

State Building Code

Report #99-01

January 1999

A PROGRAM EVALUATION REPORT



Photos courtesy of Minnesota Department of Administration

Office of the Legislative Auditor
State of Minnesota



STATE OF MINNESOTA
OFFICE OF THE LEGISLATIVE AUDITOR
JAMES R. NOBLES, LEGISLATIVE AUDITOR

January 7, 1999

Members
Legislative Audit Commission

In April 1998, the Legislative Audit Commission directed us to examine how the state building code is developed and administered and how it relates to the fire code. Because both codes contain fire protection provisions, some policy makers have worried that building and fire officials may develop, apply, or interpret similar provisions differently. Legislation was introduced during the 1997 session that would have transferred building code responsibilities from the Department of Administration to the Department of Public Safety.

The building code is a complex compilation of overlapping provisions that apply differently throughout the state. Promulgating and enforcing these provisions are complicated tasks. Although Minnesota's current organizational structure for administering the building code is contentious at times, we think it helps ensure that building and fire officials balance the various philosophies and goals embodied in the code. We do not think that major structural changes are needed in how the building and fire codes are developed and administered, but we recommend that the Legislature consider several procedural changes that would require building and fire officials to work together throughout the building construction process.

We received the full cooperation of the departments of Administration, Health, Public Safety, and Public Service and the State Board of Electricity. This report was researched and written by Jo Vos (project manager), Judy Randall, and Jan Sandberg.

Sincerely,

Handwritten signature of James Nobles in cursive.

James Nobles
Legislative Auditor

Handwritten signature of Roger Brooks in cursive.

Roger Brooks
Deputy Legislative Auditor

Table of Contents

	<u>Page</u>
SUMMARY	ix
INTRODUCTION	1
1. OVERVIEW	3
Provisions	
Application	
Summary	
2. STATE BUILDING CODE ADMINISTRATION	17
Code Development and Adoption	
Enforcement Mechanisms	
Appeals	
Conflict of Interest	
Summary	
3. OPTIONS FOR CHANGE	35
Other States	
Alternatives for Minnesota	
Summary	
AGENCY RESPONSES	63
LEGISLATIVE AUDITOR’S COMMENTS	69
RECENT PROGRAM EVALUATIONS	Back Cover

List of Tables and Figures

	<u>Page</u>
FIGURES	
Overlapping Provisions of the State Building and Fire Codes	xi
Continuum of Alternatives for Administering the State Building Code	xix
Figure 1.1 Technical Basis for State Building Codes, 1998	5
Figure 1.2 Major Provisions of the 1998 Minnesota State Building Code	6
Figure 1.3 Overlapping Provisions of the State Building and Fire Codes	8
Figure 1.4 Jurisdictions Adopting the State Building Code, 1998	11
Figure 1.5 Application of State Building Code Provisions	12
Figure 2.1 Responsibility for Promulgating Building Code Provisions	18
Figure 2.2 The State Building Code Enforcement Process	26
Figure 2.3 Primary Responsibility for Enforcing Building Code Provisions	27
Figure 3.1 State Building and Fire Code Provisions Enacted in Each State	37
Figure 3.2 Number of Departments Administering the Building and Fire Codes in Each State	39
Figure 3.3 Enforcement of Construction, Electrical, Mechanical, and Plumbing Code Provisions in Each State	41
Figure 3.4 Continuum of Alternatives for Administering the State Building Code	44
Figure 3.5 Possible Responsibilities for an Authoritative Building Code Council	52
Figure 3.6 Centralize All Building Code Administrative Functions in the Department of Administration	55
Figure 3.7 Options for Centralizing All Building and Fire Code Administrative Functions in One Agency	56

MINNESOTA OFFICE OF THE LEGISLATIVE AUDITOR

State Building Code

SUMMARY

Since the 1970s, the state building and fire codes have regulated certain aspects of building construction and remodeling. Because both codes contain fire protection provisions, some policy makers have expressed concern that building and fire officials develop, apply, or interpret similar provisions differently. With the backing of the Minnesota State Fire Chiefs' Association, legislation was introduced during the 1997 session that would have transferred building code responsibilities from the Department of Administration to the Department of Public Safety, where proponents thought that conflicts among codes and officials could be resolved more cooperatively. Other policy makers have questioned how well the building code is administered on the state level and whether there is a conflict of interest in having the Department of Administration responsible for both enforcing the building code and managing state building construction.

In April 1998 the Legislative Audit Commission directed us to examine how the building code is administered on the state level and its relationship with the fire code. We focused on the following major research questions:

- **To what extent have cities and counties adopted the state building code?**
- **Is the process for developing and adopting the state building code reasonable, consistent, and timely?**
- **What does the Department of Administration do to help ensure that the state building code is being enforced consistently?**
- **How do other states adopt, organize, and administer their codes? Should building and fire code administration in Minnesota be reorganized?**

To answer these questions, we collected data on the operations, policies, and procedures of the various state agencies that are involved in administering the building and fire codes. We interviewed officials in other states to learn how they organize code responsibilities. We contacted 45 interest groups to help identify problems related to state-local relationships and make recommendations for change. We reviewed the literature on model codes and practices, as well as Minnesota statutes, rules, and the building and fire codes themselves. Finally, we attended meetings of various advisory groups that are involved in developing or examining the state building code.

PROVISIONS

Minnesota statutes require that the Commissioner of Administration adopt minimum standards for building construction and remodeling that govern structural materials, design and construction, fire protection, health, safety, and sanitation. The purpose of these standards, which collectively make up the state building code, is to help protect the health and safety of the state's residents while containing construction costs.

Practically speaking:

- **The state building code is actually a compilation of numerous individual codes that have been developed by both state agencies and national organizations.**

The state building code sets requirements in numerous areas, including accessibility, construction, electricity, energy, fire protection, mechanical components such as elevators, and plumbing. Some of these provisions are based on nationally-developed model codes, such as the *Uniform Building Code*, the *National Electrical Code*, and the *Uniform Mechanical Code*, usually amended to reflect Minnesota's unique concerns. Other provisions, such as the code's energy and plumbing provisions, are "homegrown" in that state agencies develop them independently and do not adopt and amend any single national model code. Regardless of their origin, various building code provisions are often closely related to one another. For example, the energy provisions of the building code deal with some of the same subject matter as the code's mechanical provisions.

In addition:

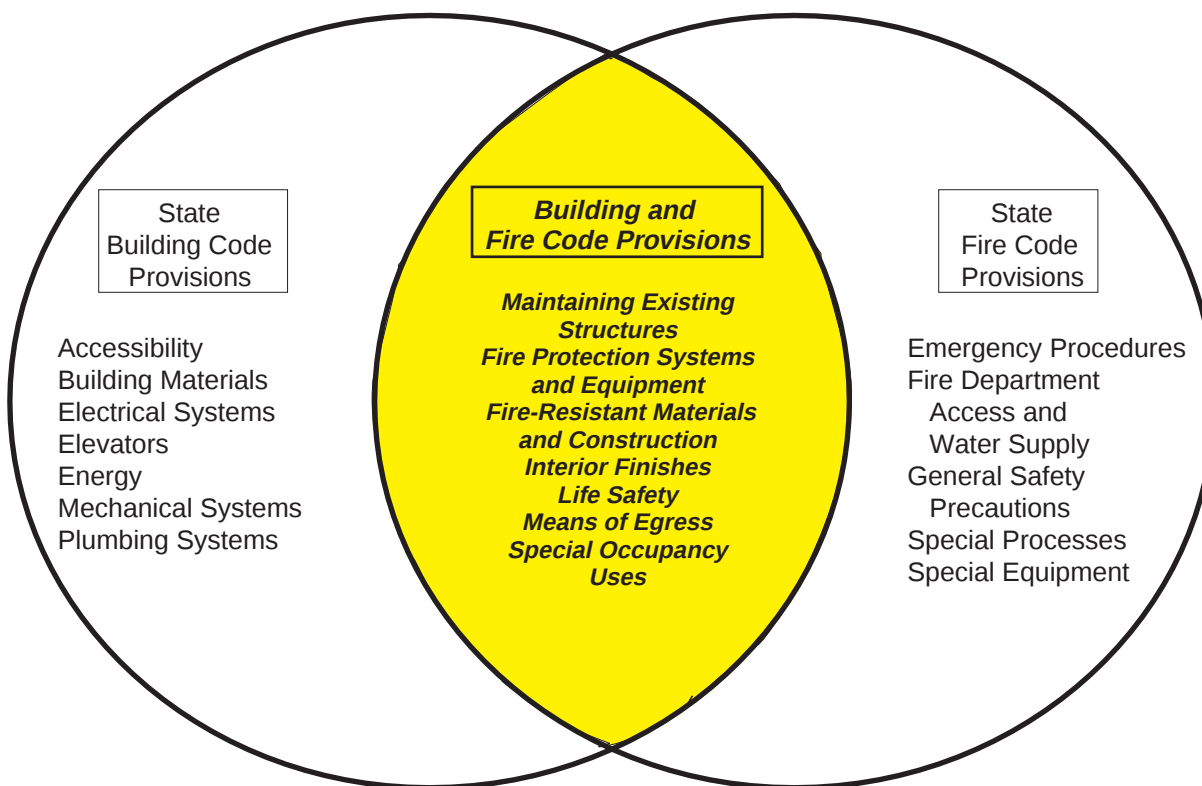
- **Other state codes cover some of the same subject matter and, at times, contain some of the same provisions as the state building code.**

Some building code provisions overlap with fire code provisions.

For example, as shown below, the state building and fire codes both contain fire protection provisions. Generally speaking, the building code sets construction requirements that are enforced while a building is under construction, and the fire code sets use and maintenance requirements that are enforced once a building is occupied. Both codes are based on national model codes, the *Uniform Building Code* and the *Uniform Fire Code*, that are designed to be companion documents. As a result, the state building and fire codes frequently reference one another. However, unlike the state building code which must consider cost factors, statutes do not specifically require that the fire code be "cost-conscious."¹

¹ According to the Department of Public Safety, cost is one of several factors that the department considers when promulgating the state fire code.

Overlapping Provisions of the State Building and Fire Codes



NOTE: This figure contains only the major code provisions of the building and fire codes.

SOURCE: Office of the Legislative Auditor.

APPLICATION

Minnesota has had a state building code for over 30 years, although the geographic and structural applicability of the code has changed considerably in that time. The Legislature adopted the state's first building code in 1965, but required only that it be applied to state-owned buildings. In 1971 the Legislature mandated that the building code supersede existing municipal codes, citing high construction costs caused by a multitude of local codes and ordinances. The Legislature made the building code mandatory statewide in 1977, calling for both state and local enforcement. However, in a reversal, the 1979 Legislature allowed counties outside the seven-county metropolitan area to opt out of the code by referendum and, two years later, it permitted small cities (fewer than 2,500 residents) in code-adopting, nonmetropolitan counties to opt out also. Currently:

- **The building code is not mandatory throughout Minnesota, although most of the state's residents are covered by the code.**

Statutes require that all counties in the seven-county metropolitan area adopt the state building code. Ten other counties in southeastern Minnesota and about 170 cities and townships throughout the rest of the state have voluntarily adopted the building code. Although only 20 percent of the state's counties, 44 percent of its cities, and 12 percent of its townships are covered by the building code, about 80 percent of the state's population live in these jurisdictions.

The building code covers all new construction, except for agricultural buildings that are designed, constructed, and used to house farm implements, livestock, or agricultural products. The code also applies to existing buildings that are being remodeled, rehabilitated, or altered. However:

- **Although the building code is not a statewide code, it applies to certain types of buildings statewide.**

These include buildings paid for by the state and all public school building projects that cost at least \$100,000. Certain state-licensed facilities, like nursing homes, hospitals, and supervised living facilities, must also meet building code requirements regardless of location. The building code does not cover federal buildings, nor does it cover local government buildings in jurisdictions that have not adopted the building code.

In addition:

- **Although the building code is optional for most cities and counties outside the seven-county metropolitan area, certain provisions of the code are mandatory statewide.**

All nonagricultural buildings throughout the state must comply with the accessibility, electrical, elevator, manufactured home, plumbing, prefabricated and industrialized/modular building, and storm shelter provisions of the building code.² In addition, buildings throughout the state must comply with the state fire code which contains some of the same fire protection provisions as the building code.

Finally:

- **Building officials have considerable discretion in how to enforce and interpret provisions of the building code.**

Statutes require that the building code must be written as much as possible in terms of desired results rather than specifying the means to obtain those results. Thus, the code encourages builders to seek new ways to achieve its goals, and building officials are given wide latitude to grant "equivalencies" that allow builders to achieve the code's goals in diverse ways. Statutes define equivalencies as measures other than a code requirement that provide essentially the same protection that would be provided by a code requirement.

² The electrical provisions apply to all buildings, including agricultural buildings, statewide. The plumbing provisions apply to all buildings, including agricultural buildings, statewide except nonpublic buildings with private water and sewer connections.

"Equivalencies" allow builders to comply with the code in different ways.

CODE DEVELOPMENT AND ADOPTION

Although Minnesota statutes give the Department of Administration the overall responsibility for promulgating the state building code, we found that:

- **Statutory responsibility for developing or adopting various building code provisions is divided among several state agencies.**

Four different agencies develop or adopt different building code provisions. The Department of Administration is responsible for developing and adopting the accessibility, construction, fire protection, and mechanical code provisions. The State Board of Electricity and the Department of Health are responsible for developing the code's electrical and plumbing provisions respectively, but the Department of Administration formally adopts them and retains the authority to modify them prior to adoption. In contrast, statutes give the Department of Public Service the authority to independently develop and adopt energy rules that the Department of Administration must subsequently fold into the state building code. The Department of Administration does not have the authority to modify the energy code provisions that are adopted by the Department of Public Service.

As long as these agencies develop or adopt unrelated code provisions, there are likely to be few problems. However, we found that:

- **Overlap among different provisions of the building code and between the building code and some other state codes has made it difficult for state agencies to promulgate the building code.**

During code development, agencies must understand how proposed changes in one provision affect other building code provisions as well as similar provisions in related state codes. When promulgation authority is located in separate agencies, there are more opportunities for inconsistent language. For example, there have been few problems among the construction, electrical, and plumbing provisions of the building code, partly because the Department of Administration has ultimate adoption authority for these provisions. However, several new energy code provisions that the Department of Public Service recently adopted are inconsistent with proposed changes to the code's mechanical provisions being developed by the Department of Administration. And, as we discuss later, the departments of Administration and Public Safety have had numerous problems developing and adopting the overlapping provisions of the building and fire codes.

We looked at the time that has elapsed between the availability of model codes and the adoption of those codes and their amendments and found that:

- **Although the time required to promulgate different code provisions has varied, it has generally been consistent with timelines in other states.**

Four state agencies develop or adopt various building code provisions.

Coordination is critical when agencies have different code priorities and perspectives.

For the most part, adopting model codes with no state amendments has taken the least amount of time. For example, the Department of Administration adopted the *National Electrical Code* without amendments only 11 months after it was initially published. In contrast, it has taken much longer to adopt amended model codes. For instance, we have estimated that it will take the Department of Administration more than two years to promulgate the latest mechanical provisions of the building code, partly because the department must ensure that these provisions are consistent with similar requirements in the code's energy provisions. Likewise, amending and adopting the most recent construction provisions of the building code took about one and a half years.

Other states with similar code provisions have timelines comparable to those in Minnesota. Wisconsin took about nine months to adopt the model electrical code, similar to Minnesota. Iowa and Michigan reported taking about two years to adopt their model construction code provisions; Rhode Island and Virginia required about a year. According to a 1993 study by the Minnesota Department of Administration, most other states took less than two years to adopt a model code with or without amendments.

Despite an acceptable timeframe for adopting some code provisions:

- **Poor coordination between the Department of Administration on the one hand and the departments of Public Service and Public Safety on the other has resulted in unnecessary delays or conflicts.**

For example, the building code's energy provisions promulgated by the Department of Public Service address some of the same subject matter as the code's mechanical provisions. Although the Department of Administration is ultimately responsible for enforcing the energy code provisions, it did not formally participate on the Department of Public Service's code advisory committee. Shortly before the energy provisions were adopted in July 1998, the Department of Administration began developing new mechanical code provisions, but did not formally involve the Department of Public Service on the mechanical code advisory committee. At that time, the Department of Administration questioned how building officials would enforce some of the new energy provisions and how inconsistent requirements among the code's construction, energy, and mechanical provisions would be resolved. Consequently, the Department of Public Service decided to re-open the rulemaking process to amend certain energy provisions. Likewise, Department of Administration staff said that they may re-open the rulemaking process to amend the construction provisions of the building code.

There were delays and conflicts in promulgating the most recent building and fire codes.

Just as good coordination is necessary when different agencies promulgate different provisions of the same code, good coordination is critical when agencies with different philosophies and priorities promulgate separate codes that address the same subject matter. We found several problems between the recently adopted state building and fire codes. The Department of Public Safety adopted the state fire code in June 1998 even though the department had not resolved all of its differences with the Department of Administration. This forced the Department of Administration to delay adopting the building code so that staff could include some fire protection provisions that they did not entirely agree with in the building

code. Although both departments contributed to this complicated and frustrating sequence of events, such problems are likely to recur without better coordination.

ENFORCEMENT MECHANISMS

Just as the responsibility for developing and adopting building code provisions is divided among several state agencies, responsibility for enforcing the code is divided among various state agencies as well as local government. We found that:

- **Minnesota statutes set forth a complicated enforcement system that authorizes both state and local government to enforce the building code depending on the type of building, its geographic location, and the specific code provision.**

According to statutes, the State Building Official in the Department of Administration oversees enforcement of the state building code. Statutes authorize the Department of Administration to direct and supervise other state agencies enforcing various provisions of the building code in some public buildings, including the State Board of Electricity and the departments of Health and Labor and Industry. Municipalities that have adopted the building code are responsible for enforcing it in all other buildings in their jurisdiction. These municipalities also have the responsibility for enforcing the building code in some public buildings if the Department of Administration determines that they have the necessary resources.

In addition to the numerous state agencies enforcing the building code, the State Fire Marshal has interagency agreements with four state agencies (the departments of Children, Families & Learning; Corrections; Health; and Human Services) to conduct plan reviews and inspections of public schools and state-licensed facilities for certain fire protection provisions of the state fire code. These provisions largely overlap with the fire protection provisions of the building code.

This complex, and at times duplicative, enforcement structure has not always worked smoothly. We found that:

- **Poor coordination between the departments of Administration and Public Safety has resulted in enforcement problems in some public buildings.**

While building officials are responsible for a building during the construction phase, fire officials assume responsibility immediately after the certificate of occupancy has been issued. However, building officials have granted equivalencies for certain building code provisions that overlap with the fire code without routinely informing fire officials. As a result, fire officials, unaware of these equivalencies, have determined that some public buildings have not complied with the fire code.

Equivalencies granted by building officials are not always communicated to fire officials.

Finally, we noted that:

- **The Department of Administration has little supervisory authority over local building officials and has little information about how they enforce the building code.**

Although statutes provide that the State Building Official must assume local enforcement responsibilities if the Commissioner of Administration determines that a municipality is not enforcing the building code properly, this has rarely happened. Statutes only permit the Commissioner to remove a local building official; intermediate alternatives are not available. As such, this authority may be “too blunt a sword” to be an effective means of discipline. Also, the Department of Administration does not routinely collect information about local building officials’ activities or the status of most buildings in code-adopting jurisdictions.

The state does not routinely collect information on local code enforcement.

Finally, building officials have wide latitude to grant equivalencies that allow designers and builders to achieve the building code’s goals in different ways. However, since equivalencies are granted by building officials and only apply to a specific project, the same option may not be available to builders in other municipalities. The Department of Administration does not have the authority to require that local officials accept an equivalency or the department’s code interpretations, regardless of whether officials in other municipalities have accepted them.

APPEALS

Because local building officials have considerable discretion in allowing equivalencies and interpreting the building code, it is important that designers and builders have the chance to have local decisions reviewed by an independent but qualified person or group. We found that:

- **Opportunities to formally appeal local building officials’ decisions at the state level are limited and have rarely been used.**

The *Uniform Building Code*, upon which the state building code is based, requires that all municipalities establish local boards of appeals. Minnesota statutes provide that anyone disagreeing with the final decision of a municipality may appeal that decision to the Commissioner of Administration, who must follow contested case procedures to hear the appeal. The commissioner’s decision may be appealed to the courts.

According to Department of Administration staff, a small percentage of code-adopting municipalities have established local boards of appeals. There have been no formal appeals to the Commissioner of Administration in the last several years. Although the state building code requires that local boards of appeals send a copy of their decisions to the Department of Administration, department staff indicated that they have received few such reports over the last several years.

In contrast, Minnesota statutes have established an intermediate appeals mechanism for the fire code in the State Fire Marshal Division. Like the building code, the fire code requires that local municipalities have local boards of appeals. However, local decisions can be appealed to the State Fire Marshal who has the power to rescind local orders related to the fire code and issue binding decisions. The office uses a code advisory panel, chiefly comprised of office staff, to hear and rule on approximately 8 to 10 appeals each month. Although these decisions can be appealed to the Commissioner of Public Safety, staff indicated that there have been no such appeals in the last several years.

CONFLICT OF INTEREST

Concerns have been expressed about having the same state agency responsible for both building construction and building code development and enforcement. Some policy makers allege that the Department of Administration's Building Construction Division has pressured the department's Building Codes and Standards Division to relax its enforcement of building code provisions in state buildings to save money. We found that:

- **Although having the Department of Administration responsible for both enforcing the building code and managing state building construction creates the potential for a conflict of interest, the Building Codes and Standards Division has taken steps to avoid problems.**

The Department of Administration has generally transferred building code enforcement responsibilities to local municipalities as much as possible, especially the more costly state buildings. This is especially true in St. Paul, where the city building official enforces the building code in all buildings that are under the Department of Administration's jurisdiction, including those in the Capitol complex. However, the potential for a conflict of interest exists and the current organizational structure allows others to repeatedly raise it as an issue.

City officials usually enforce the building code in state-owned buildings in St. Paul.

OTHER STATES

Using information from the *Building Codes and Regulations State Directory*, we found that:

- **Many states, including Minnesota, have building codes that contain six core provisions: construction, electrical, fire protection, life safety, mechanical, and plumbing.**

Minnesota and 21 other states enforce building codes that contain these 6 provisions. Fourteen states enforce all but the life safety code provisions, while 14 states enforce some combination of these provisions. Of the 22 states that enforce all of these provisions, only 5, including Minnesota, apply them to all buildings, except possibly agricultural structures. In addition, 41 states, including Minnesota, use a model code as the basis for their construction code provisions.

Although states may amend model codes, they have different rules regarding local amendments:

- **Minnesota and seven other states do not permit local jurisdictions to amend any portion of their building code.**

Nine states permit local jurisdictions to make more stringent amendments to any code provision and 11 states permit amendments to some code provisions (most frequently electrical provisions), but not others. Still others require state approval for local amendments made to their state building code.

We also found that states delegate administrative responsibility for their building and fire codes to a number of different agencies. While a few have 5 or more agencies responsible for their building and fire codes, 28 states have only 1 or 2 agencies administering these codes. However:

- **Compared with other states, Minnesota is at the far end of the organizational spectrum with five agencies having responsibility for administering provisions of the building and fire codes.**

Minnesota statutes give the responsibility for these codes to five agencies by *program*. Several states, including Arkansas, North Dakota, and South Dakota, are also organized by program and have separate state agencies responsible for their construction, electrical, and plumbing code provisions.

In contrast to this programmatic organization, we found that several states with only one or two code-administering agencies organize internally by *function*. For example, Wisconsin's Department of Commerce, Safety and Buildings Division allocates code responsibility to three bureaus: plan review, inspection and field operations, and program development. Each bureau is responsible for all code provisions within its function. That is, the plan review bureau is responsible for reviewing plans to ensure that they comply with the construction, electrical, fire protection, mechanical, and plumbing provisions.

While states enforce their building code in numerous ways:

- **Many states have both state and local officials enforce all provisions of their building code.**

Minnesota and 14 other states have both state and local officials enforce all provisions of their code. Seven states have only state officials enforcing their code. Ten other states use only local officials and 10 more assign enforcement authority by code provision.

ALTERNATIVES FOR MINNESOTA

After reviewing how other states adopt and enforce their building code, it is clear that there is no single “right way” for Minnesota to administer its building code. At the same time, our current structure is complex and fragmented. We found

Unlike Minnesota, most states have only one or two code-administering agencies.

poor coordination among some agencies as well as complex lines of authority for code promulgation and enforcement. We also found other minor problems including complications when adopting codes and inconsistencies and conflicts among some code provisions.

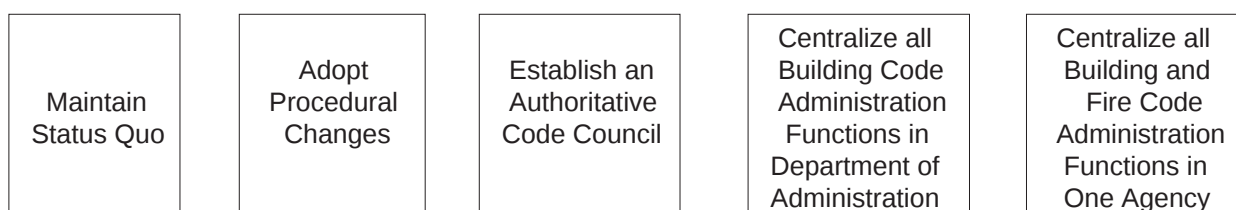
The Legislature could make several changes to the current processes used to administer the building code or to the organizational structure itself that might make administering the code more effective, timely, and coordinated. As illustrated below, possible alternatives range from making no changes and maintaining the status quo to completely centralizing all agencies that are responsible for administering provisions of the state building and fire codes.

Maintaining the status quo will not address any of the problems that we identified, but one could argue that the problems currently encountered are relatively minor and do not warrant major changes. While the current system is complex and uncoordinated, agency staff have eventually resolved all major issues.

Procedural changes are improvements that the Legislature could make to the processes used to administer the building code. While they do not require any structural changes, they may help resolve many of the coordination problems that we identified. They include the following possibilities:

1. Giving the Department of Administration rather than the Department of Public Service the authority to adopt the energy provisions of the building code.
2. Giving the Department of Administration the authority to require local building officials to accept some code equivalencies.
3. Establishing an intermediate state-level appeals process.

Continuum of Alternatives for Administering the State Building Code



Least
Change

Most
Change

SOURCE: Office of the Legislative Auditor.

4. Requiring both building and fire officials to give written approval of certain equivalencies when first proposed, and all building permits and certificates of occupancy.
5. Requiring state building and fire officials to jointly approve the overlapping portions of each other's proposed codes.

Several other states, including Connecticut, Iowa, Michigan, and Rhode Island, have implemented one or more of these procedures.

A third alternative that the Legislature could consider is to establish an authoritative code council rather than the advisory code council that currently exists. This option would create another level of government without substantially changing our current organizational arrangement. Its duties could include: determining whether building code problems are interdepartmental in nature; coordinating interdepartmental activities; approving building code provisions; resolving conflicts among agencies, codes, and building officials; reviewing proposed code-related legislative changes and reporting to the Governor on their merits; or entering into enforcement agreements. Several states, including California, use independent councils to assist with code development and enforcement.

Fourth, the Legislature could consider centralizing all building code activities by function within the Department of Administration, and requiring greater coordination between the departments of Administration and Public Safety. This would give the Department of Administration complete administrative authority over the building code, and would require moving code responsibilities out of the departments of Health and Public Service and the State Board of Electricity into the Department of Administration. Possible options to help ensure coordination between the departments of Administration and Public Safety could include incorporating some of the procedural options discussed previously. Several states with two agencies administering their building and fire codes, including Oregon and Rhode Island, have that responsibility shared between their housing and fire protection agencies.

**We do not
recommend
major
structural
changes.**

Finally, the Legislature could centralize all building and fire code activities within one agency. These activities could be centralized in one of three existing agencies, the departments of Administration, Public Safety, or Commerce, or the Legislature could create an entirely new agency. Many states, including Connecticut, Wisconsin, and Ohio, have just one agency administering their building and fire codes--usually their housing, fire prevention, or commerce agency.

In our view, however, none of the five alternatives will completely alleviate all of the problems that we identified. Although some policy makers might favor centralizing all building and fire code activities within one or two agencies, we think that:

- **Major structural changes in the way the state administers the building and fire codes are not needed at this time.**

We recommend some procedural changes to ensure mutual agreement between building and fire officials.

Building and fire officials bring different philosophies and priorities to code administration that no amount of reorganization can completely address. Our current organizational structure, although contentious at times, helps ensure that building and fire officials balance the building code's various philosophies and goals: ensuring health and safety, providing uniformity, containing costs, and adhering to model codes. At the same time, we think that some procedural changes are necessary to improve how Minnesota administers its building code, especially as it relates to the fire code. At a minimum, we recommend that:

- **The Legislature should require that the responsible building and fire officials arrive at an agreement and give their mutual written approval for all building permits and proposed equivalencies regarding the overlapping portions of their codes, as well as all certificates of occupancy.**

This would require coordination between building and fire officials and would ensure that both officials are involved throughout the code enforcement process. In addition, we recommend that:

- **The Legislature should require that the departments of Administration and Public Safety approve the overlapping portions of each other's codes before they take effect.**

The 1995 Legislature made a similar requirement of the departments of Corrections and Human Services regarding the adoption of licensing and programming rules for the residential treatment facilities that they both license.

Both these changes create a stronger building-fire partnership than currently exists and should help simplify the occupancy process for designers, builders, and building owners. Although opportunities for disagreement would still exist, these changes would require officials to address and resolve their differences much earlier in the process. At the same time, we recognize that building and fire officials might not always be able to reach agreement within a reasonable amount of time. We think that 10 working days should be sufficient for the building and fire officials to work together to come to a mutual agreement on the permits and proposed equivalencies. During this time, if the local officials are unable to resolve the conflicts among themselves, they could jointly meet with staff from the departments of Administration and Public Safety to help them reach a solution. Regardless of whether local officials jointly consult these state agencies, if the two officials are unable to come to an agreement after 10 days, we suggest that they present their cases to a state administrative law judge who will mediate the conflict and help the officials come to a mutual agreement. If a compromise cannot be achieved, the administrative law judge should have the authority to render a binding decision. According to staff in the Office of Administrative Hearings, administrative law judges frequently resolve disputes state agencies or local municipalities may have. Furthermore, the costs of using an administrative law judge should be shared by both public agencies and not the developer, regardless of the outcome.

Because we found fewer problems between the Department of Administration on the one hand and the departments of Health and Public Service and the State

Board of Electricity on the other, we do not think that it is necessary to centralize all building code activities within the Department of Administration. However, we recommend that:

- **The Legislature should give the Department of Administration rather than the Department of Public Service the authority to adopt the energy provisions of the building code.**

This procedural change would help simplify the promulgation process and would be consistent with how the electrical and plumbing provisions of the building code are currently developed and adopted. Also, this should help make it easier for building officials to enforce the code's energy provisions.

In summary, the building code is a complex collection of overlapping provisions that apply differently throughout the state. Promulgating and enforcing those provisions are equally complex tasks. It is likely that philosophical differences between building and fire officials will persist regardless of how the building and fire codes are administered. However, our recommendations should help promote more consistent building code enforcement and help code-administering agencies better coordinate their activities.

Introduction

Since the 1970s, the state building and fire codes have regulated certain aspects of building construction and remodeling in Minnesota. The Department of Administration has overall responsibility for the state building code, which is mandatory for new building construction and remodeling in the seven-county metropolitan area and in those municipalities that have adopted the code. The Department of Public Safety has overall responsibility for the state fire code, which is mandatory for all existing buildings throughout Minnesota.

Because both codes contain fire safety provisions, some policy makers have expressed concern that the departments of Administration and Public Safety may develop, apply, or interpret specific building and fire code provisions differently. With the backing of the Minnesota State Fire Chiefs' Association, legislation was introduced during the 1997 session that would have transferred building code responsibilities from the Department of Administration to the Department of Public Safety, where proponents thought that conflicts among codes and officials could be resolved more cooperatively.¹ Other policy makers have questioned how well the building code is administered on a state level. Still others have pointed to a possible conflict of interest in having the Department of Administration responsible for both enforcing building code requirements and managing state building construction.

In April 1998, the Legislative Audit Commission directed us to examine how the building code is administered on a state level and how it relates to the state fire code. Our study focused on the following major research questions:

- **To what extent have cities and counties adopted the state building code?**
- **Is the process for developing and adopting the state building code reasonable, consistent, and timely?**
- **What does the Department of Administration do to help ensure that the state building code is being enforced consistently?**

¹ Minn. House (1997), H.F. no. 336, and Minn. Senate (1997), S.F. no. 304.

- **How do other states adopt, organize, and administer their codes? Should building and fire code administration in Minnesota be reorganized?**

To answer these questions, we collected data on the operations, policies, and procedures of the various state agencies that are involved in administering the building and fire codes. We interviewed officials in other states to learn how they organize code responsibilities. We also contacted various interest groups to help identify problems related to state-local relationships and recommendations for change. We reviewed the literature on model codes and practices, as well as Minnesota statutes, rules, and the building and fire codes themselves. Finally, we attended meetings of various advisory groups that are involved in developing or examining the state building code.

**We did not
examine code
enforcement.**

Because much of code enforcement is decentralized in Minnesota, our evaluation did not examine how well state and local governments have enforced the building code. Likewise, we did not research problems that have occurred at the local level as a result of conflicts between building and fire officials. In addition, we did not examine the merits of specific code provisions such as automatic sprinkling systems and fire-resistant walls, although there is disagreement between building and fire officials as to the merits of some code requirements. We think that decisions about specific code requirements are best left to experts in the construction, fire, and insurance industries. Finally, although there has been some discussion between building and fire officials about the merits of a mandatory rather than voluntary building code statewide, we did not address this issue.

This report has three chapters. Chapter 1 provides background information on the state building code, its relationship to other state codes, and the extent to which the building code has been adopted throughout the state. Chapter 2 examines how the building code is administered on the state level. Chapter 3 discusses how other states administer their building and fire codes and presents a variety of options for restructuring code administration in Minnesota.

Overview

CHAPTER 1

The state building code, which is a compilation of minimum uniform standards and requirements for constructing new buildings and remodeling existing ones, is designed to protect the health, safety, and welfare of Minnesota residents. This chapter provides descriptive information on the building code, its relationship to other state codes, and its applicability throughout the state. It focuses on the following research questions:

- **How is the state building code related to other state codes, such as the fire, electricity, and plumbing codes, among others?**
- **To what extent have cities and counties adopted the state building code?**
- **How much discretion do local jurisdictions have to alter or exceed code requirements?**

To answer these questions, we examined state legislation that created and later amended the state building code. We reviewed some local building and zoning ordinances, and we talked with several state and local officials who are responsible for administering or enforcing the state building code and other related codes.

Simply describing how the building code applies throughout the state is not an easy task. The geographic and structural applicability of the code has changed considerably over time. Today, the state building code is mandatory when constructing and remodeling all nonagricultural buildings throughout the seven-county metropolitan area, and for all public buildings paid for by the state, all public school building projects that cost at least \$100,000, and certain state-licensed facilities, regardless of location. Municipalities outside the seven-county area that want to have a building code must adopt the state's code. At the same time, certain building code provisions--including those related to accessibility, electricity, elevators, and plumbing--are mandatory statewide, regardless of whether a municipality has chosen to adopt the state building code. In addition, there are other mandatory statewide codes--such as the state fire code--that cover some of the same subjects and contain similar requirements as the building code, that are technically not part of the state building code.

The building code contains minimum standards for construction and remodeling.

PROVISIONS

Minnesota statutes require that the Commissioner of Administration adopt minimum standards for new building construction and remodeling that govern structural materials, design and construction, fire protection, health, safety, and sanitation.¹ The purpose of these standards, which collectively make up the state building code, is to:

... provide basic and uniform performance standards, establish reasonable safeguards for health, safety, welfare, comfort, and security of the residents of this state and provide for the use of modern methods, devices, materials, and techniques which will in part tend to lower construction costs. The construction of buildings should be permitted at the least possible cost consistent with recognized standards of health and safety.²

In addition to setting forth basic or minimum standards that are both “safety- and cost-conscious,” statutes further require that the state building code conform as much as possible to model codes that are generally accepted and used nationally.³ Model codes are “consensus documents” that are written by national organizations made up of state and local building officials, trade associations, construction organizations, suppliers, engineers and design professionals, and research groups. Model codes set forth generally-accepted basic minimum provisions that are considered necessary to safeguard the public.

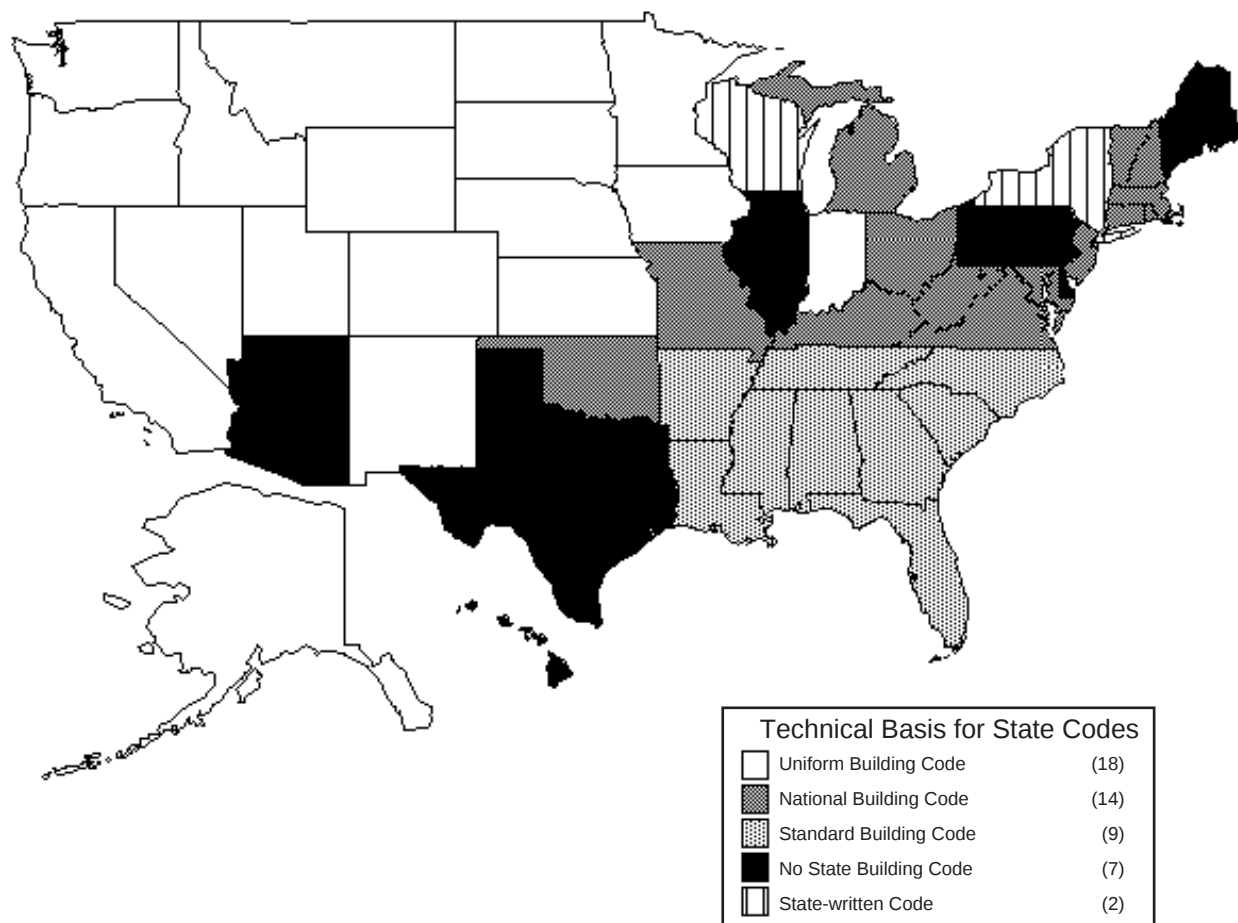
Three model codes that set standards for building construction are widely used throughout the United States: the *National Building Code* published by the Building Officials and Code Administrators International, the *Uniform Building Code* published by the International Conference of Building Officials, and the *Standard Building Code* published by the Southern Building Code Congress International. As shown in Figure 1.1, Minnesota is one of 18 states that uses the *Uniform Building Code* as the basis for the state code’s construction provisions. Other model codes used throughout the country are the *One and Two Family Dwelling Code* and the *Model Energy Code* published by the Council of American Building Officials, and the *Life Safety Code* and the *National Electrical Code* published by the National Fire Protection Association.

Figure 1.2 describes the major provisions of Minnesota’s building code. The construction provisions, which consist of the *Uniform Building Code* and Minnesota’s amendments to that code, set forth a comprehensive array of structural and fire protection requirements. These provisions classify buildings in a variety of ways, including occupancy use, type of construction, location on the property, allowable floor area, and height and number of stories. Specific code requirements vary considerably, depending on these factors. For example, the provisions generally classify buildings into 10 different occupancy or use classifications: assembly, business, educational, factory and industrial,

¹ Minn. Stat. §16B.61.

² Minn. Stat. §16B.59.

³ Minn. Stat. §16B.61.

Figure 1.1: Technical Basis for State Building Codes, 1998

SOURCE: National Conferences of States on Building Codes and Standards, Inc., *Directory of Building Codes and Regulations State Directory* (Herndon, Virginia: 1998).

hazardous, institutional, mercantile, residential, storage, and utility. There are often subdivisions within each of these 10 classifications. For instance, buildings to be used for assembly purposes, such as theaters, are further divided into five divisions, depending on how many people they can hold and whether the buildings have a stage. Institutional occupancies are further divided into four divisions: hospitals, nursing homes, and nurseries for the full-time care of children under six years of age; outpatient health care centers; detoxification centers and group homes for children at least six years of age; and mental hospitals, prisons, and other secure correctional facilities.

The code also classifies buildings into five types of construction, each representing varying degrees of public safety and resistance to fire. For example, Type I construction is the most fire resistant, and structural elements in these buildings must be made of steel, iron, concrete, or masonry. In contrast, Type V

Figure 1.2: Major Provisions of the 1998 Minnesota State Building Code

Construction	Standards for the fire, life, and structural safety aspects of buildings. Certain portions are optional.
Mechanical	Standards for designing, constructing, and maintaining heating, ventilating, cooling, and refrigeration systems.
Accessibility*	Handicapped accessibility requirements.
Electrical*	Standards for all aspects of electrical installations, wiring, apparatus, and equipment.
Plumbing*	Standards for plumbing installation and equipment.
Energy	Standards for energy efficiency and indoor air quality.
Special Fire Protection Systems	Optional requirements for installing building fire suppression systems in new buildings, buildings that have increased in size, or have changed occupancy classifications.
Elevators and Related Devices*	Standards for designing, constructing, installing, operating, altering, and repairing dumbwaiters, escalators, and moving walks and their hoistways.
Solar Energy Systems	Standards for evaluating solar energy systems used for heating, cooling, or hot water demands of buildings.
Fallout Shelters	Standards for fallout shelters in state-owned buildings.
Floodproofing	Special requirements for buildings located in areas susceptible to flooding. Certain portions are optional.
Manufactured Homes*	Requirements for transportable structures used as dwellings.
Prefabricated Buildings*	Standards for constructing and certifying manufactured residential buildings designed to be constructed off-site.
Industrialized/Modular Buildings*	Standards for buildings of closed construction including factory-built single-family and multifamily housing.
Storm Shelters*	Standards for buildings to provide protection for manufactured home park occupants from tornadoes and extreme winds.

NOTE: Excludes administrative provisions of the Minnesota state building code.

*Indicates that these provisions of the state building code are mandatory statewide.

SOURCE: Department of Administration, *Minnesota State Building Code* (St. Paul, 1998).

construction is the most combustible, and the structural elements in these buildings can be made of wood. Some types of construction are not allowed in certain occupancies. For example, theaters that hold more than 1,000 people and have a stage must be Type I or II construction, which means, in part, that certain exterior walls must have a 4-hour fire-resistant rating. In contrast, small theaters that hold less than 300 people and do not have a stage can be constructed of wood (Type V construction), and certain exterior walls can have a fire-resistant rating of 2 hours or less or have no rating, depending on how close the building is to the property line.⁴

Practically speaking:

- **The state building code is actually a compilation of numerous individual codes that have been developed by both state agencies and national organizations.**

Some of the provisions of the state building code actually predate the building code itself, which, as we discuss later, was not promulgated until the 1960s. For example, Minnesota has enforced statewide rules regarding electrical and plumbing installations since the mid-1930s--about 30 years before the state adopted its first building code.⁵ Other provisions of the code were added much later. For instance, the Legislature did not require that the energy conservation provisions of the state building code be some of the most restrictive in the country until 1991.⁶

For the most part, the state building code is based on model codes that the state amends to reflect the unique concerns of Minnesota. In addition to the *Uniform Building Code*, the state has adopted the *National Electrical Code*, the *Uniform Mechanical Code*, the *American National Standard Safety Code for Elevators and Escalators*, and *Model Rules and Regulations for Industrialized Modular Buildings*, among other model codes.

Some provisions of the state building code are “homegrown”--state agencies develop them independently and do not rely on any single national model code.⁷ For example, rather than adopting and amending one of the national model codes, the Department of Health has developed the building code’s plumbing provisions and the Department of Public Service has developed the energy provisions.

Regardless of their origin, the different provisions of the state building code are often related to one another. For example, the energy provisions of the state building code deal with some of the same subject matter as the code’s mechanical provisions. Likewise, the code’s plumbing and construction provisions both address requirements related to roof drainage systems and the slope of roofs.

⁴ Department of Administration, *1998 Minnesota State Building Code* (St. Paul, 1998), “Uniform Building Code,” sec. 303, tables 5-A and 6-A.

⁵ Minnesota Legislative Research Committee, *Building Regulation in Minnesota* (St. Paul, 1948).

⁶ *Minn. Laws* (1991), ch. 149, sec. 4.

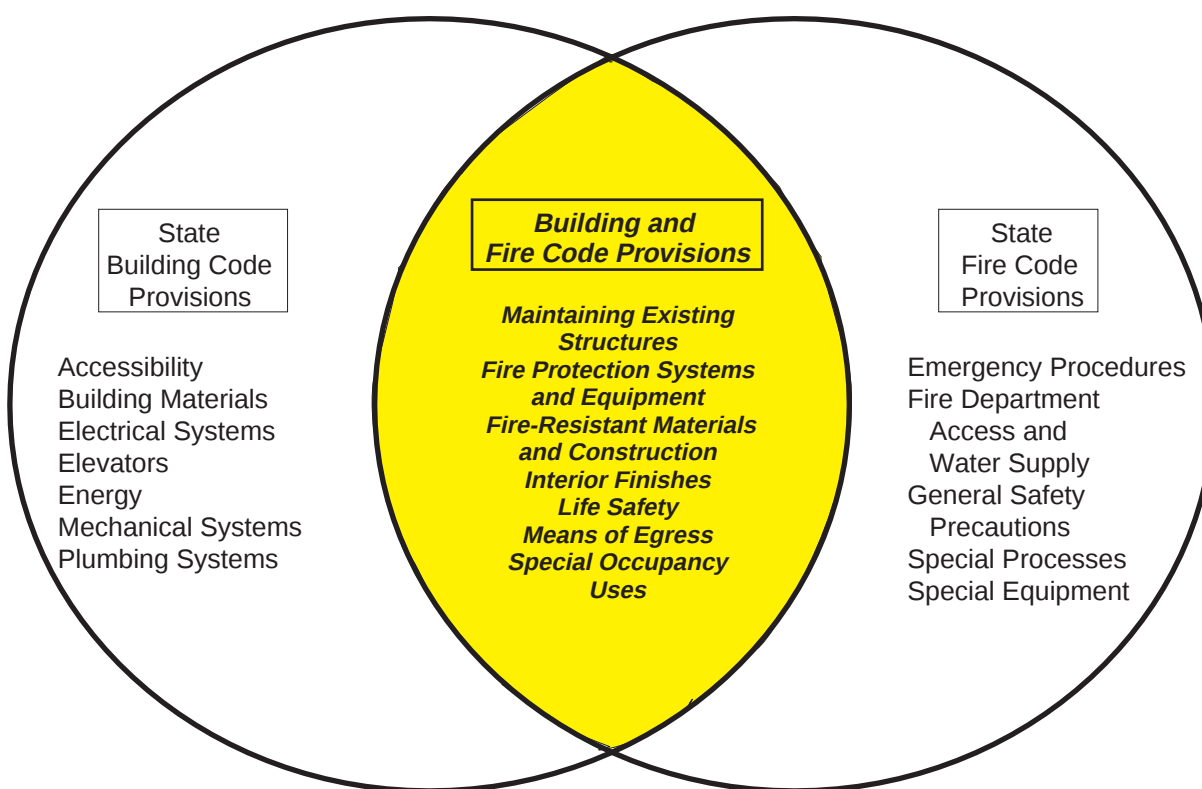
⁷ State agencies routinely consult model code documents or other sources of information when developing or writing homegrown codes.

In addition:

- **Other state codes cover some of the same subject matter and, at times, contain some of the same provisions as the state building code.**

As shown in Figure 1.3, both the state building code and the state fire code contain fire protection provisions. Generally speaking, the building code sets construction requirements that are enforced while a building is under construction, and the fire code sets use and maintenance requirements that are enforced once the building is constructed and throughout the life of the building. Both codes are based on national model codes, the *Uniform Building Code* and the *Uniform Fire Code*, that are designed to be companion documents. As a result, the state building and fire codes frequently reference one another. However, unlike the

Figure 1.3: Overlapping Provisions of the State Building and Fire Codes



NOTE: This figure contains only the major code provisions of the building and fire codes.

SOURCE: Office of the Legislative Auditor.

Some building code provisions overlap with fire code provisions.

state building code which must consider cost factors, statutes do not specifically require that the state fire code be “cost-conscious.”⁸

Both building and fire codes set requirements for maintaining existing structures, fire protection systems and equipment, fire-resistant materials and construction, interior finishes, life safety, exits, and special occupancies.⁹ Specifically, both codes define the types of occupancies in the same manner, and both require the same number of building exits and emergency escapes, depending on the type of occupancy. For instance, both codes require that the doors needed in hazardous areas or in areas with a minimum occupancy of 50 people be pivoted or side-hinged, and that they swing toward the exit path with an opening force not to exceed 30 pounds.¹⁰ Both codes also set various requirements that establish when and where automatic sprinkler systems and smoke detectors must be installed in buildings.

At the same time, the state building code sets forth requirements in many subjects that are outside the scope of the fire code, such as accessibility, energy, and plumbing. Likewise, because the fire code deals with how buildings are used and maintained, some of its provisions are outside the scope of the building code. For example, the fire code specifies fire department access to buildings and water supply and sets requirements for building evacuation plans. In contrast, the state building code is silent on these “use” issues. Although statutes permit local municipalities to adopt more restrictive fire code provisions, they cannot amend the state building code. Therefore, municipalities cannot amend those provisions of the fire code that also appear in the state building code.

Similar to the overlap between the state building and fire codes, there is overlap between the mechanical provisions of the building code and state rules regarding high pressure steam piping and appurtenances that are promulgated by the Department of Labor and Industry. For example, the mechanical provisions of the state building code require that refrigeration machinery rooms in certain types of occupancies have four-hour fire resistant walls separating these rooms from the rest of the building.¹¹ Department of Labor and Industry rules also contain requirements for fire resistant walls in refrigeration machinery rooms. However, its provisions are less stringent, and only require that such rooms be separated by one-hour fire resistant construction.¹² Likewise, the Pollution Control Agency develops standards for individual sewage treatment systems and the Department

⁸ According to the Department of Public Safety, cost is one of several factors that the department considers when promulgating the state fire code.

⁹ Building code fire protection provisions that overlap with state fire code provisions are contained in the building code’s construction provisions.

¹⁰ Department of Public Safety, *1998 Minnesota State Fire Code* (St. Paul, 1998), art. 12, sec. 1207.2 and Department of Administration, *Building Code*, “Uniform Building Code,” sec. 1003.3.1.5.

¹¹ Department of Administration, *Building Code*, “Uniform Building Code,” sec. 2802 and table 3-B.

¹² Department of Labor and Industry, *Power Piping Systems Code* (St. Paul, 1998), ch. 5230.5020.

of Natural Resources issues floodproofing and shoreline management regulations, all of which deal with some of the same subjects as the building code.

APPLICATION

Minnesota has had a state building code for over 30 years, although the geographic and structural applicability of the code has changed considerably in that time. The Legislature adopted the state's first building code in 1965, but required only that it be applied to state-owned buildings.¹³ Statutes directed the Commissioner of Administration to develop, adopt, and enforce the code. At that time, local jurisdictions were free to either adopt the state's building code, adopt their own code, or have no code. Four years later, the Legislature required that the state boards of Electricity and Health, the Department of Labor and Industry, and the State Fire Marshal enforce certain provisions of the building code under the Department of Administration's supervision.¹⁴

In 1971 the Legislature mandated that the state building code supersede existing municipal codes, citing high construction costs caused by:

a multitude of laws, ordinances, rules, regulations, and codes regulating the construction of buildings and use of materials . . . [that] . . . increase costs without providing correlative benefits of safety to owners, builders, tenants, and users of buildings . . .¹⁵

Before 1971 many cities and towns had their own building codes, and construction standards varied considerably across the state. The Legislature's action permitted municipalities to continue to enforce a building code if they so chose, but it had to be the state's building code.

The Legislature made the building code mandatory statewide in 1977, calling for both state and local enforcement.¹⁶ However, in a reversal, the 1979 Legislature allowed counties outside the seven-county metropolitan area to opt out of the code by referendum and, two years later, it permitted small cities (fewer than 2,500 residents) in code-adopting, nonmetropolitan counties to opt out also.¹⁷

Currently:

- **The building code is not mandatory throughout Minnesota, although most of the state's residents are covered by the code.**

The building code's application across the state is complicated.

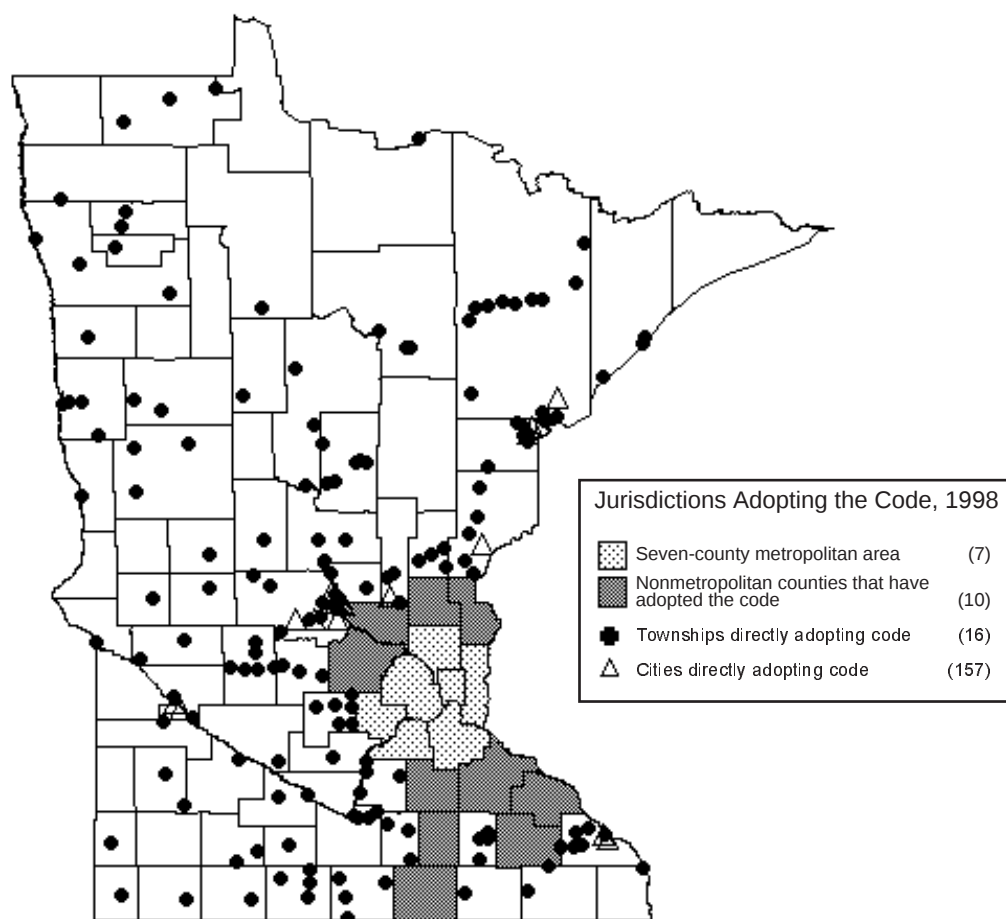
¹³ *Minn. Laws* (1965), ch. 623.

¹⁴ *Minn. Laws* (1969), ch. 850, sec. 3.

¹⁵ *Minn. Laws* (1971), ch. 561.

¹⁶ *Minn. Laws* (1977), ch. 381.

¹⁷ *Minn. Laws* (1979), ch. 287, sec. 2 and *Minn. Laws* (1981), ch. 306, sec. 1.

Figure 1.4: Jurisdictions Adopting the State Building Code, 1998

NOTE: Some jurisdictions within the 10 nonmetropolitan code-adopting counties may have opted out of the state building code.

SOURCE: Office of the Legislative Auditor.

Statutes require that all counties in the seven-county metropolitan area adopt the state building code. Ten other counties in southeastern Minnesota and about 170 cities and townships throughout the rest of the state have voluntarily adopted the state building code, as shown in Figure 1.4. Although only 20 percent of the state's counties, 44 percent of its cities, and 12 percent of its townships are covered by the building code, about 80 percent of the state's population live in these jurisdictions.

The state building code covers all new construction, except for agricultural buildings, and it applies to existing buildings that are being remodeled, rehabilitated, or altered.¹⁸ However, as Figure 1.5 shows:

¹⁸ Minn. Stat. §16B.60, subd. 5 defines agricultural buildings as structures on agricultural land that are designed, constructed, and used to house farm implements, livestock, or agricultural produce or products.

Figure 1.5: Application of State Building Code Provisions

State Building Code Provisions	Code-Adopting Jurisdictions		Nonadopting Jurisdictions	
	Certain Public Buildings ¹	Other Buildings	Certain Public Buildings ¹	Other Buildings
Accessibility ²	✓	✓	✓	✓
Construction	✓	✓	✓	N/A
Electrical	✓	✓	✓	✓
Elevators	✓	✓	✓	✓
Energy	✓	✓	✓	N/A
Fallout Shelters ²	✓	N/A	✓	N/A
Fire Protection ³	✓	✓	✓	N/A
Floodproofing	✓	✓	✓	N/A
Manufactured Homes	✓	✓	✓	✓
Mechanical	✓	✓	✓	N/A
Modular Buildings	✓	✓	✓	✓
Plumbing	✓	✓	✓	✓
Prefabricated Buildings	✓	✓	✓	✓
Solar Energy	✓	✓	✓	N/A
Storm Shelters	✓	✓	✓	✓

NOTES: ✓ = Code provision is applied to that building type; N/A = Code provision is not applied to that building type.

¹Certain public buildings include buildings paid for by the state, all public school building projects that cost at least \$100,000, and certain state-licensed facilities. Federal buildings and local government buildings in nonadopting jurisdictions are not covered by the building code.

²Accessibility requirements do not apply to one- and two-family residences. Fallout Shelter requirements apply only to state-owned public buildings.

³The fire protection provisions of the state building code are contained within the chapter of construction provisions. The fire protection provisions of the state fire code are applied in all buildings statewide.

SOURCE: Office of the Legislative Auditor.

- **Although the building code is not a statewide code, it applies to certain types of buildings statewide.**

These include buildings paid for by the state and all public school building projects that cost at least \$100,000. Certain state-licensed facilities (hospitals, nursing homes, supervised living facilities, free-standing outpatient surgical centers, and correctional facilities) must also meet state building code requirements regardless of location. The state building code does not cover federal buildings, and those provisions that are not mandatory statewide do not

apply to local government buildings in jurisdictions that have not adopted the building code.

As we discussed earlier, specific code provisions have different requirements, depending largely on how a building is classified. For example, the building code does not require that builders install automatic fire sprinkler systems in single family homes, although the code does require that some other types of buildings have such systems. Also, historic buildings may be exempted from code provisions to preserve the historic or aesthetic character of the building as long as unsafe conditions are corrected. Although Minnesota statutes require that the Commissioner of Administration consider other ways to comply with the exempted code provisions for state-occupied buildings, the law does not require that the state actually implement any substitute requirements.¹⁹

In addition:

- **Although the building code is optional for most cities and counties outside the seven-county metropolitan area, certain provisions of the code are mandatory statewide.**

Some building code provisions are mandatory throughout Minnesota.

As shown in Figure 1.5, all nonagricultural buildings throughout the state must comply with the accessibility, electrical, elevator, manufactured home, plumbing, prefabricated and industrialized/modular building, and storm shelter provisions of the state building code.²⁰ In addition, buildings throughout the state must comply with the state fire code which, as shown previously in Figure 1.3, contains some of the same fire protection provisions as the state building code.

However:

- **Municipalities that have adopted the state building code do not have to enforce all of its provisions.**

Some provisions are optional: the appendix chapters of the *Uniform Building Code* dealing with one- and two-family homes, special fire protection systems, and certain portions of the floodproofing provisions.

Although municipalities cannot amend the state building code, statutes permit municipalities to request special provisions that are unique to their community.²¹ Only Rochester has requested and received special consideration. Consequently, the state building code requires more restrictive fire sprinkler provisions for certain types of occupancies in Rochester.

¹⁹ Minn. Stat. §16B.625.

²⁰ The electrical provisions apply to all buildings, including agricultural buildings, statewide. The plumbing provisions apply to all buildings, including agricultural buildings, statewide except nonpublic buildings with private water and sewer connections.

²¹ Minn. Stat. §16B.64, subd. 5.

At the same time, we noted that:

- **While state law that creates the building code does not permit municipalities to amend it, other state laws permit more restrictive amendments to specific provisions of the code.**

For example, *Minn. Stat.* §326.243, which sets forth the basis for the state’s electrical code, allows municipalities to adopt and enforce requirements that are more stringent than the electrical provisions that are contained in the building code. Likewise, statutes permit local governments to adopt rules for installing and maintaining automatic garage door systems that are more restrictive than the state standards contained in the building code.²²

In addition:

- **Municipalities may adopt zoning ordinances that place additional restrictions on buildings or the construction process.²³**

For example, Eagan requires that 50 percent or more of the exterior finish of buildings in certain residential zones must consist of noncombustible, nondegradeable, and maintenance free materials; sheet aluminum, iron, steel, and corrugated aluminum are specifically prohibited.²⁴ Roseville requires that the exterior finish of buildings outside certain residential zones must be made of face brick; stone; specially designed, precast concrete units; glass; finished metal; fiberglass or similar materials of cor-ten steel; or stucco or other cementation.²⁵ In contrast, the state building code simply requires that a building’s exterior finish must provide weather protection for the building.²⁶

Finally:

- **Building officials have considerable discretion in how to enforce and interpret provisions of the state building code.**

**“Equivalencies”
allow builders
to comply with
the code in
different ways.**

Statutes require that the building code must be written as much as possible in terms of desired results rather than specifying the means to obtain those results. Thus, the code encourages designers and builders to seek new ways to achieve its goals, and building officials are given wide latitude to grant “equivalencies” that allow builders to achieve the code’s goals in diverse ways. Statutes define equivalencies as measures other than a code requirement that provide essentially the same protection that would be provided by a code requirement.²⁷ For example, a manufacturer may want to construct a new, three-story building using

²² *Minn. Stat.* §325F.83, subd. 7.

²³ *Minn. Stat.* §394.25, subd. 3.

²⁴ *City Code of Eagan*, sec. 11.20, H.

²⁵ *City Code of Roseville*, 1010.02.

²⁶ Department of Administration, *Building Code*, “Uniform Building Code,” sec. 1401.1.

²⁷ *Minn. Stat.* §16B.60, subd. 10.

wood-frame construction. Because the proposed building's size would exceed building code limits for such construction, the builder must provide equal protection for building occupants in other ways. Possible equivalencies might include increasing the number of exits, shortening the travel distance to exits, increasing the number of fire detectors and alarms, or upgrading sprinkler systems.²⁸ Building officials determine whether these changes provide protection for the building's occupants equal to the protection that would be provided if the building were constructed strictly according to the building code, and may approve or disapprove their use.

SUMMARY

Overall, we found that the geographic and structural applicability of the building code has changed considerably since the Legislature adopted the state's first building code in 1965. As a result, the state building code is a complex compilation of closely-related state and national provisions that apply to various types of buildings throughout the state. Today, the state building code is mandatory for all nonagricultural buildings throughout the seven-county metropolitan area, and for all buildings paid for by the state, all public school building projects that cost \$100,000 or more, and certain state-licensed facilities, regardless of location. Municipalities outside the seven-county area must adopt the state's building code if they want to have a local building code. At the same time, certain building code provisions--including those related to accessibility, electricity, elevators, and plumbing--are mandatory statewide, regardless of whether a municipality has adopted the building code. In addition, there are other mandatory statewide codes--such as the state fire code--that cover some of the same subjects and have similar requirements as the building code, that are technically not part of the state building code. Finally, building officials have considerable discretion in how to enforce and interpret provisions of the state building code.

28 J. R. Mehaffey, "Combustibility of Building Materials," 1987, URL http://www.nrc.ca/irc/bsi/87-2_E.html, (September 1988).

State Building Code Administration

CHAPTER 2

As we noted in Chapter 1, the state building code is a collection of overlapping provisions that apply differently throughout the state, depending on the type of building and its geographic location. In this chapter, we examine how this complex set of requirements is administered--that is, how it is developed, adopted, and enforced--on the state level. We asked the following questions:

- **Is the process for developing and adopting the building code reasonable, consistent, and timely?**
- **What does the Department of Administration do to help ensure that the building code is being enforced consistently?**
- **What problems affect code administration?**

To answer these questions, we examined documents from national and state organizations, including state and model codes. We contacted 45 organizations that are interested in or affected by the state building code, and we interviewed staff from several state agencies and municipalities. Finally, we attended meetings of advisory groups that are involved in various building code issues or processes.

In this chapter we have generally limited our discussion to seven major provisions of the state building code. These provisions--accessibility, construction, electrical, energy, fire protection,¹ mechanical, and plumbing--may overlap with one another or with provisions of other state codes, such as the state fire code.²

Overall, we found that promulgating and enforcing the state building code are complex processes that involve several state agencies and, at times, local jurisdictions. Both processes--promulgation and enforcement--have been marred by poor coordination and complex lines of authority. Regardless, agency staff

¹ Most fire protection provisions are found in the construction provisions of the *1998 Minnesota State Building Code*.

² Some state building code provisions also overlap with provisions of codes that are promulgated and enforced by the Department of Labor and Industry, such as the state code related to high pressure piping. Because this code affects only a small number of buildings, we did not specifically examine how the departments of Administration and Labor and Industry coordinate related activities.

have eventually resolved all major issues, although not without some tension and ill will.

CODE DEVELOPMENT AND ADOPTION

As noted in Chapter 1, the state building code is a compilation of many code provisions. Although Minnesota statutes give the Department of Administration the overall responsibility for promulgating the building code, we found that:

- **Statutory responsibility for developing or adopting various building code provisions is divided among several state agencies.**

As shown in Figure 2.1, four different agencies are responsible for developing or adopting various code provisions. The Department of Administration is responsible for developing and adopting the accessibility, construction, fire protection, and mechanical code provisions. The State Board of Electricity and the Department of Health are responsible for developing the code's electrical and plumbing provisions respectively, but the Department of Administration formally adopts them. In addition, the Department of Administration retains authority to modify these provisions prior to adoption. In contrast, statutes give the Department of Public Service the authority to independently develop and adopt energy rules that the Department of Administration must subsequently fold into the state building code. The Department of Administration does not have the authority to modify the energy provisions adopted by the Department of Public Service.

Four state agencies develop or adopt various code provisions.

Figure 2.1: Responsibility for Promulgating Building Code Provisions

State Building Code Provisions	Promulgation Responsibility	
	Development	Adoption
Accessibility	Administration	Administration
Construction	Administration	Administration
Electrical	Board of Electricity	Administration
Energy	Public Service	Public Service
Fire Protection	Administration	Administration
Mechanical	Administration	Administration
Plumbing	Health	Administration

SOURCE: Office of the Legislative Auditor.

Coordination is critical when agencies have different code priorities and perspectives.

As long as agencies develop or adopt unrelated code provisions, there are likely to be few problems. However, we found that:

- **Overlap among different provisions of the building code and between the building code and some other state codes has made it difficult for state agencies to promulgate the building code.**

During code development, agencies must understand how proposed changes in some provisions affect other building code provisions as well as similar provisions in related state codes. The more extensive the overlap between two code provisions or between two codes, the more care must be taken to avoid conflicting or inconsistent requirements. When promulgation authority is located in separate agencies, there are more opportunities for inconsistent language. Coordination is even more critical when the agencies have different philosophies and priorities. For example, statutes require that the energy provisions of the building code “. . . be designed to equal or exceed the most energy-conserving codes adopted by any state.”³ In contrast, statutes require that the state building code set basic minimum standards. Likewise, statutes require that the fire protection provisions of the building code be cost-conscious, but statutes do not specifically require this of the state fire code. Balancing the overall goals of the building code--ensuring health and safety, providing uniformity, containing costs, and adhering to model codes--becomes even more difficult when the various agencies that promulgate the code emphasize or prioritize these goals differently.

There have been few problems among the construction, electrical, and plumbing provisions of the building code, partly because the Department of Administration has ultimate adoption authority for these provisions. However, several new energy code provisions that the Department of Public Service recently adopted are not consistent with proposed changes to the code's mechanical provisions being developed by the Department of Administration. And, as we discuss later, the departments of Administration and Public Safety have had numerous problems developing and adopting the overlapping provisions of the building and fire codes.

As discussed in Chapter 1, many provisions of the building code are based on nationally-developed model codes, as directed by statute. Currently, five of the seven building code provisions considered here (accessibility, construction, electrical, fire protection, and mechanical) are based directly on model codes.⁴ In contrast, the energy and plumbing provisions of the building code are homegrown in that the state agencies have developed them largely independently and have not adopted and amended any single national model code.

³ *Minn. Stat.* §16B.165, subd. 1.

⁴ Although the present accessibility code is based on a model code, the Department of Administration is currently developing its own accessibility provisions for the building code based on national guidelines rather than a model code.

Agencies follow the Administrative Procedure Act when promulgating building code provisions.

We looked at what steps the departments of Administration, Health, and Public Service and the State Board of Electricity have followed in developing and adopting various building code provisions. We found that:

- **State agencies have followed a well-defined process to develop and adopt building code provisions.**

This process largely follows the Administrative Procedure Act requirements. This act sets forth a series of steps that agencies must follow to notify the public about proposed code changes and to provide opportunities for their participation. The first step in this process is to publish a formal “request for comments on planned rules and amendments to rules” in the *State Register*. Agency staff prepare background information and update language for various code provisions to facilitate code development. At about the same time, the sponsoring agency establishes a task force or technical advisory group to help review and revise the proposed language.

These advisory groups have commonly been a mix of industry representatives solicited from various organizations, local code enforcement personnel, and state agency staff. For example, the Department of Administration recently used two technical advisory committees that included building officials, contractors, architects, and structural engineers, to help develop construction code amendments. These committees met three or four times from November 1997 through February 1998. According to department staff, meetings generally must be infrequent, in part because construction industry representatives are usually less available during the building season. In addition to providing considerable administrative support to the committees, the supervising agency must also work with code specialists in other agencies to ensure that final provisions are consistent with other building code provisions and with provisions in other related codes.

Once the advisory groups and agency staff have prepared the proposed code language, the agency publishes a “notice of intent to adopt rules” that includes references to model codes and draft language for the various amendments. If no one requests a public hearing, the agency publishes a “notice of adopted permanent rules” about two months later. Shortly after this, the agency may begin to enforce the new code provisions.

As noted earlier, state agencies base most building code provisions on nationally-developed model codes. We think that the advantages of basing the state building code on model codes have generally far outweighed the disadvantages. First, model codes that are published by the same organization or designed to be companion documents (such as the *Uniform Building Code* and the *Uniform Fire Code*) have already been carefully scrutinized to avoid conflicts with each other. Second, many of the arguments about the advantages and disadvantages of proposed provisions have been debated and decided on the national level with little reason for further discussion at the state level. Third, model codes are “consensus” documents that have been developed by committees comprised of a broad range of construction and design professionals and practitioners from various states, including Minnesota.

On the other hand, model codes are reviewed and revised on a staggered schedule every three years.⁵ Subsequently, changing provisions of the state building code that are based on model codes have been tied to the three-year national cycle, which has made it somewhat difficult to adopt several code provisions simultaneously.

If Minnesota simply adopted model codes every three years without amendments, the promulgation process would be much easier. However, we found that:

- **Minnesota has continually amended different provisions of the state building code.**

Although this has complicated the promulgation process, there may be good reasons for most amendments. Model codes are, by their nature, broad documents that may not address all of Minnesota's particular needs. Thus, the state has amended many of the model code provisions that it incorporates into the building code. Likewise, the Department of Administration regularly updates and amends the homegrown provisions of the building code. According to department staff and our own review of recent amendments, most of the changes have reflected:

1. the unique needs of a cold-weather state such as Minnesota,
2. attempts to moderate costs,
3. the need to comply with changes in Minnesota laws,
4. new national code language,
5. technological improvements, or
6. miscellaneous goals such as creating a more user-friendly format or replacing unrealistic provisions.

For example, the Department of Administration amended a provision of the *Uniform Building Code* that set minimum allowable snowloads for different regions of the state.⁶ The *Uniform Building Code* simply defined the snowload zones using a series of gradient lines that cut through some counties. The Department of Administration amended the code to divide the state into two zones by county, ensuring that one county was not split into two different zones. The department also recently amended the plumbing code provisions to reflect new technology. For example, the provisions that define the materials used for underground soil and waste piping were expanded to include stainless steel pipe as an option.⁷

⁵ There may be some changes in this cycle over the next few years if national code organizations shift to a comprehensive international code.

⁶ Department of Administration, *1998 Minnesota State Building Code* (St. Paul, 1998), ch. 1305.4416.

⁷ *Ibid.*, ch. 4715.0570.

We looked at the time that has elapsed between the availability of model codes and the adoption of those codes and their amendments. The longer it takes to promulgate new code provisions, the longer builders and others must wait to benefit from improvements in the building code. Several organizations that we contacted said that they thought it has taken too long to update building code provisions. We found that:

- **Although the time required to promulgate different code provisions has varied, it has generally been consistent with timelines in other states.**

For the most part, adopting model codes with no state amendments has taken the least amount of time. For example, the Department of Administration adopted the *National Electrical Code* without amendments in 1996, only 11 months after it was initially published. In contrast, it has taken much longer to adopt amended model codes. For instance, we have estimated that it will take the Department of Administration more than two years to promulgate the latest mechanical provisions of the building code, partly because the department must ensure that these provisions are consistent with similar requirements in the code's energy provisions. Likewise, amending and adopting the construction provisions of the building code took about one and a half years from publication of the *Uniform Building Code* in Spring 1997 to formal adoption in Fall 1998.

However, it has taken considerably longer to adopt entirely new code provisions that are not directly based on a single model code. For example, as noted previously, the 1991 Legislature required the Department of Public Service to adopt energy provisions that would equal or exceed the most stringent requirements adopted by any other state. To comply with this mandate, the department has spent the last seven years writing and re-writing certain ventilation-related requirements for one- and two- family homes and they are still not finished. Although the department adopted some ventilation requirements for one- and two-family homes in 1994, it did not make them mandatory until January 1, 1998. The department spent the next four years studying and refining these requirements to make them more workable for code officials and more acceptable to builders. The department adopted new ventilation requirements for these homes in 1998 but did not make them effective until 1999.⁸ However, as we discuss later, the department has had to re-open the rulemaking process to amend certain energy code provisions, which may further delay implementing these requirements.

Although promulgating the state building code has been a lengthy process for some provisions, Minnesota's timeframe has not been that different from other states with similar code provisions. Wisconsin took about nine months to adopt the model electrical code, similar to Minnesota. Iowa and Michigan reported taking about two years to adopt their model construction code provisions; Rhode

Adopting new provisions not directly based on a single model code takes more time.

⁸ Department of Public Service, *Statement of Need and Reasonableness* (St. Paul, November 1997), 2.

Island and Virginia required about a year. According to a 1993 study by the Minnesota Department of Administration, most other states took less than two years to adopt a model code with or without amendments.⁹

Some time delays have been unavoidable. Developing proposed revisions to model codes generally cannot begin until the model codes have been published, although draft documents have sometimes been available. Also, volunteer advisory groups have not always been an efficient mechanism for developing proposed revisions due to constraints on members' time. On the other hand, using advisory groups has helped build a broad base of support for proposed changes that may forestall the need for public hearings. Finally, although complying with the Administrative Procedure Act can take several months, a 1993 study by our office found that the act's requirements were not a major source of delay in administrative rulemaking.¹⁰

At the same time, some delays in code adoption could have been avoided. We found that:

- **Poor coordination between the Department of Administration on the one hand and the departments of Public Service and Public Safety on the other has resulted in unnecessary delays or conflicts.**

There has been a lack of coordination among state agencies.

As we previously noted, the building code's energy provisions promulgated by the Department of Public Service cover some of the same subject matter as the code's mechanical provisions. Although the Department of Administration is ultimately responsible for enforcing the energy code provisions, it did not formally participate on the Department of Public Service's code advisory committee. Shortly before the energy provisions were adopted in July 1998, the Department of Administration began developing new mechanical code provisions, but did not formally involve the Department of Public Service in the mechanical code advisory committee. At that time, the Department of Administration questioned how building officials would enforce some of the new energy provisions and how inconsistent requirements among the code's construction, energy, and mechanical provisions would be resolved. For example, department staff thought that the energy provisions did not clearly identify what mechanical components building officials were required to test to ensure that they were functioning properly. Consequently, the Department of Public Service decided to re-open the rulemaking process to amend the energy provisions.

Likewise, Department of Administration staff said that they may re-open the rulemaking process to amend some ventilation requirements in the code's construction provisions. Specifically, the department tried to anticipate some language that it expected to be in the new energy provisions by referencing specific ventilation standards. However, energy code provisions that were ultimately adopted did not contain these standards. Consequently, the Department of Administration may need to amend the building code to eliminate

⁹ Department of Administration, *A Study of the Minnesota State Building Code Adoption Process* (St. Paul, August 1993).

¹⁰ Office of the Legislative Auditor, *Administrative Rulemaking* (St. Paul, March 1993).

There were delays and conflicts in promulgating the most recent building and fire codes.

inconsistencies. Because the energy provisions of the building code will not become effective until mid-July 1999, the practical impact of these events is limited. However, it suggests that separating the authority to adopt various building code provisions causes problems.

Just as good coordination is necessary when different agencies promulgate different provisions of the same code, good coordination is critical when agencies that have different philosophies and priorities promulgate separate codes that address the same subject matter. We found coordination problems between the recently adopted state building and fire codes. Discrepancies between these two codes are especially onerous to builders because they must comply with the building code to receive their certificate of occupancy, and must continue to comply with the building code as well as the fire code in order to keep it.

Despite this, the Department of Public Safety adopted the state fire code in June 1998 even though the department had not resolved all of its differences with the Department of Administration. For example, the two agencies were unable to come to an agreement about automatic closing doors in educational facilities. Despite disagreement on the part of the Department of Administration, the Department of Public Safety adopted the state fire code with a provision that relaxes the requirement for self-closing or automatic closing doors between corridors and classrooms or offices when automatic sprinkler protection and smoke detection systems are used.¹¹ This forced the Department of Administration to delay adopting the building code so that it could revise the code to be compatible with state fire code provisions. Although both departments contributed to this complicated, frustrating sequence of events, such problems are likely to recur without better coordination. It should be noted that the Department of Public Safety formally involved staff from the Building Codes and Standards Division in the committee it used to develop the state fire code, but the Department of Administration did not formally involve staff from the Department of Public Safety when developing the state building code.¹²

In addition, when reviewing the Department of Administration's proposed amendments to the building code, the administrative law judge identified an additional exception in the proposed building code that was not in the recently-adopted fire code. The judge cited the discrepancy because the Department of Administration's *Statement of Need and Reasonableness* claimed that the exception was necessary to conform to the state fire code.¹³ Consequently, the department had to revise the proposed building code once again.

¹¹ State of Minnesota Department of Public Safety Fire Marshal Division, "Statement of Need and Reasonableness," 1997, URL <http://www.dps.state.mn.us/fmarshal/firecode/97MUFC-2-SNR.html>, (September 1998).

¹² Likewise, the Department of Administration has not formally involved staff from the Department of Labor and Industry when developing the building code's mechanical provisions, even though these provisions overlap with rules promulgated by the Department of Labor and Industry.

¹³ Bruce H. Johnson, Administrative Law Judge, to the Department of Administration, August 17, 1998, Letter.

Even when agencies that promulgate related codes coordinate their activities closely, problems may ensue when these codes do not become effective at the same time. For example, the newly-adopted state fire code, which became effective in July 1998, added new sprinkler requirements that were not part of the building code then in effect. Although the sprinkler requirements were part of the proposed 1998 building code, they did not formally become effective until the building code was adopted several months later. Consequently, the state building and fire codes did not complement one another for several months and buildings completed during that time might not have complied with relevant fire code provisions even though they complied with the building code.

ENFORCEMENT MECHANISMS

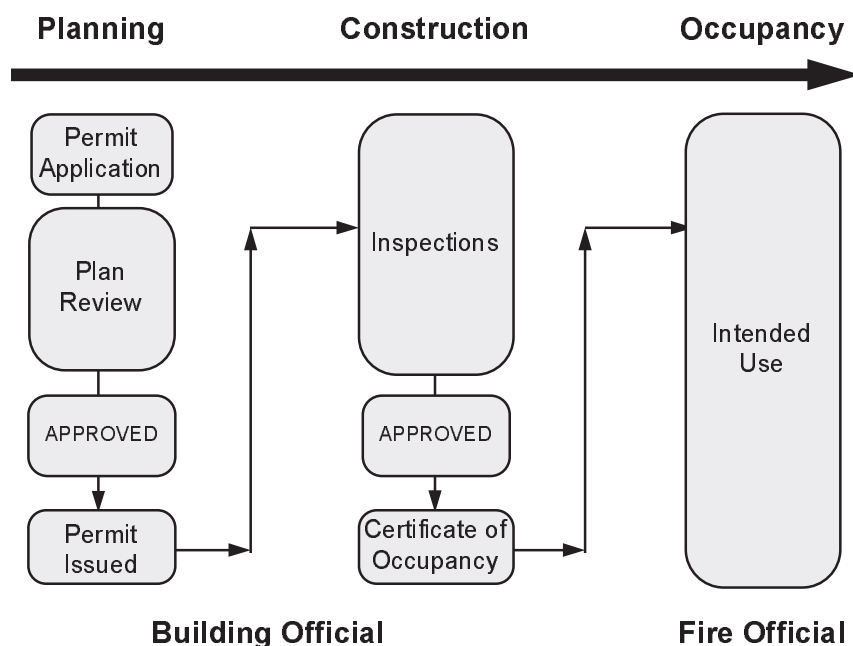
Just as the responsibility for developing and adopting the provisions of the building code is divided among several state agencies, responsibility for enforcing the code is divided among various state agencies as well as local government. Who enforces various building code provisions, in what type of building, and in what geographic part of the state depends on the specific code provision.

Enforcement is divided between state and local government.

Figure 2.2 illustrates the building code enforcement process which has several important stages: plan review (leading to issuing the building permit), inspection, and issuing the certificate of occupancy. During plan review, building plans are reviewed to ensure that construction will comply with all provisions of the building code and certain provisions of the fire code such as site access and water supply. As discussed in Chapter 1, equivalencies may be issued at this time to allow a designer or builder to meet the intent of building code provisions by using alternate procedures or materials. For example, although the building code requires that buildings' interior walls must contain a fire for a specified period of time, building officials may allow builders to install walls that are less fire-resistant if certain types of sprinkling systems are installed in the building. Once equivalencies are approved and the building official determines that the plan satisfies all building code provisions, a building permit is issued. This first phase is especially important to builders since the project cannot proceed without the approved permit. Most importantly, problems or mistakes caught at this time are least likely to have construction time and cost implications.

Once the permit is issued, construction may begin. During construction, the building is inspected at several stages. For example, gas, water, and sewer piping are inspected soon after the foundation is laid, but electrical inspectors do not examine wiring until just before the interior walls are covered with sheetrock. Complex buildings or those with correction orders may require more inspections. Occasionally during construction, the builder may request and receive equivalencies for some building code provisions. The inspection phase helps ensure that the building is being constructed in compliance with the building code, as reflected in the permit and approved plans. Finally, after passing all building code inspection requirements, the certificate of occupancy--an assurance that the building has passed all required inspections--is issued. From this time forward, the building must meet the requirements of both the state building and fire codes.

Figure 2.2: The State Building Code Enforcement Process



NOTE: The fire official conducts plan reviews for certain fire code provisions such as site access and water supply. Furthermore, the building official has some responsibility for ensuring that a building continues to meet the building code once it is occupied.

SC URCE: Office of the Legislative Auditor.

As shown in Figure 2.3:

- **Minnesota statutes set forth a complicated enforcement system that authorizes both state and local government to enforce the building code depending on the type of building, its geographic location, and the specific code provision.**

According to statutes, the State Building Official in the Department of Administration oversees enforcement of the state building code. Statutes authorize the Department of Administration to direct and supervise other state agencies enforcing various provisions of the building code in some public buildings, including the State Board of Electricity and the departments of Health and Labor and Industry.¹⁴

¹⁴ The Department of Administration enforces the building code in buildings paid for by the state, all public school building projects that cost at least \$100,000, and certain state-licensed facilities.

Figure 2.3: Primary Responsibility for Enforcing Building Code Provisions

State Building Code Provisions	Adopting Jurisdictions		Nonadopting Jurisdictions	
	Certain Public Buildings ¹	Other Buildings	Certain Public Buildings ¹	Other Buildings
Accessibility	Administration	Local Building Official	Administration	Local Authority
Construction	Administration	Local Building Official	Administration	N/A
Electrical	Board of Electricity	Board of Electricity	Board of Electricity	Board of Electricity
Energy	Administration	Local Building Official	Administration	N/A
Fire Protection	Administration	Local Building Official	Administration	N/A
Mechanical	Administration	Local Building Official	Administration	N/A
Plumbing	Health	Local Building Official	Health	Health

NOTE: N/A = Code provision is not applied to that building type.

¹Certain public buildings include buildings paid for by the state, all public school building projects that cost at least \$100,000, and certain state-licensed facilities. Federal buildings and local government buildings in nonadopting jurisdictions are not covered by the code. The Department of Administration often transfers enforcement responsibility for certain public buildings to local building officials.

SOURCE: Office of the Legislative Auditor.

To enforce the building code in public buildings under its jurisdiction, the Department of Administration employs 5 plan review staff and 41 contract inspectors throughout the state. The department directly enforces the accessibility, construction, energy, fire protection, and mechanical provisions of the building code. According to statute, the department shares responsibility with local authorities for enforcing the accessibility provisions of the building code in all buildings throughout the state and has three department staff to help enforce these provisions.

Although statutes authorize the Department of Administration to supervise other state agencies enforcing provisions of the building code in certain public buildings, we found that the department exercises little, if any, supervisory authority over the departments of Health and Labor and Industry and the State Board of Electricity. The Department of Health must enforce the code's plumbing provisions in some public buildings statewide and in other buildings in jurisdictions that have not adopted the building code. In addition, the Department

The state transfers enforcement authority for some public buildings to local authorities.

of Health generally retains authority for plumbing plan reviews for all buildings throughout the state. The department employs four engineers who review plans for certain public buildings and five regional plumbing inspectors to inspect these facilities. In addition, the department has agreements that allow 30 municipalities to review plans for other buildings in their jurisdiction. However, according to Department of Health staff, plumbing inspections are not done in all buildings, especially in privately-owned buildings in municipalities that have not adopted the building code.

The State Board of Electricity enforces the code's electrical provisions in all buildings statewide. The board employs 9 area representatives and contracts with 77 electrical inspectors. In addition, about 40 municipalities have adopted ordinances that give themselves authority to do their own electrical inspections.

In many cases, enforcement responsibility for some public buildings is transferred to local municipalities. Statutes require that the Department of Administration allow code-adopting municipalities to enforce the building code in some public buildings if they want to do it. However, the department must first determine that the municipality has enough qualified and trained staff to provide the necessary services.¹⁵ The department transfers inspection or plan review and inspection authority for many, but not all, public projects to some code-adopting municipalities. During fiscal years 1996 through 1998, the Department of Administration initially had enforcement responsibility for more than 1,300 buildings in code-adopting jurisdictions. The department transferred inspection and plan review responsibility to local municipalities for about 60 percent of these buildings, and retained plan review while transferring inspection authority for about 30 percent of these buildings. The department retained both plan review and inspection authority for the remaining 10 percent. In addition, the department retained plan review and inspection authority for approximately 300 public buildings located in nonadopting jurisdictions.

Municipalities that have adopted the state building code are responsible for enforcing it in all buildings in their jurisdiction other than those public buildings for which the Department of Administration is responsible. The governing body in the municipality must appoint a local building official to enforce the accessibility, construction, energy, fire protection, and mechanical provisions of the code and to inspect for the plumbing provisions of the code.¹⁶ The local building official has final authority for issuing building permits and certificates of occupancy. Municipalities often also have one or more local building *inspectors* who perform most of the building inspections. By statute, local building officials must be certified and fulfill continuing education requirements.¹⁷ However, statutes do not require that building inspectors be certified or fulfill any continuing education requirements. In general, the Department of Administration has tried to encourage consistent code enforcement through its training programs for building officials, inspectors, and others. This training has usually covered difficult issues

¹⁵ *Minn. Stat.* §16B.61, subd. 1a.

¹⁶ *Minn. Stat.* §16B.65, subd. 1 and *Minn. Stat.* §16B.71.

¹⁷ *Minn. Stat.* §16B.65.

or recent code revisions and has been presented by department staff or staff from national organizations. The State Board of Electricity and Department of Health have also provided training to inspectors who enforce the electrical and plumbing provisions of the code.

Building code enforcement is further complicated by the enforcement of other related state codes. The State Fire Marshal Division in the Department of Public Safety has interagency agreements with four state agencies (the departments of Children, Families & Learning; Corrections; Health; and Human Services) to provide plan review and inspection assistance for life safety provisions of the state fire code in certain occupancies. These provisions overlap with the fire protection provisions of the state building code. According to State Fire Marshal staff, they have tried to avoid duplicating the work of building officials. However, these reviews have usually not been coordinated with the Department of Administration or with local building officials who also review project plans. Coordination between the departments of Administration and Public Safety is also important because statutes indicate that the State Fire Marshal, under the supervision of the Department of Administration, should enforce the fire and life safety provisions of the fire code in those buildings for which the Department of Administration has code enforcement authority.¹⁸ According to staff in these two agencies, the unintended result of this statute is that the State Fire Marshal is required to report to two commissioners (the commissioners of Public Safety and Administration) regarding the enforcement of the fire code.

This complex, and at times duplicative, enforcement structure has not always worked smoothly. We found that:

- **Poor coordination between the departments of Administration and Public Safety has resulted in enforcement problems in some public buildings.**

Building and fire officials are responsible for a building at different points in time.

As noted previously, while building officials are responsible for a building during the construction phase, fire officials assume responsibility immediately after the certificate of occupancy has been issued. However, building officials have granted equivalencies for certain building code provisions that overlap with the fire code without routinely informing fire officials. As a result, fire officials, unaware of these equivalencies, have determined that some public buildings have not complied with the fire code.

For example, the Department of Administration recently accepted several equivalencies during plan review for a secondary school building and did not inform the State Fire Marshal. However, State Fire Marshal staff were responsible for inspecting this school because, as stated earlier, they have an agreement with the Department of Children, Families & Learning to review plans and inspect schools for life safety provisions of the fire code. In this particular project, the building official permitted a door to be built between a theater scene shop and one of the primary exit corridors; the building code generally does not allow this. The building official granted this equivalency because, among other reasons, the walls

¹⁸ Minn. Stat. §299F.011, subd. 3.

Equivalencies granted by building officials are not always communicated to fire officials.

and doors of the scene shop were more fire-resistant than the code required and there were smoke detectors installed in the room. Since the fire official was not informed of this equivalency and did not agree with it, there was confusion regarding the building's subsequent compliance with the fire code. Ultimately, the fire official accepted the equivalency. However, State Fire Marshal staff have indicated that if a fire official disagrees with an equivalency and thinks it jeopardizes the life safety of the building's occupants, the fire official has the statutory authority to write a correction order and require it to be fixed before the building can continue to be occupied.

In addition to the conflicts over equivalencies, there were several other problems with this school building that resulted from poor coordination between the building and fire officials. Specifically, the fire inspector cited an exit passageway and storeroom as not compliant with the building code despite the fact that the building official had approved them and determined that they were consistent with building code interpretations at the local and national levels. These differences in code interpretation between the building and fire officials caused delays in issuing the final certificate of occupancy. Several months of telephone calls, letters, written interpretations from national authorities, and meetings of state and local personnel were required to resolve these disagreements.

As noted earlier, local building officials are responsible for much of the enforcement of the building code and statutes give the Department of Administration overall responsibility to ensure that these officials carry out their responsibilities. However:

- **The Department of Administration has little supervisory authority over local building officials and has little information about how they enforce the building code.**

Although statutes provide that the State Building Official must assume local enforcement responsibilities if the Commissioner of Administration determines that a local government is not properly enforcing the state building code, this has rarely happened.¹⁹ The statutes only permit the state to remove a local building official; there are no intermediate disciplinary alternatives available. As such, this authority may be "too blunt a sword" to be an effective means of discipline. It may be reasonable to give the Department of Administration more general disciplinary authority over local building officials.

The state does not routinely collect information on local building code enforcement.

In addition, the department does not routinely collect information about the activities of local building officials, such as workload and staffing, nor does it have information on the status of most buildings in code-adopting municipalities. More importantly, the Department of Administration does not have current and accessible data about how municipalities enforce the code in those public buildings where it has transferred enforcement responsibility. The department

¹⁹ Minn. Stat. §16B.62, subd. 2.

**Certain
equivalencies
may be allowed
in one
municipality,
but not in
another.**

does not track how long it takes these municipalities to conduct plan reviews or inspections, nor does it have an accurate list of buildings that have been issued certificates of occupancy. The department also has no data to verify that all municipalities enforce the building code's accessibility provisions.

As discussed in Chapter 1, building officials have wide latitude to grant equivalencies to allow builders to achieve the state building code's goals in different ways. However, since equivalencies are granted by building officials and only apply to a specific project, the same option may not necessarily be available to builders elsewhere. That is, a builder may be granted an equivalency to a code requirement in one municipality, but may not receive the same equivalency in another.

Furthermore, the Department of Administration does not have the authority to require that local officials accept an equivalency or the department's code interpretations, regardless of whether other municipalities have accepted them. Local officials may go to the department with technical questions or for interpretations, but they need not do so. In an effort to share common equivalencies and code interpretations, the department, together with several building official organizations, participates on the Minnesota Uniformity Committee. This committee meets annually and publishes a list of code interpretations, although these are not binding on state or local building officials.

APPEALS

Because local building officials have considerable discretion in allowing equivalencies and interpreting the building code, it is important that builders and designers have the chance to have local decisions reviewed by an independent but qualified person or group. As we noted previously, the Department of Administration cannot simply override local officials' decisions nor can it mandate certain interpretations of the building code. We found that:

- **Opportunities to formally appeal local building officials' decisions at the state level are limited and have rarely been used.**

The *Uniform Building Code*, upon which the state building code is based, requires that all municipalities establish a local board of appeals. Board members must be knowledgeable about matters related to building construction and cannot be employees of the local municipality. However, it is not entirely clear whether this board is empowered to hear appeals that go beyond the specific provisions of the *Uniform Building Code* to include other state building code provisions, such as electrical, energy, and plumbing requirements.

Minnesota statutes provide that anyone that disagrees with the final decision of a municipality may appeal that decision to the Commissioner of Administration,

The building code does not have an intermediate appeals process like the fire code.

who must follow contested case procedures to hear the appeal.²⁰ The commissioner's decision may be appealed to the courts.

According to Department of Administration staff, a small percentage of municipalities that have adopted the state building code have established a local board of appeals. There have been no formal appeals to the Commissioner of Administration in the last several years. According to staff, builders are generally hesitant to file an appeal with the state because of the time involved to go through the process. Furthermore, it is not clear how often local boards of appeals are used. Although the state building code requires that local boards of appeals send a copy of their decisions to the Department of Administration, department staff indicated that they have received few such reports over the last several years.

In contrast, statutes require that the State Fire Marshal's office establish an intermediate mechanism at the state level for appealing local state fire code decisions. Like the state building code, the fire code requires that local municipalities have a local board of appeals. However, local decisions can be appealed to the State Fire Marshal's office which has the power to rescind local orders related to the fire code and issue binding decisions. The office uses a code advisory panel, chiefly comprised of office staff, to hear and rule on approximately 8 to 10 appeals each month. For example, a public school recently requested a variance to omit certain manual fire alarm pull stations because they contributed to frequent false alarms.²¹ The State Fire Marshal Code Advisory Panel allowed this variance to the code because the building was protected instead by smoke detectors and monitored fire alarm and automatic sprinkler systems.²² Decisions made by this advisory panel can be appealed to the Commissioner of Public Safety, who must then follow contested case procedures. Finally, decisions can be appealed one step further to the court system. According to Department of Public Safety staff, there have been no formal appeals to the commissioner in the last several years.

CONFLICT OF INTEREST

Concerns have been expressed about having the same state agency responsible for both building construction and building code development and enforcement. Some policy makers allege that the Department of Administration's Building Construction Division has pressured the department's Building Codes and Standards Division to relax its enforcement of building code provisions in state buildings to save money. We found that:

²⁰ Contested case procedures are outlined in *Minn. Stat.* §§14.57-62. This is a quasi-judicial process where an administrative law judge examines the local record, ensures that the process met due process requirements, seeks additional evidence if necessary, and distributes a copy of the written findings and decision to all parties. This process requires adherence to strict timeline and notification requirements.

²¹ Variances to the fire code are similar to equivalencies to the building code.

²² Minnesota Fire Marshal Code Advisory Panel, File #97-047-V, January 6, 1998.

**City officials
enforce the
building code
in state-owned
buildings in
St. Paul.**

- **Although having the Department of Administration responsible for both enforcing the building code and managing state building construction creates the potential for a conflict of interest, the Building Codes and Standards Division has taken steps to avoid problems.**

Critics frequently cite the State Office Building remodeling project in the mid-1980s to illustrate possible conflicts of interest within the Department of Administration. In our view, this project suffered from a variety of problems including the department's failure to adequately scope the project before obtaining bids and an overly optimistic construction schedule. However, these problems were not the product of actions by the Building Codes and Standards Division resulting from undue influence. In fact, the St. Paul building official was responsible for both plan review and inspection for the State Office Building remodeling project. The Department of Administration has generally transferred the enforcement responsibility for state buildings to local municipalities as much as possible, especially the more costly state buildings. This is especially true in St. Paul, where the city building official handles code enforcement for those buildings in which the Department of Administration has jurisdiction, including those in the Capitol complex. We think that this practice is appropriate and, combined with good communication with the construction division, helps reduce or eliminate negative perceptions about possible conflicts. However, the potential for a conflict of interest clearly exists and the current organizational structure allows others to repeatedly raise it as an issue.

SUMMARY

Overall, we found that responsibility for developing and adopting the building code is divided among various state agencies. Complex lines of authority and poor coordination have often led to delays and frustration. We found that these problems have been especially characteristic of the relationship between the departments of Administration and Public Safety.

Likewise, state building code enforcement is complex. Several state agencies and many local municipalities share enforcement responsibilities, depending on the specific code provision, type of building, and its geographic location. Again, we found that poor coordination between the departments of Administration and Public Safety has caused problems which, although generally resolved, have created tension and ill will. In addition, the Department of Administration has little authority over local building officials and little information about local enforcement activities.

Options for Change

CHAPTER 3

In previous chapters we documented the current organization of building code administration and identified weaknesses in how the code is administered. This chapter discusses how other states administer their building and fire codes and presents options for possible changes to code administration in Minnesota. Specifically, we addressed the following questions:

- **How do other states adopt, organize, and administer their codes?**
- **What are the organizational alternatives for administering the Minnesota building code?**

To answer our research questions, we first reviewed the literature on state building codes across the nation, including the 1998 *Directory of Building Codes and Regulations State Directory*, published by the National Conference of States on Building Codes and Standards, Inc. Based on information from this directory, we conducted phone interviews with building officials in 11 states that enforce a code similar to the Minnesota building code. Finally, we contacted 45 interest groups that represent various aspects of the building and design industry in Minnesota.

Overall, we found that Minnesota administers the state building code somewhat differently than most states. Minnesota has five agencies responsible for administering its building and fire codes while a majority of states have only one or two agencies responsible for these codes. In addition, Minnesota is organized by program, in that responsibility for the building code is divided by code provision. Many other states with only one or two code-administering agencies organize the administration of their state codes by function where, for example, one office is responsible for plan review for all code provisions. Finally, Minnesota does not currently have an accessible and effective state-level building code appeals mechanism short of the contested case procedure. Several other states have an intermediate structure, which is timely and effective for hearing appeals at the state level.

In this chapter we present several options that may help improve the administration of the state building code. We discuss the advantages and disadvantages of five alternatives, ranging from maintaining the status quo to centralizing all building and fire code activities in one agency. We recommend that the Legislature consider implementing some procedural changes that may help promote more consistent code enforcement and help code-administering agencies better coordinate their activities.

OTHER STATES

We examined how other states organize their building and fire codes.

To gather information on how other states administer their building code, we reviewed the 1998 *Directory of Building Codes and Regulations State Directory*.¹ This directory provides data on which code provisions each state enforces, in which buildings the code is applied, whether local jurisdictions are permitted to amend the state code, and whether state or local authorities enforce the code.

We contacted those states that base the majority of their building code on model codes, apply a majority of the code provisions to all buildings except possibly agricultural buildings, have local authorities responsible for at least some of the enforcement, and either do not permit any local amendments or only permit amendments that are more stringent than the state code. We contacted 11 of the 16 states that met these criteria: Arkansas, California, Connecticut, Kentucky, Michigan, Nevada, New Jersey, Rhode Island, Virginia, Washington, and West Virginia. We also spoke with agency staff in Iowa and Wisconsin.

Finally, we contacted 45 organizations that represent the primary interest groups of the building and design industry in Minnesota. We gathered their perceptions regarding the administration and effectiveness of the Minnesota state building code. We requested the names and addresses of interest groups from the six state agencies involved in administering the state building code and related codes: the departments of Administration, Public Safety, Health, Public Service, and Labor and Industry, and the State Board of Electricity.

Overview of Code Provisions

This chapter focuses primarily on six of the major code provisions that make up part of the Minnesota building code. As presented in Figure 3.1, we found that:

- **Many states, including Minnesota, have building codes that contain six core provisions: construction, electrical, fire protection, life safety, mechanical, and plumbing.**²

Specifically, Minnesota and 21 other states enforce these 6 types of provisions. Fourteen states enforce all but the life safety code provisions, while 14 states enforce some combination of these provisions. Of the 22 states that enforce all of these provisions, only 5, including Minnesota, apply them to all buildings except possibly agricultural structures.³

¹ National Conferences of States on Building Codes and Standards, Inc., *Directory of Building Codes and Regulations State Directory* (Herndon, Virginia: 1998).

² As noted in Chapters 1 and 2, there is no specific chapter for the fire protection and life safety provisions, instead they are scattered throughout the building code's construction code provisions and the state fire code.

³ National Conferences of States on Building Codes and Standards, Inc., *Directory*.

Figure 3.1: State Building and Fire Code Provisions Enacted in Each State

<u>Construction, Electrical, Fire Protection, Life Safety, Mechanical, and Plumbing</u>	<u>Construction, Electrical, Fire Protection, Mechanical, and Plumbing</u>	<u>Other Combinations</u>
Alabama	Alaska	Arizona
Arkansas	California	Colorado
Florida	Indiana	Connecticut
Georgia	Massachusetts	Delaware
Idaho	Michigan	Hawaii
Iowa	Montana	Illinois
Kansas	New Jersey	Louisiana
Kentucky	North Carolina	Maine
Maryland	Ohio	Missouri
MINNESOTA	Oregon	Nebraska
Mississippi	South Carolina	New Hampshire
Nevada	Virginia	Pennsylvania
New Mexico	Washington	Texas
New York	Wisconsin	Wyoming
North Dakota		
Oklahoma		
Rhode Island		
South Dakota		
Tennessee		
Utah		
Vermont		
West Virginia		

SOURCE: National Conferences of States on Building Codes and Standards, Inc., *Directory of Building Codes and Regulations State Directory* (Herndon, Virginia: 1998).

For each of these code provisions, states can adopt a model code developed by national groups, amend a model code, or develop their own homegrown code. As noted previously, Minnesota uses a model code for its electrical code provisions, amends model codes for its construction and mechanical code provisions, and enforces state-written plumbing code provisions. We found that:

- **Most states adopt model codes in some form, either as written or amended, as the technical basis for their state building code.**

That is, 41 states, including Minnesota, use a model code as the basis for their construction code provisions. As discussed in Chapter 1, many states have adopted the *Uniform Building Code* as the model code for their state building code. Similarly, 26 states, including Minnesota, have adopted the model *National Electrical Code* without amendments as their state electrical code. The only

noticeable exception to adopting model codes is state plumbing codes where nine states, including Minnesota, utilize state-written codes.⁴

Although states may amend model codes, they have different rules regarding local amendments of their building code:

- **Minnesota and seven other states do not permit local jurisdictions to amend any portion of their building code.**⁵

However, nine states, including Arkansas, Tennessee, and Washington, permit local jurisdictions to make more stringent amendments to all code provisions. Eleven states, including Maryland, South Dakota, and Wisconsin, permit amendments to some code provisions (most frequently the electrical provisions), but not others. Still others require state approval for amendments made to their building code. For example, California permits local jurisdictions to amend the state building code when they can provide topographical, geological, or climatic justification for the change.⁶

Organizational Structure

We found that states delegate administrative responsibility for their building and fire codes to a number of different agencies. Some states place all of the authority for these codes in one department, often their fire prevention, housing, or commerce agency. Several other states divide the authority for administering their building and fire codes between two state offices, typically a building codes division and a fire marshal's office. As illustrated in Figure 3.2, states may have 5 or more agencies responsible for their state building and fire codes; 28 states have only 1 or 2 agencies administering these codes. However:

- **Compared with other states, Minnesota is at the far end of the organizational spectrum with five agencies having responsibility for administering provisions of the building and fire codes.**⁷

As discussed in Chapter 2, Minnesota assigns the responsibility for its building and fire codes to five agencies by *program*: responsibility for the code is allocated by code provision. For example, the Minnesota Department of Health is responsible for developing and enforcing plumbing code provisions. Likewise, the State Board of Electricity is responsible for developing and enforcing the electrical code provisions. Several states, including Arkansas, North Dakota, and South Dakota, are also organized by program and have separate state agencies

Unlike Minnesota, most states have only one or two code-administering agencies.

⁴ *Ibid.*

⁵ *Ibid.* As discussed in Chapter 1, the Minnesota electrical code permits local jurisdictions to make more stringent amendments. The extent to which such amendments are made is unclear, as is the extent to which they conflict with the state building code.

⁶ *Ibid.* and Mr. Stan Nishimura, California Building Standards Commission, interview by author, Telephone conversation, Sacramento, California, September 14, 1998.

⁷ The departments of Administration, Health, and Public Service and the State Board of Electricity have responsibility for administering the state building code. The Department of Public Safety is responsible for administering the state fire code.

Figure 3.2: Number of Departments Administering the Building and Fire Codes in Each State

<u>One Department</u>	<u>Two Departments</u>	<u>Three Departments</u>	<u>Four Departments</u>	<u>Five or More Departments</u>
Colorado	Florida	Alabama	Arizona	California
Connecticut	Georgia	Alaska	Arkansas	Maine
Indiana	Idaho	Delaware	Hawaii	Maryland
Iowa	Louisiana	Illinois	Massachusetts	MINNESOTA
Kentucky	Montana	Kansas	Mississippi	New Hampshire
Michigan	New Mexico	Missouri	Nebraska	
New Jersey	Oklahoma	Pennsylvania	Nevada	
New York	Oregon	South Dakota	North Dakota	
North Carolina	Rhode Island	Texas		
Ohio	South Carolina			
Vermont	Tennessee			
Virginia	Utah			
West Virginia	Washington			
Wisconsin				
Wyoming				

SOURCE: National Conferences of States on Building Codes and Standards, Inc., *Directory of Building Codes and Regulations State Directory* (Herndon, Virginia: 1998).

responsible for the electrical, fire, and plumbing provisions of their building code.⁸ Michigan, which has only one state agency responsible for administering its building code, is also organized by program. Within the Michigan Department of Consumer and Industry Services, Bureau of Construction Codes, are the building, electrical, elevator and boiler, mechanical, and plumbing divisions. Each division is responsible for administering its respective code provisions, including code development, plan review, and enforcement.⁹

In contrast, we found that several states with only one or two code-administering agencies organize internally by *function* rather than program. Wisconsin provides the best example of this type of organizational structure. The Wisconsin Division of Safety and Buildings, located within the Department of Commerce, is divided into three bureaus: plan review, inspection and field operations, and program development, including code development and budgeting. Each bureau is responsible for its designated function for all code provisions. For example, the plan review bureau reviews building plans to ensure that they comply with the construction, electrical, fire, mechanical, and plumbing code provisions.

Wisconsin found that organizing by function improved its administration of the building code in many ways. First, and most importantly, one division is responsible for developing the entire code. Centralizing code development helps

⁸ National Conference of States on Building Codes and Standards, Inc., *Directory*.

⁹ Mr. Irvin J. Poke, Chief, Building Division, Michigan Department of Consumer and Industry Services, Bureau of Construction Codes, interview by author, Telephone conversation, Okemos, Michigan, August 19, 1998.

ensure that code provisions are consistent with one another and do not contain conflicting requirements. Second, this structure reduces duplication of tasks. Plans are reviewed once with respect to all code requirements, thus ensuring that builders receive complete information regarding all requirements for their project. Similarly, inspections are done with respect to all codes, ensuring that builders do not receive mixed messages regarding the compliance of their building.

Finally, organizing by function enables the divisions to easily share information and procedures. Wisconsin has identified “best practice” procedures to be used for each function across all code provisions. For example, Wisconsin has standardized procedures for code development, plan review, enforcement, and licensing, thus ensuring that clients receive consistent and effective service.¹⁰

Code Enforcement

As illustrated in Figure 3.3, we learned that states delegate building code enforcement authority in several different ways. States may retain all enforcement authority at the state level; they may delegate all enforcement authority to local jurisdictions; they may have state and local officials share enforcement responsibilities; or they may divide enforcement authority based on specific code provisions or building types. However:

- **Many states have both state and local officials enforce all provisions of their building code.¹¹**

Minnesota and 14 other states have both state and local officials enforce all provisions of their building code. Seven states have only state officials enforcing the code. Ten other states use only local officials and 10 more assign enforcement authority by code provision. For example, Maryland has only local officials enforce its construction code provisions, only state officials enforce its mechanical code provisions (which only apply to state-owned, leased, operated, or controlled buildings), and state or local officials enforce its electrical and plumbing provisions. Similarly, South Dakota has only state officials enforce its construction and mechanical code provisions (which only apply to specific buildings) and state or local officials enforce its electrical and plumbing code provisions. Most states that have only state officials enforcing the code, such as Alabama, Colorado, and Missouri, narrowly apply their building code only to state-owned facilities and other specified buildings.¹²

There are several different ways for states to share code enforcement authority between state and local officials. As discussed in Chapter 2, the Minnesota Department of Administration is responsible for enforcing the code in certain

States delegate building code enforcement authority differently.

¹⁰ Mr. Randy Baldwin, Director, Bureau of Integrated Services, Wisconsin Department of Commerce, Safety and Buildings Division, interview by author, Telephone conversation, Madison, Wisconsin, August 14, 1998.

¹¹ National Conference of States on Building Codes and Standards, Inc., *Directory*.

¹² *Ibid.*

Minnesota uses state and local officials to enforce the building code.

Figure 3.3: Enforcement of Construction, Electrical, Mechanical, and Plumbing Code Provisions in Each State

<u>State Enforcement</u>	<u>Local Enforcement</u>	<u>State and Local Enforcement</u>	<u>Enforcement Varies by Provision</u>	<u>Other</u>
Alabama	Connecticut	California	Alaska	Arizona
Colorado	Florida	Indiana	Arkansas	Delaware
Kansas	Georgia	Iowa	Idaho	Hawaii
Mississippi	Louisiana	Kentucky	Maryland	Illinois
Missouri	Massachusetts	Michigan	Nevada	Maine
Oklahoma	New York	MINNESOTA	New Hampshire	Nebraska
South Carolina	North Dakota	Montana	South Dakota	Pennsylvania
	Rhode Island	New Jersey	Tennessee	Texas
	Utah	New Mexico	Washington	
	Virginia	North Carolina	West Virginia	
		Ohio		
		Oregon		
		Vermont		
		Wisconsin		
		Wyoming		

SOURCE: National Conferences of States on Building Codes and Standards, Inc., *Directory of Building Codes and Regulations State Directory* (Herndon, Virginia: 1998).

public buildings; local building officials are responsible for enforcing the code in all other buildings in code-adopting jurisdictions.¹³ In Wisconsin, where the construction and mechanical code provisions only apply to specific buildings, all code enforcement authority ultimately rests with the state. However, the Wisconsin Inspection and Field Operations Bureau can delegate enforcement authority to local officials who have demonstrated the ability to conduct plan reviews and inspections. In Michigan, the Bureau of Construction Codes is the primary code enforcing agency. However, local jurisdictions can exempt themselves from state enforcement by adopting a code other than the state code or by enforcing the state construction code themselves.¹⁴

In contrast, Virginia has only local officials enforcing the state building code. Local jurisdictions in Virginia are required by law to have a building code department and enforce the building code. Some smaller jurisdictions have joined together to share these code enforcement responsibilities.¹⁵

¹³ Some local building officials in Minnesota also accept responsibility for enforcing the code in certain public buildings.

¹⁴ Baldwin, Telephone conversation, August 14, 1998; and Poke, Telephone conversation, August 19, 1998.

¹⁵ Mr. Norman Crumpton, Associate Director, Virginia Department of Housing and Community Development, Division of Building and Fire Regulation, interview by author, Telephone conversation, Richmond, Virginia, August 19, 1998.

Consistency of Code Interpretations

As discussed in Chapter 2, code requirements in Minnesota can be interpreted differently by building officials in different jurisdictions. A majority of the states that we spoke with also had problems with consistency of code interpretations. Although some states did not take an active role in promoting consistent interpretations, others had state-level programs or the statutory authority to encourage consistency.

For example, both Connecticut and Virginia, like Minnesota, emphasize educational and certification programs to promote consistency among local building officials and inspectors.¹⁶ New Jersey appears to have fewer problems with inconsistent enforcement than other states. New Jersey statutes give the state direct oversight of local enforcement officials and the power to discipline and remove officials that are not appropriately enforcing the code. Furthermore, the state has the authority to issue binding interpretations, which local officials must enforce, that help to quickly resolve problems when they arise.¹⁷

Appeals Process

Some states have more appeals processes than Minnesota.

We found that most of the states that we contacted have several mechanisms to handle appeals of building code decisions. As discussed in Chapter 2, the first step in an appeals process is usually to a local board of appeals. This board, comprised of qualified people, has the power to hear appeals of local decisions and issue binding rulings. Opportunities to appeal decisions made by these local boards vary by state. As discussed in Chapter 2, if builders want to appeal a decision made by a local board of appeals in Minnesota, their only option is to take it to the Commissioner of Administration as a contested case.

In contrast, Michigan has given state-level dispute resolution authority to the State Code Commission. This commission, comprised of representatives of various building code interest groups (plumbers, electricians, building officials, fire marshal representatives, home builders, contractors, and engineers, among others), is a 17-member panel that has the power to hear and resolve appeals regarding the state building code.

The first step of a state-level appeal in Michigan is to go before the “panel of three,” a panel comprised of three members of the State Code Commission. The three people are selected to achieve a balance of interests, generally a contractor, a building official, and an architect or engineer, and is dependent upon availability. The panel of three has the authority to issue a binding decision on an appeal. If the parties involved are still not satisfied with the result, they can appeal the

¹⁶ Mr. Christopher Laux, State Building Inspector, Connecticut Department of Public Safety, Division of Fire, Emergency, and Building Services, Office of the State Building Inspector, interview by author, Telephone conversation, Middletown, Connecticut, August 21, 1998; and Crumpton, Telephone conversation, August 19, 1998.

¹⁷ Mr. William Connolly, Director, New Jersey Department of Community Affairs, Division of Codes and Standards, interview by author, Telephone conversation, Trenton, New Jersey, August 28, 1998.

panel's decision to the entire commission. The State Code Commission will then hear and resolve the appeal. If the parties involved are not satisfied with the commission's decision, their only remaining option is to go to court.¹⁸

Kentucky has an appeals panel similar to Michigan's, comprised of five members of its Board of Housing.¹⁹ Connecticut also has a similar panel of three comprised of three members of its Codes and Standards Committee. Individuals in Connecticut who want to appeal a local decision must first go through their local board of appeals. If they are not satisfied with the local resolution, they may appeal the decision to the state building inspector who has the authority to make a binding decision. If the parties are still not satisfied, they may appeal to the panel of three, and then finally to superior court.²⁰

ALTERNATIVES FOR MINNESOTA

Building code administration in Minnesota is complex and fragmented.

As we discussed in Chapter 2, the current structure for administering the Minnesota building code is complex and fragmented. In addition, we found problems of poor coordination between some agencies as well as complex lines of authority for code promulgation and enforcement. We also found other minor problems including complications when adopting codes and inconsistencies among code provisions. These problems are not unique to Minnesota. In particular, there are problems nationally with coordination between building code and fire code agencies and officials. Various states have found different ways to resolve these problems including Memorandums of Understanding between the relevant agencies and giving one code official ultimate authority.²¹ The different philosophies of building and fire organizations have also had to be reconciled when developing national model codes.

In addition, there appears to be some discontent with the current code administration structure in Minnesota. Most interest group organizations we contacted indicated that there was room for improvement in the code adoption process. Furthermore, a number of organizations indicated that codes and code-administering agencies should be better coordinated to ensure code compatibility. Finally, as discussed in the previous section, Minnesota administers the state building and fire codes differently than most other states. Minnesota has five agencies responsible for administering these codes while a majority of states have only one or two. In addition, many of the states with only one or two code-administering agencies are organized internally by function rather than program, which helps to increase coordination of code provisions.

¹⁸ Poke, Telephone conversation, August 19, 1998.

¹⁹ Mr. Jack Rhody, Director, Division of Building Code Enforcement, Kentucky Department of Housing, Buildings, and Construction, interview by author, Telephone conversation, Frankfort, Kentucky, September 10, 1998.

²⁰ Laux, Telephone conversation, August 21, 1998.

²¹ State of Montana Legislative Audit Division, *Administration and Enforcement of State Building Codes in Montana* (Helena, Montana: 1997), 59; Connolly, Telephone conversation, August 28, 1998; and Crumpton, Telephone conversation, August 19, 1998.

Given these problems with current code administration, the Legislature could make several changes to current processes or to the organizational structure itself that might help make administering the building code more effective, timely, and coordinated. The remainder of this chapter presents a range of alternatives that could improve administration of the building code. As illustrated in Figure 3.4, possible alternatives range from making no changes and maintaining the status quo to completely centralizing all agencies that are responsible for administering provisions of the state building and fire codes. We discuss each of these five alternatives in the remainder of this chapter.

Status Quo

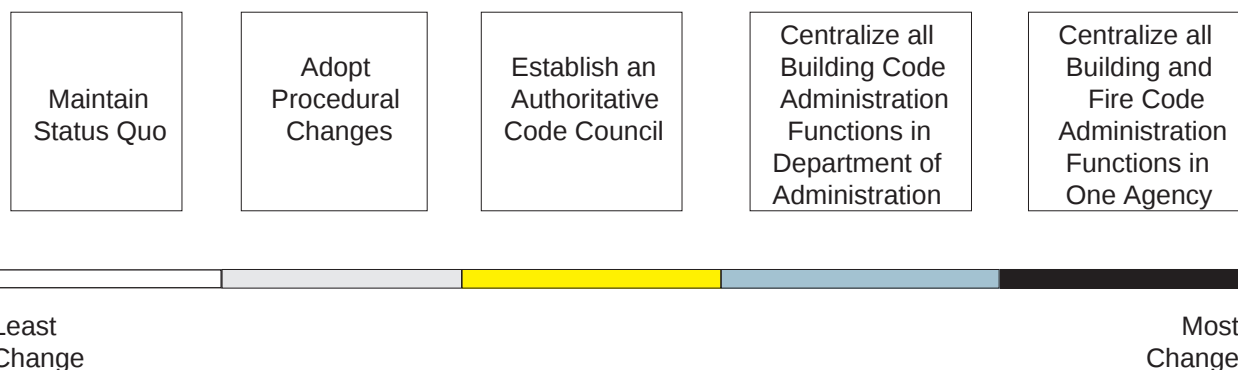
The Legislature could simply maintain the status quo or adopt some procedural changes.

Although maintaining the status quo will not address the problems we have identified throughout this report, it requires the least amount of change. The current system may be flawed, but agency staff do their best to resolve problems and enforce the code. Furthermore, since we did not examine local enforcement of the building code, we do not know the extent to which the current code administration process has created problems for builders or local officials. We do know that the status quo has created problems with coordination among agencies, but the disputed issues have all, eventually, been resolved.

Procedural Changes

Procedural changes represent a departure from the status quo, but do not require any comprehensive structural changes. They are improvements that can be made to the processes used to administer the building code. Procedural changes have advantages in that they require little change to the current structure and they may help to resolve many of the coordination problems that we found among the code-administering agencies. On the other hand, procedural changes do not solve all of the problems discussed in Chapter 2, and they may require significantly more effort on the part of code-administering agencies than the status quo. We have identified five procedural changes that the Legislature may want to consider:

Figure 3.4: Continuum of Alternatives for Administering the State Building Code



SOURCE: Office of the Legislative Auditor.

1. Giving the Department of Administration rather than the Department of Public Service the authority to adopt the energy provisions of the building code.
2. Giving the Department of Administration the authority to require local building officials to accept building code equivalencies under certain conditions.
3. Establishing a building code appeals process similar to the fire code appeals process.
4. Requiring both building and fire officials to give written approval of certain equivalencies when first proposed, and all building permits and certificates of occupancy.
5. Requiring state building and fire officials to jointly approve the overlapping portions of each other's proposed codes.

Each of these procedural changes is briefly discussed below.

Giving the Department of Administration the authority to adopt the energy provisions of the building code

Currently, the Department of Public Service is the only agency besides the Department of Administration with the responsibility for adopting provisions of the state building code. As discussed in Chapter 2, the lack of coordination between the departments of Public Service and Administration when developing the energy and mechanical code provisions has caused several problems between these two provisions and has delayed the ultimate adoption of both sets of provisions. To promote coordination between these two departments and to give the Department of Administration complete authority for adopting all provisions of the Minnesota building code:

- **The Legislature could give the Department of Administration rather than the Department of Public Service the authority to adopt the energy provisions of the building code.**

By giving the Department of Administration the authority to adopt the energy code provisions, the departments of Administration and Public Service would be required to coordinate their code promulgating activities at an earlier stage and reduce the possibility of code conflicts. This should help make it easier for building officials to enforce the code's energy provisions. This change would not require any organizational restructuring, nor would it re-align any state agencies. Under this procedural change, the Department of Public Service, with its technical expertise, would still be responsible for developing the energy code provisions; only adoption authority would transfer to the Department of Administration. However, due to the overlap of the mechanical and energy code provisions, it would be important for the Department of Administration to be actively involved in developing the energy code provisions with the Department of Public Service. Likewise, it would be important for the Department of Administration to formally involve the Department of Public Service in developing the code's mechanical

Code consistency would be improved if the Department of Administration adopted the energy provisions.

provisions. Since the departments of Administration and Public Service would be sharing responsibility for promulgating the energy provisions, they could resolve inconsistencies between the energy and other code provisions prior to adoption. With this procedural option, it is less likely that the two departments would have to re-open their rulemaking processes as they are currently doing. Also, this arrangement would be more consistent with how the plumbing and electrical provisions of the state building code are currently developed and adopted.

Requiring local officials to accept building code equivalencies

Often, builders and design professionals do not have the time or ability to formally appeal a local decision, yet they require some additional guidance from the state. In addition, as discussed in Chapter 2, equivalencies are local decisions that may not be available to everyone across the state. To provide a more accessible and timely route to code enforcement decisions, and a more uniform code across the state:

- **The Legislature could give the Department of Administration the authority to require local building officials to accept building code equivalencies under certain conditions.**

For example, the Department of Administration could require a local building official to accept a building code equivalency when:

- another municipality has accepted the equivalency, as long as it complies with the state building code;
- a state-level appeals board has approved the equivalency; or
- a model code organization has approved the equivalency.

In addition, the Department of Administration could determine if an accepted equivalency is appropriate and complies with the state building code. On the other hand, with this authority the department could not set precedent or require a local official to accept an equivalency that has not previously been approved. Similarly, with this authority the Department of Administration could not issue binding code interpretations. This procedural option would require little change to the infrastructure of the department, but would provide a degree of state-level assistance that does not formally exist under the current code administration system. Furthermore, it may enhance the department's supervisory authority over local officials. Several other states, including Connecticut, Iowa, and Rhode Island, give their state building official similar authority.²²

22 Laux, Telephone conversation, August 21, 1998; Mr. Roy Marshall, State Building Code Commissioner, Iowa Department of the State Fire Marshal, State Building Code Bureau, interview by author, Telephone conversation, Des Moines, Iowa, August 14, 1998; and Mr. Joseph Cirillo, Commissioner, Rhode Island State Building Commission, interview by author, Telephone conversation, Providence, Rhode Island, August 31, 1998.

This procedural option would help increase uniformity in code enforcement across the state. As mentioned in Chapter 2, the Department of Administration currently participates on the Minnesota Uniformity Committee which meets annually to approve and publish a list of code interpretations that are not binding on building officials. In contrast, this procedural option would enable the Department of Administration to have binding authority regarding these equivalencies and it would be available year round, not simply at an annual meeting as with the uniformity committee.

Establishing a building code appeals process

As discussed in Chapter 2, the State Fire Marshal Division currently has an accessible and intermediate state-level appeals mechanism that the Department of Administration's Building Codes and Standards Division does not have. Therefore:

- **The Legislature could establish a building code appeals process similar to the fire code appeals process.**

This change would require appointing a state building code appeals board which has the authority to hear appeals of decisions made by the local boards of appeals as well as equivalency decisions made by the Department of Administration. The appeals board could have the authority to make binding decisions regarding appeals and interpretations. The appeals board could also have the authority to set precedent regarding acceptable code equivalencies and interpretations.

A more accessible appeals process could be created.

We suggest that the composition of this board, if created, should adhere to one of the following three models: (1) comprised entirely of industry representatives, (2) comprised entirely of staff from the agencies that administer the state building code, or (3) comprised of a combination of industry representatives and agency staff.

Finally, we suggest that, if the Legislature authorizes a building code appeals board, it should follow the models of Michigan, Kentucky, and Connecticut by permitting a subcommittee of the board to convene and hear appeals on a monthly (or more frequent) basis. As with Michigan and Connecticut, Minnesota could give a "panel of three," selected from the entire appeals board, the authority to hear and resolve appeals. The three members could be selected on the basis of expertise relevant to the topic of the appeal or interpretation, availability, and willingness to serve. Parties that are not satisfied with the panel's decision could appeal to the entire appeals board.

This procedural option would provide a more accessible state-level building code appeals system. Although there are currently few building code appeals in Minnesota, organizations we contacted indicated that this is often due to the time involved in appealing a local building official's decision. A state-level appeals board that could meet and resolve issues more quickly may help to ensure that the building code is being interpreted and enforced consistently across the state. However, this procedural change would require appointing a board, with the appropriate expertise and support staff, that would be available to meet on a regular basis to hear and decide appeals.

The Legislature could require more coordination between building and fire officials.**Requiring written approval for certain equivalencies and all building permits and certificates of occupancy**

As discussed in Chapters 1 and 2, although the building official is chiefly responsible for a building during the construction phase, the fire official is chiefly responsible for the building once it is occupied. Under the current code administration procedures, a building must undergo several inspections and satisfy interpretations of both the building and fire codes. In addition, the fire official is often not informed of equivalencies granted by the building official even when these decisions concern overlapping portions of the building and fire codes. This can lead to misunderstandings, unnecessary correction orders, and delays.

To simplify the process for builders and design professionals, both building and fire officials should be involved during the planning and construction phases to ensure that both codes are satisfied. To accomplish this:

- **The Legislature could require that the responsible building and fire officials arrive at an agreement and give their mutual written approval for all building permits and proposed equivalencies regarding the overlapping portions of their codes, as well as all certificates of occupancy.**

This change would require coordination between the two officials and would ensure that both the building and fire officials are involved throughout the code enforcement process. Just as the “Truth in Housing” law requires homeowners to disclose any problems with their house prior to selling it, this procedural option would require state and local building officials to disclose certain equivalencies proposed during plan review or inspections prior to issuing a certificate of occupancy. Any equivalencies regarding the overlapping portions of the building and fire codes would be communicated to fire officials as soon as they are proposed.

Building and fire officials would also be encouraged to come to a mutual agreement and give written approval for building permits in those areas that involve the overlapping portions of the two codes. Requiring the two code officials to coordinate and agree on overlapping code requirements early in the construction process should reduce the number of conflicts and differing interpretations that have caused problems in the past. Finally, if the building and fire officials have both given written approval for the building permits and certain proposed equivalencies, written approval of the certificate of occupancy should be no more than a formality.

To implement an approval process, the departments of Administration and Public Safety, as well as municipalities, would need to employ a timely and effective mechanism to communicate and respond to proposed equivalencies and building permits that involve the overlapping portions of the building and fire codes.

**Administrative
law judges
could help
resolve
disputes.**

Oregon uses a method that could work in Minnesota in which the deputy state fire marshals provide plan review input. The deputy state fire marshals are allowed up to 10 working days to provide input; extensions can be granted for more complicated projects.²³

In order for this joint written approval process to be feasible, there also needs to be a mechanism to resolve disagreements between the building and fire officials. We recommend that, if the building and fire officials are unable to resolve their differences within a reasonable amount of time, they must present their cases to a state administrative law judge who will mediate the conflict and help the officials come to a mutual agreement. If a compromise cannot be achieved, the administrative law judge should have the authority to render a binding decision. According to staff in the Office of Administrative Hearings, administrative law judges frequently resolve disputes state agencies or local municipalities may have. In addition, the costs of using an administrative law judge should be shared by both public agencies and not the developer, regardless of the outcome.

Similar to Oregon's process, we think that 10 working days should be sufficient for the building and fire officials to work together to come to a mutual agreement on the permits or proposed equivalencies. During this time, if the local officials are unable to resolve the conflicts between themselves, they could jointly meet with staff from the Department of Administration's Building Codes and Standards Division and the Department of Public Safety's State Fire Marshal Division to help them reach a solution. Staff from these state offices could form a "resolution panel" and work to help local building and fire officials resolve their conflicts. Regardless of whether local officials use the resolution panel, if the two officials are unable to come to an agreement after 10 working days, we think the process should be elevated to an administrative law judge with the authority to mediate, and ultimately resolve, the conflict.

Rhode Island uses a similar joint approval mechanism to coordinate activities between the building and fire code divisions. For example, the local fire official must sign off on all building permits and certificates of occupancy. Furthermore, the plan reviewer from the Fire Marshal's Office works out of the State Building Commission's office several days per week. Having this coordination between the two offices at the start of projects helps to alleviate problems down the road. Any conflicts between the two Rhode Island codes that are not resolved by the building and fire officials must be heard by both their State Fire Code Board of Appeals and their Building Code Standards Committee. If these two boards disagree, the builder must comply with the most restrictive requirements or appeal the decision to court.²⁴

Implementing this change would require some statutory clarification; there is currently some language regarding the responsibility and authority of the state building official to supervise the fire marshal inspecting buildings for compliance

²³ Oregon Senate (1995) S.B. no. 498.

²⁴ Cirillo, Telephone conversation, August 31, 1998.

with the fire code in certain public buildings.²⁵ This change would also require the building-fire relationship to be more of a partnership than currently exists. In addition, it is not clear how this change would affect local enforcement; joint written approval may represent increased costs to state or local government. However, some cities such as St. Paul currently have a high level of coordination between the city's building and fire officials that appears to be effective. St. Paul fire officials usually accompany the building official on inspections and fire officials issue the certificates of occupancy, based on the recommendations of the local building official.

As fire officials inspect existing buildings, they often grant variances for fire code provisions that overlap with the building code. Variances are similar to equivalencies in that they allow building owners to comply with fire code requirements in diverse ways. Because both building and fire officials have responsibility for maintaining existing structures and ensuring that they comply with the building and fire codes, it might be reasonable to require that the responsible building and fire officials also mutually agree on all proposed variances regarding the overlapping portions of the two codes. Because our study focused on the building code and not the fire code, we did not examine the implications of such a requirement. Nevertheless, building and fire officials might want to work together to develop a joint approval system for variances that are related to the overlapping portions of the two codes.

Requiring joint written approval of the overlapping portions of codes

As discussed in Chapter 2, there have been conflicts between the state building and fire codes. These conflicts pose problems for builders who must comply with the building code to receive the certificate of occupancy, and then must also comply with the fire code on an ongoing basis. To ensure that the building and fire codes do not conflict with one another:

- **The Legislature could require that the departments of Administration and Public Safety approve the overlapping portions of each other's codes before they take effect.**

That is, before the new fire code could be formally adopted, the State Building Official would approve those portions that overlap with the building code. Similarly, before the new building code could be adopted, the State Fire Marshal would approve those portions that overlap with the state fire code. The level of coordination embodied in this change would compel these departments to work more closely together and come to agreement on code requirements prior to formally adopting these codes.

As part of this procedural change, the departments of Administration and Public Safety could work to have the building and fire codes take effect at the same time. This would reduce conflicts between the two codes due to timing issues and referencing out-of-date materials. This change would also result in two codes that are complimentary and consistent with one another. Some interest groups also

²⁵ Minn. Stat. §16B.61, subd. 2.

Joint code development could help prevent future conflicts.

support joint development of the building and fire codes. The Minnesota State Fire Chiefs' Association passed a resolution in 1997 stating that "...the Minnesota State Fire Chiefs' Association believes that the Minnesota Uniform Fire Code and the Minnesota State Building Code should be adopted concurrently and be coordinated and consistent with each other."²⁶ Likewise, some organizations representing Minnesota building officials passed similar resolutions.

This level of coordination on rules development between agencies is not unheard of in Minnesota state government. For example, according to Minnesota laws, the departments of Corrections and Human Services are supposed to "jointly adopt licensing and programming rules for the secure and nonsecure residential treatment facilities that they license and shall establish an advisory committee to develop these rules."²⁷

However, jointly developing the overlapping portions of the building and fire codes, or even approving each other's codes, would require significant effort on the part of the departments of Administration and Public Safety. Furthermore, it is possible that requiring joint code development or approval of the overlapping portions of the building and fire codes could delay code adoption. Without a structure in place to force agreement by both state building and fire officials, this procedural change could simply promote no additional code adoption. As with the previous procedural change, there would need to be a mechanism to resolve disagreements between the building and fire officials. We suggest that differences between the commissioners of Administration and Public Safety during code development be elevated to an administrative law judge with the authority to render a binding decision, or the Governor.

One Authoritative Code Council

A third option would create another level of government without substantially changing our current organizational arrangement:

- **The Legislature could establish an independent, authoritative council to help address problems related to administering the state building code.**

As shown in Figure 3.5, in addition to giving a council the authority to hear and resolve appeals as we previously discussed, the Legislature could authorize it to approve building code amendments and to coordinate the activities of the various state agencies that administer building code provisions and other related codes. Specifically, its duties could include any or all of the following: determining whether building code problems are interdepartmental in nature; coordinating interdepartmental activities regarding the building code and other related codes; approving proposed building code provisions; resolving conflicts among codes, agencies, and building officials; reviewing code-related legislative changes and

²⁶ Steve Zaccard, Code Committee Chair, Minnesota State Fire Chiefs' Association, to Fire Chief Jerry Rosendahl, President Minnesota State Fire Chiefs' Association, *Resolution*, May 17, 1997, Letter.

²⁷ *Minn. Laws* (1995), ch. 226, art. 3, sec. 60, subd. 1.

An authoritative code council could coordinate similar code activities among different agencies.

Figure 3.5: Possible Responsibilities for an Authoritative Building Code Council

- Resolving and hearing appeals;
- Determining whether building code problems are interdepartmental in nature;
- Coordinating interdepartmental activities regarding the building code and other related codes;
- Approving proposed building code provisions;
- Resolving conflicts among codes, agencies, and officials;
- Reviewing code-related legislative changes and reporting to the Governor on their merits; or
- Entering into agreements to enforce the building code.

SOURCE: Office of the Legislative Auditor.

reporting to the Governor on their merits; or entering into agreements to enforce the building code.

Several states use independent councils to assist with code development and enforcement. The California Building Standards Commission, an 11-member board appointed by the Governor, is responsible for: resolving conflict, duplication, and overlap in building standards; ensuring consistency in nomenclature and format in the code; and codifying and publishing all building standards of state agencies into one code. This commission also serves as the state-level appeals board.²⁸ However, to accomplish all of these tasks, the California commission has a full-time staff of eight people that are responsible for reviewing code changes submitted by other agencies. Furthermore, California has 17 agencies with some responsibility for code development; an outside coordinating body is almost a necessity to ensure that various code provisions are consistent with one another.²⁹

It should be noted that Minnesota already has a Construction Codes Advisory Council that was created by executive order in Spring 1996 to bring together industry, state, and local representatives to “discuss, debate and provide information on construction statutes, rules, standards, and licenses.”³⁰ Currently, the council is strictly advisory and has no authoritative responsibilities. However, in its *Calendar Year 1997 Progress Report*, the advisory council recommended

28 California Building Standards Commission, “California Building Standards Commission,” undated, URL <http://www.bsc.ca.gov/bsc/>, (September, 1998).

29 Nishimura, Telephone conversation, September 14, 1998.

30 Executive Order 96-7 (St. Paul, May 1996). In 1998 the Legislature created the council in statute and changed its name from the Governor’s Construction Codes Advisory Council to the Construction Codes Advisory Council. *Minn. Laws* (1998), ch. 366, sec. 28.

that it be created in statute as an authoritative council with responsibility for resolving code conflicts, coordinating code development and adoption, and establishing agreements between regulatory parties.³¹

Having an authoritative council oversee code development or enforcement activities could have several advantages. For instance, a council could provide simpler lines of authority than currently exist because one representative group, rather than several agencies, would make the final decision over building code issues.³² In general, having an authoritative council would require less organizational change than centralizing building and fire code activities, which we discuss later in this chapter.

On the other hand, depending on the amount of authority and responsibility that the Legislature gives it, an authoritative council might need full-time staff. As we noted in Chapter 2, promulgating the state building code and ensuring that its provisions do not conflict with one another or with related codes require considerable time and effort. If the council were to be responsible for code promulgation, they would probably require more staff than if they simply heard and resolved appeals.

To some extent, the council's composition might depend on the scope of its authority and responsibilities. The Legislature could require that the council be comprised of industry representatives only, state agency staff only, or a combination of the two. As its responsibilities increase, so too will demands on the council's time. It might be difficult to find industry representatives who are willing and able to commit the necessary amount of time to fulfill the council's responsibilities. Also, some people think that promulgating rules that govern public activities--such as the state building code--is an inherent governmental function and should not be delegated to individuals who are not directly accountable to the public. On the other hand, the council's role concerning code promulgation could be limited to resolving conflicts among code provisions where industry representatives may have useful insight and experience.

Centralizing Building and Fire Code Activities Within Two State Agencies

The options outlined previously address only some of the weaknesses that we identified in how the state administers its building code. Other problems related to complex lines of authority might be better addressed with more structural changes in how building and fire code activities are organized at the state level. Therefore:

31 Governor's Construction Codes Advisory Council, *Calendar Year 1997 Progress Report* (St. Paul, January 15, 1998). The council is currently developing recommendations in several broad areas including healthy homes, procedures to adopt the building code, the feasibility of adopting a statewide building code, and local governments' use of building construction fees.

32 Building code issues can always be resolved through the courts.

All building code activities could be centralized in the Department of Administration.

- **The Legislature could centralize all building code activities within the Department of Administration and require greater coordination between the departments of Administration and Public Safety.**

This option would give the Department of Administration complete administrative authority over the state building code, including promulgating all building code provisions and enforcing them in some public buildings. It would move the responsibility to develop and adopt the building code's energy provisions from the Department of Public Service to the Department of Administration. Likewise, it would move responsibility for developing and enforcing the plumbing and electrical code provisions from the Department of Health and the State Board of Electricity respectively to the Department of Administration. At the same time, state fire code responsibilities would remain within the Department of Public Safety. Possible options to help ensure coordination between the departments of Administration and Public Safety could include incorporating the joint approvals discussed earlier.

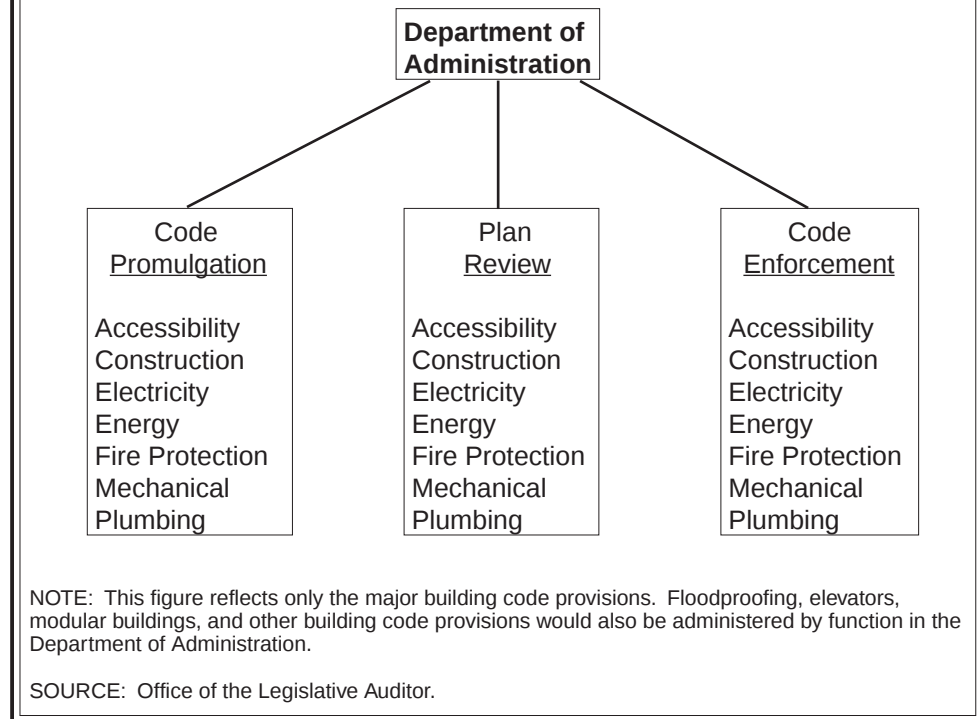
As we noted previously, Minnesota is one of only five states that have five or more agencies administering different aspects of their building and fire codes--28 states centralize responsibilities within one or two agencies. Most states that have two agencies administering these codes have that responsibility shared between their fire prevention and housing departments.

Rhode Island, which administers a state building code similar to Minnesota's, uses such an arrangement. Rhode Island's fire and building codes are administered by the State Fire Marshal and the State Building Commission. To help ensure that the two agencies work together, activities are coordinated. As mentioned previously, fire officials in Rhode Island must review plans and sign off on all building permits and certificates of occupancy. The plan reviewer from the Fire Marshal's Office actually works out of the State Building Commission's office two to three days a week. New Jersey also uses a similar approach where both building and fire officials must sign off on all certificates of occupancy.

As shown in Figure 3.6, if all building code activities were centralized within the Department of Administration, the department could organize itself by function rather than program. For example, the department's plan review staff could be responsible for ensuring that the public building plans that it reviews comply with all provisions of the building code, including construction, electrical, energy, fire protection, and plumbing. This type of arrangement provides more opportunities for ongoing coordination among staff with different program backgrounds but similar responsibilities. Several states that have one or two agencies that administer their building code, including Wisconsin, are organized internally by function.

Centralizing all building code activities within the Department of Administration, along with requiring that the departments of Administration and Public Safety give written approval of overlapping portions of each other's codes, related equivalencies, building permits, and certificates of occupancy, could help address some of the weaknesses that we noted in how the state building code is currently administered. It would simplify the lines of authority because fewer agencies would be responsible for similar building code activities. Also, centralizing

Figure 3.6: Centralize All Building Code Administrative Functions in the Department of Administration



Even with a single agency, coordination between building and fire officials would still be required.

building code activities would help improve internal coordination. For example, a centralized building code agency could develop uniform procedures that would make it easier for building officials and various inspectors to coordinate--or to at least be aware of--each other's activities.

Finally, this option would retain most of the "checks and balances" of our current administrative system that, while contentious at times, helps ensure that both building and fire officials balance the building code's various philosophies and goals: ensuring health and safety, providing uniformity, containing costs, and adhering to model codes. As we discussed earlier, fire and building professionals, both in Minnesota and nationally, emphasize different philosophies and priorities in code administration. Thus, there will always be some tension between fire and building officials that no amount of reorganization can completely address. The challenge is to help ensure that opportunities are available for both sides to express their professional opinions and reach agreement in a fair and inclusive manner. Although opportunities for disagreement between building and fire concerns would still exist, requiring greater coordination between the departments of Administration and Public Safety would result in the disagreeing parties addressing and hopefully resolving their mutual concerns much earlier in the process.

At the same time, centralizing all building code activities within the Department of Administration would have some drawbacks. As discussed in Chapter 2, most of the problems that we identified were the result of poor coordination between the departments of Administration and Public Safety. These problems might be best addressed not by structural changes, but by implementing the procedural options that we outlined earlier. We did not find the same degree of discord among the activities of the departments of Administration, Health, and Public Service and the State Board of Electricity. Moving the code-related activities of these agencies into the Department of Administration may be unnecessarily severe given the scope of the problem. Without compelling evidence that such a move would result in tangible benefits to the public, overcoming professional and agency resistance to changing “the way things have always been done” may not be worth the effort. In addition, moving all building code activities out of the departments of Health and Public Service and the State Board of Electricity might adversely affect other related programs that they manage. Finally, centralizing all building code activities within the Department of Administration does not address some policy makers’ concerns over having the same state agency responsible for both building construction and building code promulgation and enforcement and the resulting potential for a conflict of interest.

Centralizing Building and Fire Code Activities within One Agency

The fifth option for improving how the state administers the building code represents the most extensive change for state government. As shown in Figure 3.7:

- **The Legislature could centralize all building and fire code activities in one of three existing agencies--the departments of Administration, Public Safety, or Commerce--or it could create an entirely new agency.**

Some states centralize all building and fire code activities in a single agency.

This option goes beyond the previous alternative by requiring that one agency, instead of two, administers the state building and fire codes. As noted earlier, many states have just one agency administering these codes--usually their fire prevention, commerce, or housing agency. Complete centralization along with an internal organization driven by function rather than program, regardless of where these activities are located, would offer many advantages. It would provide a single line of authority because only one agency would be responsible for all

Figure 3.7: Options for Centralizing All Building and Fire Code Administrative Functions in One Agency

1. Department of Administration
2. Department of Public Safety
3. Department of Commerce
4. Create a New Agency

SOURCE: Office of the Legislative Auditor.

Centralizing all building and fire codes in one agency would simplify lines of authority.

building and fire code activities. Likewise, having the same agency promulgate all provisions of the building and fire codes would simplify and possibly shorten the code development and adoption process. As with the previous option, organizing that agency internally by function would help maximize internal coordination among staff from different program areas. It would also help ensure that the fire code activities of the State Fire Marshal's four public school inspectors, nine fire safety inspectors, and seven health care inspectors are coordinated with building code inspection activities, thereby reducing the opportunity for duplication, miscommunication, or conflict.

On the other hand, there are drawbacks to centralizing all building and fire code activities within one agency that may outweigh any benefits that might result. Our major concern is that this arrangement might reduce the current system of checks and balances that helps ensure that building and fire officials balance the building code's various philosophies and goals. Also, for reasons previously discussed, this option would be generally disruptive to all agencies involved, especially those that manage related programs and those that currently have good working relationships with one another.

Although centralizing all building and fire code activities within one agency might help rectify some of the weaknesses that we noted earlier, deciding in which organization to place such activities poses some problems. Overall, the various interest groups that we contacted did not express overwhelming support for moving building and fire code activities to any one agency. Below we present four possibilities and discuss the advantages and disadvantages of each.

Centralizing within the Department of Administration

The Legislature could centralize all building and fire code activities within the Department of Administration. This option would require moving the Department of Public Service's activities in promulgating the state's energy rules to the Department of Administration. The activities of the Department of Health and the State Board of Electricity related to developing and enforcing the building code's plumbing and electrical provisions respectively would likewise be moved to the Department of Administration. Finally, state fire code promulgation and enforcement activities would be moved to the Department of Administration.

Aside from the overall advantages and disadvantages to greater centralization that we have already discussed, centralizing all building and fire code activities within the Department of Administration has the additional benefit of being the least disruptive to the general public because the department has always been the state's lead agency on the building code. On the other hand, placing all fire code activities within the Department of Administration may influence staff developing and enforcing the fire code to more strongly emphasize cost issues rather than life safety concerns. Also, this option does not address some policy makers' concerns about a potential conflict of interest in having the Department of Administration responsible for both constructing state buildings and enforcing the state building code.

Centralizing within the Department of Public Safety

Instead of centralizing all building and fire code activities within the Department of Administration, the Legislature could locate these activities within the Department of Public Safety. As noted previously, many other states house their building and fire code activities within their fire prevention agency. This option has some advantages. The Department of Public Safety's mission--"To protect people and property in Minnesota through prevention, regulation, enforcement, information, and service"--is closely aligned with the overall goals and activities involved in administering the state building code. In addition, centralizing building and fire responsibilities within the Department of Public Safety could provide more building continuity since the State Fire Marshal has the responsibility to enforce fire and life safety provisions throughout the life of a building once the certificate of occupancy has been issued. Also, moving building code responsibilities from the Department of Administration to the Department of Public Safety would remove the potential conflict of interest involved in having the same state agency responsible for building construction and administering the state building code.

On the other hand, centralizing all Minnesota building code activities within the Department of Public Safety would require that the departments of Health and Public Service and the State Board of Electricity establish new working relationships with the Department of Public Safety. As we discussed earlier, most of the major problems that we identified regarding code administration were related to poor coordination between the departments of Administration and Public Safety, and did not involve the departments of Health and Public Service and the State Board of Electricity. In addition, placing all building code activities in the Department of Public Safety may influence staff developing and enforcing the building code to more strongly emphasize life safety issues rather than cost concerns.

Centralizing within the Department of Commerce

A number of states house their building code activities within their commerce department. Furthermore, Minnesota's Department of Commerce currently contains some code-related activities, such as licensing residential building and remodeling contractors. This option may be attractive to some state policy makers because the department could be viewed as a philosophically "neutral" agency. Also, centralizing activities there would remove the potential conflict of interest that exists in having the Department of Administration responsible for both constructing state buildings and enforcing the state building code. On the other hand, since the Department of Commerce has not been involved in building and fire code activities recently, new working relationships would have to be established.

Centralizing within a New State Agency

Finally, the Legislature could create a new state agency for building and fire code activities. However, creating a new agency--again attractive because of its philosophically neutral stance and because it removes building code responsibilities from the agency responsible for constructing state buildings--would probably involve additional costs.

For reasons previously discussed, moving all fire and building code activities to a new state agency for building and fire code activities may involve more reorganization than is necessary. Some of the procedural options that we discussed earlier, such as joint approval of overlapping code provisions, equivalencies, building permits, and certificates of occupancy might achieve a large degree of coordination, without expanding state government bureaucracy.

We do not recommend major structural changes.

Recommendations

In our view, none of the five alternatives will completely alleviate all of the problems that we identified regarding how the building code is administered on the state level and how it relates to the state fire code. The building code is a complex collection of overlapping provisions that apply differently throughout the state, and we found that promulgating and enforcing those provisions are equally complex tasks.

One of the main reasons we were asked to study the state building code was that some policy makers were concerned about the departments of Administration and Public Safety developing, applying, or interpreting overlapping building and fire code provisions differently. Although some policy makers might favor centralizing all building and fire code activities within one or two agencies, we think that:

- **Major structural changes in the way the state administers the building and fire codes are not needed at this time.**

Building and fire officials bring different philosophies and priorities to code administration that no amount of reorganization can completely address. We think that our current organizational structure, although contentious at times, helps ensure that building and fire officials balance the building code's various philosophies and goals: ensuring health and safety, providing uniformity, containing costs, and adhering to model codes. At the same time, we think that some procedural changes are necessary to improve how Minnesota administers its building code, especially as it relates to the fire code. At a minimum, we recommend that:

- **The Legislature should require that the responsible building and fire officials arrive at an agreement and give their mutual written approval for all building permits and proposed equivalencies regarding the overlapping portions of their codes, as well as all certificates of occupancy.**

This would require coordination between building and fire officials and would ensure that both officials are involved throughout the code enforcement process. In addition, we recommend that:

- **The Legislature should require that the departments of Administration and Public Safety approve the overlapping portions of each other's codes before they take effect.**

The 1995 Legislature made a similar requirement of the departments of Corrections and Human Services regarding the adoption of licensing and programming rules for the residential treatment facilities that they both license.

Both these changes create a stronger building-fire partnership than currently exists and should help simplify the occupancy process for designers, builders, and building owners. Although opportunities for disagreement would still exist, these changes would require officials to address and resolve their differences much earlier in the process. At the same time, we recognize that building and fire officials might not always be able to reach agreement within a reasonable amount of time. We think that 10 working days should be sufficient for the building and fire officials to work together to come to a mutual agreement on the permits and proposed equivalencies. During this time, if the local officials are unable to resolve the conflicts between themselves, they could jointly meet with staff from the departments of Administration and Public Safety to help them reach a solution. Regardless of whether local officials jointly consult with these state agencies, if the two officials are unable to come to an agreement after 10 days, we suggest that they present their cases to a state administrative law judge who would mediate the conflict and help the officials come to a mutual agreement. If a compromise cannot be achieved, the administrative law judge should have the authority to render a binding decision. According to staff in the office of Administrative Hearings, administrative law judges frequently resolve disputes state agencies or local municipalities may have. Furthermore, the costs of using an administrative law judge should be shared by both public agencies and not the developer, regardless of the outcome.

Because we found fewer problems between the Department of Administration on the one hand and the departments of Health and Public Service and the State Board of Electricity on the other, we do not think that it is necessary to centralize all building code activities within the Department of Administration. However, we recommend that:

- **The Legislature should give the Department of Administration rather than the Department of Public Service the authority to adopt the energy provisions of the building code.**

This procedural change would help simplify the promulgation process and would be consistent with how the electrical and plumbing provisions of the state building code are currently developed and adopted. Also, this should help make it easier for building officials to enforce the code's energy provisions. At the same time, it is important for the Department of Administration to be actively involved in developing the energy code provisions with the Department of Public Service. Likewise, the Department of Administration should formally involve the

We recommend some procedural changes to ensure mutual agreement between building and fire officials.

Department of Public Service in developing the code's mechanical provisions. In addition, we would expect that the Department of Administration would seek the Department of Public Service's technical expertise during the adoption process when needed.

SUMMARY

After reviewing how other states adopt and enforce their state building code, it is clear that there is no single "right way" to administer Minnesota's building and fire codes. However, Minnesota is different than the rest of the country in some important ways. While a majority of states have only one or two agencies responsible for their building and fire codes, Minnesota has five. Furthermore, states with only one or two agencies administering these codes are often organized by function rather than program.

In addition to administering the building code differently than other states, there are several problems with Minnesota's current code administration process, including complex lines of authority and poor coordination among some agencies. In this chapter, we have presented five alternatives to how the state building code is currently administered--both procedural and structural--that might help resolve these problems.

In our view, none of the structural options is particularly compelling, and none will alleviate all of the current problems. For example, it is likely that the philosophical differences between building and fire officials will persist regardless of how the codes are administered. On the other hand, some of the procedural options that we recommended may help promote more consistent building code enforcement throughout the state and help code-administering agencies better coordinate their activities.



Admin MINNESOTA

Department of Administration

Commissioner's Office
200 Administration Building
50 Sherburne Avenue
St. Paul, MN 55155
Voice: 651.296.1424
Fax: 651.297.7909
TTY: 651.297.4357

December 18, 1998

Mr. James Nobles
Legislative Auditor
658 Cedar Street
St. Paul, MN 55155

Dear Mr. Nobles:

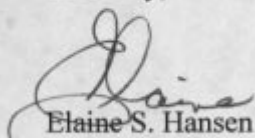
The legislative audit report regarding the State Building Code raises a number of issues we believe could improve the adoption, application, administration and coordination of our building and fire codes in the state of Minnesota. We compliment you and your staff on your quick grasp of the various concepts in these codes. We concur with your recommendation that major structural changes are not needed and that procedural changes to address cooperative agreements between building and fire officials would be beneficial.

We believe that the existing memos of understanding between the Building Code Division and the State Fire Marshall Division work well when followed. However, expanding the current memos of understanding into signed cooperative agreements to address the administrative responsibilities for building and fire officials, similar to agreements established by the State of Oregon, would address the procedural issues raised in the report, including the Certificate of Occupancy.

The Construction Codes Advisory Council would be the appropriate vehicle to research and provide recommendations to the legislature for implementation. The current Governor's Construction Codes Advisory Council, which will become the Construction Codes Advisory Council as authorized by the 1998 legislature, is made up of the four state agencies discussed in this report and 11 members representing the construction industry: design professionals, building officials, fire officials, residential and commercial contractors and local government. The current Council has established technical advisory groups (TAGs), one of which is Code Coordination and Procedures, and could establish additional TAGs for other issues raised in the report.

We will provide the legislature or other interested parties the existing memos of understanding, State of Oregon cooperative agreements or other information as requested.

Sincerely,


Elaine S. Hansen
Commissioner

MINNESOTA DEPARTMENT OF PUBLIC SAFETY



Alcohol &
Gambling
Enforcement

Bureau of
Criminal
Apprehension

Capitol Security

Driver & Vehicle
Services

Emergency
Management/
Emergency
Response
Commission

State Fire
Marshal/
Pipeline Safety

State Patrol

Traffic Safety



State Fire Marshal Division

444 Cedar Street, Suite 145, St. Paul, Minnesota 55101-5145

Phone: 612/215-0500 FAX: 612.215.0525 TTY: 612/282-6555

Internet: <http://www.dps.state.mn.us>

December 18, 1998

Mr. Roger Brooks
Deputy Legislative Auditor
Office of the Legislative Auditor
1st Floor South, Centennial Office Building
658 Cedar Street
St. Paul, Minnesota 55155

RE: Legislative Auditor Report: *State Building Code*

Dear Mr. Brooks,

Thank you for the opportunity to review the final revised draft of the *State Building Code* report. Again, I would like to express our appreciation to your staff for the excellent job that they did in analyzing the necessary information and developing this report. We value the opportunity to make these final comments and suggestions.

The State Fire Marshal Division would like to formally state our support for the following issues addressed in this report:

- The State Fire Marshal supports the development of an appeals process for state building code issues. The process should provide timely responses to persons and should be readily accessible to those interested.
- The State Fire Marshal supports measures to provide the State Building Codes and Standards Division additional supervisory control over local building officials.
- The State Fire Marshal supports having building and fire officials arrive at agreement on and provide written approval for proposed equivalencies and certificates of occupancy on fire safety issues addressed in both codes.
- The State Fire Marshal supports requiring the departments of Administration and Public Safety to approve the overlapping portions of each other's codes before taking effect.
- The State Fire Marshal supports having a mechanism for resolving differences between building and fire officials concerning enforcement and adoption. The suggestion of having an administrative law judge decide these issues is particularly noteworthy.

I would like to raise the following issues or concerns based on the revisions made to the final draft:

- **Dual Sign-Off for All Equivalencies.** A literal and strict reading of this suggestion would seem to indicate that both building and fire officials would need to agree on all equivalencies granted, including new and existing conditions. I am concerned that this would require that fire officials receive building official approval on all "fire protection"

Letter to Legislative Auditor
December 18, 1998
page 2

issues in existing buildings. It is very common for fire officials to give approval to conditions not meeting the strict "letter" of the code based on hardships posed by existing conditions.

The state fire code contains requirements for fire protection; in the case of new construction, these requirements are identical to the requirements of the state building code. For existing buildings, however, the requirements are less strict, based on the realization that there are practical difficulties in existing conditions.

In the State Fire Marshal Division alone, there are approximately 8,000 inspections conducted each year that address over 17,000 code violations. If we would be required to receive local and/or state building code approval for every situation where we approve a fire protection equivalency, it would create a major impediment to our inspectors.

Under our existing arrangement, each Deputy State Fire Marshal – Inspector is required to inspect buildings in accordance with written division policies and procedures. Deviation from accepted equivalencies in our policies must receive supervisory approval or a formal variance.

Instead of having each situation individually reviewed by local and/or state building officials, we would offer that a building code representative be appointed to serve on our internal fire code policy committee.

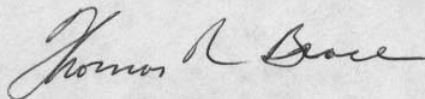
- **Require that Building Code Orders be Provided in Writing and Explain the Right of Appeal.** Your report urges that some form of building code appeal process be developed; as stated earlier, we strongly support that concept. In keeping in that same line of thinking, I feel that it would be very appropriate that building code officials be required to provide and keep written records of their inspection findings and corrective orders. In addition, these written orders could explain to the recipient that there is an appeals procedure.

The State Fire Marshal Statutes have contained such a provision for years and we have found that it works well. You can find these fire code requirements in Minn. Stat. §299F.011, subd. 6, which states:

Subd. 6. Penalty. A person who violates a provision of the uniform fire code shall be guilty of a misdemeanor. No person shall be convicted for violating the uniform fire code unless the person shall have been given notice of the violation in writing and reasonable time to comply. The notice must contain a statement explaining the right to appeal the orders.

Once again, thank you for the opportunity to review and comment. We found it to be most insightful and believe it to have far-reaching impact. If you have any questions or need additional information, please feel free to contact me.

Sincerely,



Thomas R. Brace
State Fire Marshal

cc: Mr. Donald Davis, Commissioner of Public Safety



MINNESOTA
DEPARTMENT OF
PUBLIC SERVICE

OFFICE OF THE COMMISSIONER

December 21, 1998

Roger Brooks, Deputy Legislative Auditor
1st Floor South, Centennial Building
658 Cedar Street
St. Paul, MN 55155

Dear Mr. Brooks:

Thank you for the opportunity to review your final report on the State Building Code. Many of the report's recommendations are well founded and would ultimately improve the safety, durability, and comfort of Minnesota's buildings. However, the Department of Public Service (DPS) takes issue with the recommendation to transfer energy code rulemaking authority to the Department of Administration (DOA).

The rationale for recommending the transfer of energy code rulemaking authority is not based on a comprehensive consideration of relevant issues, and may have detrimental consequences if enacted. The report argues that this transfer will help improve coordination and timing, but no mention is made of possible negative impacts. The report also cites that moving the authority for promulgation would make it easier for building officials to enforce the energy provisions of the building code, but no reasons are given to support this conclusion.

As you know, the Department of Public Service took a major step in successfully addressing the issue of depressurization in buildings in the most recent energy code rulemaking. These provisions address serious problems in the way houses are presently being built. The Department of Public Service had the necessary expertise -- based on its own research and long association with the building industry -- to develop these proposals, work with a broad range of stakeholders and ensure the incorporation of these provisions into code. As you are also aware, DOA is just now beginning to consider these necessary changes for their ultimate inclusion in the building codes.

A key finding of the report is that major structural changes in the way the state administers the building and fire code are not needed at this time because "...building and fire officials balance the building code's various philosophies and goals..." Why this same logic should not apply to the energy provisions of the building code, which are prepared by DPS experts having similarly unique qualifications, is never explained.



Roger Brooks
December 21, 1998
Page Two

The Department of Public Service certainly recognizes that certain procedural changes can improve the building code rulemaking process. We only want to ensure that any changes not detract from the ultimate and primary goal -- that of enhancing the overall effectiveness of the program.

Sincerely,

A handwritten signature in cursive script, reading "Kris Sanda".

Kris Sanda
COMMISSIONER

KS:nm



STATE OF MINNESOTA
OFFICE OF THE LEGISLATIVE AUDITOR
JAMES R. NOBLES, LEGISLATIVE AUDITOR

Memorandum

DATE: December 21, 1998
TO: Legislative Audit Commission Members
FROM: Legislative Auditor's Office
RE: Agency Responses

In response to the letters from the departments of Administration, Public Safety, and Public Service, we have the following observations:

- Regarding the Commissioner of Administration's letter, our recommendations do not address the existing cooperative agreements or memos of understanding between the Building Codes and Standards Division and the State Fire Marshal Division. Rather, we recommend some procedural changes to the building code enforcement process that would require a closer working relationship between building and fire officials. Specifically, we recommend that the responsible building and fire officials give their mutual written approval for all building permits and proposed equivalencies regarding the overlapping portions of their codes, as well as all certificates of occupancy.
- Regarding the State Fire Marshal's letter, our recommendations do not address whether fire officials should obtain the written approval of building officials when issuing variances (equivalencies) in existing buildings. We do think that building and fire officials should consider developing a joint approval process for variances proposed by fire officials regarding the overlapping portions of their codes.
- Regarding the Commissioner of Public Service's letter, we do not recommend that the Department of Administration be given the authority to *develop* the building code's energy provisions. Rather, we think that the department should *adopt* the energy provisions. Partly because of its technical expertise, the Department of Public Service should retain the authority to *develop* the code's energy provisions. This change would be consistent with how the code's electrical and plumbing provisions are currently developed and adopted.

Recent Program Evaluations

<i>Pollution Control Agency</i> , January 1991	91-01	<i>Early Retirement Incentives</i> , March 1995	95-04
<i>Nursing Homes: A Financial Review</i> , January 1991	91-02	<i>State Employee Training: A Best Practices Review</i> , April 1995	95-05
<i>Teacher Compensation</i> , January 1991	91-03	<i>Snow and Ice Control: A Best Practices Review</i> , May 1995	95-06
<i>Game and Fish Fund</i> , March 1991	91-04	<i>Pollution Control Agency's Use of Administrative Penalty Orders</i> , Update July 1995	95-07
<i>Greater Minnesota Corporation: Organizational Structure and Accountability</i> , March 1991	91-05	<i>Development and Use of the 1994 Agency Performance Reports</i> , July 1995	PR95-22
<i>State Investment Performance</i> , April 1991	91-06	<i>State Agency Use of Customer Satisfaction Surveys</i> , October 1995	PR95-23
<i>Sentencing and Correctional Policy</i> , June 1991	91-07	<i>Funding for Probation Services</i> , January 1996	96-01
<i>Minnesota State High School League Update</i> June 1991	91-08	<i>Department of Human Rights</i> , January 1996	96-02
<i>University of Minnesota Physical Plant Operations: A Follow-Up Review</i> , July 1991	91-09	<i>Trends in State and Local Government Spending</i> , February 1996	96-03
<i>Truck Safety Regulation</i> , January 1992	92-01	<i>State Grant and Loan Programs for Businesses</i> February 1996	96-04
<i>State Contracting for Professional/Technical Services</i> , February 1992	92-02	<i>Post-Secondary Enrollment Options Program</i> , March 1996	96-05
<i>Public Defender System</i> , February 1992	92-03	<i>Tax Increment Financing</i> , March 1996	96-06
<i>Higher Education Administrative and Student Services Spending: Technical Colleges, Community Colleges, and State Universities</i> , March 1992	92-04	<i>Property Assessments: Structure and Appeals, A Best Practices Review</i> , May 1996	96-07
<i>Regional Transit Planning</i> , March 1992	92-05	<i>Recidivism of Adult Felons</i> , January 1997	97-01
<i>University of Minnesota Supercomputing Services</i> , October 1992	92-06	<i>Nursing Home Rates in the Upper Midwest</i> , January 1997	97-02
<i>Petrofund Reimbursement for Leaking Storage Tanks</i> , January 1993	93-01	<i>Special Education</i> , January 1997	97-03
<i>Airport Planning</i> , February 1993	93-02	<i>Ethanol Programs</i> , February 1997	97-04
<i>Higher Education Programs</i> , February 1993	93-03	<i>Statewide Systems Project</i> , February 1997	97-05
<i>Administrative Rulemaking</i> , March 1993	93-04	<i>Highway Spending</i> , March 1997	97-06
<i>Truck Safety Regulation, Update</i> , June 1993	93-05	<i>Non-Felony Prosecution, A Best Practices Review</i> , April 1997	97-07
<i>School District Financial Reporting</i> , Update, June 1993	93-06	<i>Social Service Mandates Reform</i> , July 1997	97-08
<i>Public Defender System, Update</i> , December 1993	93-07	<i>Child Protective Services</i> , January 1998	98-01
<i>Game and Fish Fund Special Stamps and Surcharges, Update</i> , January 1994	94-01	<i>Remedial Education</i> , January 1998	98-02
<i>Performance Budgeting</i> , February 1994	94-02	<i>Transit Services</i> , February 1998	98-03
<i>Psychopathic Personality Commitment Law</i> , February 1994	94-03	<i>State Building Maintenance</i> , February 1998	98-04
<i>Higher Education Tuition and State Grants</i> , February 1994	94-04	<i>School Trust Land</i> , March 1998	98-05
<i>Motor Vehicle Deputy Registrars</i> , March 1994	94-05	<i>9-1-1 Dispatching: A Best Practices Review</i> , March 1998	98-06
<i>Minnesota Supercomputer Center</i> , June 1994	94-06	<i>Minnesota State High School League</i> , June 1998	98-07
<i>Sex Offender Treatment Programs</i> , July 1994	94-07	<i>State Building Code</i> , January 1999	99-01
<i>Residential Facilities for Juvenile Offenders</i> , February 1995	95-01	<i>Juvenile Out-of-Home Placement</i> , January 1999	99-02
<i>Health Care Administrative Costs</i> , February 1995	95-02	<i>Metropolitan Mosquito Control District</i> , January 1999	99-03
<i>Guardians Ad Litem</i> , February 1995	95-03	<i>Animal Feedlot Regulation</i> , January 1999	99-04
		<i>Occupational Regulation</i> , February 1999	99-05
		<i>Directory of Regulated Occupations in Minnesota</i> , February 1999	99-05b
		<i>Counties' Use of Administrative Penalties for Violations of Solid and Hazardous Waste Ordinances</i> , February 1999	99-06
		<i>Fire Services: A Best Practices Review</i> , forthcoming	

Evaluation reports can be obtained free of charge from the Legislative Auditor's Office, Program Evaluation Division, Centennial Office Building, First Floor South, Saint Paul, Minnesota 55155, 651/296-4708. A complete list of reports issued is available upon request. Full text versions of recent reports are also available at the OLA web site: <http://www.auditor.leg.state.mn.us>