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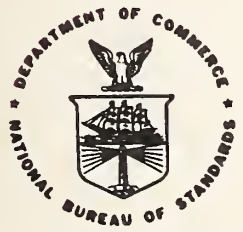

U.S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS

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U.S. DEPARTMENT OF COMMERCE, Juanita M. Kreps, *Secretary*
Dr. Sidney Harman, *Under Secretary*
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NATIONAL BUREAU OF STANDARDS, Ernest Ambler, *Director*

CONTENTS

ABSTRACT

This report summarizes the status and characteristics of State adopted building regulatory programs specific to the construction of manufactured buildings. Included are tabularized data and summary information relative to:

- technical codes upon which regulations are based
- extent to which established technical provisions contained in recognized national model codes have been amended by certain States
- differences from a regulatory standpoint between each State's treatment of manufactured building construction and conventional construction
- occupancy classifications and type of compliance assurance activities covered by each State's program
- definitions for "manufactured building" and related terms as defined in State regulations

Key Words: Building regulation; construction; enforcement; inspection; legislation; manufactured building; rules and regulations; standards.

State Adopted Building Regulations for the Construction of Manufactured Buildings -- An Analysis

1. Purpose

The purpose of this report is to examine and summarize the current status of State adopted building regulations (i.e., codes and standards) that have been promulgated in conjunction with statewide regulatory programs pertaining to the construction of manufactured building. Specifically, the report presents the results of a preliminary study based on information supplied by State authorities. The study was conducted to identify and examine various characteristics of regulatory programs in those States which promulgate and administer regulations for this type of building construction on a statewide basis. Those characteristics include the following:

- the technical basis (e.g., nationally recognized model codes) upon which the regulations adopted in each State are based;
- the extent to which the established technical provisions contained in nationally recognized model codes have been amended by the States for the regulation of manufactured building construction;
- the differences in regulatory treatment of manufactured building construction and conventional building construction;
- the occupancy classifications covered by each State's manufactured building regulatory program;

- the type of compliance assurance activities (e.g., evaluation, approval, production inspection and certification processes); and
- legal definitions for "manufactured building" and related terms (e.g., "factory-built housing," "industrialized building," etc.) that are applicable in each State that has statutes governing this form of construction.

2. Background Information

Significant developments have occurred over the past decade (1966-1976) in the cause-effect relationship of supply to demand of adequate shelter. Building codes and standards, increasing labor, land and materials costs, and changing life styles have all combined to affect the inventories and types of structures built. The demand for more efficient and/or less expensive construction than conventional on-site "stick-built" construction has to a great extent given rise to an increase in the manufactured/industrialized building process. This process extends from complete building "systems" down to factory-produced building components. As a result, the use of manufactured buildings has increased significantly over the past ten years. The Federal Government in 1969 assisted this development through "Operation Breakthrough" sponsored by the U.S. Department of Housing and Urban Development (HUD). While the evaluation of the building systems developed as a result of "Operation Breakthrough" may still be open to discussion, Federal "sanctioning" of factory methods to solve conventional building construction problems

generated a response from the States for regulatory programs and technical criteria to meet the needs of the proliferating industry. As might be expected, State regulatory programs for the regulation of manufactured building construction have not been uniform in their adoption of technical criteria and their approach to enforcement. [1]*

3. Discussion of Findings

According to the information available, thirty States have enabling legislation and regulatory programs in effect for the regulation of manufactured building construction. For several other States, the enabling legislation is awaiting enactment or the regulatory program itself is in various stages of development. Specific information on various characteristics of these programs is presented in a series of three summary tables (Tables 1, 2, and 3) and is depicted graphically on an outline map based on State population distribution in Figure 1.

Table 1 provides information on the legislation enacted in each State and includes the status of certain features of the regulatory program adopted in response to the statutes. This tabulation also includes information on the One and Two Family Dwelling Code [2] and the extent of its adoption by the States as a basis for regulating or accepting manufactured housing units.

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*Figures in brackets indicate the literature references listed in Section 5.

The information presented in Table 2 includes the building occupancy classifications (as promulgated by the Model Codes Standardization Council (MCSC)) covered by each State's regulatory program. This table also includes the type of process followed by the States in their respective compliance assurance programs for the evaluation, approval, production inspection and certification of manufactured buildings. For purposes of the table, the term "independent agency" means an accredited inspection agency or "Third Party" agency recognized by the State. The column heading "State Agency Monitoring Inspections" is intended to include those State agency functions in which unannounced random monitoring inspections are conducted to assure that the independent agency is performing properly.

Table 3 pertains to the codes and standards which have been adopted by the States as the technical basis of regulating manufactured building construction. Table 3 also indicates if the nationally recognized model codes have been strictly adopted or have been modified with respect to technical content by the States. This information is also depicted graphically in Figure 1. Further information on the status of each State's adopted codes and standard and the type of modifications that have been made, if any, is provided in Section 4 and Appendix A of this report.

Many of the States with enabling legislation and administrative rules and regulations for the construction of manufactured buildings have definitions for "manufactured building" and related terms. Since there exists extensive

variations in the terminology, these definitions have been compiled, where available, and are presented in Appendix B.

The name of the department or agency responsible for the administration and enforcement of each State's manufactured building regulatory program along with the address and person that can be contacted for further information are given in Appendix C.

The initial studies that form the basis of this report were undertaken by Arthur F. Duncan who is now affiliated with the American Institute of Architects, Washington, D.C.

TABLE 1. STATE MANUFACTURED BUILDING PROGRAMS -

STATUS OF ENABLING LEGISLATION AND SCOPE OF BUILDING REGULATIONS ADOPTED AND ENFORCED

LEGEND:
BBC - Basic Building Code (BOCA)
SBC - Standard Building Code (SBCC)
UBC - Uniform Building Code (ICBO)
ST - State Written Codes
R - Primarily Residential Occupancies
A - All MCSC Occupancy Classifications

STATE	ENABLING LEGISLATION ADOPTED			IDENTIFICATION OF ENABLING LEGISLATION (OR OTHER STATUTORY AUTHORITY)	CHARACTERISTICS OF REGULATORY PROGRAM								STATUS OF ONE & TWO FAMILY DWELLING CODE	
	YES	NO	PENDING		State Regulations Preempt Local Codes	Law Allows Manufacturer Option for Local Approval	Law Provides for Establishment of Interstate Reciprocity	Occupancies Affected by Statewide Program (Refer to Table 2)	Technical Provisions Differ from those for Conventional On-Site Construction	Predominant Technical Basis of Adopted Regulations (Refer to Table 3)	State Accepts Manufactured Units that comply because One and Two Family Dwelling Code has been adopted by State.	State Accepts Manufactured Units that comply because One and Two Family Dwelling Code is equivalent and approved alternate means of meeting State regulations.	State does not accept manufactured units that comply with One and Two Family Dwelling Code at this time.	State has plans to Adopt One and Two Family Dwelling Code in the foreseeable future.
ALABAMA	X			Factory-Built Housing Act, Act. #2059	YES	YES	YES	R	YES	SBC				
ALASKA	X			Fire Safety Code.			NO	A		UBS			X	
ARIZONA	X			Chap. 10.1, Art. 1, Sec. 32, - 1171 through 32-1197, Arizona Revised Statutes	YES		YES	A		UBC			X	
ARKANSAS		X												
CALIFORNIA	X			Factory-Built Hsg. Law, Div.13,Part 6 Health & Safety Code	YES	NO	YES	R	NO	UBC			X	
COLORADO	X			Section-1, CH-69, Colorado Revised Statutes	YES		YES	R		UBC				
CONNECTICUT	X			Sections 401.0, 1900.0, 1901.0 of State Code	YES	NO	NO	A	NO	BBC				
DELAWARE		X												
FLORIDA	X			Factory-Built Housing Act, Sec.553.35 To 553.42	YES		YES	R		SBC				
GEORGIA	X			Factory-Built Housing Act. H.B.#273, Act #325	YES		YES	R		SBC				
HAWAII	X			Factory-Blt Hsg. Regulation XXXVII	YES		YES	R		UBC				
IDAHO	X			Idaho Code, Title 39, CH. 41	YES		YES	R		UBC				
ILLINOIS	X				NO[1]	YES	YES	R	YES	BBC	X			
INDIANA	X			Act. 1393 Modified Amend. to Indiana Code 1971, Title 22, Art. - 11.	YES		YES	A	NO	UBC	X[1]			
IOWA	X			State Building Code, CH.103A, 1973	YES		YES	A	NO	UBC		X		
KANSAS		X												

[1]Local Regulations may be more stringent.

TABLE 1. (Continued) STATE MANUFACTURED BUILDING PROGRAMS -

STATUS OF ENABLING LEGISLATION AND SCOPE OF BUILDING REGULATIONS ADOPTED AND ENFORCED

LEGEND: BBC - Basic Building Code (BOCA)
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STATE	ENABLING LEGISLATION ADOPTED			IDENTIFICATION OF ENABLING LEGISLATION (OR OTHER STATUTORY AUTHORITY)	CHARACTERISTICS OF REGULATORY PROGRAM							STATUS OF ONE & TWO FAMILY DWELLING CODE			
	YES	NO	PENDING		State Regulations Preempt Local Codes	Law Allows Manufacturer Option for Local Approval	Law Provides for Establishment of Interstate Reciprocity	Occupancies Affected by Statewide Program (Refer to Table 2)	Technical Provisions Differ from those for Conventional On-Site Construction	Predominent Technical Basis of Adopted Regulations (Refer to Table 3)	State Accepts Manufactured Units that comply because One and Two Family Dwelling Code has been adopted by State.	State Accepts Manufactured Units that comply because One and Two Family Dwelling Code is accepted as equivalent and approved alternate means of meeting State regulations.	State does not accept manufactured units that comply with One and Two Family Dwelling Code at this time.	State has plans to Adopt One and Two Family Dwelling Code in the forseeable future.
KENTUCKY		X[1]													
LOUISIANA		X													
MAINE	X			Manufactured Housing Act, Sec. 1, Part 2, Chap. 951, 10 MRSA	YES	YES	YES	R	YES	BBC			X		
MARYLAND	X			Industrialized Bldg. & Mobile Home Act	YES	NO	YES	A	YES	BBC		X			
MASSACHUSETTS	X			MGLA, CH.143, Amend., C.802, 1972	YES		NO	A	NO	BBC	X				
MICHIGAN	X			St. Construction Code Act, Act-230 of PA-1972	YES		NO	A		BBC					
MINNESOTA	X			St. Bldg., Code, CH.561, MS 16.83-16.86	YES		YES	A	YES	UBS		X[2]			
MISSISSIPPI		X													
MISSOURI		X													
MONTANA	X			Chap. 21, Title 69, R.C.M. 1947	YES		YES	A		UBC	X				
NEBRASKA	X			Sec. 71-1555 to 71-1567	YES	NO	YES	R	YES	UBC			X		
NEVADA	X			Factory-Built Hsg. Law, Revised Statutes Ch. 461			NO	R		UBC			X		
NEW HAMPSHIRE		X													
NEW JERSEY	X			State Uniform Construction Code Act PL 1975, Chap. 217	YES	NO	NO	A	NO	BBC					
NEW MEXICO	X			NMSA Sec. 67-35-1, thru 67-35-67	YES		YES	A		UBC					
NEW YORK	X			Factory-Manufactured Homes Act. Art. 18-B	YES		YES	R		ST			X		
NORTH CAROLINA	X			General Statute 143-139.1	YES	YES	YES	A	NO	ST		X			
NORTH DAKOTA		X													
OHIO	X			Bldg. Standards Gen'l Provisions CH. 3781; OH Rev. Code	YES		NO	A		ST		X			

[1] Refer to page 19 for explanation of how regulations are applied in Kentucky.

[2] Adopted with exception of the Mechanical & Plumbing Sections. In process of full adoption.

TABLE 1. (Continued) STATE MANUFACTURED BUILDING PROGRAMS -

STATUS OF ENABLING LEGISLATION AND SCOPE OF BUILDING REGULATIONS ADOPTED AND ENFORCED

LEGEND: BBC - Basic Building Code (BOCA)
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UBC - Uniform Building Code (ICBO)
ST - State Written Codes
R - Primarily Residential Occupancies
A - All MCSC Occupancy Classifications

STATE	ENABLING LEGISLATION ADOPTED			IDENTIFICATION OF ENABLING LEGISLATION (OR OTHER STATUTORY AUTHORITY)	CHARACTERISTICS OF REGULATORY PROGRAM						STATUS OF ONE & TWO FAMILY DWELLING CODE			
	YES	NO	PENDING		State Regulations Preempt Local Codes	Law Allows Manufacturer Option for Local Approval	Law Provides for Establishment of Interstate Reciprocity	Occupancies Affected by Statewide Program (Refer to Table 2)	Technical Provisions Differ from those for Conventional On-Site Construction	Predominent Technical Basis of Adopted Regulations (Refer to Table 3)	State Accepts Manufactured Units that comply because One and Two Family Dwelling Code has been adopted by State.	State Accepts Manufactured Units that comply because One and Two Family Dwelling Code is accepted as equivalent and approved alternate means of meeting State regulations.	State does not accept manufactured units that comply with One and Two Family Dwelling Code at this time.	State has plans to Adopt One and Two Family Dwelling Code in the forseeable future.
OKLAHOMA		X												
OREGON	X			Administrative Rules; OAR 26.200 to 26.750	YES	NO	YES	A	NO	UBC			X	
PENNSYLVANIA	X			Industrial Housing Act No.70 of 1972	YES	NO	YES	R	YES	BBC		X		
RHODE ISLAND	X			Chap. 138, P.L. of 1973, Title 23-27.2 Gen. Laws of 1956 as amended	YES	NO	YES	A	NO	BBC	X			
SOUTH CAROLINA	X[1]			Art.9, Sec. 31-1-810 S.C. Code of Laws, 1976	NO[1]		NO							
SOUTH DAKOTA														
TENNESSEE		X												
TEXAS		X												
UTAH		X												
VERMONT		X												
VIRGINIA	X			Industrialized Bldg. Unit & Mobile Home Saf. Law, Act-1970	YES	YES	YES	A	NO	BBC	X			
WASHINGTON	X			Factory-Built Hsg. Law, RCW 43.22.450 thru RCW 43.22. 490 & WAC 296-150A	YES	NO	YES	A	NO	UBC			X	
WEST VIRGINIA		X												
WISCONSIN	X			Chap. 405, Laws of 1975.	YES	YES	YES	A	NO	ST			X	
WYOMING		X												
DIST.OF COLUM		X												
PUERTO RICO		X[2]												
VIRGIN ISLANDS		X												

[1] Law indicates that factory built housing acceptable to the Federal Department of Housing and Urban Development is approved for use in the State. However, there is no operable program utilizing this law.

[2] See page 26.

TABLE 2. STATE MANUFACTURED BUIDING PROGRAMS -

OCCUPANCY CLASSIFICATIONS REGULATED AND EXTENT OF COMPLIANCE ASSURANCE FUNCTION

LEGEND: X - YES

STATE	Standard MCSC Occupancy Classifications Covered by Regulatory Program: "A" - ASSEMBLY	"E" - EDUCATIONAL	"B" - BUSINESS	"M" - MERCANTILE	"I" - INSTITUTIONAL	"F" - FACTORY & INDUSTRIAL	"H" - HAZARDOUS	"S" - STORAGE	"R1" - RESIDENTIAL--DORMITORY HOTEL, MOTEL	"R2" - RESIDENTIAL--MULTIFAMILY	"R3" - RESIDENTIAL--1 OR 2 FAMILY	Design Evaluation and Approval Process for Compliance to Regulations: Evaluation: STATE AGENCY FUNCTION	Evaluation: INDEPENDENT AGENCY FUNCTION	Evaluation: LOCAL AGENCY FUNCTION	Evaluation: OTHER (Identify)	Approval: STATE AGENCY FUNCTION	Approval: INDEPENDENT AGENCY FUNCTION	Approval: LOCAL AGENCY FUNCTION	Approval: OTHER (Identify)	LENGTH OF APPROVAL PERIOD (In Years)	Production Inspection and Certification Process: In-State Production: STATE AGENCY CERTIFICATION INSPECTIONS	In-State: STATE AGENCY MONITORING INSPECTIONS	In-State: INDEPENDENT AGENCY INSPECTIONS	In-State: MANUFACTURER SELF-CERTIFICATION	In-State: OTHER (Identify)	Out-of-State Production: STATE AGENCY CERTIFICATION INSPECTIONS	Out-of-State: STATE AGENCY MONITORING INSPECTIONS	Out-of-State: INDEPENDENT AGENCY INSPECTIONS	Out-of-State: MANUFACTURER SELF-CERTIFICATION	Out-of-State: OTHER (Identify)	Certification Labels and Other Markings: STATE LABEL REQUIRED	INDEPENDENT AGENCY LABEL REQUIRED	NO LABEL REQUIRED	MANUFACTURER'S DATA PLATE REQUIRED	OTHER (Identify)	REMARKS
ALABAMA									X	X	X	X		X		X					X				X[1]		X				X			X		1. Local Agency Inspections also
ALASKA	X	X	X	X	X	X	X	X	X	X		X				X																	X			
ARIZONA	X	X	X	X	X	X	X	X	X	X	X	X				X					X	X				X	X				X					
ARKANSAS																																				
CALIFORNIA									X	X	X	X				X					X	X	X			X	X	X			X	X				
COLORADO									X	X	X	X				X					X										X					
CONNECTICUT	X	X	X	X	X	X	X	X	X	X	X		X				X					X	X				X	X				X		X		State Agency monitors upon request of local building official
DELAWARE																																				
FLORIDA									X	X	X	X	X			X	X			1		X	X				X				X			X		
GEORGIA									X	X	X	X	X			X	X						X				X				X	X		X		
HAWAII										X	X		X	X		X							X								X			X		
IDAHO									X	X	X	X				X					X															
ILLINOIS																																				
INDIANA	X	X	X	X	X	X	X	X	X	X	X	X				X						X	X				X				X			X		
IOWA	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X					X	X				X				X	X		X		Also has installation certification
KANSAS																																				
KENTUCKY																																				
LOUISIANA																																				
MAINE										X	X		X				X						X					X			X			X		Indefinite approval
MARYLAND	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X						X				X				X	X		X		

TABLE - (Continued STATE MANUFACTURED BUILDING PROGRAMS -

OCCUPANCY CLASSIFICATIONS REGULATED AND EXTENT OF COMPLIANCE ASSURANCE FUNCTION

LEGEND: X - YES

STATE	STANDARD MCSC OCCUPANCY CLASSIFICATIONS COVERED BY REGULATORY PROGRAM											DESIGN EVALUATION AND APPROVAL PROCESS FOR COMPLIANCE TO REGULATIONS: EVALUATION				APPROVAL					PRODUCTION INSPECTION AND CERTIFICATION PROCESS: IN-STATE PRODUCTION					OUT-OF-STATE PRODUCTION					CERTIFICATION LABELS AND OTHER MARKINGS					REMARKS
	"A" - ASSEMBLY	"E" - EDUCATIONAL	"B" - BUSINESS	"M" - MERCANTILE	"I" - INSTITUTIONAL	"F" - FACTORY & INDUSTRIAL	"H" - HAZARDOUS	"S" - STORAGE	"R1" - RESIDENTIAL--DORMITORY HOTEL, MOTEL	"R2" - RESIDENTIAL--MULTIFAMILY	"R3" - RESIDENTIAL--1 OR 2 FAMILY	STATE AGENCY FUNCTION	INDEPENDENT AGENCY FUNCTION	LOCAL AGENCY FUNCTION	OTHER (Identify)	STATE AGENCY FUNCTION	INDEPENDENT AGENCY FUNCTION	LOCAL AGENCY FUNCTION	OTHER (Identify)	LENGTH OF APPROVAL PERIOD (In Years)	STATE AGENCY CERTIFICATION INSPECTIONS	STATE AGENCY MONITORING INSPECTIONS	INDEPENDENT AGENCY MONITORING INSPECTIONS	MANUFACTURER SELF-CERTIFICATION	OTHER (Identify)	STATE AGENCY CERTIFICATION INSPECTIONS	STATE AGENCY MONITORING INSPECTIONS	INDEPENDENT AGENCY MONITORING INSPECTIONS	MANUFACTURER SELF-CERTIFICATION	OTHER (Identify)	STATE LABEL REQUIRED	INDEPENDENT AGENCY LABEL REQUIRED	NO LABEL REQUIRED	MANUFACTURER'S DATA PLATE REQUIRED	OTHER (Identify)	
MASSACHUSETTS	X	X	X	X	X	X	X	X	X	X	X	X		X		X		X																		
MICHIGAN	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X				X						X				X					
MINNESOTA	X	X	X	X	X	X	X	X	X	X	X	X	X			X						X	X				X	X			X			X		
MISSISSIPPI																																				
MISSOURI																																				
MONTANA	X	X	X	X	X	X	X	X	X	X	X	X				X						X									X			X		Local Agency inspections also
NEBRASKA										X	X	X	X			X	X			1½	X	X				X	X	X			X			X		R1 under consideration
NEVADA									X	X	X					X						X	X								X					
NEW HAMPSHIRE																																				
NEW JERSEY	X		X	X	X	X	X	X	X	X	X		X				X						X					X			X					Public Schools Under Department of Education
NEW MEXICO	X	X	X	X	X	X	X	X	X	X	X	X		X		X		X			X												X			Local Agency inspections also
NEW YORK									X	X	X	X				X							X					X			X			X		
NORTH CAROLINA	X	X	X	X	X	X	X	X	X	X	X		X				X					X	X				X	X				X		X		
NORTH DAKOTA																																				
OHIO	X	X	X	X	X	X	X	X	X	X	X	X				X					X										X			X		
OKLAHOMA																																				
OREGON	X	X	X	X	X	X	X	X	X	X	X	X				X					X					X	X				X					
PENNSYLVANIA									X	X	X		X			X	X					X	X				X	X			X	X		X		
RHODE ISLAND	X	X	X	X	X	X	X	X	X	X	X	X				X				1							X	X			X			X		
SOUTH CAROLINA																																				
SOUTH DAKOTA																																				

TABLE 2 (Continued) STATE MANUFACTURED BUILDING PROGRAMS

OCCUPANCY CLASSIFICATIONS REGULATED AND EXTENT OF COMPLIANCE ASSURANCE FUNCTIONS

LEGEND: X - YES

STATE	STANDARD MCSC OCCUPANCY CLASSIFICATIONS COVERED BY REGULATORY PROGRAM											DESIGN EVALUATION AND APPROVAL PROCESS FOR COMPLIANCE TO REGULATIONS														PRODUCTION INSPECTION AND CERTIFICATION PROCESS												CERTIFICATION LABELS AND OTHER MARKINGS					REMARKS
												EVALUATION								APPROVAL						IN-STATE PRODUCTION								OUT-OF-STATE PRODUCTION									
	"A" - ASSEMBLY	"E" - EDUCATIONAL	"B" - BUSINESS	"M" - MERCANTILE	"I" - INSTITUTIONAL	"F" - FACTORY & INDUSTRIAL	"H" - HAZARDOUS	"S" - STORAGE	"R1" - RESIDENTIAL--HOTEL, MOTEL DORMITORY	"R2" - RESIDENTIAL--MULTIFAMILY	"R3" - RESIDENTIAL--1 OR 2 FAMILY	STATE AGENCY FUNCTION	INDEPENDENT AGENCY FUNCTION	LOCAL AGENCY FUNCTION	OTHER (Identify)	STATE AGENCY FUNCTION	INDEPENDENT AGENCY FUNCTION	LOCAL AGENCY FUNCTION	OTHER (Identify)	LENGTH OF APPROVAL PERIOD (In Years)	STATE AGENCY CERTIFICATION INSPECTIONS	INDEPENDENT AGENCY MONITORING INSPECTIONS	MANUFACTURER SELF-CERTIFICATION	OTHER (Identify)	STATE AGENCY CERTIFICATION INSPECTIONS	INDEPENDENT AGENCY MONITORING INSPECTIONS	MANUFACTURER SELF-CERTIFICATION	OTHER (Identify)	STATE AGENCY CERTIFICATION INSPECTIONS	INDEPENDENT AGENCY MONITORING INSPECTIONS	MANUFACTURER SELF-CERTIFICATION	OTHER (Identify)	STATE LABEL REQUIRED	INDEPENDENT AGENCY LABEL REQUIRED	NO LABEL REQUIRED	MANUFACTURER'S DATA PLATE REQUIRED	OTHER (Identify)	
TENNESSEE																																									
TEXAS																																									
UTAH																																									
VERMONT																																									
VIRGINIA	X	X	X	X	X	X	X	X	X	X	X		X			X					X	X			X	X			X	X			X	X			X					
WASHINGTON	X	X	X	X	X	X	X	X	X	X	X	X				X					X	X	X			X				X											
WEST VIRGINIA																																									
WISCONSIN												X	X	X		X	X	X			X	X	X			X	X	X			1	1	1	1	1					
WYOMING																																									
DIST. OF COLUM																																									
PUERTO RICO																																									
VIRGIN ISLANDS																																									

[1] To be determined.

TABLE 3

STATUS OF CODES AND STANDARDS ADOPTED FOR REGULATION OF MANUFACTURED BUILDING CONSTRUCTION

STATE	BUILDING CODE	MECHANICAL CODE	PLUMBING CODE	ELECTRICAL CODE	STRICT ADOPTION OF MODEL CODES	1 & 2 FAMILY DWELLING CODE[1]
ALABAMA	SBC-71	SMC-71	SPC-71	NEC-71	YES	
ALASKA	UBC-70	UMC-70	UPC-70	NEC-68	YES	
ARIZONA	UBC-73	UMC-73	UPC-73	NEC-75	YES	X
ARKANSAS						
CALIFORNIA	UBC-73	UMC-73	UPC-73	NEC-75	YES	
COLORADO	UBC-73	UMC-73	UPC-73	NEC-75	NO*	
CONNECTICUT	BBC-70	ST[5]	NPC-55	NEC-75	NO*	
DELAWARE						
FLORIDA	SBC-76	SMC-76[2]	SPC-75	NEC-75	NO*	
GEORGIA	SBC-75	ST	NPC-73	NEC-75	NO	
HAWAII	UBC- 76		UPC-76	NEC-78	NO*	
IDAHO	UBC-76	UMC-76	UPC-76	NEC-75	NO*	
ILLINOIS						
INDIANA	UBC-76	UMC-76	UPC-76	NEC-78	NO	X
IOWA	UBC-76	UMC-76	UPC-76	NEC-75	NO*	X
KANSAS						
KENTUCKY						X[8]
LOUISIANA						
MAINE	BBC-75[7]	BMC-75[3]	ST-77	NEC-76	YES	
MARYLAND	BBC-75	BMC-75	BPC-75	NEC-75	NO*	X
MASSACHUSETTS	BBC-75	------[4]	BPC-75	NEC	—	X
MICHIGAN	BBC-75		BPC-75	NEC-75	NO*	X
MINNESOTA	UBC-73	ST	ST	NEC-75	NO*	X[6]
MISSISSIPPI						
MISSOURI						
MONTANA	UBC-73	UMC-73	UPC-73	NEC-75	NO*	X

LEGEND

BBC - Basic Building Code (BOCA)
BMC - Basic Mechanical Code (BOCA)
BPC - Basic Plumbing Code (BOCA)

NEC - National Electrical Code (NFPA-70)

NPC - National Plumbing Code

SBC - Standard Building Code (SBCC)
SGC - Standard Gas Code (SBCC)
SMC - Standard Mechanical Code (SBCC)
SPC - Standard Plumbing Code (SBCC)

ST - State-Written Regulations

UBC - Uniform Building Code (ICBO)
UMC - Uniform Mechanical Code (ICBO/IAPMO)
UPC - Uniform Plumbing Code (IAPMO)

EDITION OF CODES AND STANDARDS

Digits given after abbreviations of codes and standards indicate edition year. For example, "SBC-76" means the 1976 edition of the Standard Building Code.

NOTES

1 "X" indicates that the One- and Two-Family Dwelling Code is deemed to comply with State regulations for manufactured housing units.
2 Standard Gas Code (SBCC), 1976 Edition, also applies.
3 NFPA-31 (1974) also applies for oil burning equipment.
4 Mechanical provisions are contained in building code.
5 Appendix to BBC
6 In process of adoption
7 With 1976 Supplement
8 Except Plumbing and Electrical Sections

*Refer to Appendix A for specific technical modifications made by individual States.

TABLE 3 (continued)

STATUS OF CODES AND STANDARDS ADOPTED FOR REGULATION OF MANUFACTURED BUILDING CONSTRUCTION

STATE	BUILDING CODE	MECHANICAL CODE	PLUMBING CODE	ELECTRICAL CODE	STRICT ADOPTION OF MODEL CODES	1 & 2 FAMILY DWELLING CODE[1]
NEBRASKA	UBC-76	UMC-76	UPC-76	NEC-75	NO*	
NEVADA	UBC-73[2]	UMC-73	UPC-73	NEC-75[2]	NO*	
NEW HAMPSHIRE						
NEW JERSEY	BBC-75		NSPC-75	NEC-75	NO	
NEW MEXICO	UBC-73	UMC-73	UPC-73	NEC-71	NO*	
NEW YORK	ST	ST	NPC-71	NEC-71	--	
NORTH CAROLINA	ST	ST	ST	ST	--	
NORTH DAKOTA						
OHIO	ST	ST	ST	ST	--	
OKLAHOMA						
OREGON	UBC-76	UMC-76	UPC-76	NEC-78	NO*	NO
PENNSYLVANIA	BBC-75	BMC-75	BPC-75	NEC-75	YES	X
RHODE ISLAND	BBC-75[4]	BMC-75	BPC-75	NEC-75	NO	X
SOUTH CAROLINA						
SOUTH DAKOTA						
TENNESSEE						
TEXAS						
UTAH						
VERMONT						
VIRGINIA	BBC-75[3]	BMC-75	BPC-75	NEC-75	YES	X
WASHINGTON	UBC-76	UMC-76	UPC-76	NEC-78	YES	
WEST VIRGINIA						
WISCONSIN	UNDER	DEVELOPMENT				
WYOMING						
D.C.						
PUER[illegible]	See page 26					

LEGEND

BBC - Basic Building Code (BOCA)
BMC - Basic Mechanical Code (BOCA)
BPC - Basic Plumbing Code (BOCA)

NEC - National Electrical Code (NFPA-70)
NSPC - National Standard Plumbing Code
NPC - National Plumbing Code

SBC - Standard Building Code (SBCC)
SGC - Standard Gas Code (SBCC)
SMC - Standard Mechanical Code (SBCC)
SPC - Standard Plumbing Code (SBCC)

ST - State-Written Regulations

UBC - Uniform Building Code (ICBO)
UMC - Uniform Mechanical Code (ICBO/IAPMO)
UPC - Uniform Plumbing Code (IAPMO)

EDITION OF CODES AND STANDARDS

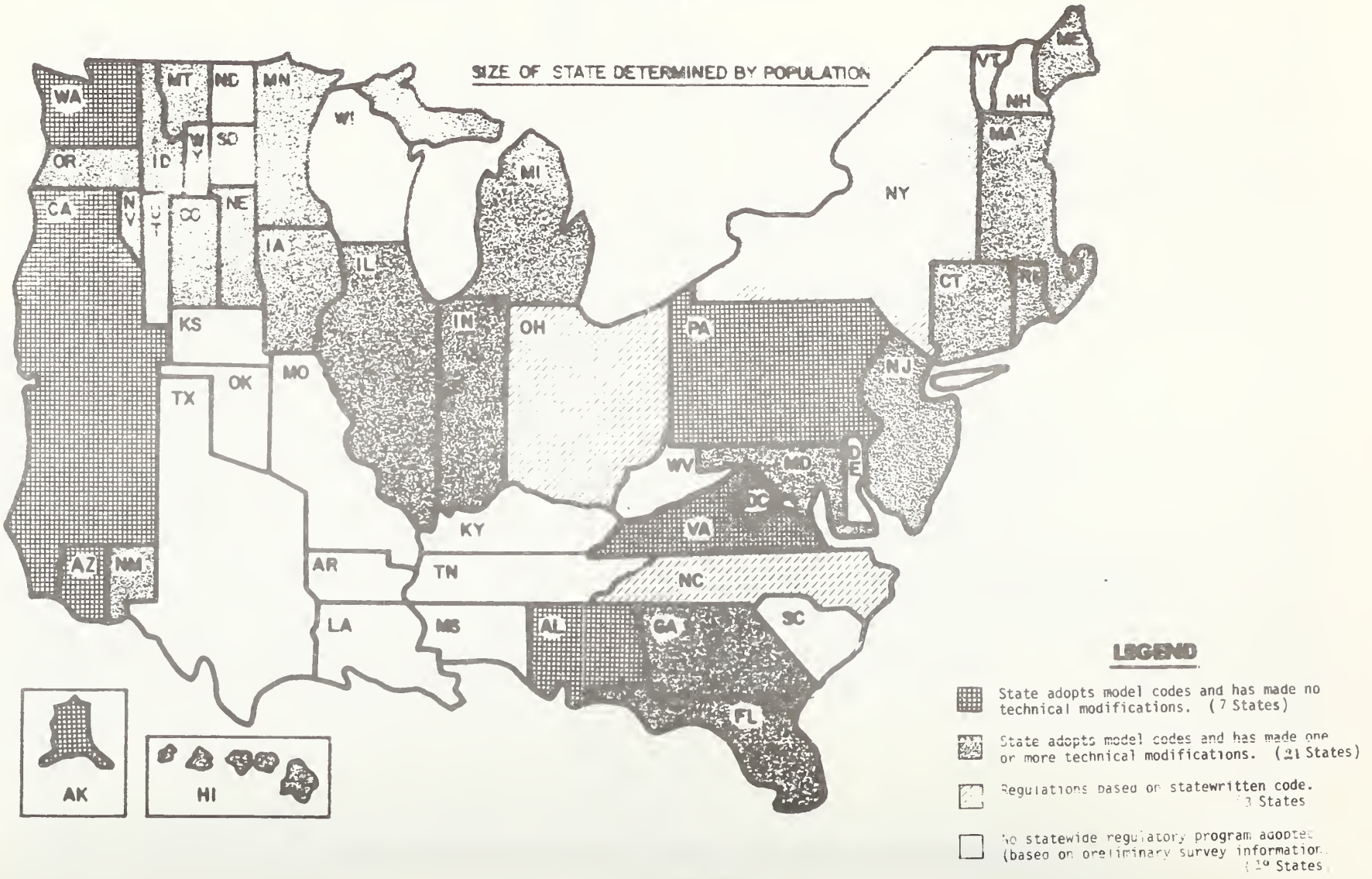
Digits given after abbreviations of codes and standards indicate edition year. For example, "SBC-76" means the 1976 edition of the Standard Building Code.

NOTES

1 "X" indicates that the One- and Two-Family Dwelling Code is deemed to comply with State regulations for manufactured housing units.
2 State regulations covering aluminum wiring, panelized wall systems and fire rating of wall systems also appl
3 State regulations covering door hardware may be enforced local Either ASHRAE 90-75 or Section 433.0, Insulation, of the Virgini Uniform Statewide Building Code also apply.
4 With 1977 State amendments.

*Refer to Appendix A for specific technical modifications made by individual States.

FIGURE 1
STATEWIDE BUILDING REGULATIONS - TYPE OF STATE REGULATORY PROGRAMS FOR MANUFACTURED BUILDING CONSTRUCTION



4. Summary of Technical Modifications to Adopted Codes and Standards

This section gives a State-by-State description of codes and standards adopted and in force and the type and extent of technical modifications made, if any, to such codes and standards.

ALABAMA - • Adopts Standard Codes (SBCC)
• No State modifications to technical provisions of model codes reported.

ALASKA - • Adopts Uniform Codes (ICBO/IAPMO)
• No State modifications to technical provisions of model codes reported.

ARIZONA - • Adopts Uniform Codes (ICBO/IAPMO)
• No State modifications to technical provisions of model codes reported.

ARKANSAS

CALIFORNIA - • Adopts Uniform Codes (ICBO/IAPMO)
• No State modifications to technical provisions of model codes reported.

COLORADO -

- Regulations based on Uniform Codes (ICBO/IAPMO)
- State Housing Board in adopting the "Factory-Built Housing Construction Code of the State of Colorado" has made various technical amendments to the Uniform Building Code (1973 Edition), the Uniform Mechanical Code (1973 Edition), and the Uniform Plumbing Code (1973 Edition)

  o Modifications are as follows:

Uniform Building Code	2 additions
	1 amendment
Uniform Mechanical Code	5 additions
	3 deletions
	2 amendments
Uniform Plumbing Code	1 deletion
	1 amendment

- Refer to Appendix A, Exhibit #1 of this report for specific modification

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CONNECTICUT -

- Building Code based on Basic Building Code (BOCA)
- Plumbing regulated by National Plumbing Code, 1955 Edition.
- Extensive technical modifications have been made.
- Modifications may be obtained from the State.

DELAWARE

FLORIDA -

- Adopts Standard Codes (SBCC)
- Standard Gas Code (SBCC), 1976 Edition, applies for gas piping systems and equipment.
- L. P. Gas systems and equipment shall comply with NFPA No. 54, National Fuel Gas Code.
- Certain exceptions are made to the adopted codes dealing with building, plumbing, and electrical aspects. Refer to Appendix A, Exhibit #2 for these exceptions.

GEORGIA -

- Adopts Standard Building and Gas Codes (SBCC) as basis for some Georgia State Codes.
- Certain technical modifications reported to have been made.
- Analysis of modifications has not been made.
- "Rules of Georgia State Administrative Board - 90-2 Factory-Built Housing" are available.

HAWAII -

- Adopts Uniform Codes (ICBO/IAPMO)
- Certain technical modifications reported to have been made.
- (Information on type and extent of modifications not available for analysis)

IDAHO -

- Adopts Uniform Codes (ICBO/IAPMO) in conjunction with State wide Code Program.
- Chapter 15 of Uniform Building Code as it relates to agricultural buildings is excepted.
- Refer to Appendix A, Exhibit #3.

ILLINOIS -

- Adopts Basic Codes (BOCA) and the One and Two Family Dwelling Code, 1975.
- Certain modifications have been made.

INDIANA -

- Adopts Uniform Codes (ICBO/IAPMO)
- Technical modifications have been made. Contact Manufactured Building Division for copies
- To aid reciprocity the One and Two Family Dwelling Code is adopted as published for units manufactured in Indiana but not to be used in Indiana.

IOWA -

- Regulations based on Uniform Codes (ICBO/IAPMO) which are incorporated by reference in the Iowa State Building Code - a code which is applied on a voluntary basis to private construction throughout the State.
- In the Administration Section of the Iowa State Building Code various technical amendments have been made to the Uniform Building Code (1976 Edition), Uniform Mechanical Code (1976 Edition), and the Uniform Plumbing Code (1976 Edition).
- Refer to Appendix A, Exhibit #4 of this report for specific modifications.

KANSAS

KENTUCKY - • In those instances where modular housing is utilized for classrooms, then application of the 1976 National Building Code and the 1973 Life Safety Code (NFPA 101) is utilized to ensure adequate safety precautions in the areas of proper exits, panic hardware, etc.

LOUISIANA

MAINE - • Adopts Basic Codes (BOCA) except for plumbing criteria which is regulated by the State of Maine Plumbing Code (1977 Edition) as adopted by the Maine Department of Health and Welfare.
• Mechanical criteria is regulated by the Basic Mechanical Code (1975 Edition) except in any instance where it conflicts with "the Installation of Oil Burning Equipment Standard," (NFPA No. 31). In those cases the Oil Burning Equipment Standard shall apply.
• Refer to Appendix A, Exhibit #5.

MARYLAND - • Adopts Basic Codes (BOCA)
• The Division of Codes Administration of the Maryland Department of Economic and Community Development has made five modifications to the Basic Building Code (1975 Edition) and one modification to the National Electrical Code (1975 Edition)
• Refer to Appendix A, Exhibits #6 and #7.

MASSACHUSETTS -

- State regulations based on Basic Codes (BOCA) with significant modifications.
- (Information on type and extent of modifications not available for analysis)

MICHIGAN -

- Adopts Basic Codes (BOCA)
- Various amendments and additions to the Basic Building Code have been made by the Construction Code Commission of the Michigan Department of Labor. Refer to Appendix A, Exhibit #8 for specific modifications.
- Appendix A, Exhibit #9, 10 and 11 contains amendments and additions to the Basic Plumbing Code, the National Electric Code, and the ASHRAE Standard 90-75 which have been adopted in Michigan.
- Appendix A, Exhibit #12 contains Premanufactured Unit Rules.

MINNESOTA -

- Adopts Uniform Building Code (ICBO) for construction and promulgates State written codes for the regulation of plumbing and mechanical provisions.
- Adopted specific energy conservation standards based on ASHRAE 90-75, effective January 30, 1976.
- Various "Manufactured Building Code Letters" have been issued to provide guidance and make amendments to regulations applicable to construction of manufactured buildings.
- Refer to Appendix A, Exhibits #13 and #14 for examples of Manufactured Building Code Letters.

MISSISSIPPI

MISSOURI

MONTANA -
- Adopts Uniform Codes (ICBO/IAPMO)
- Various additions, deletions, and amendments have been made to the Uniform Plumbing Code (1973 Edition) by the Montana State Board of Plumbers. Refer to Appendix A, Exhibit #15, for specific modifications.
- Appendix A, Exhibit #16 contains certain modifications to the National Electrical Code which have been adopted in Montana.

NEBRASKA -
- Adopts Uniform Codes (ICBO/IAPMO)
- Appendix A, Exhibit 17 contains modifications to Uniform Building and Uniform Plumbing Codes.

NEVADA -
- Adopts Uniform Codes (ICBO/IAPMO)
- State adopted modifications are:
  - restriction on aluminum wiring for branch circuits under 30 ampere rating; and
  - requirement that exterior wall systems have 20 minute fire rating
  - requirement that panelized wall systems be approved by the State Fire Marshal's office prior to use in construction
- Refer to Appendix A, Exhibit #18

NEW HAMPSHIRE

NEW JERSEY - • Adopts Basic Building Code (1975) with 1976 Supplement, Basic Energy Conservation Code, IES Recommended Lighting Power Budget Determination Procedure, and National Electrical Code (1975)

NEW MEXICO - • Adopts Uniform Codes (ICBO/IAPMO)
• Certain technical modifications reported to have been made.
• (Information on type and extent of modifications not available for analysis).

NEW YORK - • The New York State Building Construction Code, a State written code, has been adopted as the standard for the construction of manufactured buildings.

NORTH CAROLINA - • Manufactured buildings are regulated to the same State written codes and standards as on-site construction. The State written codes are based primarily on the Standard Codes (SBCC) with amendments.

NORTH DAKOTA

OHIO - • Manufactured building construction is regulated by the Ohio Building Code, which is a State-written code.

OKLAHOMA

OREGON - • Adopts Uniform Codes (ICBO/IAPMO) pre-fabs are regulated under the same code as site built structures.
• Certain technical modifications made to adopted codes. Refer to Appendix A, Exhibit #19.
• Adopted specific energy conservation standards based on ASHRAE 90-75.
• Adopted special regulations to eliminate architectural barriers.

PENNSYLVANIA - • Adopts Basic Codes (BOCA) and National Electrical Code
• No State modifications to technical provisions of model codes reported.

RHODE ISLAND - • Adopts Basic Codes (BOCA), 1971 One and Two Family Dwelling Code with 1973 Supplement

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SOUTH CAROLINA - • No operable State program
• Any State construction must meet Standard Codes (SBCC)

SOUTH DAKOTA

TENNESSEE

TEXAS

UTAH

VERMONT

VIRGINIA -
- Adopts Basic Codes (BOCA)
- No State modifications to technical provisions of model codes reported.
- Either ASHRAE 90-75 or Section 433.0, Insulation of the Virginia Uniform Statewide Building Code also apply.
- State regulations covering door hardware may be enforced locally. Refer to Appendix A, Exhibit #20 for specific requirement.
- The BOCA Basic Energy Conservation Code, 1977, will apply to manufactured buildings other than One and Two Family Dwellings beginning September, 1978.

WASHINGTON -
- Adopts Uniform Codes (ICBO/IAPMO)
- No State modifications to technical provisions of model codes reported.

WEST VIRGINIA

WISCONSIN - ● Code is under development

WYOMING

DISTRICT OF COLUMBIA

PURETO RICO - ● Puerto Rico has not enacted legislation or prepared regulations applicable to manufactured building construction. However, this does not mean that they do not permit them or allow unregulated erection of manufactured buildings. They are permitted and plans are reviewed on a case by case basis for conformity with their Building Code as alternate construction materials or construction methods. Their building regulation is based on the Uniform Building Code. The burden of the proof as to the suitability of materials and methods used in the construction of the building lies on the petitioner who must prove with reports from recognized laboratories the resistance and characteristics of materials and methods used. Proof must also be presented that the building resists lateral forces for hurricane winds of 150 m/hr and the resistance to tremors for a zone 2. Foundations, anchorage, and service installations are reviewed for compliance in each particular case.

VIRGIN ISLANDS

5. References

[1] P. W. Cooke, H. K. Tejuja, R. D. Dikkers, L. P. Zelenka; State Building Regulatory Programs for Mobile Homes and Manufactured Buildings -- A Summary; National Bureau of Standards (U.S.) Technical Note 853 (SD Catalog No. C13.46:853); September 1974.

[2] One and Two Family Dwelling Code (under the Nationally Recognized Model Codes), Second Edition, 1975 copyrighted by A. Ins. A., BOCA, ICBO and SBCC.

APPENDIX A

DATA COLLECTION ON TECHNICAL MODIFICATIONS MADE BY INDIVIDUAL STATES

APPENDIX A - DATA COLLECTION ON TECHNICAL MODIFICATIONS MADE BY INDIVIDUAL STATES

This appendix contains pertinent information and reference material organized and exhibited by State for those States that have reported modifications to model codes for the regulation of manufactured building construction.

Index Listing to Exhibits

Exhibit #1, Colorado JAN 26 1976

JOHN D. VANDERHOOF
Governor
STATE HOUSING BOARD
Thomas T. Grimshaw
Chairman
Charles L. Erickson
Julianne F. Haefeli
Ronald C. Hayes
Charles W. Henning
Harold Jacobs
Joseph Romero

STATE OF COLORADO
DIVISION OF HOUSING
DEPARTMENT OF LOCAL AFFAIRS
1575 Sherman Street, Room 704
Denver, Colorado, 80203
303-892-2778

JAMES FRESQUES
Director

SUBJECT: NOTICE OF ADOPTION OF RULES REGARDING CONSTRUCTION STANDARDS.

DATE: December 19, 1974

RESOLUTION ADOPTING AMENDMENTS TO THE "FACTORY-BUILT HOUSING CONSTRUCTION CODE," AND THE "MULTIPLE-DWELLING CODE" OF THE STATE OF COLORADO:

BE IT RESOLVED BY THE STATE HOUSING BOARD OF THE STATE OF COLORADO:

That pursuant to Article 9, Section 7 (1) (c) and 10 (1) of Chapter 69, Colorado Revised Statutes 1963, as amended, the State Housing Board repeals its Resolutions Numbers 1, 2, 4, and 6; and

That pursuant to Article 9, Section 7 (1) (c) and 10 (1) of Chapter 69, Colorado Revised Statutes 1963, as amended the State Housing Board adopts the following as the "Multiple-Dwelling Code of the State of Colorado", and as the "Factory-Built Housing Construction Code of the State of Colorado" to apply to all "factory-built" housing to be sold or offered for sale in the State, except mobile homes (as defined in the 1974 ANSI Standard A119.1, Standard for Mobile Homes):

- 1973 Edition and I.C.B.O. amendments of the I.C.B.O. Uniform Building Code, Volume I and Chapters 23 and 49 of the Appendix, with these amendments:

  (1) Add to Section 2305 (c), "Criteria for design of roof (roof load requirements) of factory-built units to be sold in Colorado shall meet or exceed those set forth in the current edition of the Structural Engineers Association of Colorado publication, 'SNOW LOAD DESIGN DATA FOR COLORADO', for the specific locale in which each unit is to be located."

(2) AMEND Section 1105: Strike the last sentence in the first paragraph and insert the following, "Unless otherwise permitted by the Building Official, all F occupancies shall be ventilated at the rate of two changes per hour. Where so permitted, all F occupancies may be ventilated in accordance with Section 605."

(3) Add a new Section 1717 to read as follows:

(a) General: All occupancies constructed under this code shall meet the minimum insulation and glazing requirements set forth in this section.

(b) Building Insulating Material Standards: All materials used in the insulation of buildings in order to comply with this section shall conform with the Standards listed in Section 607 of the FHA Minimum Property Standards, Multi-Family Housing, 1973 Edition (6,000+ degree-day criteria).

(c) Insulation of Buildings.

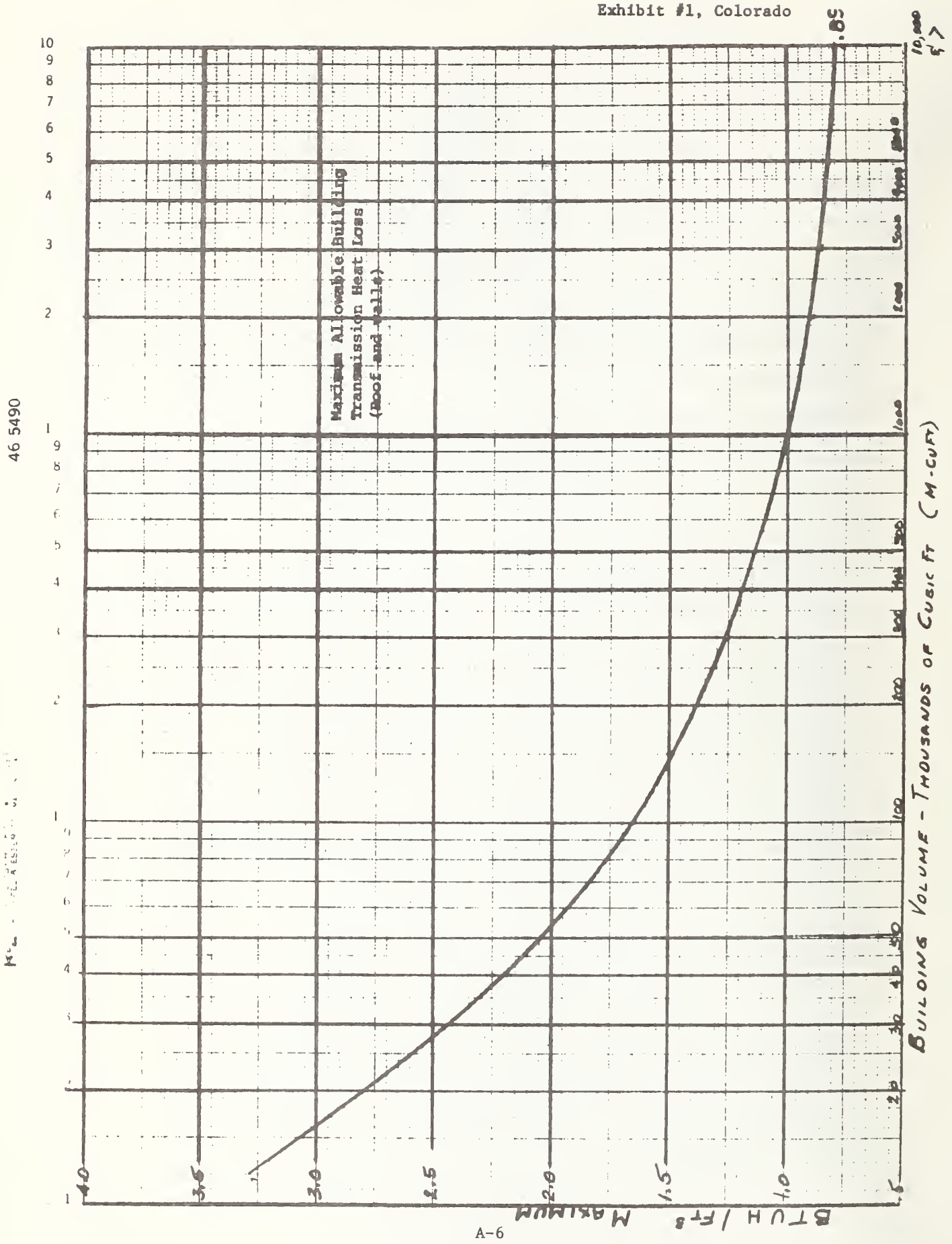
(i) H & I occupancies: Openings: All windows and doors shall be glazed with insulating glass as defined in the ASHRE Guide or shall be equipped with storm windows and storm doors. Closures providing equivalent resistance to heat transmission will be acceptable.

Exception: Where window glazing is under 8 sq. ft. and the total glazed area in a room does not exceed 1/10th of the floor area in that room, the window glazing shall not be required to be constructed of insulating glass or equipped with storm windows.

Design temperatures: The outside design temperature shall be -10° Fahrenheit.

(ii) All other occupancies: All other occupancies specified in this Code, excpet J occupancies, shall be designed in such a manner as to not exceed the B.T.U. per hour transmission loss, exclusive of infiltration, as set forth in Chart 1 and the instructions to Chart 1 for this purpose.

Exhibit #1, Colorado



46 5490

INSTRUCTIONS FOR USING CHART 1

All buildings, except H, I, and J occupancies, shall be constructed so that the calculated heat loss through wall and roof areas, when converted to BTU per hour per cubic foot of volume shall not exceed the figure taken from the attached graph.

HEAT LOSS CALCULATIONS

Heat loss through walls shall include the transmitted heat loss through all wall areas above grade, including window and door openings.

Heat loss through roof shall include the transmitted heat loss through all roof areas, including skylights and other openings.

Note: If the space between the roof and ceiling is used for supply or return air,[1] the heat transmission coefficient used shall be the same as if there were no ceiling.

Temperature difference shall be the inside temperature to be maintained plus 10^{o} F. (Outside design temperature = 10^{o} F.)

BUILDING VOLUME

For purposes of reference to attached chart, building volume shall be the total volume within the exterior wall surfaces from the lowest floor level to the highest ceiling level, except that the maximum floor to ceiling height of the top floor or only floor of one story building shall not be considered to exceed fifteen feet.

Note 1: The top floor ceiling and "Plenum" is considered part of the total roof unless the plenum contains uninsulated ducts or piping, or is used as a supply or return air plenum.

OTHER ITEMS

Slab floors on grade and floors over unheated spaces shall be insulated as prescribed for H & I occupancies.

Infiltration or fresh air heat loads are not to be considered in these calculations.

- 1973 Edition and I.C.B.O. amendments of the I.C.B.O. Uniform Mechanical Code, and all appendices, with these amendments:

(1) Add to Section 1102: "All occupancies other than H and I occupancies shall be provided with a convenient means for shutting off fresh air supply automatically or by a manual switch when the existing building is not occupied."

(2) Delete the second sentence of the second paragraph of Section 2213 (d), Chapter 22, Appendix B, and substitute the following: "Hand field wrapping will provide equivalent protection and is restricted to those short sections necessarily stripped for threading or welding and to the fittings."

(3) Add between the definitions for "Radiant Heater" and "Readily Accessible" on page 21, the following definitions: "Rating, Fuel Input. The amount of fuel in BTU (British Thermal Units) per hour that can be safely burned in appliances at the altitude the appliance is installed. Rating, Appliance Output. The amount of heat in BTU (British Thermal Units) that an appliance will deliver when operating at the correction input."

(4) Add to Section 508, "Water heaters shall not be installed in bedrooms, rooms used for sleeping purposes, bathrooms, occupied rooms normally kept closed, closets or recesses used for wearing apparel or home cleaning equipment, or under stairways."

(5) Amend the caption statement of Table 5-A, page 30, to read "shall" instead of "should".

(6) Amend Section 2212 as follows:

(a) Add to the first paragraph, "Internally-tinned copper tube may be used when installed with approved fittings. Plastic pipe or plastic tube meeting the standards of this code may be used for outside underground installations only and when an approved transition to steel pipe is made underground;"

(b) In the second paragraph, after the word pipe insert the words, "or

tube" (two places).

(c) Delete the third paragraph, and insert, "All fittings used in connection with the above ferrous or non-ferrous pipe or tube shall be of malleable iron or steel, or yellow steel (containing not more than 75 percent copper), or other ferrous or non-ferrous material approved for the pipe or tube being used."

(d) Add as an additional paragraph, "All threaded pipe fittings shall be tapped tapered."

(7) Add to Section 2213 (a), "Tubing joints in ferrous and non-ferrous metallic materials shall be made with flared tubing fittings, or welded, or brazed with a material having a melting point in excess of 1,000°F. Brazed joints shall be solvent-welded using approved fittings, or other approved methods. All joints shall be of an approved type. Underground joints between dissimilar metals shall be made with an approved dielectric fitting."

(8) Add to Table 22-A, "Tubing . . . Supported at every 4 feet."

(9) Delete the first sentence of Section 2213 (g), and amend the last sentence of Section 2213 (g) to read: "Bushings or unions shall not be used in concealed locations."

(10) Delete paragraph 9 of Section 2215, and substitute, "Discharge from relief valves shall be into open air and shall be at least 5 feet away from, and below the level of any adjacent opening into a building."

- 1973 Edition of the I.C.B.O. Uniform Building Code Standards.
- National Electrical Code (NFPA 70-1975).
- 1973 Edition of the I.A.P.M.O. Uniform Plumbing Code, excluding Chapters 12 and 13, but including Appendices A through D, and with these two amendments:

(1) delete from Section 117 (f) of Chapter 1 the words, "fuel gas piping, water heaters and vents for same,"

(2) amend Appendix D, Section D 1.0 (a) and (c) to include the use of PVC for interior roof drain headers and roof drain systems;

- "taken from Florida Rules and Regulations for Factory-Built Housing (1974 Amendment) Rules Chapter 9B-1, Florida Department of Community Affairs.

9B-1.04 Adoption of Model Codes

(1) Building Code - The design and fabrication of factory-built housing shall comply with the Standard Building Code, 1976 Edition as published by the Southern Building Code Congress International, Inc. subject to the following exceptions:

(a) Chapter 1 shall be deleted.

(b) Chapter 25 shall be deleted.

(c) Appendices shall be excluded.

(d) Where reference is made to the building official in such code it shall mean the Chief, Bureau of Community Development Assistance.

(2) Electrical Codes - The design, fabrication and installation of electrical systems and equipment in or on factory-built housing shall comply with the requirements of the Florida Electrical Code except Section 553.18(2) and (3) shall be deleted and except that the National Electric Code shall be the 1975 edition.

(3) Gas Codes - The design, fabrication and installation of gas piping systems and equipment in or on factory-built housing shall comply with the requirements of the Standard Gas Code, 1976 edition of the Southern Building Code Congress International, Inc. for other than liquified petroleum gas, except that Chapter 1 shall be deleted. Systems and equipment for L. P. Gas shall comply with Chapter 527 of the Florida Statutes (NFPA #54). Where reference is made to the administrative authority in the Standard Gas Code, it shall mean the Chief, Bureau of Community Development Assistance.

(4) Plumbing Code - The design, fabrication and installation of plumbing systems and equipment in or on factory-built housing shall comply with the requirements of the Standard Plumbing Code 1975 Edition, together with the 1976 and 1977 Revisions thereto, as published by the Southern Building Code Congress International, Inc. with the following exceptions:

(a) Chapter 1 shall be deleted

(b) Where reference is made to the plumbing official in such code, it shall mean the Chief, Bureau of Community Development Assistance.

(5) Mechanical Code - The design, fabrication and installation of mechanical systems and equipment in or on factory-built housing shall comply with the requirements of the Standard Mechanical Code, 1976 Edition.

(a) Chapter 1 shall be deleted.

(b) Where reference is made to the mechanical official in such code, it shall mean the Chief, Bureau of Community Development Assistance.

(6) A copy of each of the above referenced codes has been filed with these regulations with the Secretary of State. Such codes are also available for reference and inspection at the Department offices in Tallahassee, Factory-Built Housing Section. General Authority 553.37(1), Florida Statutes; Law Implemented 553.38(1), Florida Statutes.

History - Adopted 1/17/72, amended 6/19/74

39-4109. ADOPTION OF CODES. – The following codes are hereby adopted for the state of Idaho:

(1) The Uniform Building Code, 1973, 1974 supplement, 1975 supplement, and the appendices thereto, excepting chapter 15 as it relates to agricultural buildings as defined in section 402, published by the International Conference of Building Officials;

(2) The Uniform Housing Code, 1973, published by the International Conference of Building Officials;

(3) The Uniform Code for Abatement of Dangerous Buildings, 1973, published by the International Conference of Building Officials;

(4) The Uniform Mechanical Code, 1973, published by the International Conference of Building Officials and the International Association of Plumbing and Mechanical Officials;

(5) American Standard Specifications for Making Buildings and Facilities Accesible to, and Usable by, the Physically Handicapped, ANSI A117.1-1961 (R-1971), published by the American National Standards Institute;

(6) Scheme for the Identification of Piping Systems, ASA A13.1-1956, published by the American Society of Mechanical Engineers, and shall be applicable to public and private hospitals;

(7) Elevators, Dumbwaiters, Escalators and Moving Walks, ANSI A17.1-1971, and ANSI A17.1b-1973, published by the American National Standards Institute;

(8) The ASME Boiler and Pressure Vessel Code-1971, and the ASME Power Piping Code (ANSI B31.1-1973), all published by the American Society of Mechanical Engineers;

(9) The Uniform Fire Code, 1973, with appendices thereto, published by the Western Fire Chiefs Association and the International Conference of Building Officials, and The Life Safety Code, National Fire Protection Association Code number 101-1973, published by the National Fire Protection Association;

(10) National Fire Protection Association Code numbers 501B-1974 (ANSI A119.1), and 501C-1974 (ANSI A119.2), and the accepted engineering practice standards therein, for compliance by the mobile home and recreational vehicle industry, published by the National Fire Protection Association;

(11) National Fire Protection Association Code numbers 501A-1974, and 501D-1974, published by the National Fire Protection Association; and

(12) National Fire Protection Association Code number 54-1974 (ANSI Z223.1), and the appendices thereto, as it pertains to natural gas, and National Fire Protection Association number 59A-1972, both published by the National Fire Protection Association. These codes shall not be applicable to gases produced as a byproduct internal to the process of manufacture.

ISBC 300.0
September 1, 1977

IOWA STATE BUILDING CODE

ADMINISTRATION SECTION

ROBERT F. TYSON
DIRECTOR
OFFICE FOR PLANNING AND PROGRAMMING

ROBERT D. RAY
GOVERNOR
STATE OF IOWA

630—5.140(103A) General construction rules and regulations.

5.140(1) *Adoption.* Chapters 4 through 54 of the uniform building code, 1976 Edition, as published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601 are hereby adopted by reference as the construction rules and regulations, Division 1, Part 4 of the Iowa state building code, administration section, with the following revisions and amendments.

a. Chapters 1, 2 and 3 of the uniform building code, 1976 Edition, are deleted and replaced by the administration rules and regulations, Division 1, Parts 1, 2 and 3 of this code.

b. Delete all appendices to the uniform building code, 1976 Edition, and all references hereto.

c. Section 502 last paragraph, line 2 delete reference to section 306 and replace with subsection 5.130(13).

d. Chapter 14, add new section 1414 to read:

Special Construction Requirements

Sec. 1414(a) Foundation Retaining Walls. Notwithstanding other design requirements of Chapter 24, 26 and 29, foundation retaining walls for group R, Division 3 occupancies of Type V construction may be constructed in accordance with the provisions set forth, provided that use, or building site conditions affecting such walls are within the limitations specified herein.

1. The maximum height of the foundation wall shall be seven feet eight inches measured between the foundation plate and a concrete floor slab having a minimum thickness of three and a half inches. If such floor slab is not provided, a specially designed means of providing lateral support at the bottom of the wall shall be required.

2. The foundation plate shall be attached to the wall prescribed in Sec. 2907(e).

3. Material used for back-filling shall be carefully placed granular soil of average or high permeability except the top two feet may be an impervious type material and shall be drained with an approved drainage system. The wood and earth separation requirements of Sec. 2517 Subsection (c)7 shall be observed at all times.

4. Where soils containing a high percentage of clay, fine silt or similar material of low permeability or expansive soils are encountered or where back-fill materials are not drained or an unusually high surcharge is to be placed adjacent to the wall, a specially designed wall shall be required.

(b) Hollow Concrete Masonry Foundation Walls.

1. Hollow concrete masonry units shall be set in Type M or Type S mortar.

2. All footings shall be of cast-in-place concrete having a minimum compressive strength

of 2,500 pounds per square inch at twenty-eight days, and shall be reinforced longitudinally with not less than a half inch steel bar for one story construction, or two half inch steel bars for two story construction. Footing reinforcement shall be symmetrically placed and so located as to insure no less than three inches of concrete cover on all sides.

3. Masonry foundation walls having a nominal thickness of not less than twelve inches may be unreinforced. Other masonry foundation walls shall comply with the following requirements:

(i) The nominal thickness of concrete masonry units shall not be less than eight inches.

(ii) When a foundation wall has a horizontal clear-span of more than twelve feet between supporting cross walls or corners, fully grouted vertical reinforcing shall be provided in the center of said wall in the amount of 0.075 square inches of ASTM A615 grade 40 or better steel, per lineal foot of wall. All reinforcing steel shall be deformed bars spaced no more than eight feet (8'-0") on center. All grout shall comply with Section 2403(s).

(c) Cast-in-place plain concrete foundation walls. Cast-in-place walls constructed under the provisions of this subsection shall be of concrete having a minimum compressive strength of twenty-eight days of not less than 3,000 pounds per square inch. All materials, proportioning, and placing shall conform to the requirements of chapter 26. In addition, the following shall apply:

(i) The minimum thickness of wall shall be seven and one-half inches (7½").

(ii) Walls shall be reinforced with no less than three half inch diameter deformed ASTM A615 grade 40 steel bars placed horizontally at the center of the wall, with one bar located near the top, one bar located near the bottom, and one bar located near midheight of the wall. Reinforcing bars and methods of placement shall be in accordance with chapter 26.

e. Section 1711. Delete subsections (a), (b), and (c) and insert new subsections in place thereof.

(a) Floors and walls. In other than dwelling units, toilet room floors shall have a smooth, hard, nonabsorbent surface such as portland cement, concrete, ceramic tile or other approved material which extends upward onto the walls at least four inches. Walls within water closet compartments and walls within two feet of the front and sides of urinals shall be similarly finished to a height of four feet and, except for structural elements, the materials used in such walls shall be of a type which is not adversely affected by moisture.

(b) Toilet facilities. Water closet compartments in all occupancies shall be not less than thirty inches in width and shall provide a clear space in front of the water closet not less than twenty-four inches.

(c) Other toilet facilities. For other provisions see Division 7, "Handicapped Rules and Regulations" in this code.

Delete sections 1712 and 1713.

f. Section 1807(a) Add new paragraph at end of subsection (a).

"Buildings having floors used for human occupancy located less than seventy-five feet above the lowest level of fire department vehicle access, but of greater height than the ladder capability of the local fire department, shall conform to the requirements of this section in addition to other applicable requirements of this code."

g. Section 1807(i) Delete the last sentence of the first paragraph, and add a new sentence.

"For other requirements, contact the Iowa state labor commissioner and chapter 51 of this code."

h. Section 1807(m). Delete Subsection (vi).

i. Section 2305(d) 1. Delete the last sentence of paragraph 2, and insert the following: Roofs shall sustain a minimum snow load of 30 pounds per square foot. The building official shall determine if conditions warrant the need for greater snow loads.

j. Section 2310. The minimum horizontal wall anchorage force of 200 pounds per lineal foot of wall shall not be applicable.

k. Section 2312. Add to subsection 2312(a) after the first paragraph the following: The requirements of section 2312, Earthquake Regulations shall be applicable only to those buildings or structures listed hereinafter:

1. Any building housing a Group A, E, 1, Group H, Division 1, or Group H Division 2 occupancy.

2. Any tower structure exceeding fifty feet in height, including, but not limited to, water towers and transmission towers.

3. Any major public building or structure, including, but not limited to, office buildings, police stations, fire stations, water treatment and/or supply facilities, sewage treatment facilities, bridges.

4. Any other building or structure other than those listed above, in which the fundamental period of vibration "T" is in excess of one-half a second.

l. Table 24H Footnote No. 3 shall not be applicable for seismic zone No. 1.

m. Table No. 29-A Delete Table and insert in place thereof:

Number of Stories	Thickness of Foundation Walls (Inches)		Minimum Width Footing (Inches)	Thickness of Footing (Inches)	Minimum Depth of Foundation Below Natural Surface of Ground and Finish Grade (Inches)
	Concrete	Unit Masonry			
1	8	8	16	8	*42
2	8	8	16	8	*42
3	10	12	18	12	*42

*NOTES: See Sec. 2905 for requirements for unusual conditions. If unusual or deeper frost conditions may be encountered, the building official may require additional depth.

n. Table 33A Delete right hand column "Egress by means of a ramp or an elevator must be provided for the physically handicapped as indicated." (See Division 7. Rules and Regulation for the Handicapped, Table 705A for Accessibility Requirements.)

o. Section 3704(c) Anchorage requirements of this section shall apply to Seismic Zone No. 1 within the State of Iowa.

p. Sec. 5101, Paragraph 2. Delete paragraph and insert in place thereof.

"Compliance with the rules and regulations of Elevator Division of the Department of Labor of Iowa shall also be herein required, and in the event of a conflict of provision in this code, the rules and regulations promulgated by the department of labor shall apply".

In addition to these provisions, see section 1807 of the uniform building code 1976 for elevator requirements in high rise buildings, and Division 7 of the state building code, administration section for compliance with handicapped requirements.

5.141 to 5.199 Reserved.

DIVISION 2

630—5.200(103A) Electrical rules and regulations.

5.200(1) *Adoption.* Chapters 1 to 9 of the National Electrical Code, 1975 Edition, NFPA No. 70 as published by the National Fire Protection Association, 470 Atlantic Avenue, Boston, Mass. 02210, are hereby adopted by reference as the Iowa Electrical Rules and Regulations, Division 2 with the following deletions and amendments.

a. Article 90. Delete the text of Article 90 and insert in place thereof:

90.1 Purpose.

The purpose of these rules and regulations is the practical safeguarding of life and property from hazards arising from the use of electricity.

90.2 Scope.

(a) Provisions covered.

1. Electrical conductors and equipment installed within or on public and private buildings or other structures, including yards, carnival, parking and other lots and industrial substation.

2. Conductors that connect the installation to a supply of electricity.

3. Other outside conductors on the premises.

(b) Provisions not covered.

1. Installations in ships, watercraft, railway rolling stock, aircraft, automotive vehicles and mobile homes constructed to the Federal standards.

2. Installations underground in mines.

3. Installations of railways for generation, transformation, transmission or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communication purposes.

4. Installations of communication equipment under exclusive control of communication utilities, located outdoors or in building spaces used exclusively for such installations

5. Installations under the exclusive control of electric utilities for the purposes of communication, metering; or for the generation, control, transformation, transmission and distribution of electric energy located in buildings used exclusively by utilities for such purposes or located outdoors on property owned or leased by the utility or on public highways, streets, roads, etc., or outdoors by established rights on private property.

b. Appendix—Note: The Appendix has not been adopted as a requirement of these rules and regulations but may be used as general information concerning NFPA.

5.201-5.299 Reserved.

DIVISION 3

630—5.300(103A) Mechanical rules and regulations.

5.300(1) *Adoption.* Chapters 4 to 20, and Appendices A, B, and C of the Uniform Mechanical Code, 1976 Edition as jointly published by the International Association of Plumbing and Mechanical Officials, 5032 Alhambra Avenue, Los Angeles, California 90032, and the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601, are hereby adopted as the Mechanical Rules and Regulations, Division 3, of the state building code with amendments as follows:

a. Section 404, Building code. Delete definition and insert in place thereof:

"Building code is the 1977 Edition of the Construction Rules and Regulations, Division 1 of the Iowa State Building code."

b. Appendix B. Delete Sec. 2203.

5.301 to 5.399 Reserved.

DIVISION 4

630—5.400(103A) Plumbing rules and regulations.

5.400(1) *Adoption.* Chapters 1 to 13, of the Uniform Plumbing Code, 1976 Edition as published by the International Association of Plumbing and Mechanical Officials, 5032 Alhambra Avenue, Los Angeles, California 90032, are hereby adopted by reference as the Plumbing Rules and Regulations, Division 4, of the Iowa state building code, with amendments as follows:

a. Section 201 Delete the subsections, e, f, g, h, i, and j. (See 630—5.110(7) for alternate materials and methods of construction)

b. Section 209 Add

When backwater valves are required by section 409(a), they shall include a manually operated valve. In addition, approved valves which are automatic in operation as described in subsection 209(b) may also be used but are not required.

c. Table A—Plumbing Material Standards Delete reference to "homogenous bituminized fiber drain and sewer pipe", on page 22.

d. Subsection 401(a) Delete exception 2 and rewrite as follows:

2. ABS or PVC installations are limited to residential construction not more than two stories in height. Residential construction shall include sleeping rooms of hotels or motels.

e. Subsection 409(a). Add the following exception after 409(a):

1. EXCEPTION. The requirements of section 409(a) shall apply only when it is determined necessary by the administrative authority or the engineers of the governing body, based on local conditions.

f. Table 4-3. Delete reference to footnote 3 for vent piping maximum units under 1½-inch pipe size.

g. Section 502. Delete Subsection (a) and add:

(a) No vents will be required on a downspout or rain leader trap, a backwater valve, a subsoil catch basin trap, a three (3) inch basement floor drain, or a water closet provided its drain branches into the house drain on the sewer side at a distance of five (5) feet or more from the base of the stack and the branch line to such a floor drain or water closet is not more than twelve (12) feet in length.

h. Section 507. Add a new subsection (c) to read as follows:

(c) A vent stack or a main vent shall be installed with a soil or waste stack whenever back vents, relief vents or other branch vents are required in two or more branch intervals or stories.

i. Section 604. Add a new subsection (c) to read as follows:

(c) In basements of residential construction a stand-pipe receptor for any clothes washer may discharge directly over a floor drain.

j. Section 608. After the word "MACHINE" in the last paragraph substitute a comma for the period, and add the following sentence:

"or by looping the discharge line of the dishwasher as high as possible near the flood level of the kitchen sink where the waste disposer is connected."

k. Section 613. Add a new subsection (d) to read as follows:

(d) The following wet venting conditions are given as examples of common conditions used in residential construction which are allowed under this code, provided the piping sizes are maintained as required by other sections of this code and the wet vented section is vertical.

1. Single bathroom groups. A group of fixtures located on the same floor level may be group vented but such installations shall be subject to the following limitations:

a. One fixture of two or less units may drain into the vent of a three inch closet branch.

b. One fixture of two or less units may drain into the vent of a one and one-half inch bathtub waste pipe.

c. Two fixtures of two or less units each may drain into the vent of a two-inch bathtub waste serving two or less tubs providing that they drain into the vent at the same location.

2. Common vent. A common vent may be used for two fixtures set on the same floor level but connecting at different levels in the stack providing the vertical drain is one pipe size larger than the upper fixture drain but in no case smaller than the lower fixture drain.

3. Double bathroom group. Where bathrooms or water closets or other fixtures are located on opposite sides of a wall or partition or are adjacent to each other within the prescribed distance such fixtures may have a common soil or waste pipe and common vent. Water closets having a common soil and vent stack shall drain into the stack at the same level.

4. Basement closets. Basement closets or floor drains may be vented by the waste line from a first floor sink or lavatory having a 1½-inch waste and vent pipe.

l. Table 7-1. Change tabulation to read as follows:

Trap Arm	Distance Trap to vent	
	Feet	Inches
1¼	5	0
1½	6	0
2	8	0
3	12	0
4 and larger	12	0

m. Section 1105. Delete entire section and insert in place thereof.

Sec. 1105. Size of building sewers.

The size of any building sewer shall be determined on the basis of the total number of fixture units by such sewer, in accordance with Table 4-3, except that the minimum diameter for any building sewer regardless of the number of fixtures shall be four inches.

n. Appendicies. Appendix A, B, C, D, E, G, H, and I are not approved as rules, however they may be used as a point of reference when circumstances warrant.

5.401—5.499 Reserved.

DIVISION 5

630—5.500(103A) One and two-family dwelling rules and regulations.

5.500(1) *Adoption.* The one and two-family dwelling code, Chapters 2 to 26, Appendices A, and B, 1975 Edition, published under the auspices of the Nationally Recognized Model Code Group listed in Division 1, Part 2, Subrule 5.121(1) of this Code is approved as an optional alternate for one and two-family dwellings to the Uniform Building Code, National Electrical Code, Uniform Plumbing Code and the Uniform Mechanical Code, with the following deletions and amendments.

a. Delete Sec. R-202, including Table 2-A. Insert new paragraphs and Table 2-A to read:

General Design Requirements.

Sec. R-202—Design criteria set forth in Division I of the construction rules and regulations of this code as repeated herein shall apply to one- and two-family dwellings:

Horizontal wind pressure shall be considered as acting upon the gross area of the vertical projection of that portion of the building or structure measured above the average level of the adjoining ground.

Table 2-A. Wind Pressure

Height Zones (Feet)	Wind Pressures-Map Areas Zone 30 (Pounds per sq. ft.)
Less than 30	25
30 to 49	30
50 to 99	40

Roof snow loads shall be required to sustain a minimum snow load of 30 pounds per square foot.

No roof shall be designed for live loads less than the required minimum snow load. Snow loads reduced for each degree of pitch over 20 degrees as determined by the following formula:

$$R_S = \frac{S}{40} - \frac{1}{2}$$

Where:

R_S = snow load reduction in pounds per square foot per degree of roof pitch over 20 degrees.

S=Total snow load in pounds per square foot.

b. Sec. R-216. Smoke Detectors. Delete title and text of Sec. R-216 and insert in place thereof:

Fire warning system.

Sec. R-216. Every dwelling unit shall be provided with approved smoke detectors conforming to U.B.C. standard No. 43.6. Smoke detectors shall be mounted on the ceiling or wall at a point centrally located in the corridor or area giving access to rooms used for sleeping purposes. Care shall be exercised to insure that the installation will not interfere with the operating characteristics of the detector. When actuated the detector shall provide a clear and distinctive alarm.

c. Sec. R-302. Delete second paragraph and insert the following:

The ultimate compressive strength of concrete at 28 days shall be not less than 2000 pounds per square inch.

EXCEPTION: Where weathering may require a higher cement content or grade of masonry as determined by the local building official or others having jurisdiction, such material shall be subject to approval by the authority.

d. Sec. R-304. Delete reference to Table No. 2-A. "as established in Table No. 2-A."

Add a new paragraph to Sec. R-304:

In lieu of structural design when required by Table No. 3-B, the provisions of Division 1 Part 4 Subrule 5.140(1)d may be used when applicable.

e. Sec. R-308. Delete reference to Table No. 2-A in first paragraph and add: "appropriate map in Appendix."

5.500(2) *Application.* The use of the one-and two-family dwelling code as an alternate method of construction for one- and two-family dwellings by a local governmental subdivision (See 630—5.120(103A)) or a manufacturer for use in the construction of factory-built structures under the requirements of Division 5 of this code (See 630—5.600(103A)) voids all provisions of Division 1, Part 4, Division 3 and Division 4 which apply to one- and two-family dwellings.

5.501 to 5.599 Reserved.

JAN 26 1976

INSPECTION DIVISION
J. Douglas Brownrigg, Manager

P. O. BOX 1450
PORTLAND, MAINE 04104
(207) 781-3350

MAINE STATE HOUSING AUTHORITY
James E. Mitchell, Director

Amendments to the Rules and Regulations for Certification of Industrialized Housing, adopted by the Commissioners of the Maine State Housing Authority on August 21, 1975.

1. Article IV, Section 4.1.1, revise to read as follows:

   4.1.1 The 1975 edition of the BOCA Basic Building Code, as adopted by the Building Officials and Code Administrators International, Inc.

2. Article IV, Section 4.1.2, revise to read as follows:

   4.1.2 The 1975 edition of the BOCA Basic Mechanical Code as adopted by the Building Officials and Code Administrators International, Inc. except, in any instance where this code conflicts with the Oil Burning Equipment Code referred to below, the Oil Burning Equipment Code shall apply.

3. Article V, Section 5.5.3. The first sentence of the second paragraph of Section 5.5.3 shall be amended to read as follows:

   The Division shall remove, or cause to be removed, the Seal of Approval from any such industrialized house until it is brought into compliance with these standards, or alternatively, the Division may issue or cause to be affixed, or both, a notice of defect which shall have the same legal effect as the physical removal of the seal from such industrialized house, and which shall remain in effect until such industrialized house is brought into compliance with these standards.

4. Article V, Section 5.6.3.6. There shall be a new section, designated 5.6.3.6, to read as follows:

   5.6.3.6 The time involved in inspecting a manufacturing facility to determine compliance of the product when the Division is acting as the inspection agency.

Exhibit #6, Maryland

State of Maryland Department of Economic & Community Development

Division of Codes Administration

2525 Riva Road, Annapolis, Maryland 21401 • 301—267-5087

Marvin Mandel
Governor

Joseph G. Anastasi
Secretary

December 13, 1975

MEMORANDUM

TO: All Approved Testing Facilities, Approved Manufacturers, and Local Governments
FROM: Willard E. Bryant, Director, Codes Administration
SUBJECT: Revised Codes for Industrialized Buildings

As provided for in Sections 266EE 3(A) and 257J(b) of Article 41 of the Annotated Code of Maryland (1965 Replacement Volume, 1970 Supplement), the Department of Economic and Community Development held a public hearing on the adoption of the 1975 BOCA Basic Building, Plumbing, and Mechanical Codes and the 1975 National Electrical Code.

Based on this public hearing and the advice of the Advisory Commission on Industrialized Buildings and Mobile Homes, the Department has made the following adoptions which are effective as of January 1, 1976.

1. The 1975 editions of the BOCA Basic Plumbing and Mechanical Codes have been adopted without any modification.

2. The 1975 National Electrical Code was adopted with one modification. Section 336.3 has been modified to delete the limitations contained in the initial sentence. The modification reads: "Type NM and Type NMC Cables shall be permitted as follows:"

3. The 1975 edition of the BOCA Basic Building Code has been adopted with certain modifications, only a few of which apply to one and two family dwellings. These are as follows:

   a. Section 316.0. "Physically Handicapped and Aged" is deleted and the Maryland Code for the Handicapped is substituted. Note this does not apply to one and two family units unless they are part of a multifamily project.

   b. Section 625.3. Identification of Hazardous Exits is deleted because it conflicts with the Handicapped Code.

   c. Section 857.5.6.1. Add to item 3 the following "or whose least dimension is 18 inches or more.

(OVER)

e. Section 924.4 Balconies. Add the following sentence: "Because of the danger of deterioration due to weather and lack of adequate maintenance, all structural members supporting balcony decks shall be of metal, reinforced concrete or decay resistant wood such as cedar or cypress or treated wood as approved by the building official.

In Bulletin #6, paragraph 4, issued April 11, 1973, the wind load requirement was specified for all industrialized buildings as requiring design to withstand a 25 lb. per square foot horizontal wind load. For uniformity, this requirement is still retained.

All industrialized buildings fabricated after January 1, 1976 must conform to the above. Approved Test Facilities are requested to review the plans for each manufacturer for which they are the Approved Test Facility and send a letter to this office confirming that the plans have been modified as may be necessary and that future construction will be in compliance with the above 1975 code editions.

Exhibit #7, Maryland

State of Maryland
Department of Economic & Community Development
Division of Codes Administration
2525 Riva Road, Annapolis, Maryland 21401 • 301—267-5087
Marvin Mandel
Governor
Joseph G. Anastasi
Secretary

January 9, 1976

MEMORANDUM

TO: All Approved Testing Facilities, Approved Manufacturers, and Local Governments
FROM: Willard E. Bryant, Director, Codes Administration
SUBJECT: Revised Codes for Industrialized Buildings

Reference is made to our memo with the above subject dated December 18, 1975 which announced the adoption of the 1975 BOCA Basic Building Code.

Although no objection was raised at the time of the public hearing, Section 612.3 contains a major increase in the minimum size of single doors. In the 1972 code cycle, the minimum size for single doors was modified in Section 614.2 to provide not less than 23" clear width, which has resulted in the normal use of 30" wide doors. The new requirement in Section 612.3 is a clear width of not less than 32" and this would have an effect on corridor widths also. It appears that this new requirement came from consideration of increased convenience for wheelchair users, but it is believed that the intent was to exempt one and two family dwellings from this requirement. Numerous calls have been received from manufacturers concerning this increase with request for delay in putting it into effect.

There will be a meeting of our Advisory Commission on February 3, at which time this requirement will be discussed and there is the possibility that the code will be modified to retain the minimum clear width as 28". Pending further advice, which should be issued no later than February 15, Approved Test Facilities and manufacturers are authorized to continue using the clear width of not less than 28" for single doors.

WEB:eb

DEPARTMENT OF LABOR

CONSTRUCTION CODE COMMISSION

GENERAL RULES

Filed with the Secretary of State, October 27, 1976.

These rules take effect 15 days after filing with the Secretary of State.

(By authority conferred on the construction code commission by section 6 of the act No. 230 of the Public Acts of 1972 as amended. being sec. 125.1506 of the Michigan Compiled Laws).

AMENDMENTS AND ADDITIONS TO BASIC CODE

R 408.30411. Title

Rule 411. Section 100.1 of the code is amended to read as follows:

100.1. Title: These rules shall be known as the Michigan building code hereinafter referred to as the basic code. They shall control all matters concerning the construction, alteration, addition, repair, removal, demolition, use, location, occupancy and maintenance of all buildings and structures and their service equipment as herein defined and shall apply to existing or proposed buildings and structures in the state.

R 408.30412. Continuation of existing use.

Rule 412. Section 105.1 of the code is amended to read as follows:

105.1. Continuation of existing use: The legal use and occupancy of any structure existing on the effective date of enforcement or for which it had been heretofore approved, may be continued without change, except as may be specifically covered in the basic code or as may be deemed necessary by the building official for the general safety and welfare of the occupants and the public.

R 408.30413. Building Official.

Rule 413. Section 107.1 of the code is amended to read as follows:

107.1. Building Official: The administration and enforcement of the basic code shall be the responsibility of the enforcing agency in accordance with the act.

R 408.30414. New rules.

Rule 414. Section 108.6 of the code is amended to read as follows:

108.6. New rules: Rules for the use of new materials shall be promulgated in accordance with section 6 of the act.

R 408.30415. Preliminary Inspection.

Rule 415. Section 111.1 of the code is amended to read as follows:

111.1. Preliminary inspection: Before issuing a permit, the building official may examine or cause to be examined all buildings, structures and sites for which an application has been filed for a permit to construct, enlarge, alter, repair, remove, demolish or change the use thereof. He shall conduct such inspections from time to time during and upon completion of the work for which he has issued a permit. He shall maintain a record of all such examinations and inspections and of all violations of the basic code.

R 408.30416. Permits.

Rule 416. Section 114.1 of the code is amended to read as follows:

114.1. Action on application. The enforcing agency shall examine and issue a building permit in accordance with section 11 of the act.

R 408.30417. Fees.

Rule 417. Section 118.1 of the code is amended to read as follows:

118.1. General: A permit to begin work for new construction, alteration, removal, demolition, or other building operation shall not be issued until the fees prescribed by section 22 of the act have been paid to the enforcing agency or other authorized agency of the jurisidiction, nor shall an amendment to a permit necessitating an additional fee, due to an increase in the estimated cost of the work involved, be approved until the additional fee has been paid.

R 408.30418. Certificate of use and occupancy.

Rule 418. Sections 120. 1 and 120.2 of the code are amended to read as follows:

120.1. New buildings: A building or structure hereafter erected shall not be used or occupied, in whole or in part, until the certificate of use and occupancy is issued by the building official in accordance with section 13 of the act.

120.2. Buildings hereafter altered: A building or structure hereafter enlarged, extended, or altered to change from one use group to another or to a different use within the same use group, in whole or in part, shall not be used or occupied until the certificate of use and occupancy is issued by the building official in accordance with section 13 of the act.

R 408.30419. Violations.

Rule 419. Section 122.3 of the code is amended to read as follows:

122.3. Violation penalties: Prohibited acts and penalties shall be in accordance with section 23 of the act.

R 408.30420. Stop-work order.

Rule 420. Sections 123.1 and 123.2 of the code are amended to read as follows:

123.1. Notice to owner: Upon notice from the building official that work on any building or structure is being prosecuted contrary to the provisions of this code or in an unsafe and dangerous manner, such work shall be stopped in accordance with section 12 of the act.

123.2. Unlawful continuance: Any person who shall continue any work in or about the structure after having been served with a stop-work order, except such work as he is directed to perform to remove a violation or unsafe conditions, shall be subject to penalty provisions under section 23 of the act.

R 408.30421. Scope.

Rule 421. Section 300.1 of the code is amended to read as follows:

300.1. Scope. The provisions of this article shall control the division of the local municipality into fire limits as determined by the governing bodey of each locality within the state and the general limitations of height and area of all buildings hereafter erected, and extensions to existing buildings hereafter altered or enlarged as affected by the fire and life hazard incident to type of construction, use group, density of development, exterior exposure, and accessibility of buildings and structures to fire fighting facilities and equipment.

r 408.30422. Fire limits.

301.2. Fire limits: The fire limits shall compreise the areas containing congested business, commercial, manufacturing and industrial uses or in which such uses are developing, and the limits of such areas are as determined by the governing body of the locality.

R 408.30427. Accessibility for use by the physically handicapped and aged.

Rule 427. Section 316 of the code is added as follows:

316.0. Provisions for barrier free design. This section applies to all levels and areas used by the general public, employees, persons visiting or on the premises for any reason, and to all use groups except R-3, R-4, and T. Areas of a building or structure, such as mechanical equipment rooms, machine rooms, and penthouses housing equipment, may be excluded from the requirements.

Buildings and structures, and facilities within buildings and structures, meeting the requirements for barrier free design shall be cleary identified with the international symbol of accessibility for the handicapped.

316.1. Special requirements.

316.11. Use group R-1. At least 1 bed room unit for ever 25 bedroom units or fraction thereof in use group R-1 buildings shall be made accessible to, and usable by, physically handicapped persons. The bedroom units allocated for the physically handicapped shall be proportionately distributed throughout the range of size and price of the total bedroom units.

316.12. Use group R-2. In addition to multiple dwellings in this use group, the requirements for barrier free design shall apply to complexes and group housing. The requirements shall not apply to dormitories, lodging houses, and boarding houses having accommodations for less than 20 individuals. At least 1 dwelling unit for every 25 dwelling units, or fraction thereof, shall be accessible to and usable by, physically handicapped persons, and shall be proportionately distributed throughout the ranges of sizes of the total dwelling units.

316.2. Building approaches. At least 1 primary entrance at a grade floor level of a building or structure shall be accessible by means of a walk uninterrupted by steps or abrupt changes in levels and with a width of not less than 5 feet and a gradient of not more than 1 foot in 20 feet. When practical difficulties are involved in carrying out this section, the gradient may be changed, but not to exceed the requirements for ramps. In this case, the walk shall comply with all of the requirements for ramps in section 615.0.

316.3. Off-street parking. Off-street parking facilities required for buildings under separate ordinances or zoning laws shall be provided in accordance with the following table and identified by signs as being reserved for physically handicapped persons. Signs shall be located approximately 6 feet above grade. Each reserved parking space shall be not less than 12 feet wide. Where a curb exists between a parking lot surface and a sidewalk surface, an inclined approach or a curb cut with a gradient of not more than 1 foot in 12 feet and a width of not less than 4 feet shall be provided for wheelchair access. Parking spaces for the physically handicapped shall be located as close as possible to walkways and entrances. Signs shall be provided when necessary, indicating the direction of travel to an accessible entrance.

Total Parking in Lot	Required number of Accessible Spaces
Up to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2% of total
Over 1,000	20 plus 1 for each 100 over 1,000

316.4. Interior access. Interior access to all levels required to be accessible to handicapped persons shall be provided by ramps meeting the requirements of section 615 or elevators. In addition, access to all points on each level shall be provided by means of passageways, corridors, and doorways meeting the requirements of sections 610 and 612. In R-2 structures, laundry and storage facilities shall be accessible from the handicapped units.

316.5. Access to electrical switches, controls, fire alarms, and convenience outlets. Light switches, controls, and fire alarms shall be located not more than 48 inches above the floor. Convenience outlets located within living units shall be located not less than 18 inches above the floor.

316.51. Where a public or pay phone is installed, the following shall apply:

(a) Five percent or not less than 1 telephone shall be accessible to, and usable by, physically handicapped persons.

(b) The telephones shall have the coin slot not more than 54 inches above the floor.

(c) Telephones shall be equipped to assist persons with a hearing disability and so designated.

316.6. Elevators. Elevators that are installed in multi-story buildings in order to provide interior access for the physically handicapped individuals shall meet the following requirements:

(a) The elevator cab shall have a clear area of not less than 25 square feet, with a minimum dimension of 55 inches. Elevators serving not more than 3 stops may have a clear area of 22 square feet, with minimum dimensions of 48 inches from rear cab wall to inside face of car doors.

(b) The elevator door shall have a minimum clear opening width of 36 inches.

(c) The corridor landing buttons shall be located not more than 55 inches above the floor.

(d) Metal braille numbers shall be provided adjacent to cab control buttons and switches, and shall be located not more than 60 inches above the floor.

(e) Metal tactile numbers shall be provided for floor designation on each floor, 60 inches above the floor, on the fixed point at the open side of the elevator door or on both sides, when center opening doors are used.

(f) At least 1 handrail shall be provided and located at normal handrail height within the elevator car.

(g) Elevator doors shall operate automatically, and the leading edge of car doors shall be equipped with a door safety shoe reversing device and a light ray door reversing device or other type proximity sensing reversing device.

(h) An audible gong shall sound when the elevator arrives at the ground floor landing where access to the building for the physically handicapped has been provided.

316.7. Access to plumbing fixtures and kitchens. All toilet rooms with group facilities shall meet the requirements of sections 316.71, 316.72, 316.73, 316.74, and 316.75. Other toilet rooms shall meet the requirements of sections 316.72, 316.73, 316.74, 316.75, 316.76, and subdivisions (a), (d), and (e) of section 316.78. In all required toilet rooms, a minimum of 2% of toilet fixtures, but not less than 1 fixture of each type, shall meet these requirements.

316.71. (1) Where water closet stalls are provided, stalls for physically handicapped persons shall be not less than 42 inches wide by 72 inches deep. If the stall has a door, it shall swing out or slide and shall provide a clear opening of not less than 32 inches. When it is necessary to install the opening on the side instead of the front of the stall, the depth of the stall shall be a minimum of 84 inches. There shall be a minimum clear floor space of 48 inches by 48 inches in the front of the stall opening.

(2) Handrails shall be provided on each stall side wall. Handrails shall be not less than 48 inches long and 33 inches above and parallel to the floor, with the front end position 24 inches in front of the water closet. Each handrail shall be 1-1/2 inches outside diameter, with 1-1/2 inch clearance between rail and wall, and shall be anchored so as to withstand a force of 300 pounds.

316.72. At least 1 water closet shall have a narrow understructure that recedes sharply from the front and is centered at the rear wall, with the seat 17 inches above the finished floor. The trap shall not extend in front of, or be flush with, the lip of the bowl. The flush control shall be mounted no higher than 36 inches above the floor. The toilet paper holder shall be mounted within arm's reach of a person using the water closet, and shall not impede operation of the wheelchair.

316.73. When urinals are provided, there shall be at least 1 wall-mounted urinal, with the opening of the lip a maximum of 15 inches above the finished floor or shall be floor-mounted and level with the finished floor. Urinal shields shall not extend beyond the lip. If the urinal is enclosed in a stall, the width of the stall shall be a minimum of 36 inches and meet the depth and opening requirements of subsection (1) of section 316.71.

316.74. There shall be at least 1 lavatory that projects a minimum of 18 inches from the wall and is wall-mounted, with the bottom edge at least 28 inches above the finished floor and with an opening at least 26 inches wide. Maximum water temperature to outlets shall not exceed 120 degrees Fahrenheit. Faucets shall be lever or push-button type. When mounted in a counter, the rim shall be not more than 3 inches from the front.

316.75. Toilet room accessories, such as shelf, towel dispenser, electric hand dryer, sanitary napkin dispenser, disposal unit, and clothes hook, shall be mounted so that the bottom edge is no higher than 40 inches above the floor. The towel dispenser shall be mounted within arm's reach of a handicapped individual seated in a wheelchair in front of the lavatory. At least 1 mirror shall be full length or shall be mounted with the lower edge no more than 36 inches above the floor.

316.76. Handrails, water closets, lavatories, and accessories for small children, such as elementary school children, shall meet the requirements for their use.

316.77. Drinking fountains or other water dispensing means shall be accessible to, and usable by, handicapped persons. Drinking fountains shall be wall-mounted or semi-recessed. Fully recessed drinking fountains are not acceptable. If a drinking fountain is set in an alcove, the width of the recess shall be at least 3 feet. Drinking fountains shall have the bottom edge of the apron at least 28 inches above the finished floor, shall be mounted with an upper edge of the fountain base 36 inches above the floor, and shall be hand operated, with spout and controls at the front. The controls shall be push-button or lever type. A floor-mounted drinking fountain shall have a side-mounted fountain meeting the above requirements.

316.78. Bathroom for group R-1 and R-2 structures. Each unit designated for the physically handicapped, as specified in sections 316.11 and 316.12, shall contain 1 bathroom that complies with the following requirements:

(a) A minimum of 5 feet by 5 feet clear floor space shall be provided. When the fixtures and controls of the bathtub, water closet, and lavatory, in that order, are located on the same wall, the clear space from the front of the water closet to the opposite wall may be reduced to 4 feet. The entrance door shall open out or slide, with a minimum clear opening of 32 inches.

(b) Bathtub water and waste controls shall have lever handles. Maximum water temperatures to water outlets shall not exceed 120 degrees Fahrenheit. The bathtub rim shall be no higher than 20 inches and no lower than 16 inches, and the interior length shall not exceed 5 feet 6 inches. A handrail, at least 48 inches long, 5 inches above the rim, and centered on the back wall, shall be 1-1/2 inches in outside diameter, with 1-1/2 inches clearance between rail and wall, and shall be fastened at ends and center so as to withstand a force of 300 pounds. The handrail and floor of the tub shall be nonslip when wet. Fixed tub enclosures are not allowed.

(c) A duplex electrical receptacle shall be provided within easy reach of a person seated in a wheelchair in front of the lavatory. The water closet, lavatory, and accessories shall otherwise conform to sections 316.72, 316.74, and 316.75.

(d) When a bathtub or water closet is in a separate room from the lavatory, the clear space between the front edge of the fixtures and the opposite wall shall be no less thsn 48 inches.

(e) When water closets do not have walls on each side for mounting handrails, a handrail shall be placed on the existing side wall space, if there is one, that is 42 inches long or no less than the wall length, and 1 handrail shall be placed on the wall behind the water closet 3 inches above the tank top or 33 inches above the finished floor for water closets without tanks. The design of handrails shall meet the requirements of subsection (2) of section 316.71.

(f) Where showers only are provided, the shower cubicle shall measure 3 feet by 3 feet inside dimensions. The threshold shall be no higher than 2 inches. The soap dish shall be mounted on the back wall and centered at 36 inches above the floor. The floor inside and outside the cubicle shall have a nonslip surface when wet. There shall be a clear floor space of at least 5 feet by 5 feet outside of the cubicle.

316.79. Kitchens for group R-1 and R-2 structures. Each unit containing kitchens, and designated for physically handicapped as specified in sections 316.11 and 316.12, shall contain 1 kitchen that shall comply, or be adjustable to comply, with the following requirements.

(a) A minimum of 5 feet clear floor space shall be provided between opposite cabinets or cabinets and walls, except that, where a toe space of 8-3/4 inches high by 6 inches deep is provided on each side, the clear space may be reduced to 4 feet.

(b) Counter height shall be 34 inches if fixed, or may be adjustable.

(c) The sink shall be a maximum of 6 inches in depth, with lever-type controls. There shall be a space at least 28 inches above the finished floor, 26 inches wide and 12 inches deep under the sink. Maximum water temperatures to water outlets shall not exceed 120 degrees Fahrenheit.

(d) A work space shall be provided that is at least 26 inches wide, and has a clear opening 26 inches wide, 28 inches high, and 24 inches deep. This work space may be provided by an adjustable counter or pull-out sections.

316.8. Seating accommodations: Places of assembly with fixed seating arrangements shall provide viewing positions for persons in wheelchairs in accordance with the following schedule.

Capacity of Assembly Space	Number of Viewing Positions
Up to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2% of total
Over 1,000	20 plus 1 for each 100 over 1,000

Viewing positions for wheelchair persons shall be provided in a reasonable and convenient section or sections of the facility by providing level clear space, devoid of any fixed seating arrangements.

These positions shall be located so as not to interfere with egress from any row of seats, and shall not infringe upon aisle requirements.

There shall be no steps in the aisles or in the access route used by the physically handicapped to reach the performance viewing positions, but the aisles may be inclined.

316.9. Checkout lanes and turnstiles. Buildings which include checkout lanes shall provide, on each floor, at least 1 checkout lane which is not less than 36 inches wide.

Buildings which utilize turnstiles to control pedestrian traffic shall provide a clearly marked alternate and independent access route which is at least 36 inches wide.

R 408.30431. High rise buildings.

Rule 431. Sections 431.1, 431.2, and 431.3 are amended to read as follows:

431.1. Applicability: The provisions of this section shall apply to all buildings of the following use groups when such buildings are more than 40 feet in height:

1. Use group B (business)
2. Use group R-1 (residential, hotel)
3. Use group R-2 (residential, multi-family)

431.2. Compartmentation option: Buildings designed in accordance with the early fire control option, as set forth in section 431.3, are not subject to the provisions of this section. Buildings more than 75 feet in height shall be designed in accordance with section 431.3.

431.3. Early fire control option: Buildings designed in accordance with the compartmentation option, as set forth in section 431.2, are not subject to the provisions of this section. Buildings more than 75 feet in height shall be designed in accordance with this code and the mechanical code listed in appendix B.

R 408.30443. Means of egress.

Rule 443. Sections 612.3, 612.7, and 612.8 are amended to read as follows:

612.0. Means of egress doorways.

612.3. Size of doors. A single door opening shall provide a clear width of not less than 32 inches and a maximum width of 48 inches, except that, in 1- and 2- family dwellings (use group R-3 and R-4), the clear width shall be not less than 28 inches. When the doorway is divided into 2 or more separate openings, the minimum clear width of each opening shall be not less than 32 inches, and each opening shall be computed separately in determining the number of required units of exit width. A door 40 inches in width shall be deemed the equivalent of 2 full units of exit width. The height of doors shall not be less than 6 feet 8 inches.

612.7. Doorway grading. At the exit door, the level of the exterior landing surface shall not be elevated from the floor inside the door, nor shall it be more than 2 inches below the floor inside the door. A threshold at a grade floor exitway shall be not more than

1/2 inch high, with bevelled edges. The floor and exterior surface shall not have a grade of more than 2% for a distance of 5 feet either side of the door.

Exception: 1- and 2- family dwellings (use group R-3 and R-4) and use group T.

612.8. Doors in series. Doors in series may be operated by time delay closing devices, or shall be spaced apart 7 feet in a closed position to allow for use by persons in wheelchairs.

Exception: Powered-operated doors, 1- and 2- family dwellings (use group R-3 and R-4) and use group T.

R 408.30445. Ramps.

Rule 445. Section 615.0 is amended to read as follows:

615.0. Exitway ramps:

615.1. Ramps with a gradient of not more than 1 in 12 may be used as an exitway component and shall comply with all the applicable requirements of required interior stairways as to enclosure, capacity, and limiting dimension, except that, in existing buildings and where specified in article 4 for special uses and occupancies, larger gradients may be permitted, but in no case greater than 1 in 10.

615.2. Handrails. Handrails shall be provided on both sides of ramps not less than 30 inches nor more than 33 inches in height, measured from the surface of the ramp. Handrails shall be smooth and shall extend 18 inches beyond the top and bottom of the ramp and return to walls or posts at the ends.

615.3. Landings. Landings shall be provided at all ramp points of turning, entrance, exiting, and doors, and at a minimum of 30 foot intervals. All landings shall be of such length as to provide a minimum of 42 inches clear from any door swing to the ramp. Minimum landing length shall be 42 inches, and the bottom landing of any ramp or set of ramps and landings of a straight run shall be at least 72 inches.

R 408.30446. Interior exitway stairways.

Rule 446. Section 616.5.1 and 616.6.1 are amended to read as follows:

616.0. Interior exitway stairways:

616.5.1. (1) Handrails may project not more than 3-1/2 inches into the required stair width.

(2) Handrails shall be not less than 30 inches nor more than 34 inches, measured vertically, above the nosing of the treads.

(3) Handrails shall extend 18 inches beyond the top and bottom step if a guard or wall exists, and shall be returned to walls or posts at the ends of the stairways.

(4) Handrails shall be designed to withstand an applied load of 200 pounds in any direction at any point.

616.6.1. Width. The width of every exitway door to or from a stairway shall be not less than the number of units of exit width required for the capacity of the stairway which services the floor or area from which the exitway door leads, but not less than 32 inches clear.

R 408.30448. Hazards in means of egress.

Rule 448. Section 625 is amended as follows:

625.0. Hazards in means of egress:

625.1. Floor openings. A portion of the means of egress shall not have clear width reduced to less than 32 inches by floor or walkway openings or other temporary obstructions that would allow exiting by persons confined to wheelchairs.

625.2. Protrusions. A projection shall not reduce the allowable headroom to less than 6 feet 8 inches in corridors, door openings, or lines of egress.

625.3. Identification of hazardous exits. Doors leading to dangerous areas, such as fire escapes, loading platforms, switch rooms, and mechanical rooms, shall be equipped with knobs, handles, or push bars that are knurled.

625.4. Floor surfaces. All floors and means of egress shall have a surface that is nonslip.

R 408.30456. Human impact loads.

Rule 456. Section 857.5.6.1. of the code is amended to read as follows:

857.5.6.1. Specific hazardous locations: The following shall be considered specific hazardous locations for purposes of glazing:

1. Glazing in ingress and egress doors.

2. Glazing in fixed and sliding panels of sliding type doors (patio and mall type).

3. Glazing in storm doors.

4. Glazing in all unframed swinging doors.

5. Glazing in shower doors and tub enclosures.

6. Glazing, 300 square inches or larger, in fixed panels within 60 inches horizontally of the nearest vertical edge of the ingress or egress door.

7. Glazing, 300 square inches or larger, in fixed panels with a bulkhead less than 36 inches above the finish floor level which, because of their size or design, may be mistaken as a means of ingress or egress.

R 408.30458. Fire Suppression Systems.

Rule 458. Sections 1202.6 and 1202.10 of the code are amended to read as follows:

1202.6. Business (B) use: In all buildings or structures of use group B (business) when more than 75 feet in height (See section 431.0).

1202.10. Residential (R-1 and R-2) uses: In all buildings or structures of use groups R-1 (residential, hotels) R-2 (residential, multi-family) when more than 75 feet in height (see section 431.0).

R 408.30460. Automatic fire alarm systems.

Rule 460. Section 1216.5 of the code is amended to read as follows:

1216.5. Manual pull stations: A manual fire alarm system, conforming to the requirements of section 1217.0, shall be installed in conjunction with an automatic fire alarm system.

Exception: Automatic fire alarm system for use groups R-2, R-3, and R-4, as required by section 1216.3.4.

R 408.30461. Manual fire alarm systems (pull stations).

Rule 461. Section 1217.3.1 of the code is amended to read as follows:

1217.3.1. Automatic alarm system: In all buildngs required to be equipped with an automatic fire alarm system (see section 1216.5).

Exception: Automatic fire alarm system, as required by section 1216.3.4, for dwelling units in use groups R-2, R-3, and R-4.

R 408.30495. Prefabricated construction.

Rule 495. Section 1900.1 of the code is amended to read as follows:

1900.1. Scope. The provisions of this article shall govern the materials and methods of construction of all prefabricated buildings, prefabricated subassemblies, and prefabricated building units as herein defined. This article shall not govern the materials and methods of construction of mobile homes.

Note D: Mass and industrialized production. Prefabrication, as herein used, is not restricted to housing for 1- and 2- family dwellings, but applies to all prefabricated forms of building elements and assembled construction units intended for both structural and service equipment purposes in all buildings of all use groups. The provisions of this article are supplemental to the structural, mechanical, and fire resistive requirements of the basic code. Prefabrication covers the precutting and assembling of individual elements, either in the shop or at the site before erection in the building structure. Prefabricated shop assemblies may be shipped in structurally complete units ready for installation in the building structure or in knockdown and packaged form for assembly at the site. There is no distinction in the application of

the basic code requirements for controlled or ordinary materials as defined in sections 201.0, 721.0, and 800.0, to either prefabricated or at-site construction. However, the use of controlled materials procedure permits greater latitude for the development of industrialized shop production methods.

R 408.30497. Appendix B.

Rule 497. Appendix B, Heating, Unclassified-Miscellaneous, is amended to read as follows:

Heating

Boiler Code and Unfired Pressure Vessel Code.....ASME-1974
Mechanical Equipment and piping
Basic Mechanical Code.....BOCA-1975
Basic Plumbing Code.....BOCA-1975

Unclassified-Miscellaneous

Basic Housing-Property Maintenance Code.....BOCA-1975
Building Materials and Equipment-
Coordination of Dimensions of.....ANSI A62.1-1957
Demolition-Safety Requirements for.....ANSI A10.6-1969
Fallout Shelters-Suggested Building
Code Provisions for.....DOD-OCD-TR-36-1966
Flood Proofing Regulations.....U.S.Army-1972
Floor and Wall Openings, Railings, and
Toe Boards-Safety Requirements for.....ANSI A12.1-1973
Installing Vitrified Clay Sewer Pipe.....ASTM C12-74
Loads, Minimum Design in Buildings and other
Structures-Building Code Requirements for....ANSI A58.1-1972
Safety Requirements for Shoring Concrete
Formwork-Recommended.....SSSI-1973
Signs and Outdoor Display Structures-
Building Code Requirements for.....ANSI A60.1-1949
Waterproofing and Drainage of Floors-
Manual on.....NFiPA 92M-1972
Unclassified Miscellaneous Accepted Engineering Practice Standards shall include those contained in the One - and Two Family Dwelling Code, BOCA, AInA, SSBC, ICBO 1975 edition, except section R-209, Part IV, and Part V; and with exceptions noted, it is incorporated herein by reference and supplemented with section 857.5.6. of the Basic Building Code, 1975 edition. The code is available for inspection at the Lansing office of the department of labor, bureau of construction codes. The code may be purchased from the Building Officials and Code Administrators International, Incorporated, 1313 East 60th Street, Chicago, Illinois 60637, or from the Michigan Dept. of Labor, Bureau of Construction Codes, 7150 Harris Drive, Lansing, Michigan 48926, at a cost of $7.00.

MICHIGAN DEPARTMENT OF LABOR

CONSTRUCTION CODE COMMISSION

PART 7. PLUMBING CODE RULES

DEPARTMENT OF LABOR
BUREAU OF CONSTRUCTION CODES
State Secondary Complex
7150 Harris Drive, P. O. Box 30015
Lansing, Michigan 48909

DEPARTMENT OF LABOR

CONSTRUCTION CODE COMMISSION

PLUMBING CODE RULES

Filed with the Secretary of State on May 31, 1977.
These rules take effect 15 days after filing with the Secretary of State

(By authority conferred on the construction code commission by section 6 of Act No. 230 of the Public Acts of 1972, being §125.1506 of the Michigan Compiled Laws)

Rules 701, 711, 712, 722 to 725, 726, 731, 741 to 743, 751 to 755, 761, 762, 781 to 784, 791 to 793, 795, and 796 of the rules of the construction code commission entitled "Part 7. Plumbing Code", being R 408.30701, R 408.30711, R 408.30712, R 408.30722 to R 408.30725, R 408.30726, R 408.30731, R 408.30741 to R 408.30743, R 408.30751 to R 408.30755, R 408.30761, R 408.30762, R 408.30781 to R 408.30784, R 408.30791 to R 408.30793, R 408.30795, and R 408.30796 of the Michigan Administrative Code and appearing on pages 7474 to 7480 of the 1974 Annual Supplement to the Code are amended and rules 714, 715, 725a, 733, 734, 736, 738, 741a to 741c, 743a to 750, 752a, 757 to 759, 763 to 780a, 781a to 781c, and 785 to 788a are added to read as hereinafter set forth.

Rule 713 of such rules, being R 408.30721 of the Michigan Administrative Code and appearing on page 7475 of the 1974 Annual Supplement to the Code, is rescinded.

PART 7. PLUMBING CODE

R 408.30701. Applicable code.

Rule 701. Rules governing the installation, replacement, alteration, relocation, and use of plumbing systems or plumbing materials shall be those contained in the BOCA Basic Plumbing Code, 1975 edition, except sections P-102.0, P-105.0, P-302, P-501.2, P-908.2, P-912.2, P-914.2, P-915.0, P-1101.5, P-1205.2, P-1400.0 to P-1404.0, P-1500.0 to P-1511.4, P-1605.8, P-1605.11.6, and P-1700.0 to P-1705.2; and with exceptions noted, they are incorporated herein by reference. The code is available for inspection at the Lansing Office of the Michigan Department of Labor. The code may be purchased from the Building Officials and Code Administrators, International, Incorporated, 1313 East 60th Street, Chicago, Illinois 60637 or from the Michigan Department of Labor, Bureau of Construction Codes, Michigan Secondary Complex, 7150 Harris Drive, Lansing, Michigan 48926 at a cost of $9.50 each plus mailing costs.

AMENDMENTS AND ADDITIONS TO BASIC PLUMBING CODE

R 408.30711. Title.

Rule 711. Section P-100.3 of the code is amended to read as follows:

P-100.3. Title. This part shall be known as the Michigan plumbing code and is hereinafter referred to as the plumbing code or this code.

R 408.30712. Violations.

Rule 712. Section P-117.0 of the code is amended to read as follows:

P-117.0. Violations. Written notice of any violation of this code shall be given by the administrative authority to the violator within 7 days thereof, upon his failure to remove the violation within a reasonable time, prosecution for violation of this code shall be commenced against him.

R 408.30714. Definition of plumbing terms.

Rule 714. Section P-201.0 of the code is amended to read as follows:

P-201.0. Definition of plumbing terms.
Administrative authority. The individual official, board, department, or agency established and authorized by a state, county, city, or other political subdivision created by law to administer and enforce the provisions of the plumbing code as adopted or amended; except when used in sections P-301.3.1, P-301.3.2, P-401.1, P-405.2.2, P-405.2.8, P-405.3.3, P-405.5.1, P-406.8, P-502.6, P-502.7, P-602.3.3, P-602.5.1, P-602.5.4, P-916.0, P-1002.3.1, P-1216.2, P-1605.11.4; it means the state administrative authority and not a local authority.
(All other definitions within the section remain the same.)

R 408.30715. Plans, prior approval required.

Rule 715. Section P-112.31 of the code is added to read as follows:

P-112.31. Plans, prior approval required. Plans submitted for approval for hospitals, nursing homes, and homes for the aged shall be approved by the department of health, or the licensing or certifying agency having jurisdiction, or both, prior to submission to the administrative authority.

R 408.30721. Rescinded.

R 408.30722. New buildings.

Rule 722. Section P-301.1 of the code is amended to read as follows:

P-301.1. New buildings. All plumbing materials and plumbing systems or parts thereof installed hereafter shall meet the provisions of this code.

R 408.30723. Existing buildings.

Rule 723. Section P-301.2 of the code is amended to read as follows:

P-301.2. Existing buildings. In existing buildings or premises in which plumbing installations are to be altered, renovated, or replaced, such new materials and work shall meet the provisions of this code. Where the administrative authority shall find that the full performance of bringing such work into compliance with all requirements of this code would result in exceptional or undue hardship by reason of excessive structural or mechanical difficulty, or impracticability, a deviation

may be granted by the administrative authority only where, and to the extent, necessary to relieve such exceptional or undue hardship, and only where, and to the extent, such deviation can be granted without impairing the intent and purpose of this code. A record, open to inspection by the public, shall be maintained by the administrative authority of each and every deviation allowed under the terms of this section.

R 408.30724. Public systems available.

Rule 724. Section P-308.2 of the code is amended to read as follows:

P-308.2. Public systems available. A public water supply system and or public sewer system shall be deemed available to premises used for human occupancy if such premises are within 200 feet, measured along a street, alley, or easement, of the public water supply or sewer system, and a connection conforming with the standards set forth in this code may be made thereto.

R 408.30725. Industrial-commercial chemical waste information.

Rule 725. Section P-309.3 of the code is added to read as follows:

P-309.3. Industrial-commercial chemical waste information. When plans of plumbing installations that involve industrial or commercial type wastes are submitted for approval, complete process information shall accompany the plans. The information shall include without limitation the following:

(a) Description of process yielding the waste.

(b) Composition and concentration of chemical mixtures in the process.

(c) Composition of wastes and concentration of constituents.

(d) Quantities of wastes to be treated and rates of discharge to treatment equipment.

(e) Capacity of largest process tank or tanks that will be simultaneously discharged.

(f) Water demands of the industrial waste producing process.

(g) Description of waste treatment equipment to be used, including capacities, methods of treatment, quality of effluent, nature and disposition of products resulting from treatment.

R 408.30725a. Radioactive material.

Rule 725a. Section P-309.4 of the code is added to read as follows:

P-309.4. Radioactive material. Possession of radioactive material is regulated by state or federal license. The disposal of radioactive material shall not create a hazard to operational or maintenance personnel of the institution or to the public. Radioactive waste disposal is controlled by the Michigan Department of Public Health by conditions for disposal in a radioactive material license issued under authority of Act No. 305, of the Public Acts of 1972, being §325.451 et seq. of the Michigan Compiled Laws and the ionizing radiation rules, being R 325.5001 et seq. of the Michigan administrative code, or is controlled by the U.S. Nuclear Regulatory Commission by conditions for disposal in a license issued under authority of the Atomic Energy Act of 1954 and Title 10 code of Federal Regulations, part 20.

R 408.30726. Freezing.

Rule 726. Section P-313.3 of the code is amended to read as follows:

P-313.3. Freezing. Water service piping and sewers shall be installed below recorded frost penetration. In climates with freezing temperatures, plumbing piping in exterior building walls shall be adequately protected against freezing by insulation or heat or both.

R 408.30731. Water service pipe.

Rule 731. Section P-405.1.2 of the code is amended to read as follows:

P-405.1.2. Water service pipe. Water service pipe shall be made of asbestos cement pipe, brass pipe, copper pipe, copper tube, cast iron water pipe, open-hearth iron pipe, plastic pipe, or steel pipe. Copper tube when used underground shall have a weight not less than copper water tube type L. All threaded ferrous pipe and fittings shall be galvanized or cement lined. When used underground in corrosive soil or fill, the piping material or protective coating or covering shall be as approved by the construction code commission.

R 408.30733. Glass pipe.

Rule 733. Section P-501.12 of the code is added to read as follows:

P-501.12. Glass pipe. Joints in glass piping shall be made with couplings or gasket with corrosion resistant compression clamp, and installed in accordance with the manufacturer's instructions.

R 408.30734. Grooved joints, rubber gasket and clamp.

Rule 734. Section P-501.19 of the code is added to read as follows:

P-501.19. Grooved joints, rubber gasket, and clamp. Grooved joints shall consist of 2 properly prepared, grooved, ends of pipe or fittings sealed by an elastomeric gasket, and secured in place by a specially designed clamp for potable water and storm water.

R 408.30736. Prohibited connections on water systems.

Rule 736. Section P-506.0 of the code is added to read as follows:

P-506.0. Prohibited connections on water systems. Branch connections to water distribution piping shall only be made with fittings meeting the appropriate material standard. So called saddle fittings and connections are prohibited.

R 408.30738. Short sweeps permitted.

Rule 738. Section P-602.2.2 of the code is amended to read as follows:

P-602.2.2. Short sweeps permitted. Short sweeps not less than 3 inches in diameter may be used in soil and waste lines where the change in direction of flow is from either the horizontal to the vertical or from the vertical to the horizontal, and may be used for making necessary offsets between the ceiling and the next floor above. Short sweep quarter bends shall not be used at the base of stacks.

R 408.30741. Prohibited fittings.

Rule 741. Section P-602.3.1 of the code is amended to read as follows:

P-602.3.1. Prohibited fittings. A tee branch shall not be used as a drainage fitting. A fitting or connection which has an enlargement chamber or recess with a ledge or shoulder, or reduction in pipe area shall not be used. Running threads, bands, or saddles shall not be used. Drainage or vent piping shall not be drilled, tapped, or welded.

R 408.30741a. Drainage piping in food storage areas.

Rule 741a. Section P-602.34 of the code is added to read as follows:

P-602.34. Drainage piping in food storage areas. Refer to department of health regulations which prohibit the installation of exposed soil or waste piping above any working, storage, or eating surfaces in kitchens, dining rooms, or food storage areas in food service establishments.

R 408.30741b. Building sumps in single and 2 family dwellings.

Rule 741b. Section P-602.5.3 of the code is amended to read as follows:

P-602.5.3. Building sumps in single and 2 family dwellings. A sump which receives only sub-soil discharge or other clear water wastes, such as condensate or cooling water, shall not be required to have either a gas-tight cover or a vent. Laundry wastes shall be excluded from such sumps.

If a basement or cellar water closet discharges into the building sump of a single or 2 family dwelling, the sump shall be individually vented by means of 2 inch vent.

If no water closet is connected to the building sump, the sump shall be vented either by means of a 2 inch underground fixture waste, terminating in a stack, or a separate 2 inch underground vent changed to a 1 1/2 inch stack at floor level and increased to a 3 inch at the roof, or a 2 inch vent shall be led outside the structure to terminate not less than 1 foot above grade and not less than 3 feet from a door, window or air duct. The vent shall not terminate in an unventilated space under a porch or terrace, nor in an inaccessible place. The vent terminal shall be equipped with a vent cap.

R 408.30741c. Food handling establishments.

Rule 741c. Section P-701.1.1 of the code is amended to read as follows:

P-701.1.1. Food handling establishments. Establishments or institutions, other than private dwellings, shall have the drains from all fixtures, appliances, counters, compartments, storage rooms, refrigerator receptacles, appurtenances, or devices, which are used, designed, or intended to be used in the manufacture, preparation, processing, storage, or handling of food, ice, or drinks, connected to appropriately located

indirect waste pipes which, in turn, shall discharge atmospherically over an indirect waste sink or other acceptable receptacle, except that dishwashing sinks, dishwashing machines, or culinary sinks not used for soaking or washing ready-to-serve foods, are excluded from the foregoing requirement.

The waste from dishwashing sinks and machines, or culinary sinks directly connected to the drainage system shall have a properly vented floor drain connected into the same branch, within 3 feet of the fixture.

R 408.30742. Swimming pools.

Rule 742. Section P-701.1.6 of the code is amended to read as follows:

P-701.1.6. Swimming pools. Pipes carrying waste water from swimming or wading pools, including pool drainage, back wash from filters, and water from floor drains which serve walks around pools, may be installed as piping for an indirect waste. Where the recirculation pump is used to discharge waste pool water to the drainage system, the pump discharge line shall be installed to convey an indirect waste to the sewer.

R 408.30743. Air gap or air break required.

Rule 743. Section P-701.2 of the code is amended to read as follows:

P-701.2. Air gap or air break required. All indirect waste piping shall discharge into the building drainage system through an air gap or air break, as set forth in section P-701.1 of this code.

R 408.30743a. Automatic laundry machines.

Rule 743a. Section P-701.3.6 of the code is amended to read as follows:

P-701.3.6 Automatic laundry machines. All automatic laundry machines shall be indirectly wasted. An automatic laundry machine waste shall not discharge into a bathroom fixture, kitchen sink, or other fixture used for culinary, utensil, or body cleansing.

R 408.30743b. Water supply required.

Rule 743b. Section P-701.6 of the code is added to read as follows:

P-701.6. Water supply required. Water shall be individually supplied to all indirect waste receptors so as to maintain trap seal and cleansing facilities.

R 408.30744. Supermarket indirect waste system.

Rule 744. Section P-703.0 of the code is added to read as follows:

P-703.0. Supermarket indirect waste system. In supermarkets which have no basements, instead of discharging all branches from indirect waste sinks, air-gapped standpipes, and similar waste piping to a sanitary

system, it will be permissible to assemble all such wastes into an underground system which discharges to an interceptor.

The interceptor shall be of water-tight construction at least 4 feet deep, of vitrified clay pipe or equal. It shall have a minimum discharge pipe of 3 inches in diameter to the sanitary system, with a cleanout at floor level, on the outlet leg. The interceptor shall be a minimum of 24 inches in diameter. There shall be a 12 inch dirt pocket at the base, the water seal shall be 4 inches, the top shall have a solid cover and the interceptor shall be vented by a fresh air vent or stack whose diameter is 3 inches.

The drains on the fixture side of the interceptor shall discharge above the liquid level of the interceptor. The underground drain shall be not less than 3 inches in diameter and shall terminate in a vent stack the minimum size of which is 3 inches. All floor sinks, fixtures, or other trapped receptacles the waste from which must discharge with a vertical branch connected to the underground drain, shall be vented. A vent from the indirect waste system shall not be connected with a vent on the regular system of the premises.

R 408.30745. Scope.

Rule 745. Section P-900.1 of the code is amended to read as follows:

P-900.1. Scope. This article shall control the selection of piping, tubing, and fittings for venting systems and their proper installation. It shall also control the minimum diameter of vent pipe, individual vents, relief vents, and shall contain a table setting forth the size and length of vents and other items covering vent stacks and stack vents. In addition, vent grades and connections, height above fixtures, hydraulic gradient, relief vents for stacks, and fixture traps are included.

R 408.30745a. Bathroom fixture venting.

Rule 745a. Section P-906.3 of the code is amended to read as follows:

P-906.3. Bathroom fixture venting. One complete bathroom, consisting of a water closet, bathtub, with or without overhead shower, and lavatory, or a substitution of a shower compartment for the bathtub may be vented by a 1 1/2 inch revent, provided the connections of these fixtures are made to a 3 inch or larger stack by means of an approved "tee wye" or "F and W" type of fitting. If the bathroom fixtures are connected to a 4 inch or larger stack, such connections may also be made by means of a 4 inch tapped closet bend. The tappings of a closet bend or "tee wye" fitting shall not be greater than 2 inches in diameter. The revent may be washed by a lavatory in this type of installation.

Heel inlet closet bends are permitted only in cases where the fixtures connecting thereto are vented, and in no case shall the inlet be used to vent a bathroom group without being washed by a fixture.

The inverts of auxiliary openings in closet bends or other special fittings shall not be below the center line of the major horizontal opening.

R 408.30746. One bathroom group.

Rule 746. Section P-907.1 of the code is amended to read as follows:

P-907.1. One bathroom group. A group of fixtures consisting of 1 bathroom group and a kitchen sink or combination fixture, may be installed without individual fixture vents, in a 1 story building or on the top floor of a building, if each fixture drain connects independently to the stack and the water closet and bathtub or shower stall drain enters the stack at the same level.

R 408.30746a. Waste stacks serving fixtures at different levels.

Rule 746a. Section P-907.2 of the code is amended to read as follows:

P-907.2. Waste stacks serving fixtures at different levels. Combinations of fixtures, each combination of which is rated at not more than 2 fixture units, may be connected to waste stacks at different floor levels without reventing as indicated in the following schedule:

1 1/2	inch waste stack.....	2 fixture units
2	inch waste stack.....	4 fixture units
3	inch waste stack.....	8 fixture units
4	inch waste stack.....	36 fixture units

(a) The fixtures shall be within the specified eight (8) feet developed length from the trap seal to the stack and all other requirements fulfilled.

(b) Any fixture branch shall be vented if it is connected within 3 feet of a waste stack base, and above which, into the stack, other fixtures with a combined discharge of 4 fixture units or more are connected.

R 408.30747. Where individual venting required.

Rule 747. Section P-908.1 of the code is amended to read as follows:

P-908.1. Where individual venting required. When fixtures other than water closets discharge into only a 3 inch horizontal branch downstream from a water closet, each fixture connecting downstream shall be individually vented.

R 408.30748. Battery venting.

Rule 748. Section P-910.1 of the code is amended to read as follows:

P-910.1. Battery venting. A branch soil or waste pipe to which not less than 2 but not more than 8 water closets, other than blow-out type water closets, pedestal urinals, fixtures having floor outlet trap standards, shower stalls, or floor drains are connected in a battery, shall be vented by not less than a circuit or loop vent which shall be taken off downstream from the fixture most distant from the stack or vented line. In addition, lower floor branches serving more than 3 water

closets shall be provided with a relief vent installed downstream from the fixture nearest the soil stack.

If more than 8 of the above fixtures are connected in a battery, an additional vent shall be provided for each 8 or fraction thereof.

R 408.30748a. Fixtures back-to-back in battery.

Rule 748a. Section P-910.2 of the code is amended to read as follows:

P-910.2. Fixtures back-to-back in battery. When fixtures are connected to 1 horizontal branch through a double wye or a sanitary tee in a vertical position, a common vent for each 2 fixtures back-to-back or double connection shall be provided. The common vent shall be installed in a vertical position as a continuation of the double connection.

In back-to-back installations in which fixtures discharge into the horizontal branch through double wye's or special soil or waste fittings and the individual fixture traps are otherwise not too high, every other double connection shall be vented, being sure the most distant double connection is vented.

R 408.30748b. Exceptions.

Rule 748b. Section P-910.3 of the code is amended to read as follows:

P-910.3. Exceptions. Drainage branches serving single fixtures which are connected on the main drain at intervals in excess of 54 inches shall not be considered a battery, and are not required to be vented or battery vented unless prohibited by other pertinent sections of this code which govern venting.

R 408.30748c. Fixture groups discharging to a common horizontal branch.

Rule 748c. Section P-910.4 of the code is amended to read as follows:

P-910.4. Fixture groups discharging to a common horizontal branch. Groups of fixtures of several types, such as might be found in bathrooms, toilet rooms, utility rooms, or combinations thereof, are not to be classified as a battery unless 2 or more of the fixtures are similar and adjacent. However, if several types of fixtures discharge into a common horizontal branch and 1 or more of the fixtures has an individual rating of not less than 4 fixture units, then all connections downstream from that fixture shall be vented as a battery unless the fixture drain connections with the horizontal branch are 54 inches or more apart. Fixtures upstream from the water closet, or fixture with equivalent rating, shall have an intervening vent or be individually vented and otherwise comply with other venting requirements of this code.

R 408.30749. Maximum distance of fixture trap from vent.

Rule 749. Section P-912.1 of the code is amended to read as follows:

P-912.1. Maximum distance of fixture trap from vent. Single fixtures,

which are within 8 feet in developed length from the seal of the trap to a main vented line, may be installed without additional venting, if the vertical drop does not exceed 3 feet. "S" traps are prohibited.

R 408.30750. Venting of free standing fixtures.

Rule 750. Section P-914.1 of the code is amended to read as follows:

P-914.1. Venting of free standing fixtures. Single free standing fixtures such as island sinks, sinks in laboratory tables, etc., may be vented by increasing the vertical branch waste to the fixture trap to a minimum of 3 inches. The 3 inch vertical waste branch shall be equipped with a full size cleanout and shall be connected to a vented horizontal branch of not less than 3 inch size. However, fixtures whose rating is not more than 1 fixture unit may discharge into a vertical branch of 2 inch diameter.

R 408.30751. Building traps.

Rule 751. Section P-1001.7 of the code is amended to read as follows:

P-1001.7. Building traps. The use of building or house traps is optional except where specifically required by the administrative authority. Each building trap, when installed, shall be provided with a cleanout and with a relieving vent or fresh air intake on the inlet side of the trap which need not be larger than 1/2 the diameter of the drain to which it connects. The relieving vent or fresh air intake shall be carried above grade and terminate in a screened outlet located outside the building.

R 408.30752. Recesses for trap connections.

Rule 752. Section P-1001.9 of the code is added to read as follows:

P-1001.9 Recesses for trap connection. A recess provided for connection of the underground trap such as one serving a bathtub in slab-type construction shall have sides and bottom of corrosion resistant, insect and vermin proof construction.

R 408.30752a. Fixture branches below grade in municipal systems only.

Rule 752a. Section P-1003.2 of the code is amended to read as follows:

P-1003.2. Fixture branches below grade in municipal systems only. In municipal systems only, backwater valves shall be installed in the building drain branch which receives only the discharge from fixtures located below ground level and subject to backflow or back pressure.

R 408.30753. Base of stacks.

Rule 753. Section P-1101.3 of the code is amended to read as follows:

P-1101.3. Base of stacks. An accessible cleanout shall be provided at or near the foot of each vertical waste or soil stack.

R 408.30754. Building drain and building sewer junction.

Rule 754. Section P-1101.4 of the code is amended to read as follows:

P-1101.4. Building drain and building sewer junction. There shall be a cleanout near the junction of the building drain and the building sewer. This cleanout may be either inside or outside the building wall. If outside, the cleanout shall not be installed in public property nor more than 5 feet from the outside face of the wall or other permanent obstruction or foundation. If inside, the cleanout opening shall be not more than 24 inches from the inside face of the wall, except that buildings with unusually wide footings shall have the cleanout installed as close to the finished wall as possible, without encasement of the cleanout extension in the foundation.

R 408.30755. Underground drainage.

Rule 755. Section P-1102.1 of the code is amended to read as follows:

P-1102.1. Underground drainage. Cleanouts, when installed on an underground drain, shall be extended vertically to or above the finished grade level.

R 408.30757. Manholes for larger pipes.

Rule 757. Section P-1106.1 of the code is amended to read as follows:

P-1106.1. Manholes for larger pipes. For underground piping over 10 inches in diameter, manholes shall be provided and located at every major change of direction, grade, elevation, or size of pipe or at intervals of not more than 400 feet. Metal covers shall be provided for the manholes and shall be of sufficient weight to meet local traffic and loading conditions.

Within buildings, manhole covers shall be gas-tight and the manhole shall be vented with not less than a 4 inch pipe.

R 408.30758. Minimum number of plumbing fixtures, elementary and secondary schools.

Rule 758. Section P-1202.1 of the code is amended to read as follows:

P-1202.1 Minimum number of plumbing fixtures; elementary and secondary schools. The minimum number of plumbing fixtures to be installed in elementary and secondary schools shall be as follows:

Enrollment			WC/Girls		WC/Boys		Urinals/Boys		Lavatories Boys/Girls		Drinking Fountains
Boys	Girls	Total	E	S	E	S	E	S	E	S	
1-40	1-40	80	2	1	1	1	1	1	1	1	1
80	80	160	2	2	2	1	2	2	2	2	2
120	120	240	4	3	3	2	3	3	3	3	2
150	150	300		4	4	2	4	4	4	4	3
200	200	400	6	5	5	3	5	5	5	5	4
300	300	600	8	7	6	4	7	7	6	6	5
400	400	800	10	9	7	5	9	9	7	7	7
500	500	1000	12	11	8	6	11	11	9	9	8
600	600	1200	14	13	9	7	13	13	11	11	9
800	800	1600	17	16	11	8	17	16	12	12	11
1000	1000	2000	19	18	12	9	18	17	13	13	12

E - Elementary
S - Secondary
WC - Water Closet

R 408.30758a. Minimum number of plumbing fixtures; buildings.

Rule 758a. Section P-1202.1 of the code is amended to read as follows:

P-1202.1 Minimum number of plumbing fixtures; buildings. The minimum number of plumbing fixtures to be installed in the following types of buildings shall be as follows:

TYPE OF BUILDING OCCUPANCY	TYPE OF FIXTURE							
	Water Closets		Urinals	Lavatories		Drinking Fountains	Other Fixtur
	No. of Employees	No. of Fixtures		No. of Employees	No. of Fixtures		
Public Buildings, Offices, Business Mercantile, Storage, and Institutional employees	1-15 16-35 36-55 56-80 81-110 111-150 1 fixture for ea. additional 40 employees or patrons.	1 2 3 4 5 6	Urinals may be provided in Men's toilet rooms in lieu of water closets but for not more than 1/3 of the required number of water closets.	1-15 16-35 36-55 56-80 81-110 111-150 1 fixture for ea. additional 45 persons	1 2 3 4 5 6	1 for ea. 75 persons	1 slop sink per floor.
Working men temporary facilities.	1-30 working men.					1 fixture or equivalent for each 100 working men	

R 408.30758b. Minimum number of plumbing fixtures; restaurants and food service establishments.

Rule 758b. Section P1202.1 of the code is amended to read as follows:

P-1202.1 Minimum number of plumbing fixtures; restaurants and food service establishment. The minimum number of fixtures to be installed in restaurants and food service establishments shall be as follows:

TYPE OF BUILDING OCCUPANCY	TYPE OF FIXTURE			
	Water Closets	Urinals	Lavatories	Drinking Fountains	Other Fixtures
	No. of Employees/ Patrons — No. of Fixtures		No. of Employees/ Patrons — No. of Fixtures		
Restaurants & food service establishment	1-15 — 1 16-35 — 2 36-55 — 3 56-80 — 4 91-110 — 5 111-150 — 6 1 fixture for ea. additional 40 employees/ patrons	Urinals may be provided in Men's toilet rooms in lieu of water closets but for not more than 1/3 of the required number of water closets.	1-15 — 1 16-35 — 2 36-55 — 3 56-80 — 4 81-110 — 5 111-150 — 6 1 fixture for ea. additional 45 persons	1 for ea. establishment	1 slop sink per floor.

R 408.30759. Separate facilities.

Rule 759. Section P-1202.2 of the code is amended to read as follows:

P-1202.2. Separate facilities. In other than residential installations, where toilet and bathing facilities are provided to serve members of both sexes and are designed for use by more than 1 person at a time, separate facilities shall be installed for each sex. However, when total occupancy is 15 or less, 1 toilet room may suffice, if the room is designed for 1 person only and the door can be locked from the inside.

R 408.30761. Plastic connections.

Rule 761. Section P-1204.5.5 of the code is amended to read as follows:

P-1204.5.5. Plastic connections. Plastic water closet bends may be used when provided with a suitable 4-inch by 3-inch flange used to receive the fixture horn.

R 408.30762. Urinals, stall type, watertight pans required.

Rule 762. Section P-1205.4.1 of the code is added to read as follows:

P-1205.4.1. Urinals, stall type, watertight pans required. Urinals of stall type shall be constructed so as to have a watertight pan of lead or other approved materials approved by the construction code commission installed beneath them. The drain for the urinal shall be made with a drainable clamping ring assembly to the watertight pan.

R 408.30763. Floor drains, public toilet rooms.

Rule 763. Section P-1217.6 of the code is added to read as follows:

P-1217.6. Floor drains, public toilet rooms. In all public toilet rooms hereafter created containing 2 or more water closets, or 1 water closet and 1 urinal or more, not less than 1 approved floor drain shall be installed connecting to the soil system; however, stall urinals may serve as floor drains if the entire floor area may be drained to the urinals.

R 408.30763a. Floor drains, according to floor area.

Rule 763a. Section P-1217.10 of the code is added to read as follows:

P-1217.10. Floor drains, according to floor area. In all toilet rooms in which floor drains are required there shall be not less than 1 floor drain for each 400 square feet of floor area or major fraction thereof.

R 408.30764. Hospital plumbing, scope of article 14.

Rule 764. Section P-1401.0 of the code is added to read as follows:

P-1401.0. Hospital plumbing; scope of article 14. The special devices and equipment which are installed and maintained in hospitals are also found in some degree in all of the following types of institutions and establishments: nursing homes, homes for the aged, orphanages, infirmaries, first aid stations, psychiatric facilities, clinics, professional offices of dentists and doctors, and many other care institutions or establishments, whether enumerated or not; also mortuaries, educational facilities, surgery,dentistry, research and testing laboratories, and establishments manufacturing pharmaceuticals, drugs, and medicines, and other structures having similar apparatus and equipment classified as plumbing.

Rules 764 through 776c to apply to hospitals and the above mentioned facilities. Plumbing systems serving these facilities shall conform not only to the requirements of rules 764 through 776c but also to the requirements contained in other parts of this code.

Refer to Michigan department of health rules and regulations governing hospitals, nursing homes, and homes for the aged.

R 408.30765. Special fixtures.

Rule 765. Section P-1402.0. of the code is added to read as follows:

P-1402.0. Special fixtures. Fixtures which are designed for any special use, therapy, special cleansing, or disposal of waste materials, or for combinations of such uses, shall be of smooth, impervious, corrosion resistant materials, and if subjected to temperatures in excess of 180 degrees Fahrenheit, shall be able to withstand without damage, higher temperatures as may be specified.

R 408.30765a. Special equipment.

Rule 765a. Section P-1402.11 of the code is added to read as follows:

P-1402.11. Special equipment. All devices, appurtenances, appliances, and apparatus intended to serve some special function, such as sterilization, distillation, processing, cooling, storage of ice or foods, etc., which may be connected to either the water supply or drainage systems, shall be provided with protection against back-siphonage, backflow, flooding, fouling, or any possibility of contaminating any portion of the water supply system, or the stoppage of any drain through normal use.

R 408.30765b. Acceptance.

Rule 765b. Section P-1402.12 of the code is added to read as follows:

P-1402.12. Acceptance. All special plumbing fixtures, equipment, devices and apparatus shall be submitted to the construction code commission for its review and acceptance prior to installation.

R 408.30765c. Clinic sink, design.

Rule 765c. Section P-1402.2 of the code is added to read as follows:

P-1402.2. Clinic sink, design. A clinic sink shall have an integral trap with a visible trap seal. The fixture shall be designed so as to

permit complete removal of the contents by siphonic action, blowout action, or both, and to reseal the trap. A flushing rim shall provide water to cleanse the interior surface. The fixture shall have flushing and cleansing characteristics similar to those of a water closet.

R 408.30765d. Accessibility.

Rule 765d. Section P-1402.3 of the code is added to read as follows:

P-1402.3. Accessibility. Concealed piping in connection with special fixtures which contain steam traps, valves, relief valves, check valves, vacuum breakers, or other similar items that require periodic inspection, servicing, or both, shall be accessible for inspection, maintenance, or repair. Concealed piping which requires periodic inspection shall be accessible for inspection, maintenance, or repair.

R 408.30765e. Sterilizer piping.

Rule 765e. Section P-1402.4 of the code is added to read as follows:

P-1402.4. Sterilizer piping.

a. Steam supply. Steam supplies to sterilizers, including those connected by pipes from overhead mains or branches, shall be drained to prevent any excess moisture from reaching the sterilizer. The condensate drainage from the steam supply shall be discharged by gravity.

b. Steam condensate return. Steam condensate return from sterilizers shall not be connected to pressure or vacuum return systems; only gravity returns shall be acceptable. Steam condensate returns from sterilizers shall not be connected to overhead mains or branches.

c. Condensers. Pressure sterilizers should be equipped with an acceptable means of condensing and cooling the exhaust steam vapors.

d. Gas-fired equipment. Gas-fired equipment, or apparatus requiring either water or drainage connections, or both, should meet standards of the American Gas Association.

R 408.30766. Vacuum system stations.

Rule 766. Section P-1402.50 of the code is added to read as follows:

P-1402.50. Vacuum system stations. Vacuum system stations shall be located according to convenience and practical use. The stations should be built into cabinets or recesses, but also shall be readily accessible. Vacuum stations should include a shut-off valve, vacuum regulator, and gauge. However, where bottle receptors are used, these devices may be a part of a bottle assembly.

R 408.30766a. Vaccum system stations, cleanouts.

Rule 766a. Section P-1402.51 of the code is added to read as follows:

P-1402.51. Vacuum system stations, cleanouts. In order to provide cleanout facilities, each outlet connector valve, or assembly of valves, shall be removable at the connection of the valve, or assembly of valves, with the vacuum piping branch or main.

R 408.30766b. Bottle (dry) systems.

Rule 766b. Section P-1402.52 of the code is added to read as follows:

P-1402.52. Bottle (dry) systems. A vacuum, or fluid suction, system intended for use as a bottle, or dry, system, shall specifically designate receptacles or an assembly of receptacles, which are equipped with an overflow preventive device, at each vacuum outlet station. Each vacuum outlet station should be equipped with a secondary safety receptacle, in series with the collecting receptacle, as an additional safeguard against fluids, other than air, entering the vacuum piping system. No secondary receptacle installed in series with a collecting receptacle shall be considered a stand-by or reserve receptacle. Where a stand-by or reserve receptacle is desired, it may be connected and valved in parallel with the collecting receptacle, but shall not by-pass a secondary receptacle.

R 408.30766c. Central system equipment.

Rule 766c. Section P-1402.53 of the code is added to read as follows:

P-1402.53. Central system equipment. A system equipped with collecting tanks, interceptors, or other means of collecting and or disposal to the sanitary waste system, shall provide for draining and cleaning while the system is in operation.

R 408.30766d. Vacuum pump discharge.

Rule 766d. Section P-1402.54 of the code is added to read as follows:

P-1402.54. Vacuum pump discharge. The exhaust discharge from a vacuum pump used in connection with a vacuum, or fluid suction, system shall not create a nuisance, a hazard, or both, within, without, around, or about the premises.

The exhaust from a vacuum pump shall be piped separately to the outer atmosphere, and wherever practical to do so, above the highest roof. The exhaust discharge terminal shall be a minimum of 4 inches in diameter from at least 1 foot below the roof to its terminal not less than 1 foot above the roof.

Unless the exhaust is washed, filtered, or both, so as to eliminate any possibility of nuisance, hazard, or both, the exhaust terminal shall be a minimum distance of 25 feet from any door, window, air intake, or opening in a building, and a minimum distance of 20 feet above the ground, if side wall discharge.

R 408.30767. Radioactive materials.

Rule 767. Section P-1402.6 of the code is added to read as follows:

P-1402.6. Radioactive materials. Hospital plumbing used for radioactive materials shall conform to the requirements of rule 725a.

R 408.30767a. Special elevations.

Rule 767a. Section P-1402.7 of the code is added to read as follows:

P-1402.7. Special elevations. Control valves, vacuum outlets, and devices which protrude from a wall shall be located at an elevation which will preclude bumping against the device.

R 408.30768. Recess rooms.

Rule 768. Section P-1403 of the code is added to read as follows:

P-1403. Recess rooms. Rooms which contain the recessed or concealed portions of sterilizing equipment, sterilizing stills, or both, shall be of sufficient size to provide adequate clear space for installation, service, and maintenance.

Recess rooms shall be accessible through a door or doors located on the floor level from which the sterilizing equipment is operated. The door or doors shall provide access to all portions of the recess and shall be large enough to permit passage of an average person without crawling under or climbing over any object or equipment and shall be large enough to permit removal, replacement, or both, of the largest piece of equipment contained in the room which is not removable through the end wall panel. The door or doors shall be located so as to permit entrance to, or exit from, the recess room without interfering with activity in an adjoining room.

R 408.30768a. Floor drain required.

Rule 768a. Section P-1403.1 of the code is added to read as follows:

P-1403.1. Floor drain required. In all recess rooms containing the recessed or concealed portions of sterilizers, not less than 1 acceptable floor drain, connecting to the drainage system, shall be installed in a manner which will drain the entire floor area.

A recess room shall have a waterproof floor.

R 408.30768b. Recess room floor drains; trap seal maintenance.

Rule 768b. Section P-1403.11 of the code is added to read as follows:

P-1403.11. Recess room floor drains, trap seal maintenance. The recess room floor drain waste and trap shall be a minimum diameter of 3 inches. It shall receive the drainage from at least 1 sterilizer within the recess room to assure maintenance of the floor drain trap seal. The sterilizer drain shall be installed on a branch taken off between the floor drain trap and the drain head. An individual sterilizer waste trap shall not be required on this type of installation.

R 408.30769. Ordinary fixtures.

Rule 769. Section P-1404.1 of the code is added to read as follows:

P-1404.1. Ordinary fixtures. Clear space about ordinary fixtures shall be in accordance with Article 12 of the code.

R 408.30769a. Clear space about special fixtures or equipment.

Rule 769a. Section P-1404.11 of the code is added to read as follows:

P-1404.11. Clear space about special fixtures or equipment. Clear space about special fixtures or equipment shall be as follows:

Fixtures

	Front	Side	Rear
Bedpan washers (with door open)	42"	6"	6" u 3" v
Sinks, clinic	42"	12"	3" w
Sinks, scrub-up	42"	4" W	
Sinks, utilility room	42"	4" W	
Sterilizers, pressure (Free standing)	24" Y	20"	10"
Sterilizers, pressure (Recessed)	24" Y	20"	20"
Sterilizers, pressure instrument washer sterilizer (Free Standing)	24" Y	20"	10"
Sterilizers, pressure instrument washer-sterilizers (Recessed)	24" Y	20"	20"

U -- Concealed type
V -- Exposed type
W -- If not flush with wall
X -- In double door installations each door shall be considered the front
Y -- Plus length of rack
Z -- The administrative authority may permit 1 end of the table to be located closer to a water supply control panel, or a service or clinic sink. Enbalming tables not directly connected to the waste system may be located with 1 end over a clinic sink.

R 408.30769b. Battery assemblies.

Rule 769b. Section P-1404.12 of the code is added to read as follows:

P-1404.12 Battery assemblies. Only in exposed installations of battery assemblies or combination groups of sterilizers may the clear space requirements on each adjoining side of the individual sterilizers be reduced, but there shall be provided not less that the space required to clean, inspect, repair, and maintain the equipment, and in no case shall there be less than 6 inches.

In a concealed or recessed installation of battery assemblies or combination groups of sterilizers, the clear space requirements for individual sterilizers shall apply.

R 408.30769c. Mortuary preparation and autopsy rooms.

Rule 769c. Section P-1404.13 of the code is added to read as follows:

P-1404.13. Mortuary preparation and autopsy rooms. Portable mortuary preparation tables and autopsy tables shall discharge their wastes into a clinic sink. See Article 14, sec. 1402.2 of the code. Stationary mortuary preparation tables and autopsy tables shall discharge their wastes through a trap directly connected to the drainage system.

R 408.30770. Material.

Rule 770. Section P-1405.1 of the code is added to read as follows:

P-1405.1. Material. Material for local vents serving bedpan washers and vents serving sterilizers shall be brass, copper, galvanized steel, galvanized wrought iron, or such other satisfactory rustproof and corrosion-resistant alloys or materials acceptable to the construction code commission. Connections of dissimilar metals should be avoided.

R 408.30770a. Direction.

Rule 770a. Section P-1405.2 of the code is added to read as follows:

P-1405.2. Direction. A local vent stack, sterilizer vent stack, or both, shall be run vertically and separately through the roof of the building with not more than 1 offset of not more than 45 degrees with the vertical. Connections with any other piping system shall not be permitted, except as herein stated for drainage and trap seal supply. The roof terminal shall be a minimum of 4 inch diameter pipe from a point above 1 foot below the roof. A local vent stack, sterilizer vent stack, or both, except the increase at the roof terminal, shall be full size throughout its length.

R 408.30770b. Vent connections prohibited.

Rule 770b. Section P-1405.3 of the code is added to read as follows:

P-1405.3. Vent connections prohibited. Connections shall not be made between local vents serving bedpan washers, sterilizer vents serving sterilizer apparatus, or normal sanitary plumbing systems or combinations thereof. Furthermore, only 1 type of apparatus shall be served by a given vent. Interconnection of gas exhaust vents and steam exhaust vents from combination gas and steam sterilizers is prohibited.

R 408.30771. Required.

Rule 771. Section P-1405.41 of the code is added to read as follows:

P-1405.41. Required. Bedpan washers shall be vented to the outer atmosphere above the roof by means of 1 or more local vents.

R 408.30771a. Size.

Rule 771a. Section P-1405.42 of the code is added to read as follows:

P-1405.42. Size. The diameter of a local vent pipe for a bedpan washer shall not be less than 2 inches. A local vent serving a single bedpan washer may drain to the fixture served.

R 408.30771b. Multiple installation.

Rule 771b. Section P-1405.43 of the code is added to read as follows:

P-1405.43. Multiple installation. Where bedpan washers are located above each other on more than 1 floor, a local vent stack may be installed

to receive the local vent on the various floors. Not more than 3 bedpan washers shall be connected to a 2 inch local vent stack, 6 to a 3 inch local vent stack, and 12 to a 4 inch local vent stack.

R 408.30771c. Vent connections.

Rule 771c. Section P-1405.431 of the code is added to read as follows:

P-1405.431. Vent connections. In multiple installations, the connections between a bedpan washer local vent and a local vent stack shall be made by use of the tee or tee-wye sanitary pattern drainage fittings, installed in an upright position.

R 408.30771d. Trap required.

Rule 771d. Section P-1405.432 of the code is added to read as follows:

P-1405.432. Trap required. The base of the local vent stack, except when serving only 1 bedpan washer, shall be drained by means of a trapped and vented waste connection to the plumbing sanitary drainage system. The trap and waste shall be the same size as the local vent stack. See sections 1405.42, 1405.433 and 1406.6.1 of the code.

R 408.30771e. Trap seal maintenance.

Rule 771e. Section P-1405.433 of the code is added to read as follows:

P-1405.433. Trap seal maintenance. On the discharge or fixture side of the vacuum breaker a water supply pipe of not less than 1/4 inch minimum tubing shall be taken from the flush supply pipe of each bedpan washer. This tubing shall be trapped to form not less than a 3 inch seal, and connected to the local vent stack on each floor. This water supply shall be installed so as to provide sufficient water to the local vent stack for cleansing, and for trap seal maintenance each time a bedpan washer is flushed.

R 408.30772. Required.

Rule 772. Section P-1405.51 of the code is added to read as follows:

P-1405.51. Required. Sterilizer vents and stacks are required to serve pressure sterilizing equipment except when acceptable condensing apparatus is provided.

R 408.30772a. Reduction of sizes prohibited.

Rule 772a. Section P-1405.52 of the code is added to read as follows:

P-1405.52. Reduction of sizes prohibited. The sterilizer vent, exhaust opening, or both, provided by the manufacturer should not be reduced in diameter.

R 408.30772b. Connections.

Rule 772b. Section P-1405.53 of the code is added to read as follows:

P-1405.53. Connections. Multiple installations of pressure sterilizers shall have their vent connections to the sterilizer vent stack made by means of inverted wye fittings.

R 408.30772c. Drainage.

Rule 772c. Section P-1405.54 of the code is added to read as follows:

P-1405.54. Drainage. The connection between sterilizer vent, exhaust openings, or both, and the sterilizer vent stack shall be designed and installed to drain to the funnel or basket-type waste fitting. In multiple installations the sterilizer vent stack shall be drained separately to the lowest sterilizer funnel or basket-type waste fitting or receptor.

R 408.30772d. Pressure sterilizers.

Rule 772d. Section P-1405.551 of the code is added to read as follows:

P-1405.551. Pressure sterilizers. Pressure sterilizer vent stacks shall be 1 1/2 inches minimum diameter; those serving combinations of pressure sterilizer exhaust connections shall be based on the following table.

Table P-1405.551
Pressure Sterilizers
Number of Connections of Various Sizes
Permitted to various sized vent stacks

Stack Size	Connection Size 3/4"		1"		1-1/4"		1-1/2"
*-1-1/2"	3	or	2	or	1		
***-1-1/2"	2	and	1				
*-2"	6	or	3	or	2	or	1
***-2"	3	and	2				
***-2"	2	and	1	and	1		
***-2"	1	and	1	and			1
*-3"	15	or	7	or	5	or	3
***-3"			1	and	2	and	2
***-3"	1	and	5	and			1

R 408.30772e. Pressure instrument washer-sterilizer.

Rule 772e. Section P-1405.552 of the code is added to read as follows:

P-1405.552. Pressure instrument washer-sterilizer. The minimum size of a pressure instrument sterilizer vent stack serving an instrument washer-sterilizer shall be 2 inches in diameter. Not more than 2 sterilizers shall be installed on a 2 inch stack, and not more than 4 on a 3 inch stack.

R 408.30773. Water service.

Rule 773. Section P-1406.1 of the code is added to read as follows:

P-1406.1. Water service. All hospitals shall have dual services

installed in a manner to provide an uninterrupted supply of water in case of a water main break.

R 408.30773a. Hot water mandatory.

Rule 773a. Section P-1406.2 of the code is added to read as follows:

P-1406.2. Hot water mandatory. All fixtures, devices, appliances, and appurtenances normally equipped for hot water shall be provided with an adequate supply of potable hot water.

All patients handwashing and bathing facilities shall be provided with hot water in a temperature range of 110 to 120 degrees Fahrenheit.

R 408.30773b. Hose connections.

Rule 773b. Section P-1406.3 of the code is added to read as follows:

P-1406.3. Hose connections. For ordinary hose connections the maximum height at which a hose is to be used shall be treated as its flood level.

R 408.30773c. Prohibited water closet and clinic sink supply.

Rule 773c. Section P-1406.4 of the code is added to read as follows:

P-1406.4. Prohibited water closet and clinic sink supply. Jet or water-supplied orifices, except those supplied by the flush connections, shall not be located in, connected with, or both, located in and connected with a water closet bowl or clinic sink. This section shall not prohibit an acceptable bidet installation.

R 408.30773d. Bedpan washer hose.

Rule 773d. Section P-1406.5 of the code is added to read as follows:

P-1406.5. Bedpan washer hose. A bedpan washer hose shall be equipped with wall-mounted, foot-operated valve. An acceptable vacuum breaker shall be located downstream from the control valve. The elevation of the vacuum breaker shall not be less than 5 feet above the toilet room or bathroom floor. A hose of sufficient length for use in cleansing a bedpan or urinal over the water closet or clinic sink shall be provided and shall be equipped with a spray nozzle. Unless the water closet combination is provided with a receptacle for draining and retaining the bedpan washer hose, a rack or hook shall be provided not less than 12 inches below the vacuum breaker for supporting the hose nozzle when the hose is not in use.

R 408.30774. Bedpan washers.

Rule 774. Section P-1406.61 of the code is added to read as follows:

P-1406.61. Bedpan Washers. A hot or cold water supply to a bedpan

washer shall be equipped with an acceptable vacuum breaker installed between the flushometer valve and the fixture at an elevation as specified in the vacuum breaker acceptance. Should the hot and cold water supplies be interconnected, each supply branch to the fixture shall be equipped with a check valve. For steam and water interconnection see Section P-1605.119 of the code. See rule 771e for local vent trap seal maintenance.

R 408.30774a. Electrically heated pressure sterilizers.

Rule 774a. Section P-1406.62 of the code is added to read as follows:

P-1406.62. Electrically heated pressure sterilizers. In an electrically heated pressure sterilizer installation, the water supply to the steam generator shall be equipped with an acceptable vacuum breaker. The vacuum breaker shall be installed on the discharge side of the control valve and at the elevation above the top of the sterilizer specified in the vacuum breaker acceptance. A check valve shall be installed between the vacuum breaker and the steam generator. A sediment separator with a screen of a minimum of 20 mesh per inch shall be installed between the check valve and the steam generator.

R 408.30774b. Clinical, hydrotherapeutic, and radiological equipment.

Rule 774b. Section P-1406.63 of the code is added to read as follows:

P-1406.63. Clinical, hydrotherapeutic, and radiological equipment. Clinical, hydrotherapeutic, radiological, or any equipment, whether mentioned or not, which is water supplied or discharges to the waste system, or which is both water supplied and discharges to the waste system, shall meet the requirements of Article 16 of the code covering cross-connections and Article 7 of the code regarding indirect waste.

R 408.30774c. Aspirator for vacuum (fluid suction) use.

Rule 774c. Section P-1406.64 of the code is added to read as follows:

P-1406.64. Aspirator for vacuum (fluid suction) use. Aspirators which create a vacuum for fluid suction shall be equipped with an acceptable vacuum breaker in the water supply between the control valve and the aspirator vacuum fitting. The elevation of the vacuum breaker shall be not less than 6 feet 6 inches above the floor, and the minimum distance between the bottom of the vacuum breaker, and the aspirator vacuum inlet shall not be less than the elevation as specified in the vacuum breaker acceptance.

R 408.30774d. Vacuum (fluid suction) systems.

Rule 774d. Section P-1406.65 of the code is added to read as follows:

P-1406.65. Vacuum (fluid suction) systems. Water supply to a vacuum (fluid suction) system, except as provided for aspirators in rule 774c shall be protected against back siphonage by means of an acceptable air gap.

R 408.30774e. Autopsy and embalming tables.

Rule 774e. Section P-1406.66 of the code is added to read as follows:

P-1406.66. Autopsy and embalming tables. The water supply to autopsy tables and embalming tables, including the sink compartments, flush device, aspirator, hose, or any similar water connection, shall be designed and installed to prevent back siphonage, backflow, or both, by means of an acceptable air gap, vacuum breaker installation or both.

Vacuum breakers on hose connections serving this type of equipment shall be not less than 6 feet 6 inches above the floor.

R 408.30774f. Exhaust condensers.

Rule 774f. Section P-1406.67 of the code is added to read as follows.

P-1406.67. Exhaust condensers. Pressure sterilizers, if provided with a means of condensing the exhaust vapors, shall have the exhaust connected to a condensing chamber designed to permit cold water to condense all vapors. The vacuum breaker shall be installed on the discharge side of the water supply control valve at the elevation specified in the vacuum breaker acceptance. A check valve shall be installed between the vacuum breaker and the condenser. A fixed orifice flow control valve shall be installed before connecting to the condenser chamber.

R 408.30775. Bedpan washers and clinic sinks.

Rule 775. Section P-1407.1 of the code is added to read as follows.

P-1407.1. Bedpan washers and clinic sinks. Bedpan washers and clinic sinks shall be connected to the soil pipe system and follow the venting requirements as applied to water closets, except that bedpan washers require additional local vents. See rule 771.

R 408.30775a. Indirect wastes required.

Rule 775a. Section P-1407.21 of the code is added to read as follows:

P-1407.21. Indirect wastes required. All sterilizers and stills shall be provided with individual and separate indirect wastes. Such wastes shall discharge through a fixed air gap of not less than 2 diameters of the waste tailpiece measured from the spill rim of the funnel or basket type waste fitting.

R 408.30775b. Battery assemblies.

Rule 775b. Section P-1407.22 of the code is added to read as follows:

P-1407.22. Battery assemblies. A battery assembly of not more than 3 sterilizer wastes may drain to 1 trap, subject to the following:

1. The waste from each sterilizer shall discharge through a fixed air gap as required by rule 775a.

2. The trap and waste piping shall be sized according to the combined fixture unit rating and the trap shall be located immediately below one of the indirect waste connections.
3. The developed distance of a branch shall not exceed 8 feet from the trap to the most distant air gap fitting.
4. All changes of direction in the branch shall be made by means of tee-wye or wye pattern fittings.

R 408.30775c. Sterilizer exhaust condensers.

Rule 775c. Section P-1407.23 of the code is added to read as follows:

P-1407.23. Sterilizer exhaust condensers. If an exhaust condenser is used, the drain from the condenser shall be installed according to Section 1407.21 of the code. A condenser drain shall be designed and installed so that the receptor, waste funnel, basket, or pan type indirect waste connection shall not overflow. Furthermore, the release of vapors and pressures shall not create excessive temperatures, a nuisance or hazard to personnel, the plumbing system, other equipment, or the surrounding area.

R 408.30775d. Pressure sterilizers and pressure instrument washer-sterilizers.

Rule 775d. Section P-1407.24 of the code is added to read as follows:

P-1407.24. Pressure sterilizers and pressure instrument washer-sterilizers. In addition to the requirements of rules 775a and 775b, pressure sterilizer and pressure instrument washer-sterilizer drainage piping shall be designed, installed, and maintained in a manner to preclude the possibility of chamber negative pressure aspirating moisture into the chamber, interfering with sterilizing procedure or endangering the chamber contents.

R 408.30776. Aspirators.

Rule 776. Section P-1407.32 of the code is added to read as follows:

P-1407.32. Aspirators. Where aspirators are installed for removing blood, pus, or other fluids, the discharge from an aspirator shall be indirectly connected to a trapped waste of not less than 1 1/2 inch pipe size with a tubular trap.

R 408.30776a. Wastes.

Rule 776a. Section P-1407.321 of the code is added to read as follows:

P-1407.321. Wastes. The waste from a central vacuum (fluid suction) system, except station bottles, shall be directly connected to the sanitary drainage system through a trap.

R 408.30776b. Piping.

Rule 776b. Section P-1407.322 of the code is added to read as follows:

P-1407.322. Piping. The piping of a central vacuum (fluid suction) system shall be brass, copper, galvanized steel, or galvanized wrought iron, or such other satisfactory rustproof and corrosion resistant alloys or materials acceptable to the construction code commission. The minimum size branch shall be 1/2 inch. The minimum size main shall be 1 inch. The pipe sizing shall be based on the following:

1. Velocities of air flow are to be limited to 5,000 feet per minute (83.4 feet per second) to hold line noise to a reasonable level and avoid excessive pressure drop.
2. Pressure drops because of friction in piping systems are to be limited to 1 inch Hg (Mercury) per 100 feet of pipe or equivalent, and 4 inches Hg (Mercury) is the maximum allowable pressure drop for the entire system.
3. See formula for calculating pipe size and Tables P-1407.322a, P-1407.322b and P-1407.322c of the code.

All piping shall be provided with accessible cleanout facilities at each 90 degree change of direction on mains and at branch connections. All piping should be accessible for inspection, maintenance, and replacement.

All piping shall be supported in a manner to prevent sags, dips, and traps. A zone control station or change in direction shall not interfere with drainage of the piping system.

Piping systems shall be installed with pitch to provide gravity drainage toward the lowest portion of the system. So called "wet" disposal systems shall pitch toward the discharge connection to the sanitary drainage system. Systems specifically intended as non-disposal "dry" systems, and not equipped with a low elevation sanitary drainage connection, shall be provided with replaceable drip pocket cleanout facilities at the base of each main riser. Where impractical to avoid station outlet branch drops, pitch shall be from the high point of such drops. The Formula for calculating pipe size in central vacuum systems is as follows:

$$V = 58 \sqrt{\frac{PD5}{WL}}$$

Where:

V = Volume in cubic feet per minute
P = Difference in pressure in pounds per square inch
D = Inside diameter of pipe in inches
W = Weight of air in pipe in pounds per cubic foot
L = Length of pipe in feet

Note: This equation is derived from Fanning's equation using values in units of measurement as indicated.

This formula is the basis for sizing at 15 inches HG. Vacuum, as provided in Table P-1407.322c. It is a designer's prerogative to use a different design, pressure, and size according to the formula, if his results are within the established limits. The manufacturers will probably include this information in the engineering data for their equipment, and may also include ratio conversion factors or charts for sizing at various pressures.

TABLE P-1407.322 a

DESIGN CRITERIA FOR HOSPITAL AND CLINICAL
CENTRAL VACUUM SYSTEMS
OUTLET RATINGS

Location of Outlet	Allowance Per Outlet, Cubic Foot/Minute of Air at 15" Hg. Vacuum	Equivalent Allowance Per Outlet, Cubic Feet/ Minute of Air at Atmosphere	Percentage of Simultaneous Use Factor
Operating Rooms, General Medical	2	1	100%
O.B. Rooms	2	1	100%
Operating, Dental, Hospital Central Systems	1	$\frac{1}{5}$	20%
Operating, Dental, Clinical erating, Eye, Ear, Nose, Throat	1	$\frac{1}{2}$	50%
Recovery	1	$\frac{1}{5}$	20%
Emergency Room	2	1	100%
Patients' Rooms, Nurseries, Wards, General Medical	1	$\frac{1}{5}$	20%
Patients' Rooms and Wards, T.B. Hospitals, and Polio Wards	1	$\frac{1}{2}$	40%
Treatment and Examining Rooms	1	$\frac{1}{5}$	20%
Autopsy	1	1	100%
Laboratory	2	$\frac{1}{2}$	40%

*Dental operating outlets in hospitals do not have the percent of use as compared to dental operating clinic outlets which are located in suites of rooms and have a separate vacuum suction system or a separate vacuum suction system other than the central vacuum suction system in a hospital.

TABLE P-1407.322 b

DESIGN CRITERIA FOR HOSPITAL AND CLINICAL
CENTRAL VACUUM SYSTEMS
RESISTANCE OF FITTINGS & VALVES TO AIR FLOW
ALL VALUES EXPRESSED IN EQUIVALENT LENGTH (FEET)
OF STRAIGHT PIPE

Size	90° Elbow	Tee Branch Flow	Gate Valves
1/2"	2.0	2.6	2.0
3/4"	2.2	2.8	2.0
1"	2.9	3.6	2.5
1 1/4"	3.5	4.5	3.0
1 1/2"	3.9	5.8	3.1
2"	4.5	7.2	3.4
2 1/2"	5.0	9.0	3.6
3"	5.7	10.5	3.9
4"	6.0	14.0	4.2

TABLE P-1407.322 c

DESIGN CRITERIA FOR HOSPITAL AND CLINICAL
CENTRAL VACUUM SYSTEMS
PIPE SIZING TABLE

Pipe Size	CFM Measured at 15" Hg. Vacuum	Pressure Drop Per 100' Equiv. Pipe Length Inches Hg.	Velocity Ft./Min.
1/2"	4	1.0	2660
3/4"	10	1.0	3285
1"	21	1.0	3800
1 1/4"	36	1.0	4310
1 1/2"	58	1.0	4710
2"	110	0.9	5000
2 1/2"	170	0.7	5000
3"	245	0.6	5000
4"	435	0.4	5000

Note: Values given are in accordance with the limitations indicated in Section P-1407.322

R 408.30776c. Prohibited location of soil and waste piping in specialized area.

Rule 776c. Section P-1407.5 of the code is added to read as follows:

P-1407.5. Prohibited location of soil and waste piping in specialized area. Exposed soil or waste piping shall not be located above any areas used for pharmaceutical preparation, clean or sterile goods preparation, or storage.

R 408.30777. Scope.

Rule 777. Section P-1600.1 of the code is amended to read as follows:

P-1600.1. Scope. The provisions of this article shall control the design and installation of water supply systems, both hot and cold.

Refer to Michigan department of public health regulations for additional requirements on water supply systems pertaining to establishments subject to regulation, licensure, or both, by that department.

R 408.30777a. Water hammer.

Rule 777a. Section P-1603.3 of the code is amended to read as follows:

P-1603.3. Water hammer. All building water supply systems shall be provided with devices to absorb high pressures so as to eliminate water hammer. These pressure absorbing devices shall be either air chambers or approved mechanical devices.

Water pressure absorbers shall be placed as close as possible to the fixture and at the ends of long runs of piping and near batteries of fixtures.

a. Air chambers. Where air chambers are installed, they shall be provided with a means of restoring the air in event the chamber becomes water logged.

b. Air chamber size. The diameter of air chambers located at the tops of water supply risers, vertical fixture branches, or both, shall be not less than the diameter of the pipe served by the air chamber. If less than 15 inches in length, the air chamber shall be at least 1 pipe size larger than the riser, branch, or both, and shall be of a length sufficient to provide a volume equivalent to that of an air chamber 15 inches in length.

c. Air chambers, location. Air chambers shall be installed at the tops of each hot and cold water supply riser. A single pair of air chambers may be provided for the water supplies to a bathroom group. Air chambers shall be installed at all automatic washer connections, fixtures equipped with quick closing valves and on all supplies equipped with solenoid water control valves.

d. Mechanical devices. Where mechanical devices are used, the manufacturer's specifications shall be followed as to location and method of installation.

R 408.30777b. Prohibited location of potable supply tanks.

Rule 777b. Section P-1604.2.8 of the code is amended to read as follows:

P-1604.2.8. Prohibited location of potable supply tanks. Potable water gravity tanks or manholes of potable water pressure tanks shall not be located directly under any soil or waste piping or other source of contamination.

R 408.30778. Connections to boilers.

Rule 778. Section P-1605.7 of the code is amended to read as follows:

P-1605.7. Connections to boilers. Potable water connections to high pressure boilers and boiler feed water systems in which boiler water conditioning chemicals are introduced shall be made through an air gap or provided with an approved reduced pressure zone backflow preventer located in the potable water line where such chemicals are introduced.

Low pressure boilers not subject to chemical treatment shall be equipped with a double check valve assembly or other approved device in the water supply line to the boiler.

For the purpose of this section, a high pressure boiler is one whose pressure relief valve is set for more than 15 p.s.i.g. if steam, or more than 30 p.s.i.g. if a water boiler.

R 408.30778a. Boiler treatment chemicals.

Rule 778a. Section P-1605.7.1 of the code is added to read as follows:

P-1605.7.1. Boiler treatment chemicals. Chemical treatment shall not be added to a previously untreated boiler feed water system without first securing a plumbing permit and providing protection to the water supply by the installation of an air gap or a reduced pressure zone backflow preventer in the water supply line to the boiler.

R 408.30778b. Protection required for water supplies to closed recirculating systems used for heating and cooling.

Rule 778b. Section P-1605.7.2 of the code is added to read as follows:

P-1605.7.2. Protection required for water supplies to closed recirculating systems used for heating and cooling. A potable water piping connected to a closed recirculating system used for heating and cooling shall be protected against backflow by either an air gap and surge tank or by a backflow preventer of the reduced pressure zone type, except when the following conditions are met:

a. No additives introduced into the system.
If the recirculated water is only potable water without any additives, a double check valve assembly may be substituted for the protection specified above. However, the owner of the building in which the system is located shall submit an affidavit to the effect that no additives will be used.

R 408.30779. Pressure filter protection.

Rule 779. Section P-1605.8 of the code is added to read as follows:

P-1605.8. Pressure filter protection. If city water is to be passed through a pressure filter using granular or suspended media such as sand, zeolite, ion exchange resins, carbon, etc., in order to remove dissolved or suspended matter, not less than a single check valve shall be installed between the filter and the nearest upstream branch or point of use.

R 408.30779a. Automatically regenerated water softeners.

Rule 779a. Section P-1605.8.1 of the code is added to read as follows:

P-1605.8.1. Automatically regenerated water softeners. Ion exchange resin water softeners of the automatically regenerated type, the operation of which requires that the brine tank water supply branch be directly connected to or submerged in the brine tank, shall be water supplied through a double check valve assembly installed upstream from the softener bypass.

R 408.30779b. Deionizers and demineralizers.

Rule 779b. Section P-1605.8.2 of the code is added to read as follows:

P-1605.8.2. Deionizers and demineralizers. Deionizers and demineralizers which are regenerated with solutions of mineral acids and alkalies, shall have the water supply protected in accordance with the following:

a. Regenerating solutions applied by injectors. Where the regenerating solutions are applied to the resin beds by city water-operated injectors, a pressure type vacuum breaker shall be installed at the required elevation above the highest point in the deionized water system.

If such an elevation for the protective device is not practicable, a reduced pressure zone type backflow preventer shall be installed in the city water branch supplying the system.

b. Regenerating solutions pumped. Where the regenerating solutions are pumped through the resin beds, as in mixed bed deionizing, a reduced pressure zone type backflow preventer shall be installed in the water supply branch to the system.

R 408.30780. Water supplies to refrigeration equipment.

Rule 780. Section P-1605.9 of the code is amended to read as follows:

P-1605.9. Water supplies to refrigeration equipment. A water control valve, either manually or automatically operated, shall not be installed on the water discharge piping from a refrigerant containing a component of a refrigerating system which is, for example, shell-and-tube condensers, double-pipe condensers, water-jacketed compressor cylinders,

etc., supplied with potable water in such a way that there would be direct contact between potable water and the refrigerant upon leakage through the wall separating the two fluids.

R 408.30780a. Manifolded water supplies to refrigeration equipment.

Rule 780a. Section P-1605.9.1 of the code is added to read as follows:

P-1605.9.1. Manifolded water supplies to refrigeration equipment. If 2 or more refrigerants containing components are served in parallel from a common water supply pipe and it is necessary to connect the water discharge piping into a common discharge manifold, valves may be installed on the individual discharge pipes between the components and the manifold, if a check valve is installed in the common water supply pipe upstream from all refrigerant containing components.

Also adjacent to and at the outlet side of the check valve, an approved pressure relief valve, set to relieve at 5 p.s.i. above the maximum water pressure at the point of installation shall be provided if the refrigeration units contain more than 20 pounds of refrigerants.

R 408.30781. Used water return prohibited.

Rule 781. Section P-1605.10 of the code is amended to read as follows:

P-1605.10. Used water return prohibited. Water used for cooling of equipment or other processes shall not be returned to the potable water system. The water shall be discharged into a drainage system through an air gap or may be used for nonpotable purposes.

R 408.30781a. Water outlets.

Rule 781a. Section P-1605.11.1 of the code is amended to read as follows:

P-1605.11.1. Water outlets. A potable water system shall be protected against backflow and backsiphonage by providing at each outlet (a) an air gap as specified herein between the potable water outlet and flood level rim of the fixture it supplies, or between the outlet and any other source of contamination, or, where an air gap is impracticable, (b) a backflow prevention device approved as hereinafter provided.

Distilled or deionized water systems shall be protected against backflow and backsiphonage the same as any other potable water supply. A distilled or deionized water system shall not be considered a secondary water system.

R 408.30781b. Installation of devices.

Rule 781b. Section P-1605.11.5 of the code is amended to read as follows:

P-1605.11.5. Installation of devices.

a. Vacuum breakers. Vacuum breakers shall be installed with the critical level at least 6 inches above the flood level or rim of the

fixture they serve, and on the discharge side of the last control valve to the fixture. No shut-off valve or faucet shall be installed downstream from the vacuum breaker. For closed equipment and vessels, such as pressure sterilizers, the top of the equipment or vessel shall be treated as the flood level rim. A check valve shall be installed on the discharge side of the vacuum breaker on pressure vessels.

b. Reduced pressure zone backflow preventer. A reduced pressure zone type backflow preventer may be installed subject to full static line pressure.

c. Pressure type vacuum breaker. Pressure type vacuum breakers may be installed so that they are continually subject to static line pressure; that is to say, a valve may be installed downstream from the vacuum breakers.

Pressure type vacuum breakers shall be installed a minimum of 12 inches above the equipment or piping served, whichever is the higher.

d. Devices of all types. Backflow and back-siphonage preventing devices shall be accessibly located preferably in the same room with the fixture they serve. Installation in utility or service spaces, provided they are readily accessible, is also permitted.

R 408.30781c. Connections subject to back pressure.

Rule 781c. Section P-1605.11.6 of the code is added to read as follows:

P-1605.11.6. Connections subject to back pressure. Where a potable water connection is made to a line, fixture, tank, vat, pump, or other equipment with a hazard of backflow or back-siphonage and the water connection is subject to back pressure, such connection shall be made by means of an air gap with a surge tank and pump. Where this method is not feasible, the use of a reduced pressure zone backflow preventer may be allowed if the system design is submitted to the administrative authority for approval prior to installation.

R 408.30781d. Protective devices required.

Rule 781d. Section P-1605.11.7 of the code is amended to read as follows:

P-1605.11.7. Protective devices required: In the installation of the following list of fixtures and devices, where an air gap is not provided or is impracticable, approved backflow preventers shall be installed in all supply lines according to Table P-1605.11.7, cross connections where protective devices are required and critical level (C-1) settings for backflow preventers.

TABLE P-1605.11.7
CROSS CONNECTIONS WHERE PROTECTIVE DEVICES ARE REQUIRED AND
CRITICAL LEVEL (C-L) SETTINGS FOR BACKFLOW PREVENTERS[1]

Fixture or Equipment	Method of Installation
Aspirators, Ejectors and Hand held "telephone" showers	C-L at least 6 inches above flood level of receptacle
Cup Beverage Vending Machines	C-L at least 12 inches above flood level of machine
Dental Units	On models without built-in vacuum breakers C-L at least 6 inches above flood level rim of bowl
Dishwashing Machines	C-L at least 6 inches above flood level of machine
Flushometers (closet & urinal)	C-L at least 6 inches above top of fixture supplied
Garbage Can Cleaning Machine	C-L at least 6 inches above flood level of machine
Hose Outlets	C-L at least 6 inches above highest point on hose line
Laundry Machines	C-L at least 6 inches above flood level of machine
Lawn Sprinklers	C-L at least 12 inches above highest sprinkler or discharge outlet
Steam Tables	C-L at least 6 inches above flood level
Tank and Vats	C-L at least 6 inches above flood level rim or line
Trough Urinals	C-L at least 30 inches above perforated flush pipe
Flush Tanks	Equip with an approved float valve. In all cases the float valve shall be located above the overflow level of the tank and the outlet terminated 1 inch above the overflow or provided with a backflow preventer located at least 1 inch above the overflow.
Hose Bibs (where aspirators or ejectors could be connected)	C-L at least 6 inches above flood level of receptacle served

[1]Critical Level (C-L) is defined as the level to which the backflow preventer (vacuum breaker) may be submerged before backflow will occur. Where C-L marking is not shown on the preventer, the bottom of the device shall be taken as the C-L.

Connections Subject to Back Pressure -- Where a potable water connection is made to a line, fixture, tank, vat, pump, or other equipment with a hazard of backflow or back-siphonage where the water connection is subject to back pressure, and an air gap or backflow preventer cannot be installed, the administrative authority may require the use of an approved reduced pressure zone backflow preventer, and in extreme situations, may also

require an approved pressure type vacuum breaker. A partial list of such connections is shown in Table P-1605.11.8, partial list of cross connections subject to back pressure.

Note: The flood level indicated above shall be the spill rim of a fixture, the highest portion of piping downstream from a vacuum breaker, or the point of introduction of potential contamination, whichever is the highest. For hose connections the maximum height at which a hose is to be used shall be treated as its flood level.

For devices, fixtures, or equipment not listed, the installation heights shall be governed by the administrative authority.

R 408.30781e. Water and steam interconnections protection.

Rule 781e. Section P-1605.11.9 of the code is amended to read as follows:

P-1605.11.9. Water and steam interconnections protection. If potable water and steam piping are inteconnected for mixing and heating of the water, there shall be a vacuum breaker and check valve in the water line adjacent to the point of connection, and there shall be no shut-off valve in the common line downstream from the point of connection. The check valve shall be located on the discharge side of the vacuum breaker.

R 408.30782. Pressure relief valves.

Rule 782. Section P-1601.3.1 of the code is amended to read as follows:

P-1606.3.1. Pressure relief valves. The valves shall have a relief rating adequate to meet the pressure conditions in the equipment served. They shall be installed in the cold water supply line to the heating equipment served, except where scale formation from hard water may be encountered, in which case they may be installed in the hot water supply line from the heating equipment served. There shall be no shut-off valve between the pressure relief valve and the tank. The pressure relief valve shall be set to open at not less than 25 p.s.i. above the street main pressure, or not less than 25 p.s.i. above the setting of any house water pressure regulating valve. The setting shall not exceed the tank working pressure. The minimum size of both the inlet and discharge connections shall be 3/4 inch pipe size except that relief valves protecting water heating systems with input of not more than 15,000 BTU per hour may have inlet and discharge connections of 1/2 inch pipe size.

R 408.30783. Temperature relief valves.

Rule 783. Section P-1606.3.2 of the code is amended to read as follows:

P-1606.3.2. Temperature relief valves. Temperature relief valves shall be of adequate relief rating, expressed in BTU/HR, for the equipment served. They shall be installed so that the temperature sensing element is immersed in the hottest water within the top 6 inches of the tank. The valve shall be set to open when the stored water temperature is 210 degrees Fahrenheit or less. The minimum size of both the inlet and

discharge connections shall be 3/4 inch pipe size except that relief valves protecting water heating systems with input of not more than 15,000 BTU per hour may have inlet and discharge connection of 1/2 inch pipe size.

R 408.30784. Combination pressure-temperature relief valves.

Rule 784. Section P-1606.3.3 of the code is amended to read as follows:

P-1606.3.3. Combination pressure-temperature relief valves. Combination pressure-temperature relief valves shall comply with the applicable requirements for individual pressure and individual temperature relief valves and shall be installed so that the temperature sensing element is immersed in the hottest water within the top 6 inches of the tank. The minimum size of both the inlet and discharge connections shall be 3/4 inch pipe size, except that relief valves protecting water heating systems with input of not more than 15,000 BTU per hour may have inlet and discharge connections of 1/2 inch pipe size.

R 408.30785. Installation of relief valves.

Rule 785. Section P-1606.3.5 of the code is amended to read as follows:

P-1605.3.5. Installation of relief valves. A check valve or shut-off valve shall not be installed between a safety device and the hot water equipment used, nor shall there be a shut-off valve in the discharge pipe from the relief valve. Relief outlets, when connected to the building drainage system, shall be indirectly connected. A relief outlet or relief pipe shall not discharge so as to be a hazard or a potential cause of damage, or to otherwise be a nuisance. Relief piping shall be made of corrosion resistant material and shall drain continuously downward to the outlet.

Discharge tubes from relief valves shall terminate atmospherically not more than 4 inches from the floor with an unthreaded end. A discharge tube from a relief valve shall not terminate outdoors or in an unheated space.

R 408.30788. Drainage and vent systems.

Rule 788. Section P-1802.5.1 of the code is amended to read as follows:

P-1802.5.1. Drainage and vent systems.

1. Rough plumbing: Except for outside leaders and perforated or open jointed drain tile, the piping of plumbing drainage and venting systems shall be tested upon completion of the rough piping installation by water or air and and proved watertight. The administrative authority may require the removal of any cleanout plugs to ascertain if the pressure has reached all parts of the system. Either of the following methods shall be used.

a. Water test: The water test shall be applied to the drainage system either in its entirety or in sections after rough piping has been installed. If applied to the entire system, all openings in the piping shall be tightly closed, except the highest opening, and the system filled with water to point

of overflow. If the system is tested in sections, each opening shall be tightly plugged except the highest opening of the section under test, and each section shall be filled with water, but a section shall not be tested with less than 10 foot head of water. In testing successive sections, at least the upper 10 feet of the next preceding section shall be tested, so that a joint or pipe in the building (except the uppermost 10 feet of the system) shall not have been submitted to a test of less than a 10 foot head of water. The water shall be kept in the system or in the portion under test for at least 15 minutes before inspection starts; the system shall then be tight at all points.

b. Air test: The air test shall be made by attaching an air compressor testing apparatus to any suitable opening, and, after closing all other inlets and outlets to the system, forcing air into the system until there is a uniform gauge pressure of 5 pounds per square inch (psi) or sufficient to balance a column of mercury 10 inches in height. This pressure shall be held without introduction of additional air for a period of at least 15 minutes.

2. Finished Plumbing: After the plumbing fixtures have been set and their traps filled with water, their connections shall be tested and proved gas and water tight. The following test method shall be employed:

A. Final test for gas and water tightness - The final test for sewer gas and water tightness of the completed drainage system shall be made by an operational test with all fixtures operative under normal water pressure and visible to the eye of the inspector inspecting for leaks.

R 408.30788a. Water supply system.

Rule 788a. Section P-1802.5.3 of the code is amended to read as follows:

P-1802.5.3. Water supply system. Upon completion of a section or of the entire water supply system, it shall be tested and proved tight under a pressure not less than the working pressure under which it is to be used. If water is used for tests it shall be obtained from a potable source of supply.

R 408.30791. Definitions.

Rule 791. As used in rules 791 to 796:

(a) "Authorized master plumber" means a person who has met the qualifications to obtain plumbing permits from an administrative authority.

(b) "Building sewer permit" means a permit issued by an administrative authority for a building sewer.

(c) "Plumbing permit" means a permit issued by an administrative authority for a plumbing and plumbing system.

(d) "Private sewer permit" means a permit issued by an administrative authority for a private sewer.

R 408.30792. Authorized master plumbers.

Rule 792. (1) To obtain plumbing permits, an applicant shall:

(a) Be an authorized licensed master plumber in this state.

(b) Be active in the business of serving the public as a master plumber in a county, city, village, or township in this state.

(c) Represent only 1 firm, which may operate 1 or more branches in this state bearing the same firm name, when a licensed master plumber is in charge and has the responsibility of supervision at each branch. A firm may have 1 or more authorized master plumbers to obtain permits. The names of the authorized master plumbers representing a firm shall be on record with the state plumbing board.

(2) To become an authorized master plumber, an application shall be made on a form furnished by the state plumbing board and filed with the board at Lansing, Michigan. An incomplete application will be returned to the applicant.

R 408.30793. Plumbing permits.

Rule 793. (1) An applicant for a permit shall be an authorized master plumber.

(2) An application for a permit shall be made in writing on a form provided by an administrative authority. An incomplete application shall be returned to the applicant. The application shall contain:

(a) Name of authorized master plumber.

(b) Master plumber license number.

(c) Name of the plumbing firm.

(d) Name of place of business.

(e) Name and address of the owner or agent for whom the work is being done.

(f) Location of work by city or township, county, street and number, or lot and block number when street number is not available.

(g) Type of building.

(h) Number and type of fixtures or devices to be installed or nature of construction, alteration or repair.

(3) An authorized master plumber is responsible for completion of the plumbing for which he has an active permit. Permits issued to an authorized master plumber representing a plumbing firm are valid for the firm to complete the plumbing upon his death. However, work shall be done under the supervision of a master plumber.

(4) If the authorized master plumber who signs an application for a permit does not desire to do the work covered by it, either in part or in its entirety, he shall notify the administrative authority in writing, requesting that he be released from responsibility for that part of the work which he does not desire to do. However, he will be held responsible for the work which he has completed. The administrative authority's record shall indicate the extent of the completed work and the responsiblity.

(5) When an emergency requires a plumbing permit, the authorized master plumber shall apply for a permit within 72 hours.

(6) An administrative authority may refuse to issue new permits to an authorized master plumber who has failed to correct violations or to any authorized master plumber representing a firm which has failed to correct violations.

R 408.30795. Building sewer and private sewer permits.

Rule 795. (1) An application for a permit shall be made in writing on a form provided by an administrative authority. An incomplete application shall be returned to the applicant. The application shall contain:

(a) Name of the applicant.
(b) Name of the applicant's firm.
(c) Address of place of applicant's business.
(d) Name and address of the owner or agent for whom the work is being done.
(e) Location of work by city or township, county, street and number, or lot and block number when street number is not available.
(f) Type of building.
(g) Nature of sewer construction, alteration or repair.

(2) A person is responsible for completion of the work for which he has an active permit.

(3) If the person who signs an application for a permit does not desire to do the work covered by it, either in part or in its entirety, he shall notify the administrative authority in writing, requesting that he be released from responsibility for that part of the work which he does not desire to do. However, he will be held responsible for the work which he has completed. The administrative authority's record shall indicate the extent of the completed work and the responsibility.

(4) When an emergency requires a sewer permit, a person shall apply for a permit within 72 hours.

(5) An administrative authority may refuse to issue new permits to a person who has failed to correct violations or to any person representing a firm which has failed to correct violations.

R 408.30796. Homeowner.

Rule 796. A homeowner installing his own plumbing, building sewer or private sewer and having knowledge of the plumbing code rules shall:
(a) Apply for the appropriate permit.
(b) Furnish a statement that all work will be performed by himself and by no one else.
(c) Pay the required fee.
(d) Apply for inspection by, and approval of, the administrative authority.

DEPARTMENT OF LABOR

CONSTRUCTION CODE COMMISSION

GENERAL RULES

Filed with the Secretary of State, May 11, 1977.

These rules take effect 6 months after filing with the Secretary of State.

(By authority conferred on the construction code commission by section 6 of Act No. 230 of the Public Acts of 1972, being section 125.1506 of the Michigan Compiled Laws).

R 338.1041 to R 338.1077. Rescinded by R 408.30805.

May 11, 1977

PART 8. ELECTRICAL CODE

R 408.30801. National electrical code; incorporation by reference; inspection; purchase.

Rule 801. Rules governing the installation, replacement, alteration, relocation, and use of electrical systems or materials shall be those rules contained in the National Electrical Code, 1975 edition, as published by the National Fire Protection Association, except as modified by these rules, with the exceptions noted. The National Electrical Code is incorporated in this Part by reference, and is available for inspection at the Lansing Office of the Michigan Department of Labor. The code may be purchased from the National Fire Protection Association, 470 Atlantic Ave., Boston, Mass. 02210, or from the Bureau of Construction Codes, 7150 Harris Drive, Lansing, Michigan 48926, at a cost of $5.50 each, plus mailing costs.

R 408.30805. Rescission.

Rule 805. Rule 41 through 77 of the rules of the electrical administrative board, being R 338.1041 to R 338.1077 of the Michigan Administrative Code, are rescinded.

R 408.30806. Portion of the National Electrical Code not incorporated by reference.

Rule 806. Article 551, part A. Recreational Vehicles; except for section 551-2 and figure 551-13(c), is not incorporated in this Part by reference.

R 408.30807. Title.

Rule 807. Title. This Part shall be known as the Michigan electrical code, hereinafter referred to as the code.

AMENDMENTS AND ADDITIONS TO ELECTRICAL CODE

R 408.30810. Scope.

Rule 810. Section 90-2 (a)(1) and 90-2 (b)(1) of the code is amended to read as follows:

90-2. Scope.

(a) Covered. This code covers:

(1) Electrical conductors and equipment installed within, or on, public and private buildings or other structures, including mobile homes, as well as other premises, such as yards, carnival, parking, and other lots, and industrial substations.

(b) Not covered. This code does not cover:

(1) Installations of electrical equipment in automotive vehicles, other than mobile homes, ships, watercraft, railway rolling stock, or aircraft.

R 408.30812. Enforcement.

Rule 812. Section 90-4 of the code is amended to read as follows:

90-4. Enforcement. The administrative authority shall make interpretations of the rules, deciding upon approval of listed equipment and materials, and shall grant any special permission required by these rules. In industrial establishments and in research and testing facilities, the administrative authority may waive specific requirements in this code, or may permit alternate methods, where it is assured that equivalent objectives can be achieved by establishing and maintaining effective safety and maintenance procedures.

R 408.30815. Maintenance of existing wiring.

Rule 815. Section 90-8 of the code is added to read as follows:

90-8. Maintenance of existing wiring. Every building, structure, or part thereof shall be kept in good electrical repair by the owner.

R 408.30816. Responsibility of persons.

Rule 816. Section 90-9 of the code is added to read as follows:

90-9. Responsibility of persons. A person shall not install, alter, maintain, service, or repair, or cause or permit the installation, altering, maintaining, servicing, or repairing of electrical equipment in or on any building, structure, or part thereof, or on any premises, if by the person's action the work does not conform to the provisions of the code.

R 408.30817. Disconnection of dangerous electrical equipment.

Rule 817. Section 90-10 of the code is added to read as follows:

90-10. Disconnection of dangerous electrical equipment. When the use of any electrical equipment is found imminently dangerous to human life or property, the administrative authority is hereby empowered to condemn it or disconnect it from its source of electric supply, except that the service entrance equipment or utility service drop wires shall not be disconnected unless such entrance equipment or utility wires in themselves constitute a hazard to life or property. When such equipment is so condemned or disconnected, a red tag shall be placed thereon listing the causes for the condemnation or disconnection and the penalty under the act for the unlawful use thereof. Written notice of condemnation or disconnection, and the causes therefore, shall be given to the owner or the occupant of the building, structure, or premises. A person shall not remove the tag or reconnect the electrical equipment to its source of electric supply, or use or permit to be used electrical current in any such electrical equipment, until such causes for the condemnation or disconnection are remedied and a permit for the electrical repairs thereof is obtained from the administrative authority.

R 408.30818. Permits and certificates.

Rule 818. Sections 90-11, 90-12, 90-13, 90-14, 90-15, 90-16, 90-17 90-18, 90-19, and 90-20 of the code are added to read as follows:

90-11. Permits and certificates. A person shall not equip a building with electrical equipment or make an alteration of, change in, or addition to electrical equipment without receiving a written permit to do the work described. When such electrical equipment, changes, or additions thereto are found to conform to the provisions of the code, and the work has passed inspection of the administrative authority, the administrative authority shall issue a certificate of final electrical inspection upon request of the permit holder to whom the permit was issued, that the provisions of the code have been complied with. However, such certificate shall not be granted until the electrical equipment is made to conform to the code. This section shall not apply to installations referred to in R 538.887.

90-12. Persons to whom permits shall be issued:

(1) A holder of a class 1 license.

(2) A person employing a licensed electrical journeyman to actively supervise the new installation of electrical equipment on premises owned or occupied, and used, by the applicant in the conduct of his business, and at which premises the licensed electrician performs his duties in those instances where business or industrial procedure requires the regular employment of a licensed electrical journeyman. However, an affidavit form furnished by the administrative authority shall be signed by both the employer and the licensed journeyman. This affidavit shall be kept on file in the offices of the administrative authority, and shall contain the following:

(a) Name and business address of the person employing the licensed electrical journeyman.

(b) Name, address, and current license number of the licensed electrical journeyman.

(c) License numbers of 2 previous years, and the name of licensing authority in order to establish the holding of a license for not less than 2 years.

(d) Statement to the effect that the employer and the licensed electrical journeyman will comply with the provisions of the code regulating installation of electrical equipment in the state. A new affidavit shall be filed before permits are issued if the licensed electrical journeyman terminates his employment.

(3) A homeowner who comes under the jurisdiction of the code.

90-13. Permit application forms. Applications for a permit under the code shall be on forms furnished by the administrative authority and shall be signed by the electrical contractor or his authorized agent.

90-14. Revocation of permits. A permit issued in violation of the laws of this state, or as a result of false or fraudulent information or misinterpretation of conditions, is subject to revocation at the direction of the administrative authority. The person holding the permit shall be notified to appear and show cause why the permit should not be revoked. Failure to appear shall be deemed sufficient grounds for revocation of the permit.

90-15. Lapsed and expired permits. If work for which a permit is issued is not started within 6 months of the date of issue, or if work is abandoned for a period of 6 months, the permit shall lapse and cease to be in effect. The administrative authority may reinstate an expired permit within 1 year of its date of issue. A permit which has expired, lapsed, or been abandoned 1 year or more may be reinstated only by action of the Bureau of Construction Codes in each case.

90-16. Permit holder quitting installation. If a person to whom a permit is issued for the installation and inspection of electrical equipment quits the installation for any reason, that person shall notify the administrative authority.

90-17. Partial completion of work. If an installation is partially completed, the permit holder, upon quitting the installation, shall notify the administrative authority and request an inspection. Acceptance of, or violations against, the work installed shall be recorded by the inspector on the permit record according to the findings of the inspector. A refund shall not be granted to the permit holder of the permit fee covering electrical equipment installed and inspected.

90-18. Owner hiring another licensed contractor to complete work. If a permit holder quits an installation after the electrical equipment is installed, and fails to notify the administrative authority, the owner or his agent may notify the administrative authority and request inspection. Upon inspection, the permit holder shall be sent a notice of any violation. The owner may then secure another licensed contractor to proceed with the work, when properly covered by a permit.

90-19. Transfer of electrical permit. If the permit holder gives written permission, or appears in person with another licensed contractor and grants permission, the permit shall be transferred to the licensed contractor. If permission is not granted by the original permit holder, the licensed contractor who completes the installation shall secure a permit covering the work he does. and such licensed contractor shall be responsible in either case for all work done under his supervision.

90-20. Additional permits. Additional permits shall be required as follows:

(1) If more than 1 inspection is necessary on any violation notice.

(2) For special inspections required for the investigation of a violation of the code.

(3) For additional work not included on the original permit.

R 408.30819. Plans and specifications

Rule 819. Section 90-21 of the code is added to read as follows:

90-21. Plans and specifications. A detailed set of plans and specifications shall be submitted with the application for an electrical permit for any wiring or alteration to the electrical system in all buildings using more than 6 circuits, except single and 2-family dwellings. The electrical drawings shall include such details as lighting layout, circuiting, switching, conductor and raceway sizes, wattage schedule, service location and riser diagram, calculations, and a proposed method of construction drawn with symbols of a standard form. All conductors are assumed to be copper, unless otherwise stated on the plan. Specifications, when provided, shall also include the foregoing information. The selection of suitable disconnect and over current devices to provide proper coordination and interrupting capacity for a wiring system is the responsibility of the designer. The administrative authority, when approving electrical plans, assumes no responsibility for the design or for any deviations from any applicable codes not explicitly agreed upon at the time of approval of electrical drawings. Plans and specifications approved by the administrative authority, or a certified copy thereof, where required, shall be available for the use of the administrative authority, or a certified copy thereof, where required, shall be available for the use of the administrative authority on the job.

R 408.30820. Representative on job site.

Rule 820. Section 90-22 of the code is added to read as follows:

90-22. Representative on job site. The administrative authority reserves the right to require a representative of the contractor to be on the job when an inspection is made.

R 408.30821. Safeguarding electrical equipment.

Rule 821. Section 90-23 of the code is added to read as follows:

90-23. Safeguarding electrical equipment. Electrical contractors shall not install electrical equipment than may be damaged by exposure or construction.

R 408.30822. Scheduling inspection.

Rule 822. Sections 90-24, 90-25, and 90-26 of the code are added to read as follows:

90-24. Scheduling inspection. Not less than 24 hours' notice shall be given the administrative authority before inspection is required.

90-25. Inspection notices. Any notice of inspection of electrical equipment shall be posted, or removed, at the job site by the administrative authority only.

90-26. Inspection before concealing. A person shall not conceal, or cause to be concealed, any electrical equipment before such equipment is approved by the administrative authority.

R 408.30823. Inspection and copying of records.

Rule 823. Section 90-27 of the code is added to read as follows:

90-27. Inspection and copying of records. Upon request in writing, the administrative authority shall make available for public inspection and copying, during its business hours, final orders or decisions in contested cases and the records on which such orders or decisions were made. Advance notice is required where these records are stored outside the immediate office area. Promulgated rules and written statements which interpret law, rules, or policy shall be available upon request during business hours. The administrative authority may charge not more than cost for each copy of any document.

R 408.30824. Methods of obtaining information

Rule 824. Section 90-28 of the code is added to read as follows:

90-28. Methods of obtaining information. The administrative authority is not responsible for code interpretations or other information relative to electrical installations given over the telephone. Requests for such information shall be made in person or in writing.

R 408.30825. Advertising.

Rule 825. Section 90-29 of the code is added as follows:

90-29. Advertising. A person shall not use any word or words in a sign, display, business form or document, or advertising medium which indicates, or tends to indicate, that a person is qualified to supervise, install, repair, replace, remove, or service any electrical equipment which requires a permit or inspection, or both, pursuant to these rules from the administrative authority, unless such is uttered, published, or displayed by authority of a licensed electrical contractor (class 1 licensee).

R 408.30826. Violations.

Rule 826. Section 90-30 of the code is added to read as follows:

90-30. Violations. If it is found that any electrical equipment does not conform to the provisions of the code, the person installing or responsible for installing such electrical equipment shall be notified in writing of such defect, misuse, or violation, and all such violations, defects, or misuses of such electrical equipment shall be corrected within a resonable length of time, not to exceed 10 working days. When the corrections have been made, that person shall notify the administrative authority in writing not less than 24 hours prior to the time reinspection is desired. Any person failing to make correction of a violation within the time specified herein shall be denied the right to file any further permits to do electrical work until the corrections are made.

R 408.30830. Definitions.

Rule 830. Article 100, Part A, of the code is amended to read as follows:

"Administrative authority defined." "Administrative authority" means the individual official, board, department, agency established and authorized by a state, county, city, or other political subdivision created by law to administer and enforce the provisions of the electrical code as adopted or amended. (All other definitions within Article 100, Part A, of the code shall remain the same.)

R 408.30865. Nonmetallic sheathed cable; uses permitted or not permitted.

Rule 865. Section 336-3 is amended to read as follows:

336-3. Uses permitted or not permitted. Type NM and Type NMC Cables shall be permitted to be used in one and two family dwellings, or multi-family dwellings and other structures.

(a) Type NM. This type of nonmetallic-sheathed cable shall be permitted to be installed for both exposed and concealed work in normally dry locations. It shall be permissible to install or fish type NM cable in air voids in masonry block or tile walls where such walls are not exposed or subject to excessive moisture or dampness.

Type NM cable shall not be installed where exposed to corrosive fumes or vapors; nor shall it be imbedded in masonry, concrete, fill, or plaster; nor run in a shallow chase in masonry or concrete and covered with plaster or similar finish.

(b) Type NMC. Type NMC cable shall be permitted for both exposed and concealed work in dry, moist, damp, or corrosive locations, and in outside and inside walls of masonry block or tile.

(c) Uses not permitted for either Type NM or NMC. Types NM and NMC cables shall not be used as: (1) service-entrance cable, (2) in commercial garages, (3) in theaters and similar locations, except as provided in Article 518, places of assembly, (4) in motion-picture studios, (5) in storage battery rooms, (6) in hoistways, (7) in any hazardous location, (8) embedded in poured cement, concrete, or aggregate.

R 408.30880. Circuits in anesthetizing locations.

Rule 880. Section 517-63(f) is amended to read as follows:

517-63(f). Circuits in anesthetizing locations. (1) A general purpose lighting circuit connected to the normal grounded service shall be installed in each operating room. Exception: Where connected to any alternate source permitted in 700-6 which is separate from the source serving the emergency system.

DEPARTMENT OF LABOR
CONSTRUCTION CODE COMMISSION
GENERAL RULES

Filed with Secretary of State on December 22, 1976
These rules take effect 6 months after filing with the Secretary of State

(By authority conferred on the construction code commission by section 6 of Act No. 230 of the Public Acts of 1972, being § 125.1506 of the Michigan Compiled Laws)

PART 10. ENERGY CONSERVATION IN NEW BUILDING DESIGN

R 408.31001. Standard incorporated by reference; examination and purchase of standard.

Rule 1001. (1) Rules governing the following subjects shall be those contained in the standard for energy conservation in new building design, ASHRAE 90-75:

(a) Exterior building envelope.
(b) Heating, ventilating, and air conditioning systems and equipment.
(c) Service water heating.
(d) Electrical distribution systems.
(e) Lighting power budget determination procedure.
(f) Energy requirements for building designs based on system analysis.
(g) Energy requirements for buildings utilizing solar, wind, or non-depleting energy sources in new building design.

(2) The standard referred to in subrule (1) is incorporated herein by reference, except for the definition of mobile home in section 3 and the exceptions noted in rules 1010 to 1055. The standard may be examined at the office of the Michigan department of labor, bureau of construction codes, in Lansing, and may be purchased from the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., 345 East 47th Street, New York, New York 10017, or from the Michigan Department of Labor, Bureau of Construction Codes, Michigan Secondary Complex, 7150 Harris Drive, Lansing, Michigan 48926, at a cost of $10.00, plus mailing costs.

R 408.31010. Purpose.

Rule 1010. (1) Section 1, part 1.4 of the standard incorporated by reference under rule 1001 is amended to read as follows:

1.4 It is intended that this referenced standard be used in the design of new buildings and that compliance with its requirements shall be determinable in the preconstruction stage, by evaluation and analysis of design specifications, drawings, and calculations by the enforcing agency prior to the issuance of the permit.

(2) Section 1, part 1.4.1 of the standard incorporated by reference under rule 1001 is added to read as follows:

1.4.1 Plans, specifications, and calculations shall show in sufficient detail all pertinent data and features of the building, the equipment, and the systems, including, but not limited to: exterior envelope component materials; U values of elements; R values of insulating materials; size and type of apparatus and equipment; equipment and system controls, and other pertinent data to indicate conformance with the requirements of the referenced standard.

R 408.31020. Scope.

Rule 1020. The words "mobile homes and" shall be deleted in section 2, part 2.1.1, of the standard incorporated by reference under rule 1001.

R 408.31030. "Resistance (R)" and "thermal transmittance (U)" defined.

Rule 1030. (1) "Resistance (R)" means the thermal resistance to heat flow and is the reciprocal of the thermal transmittance (R= 1/U).

(2) "Thermal transmittance (U)" means the overall coefficient of heat transmission or thermal transmittance (air to air) expressed in units of BTU per hour, per square foot, per degree Fahrenheit. It is the time rate of heat flow. The U value applies to combinations of different materials used in series along the heat flow path and also applies to single materials that comprise a building section, and includes cavity air spaces and surface air films on both sides.

R 408.31040. Exterior envelope requirements.

Rule 1040. Section 4, part 4.2.5, of the standard incorporated by reference under rule 1001 is amended to read as follows:

4.2.5 For calculations called for under this section, the following temperatures shall apply:

	Indoor		*Outdoor*
	F	*°C*	
Winter	72	22.0	97½%*
Summer	78	25.5	2½%*

* Values from 1972 ASHRAE Handbook of Fundamentals, Chapter 33, or from Table 4.1, of rule 1041 entitled "Climatic Conditions for Michigan".

R 408.31041. Exterior envelope requirements.

Rule 1041. The following table is added to section 4 of the standard incorporated by reference under rule 1001.

TABLE 4.1

CLIMATIC CONDITIONS FOR MICHIGAN

1	2		WINTER		SUMMER		
			3	4	5	6	7
Cities	Latitude		Design Temp. 97½%	Winter Degree Days	Design Dry Bulb 2½%	Design Wet Bulb 2½%	Summer Cooling Hour Over 80°F
	°	'					
Adrian	41	05	4	6400	91	75	500
Alpena	45	04	- 1	8506	87	73	304
Ann Arbor	42	16	0	6800	87	74	418
Battle Creek	42	18	5	6600	89	74	511
Bay City	43	36	2	6776	88	75	422
Benton Harbor	42	08	3	6200	87	74	359
Calumet AFS	-	-	- 5	-	79	69	75
Charlevoix	45	14	-16	-	87	73	301
Chatham	46	21	- 7	-	86	70	230
Dearborn	42	18	8	-	89	75	495
Detroit	42	24	8	6258	89	75	495
Dunbar Forest	46	16	- 9	-	81	70	124
Escanaba	45	04	- 3	8481	80	71	250
Flint	42	58	3	7377	88	75	509
Glen Arbor	44	55	4	-	84	73	218
Grand Marais	46	37	- 7	-	82	71	123
Grand Rapids	42	54	6	6894	88	75	420
Grayling	44	37	-10	8138	87	73	334
Hancock	47	09	- 4	-	80	70	97
Hart	43	42	- 2	6955	88	74	409
Holland	42	05	6	6400	88	74	300
Houghton	47	10	- 4	-	80	70	97
Iron Mountain	45	50	-16	-	86	69	272
Jackson	42	16	4	6400	89	74	511
Kalamazoo	42	17	5	6600	89	74	511
Lansing	42	47	6	6909	86	75	323
Manistee	44	13	4	7066	86	74	263
Marquette	46	34	- 4	8393	81	70	114
Mount Clemens	42	36	7	-	88	75	427
Mount Pleasant	43	04	1	7200	87	74	400
Muskegon	43	10	8	6696	85	74	247
Oscoda	44	26	- 3	-	84	73	219
Pontiac	42	38	4	-	88	75	414
Port Huron	42	59	3	7200	88	75	392
Saginaw	43	26	3	7000	88	75	392
Sault Ste.Marie	46	03	- 8	9048	81	71	100
Traverse City	44	44	4	-	86	73	308
Willow Run	42	14	5	-	88	75	410
Ypsilanti	42	14	5	-	88	75	410

R 408.31045. Heating and cooling criteria; walls.

Rule 1045. (1) Section 4, part 4.3.2.1 of the standard incorporated by reference under rule 1001 is amended to read as follows:

4.3.2.1 Walls. A building that is heated and/or mechanically cooled shall have a combined thermal transmittance value (U_w value) for the gross area of exterior walls not exceeding the values shown in figure 1, using Heating Degree Days as given in the 1973 ASHRAE Handbook & Product Directory, Systems Volume, Chapter 43, or Table 4.1 of rule 1041, entitled "Climatic Conditions for Michigan."

(2) Section 4, part 4.4.2.1 of the standard incorporated by reference under rule 1001 is amended to read as follows:

4.4.2.1 Walls. A building that is mechanically heated shall have a combined thermal transmittance value (U_w value) for the gross area of exterior walls not exceeding the values shown in figure 3, using Heating Degree Days as given in the 1973 ASHRAE Handbook & Product Directory, Systems Volume, Chapter 43, or Table 4.1 of rule 1041, entitled "Climatic Conditions for Michigan."

R 408.31050. Heating, ventilating, and air conditioning (HVAC) systems.

Rule 1050. The words "and Mobile Homes" shall be deleted from section 5, part 5.4.3.1, of the standard incorporated by reference under rule 1001

R 408.31055. Control setback and shut-off.

Rule 1055. The words "and Mobile Homes" shall be deleted from section 5, part 5.4.4.1, of the standard incorporated by reference under rule 1001.

STATE OF MICHIGAN

WILLIAM G. MILLIKEN, Governor

DEPARTMENT OF LABOR

KEITH MOLIN, Director

BUREAU OF CONSTRUCTION CODES
STATE SECONDARY COMPLEX
7150 HARRIS DR., P.O. BOX 30015
LANSING, MICHIGAN 48909
517/373-8187

June 23, 1977

TO; Bureau of Construction Codes Mailing List

FROM: Construction Code Commission

SUBJECT: VARIANCE FROM MICHIGAN ENERGY CODE RELATIVE TO COMMERCIAL HOT WATER HEATERS

The Construction Code Commission has agreed to delay enforcement of Section 7.3.1.2 of the ASHRAE 90-75 standard, which is adopted by reference in the State Energy Code, until the standard is changed by ASHRAE or until June 15, 1978, whichever occurs first, the energy efficiency requirements with respect to all commercial type gas and oil-fired automatic storage type hot water heaters as described in Section 2.7 of ANSI Z21.10.3-74 - Gas Water Heaters, Volume III, Circulating Tank, Instantaneous and Large Automatic Storage Type Water Heaters.

The Commission was informed through correspondence and telephone conversations with the chairman of the ASHRAE Panel 7 committee, Gas Appliance Manufacturers Association, Water Heater Division, and two individual manufacturers that the stand-by loss and recovery efficiency requirements cannot be met utilizing present day technology.

RAC/ibm

cc: CCC members
BCC staff
MEA
ASHRAE
GAMA
Panel 7 (ASHRAE) chairman
Lochinvar Water Heater Corporation
LABORegister

MICHIGAN
THE GREAT LAKE STATE

DEPARTMENT OF LABOR

CONSTRUCTION CODE COMMISSION

PREMANUFACTURED UNIT RULES

Filed with Secretary of State, June 11, 1975

These rules take effect 15 days after filing with the Secretary of State or earlier if so provided for by legislative amendment.

(By authority conferred on the construction code commission by Section 6 of Act No. 230 of the Public Acts of 1972, being section 125.1506 of the Michigan Compiled Laws.)

PART 11. PREMANUFACTURED UNITS

R 408.31101. Title.

Rule 1101. This part shall be known as the Michigan rules for the certification of premanufactured units.

R 408.31103. Definitions A and B.

Rule 1103. (1) "Act" means Act 230 of the Public Acts of 1972, as amended, being sections 125.1501 to 125.1531 of the Michigan Compiled laws. Terms defined in the act have the same meaning when used in these rules.

(2) "Approved" means approved by the commission.

(3) "Building Component" means any subsystem, subassembly or other system designed for use in or as part of a structure, which may include structural, electrical, mechanical, plumbing and fire protection systems and other systems affecting health and safety.

(4) "Building System" means plans, specifications and documentation for a system of premanufactured units or for a type or a system of building components, which may include structural, electrical, mechanical, plumbing and fire protection systems and other systems affecting health and safety, including variations which are submitted as part of the building system.

R 408.31104. Definitions C to E.

Rule 1104. (1) "Closed construction" means any unit, building, building component, assembly or system manufactured in such a manner that all concealed parts or processes of manufacture cannot be inspected before installation at the site without disassembly, damage or destruction.

(2) "Compliance assurance program" means the system, documentation and methods of assuring that premanufactured units and building components, including their manufacture, storage, transportation, assembly, handling and installation, conform with the act and these rules.

(3) "Evaluation agency" means an approved person or organization, private or public, including a governmental agency, determined by the commission to be qualified by reason of facilities, personnel, experience and demonstrated reliability and independence of judgment, to investigate, evaluate and recommend approval of premanufactured units, building components, building systems or compliance assurance programs and to recommend issuance of labels.

R 408.31105. Definitions I to L.

Rule 1105. (1) "Independence of judgment" means not being affiliated with or influenced or controlled by building manufacturers or by producers, suppliers or vendors of products or equipment used in premanufactured units and building components, in any manner which is likely to affect capacity to render reports and findings objectively and without bias.

(2) "Inspection agency" means an approved person or organization, private or public, including a governmental agency, determined by the commission to be qualified by reason of facilities, personnel, experience and demonstrated reliability and independence of judgment, to conduct or supervise compliance assurance programs, to recommend certification of premanufactured units and building components, and to recommend issuance and attachments of labels.

(3) "Installation" means the process of affixing, or assembling and affixing, premanufactured units or building components on the building site, or to an existing building.

(4) "Label" means an approved device or seal evidencing certification in accordance with the act and these rules.

(5) "Local enforcement agency" means the agency of local government with authority to make inspections of buildings and to enforce the laws, ordinances and rules enacted by the state and by the local government which establish standards and requirements applicable to the construction, alteration, repair or demolition of buildings.

(6) "Local government" means a county, city, village or township of this state with authority to establish standards and requirements applicable to the construction, alteration, repair or demolition of buildings.

R 408.31106. Definitions M to P.

Rule 1106. (1) "Mobile home" means a vehicular, portable structure built on a chassis and designed to be used without

a permanent foundation as a dwelling when connected to required utilities and which is, or is intended to be, attached to the ground, to another structure, or to a utility system on the same premises for more than 30 consecutive days.

(2) "Open construction" means unit, building, building component, assembly or system manufactured in such a manner that all portions can be readily inspected at the building site without disassembly, damage or destruction.

(3) "Premanufactured unit" means an assembly of materials or products intended to comprise all or part of a building or structure, and that is assembled at other than the final location of the unit of the building or structure by a repetitive process under circumstances intended to insure uniformity of quality and material content. The term includes a mobile home.

R 408.31111. Applicability.

Rule 1111. (1) These rules govern the design, manufacture, handling, storage, transportation and installation of premanufactured units and building components intended for installation in this state or in any other state or local governmental jurisdiction in which the building components and the labels thereon are accepted.

(2) A premanufactured unit or building components may be sold for, delivered to or installed on building sites located in any local government if:

(a)The unit or building components have been approved and certified pursuant to the act and these rules.

(b) The installation complies with the local government's zoning laws and other applicable ordinances.

R 408.31112. Pre-emption.

Rule 1112. Premanufactured units and building components certified pursuant to these rules are deemed to comply with the requirements of all laws, ordinances, rules and regulations which govern the matters within the scope of the approval and certification, regardless of the provisions of any other such law, ordinance, rule or regulation.

R 408.31113. Applicability of local law.

Rule 1113. (1) Except as provided by or pursuant to the act and these rules, land use zone requirements, performance-based fire zone requirements, building set-back requirements, side and rear yard requirements, property line requirements and on-site development, construction and inspection are specifically and entirely reserved to the local government.

(2) In areas of the state where special environmental conditions exist which require special or different building standards, pursuant to rule 1121, local government shall prescribe such standards for those parts of the site development, foundation and other work, for which responsibility is vested in local government pursuant to subrule (1).

R 408.31121. Standards, specifications and requirements adopted.

Rule 1121. Building systems shall comply with the state construction code.

R 408.31122. Amendments.

Rule 1122. Consistent with subrule (8) of rule 1133, the commission shall notify all manufacturers with approved building systems, local government and other concerned persons of all amendments. For purposes of this rule, a premanufactured unit or building component is deemed to be manufactured at such time as the label is attached to it in accordance with an approved compliance assurance program.

R 408.31131. Enforcement responsibility.

Rule 1131. The commission shall administer and enforce these rules. The commission has the responsibility for evaluating and approving building systems, and inspecting and certifying premanufactured units and building components for compliance with these rules. The commission may receive recommendations for acceptance of premanufactured units, building systems and compliance assurance programs submitted for approval by approved evaluation and inspection agencies.

R 408.31132. Approvals of building systems and compliance assurance programs.

Rule 1132. The commission shall approve building systems which comply with the codes, standards, specifications and requirements adopted in rule 1121 and with the other requirements of the act and these rules and shall approve compliance assurance programs which comply with the requirements of the act and these rules.

R 408.31133. Building systems.

Rule 1133. (1) To obtain approval for premanufactured units or building components, a manufacturer shall submit a building system for evaluation by the commission in accordance with the requirements of rule 1151.

(2) Before a full evaluation, the commission shall determine that building systems submitted to it are suitable for processing. If the application is found to be unsuitable for processing, the applicant shall be notified in writing of the unsuitability and the basis thereof within 30 days of the date the application is received by the commission and a portion of the fee may be returned. The findings of unsuitability is without prejudice. A subsequent submission shall be treated as a new application.

(3) The commission may require tests to determine whether a building system meets the codes, standards and requirements of the act and these rules, if that determination cannot be made from evaluation of plans, specifications and documentation alone. The procedures used shall be reviewed and evaluated by the commission.

(4) If a building system is disapproved, the commission shall notify the applicant with a written explanation of the reasons for disapproval attached thereto.

(5) Approval of a building system shall be evidenced by the stamp of approval of the commission on each sheet, or by other effective means of identification. Each sheet shall be numbered serially and shall indicate effective dates of revision. One copy of all plans, specifications and documentation shall be returned to the applicant.

(6) The commission shall prepare and issue to the applicant a building system approval report signed by the drafter and by the person in charge of the evaluation. The report shall be numbered and shall contain a summary description of the building system and all of the conditions of its use including installation instructions.

(7) A building system, or an amendment thereto which has been approved, shall not be altered without prior authorization by the commission. All approved changes shall be made a part of the written record of the approval. The authorization shall be in writing or be confirmed in writing within 10 days of any oral authorization.

(8) A change in the codes, standards, specifications and requirements shall not apply retroactively. The commision

shall notify all manufacturers with approved building systems and evaluation agencies of all changes. Each manufacturer shall submit to the commission the necessary amendments to its already approved building systems.

(9) Amendments to building systems may be proposed by submitting to the commission for approval, appropriate plans, specifications or documentation showing the effect of the proposed amendment on each building system.

(10) The commission may suspend or revoke the approval of a building system when the approval was issued in error, or was issued on the basis of incorrect information or was issued in violation of these rules or is later found to be in violation of these rules. Notice of suspension or revocation of the approval shall be in writing with the reasons set forth therein. Appeals from suspensions or revocations shall receive timely review.

R 408.31134. Compliance assurance programs.

Rule 1134. (1) A manufacturer shall obtain approval for a compliance assurance program for his building system. Units or building components shall be manufactured in accordance with an approved program in order to be certified. Compliance assurance programs shall be submitted to the commission in accordance with the requirements of rule 1161.

(2) Before full evaluation, the commission shall determine that the application for approval submitted to it is suitable for processing. If the application is found to be unsuitable for processing, the applicant shall be notified in writing of the unsuitability and the basis thereof within 30 days of the date of the application is received by the commission and a portion of the fee may be returned. The findings of unsuitability shall be without prejudice. A subsequent submission shall be treated as a new application.

(3) Compliance assurance programs submitted for approval shall be evaluated for compliance with the act and these rules.

(4) If a compliance assurance program is disapproved, the commission shall notify the applicant with a written explanation of the reasons for disapproval attached thereto.

(5) Approval of compliance assurance programs shall be evidenced by the stamp of approval of the commission on each sheet, or by other effective means of identification. One copy of the approved application and documentation shall be returned to the applicant.

(6) A compliance assurance program or an amendment thereto which has been approved shall not be altered without prior authorization by the commission. All approved amendments shall be made a part of the written record of the approval.

(7) The commission may suspend or revoke its approval of any compliance assurance program whenever the approval was issued in error, was issued on the basis of incorrect information or was issued in violation of these rules. If the commission determines that premanufactured units or building components manufactured pursuant to an approved building system do not comply with the act or these rules and the manufacturer fails to comply with a corrective order, the commission may suspend or revoke the approval of the manufacturer's compliance assurance program. Notice to the manufacturer and the inspection agency of suspension or revocation of approval shall be in writing with the reasons for suspension or revocation set forth therein. Appeals from suspensions or revocations shall receive timely review.

R 408.31135. Certification.

Rule 1135. Premanufactured units and building components, accepted by the commission as having been manufactured according to an approved building system and an approved compliance assurance program, shall be certified by the commission as complying with the requirements of the act and these rules. Certification shall be evidenced by the attachment of a label to each certified premanufactured unit, building component or group of components. The commission may authorize approved inspection agencies to make all or part of the inspection of premanufactured units or building components.

R 408.31136. Manufacturer's data plate.

Rule 1136. (1) The following information shall be placed directly on 1 or more permanent manufacturer's data plates in the vicinity of the electrical distribution panel, or in some other designated location, acceptable to the commission, on the premanufactured unit or building component where it will be readily accessible for inspection:

(a) Manufacturer's name and address.

(b) Serial number of the unit.

(c) Label serial number.

(d) Name and date of applicable nationally recognized codes complied with.

(e) Model designation and name of manufacturer of major factory installed appliances.

(f) Identification of permissible type of gas for appliances and directions for water and drain connection.

(g) Snow, wind, seismic and other live loads.

(h) Electrical ratings and instructions and warnings on voltage.

(i) Special conditions or limitations on use of the unit, including unsuitability for areas in which specified environmental conditions prevail.

(j) Date of manufacture.

(2) If, in the opinion of the commission, the shape or size of a building component is such that the information required in subrule (1) cannot be attached to a component permanently, the information may be placed in a manual crated with the component or on a tag attached to the crate in which the component is shipped, if the information is not such that the future occupant of the building should know it. If the occupant will need to know the information, it shall be contained in a manual which shall be presented to the occupant upon transfer of possession. If life safety is involved, the item in question shall be plainly labeled.

R 408.31137. Labels.

Rule 1137. (1) Each premanufactured unit or building component or group of components, which is certified pursuant to the act and these rules, shall have permanently attached thereto, in a visible location as shown on the approved building system, an approved label which cannot be removed therefrom without destroying the label.

(2) An approved label shall bear the following information:

(a) "This label certifies that this unit (or building component) has been manufactured in accordance with

a building system and compliance assurance program approved by the construction code commission and inspected by (name of inspection agency) under the auspices and approval of the State of Michigan."

(b) Label serial number.

(c) Building system approval number.

(d) Manufacturer's serial number.

(e) The words "See data plate located on _____."

(f) The name of the agency issuing the label.

(3) At the discretion of the commission, labels and data plates may be limited in size and content for components whose shape or size does not permit the full information to be placed thereon.

(4) The approved label shall be issued by the commission or its agents in accordance with the following:

(a) The commission shall specify the manner in which the labels are handled.

(b) Labels shall be numbered serially.

(c) A manufacturer's compliance assurance program, submitted in accordance with rule 1161, shall include requirements for issuance, possession, attachment and accounting of all labels to assure that labels are attached only to units or building components manufactured pursuant to an approved building system and inspected pursuant to an approved compliance assurance program.

(d) If the commission determines that the manufacturer's record of compliance is such that the commission need not maintain an inspector in a given plant at all times, the commission may entrust labels to the custody of 1 or more employees of the manufacturer, who shall be charged with controlling the use of the labels. The employees shall not be given custody of more labels than are necessary to accommodate the manufacturer's anticipated production for 1 month. If the conditions of custody are violated, the commission shall regain possession immediately of all labels that have not been applied to the premanufactured units or building components and shall take such further action with respect to units or components already labeled, and with respect to future labeling, as it deems necessary to assure compliance with the act and these rules.

(5) Permanent records shall be kept of the handling of all labels, indicating at least how many labels have been applied to units, building components or groups of components, which labels have been applied to which units or building components, the disposition of any damaged or rejected labels, and the location and custody of all unused labels. The records shall be maintained by the manufacturer or by the inspection agency. A copy of the records covering attachment of each label shall be sent to the commission every 3 months.

(6) The commission or an inspection agency shall attach labels to units or building components manufactured in accordance with an approved building system, and meeting the requirements of an approved compliance assurance program.

R 408.31138. Suspension and revocation.

Rule 1138. (1) The commission may suspend or revoke the certification of a premanufactured unit or building component which the commission finds not to comply with the act or these rules, or which has been manufactured pursuant to a building system or a compliance assurance program as to which approval has been suspended or revoked, or which has not been manufactured in accordance with the approved compliance assurance program. The commission shall remove or cause to be removed, labels from a premanufactured unit or building component until it is brought into compliance with the act and these rules. Notice of suspension or revocation of certification shall be in writing with the reasons for suspension or revocation clearly set forth therein. Appeals from suspensions or revocations shall receive timely review.

(2) Upon suspension or revocation by the commission of the approval of a building system or compliance assurance program, further labels shall not be attached to a premanufactured unit or building component manufactured pursuant to the building system or compliance assurance program with respect to which the approval was suspended or revoked. Upon termination of the suspension or revocation, labels may again be attached to the premanufactured unit or building component manufactured after the date approval is reinstated. If any unit or building component has been manufactured during the period of suspension or revocation, it shall not be labeled unless the commission, evaluation agency or inspection agency has inspected the unit or building component and the commission or its authorized inspection agency is satisfied that all requirements for certification have been met.

(3) The manufacturer shall return all labels allocated for a premanufactured unit or building component to the commission no later than 10 days from the effective date of the commission's suspension or revocation of the approval of the building system or compliance assurance program pursuant to which the premanufactured unit or building component is being manufactured. The manufacturer shall also return to the construction code commission all labels which it determines for any reason are no longer needed.

R 408.31139. Variations of certified units.

Rule 1139. Premanufactured units or building components certified and labeled pursuant to the act and these rules shall not be altered before the issuance of a certificate of occupancy without resubmission to the commission for approval of the variation and of the unit which includes the variation. The commission or its authorized inspection agency shall inspect the unit or building component wherever it is located which inspection may include such tests or destructive or nondestructive disassembly as the commission or its authorized inspection agency deems necessary to assure compliance with the act and these rules. Local enforcement agencies may be designated as inspection agencies for these purposes.

R 408.31141. Inspections by commission or its agents.

Rule 1141. (1) The commission shall make, or cause to be made, such inspections of the entire process of manufacturing, certifying, handling, storing and transporting of premanufactured units and building components produced pursuant to approved building systems as it deems necessary. As part of the process of evaluating building systems and compliance assurance programs, the commission shall inspect or cause to be inspected, the manufacturing facilities in which the units or building components are to be manufactured.

(2) The commission or its authorized inspection agency, shall make such inspections as may be required by an approved compliance assurance program, or as may be deemed necessary by the commission.

(3) Before issuing a certificate of occupancy, the commission shall inspect, or cause to be inspected, certified premanufactured units or building components which it determines to have been sufficiently damaged after certification to warrant the inspection and to take such action with regard to such units or building components as is authorized under rule 1138, or as is otherwise necessary to eliminate dangerous

conditions. The commission shall require premanufactured units or building components which are so damaged as no longer to comply with the act and these rules to be brought into compliance promptly. If such units or building components are not brought into compliance with the act and these rules within a reasonable time, or if they are so damaged that they cannot be brought into compliance, the commission shall order that the labels be removed. Irreparably damaged units or building components shall be disposed of in accordance with applicable law.

(4) The commission shall examine each approved inspection agency, at any reasonable time and without prior announcement, in order to monitor the reliability of the agency and of its monitoring of compliance assurance programs. Each examination shall investigate the adequacy of all procedures used by the agency in monitoring compliance assurance programs including inspection, tests, production methods, process controls, operator performance, materials receipt, storage and handling, workmanship standards, records and all other activities which implement the compliance assurance program in the manufacturing facility during transport, on-site, and at critical subcontractors' facilities. The results of examinations shall be kept on file at the offices of the commission. Copies of the reports shall be sent to the inspection agency. Inspection agencies shall be notified specifically of any deficiencies and of the manner in and time by which the deficiencies shall be eliminated. If deemed necessary by the commission, an agency's approval may be suspended or revoked as provided in rule 1173. The examinations shall also be conducted before approving an inspection agency.

(5) The commission shall examine each approved evaluation agency, at any reasonable time and without prior announcement, in order to monitor the reliability of the agency. Each examination shall investigate the adequacy of all evaluative procedures including engineering evaluation of plans, specifications and test results, testing, and analysis of compliance assurance programs. The results of the examination shall be kept on file at the offices of the commission. Copies of the reports shall be sent to the evaluation agency. Agencies shall be notified specifically of any deficiencies and of the manner in and time by which the deficiencies shall be eliminated. If deemed necessary by the commission, approval of an evaluation agency may be suspended or revoked as provided in rule 1173. The examinations shall also be conducted before approving an evaluation agency.

(6) An inspection entailing disassembly, damage to or destruction of certified premanufactured units or building components shall not be conducted except to implement subrule (1).

R 408.31142. Local enforcement agency procedures and inspections.

Rule 1142. (1) A local enforcement agency snall issue building permits for certified premanufactured units prior to installation and shall not withhold issuance of building permits for buildings containing certified building components which in all other respects comply with all applicable construction codes. A premanufactured unit or building component found by the commission not to comply with the act or these rules shall be brought into compliance before a permit shall be issued. An application to a local enforcement agency for a building permit shall, when requested, in addition to any other requirements, contain:

(a) A statement that the work to be performed under the permit is to include the installation of a certified premanufactured unit or building component in accordance with the provisions of the act which statement shall be signed by the applicant or his agent, with an appropriate address.

(b) A true copy of the approved building system with respect to which the premanufactured unit or building component was manufactured or is to be manufactured, if 1 has not been furnished to that local enforcement agency previously.

(c) A copy of the building system approval report, where it has not been furnished to that local enforcement agency previously.

(2) A local enforcement agency shall inspect site preparation work including foundations, not within the scope of the approval and certification, and the structural, mechanical, plumbing and electrical connections among units, for compliance with applicable law.

(3) A local enforcement agency shall inspect all premanufactured units or building components upon, or promptly after, installation at the building site to determine whether all instructions in the building system approval report or conditions listed on the manufacturer's data plate have been followed. This may include tests for tightness of plumbing and mechanical systems, for malfunctions in the electrical system and a visual inspection for obvious nonconformity with

the approved building system. Destructive disassembly of certified units and building components shall not be performed in order to conduct these tests or inspections. Standards or test criteria different from those adopted by the commission or specified in the building system approval report shall not be imposed. Nondestructive disassembly may be performed only to the extent of opening access panels and cover plates.

(4) A local enforcement agency shall cause the disposition of noncomplying premanufactured units and building components after consultation with the commission and reasonable notice of the proposed disposition to the manufacturer or owner thereof.

(5) A local enforcement agency shall issue certificates of occupancy for certified premanufactured units and for buildings containing certified building components which otherwise comply with all applicable building codes, after they have been installed and inspected pursuant to the act and these rules. A premanufactured unit or building component found not to comply with the building system approval report shall be brought into compliance before the certificate of occupancy is issued.

(6) When a local enforcement agency is making an inspection and finds a violation, it shall report the details of the violation in writing to the commission. Where a violation is hazardous to occupants, a certificate of occupancy shall not be issued and the building shall not be occupied before the hazard is corrected. If a violation is not hazardous, a provisional certificate of occupancy may be issued.

R 408.31143. Fees.

Rule 1143. Fees shall be charged in accordance with published rates of the commission.

R 408.31144. Notification of changes.

Rule 1144. (1) Manufacturers shall notify the commission in writing within 10 days of any of the following occurrences:

(a) The corporate name is changed.

(b) The main address of the company is changed.

(c) There is a change in 25% or more of the ownership interest of the company within a 12-month period.

(d) The change in location of any manufacturing facility which may supply components or units for sale and use in the State of Michigan.

(e) The establishment of a new manufacturing facility which may supply components or units for sale and use in the State of Michigan.

(f) There are changes in principal officers of the firm.

(2) Evaluation agencies and inspection agencies shall notify the commission in writing within 10 days of any of the following occurrences:

(a) The company name is changed.

(b) The main address of the company is changed.

(c) There is a change in 25% or more of the ownership interest or control of the company within a 12-month period.

(d) The change in location of any testing facility which may supply services to the commission.

(e) The establishment of a new testing facility which may supply services to the commission.

(f) There are changes in principal officers and key supervisory and responsible personnel of the firm.

R 408.31145. Proprietary information.

Rule 1145. All information relating to building systems and compliance assurance programs which the manufacturer or other party considers proprietary shall be so designated by him at the time of its submission, and shall be so held by the commission and by the inspection, evaluation and local enforcement agencies, except as the commission determines in each case, that disclosure is necessary to carry out the purposes of the act.

R 408.31151. Requirements for submission of building systems.

Rule 1151. Building systems shall meet the requirements set forth in rules 1152 and 1153 to be evaluated for compliance with the standards, specifications and requirements adopted by the commission.

R 408.31152. General requirements, building systems.

Rule 1152. (1) Building systems, including all plans, specifications and other documentation, shall be submitted in 3 copies.

(2) Building systems shall be submitted in the form prescribed by the commission and shall be accompanied by all required fees.

(3) All documents submitted with the application shall be identified to indicate the manufacturer's name, office address and the address of the manufacturing facility.

(4) Manufacturers shall submit plans showing all elements relating to specific systems on properly identifiable sheets.

(5) All work to be performed on-site, including connection of all systems, equipment and appliances, shall be identified and distinguished from work to be performed in the manufacturing facility.

(6) A 1½" x 2½" blank rectangular space shall be provided after possible reduction in print size on all sheets of plans as near as possible to the title box for the commission's stamp of approval.

(7) Grade, quality and identification of all materials shall be specified.

(8) Design calculations and test reports shall be submitted when required.

(9) Drawings shall be drawn to scale.

(10) Drawings shall indicate the location of the approved label and data plate.

(11) Drawings shall be dated and identified. The number of sheets in each set shall be indicated.

R 408.31153. Required construction details.

Rule 1153. (1) Building systems for premanufactured units shall provide or show, but not be limited to, the details listed below including the method of their testing or evaluation, or both. These requirements shall apply to the building systems for building components only to the extent deemed necessary by the commission or by its authorized evaluation agency to permit a proper evaluation of the building component.

(2) General requirements.

(a) Details and methods of installation of premanufactured units or building components on foundations or to each other or both.

(b) All exterior elevations.

(c) Cross sections as necessary to identify major building components.

(d) Details of flashing, such as at openings and at penetrations through roofs and subcomponent connections. Indicate flashing material and gauge to be used.

(e) Attic access and attic ventilation.

(f) Exterior wall, roof and soffit material as well as finish.

(g) Interior wall and ceiling finish material.

(h) Fire separation walls.

(i) Sizes, locations and types of doors and windows.

(j) Recommended foundation plans, vents and underfloor access.

(3) Building classification detail requirements:

(a) Occupancy or use.

(b) Area, height and number of stories.

(c) Type of construction.

(d) Fire resistance ratings.

(4) Space and fire safety detail requirements:

(a) Detail of fire resistance rated assemblies for all stairway enclosures, doors, walls, floors, ceilings, partitions, columns, roof and shaft enclosures.

(b) Details as to width of all aisles, exits, corridors, passageways and stairway enclosures.

(c) Toxicity and flame spread classification of finished materials.

(5) Structural detail requirements:

(a) Engineer's calculations of structural members where appropriate.

(b) Design soil bearing value.

(c) Structural and framing details of all floors, roof and walls.

(d) Details and stress diagrams of roof trusses.

(e) Details of reinforcing steel.

(f) Complete loading schedule.

(g) Column loads and column schedule.

(h) Lintel schedule.

(i) Size, spacing and details of all structural elements.

(j) Grade or quality of all structural elements such as lumber, steel and so forth.

(k) Elevation of structural elements, walls or sections thereof, providing resistance to vertical loads or lateral forces.

(l) Complete details of all structural connections.

(6) Mechanical detail requirements:

(a) Location of all equipment and appliances. Indicate equipment and appliances listed or labeled by approved agencies.

(b) Heat loss calculations, where appropriate.

(c) Manufacturer's name, make, model, number, BTU, and input rating of all equipment and appliances, as appropriate, or the equal thereof.

(d) Duct and register locations, sizes and materials.

(e) Clearances from combustible material or surfaces for all ducts, flues and chimneys.

(f) Method of providing required combustion air and return air.

(g) Location of flues, vents and chimneys and clearances from air intakes and other vents and flues.

(h) Details regarding dampers in ducts penetrating fire separations.

(i) Complete drawings of fire sprinkler systems, standpipe system or fire alarm system.

(j) Detail of elevator or escalator system, including method of emergency operation.

(7) Plumbing detail requirements:

(a) Plan or schematic drawing of the plumbing layout including, but not limited to, size of piping, fitting, traps and vents, cleanouts and valves, gas, water and drainage system.

(b) Plumbing materials, and location of all equipment and appliances to be used. Indicate fixture unit capacity of systems and the make, model and rating/capacity of equipment and appliances. Indicate equipment and appliances listed or labeled by approved agencies.

(c) Make and model of safety controls, such as for water heaters, their location, and whether listed or labeled by approved agencies.

(d) How piping is to be supported and intervals of support.

(e) Location of vents above roofs and required clearances, including, but not limited to, clearances from air intakes, other vents and flues.

(f) Methods of testing.

(8) Electrical detail requirements:

(a) Plan of service equipment, including service entrance, conductors, service raceway and clearances above ground and above structures.

(b) Method and detail for grounding service equipment.

(c) Single line diagram of the entire electrical installation.

(d) Load calculations for service and feeders.

(e) Sizes of all feeders and branch circuits.

(f) Size, rating and location of main disconnect/ overcurrent protective devices.

(g) Method of interconnection between manufactured units or building components and location of connections.

(h) Location of all outlets and junction boxes.

(i) Method of mounting fixtures and wiring installations.

R 408.31161. Requirements for submission of compliance assurance programs.

Rule 1161. Compliance assurance programs shall be approved if they meet the requirements set forth in rules 1162 to 1168. It is the manufacturer's responsibility to execute every aspect of this program. The manufacturer shall continue to be responsible for all corrective actions required, and if the commission authorizes an inspection agency to perform its inspection duties, the contractual relationship between the manufacturer and the inspection agency shall not diminish this responsibility. The manufacturer shall cooperate with the inspection agency by providing the inspection agency with all necessary reports, information, documents, records, facilities, equipment, samples and other assistance for assuring compliance. The manufacturer's compliance assurance program shall be submitted in the form of a compliance assurance manual which shall contain complete documentation of all the compliance assurance activities of both the manufacturer and the inspection agency. The manual shall be comprehensively indexed, and shall treat the material listed in rules 1162 to 1168 in detail.

R 408.31162. Organization requirements.

Rule 1162. (1) A procedure for periodic revision of the manual.

(2) An organizational structure for implementing and maintaining the compliance assurance program and its functional relationship to other elements of the organization structure of the manufacturer, which structure shall provide for independence from the production department. Company officers and employees in charge of the compliance assurance program shall be identified, and their training and qualifications specified.

(3) A uniform system of in-depth analysis of program effectiveness and means to identify deficiencies, referred to as audit, to monitor program performance periodically.

(4) Complete and reliable records of manufacturing, site operations, suitable means of storage, preservation and accessibility of copies of forms to be utilized shall be included.

(5) A system to control changes in production or inspection procedures.

(6) A system to assure that working drawings and specifications, working instructions and standards, procurement documents, and so forth, conform to the approved building system.

(7) A serial numbering system for buildings and building components.

(8) The method of safekeeping, handling and attaching labels and identification of those employees responsible therefor.

R 408.31163. Materials control.

Rule 1163. (1) Procedures to assure effective control over procurement sources to ensure that materials, supplies and other items used in production and site operations, if any, conform to the approved plans, specifications and quality requirements.

(2) Procedures for inspection of materials, supplies and other items at the point of receipt.

(3) Method of protection of materials, supplies and other items against deterioration prior to their incorporation in the certified unit or building component.

(4) Provision for disposal of rejected materials, supplies and other items.

R 408.31164. Production control.

Rule 1164. (1) Procedures for timely remedial and preventive measures to assure product quality.

(2) Provision, maintenance and use of testing and inspection equipment to assure compliance with the approved building system.

(3) Provision for frequency of sampling inspections.

(4) Provision of necessary authority to reject defective work and carry out compliance assurance functions, notwithstanding any conflict with production department goals and needs.

(5) A schematic of the manufacturing operation showing the location of inspection stations, and hold points for mandatory inspection characteristics.

(6) Inspection and test procedures, including accept/reject criteria and mandatory inspection characteristics.

(7) Standards of workmanship.

(8) Provision for disposal of rejects.

R 408.31165. Finished product control.

Rule 1165. (1) Procedure for final inspection of all premanufactured units or building components before shipment to the site or storage point, including identification and labeling.

(2) Procedures for handling and storing all finished premanufactured units or building components, both at the manufacturing plant or other storage point and after delivery to the building site.

(3) Procedures for packing, packaging and shipping operations and related inspections.

(4) Procedures for transportation, including all measures to protect against damage while in transit, and setting forth the modes of transportation to be utilized and the carrying equipment and procedures.

R 408.31166. Installation control.

Rule 1166. (1) Installation procedures including component placement, equipment and procedures, field erection and finishing work, utility connection instructions and all appropriate on-site inspection criteria and test descriptions.

(2) Organizational provisions for field repair and disposal of rejects.

R 408.31167. Permission for inspection.

Rule 1167. A manufacturer shall provide the commission with written permission, signed and notarized, for the commission or its authorized evaluation or inspection agencies to inspect its manufacturing facilities, its products and building sites under its control any reasonable time without prior announcement.

R 408.31168. Inspections by the commission.

Rule 1168. The compliance assurance manual shall contain detailed plans for inspections by the commission or inspection agency.

R 408.31171. Requirements of submission for approval of inspection and evaluation agencies.

Rule 1171. (1) An inspection or evaluation agency seeking approval shall submit an application to the commission which includes the items listed in this rule.

(2) The original articles of incorporation of the agency and all subsequent amendments thereto, as filed in the state of incorporation.

(3) The bylaws of the organization.

(4) The names, addresses and business affiliations of all members of the board of directors and of top management personnel.

(5) Stock owned in amounts over $5,000 reflecting the financial interests of the agency's board of directors and top management personnel if requested by the commission.

(6) Certification by the agency that:

(a) Its board of directors, as a body, and its technical personnel, as individuals, can exercise independence of judgment.

(b) Its activities pursuant hereto will result in no financial benefit to the agency via stock ownership, or other financial interests in any producer, supplier or vendor of products involved, other than through standard published fees for services rendered.

(7) Names, years of experience, state in which professionally registered and other qualifications of the directors of inspection or evaluation programs.

(8) Names and years of experience of employees practicing in the following disciplines: architecture, structural engineering, mechancial engineering, electrical engineering, fire protection and other branches of engineering; the states in which each is registered and the services each performs.

(9) An organization chart showing management and supervisory persons including the number of graduate engineers and architects, and the names of all consulting engineers or architects, designating which are full time and which are part time engineers.

(10) Number and location of factory inspectors, supervisors and other technicians, including evaluators of factory inspectors and the qualifications of each specialized group, including records of work experience, licenses held and other pertinent qualifications; descriptions of the type of work each group and each technician is expected to perform, and the qualifications of each group and each technician to perform the work assigned.

(11) An outline of the training program, if any, of the agency to assure that all inspectors, evaluators and other technicians are properly trained to do each job assigned to them.

(12) An outline of the general procedures for supervision of inspectors and evaluators, including checking and evaluation of their work.

(13) All engineers, technicians and other personnel who will perform services for the organization but who are not employees of the organization, and the supervisory and other relationships which each will have to the agency.

(14) Type of products, components, equipment, structures and other items which the organization has evaluated, tested or inspected, and the number of years of experience the organization has had with each, and the type of codes, standards, specifications and requirements with respect to which the organization has had experience in providing evaluation, inspection or testing services, and the number of years of experience with each.

(15) Description of the record keeping system the agency proposes to use with particular regard to availability of records to the commission and the capacity to render reports to the commission.

(16) Description of the frequency with which the agency is capable of performing inspections or evaluations.

(17) List of the states in which the agency is now approved to inspect or evaluate premanufactured units or building components, and a further listing of those states in which the agency intends to seek such approval within the next 2 years.

(18) Certification that the agency is able to evaluate building systems for compliance with the codes, standards, specifications and requirements adopted in this state, or premanufactured units or building components for compliance with approved building systems.

R 408.31172. Procedures for approving inspection and evaluation agencies.

Rule 1172. (1) The commission may approve inspection or evaluation agencies which meet the requirements of rule 1171 and which the commission finds otherwise qualified to perform the functions proposed to be assigned to them.

(2) Before a full evaluation of an application for approval, the commission shall determine whether the application is suitable for processing. If the application is found to be unsuitable for processing, the applicant shall be notified in writing of the unsuitability and the basis thereof within 30 days of the date the application is received by the commission and a portion of the fee may be returned. The findings of unsuitability shall be without prejudice. A subsequent submission shall be treated as a new application.

(3) If an inspection or evaluation agency is not approved, the commission shall return 1 complete application to the applicant with a written explanation of the reasons for disapproval attached thereto.

(4) Approval of inspection or evaluation agencies shall be evidenced by a letter to the applicant indicating the approval and stating specifically the functions which the applicant has been approved to perform. Approval does not constitute the actual assignment of the functions.

R 408.31173. Suspension and revocation of authority of inspection and evaluation agencies.

Rule 1173. The commission may suspend or revoke its approval of any evaluation agency or inspection agency if the approval was issued in error, or was issued on the basis of incorrect information, or was issued in violation of the act or these rules, or if the agency violates the act or these rules, or if examination pursuant to subrules (4) and (5) of rule 1141 discloses that the agency has failed to perform properly, or for such other cause as may be deemed sufficient by the commission to warrant the action.

R 408.31174. Procedures in event of suspension or revocation.

Rule 1174. (1) If the commission suspends or revokes the approval of an evaluation or inspection agency, the evaluation or inspection agency shall be given notice in writing of the suspension or revocation with the reasons therefor set forth. Manufacturers being evaluated or inspected by the agency, and all local enforcement agencies within this state shall also be notified in writing of the suspension or revocation. The notice shall contain instructions to the manufacturer and to the local enforcement agency as to premanufactured units or building components previously certified by an agency whose approval has been suspended or revoked.

(2) An evaluation or inspection agency whose approval has been suspended or revoked, within 90 days of the suspension or revocation, shall deliver to the custody of the commission the originals of all records required by the act and these rules to be made of or in the course of, the agency's operations pursuant to the act and these rules

R 408.31191. Applications for appeal.

Rule 1191. (1) Any person or party in an individual capacity or on behalf of a class of persons or parties affected by these rules or by any decision of or action by any evaluation agency, inspection agency or of the commission under these rules may file an application for appeal.

(2) An application for appeal shall be filed within 90 days after the date of the decision or action from which the appeal is being taken.

(3) An application may be filed either personally or by mail at the principal office of the commission.

(4) The application need not follow any prescribed form, but shall be in writing and shall contain sufficient information, as set forth in subrule (5), to apprise the commission of the rule appealed from, or of the facts and circumstances surrounding the decision or action appealed from and giving the grounds upon which the appeal is based.

(5) The application shall include, where applicable, the following documentation:

(a) A copy of the rule, initial determination, decision, direction, ruling or order which is the subject of the appeal.

(b) A copy of the building system, compliance assurance program or other document involved.

(c) A description of the premanufactured unit or building component affected.

(d) A statement of the relief sought by the appellant.

(6) If the appeal is from an action or decision of an inspection or evaluation agency, the application shall contain a statement of the prior decision or other action of the commission on such appeal.

R 408.31192. Hearings and hearing notices for appeals.

Rule 1192. The commission shall hear all appeals without undue delay after receipt of the objections. The appeal may be heard by the commission, or a panel of 3 or more members designated for that purpose by its chairman.

R 408.31193. Conduct of hearings for appeals.

Rule 1193. (1) Any interested person may appear and be heard.

(2) The commission, on its own motion or on the motion of any person, may adjourn a hearing to such time and place as the commission may determine.

(3) At least 3 members of the commission shall be present at all times during a hearing.

(4) A person may produce such witnesses as he deems appropriate.

(5) The commission shall not be bound by common law or statutory rules of evidence in the conduct of the hearing. The commission shall consider in evidence any testimony, documents or other materials submitted by the appellant or the appellee including the results of formal or informal appeals before national codes and standards organizations or national codes and standards appeals organizations.

(6) All parties shall be afforded an opportunity to state their positions, either by the testimony of witnesses or by a formal or informal statement by themselves, their attorneys or any other persons. At the conclusion of the parties' statements, the commission may question the appellant or appellee or any witness and any other party who so desires shall be heard.

(7) All hearings shall be reported by an official reporter. The official transcript shall be open for inspection at the offices of the commission. Copies of the transcripts shall be available from the official reporter on payment of the charges therefor.

R 408.31194. Decisions.

Rule 1194. All final decisions of the commission shall be in writing, shall be rendered without undue delay after the close of the hearings and shall state the reasons therefor. One copy of the final decision shall be transmitted by mail to the appellant immediately and 1 copy to the appellee. Final decisions shall be filed in the office of the commission permanently.

# # # # #

Exhibit #13, Minnesota

STATE OF MINNESOTA
DEPARTMENT OF ADMINISTRATION
SAINT PAUL

BUILDING CODE
DIVISION

MANUFACTURED BUILDING CODE LETTER NO. 1

To: Building Manufacturers

From: Herbert W. Meyer
State Building Inspector

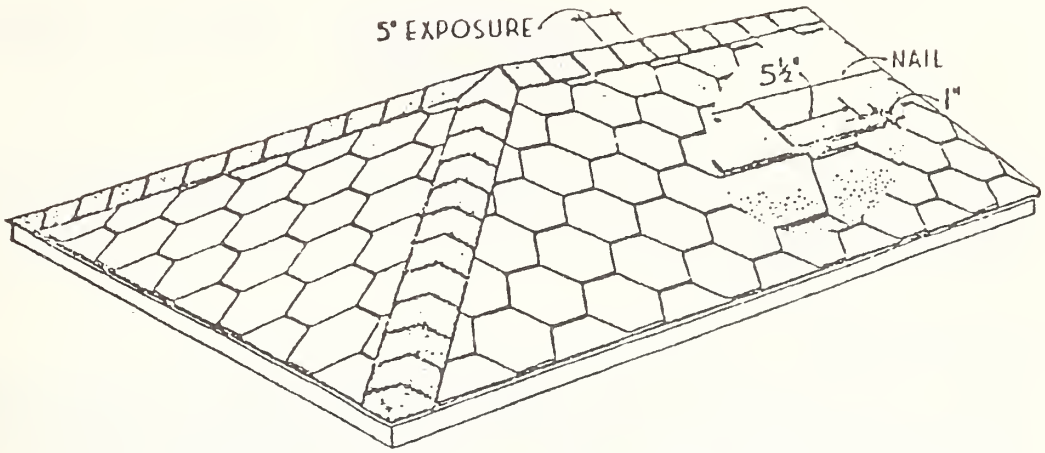
Subject: INSTALLATION OF COMPOSITION ROOFING SHINGLES

The submission of plans for manufactured buildings to the Building Code Division has indicated that compliance is not being made with Section 3203(d)2 "Composition Shingles Composition Shingles shall not be installed on a roof having a slope of less than four(4) inches to twelve(12) inches unless approved by the Building Official."

Because of the low slope roofs being used in manufactured buildings alternate methods to those allowed in UBC Standard 32-3 must be used. We are writing to inform you that composition shingles installed in accordance with the recommendations of the "Asphalt Roofing Manufacturers Association" for "Low Slope Applications" will be acceptable to the division. A copy of such recommendation is attached.

In addition the division will accept other methods if they have been proven by use or test. Such use or test must show the roof covering will provide weather protection for the building at the roof.

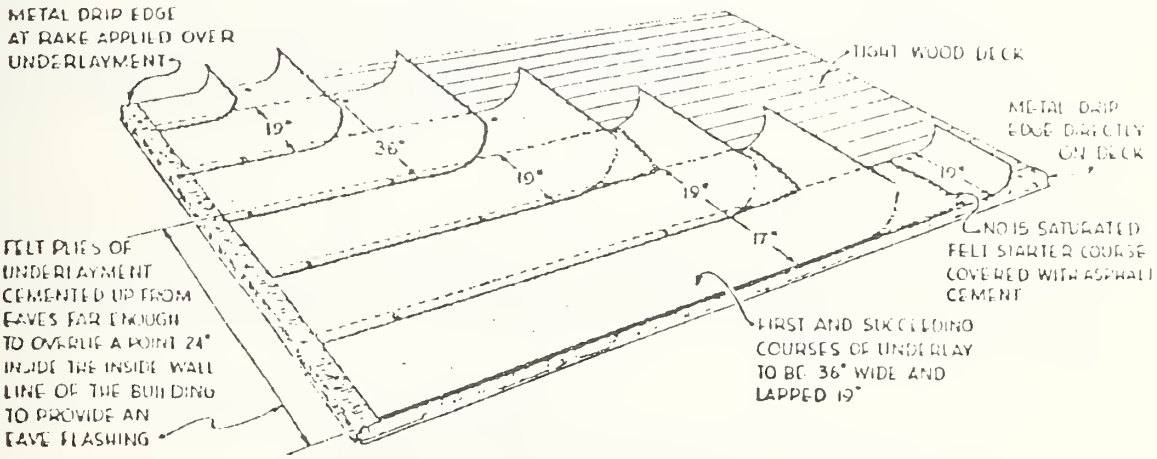
The division will accept approval of low slope roof applications if examined and approved by an "Evaluation Agency" approved by this division.



- Hip and ridge shingles applied with hex tab strips.

LOW SLOPE APPLICATION

Square-tab strip shingles are recommended for use on decks having a slope lower than 4" per foot but not less than 2" per foot when special application methods are used to compensate for the slower water run-off resulting from the lower roof slope. These application methods involve:-- (a) double underlayment; (b) a special cemented eaves flashing strip; (c) use shingles provided with factory applied adhesive and manufactured to conform to the Underwriters' Laboratories' 1962 Standard for Class "C" Wind Resistant shingles, or, if "free" tab square butt strips are used cement all the tabs.



- Application of No. 15 asphalt saturated felt underlay on a Low Slope Deck.

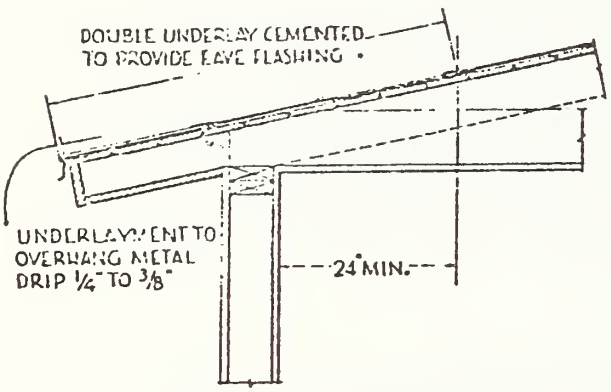
(a) Underlayment

The deck is covered with two layers of No. 15 asphalt saturated felt, applied as shown. The application begins with a 19" starter course laid along the eaves followed by a 36" wide sheet laid even with the eaves and completely overlapping the starter course.

Thereafter, 36" sheets are laid, each to overlap the preceding course by 19", exposing 17" of the underlying sheet. The felt is secured to the deck with only enough fasteners to hold it in place until the shingles are applied.

(b) Eave Flashing

Under the conditions outlined in paragraph (d), page 39, that portion of the felt underlay that extends from the eave up the roof far enough to overlie a point 24" inside the inside wall line of the building is treated as follows:

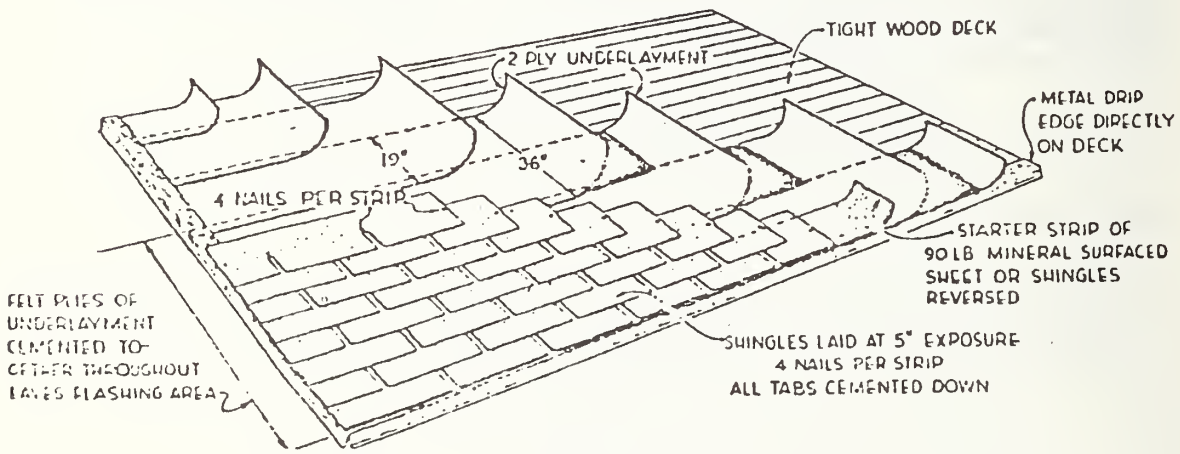


- Underlay plies cemented together to form an eaves flashing.

A continuous layer of plastic asphalt cement is applied at the rate of two gallons per 100 square feet to the surface of the underlay starter course before the first full course is applied, and also to the 19" underlying portion of each succeeding course which lies within the eaves flashing area, before placing the next course. It is important to apply the cement uniformly with a comb trowel, so that at no point will felt touch felt when the application is completed. The overlying sheet is pressed firmly into the entire cemented area.

(c) Application of Shingles

Fig . shows how the shingles are applied over the underlayment. Any shingle arrangement as described for normal slope application may be used. The exposure is 5" and the number of nails required per strip is four.



- Application of shingles over double underlay.

STATE OF MINNESOTA
DEPARTMENT OF ADMINISTRATION
SAINT PAUL

BUILDING CODE
DIVISION

October 10, 1975

MANUFACTURED BUILDING CODE LETTER NO. 9

To: Manufactured Building Manufacturers

From: Wm. F. Anderson
State Building Inspector

Subjects: Energy Conservation Document
1975 National Electrical Code
Bathtub Drains

Energy Conservation - an amendment to the State Building Code:

An energy document which establishes energy conservation standards for design, evaluation, construction or reconstruction of all new and remodeled buildings becomes effective on January 30, 1976. The requirements are statewide. You must submit new heat loss calculations and other documentation and drawings which will indicate compliance with the standard. The submission should be made in two copies to this Division prior to January 1, 1976.

The energy document, entitled "Design and Evaluation Criteria for Energy Conservation in New Buildings, Additions and Remodeled Elements of Buildings", is available from the Document Section, 140 Centennial Building, St. Paul, Minnesota, 55155. A check or money order in the amount of $2.50 plus tax for each copy should be made payable to "State of Minnesota Document Section."

1975 National Electrical Code:

The 1975 National Electrical Code has been adopted by reference by this State and is now in effect.

Bathtub Drains:

MHD 127 has been amended to read as follows:

(h)(1) Bathtubs shall have waste outlets and overflows at least 1½ inches in diameter. The waste control device shall be located at the tub outlet.

This amendment does not permit the use of recessed stoppers in the bathtub drain. Review your current procedures for compliance with this amended section of the Minnesota Plumbing Code.

WFA:RIH:kd

The Montana State Board of Plumbers, at their special meeting January 12, 1974, approved the Uniform Plumbing Code (October 1972, October 1973), as it may be amended and approved by the board from time to time, to be the plumbing code for the State of Montana.

The following exceptions hold true throughout the entire code:

1. Acrylonitrile-butadiene-styrene (ABS) plastic pipe is NOT an acceptable material in the state of Montana.

2. Abestos-cement plumbing vent pipe is NOT an acceptable material in the state of Montana.

3. Homogenous bituminized fiber drain and sewer pipe is NOT an acceptable material in the state of Montana.

4. Wherever in the code "a holder of a permit" appears, it is to be deleted.

The following amendments and exceptions are listed according to section:

Section 203 (d) - Delete "or underground outside of structures." ending the sentence with 'building'.

Section 207 (a) - Insert "lead plug" between 'brass cap' and 'or an approved PVC plastice plug."

Section 317 (e) - Substitute "(1) Except as permitted in paragraph (2), the underground water-service pipe and the building drain or building sewer shall not be less than ten (10) feet apart horizontally and shall be separated by undisturbed or compacted earth. (2) The water-service pipe may be placed in the same trench with the building drain provided the following conditions are met:

The bottom of the water-service pipe, at all points, shall be at least twelve (12) inches above the top of the sewer line at its highest point.

The water-service pipe shall be placed on a solid shelf excavated at one side of the common trench.

The number of joints in the service pipe shall be kept to a minimum.

The materials and joints of sewer and water-service pipe shall be installed in such a manner and shall possess the necessary strength and durability to prevent the escape of solids, liquids, and gases, therefrom, under all know adverse conditions such as corrosion, strains due to temperature changes, settlement, vibrations and superimposed loads."

Section 406 (a) - Substitute "(a) Cleanouts shall be not more than fifty (50) feet apart in horizontal drainage lines of four (4) inch nominal diameter or less and not more than one hundred (100) feet apart for larger pipes."

Section 407 - Change four (4) inch to "two (2) inch", and delete "when first approved by the Administrative Authority."

Section 506 (a)&
Section 506 (c) - Change six (6) inches to "twelve (12) inches".

Section 506 - Add "(e) All vents through three (3) inch must be increased one (1) pipe size with a minimum size going through the roof two (2) inch."

Section 708
Section 711
Section 712 - Change Administrative Authority to "Department of Health and Environmental Sciences".

Section 802 (j) - Delete this section completely.

Section 902 - Delete the first sentence of the second paragraph: "Restaurant kitchen and other special use sinks may be of approved type bonderized and galvanized sheet steel of not less than No. 16 U.S. gauge (.0625)."

Section 908 (c) - Delete this section completely.

Section 1008(b) - Substitute - same as Section 317 (e).

Section 1009(m) - (1) Add "and Department of Health and Environmental Sciences."

Section 1101 - Delete (c), (d) and (e) compeletely.

Section 1108 - Substitute - same as Section 317 (e).

Section 1109
Section 1110
Section 1111
Section 1112
Section 1113
Section 1114
Section 1115
Section 1116
Section 1117
Section 1118 - Delete these sections completely. The sections on private sewer systems shall be as required by the State Department of Health and Environmental Sciences.

40-3.38(10)-S38060 SET AND APPROVE REQUIREMENTS AND STANDARDS - NATIONAL ELECTRICAL CODE (1) The National Electrical Code, as amended from time to time, is hereby incorporated by reference into the rules and regulations of the Board, and may be obtained by writing the Board for a current copy and payment of a fee in advance. (History: Sec. 66-2802, 69-2111, 82A-1202, 82A-1605; R.C.M. 1947; Order MAC No. 23-1; Adp. 12/31/72; Eff. 12/31/72; PRIOR Transferred from Dept. of Justice on 3/3/73; TRANS under Sec. Bill No. 166, Ch. 87, Session Laws of Mont. 1973, by Order MAC No. 40-3-2.)

40-3.38(10)-S38070 SET AND APPROVE REQUIREMENTS AND STANDARDS - WIRING STANDARDS (1) In the State of Montana, all electrical work shall be installed to meet the requirements prescribed by the National Electrical Code, except such sections, sub-sections, part or parts as are changed, modified, inconsistent with or are expressly omitted by provisions contained in the rules and regulations of the Board are hereafter known as the Montana Wiring Standards. A check with the power suppliers in the area or the municipality in which the installation is being done, for more stringent codes, should be made.

(2) In every case where no specific type of class of material, or no specific method of construction is prescribed in said standards, the material and method of construction shall be in conformity with the National Electrical Code as interpreted by the Board.

(3) Throughout these Wiring Standards, the word "shall" is used to indicate requirements and the word "should" to indicate recommendations.

(4) It is recommended, as a safety precaution, that persons doing their own wiring and not being familiar with, or understanding the wiring standards as prescribed by the Board, should employ a licensed electrical contractor.

(5) These wiring standards do not constitute a design specification for any particular installation, nor an instruction manual for untrained persons. Skill and experience are necessary factors for a safe and adequate wiring installation.

(6) Electrical installations shall be planned to provide adequate capacity for the total connected load. Adequate electrical installations should include capacity for future needs.

(7) All wiring materials and devices shall bear the ap-

proval of the Underwriters Laboratories, Inc., or other accepted testing laboratory.

(8) All installations shall be made in a workmanlike manner with special attention paid to the mechanical execution of the work. All conductors shall be rigidly supported and all fittings securely fastened.

(9) Service entrance conductors used on circuits exceeding 600 volts, shall be installed in rigid metal conduit as in Article 230-101(b), of the National Electrical Code.

(a) For circuits not exceeding 600 volts, the conductors may be installed in rigid metal conduit, electrical metallic tubing, wireways, auxiliary gutters or busways.

(b) All mast type services shall be of sufficient size or properly guyed to support the service drop.

(i) A perpendicular mast used for the support of a service drop, shall be not less than 1-1/2 inch galvanized rigid conduit.

(10) The size of service entrance conductors shall conform with Article 230-21 of the National Electrical Code, except that a minimum of 100 ampere, 3-wire service shall be provided for all individual residences of new construction or older residences where service is altered or being rewired and except that installations consisting of more than two 2-wire branch circuits shall be not less than 3-wire 100 ampere in size. Buildings moved from one service location to another shall be considered as having the service altered.

(11) In general, service entrance conductors shall be provided with a readily accessible disconnecting means, with overload protection of ungrounded conductors, from the source of supply at the meter or adjacent thereto.

(12) All electrical installations in commercial, mercantile, industrial, institutional and public buildings shall be wired in raceways of the following classifications: rigid metal conduit, rigid nonmettalic conduit, electrical metallic tubing, under floor raceways, surface metallic raceways, cellular concrete floor raceways, cellular metal floor raceways, wireways, and busways.

(13) The aforesaid standards, as provided in Paragraph (12) supra, shall also be required for the following:

(a) Buildings open to the public.

(b) Places of public assembly, including but not limited to, churches, schools having more than one classroom, clubs, theatres, dance halls, taverns, hospitals, hotels, multi-family dwellings of more than four apartments, motels, and residences mechanically connected to motels or buildings designated for stores or business purposes.

(c) In all fairgrounds, amusement parks, or in any place where the public becomes seated in a grandstand.

(d) Nursing homes, convalescent homes, homes for the aged and dormitories which house more than eight persons. Emergency and exit lighting shall be provided. Receptacles

shall be installed in accordance with Article 210-22(b) of the National Electrical Code.

(e) A minimum of four (4) applicance circuits shall be installed in kitchens which may be used to service public gatherings, including, but not limited to churches, schools, clubs, lodges, etc.

(f) All alterations or additions shall comply with all the wiring standards.

(14) Type AC cable, commonly known as BX, shall not be used in the State of Montana.

(15) Rigid metallic conduit, electrical metallic tubing or surface metallic raceways shall be used in commercial buildings or rooms in which more than three self-propelled vehicles, including but not limited to, passenger automobiles, buses, trucks, tractors, etc., may by serviced, repaired or stored at one time.

(16) Grounding shall conform to Article 250 of the National Electrical Code.

(a) Where the system of wiring is nonmetallic cable, the cable shall contain a grounding wire on all branch circuits. Connections for grounding wire shall be the same or equal to the connection for other conductors except that solder may not be used, and shall be securely fastened to such box or fitting. Bonding of grounding type receptacles shall be in conformity with Article 250-74, National Electrical Code.

(b) For the purpose of lighting protection in rural areas, all overhead services, on all buildings containing a 220 volt circuit or more than a single 115 volt lighting circuit, shall be grounded. The neutral conductor shall be grounded. The neutral conductor shall be grounded at the weatherhead by a continuous grounding conductor from the neutral to a made electrode directly below and adjacent to the service in the manner prescribed in Article 250 of the National Electrical Code. The installation of secondary service lightning arrestors is recommended.

(c) Service ground shall be on the street side or water service entrance side of the water meter or shut-off valve of a continuous metallic underground water piping system if available. Article 250-112(a) of the National Electrical Code.

(d) Where a water system is not available, the grounding electrode shall consist of a driven pipe, drive rod, buried plate or other device approved for the purpose of conforming to Article 250-83 of the National Electrical Code.

(17) No wires smaller than #12 AWG snall be used in wiring of 110 volts or over except for remote control circuits.

(18) Wiring systems shall have conductors of sufficient capacity to furnish each outlet without excessive line loss or voltage drop. This voltage drop shall not exceed 3% for lighting loads or combined lighting and power loads and 3% for power loads. Provided further, that the maximum voltage drop

from feeders and branch circuits shall not exceed 5% overall.

(19) In determining the branch circuit load on the "watts per square foot" basis, resident basements shall be included in the square foot area.

(20) In each individual residence, an additional twenty (20) ampere single pole circuit shall be installed for laundry receptacles. Article 210-22 of the National Electrical Code.

(21) Furnace load requirements exceeding 50% of a circuit capacity shall require a separate circuit. (History: Sec. 66-2802, 69-2111, 82A-1202, 82A-1605; R.C.M. 1947; Order MAC No. 23-1; Adp. 12/31/72; Eff. 12/31/72; PRIOR Transferred from Dept. of Justice on 3/3/73; TRANS under Sen. Bill No. 166, Ch. 87, Session Laws of Mont. 1973, by Order MAC No. 40-3-2.)

RULE 47

8-2-77

ADMINISTRATIVE RULES AND REGULATIONS GOVERNING CONSTRUCTION OF MANUFACTURED HOUSING UNITS

(1) DEFINITIONS, SCOPE, AND STATE CODES

(a) DEFINITIONS. As used in these rules and regulations, unless the context otherwise requires:

i. Manufactured housing unit shall mean any dwelling whose construction consists entirely of, or the major portions of its construction consists of, a unit or units not fabricated on the final site for the dwelling unit, which units are movable or portable until placed on a permanent foundation and connected to utilities. The term manufactured housing unit does not include a mobile home.

ii. Seal shall mean a device or insignia issued by the Department of Health to be displayed on the exterior of the manufactured housing unit to evidence compliance with Departmental standards.

iii. Dealer shall mean any person other than a manufacturer who sells, offers to sell, distributes, or leases manufactured housing units primarily to persons who in good faith purchase or lease a manufactured housing unit for purposes other than resale.

iv. Manufacturer shall mean any person who manufactures or produces manufactured housing units.

v. Person shall mean any individual, partnership, company, corporation, or association engaged in manufacturing, selling, offering to sell, or leasing manufactured housing units.

vi. Department shall mean the Department of Health.

vii. Date of manufacture means the date the manufactured housing unit has been completed with all but minor finishing details and has left the assembly line.

(b) SCOPE AND APPLICATION. These administrative rules and regulations, including the standards incorporated by reference herein, shall apply only to manufactured housing units manufactured on or after January 11, 1977 and shall apply only to the manufacture, sale, offering for sale, or lease of manufactured housing units on or after January 11, 1977. All manufactured housing units which have been completed with all but minor finishing details and have left the assembly line before January 11, 1977 shall be considered to be manufactured prior to said date. All manufactured housing units not completed with all but minor finishing details prior to January 11, 1977 shall be considered to be manufactured on and after January 11, 1977.

Further, these Rules and Regulations shall govern the design, manufacture, and sale of manufactured housing units intended for sale, lease or installation in this state, or elsewhere, wherever such manufactured housing units are reciprocally accepted by virtue of the Nebraska seal.

Further, such manufactured housing units may be manufactured, sold, leased, delivered and installed anywhere in the State of Nebraska, where the site development complies with reasonable and necessary requirements prescribed by an agency, political subdivision of the state or a municipality pursuant to section 71-1562, provided such manufactured housing units have been approved and certified pursuant to the Nebraska Uniform Standards for Manufactured Housing Units Act and these Rules and Regulations.

(c) STANDARDS FOR MANUFACTURED HOUSING UNITS. The following standards are hereby adopted as the State of Nebraska Standards governing the construction of and the installation of plumbing, heating, and electrical systems in manufactured housing units: ~~UNIFORM BUILDING CODE, published by the International Conference of Building Officials (ICBO), 5930 Workman Mill Road, Whittier, California 90601, as of July 1, 1976.~~

1. UNIFORM BUILDING CODE - 1976 EDITION, as published by the International Conference of Building Officials, (ICBO), 5930 Workman Mill Road, Whittier, California 90601, as of July 1, 1976, with the following revisions and amendments.

   A. Delete the second paragraph of Section 3203 (d) 3.

   B. Delete the second sentence of the second paragraph of Section 2305 (d) and add the following: "The minimum standard snow load shall be 30 PSF."

   C. Add a second paragraph to 1410 to read as follows: "The heating facilities must maintain the specified temperature (70° F, three feet above the floor) with an outdoor standard design temperature determined by the local conditions where the unit is located. Information, values, standard design temperatures, and data necessary for heat loss and heat gain determinations shall be taken from the 1977 American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE) handbook of fundamentals.

Infiltration and Ventilation	-	Chapter 21
Determining "R" and "U" Valves	-	Chapter 22
Heating Load	-	Chapter 24
Cooling Load Calculation	-	Chapter 25 & 26
Outdoor Winter Design Temperature (Use 97½ percent values)	-	Chapter 23
Outdoor Summer Design Temperature (Use 2½ percent values)"	-	Chapter 23

~~UNIFORM-PLUMBING-CODE,-published-by-the-International-Association-of Plumbing-and-Mechanical-Officials-(IAPMO),-5032-Alhambra-Avenue,-Los Angeles,-California---90032,-as-of-July-1,-1976.~~

ii. UNIFORM PLUMBING CODE, published by the International Association of Plumbing and Mechanical Officials (IAPMO), 5032 Alhambra Avenue, Los Angeles, California 90032, as of July 1, 1976, with the following amendment:

A. Section 608. After the word "machine" in the last paragraph, substitute a comma for the period, and add the following sentence: "or by looping the discharge line of the dishwasher as high as possible near the flood level of the kitchen sink where the waste disposer is connected."

~~UNIFORM-MECHANICAL-CODE,-published-by-the-International-Association-of Plumbing-and-Mechanical-Officials-(IAPMO),-5032-Alhambra-Avenue,-Los Angeles,-California---90032,-as-of-July-1,-1976.~~

iii. UNIFORM MECHANICAL CODE, published by the International Association of Plumbing and Mechanical Officials (IAPMO), 5032 Alhambra Avenue, Los Angeles, California 90032, as of July 1, 1976.

~~NEBRASKA-ELECTRICAL-CODE,-adopted-by-the-Nebraska-State-Electrical Board-under-section-81-575,-Revised-Statutes-Supplement,-1975,-which is-identical-to-the-minimum-standards-set-forth-in-the-National Electrical-Code-issued-and-adopted-by-the-National-Fire-Protection Association-in-1975,-Publication-Number-70-1975.~~

iv. NEBRASKA ELECTRICAL CODE, adopted by the Nebraska State Electrical Board under section 81-575, Revised Statutes Supplement, 1975, which is identical to the minimum standards set forth in the National Electrical Code issued and adopted by the National Fire Protection Association in 1975, Publication Number 70-1975.

These standards shall have the same force and effect as rules and regulations of the Department of Health as if set out verbatim in this section, and shall be considered the State standards in regard to manufactured housing units.

(2) PLAN APPROVAL

(a) CONFIRM INFORMATION. Plans, specifications, and other information shall provide units which meet the state codes and shall be confirmed by calculations or tests. When designs cannot be verified by calculations, test of components must be conducted by an independent professional engineer or testing agency the cost of which will be borne by the manufacturer.

(b) EVIDENCE OF PLAN APPROVAL. Required material shall be submitted in duplicate. Plan approval shall be evidenced by a letter of approval from the Department. One copy of all approved documentation shall be returned to the manufacturer. Additional sets will be approved if requested.

(c) GENERAL REQUIREMENTS. Applications, plans, and specifications, and other documentation shall be submitted as indicated below:

1. All plans and specifications of basic systems or variations thereof, including all elements relating to specific components and properly identified as relating to said components, shall be submitted in duplicate and accompanied by an application for review on a form supplied by the Department. The application

form prescribed by the Department shall be Attachment 1. Nebraska law (section 81-853(2), Reissue Revised Statutes of Nebraska, 1943) requires that a registered professional engineer or registered professional architect be retained whenever the construction, remodeling or repairing of any building or other structure provides for the employment, housing or assembly of twenty or more persons or covers over five thousand square feet of ground, and the construction cost thereof is twenty thousand dollars or more.

ii. A compliance assurance manual (two copies each) shall be provided with index including but not limited to the following:

A. STANDARDS. The manual shall contain the following standards adopted by the State of Nebraska:

~~UNIFORM BUILDING CODE, published by the International Conference of Building Officials (ICBO), 5360 Workman Mill Road, Whittier, California 90601, as of July 1, 1976.~~

1. UNIFORM BUILDING CODE, published by the International Conference of Building Officials (ICBO), 5930 Workman Mill Road, Whittier, California 90601, as of July 1, 1976, as revised and amended herein.

~~UNIFORM PLUMBING CODE, published by the International Association of Plumbing and Mechanical Officials (IAPMO), 5032 Alhambra Avenue, Los Angeles, California 90032, as of July 1, 1976.~~

2. UNIFORM PLUMBING CODE, published by the International Association of Plumbing and Mechanical Officials (IAPMO), 5032 Alhambra Avenue, Los Angeles, California 90032, as of July 1, 1976, as amended herein.

~~UNIFORM-MECHANICAL-CODE,-published-by-the-International-Association-of-Plumbing-and-Mechanical-Officials-(IAPMO),-5032-Alhambra-Avenue,-Los-Angeles,-California---90032,-as-of-July-1,-1976.~~

3. UNIFORM MECHANICAL CODE, published by the International Association of Plumbing and Mechanical Officials (IAPMO), 5032 Alhambra Avenue, Los Angeles, California 90032, as of July 1, 1976.

~~NEBRASKA-ELECTRICAL-CODE,-adopted-by-the-Nebraska-State-Electrical-Board-under-Section-81-575,-Revised-Statutes-Supplement,-1975,-which-is-identical-to-the-minimum-standards-set-forth-in-the-National-Electrical-Code-issued-and-adopted-by-the-National-Fire-Protection-Association-in-1975,-Publication-Number-70-1975.~~

4. NEBRASKA ELECTRICAL CODE, adopted by the Nebraska State Electrical Board under Section 81-575, Revised Statutes Supplement, 1975, which is identical to the minimum standards set forth in the National Electrical Code issued and adopted by the National Fire Protection Association in 1975, Publication Number 70-1975.

B. IDENT. (Identification)

Identification of plant, manufactured housing models produced and manufacturing plant personnel involved in principal inspection agencies and related activities.

C. EXT. INSP. (External Inspection)

Agreements for principal inspection agencies and related activities.

D. A.C. ORGAN (Assurance Compliance Organization)

Company organization chart, functional characteristics of quality control groups, and resumes of key quality assurance personnel.

E. PRODUCTION

Description of product flow by work stations, work load at stations, inspection, production line testing, and final (at plant) inspection.

F. MATERIALS

Inspection procedure for controlling incoming material, materials in storage, specifications and approved materials list.

G. SALES

Sales contract and related obligations incurred by manufacturer and dealer.

H. SHIPPING

Responsibility related to transportation of manufacturer's manufactured housing units.

I. ENGINEERING

Coding of drawings and calculations. Cross indexing of data.

iii. If the manufacturer plans to produce the same design at more than one location, plan approval for the other plant(s) may be obtained at the time of original filing, provided the following requirements are met:

A. One additional set of application forms for plan approval for each location of manufacture.

B. One additional set of the compliance assurance manual and inspection procedures for each additional location of manufacture.

iv. Plans shall be drawn to scale.

(d) REQUIRED CONSTRUCTION DETAILS. Plans and specifications for manufactured housing units shall indicate but not be limited to the following details:

i. General:

A. Details and method of installation of manufactured housing units or components to foundations or to each other.

B. All exterior elevations.

C. Cross sections as necessary to identify major building components.

D. Attic access and attic ventilation.

E. Fire separation details, if required by code.

F. Sizes, locations, and types of doors and windows.

ii. Complete structural, plumbing, mechanical and electrical plans or specifications indicating all pertinent elements.

(e) VALIDITY OF APPROVAL. An approval granted by the Department shall be valid for a period of eighteen (18) months from the date of issue, provided that the plans and specifications remain in compliance with the state codes for manufactured housing units. An extension of time as to the effective date of the approval may be granted by the Department upon written request by the manufacturer or his agent.

(3) COMPLIANCE ASSURANCE PROGRAM

(a) GENERAL. This RULE 3 outlines the requirements for a comprehensive compliance assurance program consisting of an application form (Attachment 1) and a compliance assurance manual. It shall be the manufacturer's responsibility to execute every aspect of this program. The manufacturer shall continue to be responsible for all corrective actions required. Each manufacturer must obtain approval of his compliance assurance program from the Department.

(b) REQUIREMENTS OF MANUFACTURER. The manufacturer of manufactured housing units shall:

i. Provide a compliance assurance manual with index, in duplicate.

ii. Provide installation procedures with appropriate inspection procedures. Utility hook-up information shall contain appropriate inspection criteria and test description.

iii. Identify the manufacturer's representative who will be assigned the responsibility for implementing the compliance assurance program, and define such individual's functional obligation, responsibility and authority. The Department shall be advised of any subsequent change.

iv. Be responsible directly, or by means of his agent, for timely and effective performance of service and repairs related to code compliance.

v. Whenever the manufacturer proposes changes to the compliance assurance manual, he must submit two copies of such changes to the Department for approval.

(c) REQUIREMENTS OF INSPECTION AGENCIES. To ensure that the final product conforms to the adopted construction standards set forth in Section 1, Part "C", "Standards for Manufactured Housing Units", inspection agencies shall follow the following requirements:

i. Be totally familiar with the procedures, materials, and design specifications, as stated in the manufacturer's approved design plans and compliance assurance manual.

ii. During the in-plant inspection, the inspector shall check for, but not be limited to, the following:

A. FLOOR FRAMING.

1. MATERIALS. Structural, framing members - joists, beams, stringers, blocking, bridging.

a. Species
b. Grade
c. Size(s)
d. Moisture Content
e. Preservative Treatment
f. Condition/Tolerances (e.g., warp, bow, splits, twist)

2. OPERATIONS.

a. Measuring and Cutting
b. Drilling and Notching
c. Layout/Spacing
d. Framing for Floor Openings (e.g., stairwells)

3. FASTENERS. Nails, bolts/screws, joist hangers.

a. Size
b. Type/Grade
c. Condition

4. CONNECTIONS.

a. Number (of fasteners)
b. Location and Spacing
c. Method (e.g., toenail, end-nail)
d. Bearing of Members
e. Washers (with bolts/screws)
f. Workmanship

B. FLOOR INSULATION.

1. MATERIALS. Moisture barrier, thermal insulation.

a. Size (e.g., thickness, weight)
b. Type/Grade
c. Condition (e.g., dry, undamaged)

2. INSTALLATION.

a. Moisture barrier
b. Thermal Insulation
c. Workmanship

C. FLOOR SHEATHING.

1. MATERIALS. Plywood, proprietary sheathing types.

a. Size (e.g., thickness)
b. Type/Grade
c. Condition/Tolerances

2. FASTENERS.

a. Nails, Staples
b. Adhesives

3. INSTALLATION.

a. Measuring and Cutting
b. Layout
c. Nails, Staples
d. Adhesives
e. Methods

D. WALL FRAMING AND SETTING

1. MATERIALS. Structural framing members - studs, plates, and lintels.

   a. Species
   b. Grade
   c. Size(s)
   d. Moisture Content
   e. Condition/Tolerances (e.g., warp, bow, splits, twist)

2. OPERATIONS.

   a. Measuring and Cutting
   b. Drilling and Notching
   c. Layout/Spacing
   d. Framing for Wall Openings

3. FASTENERS. Nails, bolts/screws, staples.

   a. Size
   b. Type/Grade
   c. Condition

4. CONNECTIONS.

   a. Number (of fasteners)
   b. Location and Spacing
   c. Method (e.g., toenail, end-nail)
   d. Bearing of Members
   e. Plumb and Square
   f. Workmanship

5. ERECTION/SETTING OF WALLS.

   a. Connections/Fasteners
   b. Bearing of Members
   c. Workmanship

E. WALL INSULATION

1. MATERIALS. Moisture barrier, thermal insulation.

   a. Size (e.g., thickness, weight)
   b. Type/Grade
   c. Condition (e.g., dry, undamaged)

2. INSTALLATION.

   a. Moisture Barrier
   b. Thermal Insulation

F. INTERIOR WALL COVERING

1. MATERIALS. Gypsum Wallboard

   a. Size (thickness)
   b. Type/Grade
   c. Condition

2. FASTENERS.

   a. Nails, screws, wallboard clips
   b. Adhesives

3. INSTALLATION.

   a. Nails, screws
   b. Adhesives
   c. Method

G. CEILING/ROOF FRAMING AND SETTING

1. MATERIALS. Structural framing members--rafters, joists, roof trusses.

   a. Species
   b. Grade
   c. Sizes
   d. Moisture Content
   e. Condition/Tolerance (e.g., warp, bow, splits, twist)

2. OPERATIONS.

   a. Measuring and Cutting
   b. Drilling and Notching
   c. Layout/Spacing
   d. Laps and Splices
   e. End Bearing
   f. Framing for Openings

3. FASTENERS. Nails, bolts/screws, truss plates

   a. Size
   b. Type/Grade
   c. Condition

4. CONNECTIONS.

   a. Number (of fasteners)
   b. Location and Spacing
   c. Method (e.g., toenail, end-nail)
   d. Bearing of Members
   e. Plumb and Square
   f. Workmanship

5. ERECTION/SETTING OF CEILINGS/ROOF.

a. Connections/Fasteners
b. Bearing of Members
c. Workmanship

H. INTERIOR CEILING COVERING

1. MATERIALS. Gypsum Wallboard

a. Size (thickness)
b. Type/Grade
c. Condition

2. FASTENERS.

a. Nails, Screws, Wallboard Clips
b. Adhesives

3. INSTALLATION.

a. Nails, Screws
b. Adhesives
c. Method

I. PLUMBING

1. MATERIALS.

a. Pipe - D.W.V.
b. Pipe - Water Supply and Distribution
c. Pipe - Gas Fuel Supply Piping
d. Plumbing Fixtures/Drains (traps, trap arms)
e. Valves
f. Appliances and Equipment
g. Miscellaneous - Air gaps, pipe coatings, compounds, solder.

2. INSTALL DRAINAGE SYSTEM.

a. Piping

3. INSTALL VENTING SYSTEM.

a. Installation

4. INSTALL TRAPS AND TRAP ARMS.

a. Installation

5. INSTALL JOINTS AND CONNECTIONS

a. Installation

6. INSTALL INDIRECT WASTE PIPING, WET VENTED SYSTEMS AND SPECIAL WASTES.

   a. Installation

7. INSTALL PLUMBING FIXTURES.

   a. Installation

8. INSTALL WATER DISTRIBUTION SYSTEM.

   a. Installation

9. INSTALL FUEL GAS PIPING.

   a. Installation

10. INSTALL WATER HEATER AND VENTS.

    a. Installation

J. ELECTRICAL

1. MATERIALS.

   a. Service Equipment
   b. Distribution Panel and Load Center
   c. Feeder Circuits
   d. Branch Circuits
   e. Fixed Appliances, Ranges, Water Heaters
   f. Outlet Boxes, Switches, Junction Boxes, Fittings
   g. Lighting Fixtures, Lampholders and Lamps

2. INSTALL ELECTRICAL SERVICE.

   a. Identification
   b. Mounting Cabinet
   c. Service Entrance
   d. Grounding Continuity
   e. Gutter at Service
   f. Service Disconnect
   g. Workmanship

3. INSTALL DISTRIBUTION PANEL AND LOAD CENTER.

   a. Identification
   b. Mounting
   c. Over Current Protection
   d. Grounding and Bonding
   e. Workmanship

4. INSTALL FEEDER CIRCUITS.

   a. Identification
   b. Drilling, Boring-Studs/Joists
   c. Mechanical Protection
   d. Mechanical Continuity
   e. Installation
   f. Workmanship

5. INSTALL BRANCH CIRCUITS.

   a. Identification
   b. Drilling, Boring-Studs/Joists
   c. Mechanical Protection
   d. Mechanical Continuity
   e. Installation
   f. Workmanship

6. INSTALL FIXED APPLIANCES, RANGES, WATER HEATERS.

   a. Marking
   b. Supply Circuits
   c. Location
   d. Grounding
   e. Over Current Protection
   f. Workmanship

7. INSTALL OUTLET, SWITCH AND JUNCTION BOXES AND FITTINGS.

   a. Identification
   b. Mounting and Installations
   c. Size and Shape
   d. Covers and Canopies
   e. Conductors
   f. Accessibility
   g. Grounding, Bonding and Insulation from Supports
   h. Workmanship

8. LIGHTING FIXTURES, LAMPHOLDERS, LAMPS, ROSETTES, OUTLET BOXES.

   a. Identification
   b. Installation

9. TESTING OF SYSTEM.

   a. Continuity Test
   ~~b. Dielectric Test~~
   ~~c. Functional Test of Fixtures and Appliances~~
   <u>b. Functional Test of Fixtures and Appliances</u>

K. MECHANICAL (HVAC) SYSTEM.

1. MATERIALS.

a. Heating Equipment, Furnaces, Room Heaters
b. Ventilation Systems
c. Air Conditioning Equipment
d. Miscellaneous Heat Producing Appliances--Ranges, Dryers

2. INSTALL WARM AIR FURNACES.

a. Identification
b. Installation
c. Circulating Air Supply
d. Conditioned Air Supply
e. Combustion Air
f. Workmanship

3. VENTS/CHIMNEYS.

a. Identification
b. Type/System
c. Size/Area
d. Location/Support
e. Length/Pitch/Clearance
f. Termination
g. Connectors
h. Unused Openings
i. Workmanship

4. DUCTS.

a. Identification
b. Fastening/Support
c. Location
d. Plenum
e. Workmanship

5. INSTALL FLOOR FURNACES, ROOM HEATERS.

a. Identification/Label/Listing
b. Type/System
c. Location/Access
d. Combustion Air Supply
e. Grilles/Registers
f. Support
g. Protection from Damage
h. Controls-Manual/Auto
i. Electrical Connectors
j. Workmanship

6. INSTALL VENTILATION SYSTEM.

   a. Ducts
   b. Hoods
   c. Workmanship

7. INSTALL AIR CONDITIONING EQUIPMENT.

   a. Identification
   b. Location
   c. Support
   d. Access
   e. Circulating Air Supply
   f. Return Air Limitation
   g. Workmanship

8. INSTALL MISCELLANEOUS HEAT PRODUCING APPLIANCES, RANGES, DRYERS.

   a. Identification
   b. Location
   c. Clearances
   d. Ducts
   e. Workmanship

9. TESTING OF MECHANICAL MERCHANDISE.

L. CEILING INSULATION.

1. MATERIALS. Moisture barrier, thermal insulation.

   a. Size (e.g., thickness, weight)
   b. Type/Grade
   c. Condition (e.g., dry, undamaged)

2. INSTALLATION.

   a. Moisture Barrier
   b. Thermal Insulation

M. MISCELLANEOUS COMPONENTS (WINDOW, EXIT DOOR, AND AND STAIRWAY) INSTALLATION.

1. MATERIALS.

   a. Doors and Windows
   b. Stairways

2. INSTALLATION.

   a. Doors and Windows
   b. Stairways

N. WALL SHEATHING.

1. MATERIALS. Plywood, fiberboard, proprietary sheathing types.

   a. Size (e.g., thickness)
   b. Type/Grade
   c. Condition/Tolerance

2. FASTENERS.

   a. Nails, Staples
   b. Adhesives

3. INSTALLATION.

   a. Measuring and Cutting
   b. Layout
   c. Nails, Staples
   d. Adhesives

O. EXTERIOR SIDING.

1. MATERIALS.

   a. Exterior Wall Siding
   b. Weather Flashing
   c. Caulking Compounds/Mastics

2. FASTENERS.

   a. Nails, Staples
   b. Adhesives

3. INSTALLATION.

   a. Flashing
   b. Layout
   c. Weather Tightness
   d. Nails, Staples
   e. Adhesives
   f. Caulking Application
   g. Corner Treatment
   h. Painting/Finishing

P. ROOF SHEATHING.

1. MATERIALS. Plywood, proprietary sheathing types.

   a. Size (e.g., thickness)
   b. Type/Grade
   c. Condition/Tolerances

2. FASTENERS.

a. Nails, Staples, Plyclips
b. Adhesives

3. INSTALLATION.

a. Measuring and Cutting
b. Layout
c. Nails, Staples
d. Adhesives
e. Methods

Q. FINISH ROOFING

1. MATERIALS.

a. Underlayment
b. Roofing
c. Weather Flashing
d. Nails

2. INSTALLATION.

a. Underlayment
b. Flashing
c. Layout
d. Nails
e. Exposure
f. Workmanship

R. COMPLIANCE INSPECTION AND CERTIFICATION.

1. COMPLIANCE REVIEW.

2. LABEL.

a. Contents
b. Location
c. Attachment (method of fastening)

3. LABEL CONTROL RECORD.

4. MANUFACTURER'S DATA PLATE.

a. Contents
b. Location
c. Attachment (method of fastening)

(d) INITIAL AND MONITORING IN-PLANT INSPECTIONS BY INSPECTION AGENCIES.

i. Initial in-plant inspection. Once a Manufacturer's compliance assurance manual and plans have been approved, the inspection agency shall perform the initial inspection. The initial inspec-

tion shall consist of the inspection agency making a station by station thorough evaluation of the manufacturer's operation to assure that the manufacturer is operating in accordance with the criteria set forth in the previously approved compliance assurance manual and plans. In so doing, the inspection agency shall utilize the in-plant inspection check list specified in (c) above.

If the manufacturer during the initial inspection is found to be producing units in accordance with the approved compliance assurance manual and plans, the inspection agency shall notify the manufacturer, in writing, with a copy being forwarded to the Nebraska State Health Department.

The notification letter to the manufacturer from the inspection agency shall be in the following form:

This is to notify that _____
Name of Inspector(s)
representing _____
Name of Inspection Agency
on _____ ____, 19___, made a thorough evaluation of _____
Name of Manufacturer
_____,
Address of Manufacturer
involving a complete station-by-station inspection process that _____ was found
Name of Manufacturer
to be performing in conformance with its approved plans and compliance assurance manual and Nebraska's standards for manufactured housing units, and the _____ Name of
_____
the Inspection Agency
is satisfied that _____
Name of Manufacturer
can produce manufactured housing units in comformance with Nebraska's standards for manufactured housing units.

If the initial inspection reveals deviations from the previously

approved compliance assurance manual and plans, the inspection agency shall notify the manufacturer, in writing, of deviations, specifying in detail the observed deviations. A copy of this letter shall be sent to the Nebraska State Health Department. Upon notification from the plant that the specified deviations have been corrected, the inspection agency shall again make an initial inspection of the plant following the procedure outlined above.

ii. Monitoring In-Plant Inspections. Following notification to a manufacturer under i. above, the inspection agency shall undertake monitoring in-plant inspections on a frequency sufficient to assure continuing compliance with the manufacturer's compliance assurance program. The factors which the inspection agency shall take into consideration in determining this frequency of monitoring in-plant inspections are as follows:

A. Production Volume

B. Design Complexity of Units

C. The qualifications of the manufacturer's own in-house compliance control organization.

D. The experience record of the manufacturer.

The monitoring in-plant inspection shall utilize the in-plant inspection check list in part (c) above to assure that each construction feature (structural, mechanical, plumbing, and electrical) is fully evaluated.

(e) SEAL ISSUANCE. Upon satisfactory completion of the initial in-plant inspection and the notification letter issued to the manufacturer by the inspection agency, the manufacturer shall act in accordance with the provisions of these rules and regulations so specified under that part of the rules and regulations entitled, "Seals".

(4) SEALS

(a) ACQUISITION OF SEAL. Any person shall qualify for acquisition of a seal by obtaining plan approval pursuant to Section (2) and compliance assurance program approval pursuant to Section (3).

(b) APPLICATION FOR SEALS. Any person who has met the applicable requirements of Sub-section (4)(a) shall apply for seals in the form prescribed herein. The seal application shall include the plan approval number. The application shall be accompanied by the seal fee set forth in Section (5), the number of seals requested and a check, payable to the Nebraska State Department of Health. The seal application form provided by the Department shall be Attachment 2.

(c) DENIAL, SUSPENSION, AND REVOCATION OF SEALS. The denial, suspension, and revocation of seals shall be performed as described in the NEBRASKA UNIFORM STANDARDS FOR MANUFACTURED HOUSING UNITS ACT. The Department or an authorized representative of the Department may order a manufacturer or dealer to refrain from selling, offering to sell or leasing any manufactured housing unit determined to be in non-compliance with the state codes, even though a Nebraska seal or reciprocal state seal is affixed to the unit. The Department or authorized representative of the Department may affix to said non-complying unit or component thereof an insignia or device indicating such prohibition.

(d) LOST OR DAMAGED SEALS.

i. When a seal becomes lost or damaged, the Department shall be notified immediately in writing by the manufacturer or dealer. The manufacturer or dealer shall specify the state seal number lost or damaged.

ii. All damaged seals shall be promptly returned. Damaged and lost seals shall be replaced by the Department with a new seal at Departmental cost.

(e) PLACEMENT OF SEALS

i. Each seal shall be assigned and affixed to a specific manufactured housing unit before its shipment from the manufacturing plant and a record of each seal assignment shall be submitted as set forth in Subsection (4)(f).

ii. The seal shall be securely affixed to a lower corner of a living room window.

(f) RECORDS. Not more than thirty (30) days after the original receipt of seals from the Department, and at the end of each week thereafter, the manufacturer shall submit a construction compliance certificate for each unit manufactured during that week of all manufactured housing units manufactured within Nebraska, or all manufactured housing units destined for Nebraska, on the certificate prescribed by the Department. The reporting form as prescribed by the Department shall be Attachment 3.

(g) UNIT IDENTIFICATION. Each manufactured housing shall be assigned a serial number and each major transportable section of the house shall carry this serial number. The serial number shall be readily visible.

The following information shall be placed directly or by reference on one or more permanent manufacturer's data plates in the vicinity of the electrical distribution panel or in some other designated location that is readily accessible for inspection.

i. Manufacturer's name and address.

ii. Serial number of the unit.

iii. Model designation and name of manufacturer of major factory-installed appliances.

iv. Where applicable, identification of permissible type of gas for appliances and direction for water and drain connections.

v. Name and date of standards complied with.

vi. State seal number

vii. Design loads.

viii. Special conditions or limitations of the unit.

ix. Date of manufacture.

x. Electrical Ratings--instructions and warnings on voltage, phase, size, and connections of units and grounding requirements.

(5) FEES

(a) FEES FOR SEALS. A fee of twenty dollars ($20.00) shall be charged for each seal issued by the Department for a manufactured housing unit. Only one seal is required per completed unit.

(6) RECIPROCITY LIST

(a) RECIPROCITY LIST. The Department shall make available to all interested individuals a list of those states whose construction codes and whose codes for the installation of plumbing, heating, and electrical systems in manufactured housing units are at least equal to those established by the Department and are being enforced by such other state. A manufactured housing unit which bears the seal of any state which has been placed on the reciprocity list shall not be required to bear the seal issued by this state.

(7) RULES OF PRACTICE IN ADMINISTRATIVE HEARING

(a) CONSIDERATION. Evidence in a hearing involving a refusal to issue a seal or seals will ordinarily be received in the following order: (1) Manufacturer; (2) Department. Evidence in a hearing involving a suspension or revocation of a seal or seals will ordinarily be received in the following order: (1) Department; (2) Manufacturer.

(b) DENIALS AND REVOCATIONS OF SEALS. Whenever the Department determines to refuse to issue, suspend, or revoke a seal for a manufacturer, it shall send to the manufacturer, by either registered or certified mail, a notice setting forth the particular reasons for the deter-

mination. Such notice shall state that the refusal of issuance, suspension, or revocation shall become final ten(10) days after the receipt of the notice, unless the manufacturer, within such ten-day period, shall give written notice to the Department of the desire for a formal hearing. The Department shall then schedule a formal hearing to be held before the Department, such act of scheduling to be performed within twenty (20) days of the receipt of the request and such hearing to be held within sixty (60) days of the receipt of the request. No seals shall be sent by the Department to the manufacturer during this period of time before the hearing. Resumption of transmittal of seals shall depend upon the results of the hearing.

(c) DISPOSITION. The manufacturer affected by the refusal of issuance, suspension, or revocation hearing shall be notified of the Department's decision by registered or certified mail.

(d) NOTICE OF HEARING. The notice of any such formal hearing shall name the manufacturer which shall appear as applicant or holder of a seal; shall state the time, date, and place of the hearing; shall state the reason or reasons for the proposed refusal of issuance, suspension, or revocation; and shall be served on the manufacturer at least twenty (20) calendar days prior to the date set for the hearing, by either registered or certified mail.

(e) OFFICIAL RECORD. The Department shall prepare an official record in all refusal of issuance, suspension, or revocation hearings, including testimony and exhibits, but it shall not transcribe shorthand notes unless requested for the purpose of a rehearing or judicial review, in which event the transcript and record shall be furnished by the Department upon request and tender of the cost of preparation.

(f) RULES OF PRACTICE AND PROCEDURE. Rules 1, 2, 3, 7, 8, 9, and 10

of the RULES OF PRACTICE AND PROCEDURE, RULE 56 of the Department of Health shall be applicable to administrative procedures arising under the NEBRASKA UNIFORM STANDARDS FOR MANUFACTURED HOUSING UNITS ACT, Section 71-1555 to 71-5167, Reissue Revised Statutes of Nebraska, 1943, to the extent that they are not in conflict with the Sub-sections (8)(a) to (8)(e) of these Rules and Regulations. Said enumerated rules of such RULES OF PRACTICE AND PROCEDURE, or portion of said enumerated rules, shall not apply in any situation in which other methods of practice and procedure are specifically provided for by statute.

(9) OPERATIVE DATE. These RULES AND REGULATIONS shall become effective five (5) days after the date of filing with the Revisor of Regulations and shall become operative on and after that date.

Source: Section 71-1558

NEBRASKA STATE DEPARTMENT OF HEALTH
DIVISION OF HOUSING AND ENVIRONMENTAL HEALTH
301 CENTENNIAL MALL SOUTH, P. O. BOX 95007, LINCOLN, NEBRASKA 68509

APPLICATION FOR MANUFACTURED HOUSING PLAN APPROVAL

Instructions: Fill in all applicable data - please type.

Manufacturer's Name: _____

Manufacturer's Address: _____

_____

Telephone: _____

Mailing Address: _____

_____

Models For Which Approval Is Sought

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Department Use Only

Plans _____
Specifications _____
Compliance Assurance Manual _____
Calculations _____

Plan Identification Number

_____

Approval Status Date

Manufactured housing units, which are manufactured, sold, offered for sale or leased in the State of Nebraska, shall be constructed to conform with the plans and specifications submitted with this application form and shall be in accordance with the building, plumbing, mechanical, and electrical codes for manufactured housing units approved by the Nebraska Health Department.

Authorized Company Official: _____

Title: _____

Date: _____

MANUFACTURED HOUSING SEAL REQUEST FORM

Manufactured Housing
Plant Name _____

Manufactured Housing
Plant Mailing Address _____

_____
Zip Code

Plan Approval Number: _____

To meet the requirements of Nebraska's manufactured housing law, the above named plant wishes to order _____ (Quantity) Nebraska manufactured housing compliance seals at the cost of $20.00 per seal for a total of $_____.

A "Manufactured Housing Seal Request Form" shall be filled out for each manufactured housing plant. The Department will send the seals directly to the plant receiving the seals as designated above.

Departmental manufactured housing compliance seals will be issued only upon receipt of the total dollar amount.

Your Check No. _____ for total amount of $_____.

Please make check payable to the Nebraska State Health Department.
301 Centennial Mall South, P.O. Box 95007
Lincoln, Nebraska 68509

==========

Departmental Use Only

Beginning Seal No. _____ End Seal No. _____
Receipt No. _____ Date Mailed _____

NEBRASKA STATE HEALTH DEPARTMENT

CONSTRUCTION COMPLIANCE CERTIFICATE

MANUFACTURED HOUSING ☐ RECREATIONAL VEHICLE ☐

DATE OF MANUFACTURE

NAME OF MANUFACTURER

MANUFACTURER'S ADDRESS

CITY STATE ZIP

DEALER

DEALER'S ADDRESS

CITY STATE ZIP

STATE SEAL NUMBER BY STATE OF

Unit Serial Number

Manufacturer's Model Number

Inspection Agency

MFRS AUTHORIZED SIGNATURE

TITLE

DISTRIBUTION:

WHITE — CUSTOMERS COPY
PINK — DEALER MAIL TO →
BLUE — DEALERS COPY
YELLOW — MFR. MAIL TO →
GREEN — MFRS. COPY

STATE OF NEBRASKA
DEPARTMENT OF HEALTH
DIVISION OF HOUSING AND ENVIRONMENTAL HEALTH
301 Centennial Mall South, P.O. Box 95007
LINCOLN, NE 68509
402-471-2541

MANUFACTURER — FILL IN PORTION ABOVE ▲

MANUFACTURER OR **DEALER — FILL IN PORTION BELOW** ▼

CUSTOMER'S NAME

INSTALLATION ADDRESS

CITY STATE ZIP

COUNTY

DELIVERY DATE TO CUSTOMER

DEALER AUTHORIZED SIGNATURE

TITLE

NOTE: If dealer information is not applicable, indicate so by inserting "N.A.".

Exhibit#18, Nevada

MIKE O'CALLAGHAN
GOVERNOR

STATE OF NEVADA
STATE FIRE MARSHAL DIVISION

KINKEAD BUILDING (CAPITOL COMPLEX)
505 EAST KING STREET, ROOM 302
CARSON CITY, NEVADA 89710

MICHAEL L. MELNER, DIRECTOR
DEPARTMENT OF COMMERCE
DAN J. QUINAN, FIRE MARSHAL
STATE FIRE MARSHAL DIVISION
(702) 885-4290
MOBILE HOME AND MANUFACTURED
BUILDING SECTION
(702) 885-4298
FIRE PROTECTION SECTION
(702) 885-4290

February 4, 1976

Mr. Arthur Duncan
National Bureau of Standards
Office of Building Standards and Codes Services
Room 226
Washington, D.C. 20234

RE: NEVADA FACTORY HOUSING REGULATIONS

Dear Mr. Duncan:

Enclosed is a copy of Nevada Revised Statute sections 461.030 Declaration of Legislative Intent and 461.170 listing the adopted codes and standards applying to factory housing and manufactured building or components. We are currently using the 1973 editions in all categories excepting the National Electrical Code. The 1975 Edition of the National Electrical Code was adopted as a statewide standard by our last legislative session. As these adoptions are statutory, we are restricted to their use only and reciprocity with other model codes can only be achieved if the reciprocity code is more restrictive, an option granted to local authorities by law.

In addition, our state regulation will not allow aluminum wiring for branch circuits under 30 ampere rating. We, also, require exterior wall systems be 20 minutes rated from fire penetration. Panalized wall systems must be approved by the State Fire Marshal's office prior to use in construction.

If you have further questions please contact our office.

Yours truly,

DAN J. QUINAN
Nevada State Fire Marshal

RICHARD H. BAST
Deputy State Fire Marshal
Mobile Home and Manufactured Building Section

RHB:mh

Enclosures: NRS 461-030
NRS 461-170

OREGON SUPPLEMENT TO UNIFORM PLUMBING CODE, 1976 EDITION

EXCLUSIONS: The following chapters, sections, sub-sections, sentences, numbers and references of the 1976 edition of the Uniform Plumbing Code are excluded from these regulations:

Part I, Administration ..... 10.1 through 20.14
Chapter 9, Section 904 (b) and the second paragraph of (d)
Chapter 12
Appendix ..... D
Appendix ..... F
Appendix ..... G
Appendix ..... H
Appendix I

AMENDMENTS: This list shows sections of the 1976 Uniform Plumbing Code amended by the State of Oregon. The Supplement sections replace the same numbered sections, or parts thereof, in the Uniform Plumbing Code, 1976 Edition. Sections amended are

Plumbing Code:

Chapter 1, Sec. 102 ..... (c)
(h)
Sec. 103 ..... (i)
(o)
(p)
(q)
(r)
Sec. 104 ..... (j)
(k)
(l)
Sec. 105 ..... (h)
Sec. 108 ..... (d)
(e)
Sec. 114 ..... (e)
(f)
(h)
Sec. 117 ..... (c)
Sec. 119 ..... (a)
(b)
(g)
Sec. 120 ..... (p)
(q)
Sec. 124 ..... (f)
(g)
(h)
(j)
Table A (1), (2), (3)
Chapter 2, Sec. 207 ..... (a)
Chapter 3, Sec. 303 ..... (c)

Chapter 4,	Sec. 401	(a)
	Sec. 405	(b)
Chapter 5,	Sec. 504	Exception
Chapter 6,	Sec. 608	In Whole
Chapter 6,	Sec. 613	In Whole
Chapter 7,	Sec. 701	
	Table 7-2	
Chapter 9,	Sec. 904	(b) Delete
		(d) Delete second paragraph
	Sec. 910	
Chapter 10,	Sec. 1001	In Whole
	Sec. 1004	Exception
	Sec. 1007	In Whole
Chapter 11,	Sec. 1106	Exception
	Sec. 1120	In Whole
Chapter 14		In Whole
Appendix E		In Whole
Installation Standards:		
IS 1-75		9.3
IS 8-75		Exception
IS 14-75		Exception

IS for ABS Composition ASTM D2680 and ABS SDR35 ASTM D2751 Sewer Pipe

IS for Corrugated Metal (Steel and Aluminum) Storm Sewers

Supplement from 1976 UBC Installation Standards

NOTE: The State of Oregon Structural Specialty Code and Fire and Life Safety Code is an amended version of the Uniform Building Code. Changes are numerous and a copy of the amendments may be secured from the State of Oregon.

Effective April 21, 1976

SECTION 300. REQUIREMENTS

Industrialized building units, other than mobile homes, produced after the effective date of these Regulations shall be reasonably safe for the users thereof and shall provide reasonable protection to the public against the hazards thereof to life, health and property. Compliance with all applicable requirements of the codes and standards specified in Section 301, subject to the time limitations specified therein, shall be acceptable evidence of compliance with this provision. Where industrialized building units are used in combination with each other or in combination with other components, compliance of the entire resulting building with all applicable requirements of the codes and standards specified in Section 301 shall be acceptable evidence of compliance with this provision. The local building official may also enforce the requirements of Section 612.5, Door Hardware, of the Virginia Uniform Statewide Building Code, provided that installation of the required security devices may be made after delivery of the industrialized building units to the building site.

APPENDIX B

DEFINITIONS OF "MANUFACTURED BUILDING" AND RELATED TERMS

APPENDIX B

Definitions of "Manufactured Building" and related terms as used in various State laws, rules and regulations, and statewide building codes.

ALABAMA

"Factory-built housing" means any structure, or component thereof, designed primarily for residential occupancy which is wholly or in substantial part made, fabricated, formed, or assembled in manufacturing facilities for installation, or assembly and installation, on the building site. Mobile Homes as defined by Southern Standards Building Codes are specifically excluded from the provisions of this Act.
Ref: Alabama Law, Act No. 2059 - H.862, Section 2.

ALASKA

ARIZONA

"Factory built building" means a single story commercial building of less than four thousand five hundred square feet floor space, a temporary or permanent office building constructed to be towed on its own chassis and designed to be installed with or without a permanent foundation, a residential building not exceeding two stories in height, a dwelling unit or habitable room thereof which is either wholly or in substantial part manufactured at an offsite location to be assembled on-site, except that it does not include a mobile home as defined in this section.
Ref: Chapter 10.1, Article 1, Section 32-1172, Subsection 10.

ARKANSAS

CALIFORNIA

"Dwelling unit" means one or more habitable rooms which are occupied or which are intended or designed to be occupied by one family with facilities for living, sleeping, cooking and eating.

"Factory-built housing" means a residential building dwelling unit, or an individual dwelling room or combination of rooms thereof, or building component, assembly, or system manufactured in such a manner that all concealed parts or processes of manufacture cannot be inspected before installation at the building site without disassembly, damage, or destruction of the part, including units designed for use as part of an institution for resident or patient care, which is either wholly manufactured or is in substantial part manufactured at an offsite location to be wholly or partially assembled onsite in accordance with regulations adopted by the commission pursuant to Section 19990. Factory-built housing shall not be deemed to include a mobile home as defined in Section 18008, mobile accessory building or structure, as defined in Section 18010, a recreational vehicle, as defined in Section 18010.5, or a commercial coach, as defined in Section 18012.
Ref: California Administrative Code, Title 25, Chapter 3, Article 1, Section 3001

COLORADO

CONNECTICUT

Prefabricated building: the completely assembled and erected building or structure, including the service equipment of which the structural parts of prefabricated individual units or subassemblies using ordinary or controlled materials; and in which the service equipment may be either prefabricated or at-site construction.

Prefabricated subassembly: a built-up combination of several structural elements designed and fabricated as an assembled section of wall, ceiling, floor or roof to be incorporated into the structure by field erection of two (2) or more such subassemblies.
Ref: Section 1901.0

DELAWARE

FLORIDA

Factory-Built Housing (FBH) - Any residential building, or building component or building system, therefor, which is of closed construction and which is made or assembled in manufacturing facilities for installation, on the building site. Factory-built housing may also mean, at the option of the manufacturer, any residential building, building component or building system therefor of open construction made or assembled in manufacturing facilities for installation, or assembly and installation, on the building site; provided that this term does not apply to mobile homes.

Ref: Rules and Regulations, Factory-Built Housing (1974 Amendment), Section 9B - 1.02 (11)

GEORGIA

Factory-Built Housing - (referred to herein as FBH) - Means any structure or component thereof, designed primarily for residential occupancy which is wholly or substantially made, fabricated, formed, or assembled in manufacturing facilities and assembled on a building site, into a dwelling unit. The rules do not apply to Mobile Homes (see Georgia Safety Fire Commission, Rules and Regulations 120-3-7). The Board has interpreted this definition of FBH to include all or any component part of a manufactured residential building which is of closed construction. Such component parts may be mechanical cores, floor, ceiling, roof, wall or partition panels either individually or in any combination thereof, or may include plumbing, electrical or mechanical systems or devices. The Board has further interpreted that Factory-Built Housing does not include those products which might be considered as closed construction such as precast or pre-stressed concrete beams or columns or laminated wood beams, arches or columns inasmuch as such products are usually designed under industry or commercial standards and the quality controlled by professional engineers on a job by job basis, hence no need to impose an additional state control.

Components of FBH - Means any subsystem, subassembly, or other system designed for use in or as part of a structure, which may include structural, electrical, mechanical, plumbing, fire protection and other systems affecting health and safety.

Dwelling Unit - One (1) or more habitable rooms which are occupied, intended, or designed to be occupied by one or more families with facilities for sanitation, living, sleeping, cooking and eating.
Ref: Rules of Georgia State Building Administrative Board, 90-2 Factory-Built Housing, Chapter 90-2-2.

HAWAII

"Factory built housing" means a residential building, dwelling unit or habitable room thereof, but not including mobile homes, the structure of any room of which is either entirely or substantially prefabricated or assembled at a place other than the building site.
Ref: State of Hawaii Regulations XXXVII, Section 2 (d)

IDAHO

"Manufactured building" means any building which is of closed construction and which is made or assembled in manufacturing facilities, on or off the building site, for installation, or assembly and installation, on the building site.
Ref: Idaho Session Laws, Chapter 41, Idaho Building Code Advisory Act, Section 39-4105.

ILLINOIS

502 (i) "Manufactured Housing" or "manufactured housing unit" means a building assembly or system of building sub-assemblies, designed for habitation as a dwelling for one or more persons, including the necessary electrical, plumbing, heating, ventilating and other service systems, which is of closed or open construction and which is made or assembled by a manufacturer, on or off the building site, for installation, or assembly and installation, on the building site, with a permanent foundation.
Ref: Manufactured Housing and Mobile Home Safety Act, 502, Section 2 i.

INDIANA

"Modular Buildings" shall be construed to mean dwellings, offices, apartments, schools, etc., whether it be a total building room or closed panel that is constructed or pre-fabricated, in part or in whole, at a place other than the foundation site.

"Modular Components" shall mean any closed panel or unit bearing or requiring an electrical, heating and/or air conditioning plumbing or any other mechanical connections.

Ref: Indiana Rules and Regulations, ACB4-IBD, Administrative Building Council

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IOWA

5.601(3) "Modular" - A general term to describe all factory-built structures which are not mobile homes, mobile home add-on units, or temporary field construction offices, including, but not limited to panelized units, components, sections, modules.

5.601(7) "Factory-built structures" - Is any structure, building, component, assembly or system which is of closed construction and which is made or assembled in manufacturing facilities, on or off the building site, for installation or assembly and installation, on the building site. Factory-built structure may also mean, at the option of the manufacturer, any structure or building of open construction, made or assembled in manufacturing facilities away from the building site, for installation, or assembly and installation, on the building site. Factory-built structure also means "Factory-built unit."

Ref: Iowa State Building Code, Division 6, Part 1, 630-5.601(3) and 5.601(7)

KANSAS

KENTUCKY

MICHIGAN

"Premanufactured unit" means an assembly of materials or products intended to comprise all or part of a building or structure, and that is assembled at other than the final location of the unit of the building or structures by a repetitive process under circumstances intended to insure uniformity of quality and material content. The term includes a mobile home.

Ref: State Construction Code Act of 1972, Section 125.1502 and Department of Labor, Construction Code Commission, General Rules, Part 11.

MINNESOTA

Manufactured Building means any building which is of closed construction and which is made or assembled in manufacturing facilities, on or off the building site, for installation, or assembly and installation, on the building site. Manufactured building may also mean, at the option of the manufacturer, any building of open construction, made or assembled in manufacturing facilities away from the building site, for installation, or assembly and installation, on the building site.

Ref: Rules and Regulations of the Building Code Division, Department of Administration, Relating to Prefabricated Structures and Manufactured Buildings, Section SBC 303.

MISSISSIPPI

MISSOURI

MONTANA

NEBRASKA

NEVADA

"Modular building" means an office, apartment, school, motel or other building, whether it is a total building or a room, which is either wholly manufactured or is in substantial part manufactured at an offsite location to be wholly or partially assembled on site in accordance with regulations adopted by the department pursuant to NRS 461.170, but does not include a mobile home.

(Added to NRS by 1973,454)

"Modular component" means any closed unit of construction which bears or requires any electrical, plumbing, heating, air-conditioning or any other mechanical connection.

(Added to NRS by 1973, 454)

Ref: Nevada Revised Statue, Factory-Built Housing, Buildings, Section 461.

NEW HAMPSHIRE

NEW JERSEY

NEW MEXICO

NEW YORK

"In substantial part manufactured." A term used in relation to a factory manufactured home assembled at an off-site location in such a manner that all portions may not be inspected at the installation site without disassembly or destruction thereof.

"Dwelling unit." One or more rooms with provision for living, sanitary and sleeping facilities arranged for the use of one family, used as part of a multiple dwelling, and regulated as a component of a multiple dwelling.
Ref: Standards, Rules, and Regulations for Factory Manufactured Homes, Section 1075.1.

NORTH CAROLINA

NORTH DAKOTA

OHIO

" 'Industrialized unit' means an assembly of materials or products comprising all or part of a total structure which, when constructed, is self-sufficient or substantially self-sufficient, and when installed constitutes the structure or part of a structure, except for preparations for its placement."
Ref: Section 3781.10 Ohio Building Code

OKLAHOMA

OREGON

"Prefabricated Structures", hereinafter referred to as PS, means a building or structural unit which has been in whole or substantial part manufactured at an off-site location to be wholly or partially assembled on site; but does not include a mobile home, or recreational vehicle.
Ref: Oregon Administrative Rules, Chapter 814, Section 26.220 (33).

PENNSYLVANIA

"Industrialized housing" means any structure designed primarily for residential occupancy which is wholly or in substantial part made, fabricated, formed or assembled in manufacturing facilities for installation, or assembly and installation, on the building site; however, for the purposes of this act, that category of housing units defined as mobile homes is excluded from this definition.

"Housing component" means any major manufactured subsystem or subassembly, designed for use as an integral component part of a structure designed for residential occupancy.
Ref: "Industrialized House Act" Act 70 of 1972 and "Rules and Regulations"

RHODE ISLAND

SOUTH CAROLINA

SOUTH DAKOTA

TENNESSEE

TEXAS

UTAH

VERMONT

VIRGINIA

Industrialized Building Unit or Unit means a building assembly or system of building sub-assemblies, including the necessary electrical, plumbing, heating, ventilating and other service systems, manufactured off-site and transported to the point of use for installation or erection, with or without other specified components, as a finished building or as a part of a finished building comprising two or more industrialized building units and not designed for ready removal to or installation or erection on another site. Off-site, as used in this definition, refers to an industrialized building unit produced at any place other than the location in the completed building where it is permanently positioned.
Ref: Virginia Industrialized Building Unit and Mobile Home Safety Regulations, Part One, Article 1, Section 100.0.

WASHINGTON

"Componentized Building" means a building of factory assembled components shipped to a site for installation.

"Factory-Built Housing and Commercial Structure," hereinafter referred to as FBH-CS, means any structure, or portion thereof, designed primarily for human habitation or human occupancy other than a mobile home or commercial coach, the structure, or any room, or component of which is either entirely or substantially prefabricated or assembled at a place other than a building site. Factory-built housing and commercial structure may also be called industrialized, manufactured, modular, sectional or sectionalized construction.

"Habitable space" means any space meeting the requirements of the uniform building code designed for sleeping, living, cooking, or dining purposes, excluding such enclosed places as closets, pantries, connecting corridors, unfinished attics, laundries, foyers, storage spacers, cellars, utility rooms and similar spaces.
Ref: Rules and Regulations for Factory-Built Housing and Commercial Structures Section WAC-296-150A.050.

WEST VIRGINIA

WISCONSIN

(1) (a) "Manufactured building" means any structure or component thereof which is intended for use as a dwelling and:

(1) Is of closed construction and fabricated or assembled on-site or off-site in manufacturing facilities for installation, connection, or assembly and installation, at the building site; or

(2) Is a building of open construction which is made or assembled in manufacturing facilities away from the building site for installation, connection, or assembly and installation, on the building site and for which certification is sought by the manufacturer.

(b) The term "manufactured building" does not include a building of open construction which is not subject to par. (a) 2. In no case may a single or double width mobile home as defined in s. 218.10 (2) be considered a manufactured building nor may such a mobile home be subject to this subchapter.

(2) "Dwelling" means any building the initial construction of which was commenced on or after the effective date of this act (1975) which contains one or more dwelling units. "Dwelling unit" means a structure or that part of a structure which is used or intended to be used as a home, residence or sleeping place by one person or by 2 or more persons maintaining a common household, to the exclusion of all others.

(3) "Insignia" means a device or seal approved by the department to certify compliance with this subchapter.

(4) "Installation" means the assembly of a manufactured building on-site and the process of affixing a manufactured building to land, a foundation, footing or an existing building.

(5) "Manufacture" means the process of making, fabricating, constructing, forming or assembling a product from raw, unfinished, semifinished or finished materials.

(6) "Closed construction" means any building, building component, assembly or system manufactured in such a manner that it cannot be inspected before installation at the building site without disassembly, damage or destruction.

(7) "Open construction" means any building, building component, assembly or system manufactured in such a manner that it can be readily inspected at the building site without disassembly, damage or destruction.

Ref: Section 101.71 of SubChapter III of Chapter 101 of the Wisconsin Statutes (Chapter 405 of the Laws of 1975).

WYOMING

DISTRICT OF COLUMBIA

PUERTO RICO

VIRGIN ISLANDS

APPENDIX C

LISTING OF STATE AGENCIES AND OFFICIALS RESPONSIBLE FOR ADMINISTRATION AND ENFORCEMENT OF MANUFACTURED BUILDING REGULATORY PROGRAMS

For those States with no manufactured building regulatory program in effect, the name and address of the NCSBCS (National Conference of States on Building Codes and Standards) Delegate or other State official is given.

APPENDIX C

STATE MANUFACTURED BUILDING PROGRAMS - ADMINISTRATION AND ENFORCEMENT

ST	NAME OF DEPARTMENT OR AGENCY	ADDRESS	CONTACT*	TITLE	TELEPHONE
AL	State Housing Commission	3866 S. Court St., Montgomery 36105	H. Hendrix	Director	(205) 832-6666
AK	Dept. of Public Safety	Pouch N, Juneau 99811	G. R. Crouse	Deputy Fire Marshal	(907) 586-2946
AZ	Division of Mobile and Manufactured Housing Standards	1645 W. Jefferson, Phoenix 85007	W. T. Chaney	Assistant Director	(602) 271-4072
AR	Dept. of Planning	400 Train Station Square, Little Rock 72201	R. R. Copeland	Director	(501) 371-1211
CA	Div. of Codes & Standards	921 10th St., Sacramento 95814	X. Mendoza	Chief	(916) 445-9471
CO	Div. of Housing/Dept. of Local Affairs	1575 Sherman St., Rm. 704, Denver 80203	J. A. Knott	Director	(303) 892-2776
CT	Dept. of Public Works	State Office Building, Hartford 06115	T. D'Auria	Deputy State Bldg. Inspector	(203) 566-4036
DE	Div. of Consumer Affairs	201 W. 14th St., Wilmington 19801	F. M. West	Director	(302) 571-3253
FL	Dept. of Consumer Affairs/ Factory-Built Housing	2571 Executive Center Circle, East, Tallahassee 32301	L. H. Jordan	Administrator	(904) 488-3581
GA	State Bldg. Admin. Board	166 Pryor St., SW, Atlanta 35503	A. Kelley	Executive Director	(404) 656-3931
HI	Labor & Indust. Relations Dept.	825 Mililani St., Honolulu 96813	J. C. Agsolud	Director	(808) 548-3150
ID	Dept. of Labor & Industrial Services	Room 400 - 317 Main St., Boise 83702	R. Kinghorn	Director	(208) 384-2327
IL	Dept. of Local Govt., Office of Housing	325 W. Addams, Springfield 62704	E. Jackson	Chief	(217) 782-3555
IN	Manuf. Building Division, Admin. Building Council	215 N. Senate Ave., Indianapolis 46204	V. Eder	Director	(317) 633-5433
IA	Bldg. Code Sect./Div. of Mun. Affairs	523 E. 12th St., Des Moines 50319	D. Appell	Bldg. Code Commissioner	(515) 281-3807
KS	Div. of Architectural Services	State Office Building, Topeka 66612	C. Beardmore	Chief	(913) 296-3811
KY	Office of State Fire Marshal	3rd Floor, Capital Plaza Tower Frankfort 40601	G. Ellis	Assistant State Fire Marshal	(502) 564-3626

*NOTE: For those States with no manufactured building regulatory program as reported in Table 1 of this report, the name and address of the NCSBCS (National Conference of States on Building Codes and Standards) Delegate or other State official is given.

ST	NAME OF DEPARTMENT OR AGENCY	ADDRESS	CONTACT*	TITLE	TELEPHONE
LA	Dept. of State Fire Marshal	8941 Jefferson Hwy., Baton Rouge 79809	R. Oliver	State Fire Marshal	(504) 389-7085
ME	Manufactured Housing Board Dept. of Business Reg.	State House, Augusta 04330	D. Preble	Executive Director	(207) 289-3916
MD	Dept. of Economic/Community Development	1748 Forest Dr., Annapolis 21401	W. Bryant	Director	(301) 269-2701
MA	State Bldg. Code Commission	1 Ashburton Place, Boston 02108	C. J. Dinezio	Executive Director	(617) 727-6916
MI	Dept. of Labor/Const. Code Comm.	7150 Harris Dr., Lansing 48926	R. C. Hilprecht	Executive Director	(517) 373-8187
MN	Dept. of Admin./Bldg. Code Div.	408 Metro Sq., Bldg., St. Paul 55101	B. Rogers	Assistant Director	(612) 296-4627
MS	State Municipal Assoc.	230 S & S Bldg., Jackson 39202	P. Dunne	Director	(601) 353-5854
MO	Div. of Design & Constr.	P.O. Box 809, Jefferson City 65101	J. A. Cooper	Director	(314) 751-4174
MT	Bldg. Code Admin. Bureau/ Dept. of Admin	Capitol Station, Helena 59601	B. Roat	Assistant Chief	(406) 449-3104
NE	Dept. Health, Div. of Housing and Environmental Health	Box 95007, 301 Centennial Mall South Lincoln 68509	F. H. Jolly	Director	(402) 471-2541
NV	Mobile Home & Manuf. Bldg. Section	505 East King St., Room 302, Carson City 89710	R. H. Bast	Deputy State Fire Marshal	(702) 835-4298
NH	Office of Comprehensive Planning	State House Annex, Concord 03301	W. W. Hoffman	Principal Planner	(603) 271-2359
NJ	Construction Code Enforcement Dept. of Community Affairs	P.O. Box 2768	L. Reilly	Supervisor of Code Services	(609) 292-6364
NM	Const. Industries Commission	P.O. Box 5155, Santa Fe 97501	R. Berntsen	Assistant Administrator	(505) 827-2085
NY	Hsg. & Bldg. Codes Bureau/ Div. of Hsg. & Comm. Renewal	Two World Trade Center, New York 10047	B. Selekof	Director	(212) 488-7080
NC	State Dept. of Insurance	P.O. Box 26387, Raleigh 27611	K. E. Church	Deputy Commissioner	(919) 829-3901
ND	Executive Office	Bismarck 58501	B. Meier	Secretary of State	(701) 724-2900
OH	Board of Bldg. Standards	720 S. Parsons Ave., Columbus 43215	M. J. Hughes	Chairman	(614) 466-3316

*NOTE: For those States with no manufactured building regulatory program as reported in Table 1 of this report, the name and address of the NCSBCS (National Conference of States on Building Codes and Standards) Delegate or other State official is given.

ST	NAME OF DEPARTMENT OR AGENCY	ADDRESS	CONTACT*	TITLE	TELEPHONE
OK	Engineering Department	Capitol Bldg., Oklahoma City 73105	A. Isom	Director	(405) 521-2111
OR	State Bldg. Codes Division	Labor & Industries Bldg., Salem 97310	T. Jacobson	Administrator	(503) 378-3176
PA	Dept. of Community Affairs/ Div. of Indust. Housing	P.O. Box 155, Harrisburg 17120	J. W. Shields	Chief	(717) 787-9682
RI	Dept. of Community Affairs	12 Humbert St., North Providence 02911	J. Cirrilo	State Bldg. Commissioner	(401) 277-3032
SC	Div. of General Services	300 Gervais St., Columbia 29201	M. B. Robinson	Director	(803) 758-2941
SD	Dept. of Commerce & Consumer Affairs/Div. of Consumer Protection	State Capitol, Pierre 57501	A. Christie	Administrative Assistant	(605) 224-3696
TN	Dept. of Insurance/Office of State Fire Marshal	202 Capitol Towers, Nashville 37219	J. Scanlon	Plans Examiner	(615) 741-2981
TX	Division of Housing	P.O. Box 13166, Austin 78711	E. Jewett	Director	(512) 475-3383
UT	State Building Board	Rm. 124, State Capitol, Salt Lake City 84114	G. R. Swenson	Director	(801) 328-5561
VT	Agency of Administration	Montpelier 05602	I. Bates	Director of State Bldgs.	(802) 828-3314
VA	Industrialized Building Sec. Dept. of Housing & Community Development	205 North Fourth Street Richmond 23219	R. Early	Chief Engineer	(804) 786-4846
WA	Div. of Building and Construction Safety Insp.	300 West Harrison, Seattle 98119	W. G. Campbell	Assistant Director	(206) 464-6387
WV	Office of State Fire Marshal	1800 Washington St., East, Charleston 25305	R. H. Perkis	Deputy State Fire Marshal	(304) 348-2191
WI	Div. of Ind. Safety & Bldgs.	P.O. Box 7946, Madison 53707	J. Wenning	Administrator	(608) 266-1817
WY	Office of State Fire Marshal	2015 Central Ave., Cheyenne 82002	B. M. Weckwerth	State Fire Marshal	(307) 777-7288
PR	Regulations and Permits Admin.	Centro Gubernaneutal Minillas Edificio Norte/Aptdo 41179 Sauturce 00940	W. S. Matos	Administrator	

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14. Sponsoring Agency Code

15. SUPPLEMENTARY NOTES

16. ABSTRACT *(A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.)*

This report summarizes the status and characteristics of State adopted building regulatory programs specific to the construction of manufactured buildings. Included are tabularized data and summary information relative to:

- technical codes upon which regulations are based
- extent to which established technical provisions contained in recognized national model codes have been amended by certain States
- differences from a regulatory standpoint between each States treatment of manufactured building construction and conventional construction
- occupancy classifications and type of compliance assurance activities covered by each States' program
- definitions for "manufactured building" and related terms as defined in State regulations

17. KEY WORDS *(six to twelve entries; alphabetical order; capitalize only the first letter of the first key word unless a proper name; separated by semicolons)*

Building regulation; construction; enforcement; inspection; legislation; manufactured building; rules and regulations; standards.

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