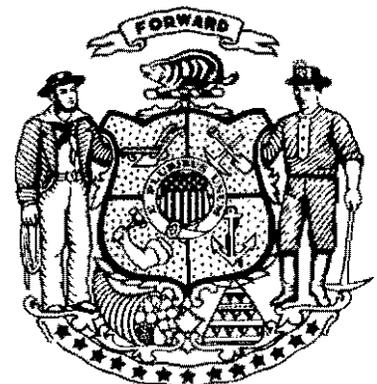

The State of Wisconsin

STATE STEPS TO BETTER HOUSING
A Look at Uniform Building Codes

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STATE STEPS TO BETTER HOUSING

A Look at Uniform Building Codes

I. BUILDING CODE PROPOSALS

Governor Lucey's Special Message

"Wisconsin is in the midst of a housing crisis of acute proportions." With this statement Governor Patrick Lucey - in a special message to the Wisconsin Legislature on May 21, 1971 - pointed to the gap between housing needs in the state and the ability of families to purchase homes at current prices. He proposed a multifaceted approach for state government action to combat the housing crisis.

One facet of this approach involves a consideration of the building code problem. Wisconsin does not now have a mandatory, state-wide building code for one and 2-family dwellings. Noting the recommendations of the Task Force on Building Codes for adopting such a code, the Governor thought it likely that a uniform code "could contribute to cutting the cost of low and moderate income housing by establishing uniform, state-wide product standards and by permitting substitution of newly developed materials meeting performance review criteria." Furthermore "...we can no longer tolerate building codes and zoning codes which exile the new construction forms from many areas of the state..." He endorsed the objectives of the task force, which is now completing its work.

Task Force Report

Like his successor, Governor Warren Knowles was also concerned about the housing situation in Wisconsin. Describing housing as "one of Wisconsin's most pressing needs," he appointed a task force in October 1969, under the chairmanship of then Lt. Gov. Jack Olson, to study local building codes. The Task Force on Building Codes, which issued its report in September 1970, made the following recommendations:

(1) the adoption of a state-wide building code for one and 2-family dwellings;

(2) provision for a state level "product acceptance and product approval procedure";

(3) provision for a state-level updating system for building regulations and product approval procedures;

(4) a uniform appeals procedure for variances and clarification;

(5) the administration of all state regulations concerning building construction by one agency except for sewerage systems;

(6) a state certification and training program for personnel administering and enforcing building regulations at the local level.

The task force was reactivated by Governor Lucey in January 1971. At a meeting on May 11, it reviewed a draft of proposed legislation, and further work on the measure is in progress.

Objectives of This Study

This study will be concerned with only one aspect of the housing problem; namely, building codes for one and 2-family dwellings, with particular attention to codes for factory-built housing. It is not our purpose to document in any detail the problems of the housing industry or the merits of single state-wide codes for family dwellings versus multiple local codes. These questions have been discussed by the Governor and by the task force, as well as in a September 1970 study by the University of Wisconsin's Institute of Governmental Affairs, "Housing in Wisconsin". In fact, the subject has been discussed in national literature for some 50 years.

Rather, this study will consider some very practical questions: What are the points to be considered in enacting authorization for a state-wide mandatory code? Where does Wisconsin stand now? What are other states doing in this area? Since there has been considerable activity in the past 2 years among the several states, their laws, together with proposed model legislation, will be examined for their usefulness as guides for Wisconsin.

A Brief Clarification

Before proceeding further, we offer a very few brief and simplified definitions of terms used throughout the study.

Building code - a construction code which sets forth in detail the minimum standards which must be met in the building or remodeling of a structure. This is different from a housing code, which is concerned with the condition of buildings already in existence and regulates the living conditions therein.

Performance building code - one which emphasizes the objective to be obtained rather than the means of obtaining it. Thus, a requirement that a roof must be able to withstand the pressure of "X" inches of snow would be a performance requirement, while a detailing of the materials and methods to be used to accomplish this would be a specification-type code requirement.

Manufactured housing, industrialized housing, factory-built housing - housing built according to mass production techniques and including prefabricated housing, modular housing and mobile homes. It is usually built in a factory for on-site assembly or installation.

Componentized housing - prefabricated and shell houses or 2-dimensional flat components, such as walls, which are assembled at the site.

Prefabricated housing - housing for which major home components, such as walls and trusses are produced in a factory for on-site assembly.

Modular housing - factory-produced 3-dimensional boxes or cubes made on an assembly line and shipped to a building site, where they are connected to form a

complete building. They frequently include prewiring and preplumbing. They meet building code requirements and are eligible for long-term mortgage financing.

Mobile home - an industrialized unit constructed on a chassis for towing to the place to be used. Its basic structure and materials preclude it from conforming to local building codes. Section 340.01 (29) of the Wisconsin Statutes defines a mobile home as "a vehicle designed to be towed as a single unit or in sections upon a highway by a motor vehicle and equipped and used or intended to be used, primarily for human habitation, with walls of rigid uncollapsible construction. A mobile home exceeding statutory size under s. 348.07 (2) shall be considered a primary housing unit. A mobile home not exceeding the statutory size under s. 348.07 (2) shall be considered a touring or recreational unit" (Section 348.07 (2) sets the statutory size as 45 feet). Section 66.058 (1) (e) gives another definition: "'Mobile home' is that which is, or was as originally constructed, designed to be transported by any motor vehicle upon a public highway and designed, equipped and used primarily for sleeping, eating and living quarters, or is intended to be so used; and includes any additions, attachments, annexes, foundations and appurtenances, except that a house trailer is not deemed a mobile home if the assessable value of such additions, attachments, annexes, foundations and appurtenances equals or exceeds 50 per cent of the assessable value of the house trailer." Section 66.058 (1) (g) further provides: "'Nondependent mobile home' means a mobile home equipped with complete bath and toilet facilities, all furniture, cooking, heating, appliances and complete year round facilities."

II. THE CHOICES BEFORE US

In determining what to do about building codes in this state, the Wisconsin Legislature is faced with making decisions on several different facets of the problem. The basic question is, of course, whether to enact a law providing for a uniform code that would be applicable, without variation, state-wide.

If the answer is "yes", the next decision will concern the inclusiveness of the code. Should it cover all housing or industrialized housing only? Should industrialized housing include mobile homes? Should the present state building code also be made unamendable at the local level?

The third question which then arises involves the placement of code operations within the state government structure. Which agency should maintain the uniform code, and should jurisdiction over the plumbing code and the mobile homes code be moved to that agency?

Finally, there are details of enforcement - such as the level of government designated to perform inspection services - and of appeal procedures to be considered.

Uniform Code Versus Local Codes

The problem of multiplicity - Although the problems caused by a multiplicity of building codes has been a subject of concern for many years, the problem is now attracting much greater attention throughout the nation than ever before.

This is due partly to the high cost of housing - a fact which is excluding large segments of the population from home ownership in spite of our "affluent society" - and partly to the improvements in housing techniques being made by industrialized housing, particularly modular homes. The tremendous upsurge in the sale of mobile homes has also focused attention on the possibilities in the further development of manufactured housing. While uniform building codes have long been advocated as one method of cutting the cost of conventional housing, with the growth of modular housing, they become a necessity. If conventional builders have been hampered from taking advantage of the cost savings possible in large scale operations, such as mass purchasing and better utilization of time, work force and materials, this would hold true to an even greater degree for industrialized housing. For the housing industry to become an actual industry like other mass production industries, it must obviously be able to produce on an assembly-line basis for mass distribution without variations to accommodate the ideas of every community in the nation. Any builder, of course, must take into consideration such factors as climate and terrain, which differ from region to region and site to site, but a uniform code should be able to accommodate these variations.

The problem of jurisdiction - A stumbling block to uniformity seemingly is the tradition of self-government or home rule in this area - the local units of government have jurisdiction over building codes. This jurisdiction, however, has been breached with regard to the state building code, the electrical code and the plumbing code - local units can modify these codes upward but not downward -; it has been breached with regard to mobile homes, which must comply with a national standard. At the present time, complete control, that is the authority to write and amend a code, by local governments extends only over one and 2-family dwellings, excluding mobile homes. Many small local jurisdictions, however, obviously do not have a building code. If Dane County can be taken as a guide, most cities and villages probably have codes; most towns probably do not.

In the matter of inspection, here again the wall has been breached. While inspection of one and 2-family dwellings has been a local function, the state codes come under the jurisdiction of state inspectors except where the law specifically authorizes cities to review building plans.

In those localities that have their own family dwelling codes, how did they compile them? Few started from scratch. Most probably adopted some other municipality's code, looked to F.H.A. standards or to national models, or adopted, insofar as applicable to houses, the state building code for public buildings. It seems that the extent to which loss of control over compilation of building codes would be a real loss to local governments is problematical, particularly since the enforcement function would probably remain wholly or partly a local task.

Inclusiveness of the Code

Mobile homes - Although mobile homes are a form of industrialized housing, some state building code laws covering manufactured housing exempt them from that particular law. In our own Wisconsin Statutes the section relating to the standards for mobile homes is to be found in a chapter on motor vehicles. The origin of mobile homes as trailers moved by automobiles indicate why. The ambivalent nature of the mobile home is also indicated by the statutory definition

which labels mobile homes over a specified size "primary housing units" and those under the size "touring or recreational" units. Chapter 474, Laws of 1969, also required mobile homes to conform to the American Standards Institute code and authorized modifications by the Department of Health and Social Services and the Department of Transportation, but did not, however, grant any enforcement standards or appropriation for enforcement to the Department of Transportation. The department is, therefore, unable to enforce the section.

1971 Assembly Bill 473 would give the department or its Division of Motor Vehicles specific authority for licensing, inspection and approval during and after the manufacturing process. Yet, the mobile home represents a major component of the industrialized housing industry. If standards and inspection procedures for it are under a different state department than all other types of housing, this might not be as efficient as a more coordinated approach. As it is now, the electrical equipment in mobile homes comes under the jurisdiction of the Department of Industry, Labor and Human Relations and the plumbing equipment under the Department of Health and Social Services. The League of Wisconsin Municipalities, in the May 1971 issue of THE MUNICIPALITY ("Mobile Homes - Legal Lebensraum for All"), said that the probable answer lies in a state-wide standard or testing agency with certified factory inspection by the state, the Federal Housing Administration or insurance underwriters. In the meantime, however, it proposed a revision of its model ordinance for municipalities on mobile homes and included a provision requiring a mobile home owner to obtain a permit from the municipal clerk or building inspector, such permit to be issued only for those homes complying with Section 218.12 of the statutes or bearing a seal, stamp or certificate of the manufacturer guaranteeing that the mobile home is constructed according to the standards of the American National Standards Institute Book A 119.1.

The state building code - The present state building code covers public buildings and apartment houses with 3 or more tenants. Since local government jurisdictions can impose more stringent regulations than are to be found in the state code if they wish, this code, although state-wide in application, cannot achieve complete uniformity. In response to the questionnaire that we sent to government jurisdictions in Dane County, the local government units appear to vary considerably in the extent to which they tamper with the state building code - some never, some rarely, some occasionally, and 2 "frequently".

The problem, however, is that industrialized, modular construction is not limited to family dwellings. This type of construction is also being used for public buildings and apartment houses. Modules have been used to construct buildings 20 stories high. If mass construction techniques are to be taken advantage of, the present state building code would also seem to need uniformity of application throughout the state.

Although a building code for one and 2-family dwellings is usually thought of as distinct from the building code for public buildings, it need not be a completely separate code. Obviously, some parts of the code are usable in both situations; the fact that several of the Dane County municipalities said their codes were based on the state code indicates this. Whether separate codes, separate sections of the same code, or some other combined code is most desirable would be a matter for the experts in the field of code writing.

Code Placement in the State Government Structure

At the present time the state building code, the boiler code, the electrical code and the elevator code are under the jurisdiction of the Department of Industry, Labor and Human Relations; the plumbing code is the responsibility of the Division of Health in the Department of Health and Social Services; and mobile home standards are the rather nebulous responsibility of the Department of Transportation. In addition, the Governor is creating a Division of Housing in the Department of Local Affairs and Development to serve as "the focal point of state involvement in housing and community development". This poses the question: Should all activities relating to housing be in the same department, or should all code activities, at least, be in the same agency?

Enforcement Procedures

The state building code in Wisconsin is enforced on the state level, but first, second and third class cities have been given enforcement authority for smaller buildings. The model law for a building code promulgated by the Advisory Commission on Intergovernmental Relations would place the responsibility for enforcement and administration on local jurisdictions as prescribed by local ordinances. The Connecticut law also provides for a municipality - or municipalities jointly - to have a building official, who is certified by the state inspector.

In its model law proposing a uniform code for factory-built housing, the Council of State Governments proposed that such housing could be inspected at the place of manufacture by a local government agency if its requirements were consistent with various national code standards, could be inspected by the state agency or could be delegated to a local government agency.

Appeal Procedures

Connecticut's general compulsory building code law provides for appeals first to a local board of appeals, then to the state Building Code Standards Committee and finally to the court of common pleas. The ACIR model would provide appeal to the State Building Construction Board of Appeals and Review and beyond that to the court. Appeals from California's factory-built housing building code may be made first to the local enforcement agency, then to the state Commission of Housing and Community Development, while the Council of State Governments model similarly provides appeal to the local agency, and then to the state department and ultimately to the court.

A Warning

Finally, the federal government is hovering over the states, urging them to act in the area of code uniformity. Increasingly, as mass-produced housing develops, it takes on the aspects of interstate commerce. Particularly in the absence of state action, it would seem likely that the federal government will take a more active role in the development of uniform codes. As in so many other areas of governmental activity, if the states leave a vacuum, the federal government will step in to fill the void.

III. THE STATUS OF BUILDING CODES IN WISCONSIN STATE GOVERNMENT

Wisconsin has a state-wide building code, but it applies only to public buildings. Furthermore, municipalities may set more stringent standards. Building codes for one and 2-family houses remain the province of local governments under their home rule powers. Counties may adopt building codes, but such codes are not applicable in cities, towns and villages within the county which have adopted their own codes.

In addition to the general building code, there are also special codes. The state has a state-wide minimum plumbing code, which is uniform "as far as practicable"; a boiler code and an elevator code applicable only to public buildings; and an electrical code, which is applicable state-wide, but, again, may be made more stringent by municipalities.

Mobile homes must conform to a national standard, which may be modified by state agencies, and many municipalities require mobile homes located outside a park to comply with local building codes.

The sections of the Wisconsin Statutes and the Wisconsin Administrative Code which are most pertinent in indicating the current status of building codes in this state are summarized below.

State Building Code

Wisconsin Statutes - Section 101.101 requires all plans for public buildings to be submitted to the Department of Industry, Labor and Human Relations for approval before construction is started. Under certain circumstances the department may accept the examination of cities and of insurance inspectors. It accepts the review of plans made by first class cities and of plans for buildings of less than 50,000 cubic feet by second and third class cities. Twenty-three Wisconsin cities are now authorized to review such plans. Inspections may be made by cities of the first, second and third class.

Section 101.01 (8) of the statutes defines "public building" as being any structure used as a place of resort, assemblage, lodging, trade, traffic, occupancy or use by the public or by 3 or more tenants.

Section 101.102 directs the department to set and collect fees for its inspection services.

Section 59.07 (51) authorizes county boards to adopt building and sanitary codes, but such codes are not to apply in cities, towns or villages which have adopted their own codes.

Wisconsin Administrative Code - Chapters Ind 50-59 constitute the state building code, which applies only to public buildings, including apartment buildings housing over 2 families. The chapters of the building code deal variously with the scope of the code; definitions and standards; general requirements; structural requirements; factories, office and mercantile buildings; theaters and assembly halls; schools; apartment buildings, hotels and places of detention; and heating, ventilating and air conditioning.

Section Ind 50.001 of the code states its purpose is "to promote the health, safety and welfare of the public by establishing performance minimums contained therein for design, construction, alteration, use and occupancy of buildings and parts thereof".

Section Ind 50.03 excludes from the code dwellings, apartment buildings housing not over 2 families, buildings used for agricultural purposes and situated outside municipal limits, and temporary buildings.

Section Ind 50.04 enables cities, villages and towns to make additional or more stringent regulations, provided they do not conflict with the code.

Ind 50.12 prohibits use of all materials, methods of construction and devices used in construction which are not specifically mentioned in the code until approved by the department.

Special Codes

Boiler code

Wisconsin Statutes - Section 101.30 requires steam boilers installed in this state to conform to the laws and orders of the Department of Industry, Labor and Human Relations enacted for the safety of employes and frequenters in places of employment and public buildings.

Wisconsin Administrative Code - Chapters Ind 41 and 42 constitute the boiler code. Section Ind 41.01 makes the code applicable to boilers and unfired pressure vessels in use at places of employment and in public buildings.

Electrical code

Wisconsin Statutes - Section 167.16 requires everyone doing any electrical wiring to conform to the state electrical code, and the company furnishing the current must obtain proof of such compliance before furnishing the service. A municipality, however, may impose more stringent qualifications than those in the code.

Wisconsin Administrative Code - The electrical code is contained in Chapters E 1 through E 900 of the administrative code.

Section E 2.02 states that the Wisconsin State Electrical Code constitutes a general order of the Department of Industry, Labor and Human Relations (DILHR) and the Public Service Commission authorized by Sections 227.14, 101.10 and 196.74 of the statutes. The Public Service Commission enforces the code with respect to the installation and operation of circuits or equipment by public utilities and railroads, while DILHR enforces the code with respect to the installation and operation of circuits or equipment affecting employes, employers or the public.

Elevator code

Wisconsin Statutes - Section 101.101 requires the submission of plans for

public buildings and places of employment, including elevators, to the Department of Industry, Labor and Human Relations for approval.

Wisconsin Administrative Code - Chapter Ind 4 is the elevator code. Section Ind 4.01 makes the code applicable to public buildings and places of employment.

Plumbing code

Wisconsin Statutes - Section 145.02 (2) directs the Department of Health and Social Services to supervise the construction, installation and maintenance of all plumbing for all buildings in the state. It prescribes and enforces "minimum, reasonable standards therefor which shall be uniform so far as practicable".

Section 145.04 (1) requires a city of the first, second or third class having a system of waterworks or sewerage and permits a village, fourth class city, town, county or metropolitan sewerage commission to prescribe rules and regulations to safeguard the public health not in conflict with the minimum standards prescribed by the department for the materials, construction, alteration and inspection of pipes, tanks and fixtures by which supply or waste water or sewage is used or carried.

Section 145.05 requires a first, second or third class city having a system of waterworks or sewerage, and permits fourth class city, village, town, county or metropolitan sewerage districts, to appoint one or more plumbing supervisors to supervise all plumbing.

Section 145.13 states that the state plumbing code adopted by the department shall have the effect of law "in the form of minimum standards state wide in application and shall apply to all types of buildings, private or public, rural or urban, including buildings owned by the state or any political subdivision thereof. All plumbing installations shall so far as practicable be made to conform to such code. Cities and villages may make additional regulations not in conflict with such code."

Wisconsin Administrative Code - Chapter H 62 is the plumbing code of the state.

Mobile Homes

Wisconsin Statutes - Section 218.12 of the Wisconsin Statutes prohibits anyone from manufacturing or selling mobile homes in this state which do not conform to the standard for mobile homes developed by the U.S.A. Standards Institute in Book A 119.1. A standard can be modified under Chapter 227 ('Administrative Procedure and Review'), by the Department of Health and Social Services or by the Department of Transportation.

Apparently, this state law does not preclude local regulation also.

Wisconsin Administrative Code - Chapter H 77, administered by the Department of Health and Social Services, requires plumbing in mobile homes to meet requirements of the state plumbing code applicable to mobile homes and mobile

home parks and provides rules and regulations concerning water supply, sewage disposal and solid waste disposal for mobile homes. It also regulates the location of a unit on its site and specifies site qualifications, and street, parking and recreation requirements.

Chapter E 550 contains the rules and regulations of the Department of Industry, Labor and Human Relations regulating the electric conductors and equipment installed in mobile homes.

IV. THE STATUS OF BUILDING CODES IN WISCONSIN LOCAL GOVERNMENT

At the present time, as we have noted, the state has no building code for one and 2-family dwellings. Establishment and maintenance of a building code for this type of structure have been the responsibility of local government units. How have local units responded to this situation? The range of response has varied from no building codes at all to regional building codes. Naturally, the size and nature of the local unit has much to do with the extent of its activities in this area.

Southeastern Regional Code

The most sophisticated action to date has been taken by the Southeastern Wisconsin Regional Building Inspectors Association, which was formed in 1967. The association promulgated the Southeastern Wisconsin Uniform Building Code for one and 2-family dwellings, which has been adopted by 30 municipalities in the southeastern part of the state. Several major area cities, however, including Milwaukee, West Allis and Wauwatosa, have not adopted the code. The code is updated annually; in January 1971, 16 changes were adopted.

The association is also assisting in the creation of 3 other regional organizations in the state - northeast, northwest and southwest - to promote uniformity in interpretation and enforcement of codes. The new regional associations would be organized as semi-independent sections of the Wisconsin Building Inspectors Association, which is associated with the League of Wisconsin Municipalities. At its January 1971 meeting the southeastern association recommended adoption of its own code as the state uniform code.

Dane County

Since it was not feasible in conducting this study to survey all the municipalities in the state regarding their building code activities, we chose Dane County as a sample and sent a questionnaire to the county and all the municipalities therein. Some 39 jurisdictions out of a total of 61 responded. It seems logical to assume that the situation in other local units around the state would not be substantially different from that of the municipalities which comprise Dane County.

County - It will be recalled that Section 59.07 (51) of the statutes permits county boards to adopt building codes applicable to cities, towns and villages within the county which have not adopted their own code. Dane County, however, has not adopted a building code.

Cities - All 5 cities in Dane County have local building codes covering one and 2-family dwellings. One municipality said that its code is a "conglomerate" of national model codes, the State of Wisconsin Code and national standards. Two cities said they use Federal Housing Administration (FHA) standards, while 2 base theirs on the state's code.

Depending upon the size of the city, the size of the building inspection staff varied from one part-time employe to 29 full-time employes for Madison.

When asked whether they ever make more stringent regulations supplementing the state building code, 3 said "occasionally"; one, "rarely"; and one, "never".

Villages - Twelve of the county's 20 villages replied to the questionnaire. All respondents have local building codes. Five said they followed the state code, one based its code on that of another village, 2 adopted the City of Madison code by reference, one uses the 1967 edition of the National Building Code (one of the national model codes), one describes its code as a "village ordinance code", another attributes the source of its code to local and national lumber stress standards, while the last says its code is based upon F.H.A. standards.

Staff sizes vary from one part-time employe to one full-time employe. The official is generally called a building inspector; in one village the clerk is responsible for building code enforcement, in another it is the Superintendent of Public Works, in the third the village clerk and the constable share the responsibility. One village stated that 3 members of the village board are responsible for building code enforcement, while another said it is the Property and License Committee.

Four said they never imposed additional requirements over and above the state building code, 4 said they rarely did, and 2 said they did so occasionally.

Towns - Twenty-one out of 35 towns responded to our inquiry. Twelve of the 21 have building codes for single and double family dwellings. Of the 12, 3 said their codes were based on the state code; 2 were based on the Madison code; one was derived from the Monona code; one described its code as partly its own and partly the state code; 2 others said their codes were based on Dane County building codes (one stating that builders must get a county permit before obtaining a town permit); one credited its source as the Wisconsin Towns Association; and the remaining 2 said their codes are local in origin. Since Dane County does not have a building code, but has a zoning code, the latter seems to be what is referred to by the towns. Three towns seem to be considering the adoption of a code.

The largest staff was one full-time employe; others had one, 2 or 3 part-time employes. One town clerk does inspection in addition to his regular duties.

With regard to the state building code, 5 said they never imposed more stringent requirements, 5 claimed they rarely did, 2 said they occasionally did, and 2 said "frequently".

V. STATE-WIDE BUILDING CODE LAWS

Connecticut was the first state to adopt a mandatory, state-wide building

code for buildings including houses. The law providing for the code was enacted in 1969, to become effective October 1970. Minnesota will apparently become the second state when its newly enacted law becomes effective in 1972.

New Jersey, New York and North Carolina have developed model codes covering all types of structures for optional adoption by municipalities; and Ohio was also authorized by a 1969 law to develop a model code pertaining to one, 2 or 3-family dwellings, which a municipality may incorporate into its building code.

The Advisory Commission on Intergovernmental Relations (ACIR) has drafted a model law based largely on New York's building code law. Optional and mandatory laws are compared in some detail in the following descriptions of the ACIR model and the Connecticut law.

ACIR Model Law

In its 1970 CUMULATIVE ACIR STATE LEGISLATIVE PROGRAM, the Advisory Commission on Intergovernmental Relations suggested model legislation containing the following provisions:

1. A Division of Building Codes in an appropriate state agency, headed by a director, and a Building Code Advisory Council, appointed by the governor, would be created.

2. The director would be empowered to adopt a state building construction code. "Building" is defined as "a combination of any materials, whether portable or fixed, having a roof, to form a structure for the use or occupancy by persons, animals, or property. The word 'building' shall be construed as though followed by the words 'or part or parts thereof' unless the context clearly requires a different meaning."

3. The code should provide "so far as may be practicable, basic and uniform performance standards". Its objectives should be to provide uniform standards formulated in terms of performance objectives, to permit the greatest possible use of modern technical methods, to encourage standardization of construction practices, and to eliminate obsolete and conflicting building regulations.

4. The code would be applicable in each municipality and county which has adopted a resolution accepting it. No municipality or county would be prohibited from adopting any building regulation, but no municipality or county accepting the code could "supersede, void, or repeal or make more restrictive" any of the rules and regulations adopted by the division. A local unit which has accepted the code could withdraw at any time after one year of the date of the code's applicability to that jurisdiction. Withdrawal shall be by resolution of the local governing body following a public hearing and shall not be effective on less than 180 days following adoption of the resolution.

5. The director would also have the power to inspect buildings when necessary in the performance of his duties; to study the effectiveness of the code and other laws on building costs; and to recommend, require or provide for tests and approvals of material and methods to determine their acceptability under the code and issue certificates of acceptability.

6. The Building Code Advisory Council would review rules and regulations

of the division submitted to it by the director and make recommendations on its own initiative.

7. Responsibility for administration and enforcement would be on the adopting jurisdiction as prescribed by local ordinance.

8. Appeals from decisions arising under the code or from decisions made by municipalities not under the code may be made to a State Building Construction Board of Appeals and Review. The board's decision on questions of fact is final, but further appeal on questions of law may be made to the court.

Connecticut's Law

The Connecticut law, which provides for a mandatory - as distinguished from an optional - code, contains the following provisions:

1. Within the Department of Public Works were created a State Building Code Standards Committee and a state building inspector, who are jointly to adopt and administer a state building code.

2. The committee, appointed by the Public Works Commissioner, shall work with the inspector in enforcing the law.

3. The code and any amendments shall be the code for all towns, cities and boroughs.

4. Any town, city or borough or any person may propose amendments to the code to apply to all municipalities or to special situations. Hearings shall be held on such proposals, and decisions on their adoption shall be made by the committee and the inspector.

5. To enforce the code, each municipality - or municipalities jointly - shall have a building official, who shall have the requisite amount of experience and be certified by the state building inspector.

6. The state building inspector and Building Code Standards Committee are responsible for preparing and conducting examinations for prospective building officials and determining the acceptability of training programs as proof of qualifications for certification. They may also conduct educational programs to train and assist building officials.

7. After October 1, 1970, no building can be constructed or altered until a permit is issued by a building official.

8. The building official shall issue a permit to a builder whose plans are intended for more than one municipality and have been approved by the state building inspector.

9. The Public Works Commissioner appoints a Board of Standards and Appeals to investigate new materials or modes of construction and promulgate regulations for their use.

10. Each municipality appoints a board of appeals to hear appeals from the

decision of the building official in that locality. An appeal may be taken from the board's panel to the State Building Code Standards Committee and further to the court of common pleas.

Comparing ACIR and Connecticut

Both the model law proposed by the Advisory Commission on Intergovernmental Relations and the Connecticut law are designed to promote a uniform building code throughout the state. Codes promulgated under both laws would apply to all types of buildings. The major difference between them is that the ACIR proposal would make the code optional with the municipalities, while the Connecticut law makes the code's use mandatory throughout the state. Local autonomy is more nearly preserved by the former, but the objective of uniformity is achieved by the latter.

Another major difference is that the Connecticut law provides for training and educational programs for local building officials, while ACIR is silent on this point. Otherwise, their administrative provisions are similar. ACIR calls for a division headed by a director and located in a state agency; Connecticut provides for a state building inspector in the state Department of Public Works. ACIR would create a Building Code Advisory Council; Connecticut provides for a State Building Code Standards Committee. Both provide appeal procedures. The ACIR model is more detailed in the matters of defining terminology and setting the objectives of the code. One of the objectives is to make it a performance code as far as practicable, an aspect that the Connecticut law does not touch upon.

Other Legislation

Minnesota - Chapter 561, which became law in May 1971, also is a mandatory law and applies to all types of structures except mobile homes. It places responsibility for promulgation of the state building code on the commissioner of administration, who appoints a state building inspector to administer the code. A Building Code Standards Committee serves as an advisory body. The code shall apply state-wide and supersede any local code; it shall not apply to farm dwellings and buildings except for electrical inspection.

Under the commissioner's supervision, the provisions of the code relating to electrical installations shall be enforced by the State Board of Electricity, plumbing by the State Board of Health, fire protection by the state fire marshal, high pressure steam piping and appurtenances and elevators by the Department of Labor and Industry, and the code as it applies to public school buildings by the State Board of Education.

Each municipality must appoint a building official to administer the code, who is certified by the state upon proof of qualifications.

There is a separate section of the law for "prefabricated structures", which are defined to mean "a residential 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, and shall not include mobile homes". (Note: "Prefabricated" is used throughout this section of the law; there is no

differentiation between it and modular and no use of the terms "modular", "factory-built", "industrialized", or "manufactured housing".) The state building inspector is responsible for the inspection and certification of the plans and specifications of each prefabricated structure, which certification shall then be conclusive on all agencies and instrumentalities of the state and its political subdivisions. The inspector also requires a certificate from the manufacturer that the code has been complied with.

Iowa - An Iowa bill, House File 6, 1971, provides for the adoption of a state building code covering all types of structures. The code would be mandatory state-wide for factory-built structures (including mobile homes), but would otherwise apply only to those local governments which adopt it.

The director of the Division of Municipal Affairs in the Office for Planning and Programming would be designated the building code commissioner, or he could designate a commissioner. With the approval of a State Building Code Advisory Council, appointed by the Governor, the commissioner would adopt a state building code and changes and variances therein. The code would provide uniform standards for construction and construction materials and establish such standards in terms of performance objectives, permit the use of modern technical methods, encourage the standardization of construction practices, and eliminate restrictive, obsolete and conflicting requirements. It would contain provisions relating to the manufacture and installation of factory-built structures. The commissioner would provide an insignia of approval for factory-built structures and would be authorized to contract with local government agencies for enforcement of the code relating to their manufacture. Local units would enforce the code provisions relating to their installation, or - if the local government has no local building department it would contract with the commissioner or another governmental subdivision.

The commissioner would also establish a State Building Code Board of Review to which appeals could be taken, with further appeal available to the commissioner and to the district courts.

Administration and enforcement of the code would be carried out by local government agencies as prescribed by local law or ordinance. This would include examination of plans, issuance of building permits and licenses, inspection of buildings, and enforcement of building regulations.

Amendments adopted to the bill include one to provide uniform standards for construction and materials "through the adoption by reference of applicable national specifications, published standards, and model building codes where appropriate and providing exceptions when necessary".

Another amendment would route the appeal from the Board of Review to the Advisory Council (instead of the commissioner), then to the courts, while a third seems to weaken the mandatory aspect of the factory-built housing part of the code. As of June 7, 1971, the bill had passed only the Iowa House of Representatives.

Michigan - There are 4 bills in the 1971 session of the Michigan Legislature which relate to construction codes. As of June 8, 1971, they were all in committee in their house of origin. One bill, relating only to manufactured housing, will be considered in the next section of this study. The other 3

bills are patterned after the proposal recommended by the Michigan Commission on Housing Revision.

One of these, House Bill 4069, would create a Housing and Construction Code Commission as a public corporation within the Department of Commerce, but exercising its functions independently of the department head. The commission would appoint an executive director and would promulgate a state construction code covering all types of structures. The code would be applicable throughout the state, except that a city, village or township may elect not to come under the code. If it makes this election, it must pass an ordinance adopting comprehensive nationally recognized construction standards. The code would include sub-codes concerning building, plumbing, electrical, fire safety, elevator and boiler codes. It would also be based upon nationally recognized standards and, to the extent practicable, be phrased in terms of performance objectives.

The bill transfers the State Plumbing, Electrical Administrative, and Elevator Safety Boards, the Board of Boiler Rules, and the Elevator and Boiler Divisions of the Department of Labor to the commission. A Fire Marshal Division is also created within the commission.

Enforcement of the code is the task of the enforcing agency of the governmental subdivision.

The commission shall determine the procedure for issuing a certificate of acceptability at the place of manufacture of a premanufactured unit. ("Premanufactured unit" means "an assembly of materials or products intended to comprise a building or structure, and that is assembled offsite by a repetitive process under circumstances intended to insure uniformity of quality and material content. The term includes a mobile home.") All manufacturers would submit plans and specifications to the commission for the unit in compliance with the code or with nationally recognized construction standards in effect in the jurisdiction where it is to be installed. The commission provides for inspection of each unit manufactured, and the local enforcing agency inspects the installation. A certificate of acceptability has no effect in a governmental subdivision in which the code is not in effect unless the unit complies also with the nationally recognized standard in effect in that subdivision.

The commission may conduct training programs for inspectors, may test new materials and issue certificates of acceptability, and may establish a state testing laboratory or contract with an existing laboratory.

House Bill 5252 (and its companion bill, Senate Bill 777) is similar to the above. It would however create a Construction Code Commission within the Department of Labor (instead of Department of Commerce). The main difference appears to be that this bill makes the code relating to premanufactured units effective throughout the state "without any local modifications whatsoever". The previous bill does not.

Oregon - House Bill 1048, 1971, as re-engrossed, would have created a State Building Code Commission appointed by the Governor and a Building Code Division in the Commerce Department, provided for the adoption of a state building code to include fire protection, electrical safety, plumbing, sanitary factory-built and mobile homes and other regulations, authorized the commission to adopt regulations covering all types of structures, permitted cities and

counties to enforce the code when their enforcement program meets state standards and required the commission to establish criteria for local enforcement programs. The authority of other state agencies in the code regulation field was removed. As of June 8, 1971, the bill passed the House and was in a Senate committee. Since the legislative session was expected to end the following day, the bill probably did not pass.

Another Oregon measure, Senate Bill 713, which apparently remained in a Senate committee, would have created a State Buildings Commission to prescribe a building code applicable to one and 2-family dwellings and for prefabricated, factory or off-site buildings or structural units, and prescribe a building code for new construction to be adopted and administered by the state fire marshal or approved governmental agencies for commercial, industrial and public buildings. It would promote state-wide uniformity as far as possible "through conformance with uniform and nationally recognized codes and standards". Governmental subdivisions would be allowed to adopt building regulations for one and 2-family dwellings, but they must be in conformity with the state code.

VI. FACTORY-BUILT HOUSING LAWS

Prefabricated housing has been with us for some time, and modular housing, although not entirely new, is now getting off the ground. The whole area of factory-built or industrialized housing is one that many people look to as the hope of the future for lowering housing costs. In order to take advantage of mass production techniques, however, uniformity in building codes is one of the prerequisites.

States appear less reluctant to enact mandatory codes for factory-built housing than they do for conventional housing. Within the past 2 years at least 10 states have chosen to enact laws permitting factory-built housing to be approved on the state level rather than by local building agencies. In addition to Connecticut and Minnesota with their more comprehensive laws, the states now having such laws include California, Georgia, Hawaii, Maryland, Ohio, South Carolina, Virginia and Washington. The laws of Georgia and Maryland were just enacted this year. Iowa, Michigan and North Carolina have bills pending on the subject, while the Oregon and West Virginia measures remained in committee at the close of their 1971 sessions. There may be others, of course, in progress that have not come to our attention.

The following gives a detailed description of the California law, enacted in 1969, and the model legislation suggested by the Council of State Governments. Summary descriptions are given of the other state laws and bills, noting salient points that might be of particular interest.

California's Law

The California law contains the following provisions:

1. "Factory-built" housing is defined as a residential building, dwelling unit or habitable room thereof which is either wholly or substantially manufactured at an off-site location to be wholly or partially assembled on site.

2. Factory-built housing shall bear an insignia of approval issued by the state Department of Housing and Community Development, but this does not apply to housing inspected and approved at the place of manufacture by the local enforcement agency and in accordance with local building requirements, with the expense being borne by the manufacturer.

3. Housing bearing the insignia is deemed to have complied with all local requirements applicable to the manufacture of such housing.

4. No factory-built housing bearing the department insignia shall be modified before or during installation, and no such housing approved by a local enforcement agency shall be modified without the approval of such agency.

5. The Commission of Housing and Community Development shall adopt rules and regulations reasonably consistent with various specified national building codes to carry out the law and set fee schedules to pay the costs of the department.

6. The department enforces the law except that local enforcement agencies enforce and inspect the installation of factory-built housing. Zone requirements are entirely reserved to local jurisdictions.

7. The commission is advised in the drafting and promulgation of rules and regulations by the Advisory Committee on Factory-Built Housing, which is appointed by the Governor.

8. Appeals regarding the application of any of its rules can be made to the commission after submission to the local enforcement agency.

CSG Model Law

In its 1971 volume of "Suggested State Legislation", the Council of State Governments (CSG) included a proposed model law on factory-built housing based largely on the California law and similar statutes. Its provisions are as follows:

1. Factory-built housing is defined as "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".

2. Factory-built housing must bear insignia of approval issued by the department (suggested Department of Housing and Community Development).

3. This section does not apply to factory-built housing which is inspected and approved by a local government agency at the place of manufacture in accordance with local building requirements if such requirements are reasonably consistent with standards set by various national codes.

4. Housing bearing the insignia is deemed to comply with all local requirements.

5. Housing bearing the insignia cannot be modified during the installation

without prior approval of the local government.

6. The department promulgates rules to make specific the provisions of this act. Its rules shall be reasonably consistent with recognized national building codes.

7. The department shall enforce the act, but enforcement authority may be delegated to a local government agency.

8. An Advisory Committee on Factory-Built Housing, appointed by the Governor, assists the department in drafting rules.

9. The department employs inspectors and may establish training programs for local enforcement personnel.

10. If the standards prescribed by another state or by the U.S. Department of Housing and Urban Development are equal to its own standards, it may approve housing approved by such other state.

11. Appeals shall first be made to the local government agency, then to the department, and further to the court.

12. The department may obtain injunctive relief from the court to prevent the sale and installation of nonapproved housing.

13. A person injured as a result of violation of this act or rules adopted under it shall have a cause of action against the person to whom an insignia has been issued. Violation of the act is a misdemeanor.

Comparing CSG and California

While the California law permits inspection and approval at the factory by the local enforcement agency in accordance to local requirements, the more stringent provision of the CSG model states that such local requirements must be reasonably consistent with national code standards.

Unlike the California law, which defines factory-built housing as built elsewhere and transported to the home site, the more inclusive model law proposed by the Council of State Governments also includes factory-built housing which is produced or assembled on the site. In other words, it is not where a house is made that is always the key but how it is made that makes it a factory-built house. Since there frequently are state restrictions on the size and weight of modular housing units that can be transported on highways, use has developed of mobile plants and equipment which can be set up at building sites.

The CSG model also provides for training programs for local enforcement personnel, while California does not. Structurally, the California law heads its Department of Housing and Community Development with a commission, while the CSG model does not, but both texts have advisory committees.

Other State Laws and Pending Legislation

Georgia - The Georgia law (Act No. 325, 1971) closely follows the Council

of State Governments' model. It does, however, include a section specifically exempting from the act factory manufactured movable homes as defined in an Act known as "The Uniform Standards Code for Factory Manufactured Movable Homes Act", which provides for the establishment of construction standards for such homes.

Hawaii - Chapter 111, 1970, defined factory-built housing as "any structure designed primarily for residential occupancy by human beings, the structure or any room of which is either entirely or substantially prefabricated or assembled at a place other than the building site". The insignia of approval for all factory-built housing is issued by the Department of Labor and Industrial Relations. When issued, it shall be deemed to comply with all the laws of any city or county or local enforcement agency which govern the manufacture and construction of such housing.

Land use requirements, building setbacks and so forth are specifically reserved to local jurisdictions. All or part of the department's duties may be delegated to local enforcement agencies. A Factory Built Housing Advisory Board reviews rules prescribed by the department, such rules to be reasonably consistent with national codes.

Maryland - Chapter 662, enacted in May 1971, covers all industrialized buildings and mobile homes. "Industrialized building" means "a building assembly or system of building sub-assemblies, including the necessary electrical, plumbing, heating, ventilating and other service systems, manufactured in its entirety, or in substantial part, 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 2 or more industrialized building units, and not designed for ready removal to, or installation or erection on another site". "Mobile home" means "an industrialized building unit constructed on a chassis for towing to the point of use and designed to be used without a permanent foundation for continuous year-round occupancy as a dwelling. The removal of the unit from its wheels shall not be used to change its character under this Act."

The Department of Economic and Community Development is the state agency authorized to make rules and regulations prescribing standards for industrialized buildings and mobile homes. For industrialized buildings it is directed to adopt the Building Officials Conference of America Basic Code with such modifications as it deems necessary. The department shall, through its own personnel or by an approved testing facility and/or qualified local enforcement agencies designated to act as its agents, determine whether a proposed industrialized building or mobile home meets its standards. "Such determination shall include not only the evaluation and testing of the building or mobile home, but also the quality control system at the factory of origin and at the building site. The Department shall maintain a program of adequate inspection and upon favorable determination, the Department shall certify the building or mobile home for the prescribed area."

The department is also responsible for conducting a program of training for and accreditation of local enforcement agency personnel. On-site inspection of the installation or assembly is reserved to those jurisdictions with fully accredited personnel. The law also provides for issuance of an insignia.

The secretary of the department has the assistance of an Advisory Commission on Industrialized Building and Mobile Homes, which makes recommendations to him on rules and regulations.

Ohio - Industrialized one, 2 and 3-family units come under the state public building code, while nonindustrialized units do not. The code is under the jurisdiction of the Board of Building Standards, which appoints a secretary, in the Department of Industrial Relations. As we noted above, the board was also authorized by 1969 law to compile a model code for one, 2 and 3-family dwellings, which a municipality or county could incorporate into its building code. (Rev. Code 3781).

South Carolina - South Carolina enacted a unique law in 1970. It states:

"Notwithstanding any existing provisions of law, municipal or county ordinance, or local building code, the standards for factory built housing, housing prototypes, sub-systems, materials and components certified as acceptable by the Federal Department of Housing and Urban Development are hereby deemed acceptable and approved for use in housing construction in this state. A certificate from the State Director of the Federal Housing Administration of the Department of Housing and Urban Development shall constitute prima facie evidence that the products or materials listed therein are acceptable and such certificates shall be furnished by the building contractor to any local building contractor or other local housing authority upon request."

South Carolina thus becomes the first state automatically to accept federal standards as its own criteria for the acceptability of industrialized housing. (A further brief statement on the South Carolina law can be found in Section X of this report.)

Virginia - The Virginia law (Chapter 305, 1970) includes all industrialized buildings except mobile homes. Its definition of an industrialized building is very similar to Maryland's.

A mobile home is defined as "an industrialized unit constructed on a chassis for towing to the point of use and designed to be used, without a permanent foundation for continuous year-round occupancy as a dwelling; or 2 or more such units separately towable, but designed to be joined together at the point of use to form a single dwelling, and which is designed for removal to, and installation or erection on other sites".

The State Corporation Commission, which is responsible for making the rules and regulations, is to have due regard for the various nationally recognized building codes applying to industrialized units and for the American National Standards Institute A 119/1 and the National Fire Protection Association No. 501 B applying to mobile homes.

Labeled units are acceptable in all localities; unlabeled units must be inspected for local requirements and rules and regulations of the commission. Where practical, rules should be stated in terms of levels of performance.

Washington - The Washington law (Chapter 44, 1970) specifically exempts mo-

mobile homes from its definition of factory-built housing. Otherwise, its definition is similar to California's. The department in charge of approving factory-built housing is the Department of Labor and Industries.

Michigan - House Bill 4393 relates to manufactured housing, including mobile homes. It would authorize the State Housing Development Authority to promulgate rules for certification of premanufactured units at their place of manufacture. (It defines "premanufactured unit" as "an assembly of materials or products that is intended to comprise all or part of a building or structure, and that is assembled off site by a repetitive process under circumstances intended to insure uniformity of quality and material content. The term includes mobile home."). The manufacturer must submit plans and specifications to the authority for approval as in compliance with nationally recognized construction codes. Each unit must be inspected by the authority or a qualified person selected by it to determine that the premanufactured unit has been manufactured in accordance with the plans previously submitted and with nationally recognized construction standards and bears the approval of a national testing laboratory having follow-up inspection services.

North Carolina - North Carolina, which we noted in the preceding section as having an optional code, has a uniform standard code for mobile homes. Rules and regulations are promulgated by the Commissioner of Insurance and embody the fundamental principles adopted, recommended or issued as ANSI A 119.1 and amended from time to time by the USASI. Any mobile home unit which bears the label or seal of compliance of a recognized testing laboratory having follow-up inspection services approved by the North Carolina State Building Code Council is deemed to be in full compliance with the standards and rules and regulations prescribed in the act (Chapter 961, 1969).

The 1971 session of the North Carolina General Assembly has 2 bills before it relating to factory-built housing. Senate Bill 656 authorizes the state building code to provide, as deemed appropriate by the Building Code Council, for testing, evaluation, inspection and certification of buildings, structures or components manufactured off the site by a recognized independent testing laboratory having follow-up inspection services approved by the Building Code Council. Labels or seals shall indicate approval, and units so labeled shall be deemed to meet state building code requirements without further inspection or fees except as may be required for the code's enforcement relative to the connection of units and components and to the enforcement of local ordinances regarding zoning, utility connections and foundation permits. The Building Code Council is directed to adopt rules and regulations necessary for approval and oversight of testing agencies.

Senate Bill 657 would make dwellings subject to the state building code. As of May 27, 1971, neither bill had been enacted.

Oregon - Senate Bill 188, 1971, passed the Senate and was in a House committee the day prior to the end of session. It would have required factory-built housing, excluding mobile homes, to be approved by the Labor Commissioner of the Bureau of Labor and authorize him to adopt rules and regulations for housing standards. As far as practicable, such standards shall be consistent with various specified national codes.

West Virginia - House Bill 1139, 1971, which remained in committee at the

end of the legislative session, would have created a uniform standards code for mobile homes and modular building units (all types of modular buildings). "Modular building unit" was defined as "a factory fabricated, transportable building unit designed to be incorporated on site into a structure to be used for residential, commercial, educational or industrial purposes". "Mobile home" means "a movable or portable unit, designed and constructed to be towed on its own chassis comprised of frame and wheels, and designed to be connected to utilities for year-round occupancy. The term shall include: (1) Units containing parts that may be folded, collapsed or telescoped when being towed and that may be expanded to provide additional cubic capacity, and (2) units composed of 2 or more separately towable components designed to be joined into one integral unit capable of being again separated into the components for repeated towing. The term shall include units designed to be used for residential, commercial, educational or industrial purposes, excluding, however, travel trailers."

The West Virginia state fire marshal is the state official who would be responsible for the code and revisions thereof, for its administration and enforcement, and for the issuance of seals to dealers for each unit. He would maintain a reciprocity list of states with equivalent standards, and the state seals would not be required when seals of states on the list are affixed to the units. Units complying with the code would not be subject to any further requirements from local jurisdictions. The bill apparently contemplated that the basis of the code adopted would be the standards code promulgated by the American National Standards Institute and identified as ANSI A 119.1.

VII. WISCONSIN STATE AGENCIES WITH BUILDING CODE FUNCTIONS

Primarily, there are 2 state level agencies in Wisconsin which function in the field of building codes; namely, the Department of Industry, Labor and Human Relations and the Department of Health and Social Services. A third - the Department of Transportation - has limited duties in this area, while the Public Service Commission is concerned with the electrical code only to the extent that it applies to public utilities and railroads. The Department of Local Affairs and Development has no code function but is actively interested in housing conditions.

The Department of Industry, Labor and Human Relations (DILHR)

The state building code, the boiler code, the electrical code (with the exceptions noted above) and the elevator code are all promulgated and maintained by the Department of Industry, Labor and Human Relations.

The department, which is headed by a 3-man commission, is the agency which is concerned with conditions of employment; that is, with the safety and sanitation of the buildings in which employes work; workmen's compensation; unemployment compensation; discrimination; training for employment, such as apprenticeship programs; and labor standards, such as minimum wages and maximum hours.

Prior to 1911 the state enforced various individual factory safety laws. When the Industrial Commission, the predecessor of DILHR, was created in 1911, these were replaced by a general safe place law. The Industrial Commission was

made responsible for requiring places of employment to be safe places in which to work. In 1913 public buildings were added to places of employment and were defined to include buildings used by the public or by 3 or more tenants. The term is still so defined today. The Division of Industrial Safety and Buildings is the unit immediately in charge of these functions.

The Department of Health and Social Services

The state plumbing code is administered by the Division of Health in the Department of Health and Social Services. The department was created in 1967 as part of the major reorganization act that year, which combined the former State Board of Health with the Department of Public Welfare. The department is the state agency that has functions in the areas of administering the correctional system, mental institutions, categorical welfare aids, and public health.

The former State Board of Health traditionally had duties in the area of public water supplies and public sewerage facilities. In 1913 it was granted the authority to prescribe and amend the "rules and regulations governing plumbing, drainage, sewerage and plumbing ventilation in connection with all buildings in this state and may prescribe minimum standards which shall be uniform throughout the state". Local governing bodies, however, could adopt additional rules not inconsistent with the state code. In the past several years the Division of Health's functions concerning water quality have been transferred to the Department of Natural Resources. In addition to its duties with regard to the state plumbing code, the Division of Health also licenses plumbers.

Department of Transportation

The Department of Transportation - along with the Department of Health and Social Services - may modify the national standards which must be met before mobile homes may be sold in this state. This law was enacted by the 1969 Legislature (Chapter 474).

Related Functions of the Department of Local Affairs and Development

Although the Department of Local Affairs and Development (DLAD) is not in the building code business, it is concerned with housing. Established in 1969 as part of the reorganization act, its Division of State-Local Affairs - and, more particularly, the division's Bureau of Community Development - appraises local government units of federal housing programs which may be of interest to them. It advises them on procedures for initiating and implementing federal programs for low and moderate income families; reviews housing plans developed by city, county and regional planning units; and reviews relocation plans developed by state and local agencies for housing persons displaced by highways and other public works.

In the 1967-1969 biennium the bureau provided technical assistance to local governments to enable them to qualify for federal programs, held a state-wide housing conference, and administered in-service training programs for local government employes under the Federal Housing Act of 1964. Its objectives

for 1969-71 included providing assistance to sponsors of housing for the elderly and low income families.

If Governor Lucey's 1971 housing program is enacted a much larger role in housing will be played by the department. In his special message to the Legislature on housing May 21, 1971, the Governor stated that he has directed the Secretary of Local Affairs and Development to create a Division of Housing, which will be "the basic state unit responsible for program implementation and long-range program development in housing". He also directed DLAD to create a state-wide nonprofit housing corporation, which would "act as an initiating sponsor of housing developments financed by the various housing assistance programs administered by the Federal Housing Administration, and in certain instances, the Farmers Home Administration".

VIII. STATE AGENCIES IN OTHER STATES WITH BUILDING CODE FUNCTIONS

States with State-Wide Building Codes

Connecticut - As the first state with a mandatory state-wide code applicable to dwellings, Connecticut carries out its function by means of a building inspector and State Building Code Standards Committee, both located in the Department of Public Works. The department is the state agency which plans and constructs capital improvements of the state (excepting highway and bridge construction) and manages state-owned buildings.

Minnesota - The new Minnesota law assigns the building code function to the commissioner of administration and his state building inspector.

New Jersey - As one of the states with an optional code, New Jersey's building code is promulgated by the Department of Conservation and Development.

North Carolina - Another optional code state, North Carolina, has a State Building Code Council. Rules and regulations for its mobile homes standard code are promulgated by the State Commissioner of Insurance. The proposed legislation on factory-built housing would also come under the jurisdiction of the State Building Code Council.

New York - The New York model code, adoption of which is also optional on the part of local governments, is administered by the Housing and Building Codes Bureau in the Division of Housing and Community Renewal. The division is located in the Executive Department, which is the Governor's department. A 7-member council, headed by the Commissioner of Housing and Community Renewal (the division head), supervises administration of the code and appoints boards of review to act on appeals arising under the code. The division administers a comprehensive program of financial and technical assistance for community development. The program represents "a total approach to the problems of urban blight and inadequate housing".

Ohio - The Board of Building Standards in the Department of Industrial Relations was authorized by a 1969 law to compile a model code for one, 2 and 3-family dwellings for optional use by municipalities and counties. The department administers the laws relating to industrial and public safety.

States with State-Wide Factory-Built Housing Laws

<u>State</u>	<u>Agency Administering the Law</u>
California	Department of Housing and Community Development
Georgia	State Building Administrative Board
Hawaii	Department of Labor and Industrial Relations
Maryland	Department of Economic and Community Development
Ohio	Department of Industrial Relations, Board of Building Standards
South Carolina	None. Works through the state director of the Federal Housing Administration.
Virginia	State Corporation Commission
Washington	Department of Labor and Industries

The above data indicates that there is no one pattern for placement of the administration of state-wide factory-built housing laws within a state's governmental structure. Some are in labor-industry oriented departments that would be the equivalent of Wisconsin's Department of Industry, Labor and Human Relations; others are in local affairs departments that would be comparable to our Department of Local Affairs and Development. Virginia's choice of its Corporation Commission is the most unusual; the commission regulates various commercial enterprises, such as insurance, banking, and small loan companies, and also promotes aviation.

Connecticut's general mandatory code law is also rather surprisingly situated in the Department of Public Works, which is concerned with constructing and administering state buildings, while Minnesota's is somewhat similarly situated in the Department of Administration, the housekeeping agency which supervises state-owned buildings.

IX. NATIONAL CODES

Model Codes

From time to time in this study - particularly in the texts of various state laws - reference has been made to national model or standard codes which are to be used as a guide on the state or local level. According to the Wisconsin task force report, there are 4 national organizations that have issued so-called model building codes for housing. These codes are: (1) the Basic Building Code of the Building Officials and Code Administrators International, (2) the Uniform Building Code of the International Conference of Building Officials, (3) the Southern Standard Building Code of the Southern Building Code Congress, and (4) the National Building Code of the American Insurance Association.

Although the task force concluded that no single nationally recognized code meets the over-all needs of Wisconsin, of all these codes the Basic Building

Code of the Building Officials and Code Administrators International was most favored.

The Wisconsin Department of Local Affairs and Development announced in its newsletter of March 1971 (DLAD 12) that the 4 model code groups have recently completed a joint code for one and 2-family dwellings; it had not yet been evaluated, however, in Wisconsin.

FHA Standards

Since 1934 the Federal Housing Administration, now a part of the U.S. Department of Housing and Urban Development, has been engaged in insuring home mortgages to enable lenders to make loans to those who might not be able to qualify for a conventional mortgage. The FHA requires compliance with all local building codes in order to obtain an FHA-insured mortgage. In addition, however, it has set up Minimum Property Standards, which describes acceptable practice in residential building technology. They are not a substitute for a building code, but go beyond minimum codes. New homes financed by FHA mortgages must conform to these standards.

X. THE INFLUENCE OF OPERATION BREAKTHROUGH

It is quite possible that one of the most significant influences on the future development of the housing industry in this country could be the federal program known as Operation Breakthrough. Initiated in 1969 as a program of the U.S. Department of Housing and Urban Development (HUD), it is, in the department's own words, "aimed at increasing the supply of housing through improvements in the entire process of producing and marketing new housing". Put another way by Harold B. Finger, HUD's Assistant Secretary for Research and Technology, Operation Breakthrough "is aimed at speeding the changes needed in every element that affects housing, so that we can be more confident that we will be able to provide 26 million additional housing units in this decade". Accomplishment of the goal requires "improvement in production, materials, performance criteria, design, land use, site planning, marketing, financing, community attitudes, and overall management".

How is this being done in Operation Breakthrough? After nation-wide competition, HUD selected 22 housing system producers to produce factory-built houses on 9 prototype sites scattered throughout the nation. Several producers are represented at each site; and different types of housing - single family homes, town houses, and apartments - are represented. Site planning teams are developing each site to demonstrate advanced ideas in planning and land use. The first houses are now being installed. When the projects are completed, the houses will be sold to private individuals. It is hoped that the program will offer not only innovative techniques in housing construction and site planning, but will also serve as a guide to and groundbreaker in surmounting the obstacles that have stood in the path of manufactured housing.

HUD contends that the major restrictions on volume housing production and marketing are "diversified local building codes, restrictive land use and zoning regulations, and rigid work practice requirements". With respect to building codes, it favors enactment of state laws providing for state certification of

industrialized housing systems and notes with approval those states that have already done so. In explaining South Carolina's law (see Section VI above), which provides for the state's acceptance of any industrialized housing approved by HUD, the publication, "Operation Breakthrough: Questions and Answers", issued by HUD in October 1970, states that procedures are being developed under which South Carolina "will accept all industrialized housing covered by FHA Structural Engineering Bulletins and meeting Minimum Property Standards". Attention was also called to the Connecticut law providing a single state-wide mandatory building code (See Section IV above). Reciprocity among states that have industrialized housing system laws was recommended.

Every housing system in the Operation Breakthrough program will be tested and evaluated by HUD, followed by a certification of each such system. The testing and evaluation program is being conducted with the assistance of the National Bureau of Standards and the National Academies of Science and Engineering.

A major objective of the testing, evaluation and certification program is "to provide a credible certification procedure on which state and local government officials may safely rely". It is hoped that the Operation Breakthrough Certification will be acceptable to governments in spite of inconsistencies with their own codes.

The May 1971 issue of NATION'S CITIES noted that HUD was producing "what could be the framework for a national model housing code". (NOTE: It is assumed "building code" is meant here since it was written in the context of the building code being evolved by the 4 national code-writing organizations).

Secretary of Housing and Urban Development George Romney stated in a review of his first 2 years as secretary that he expects that either local building codes will be changed, "or exceptions will be made to permit nationally acceptable industrialized housing in any locality regardless of the local code. If state or local initiative is too slow in moving in this direction, I see a definite possibility of some type of Federal action". (HUD CHALLENGE, February 1971).

XI. CURRENT STUDIES

Other States

Several studies have been made recently by other states on the housing problems which are common to all states. Although there are quite probably other such studies which have not come to our attention, this sampling is very likely indicative of the current thinking in this field.

Iowa - Most studies have been concerned with the housing problem in general. The Iowa study, however, was concerned only with building codes. The Building Code Study Committee, created by the Legislative Council, made its final report in January 1971. The committee recommended a bill to be introduced in the General Assembly similar to some of the laws previously examined in this study. For a description of this proposal, see Section V of this study.

Massachusetts - At the request of the Massachusetts House of Representa-

tives, the Department of Community Affairs undertook a study of housing, community and environmental development and building, housing and zoning codes. The department had been created in 1968 to coordinate the administration of the state's various housing programs. It made its report, "Housing for Massachusetts", A Proposed State Housing Policy and Action Program, in December 1970.

Citing the shortage of housing, the department recommended a state housing policy which would increase the production of housing, conserve and rehabilitate existing housing and expand the rights of citizens to "participate in decisions regarding the location, design and arrangement of their living environment..." Although the department made various recommendations and submitted several proposed legislative bills, for our purposes we will consider only the report's statement on building codes. The department recommended adoption of a state-wide building code, stating:

In order to permit the use of open systems and other concepts of industrialized housing throughout the Commonwealth, a uniform building code based on performance criteria and specifications must be adopted to remove the myriad of local, arbitrary restrictions which now inhibit the use of industrialized housing in most communities. Otherwise, the wide diversity of code requirements will continue to make it difficult to market housing systems on a regional or statewide basis. The support, understanding, advice, and cooperation of local inspectors and building code officials who will use this new code must be obtained while it is being developed in order to prevent later misunderstanding and to insure uniformity of implementation on a statewide basis.

Michigan - The Governor's Task Force on Mobile Homes, which reported in April 1971, was established especially to study the various aspects of problems related to mobile homes. Its report stated that 22 states now wholly or partly conform to the American National Standards Institute Standard A119.1 for mobile homes and recommended that Michigan also adopt the ANSI standard. It was said that the Mobile Home Manufacturers Association is instituting procedures for stricter enforcement of the standard, which is a voluntary code. The task force recommended delegating to a state agency enforcement of the building standards for mobile homes through in-factory inspections, and such agency should also have authority to alter and improve the standard. It mentioned that a State Construction Code proposal has been introduced in the 1971 Legislature and recommended supporting it as an adequate vehicle for establishing a construction code applicable to mobile homes.

Another Michigan study, the "Report of the Michigan Commission on Housing Law Revision", was made in 1968-69 for the purpose of revising Michigan's housing law act. The commission decided the present law was outdated and proposed instead enactment of a new state housing law and a state construction code act. It pointed out that: the majority of the state was not covered by a construction code, the lack of uniformity in existing codes prevented the use of new technology and construction techniques, there was a lack of an established state procedure for testing and evaluation, a procedure was lacking for approving pre-manufactured housing and modular units, and national construction code conferences had little representation from Michigan. Although the commission did not want to duplicate the work of the national groups, it felt that final decisions on construction code requirements should belong with Michigan experts and the Michigan Legislature. As a result of the commission's recommendations, several

bills were introduced in the 1971 Legislature. (See Sections V and VI of this study).

New Jersey - New Jersey's Governor Cahill delivered a special message to the Legislature, "A Blueprint for Housing in New Jersey", December 1970, in which he, too, called attention to the crisis in housing, particularly to the lack of needed housing and the cost-prohibitive nature of housing. Among his recommendations was a state building code "superseding local codes in whole or in part". He pointed particularly to manufactured housing as the hope for eventual moderate priced housing and advised consideration of California's policy. "Under this policy, the State determines what material and construction are sound and identifies them as having passed the required quality standards. This State approval then qualifies the manufactured housing for use in local areas."

Texas - At the request of the Governor of Texas in 1969, the Texas Research League, a private research organization, undertook a study of the state's role in housing. A summary of its recommendations is contained in a pamphlet, "Planning A Response To Texas' Housing Needs". Noting that Texas had adopted a 1963 uniform standard code for mobile homes, the report recommended its updating and inclusion therein of not only plumbing, heating and electrical systems, but also construction standards and provision for anchoring mobile homes to their site. It was also recommended that the Legislature adopt a uniform construction code for factory-built houses and modular components.

During the time that the scope of the state's housing program was still being determined, the League recommended that the present housing programs be vested in a Housing Section of the Governor's Office. Administration of the mobile homes code should be transferred from the Bureau of Labor Statistics to the Housing Section, which should also be responsible for administering the proposed factory-built housing code.

Virginia - The Interim Report of the Virginia Housing Study Commission, issued in December 1970, unanimously agreed that "there is a pressing need for adoption of a uniform Statewide building code". The commission established a special subcommittee to make specific recommendations on such a code. The various other proposals made to the commission, including creation of a state-wide housing agency, were still under study.

Federal Studies

ACIR report - The report of the Advisory Commission on Intergovernmental Relations, "Building Codes: A Program for Intergovernmental Reform", issued in January 1966, is devoted entirely to the subject of building codes. Developments in the building industry are moving too swiftly not to render some details of this report obsolete; nevertheless, its recommendations are still valid for consideration. Briefly, the commission recommended:

- (1) Authorization by Congress of a program to develop national performance criteria and standards and testing procedures for building construction.
- (2) Establishment of a national program for building research.
- (3) Establishment by state agencies of programs for research in building construction.

- (4) Development by the federal government of a model code.
- (5) Use by federal agencies of a common standard for federal construction.
- (6) Enactment of state legislation authorizing promulgation of a state model code "with a products approval procedure for permissive adoption by local political subdivisions." Such codes should adhere to nationally recognized models. Adopting local jurisdictions should not be able to modify such codes, but an appeals procedure should be available. States should also consider legislation to condition loans and grants to local governments upon conformance of aided projects to the state model code.
- (7) Enactment of state legislation creating a building construction review agency to consider appeals by affected parties from decisions of local governments.
- (8) Enactment of state legislation enabling local jurisdictions to adopt a recognized uniform building code by reference.
- (9) Authorization for a state supervisory agency to establish professional qualifications for building inspectors and to license candidates for examination.
- (10) Enactment of state legislation for the training of building inspectors.
- (11) Establishment by the state of minimum staffing requirements in all local government jurisdictions for building inspection. Local governments should be authorized to maintain joint services, and a state agency should provide both direct and reimbursable building inspection services to local governments.

U.S. Dept. of Commerce Report - In January 1970 a report of the Panel on Housing Technology, "The Housing Industry: A Challenge for the Nation", was issued by the Department of Commerce. It called for "a new distribution of responsibilities between housing producers and local and state governments. Industry should be responsible for designing, constructing and delivering the product. Governments should be responsible for having the land ready when and as needed, insuring that user needs are met, handling relocation problems, overriding restrictive codes and ordinances and promoting area-wide labor management agreements which will encourage better construction practices." Among its many recommendations, it also proposed the creation of a nongovernmental, nonprofit agency to certify the safety of building systems on a national scale, "using criteria and techniques developed by national code groups and research laboratories such as the National Bureau of Standards". It also proposed that government research laboratories "should be responsible for the development of test and evaluation techniques for building systems".

XII. WISCONSIN 1971 LEGISLATION

As of July 1, 1971, no measures have been introduced in the 1971 Wisconsin Legislature to provide for a state-wide mandatory building code either for all one and 2-family houses or for manufactured houses. The Task Force on Building Codes is preparing such legislation.

Legislation has been introduced, however, which touches upon random aspects of this subject.

1971 Assembly Bill 562, introduced by Representative W. A. Johnson et al., would establish the state plumbing code as a uniform set of regulations, applicable throughout the state and not subject to substantial change by municipalities. At the present time the code is a minimum code, and cities and villages may make additional regulations not in conflict with it. The bill passed the Assembly on June 15, 1971, and was sent to the Senate.

1971 Senate Bill 181, introduced by the Committee on Commerce, Labor, Taxation, Insurance and Banking, by request of Automatic Sprinkler Contractors in the State of Wisconsin, would exclude the construction, installation or maintenance of automatic sprinkler systems, connected standpipes and overhead and underground supply piping from regulation under the state plumbing law. Also excluded would be piping systems used to supply heating, air conditioning, refrigeration, boilers and other pressure vessel systems. Senate Substitute Amendments 1 and 2 would restrict the exclusion only to sprinkler systems and related appurtenances. Senate Substitute Amendment 2 was adopted and passed the Senate.

1971 Assembly Bill 473, introduced by Representative Hanna et al., would include camper trailers and camper units under the law licensing mobile home dealers and would license manufacturers and distributors as well as dealers. The Department of Transportation would be the licensing agency instead of its Division of Motor Vehicles. Section 218.12 would be amended to require recreational unit mobile homes, camping trailers or camper units to meet specified national standards as well as primary housing unit mobile homes. The Department of Transportation would be authorized to inspect manufacturing premises and manufactured units for compliance and to issue a label for each unit. No unit bearing such label would need to comply with any other code. In short, as far as the interests of this study are concerned, the bill would place the inspection and compliance to specified standards of mobile homes under the exclusive jurisdiction of the Department of Transportation.

Assembly Amendment 1 would place the inspection service under the Division of Motor Vehicles of the Department of Transportation instead of directly under the department itself. Assembly Amendment 1 to Assembly Amendment 1 exempts from ANSI standards only standards modified by the Department of Health and Social Services and also requires that mobile homes, etc., bearing the label also must comply with the plumbing code. Assembly Amendment 2 would have moved code revision (that is, any changes in the ANSI code) and inspection of manufacturers of mobile homes, etc., from the Department of Transportation to the Department of Industry, Labor and Human Relations. Assembly Amendment 1 to Assembly Amendment 2 is similar to Assembly Amendment 1 to Assembly Amendment 1.

1971 Assembly Bill 964, introduced by Representative Swoboda by request of Mr. Andy Lawrence, would redefine "mobile home" so as to include vehicles used or intended to be used as sleeping and eating quarters regardless of whether they are designed for human habitation or other than sleeping and eating. This change makes the definition more comprehensive.

1971 Assembly Joint Resolution 52, introduced by Representative Luckhardt et al., directs the Legislative Council to study the licensing and registration of mobile homes, recreational trailers, automobiles and farm trucks to bring or-

der to the diversity of registration and licensing requirements. Assembly Amendment 1 would have changed "recreational trailers" to "recreational vehicles" and added busses and motor trucks to the other vehicles to be included in the study.

Appendix: BIBLIOGRAPHY OF SOURCE MATERIAL

Except for clippings, which must be used in the bureau, the following materials are available on loan from the Legislative Reference Bureau.

California Legislature, Assembly Bill 1971, the factory-built housing law (331.83/C1a).

Connecticut Department of Community Affairs, "Home Is the Place Where...", December 1970 (331.83/C76).

Connecticut Legislature, Public Act 443, 1969, "An Act Concerning the Applicability of the State Building Code to Municipalities" (614.851/C76).

Council of State Governments, 1971 SUGGESTED STATE LEGISLATION. Vol. XXX, September 1970.

Georgia Legislature, Act No. 325, 1971, certifying factory-built housing.

Iowa Building Code Study Committee, "Final Report", January 1971 (614.851/Io9).

Maryland Legislature, Chapter 662, 1971, "Industrialized Building and Mobile Homes Act".

Massachusetts Department of Community Affairs, "Housing for Massachusetts", House No. 4940, December 4, 1970 (331.83/M4).

Michigan Task Force on Mobile Homes, "Report to Gov. William G. Milliken", April 1971.

Michigan Commission on Housing Law Revision, "Report of the...", December 1969.

Minnesota Legislature, Chapter 561, 1971, relating to a state building code.

"Mobile Homes - Legal Lebensraum for All", THE MUNICIPALITY, League of Wisconsin Municipalities, May 1971.

Montana Legislative Council, "Building Standards; Election Laws", Report No. 24, October 1968 (614.851/M76).

New Jersey, Governor William T. Cahill, "A Blueprint for Housing in New Jersey", a special message to the Legislature, December 7, 1970.

Ohio Legislature, Amended Substitute House Bill 709, 1969, minimum building code standards law.

Richardson, Ambrose M. "Building Codes: Reducing Diversity and Facilitating the Amending Process", HARVARD JOURNAL ON LEGISLATION, May 1968 (614.851/R39).

South Carolina Legislature, Act 1190, 1970, adopting federal standards for factory-built housing.

Texas Research League, "Planning a Response to Texas' Housing Needs", December 1970 (331.839/T3).

- U.S. Advisory Commission on Intergovernmental Relations, BUILDING CODES: A PROGRAM FOR INTERGOVERNMENTAL REFORM, January 1966 (614.851/X).
- ...1970 CUMULATIVE ACIR STATE LEGISLATIVE PROGRAM, August 1969 (328/X1).
- U.S. Congress, Joint Economic Committee, Subcommittee on Urban Affairs, INDUSTRIALIZED HOUSING, Parts 1 and 2, July 9, 23-24, 1969 (331.83/X8).
- U.S. Department of Commerce, "The Housing Industry: A Challenge for the Nation" report of the Panel on Housing Technology, January 1970 (331.83/X43).
- U.S. Department of Housing and Urban Development, "FHA Financing for Home Purchases and Home Improvements", Consumer Bulletin, November 1965 (331.839/X49).
- ...1969 HUD STATISTICAL YEARBOOK, 1969 (331.83/X1).
- ..."The First Two Years", reprinted from HUD CHALLENGE, February 1971 (331.83/X47).
- ..."Operation Breakthrough: Questions and Answers", October 1970 (331.83/X31).
- ..."Operation Breakthrough: The Scientific Approach", HUD CHALLENGE, March 1971.
- ..."Code Barriers Topple", HUD CHALLENGE, May 1971.
- U.S., National Commission on Urban Problems, "How the Many Costs of Housing Fit Together", Research Report No. 16, 1969 (331.83/X27).
- U.S. President's Committee on Urban Housing, "Report of The...", Technical Studies, Vol. 1, 1967 (331.83/X97).
- Virginia Housing Study Commission, "Interim Report to the Governor of Virginia", December 1970.
- Walter, Norma, "The Year 2000: in the Factory", THE EXCHANGE, New York Stock Exchange, March 1971.
- Wisconsin Department of Local Affairs and Development, "Biennial Report 1967-1969".
- ..."DLAD No. 12", official newsletter, March 1971 (332.143/W7b).
- Wisconsin, Governor Patrick J. Lucey, "Housing in Wisconsin", Special Message to the Legislature, May 21, 1971.
- Wisconsin Legislative Reference Bureau, CLIPPINGS: BUILDING CODES, Part 3 (614.851/Z).
- ...CLIPPINGS: HOUSING, Part 7 (331.83/Z).
- ...CLIPPINGS: HOUSING IN WISCONSIN, Part 4 (331.83/W7z).
- ...CLIPPINGS: HOUSING: PREFABRICATED, FACTORY-BUILT, MODULAR (331.83/Z1).

Wisconsin Task Force on Building Codes, "Report", September 24, 1970.

Wisconsin, University of, Institute of Governmental Affairs, "Housing in Wisconsin", by Margaret K. Thorpe, September 1970; "Housing in Wisconsin: A Bibliography, June 1970 (331.83/W7c, Parts 1 and 2).