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Final Report

**HOUSING
RENOVATION CODES:
REPORT ON A FORUM
SPONSORED BY CMHC**

Submitted to

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Canada Mortgage and Housing Corporation, the Federal Government's housing agency, is responsible for administering the National Housing Act.

This legislation is designed to aid in the improvement of housing and living conditions in Canada. As a result, the Corporation has interests in all aspects of housing and urban growth and development.

Under Part V of this Act, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research. CMHC therefore has a statutory responsibility to make available, information which may be useful in the improvement of housing and living conditions.

This publication is one of the many items of information published by CMHC with the assistance of federal funds.

Disclaimer

This study was conducted by Scanada Consultants Limited for Canada Mortgage and Housing Corporation under Part V of the National Housing Act. The analysis, interpretations and recommendations are those of the consultants and do not necessarily reflect the views of Canada Mortgage and Housing Corporation or those divisions of the Corporation that assisted in the study and its publication.

Executive Summary

In response to requests from the renovation industry for action on the issue of renovation codes, Canada Mortgage and Housing Corporation funded the preparation of a background paper which was presented at the May 1992 meeting of the Canadian Renovators' Council in Charlottetown. The backgrounder highlighted the current divergence of opinion regarding the development of guidelines versus renovation codes. One of the recommendations in the backgrounder was to hold a workshop or symposium to discuss the issues and develop a consensus.

CMHC accepted this recommendation and agreed to sponsor a Forum on Housing Renovation Codes, with the objectives of bringing together the key stakeholders to clarify their positions, identify the most important issues, and develop a consensus on future action. CMHC retained Scanada Consultants Ltd and A. T. Hansen to organize the Forum, which was held on December 17, 1992 in Ottawa. Virtually all those invited attended, 25 in total, representing federal, provincial and municipal agencies and the renovation industry.

The morning session consisted of a series of presentations. Richard Desserud of NRC's Canadian Codes Centre outlined the current approach to developing Guidelines on the application of code requirements to existing buildings. Ken Richardson of NRC's National Fire Laboratory described the risk-cost assessment model being developed for determining fire safety equivalencies. Representatives from three jurisdictions spoke about their experiences with renovation codes and bylaws, including John Gryffyn from the Ontario Ministry of Housing on Part 11 of the Ontario Building Code, Bob Maki from the City of Vancouver on Vancouver's Building Bylaw, and Laurent Ricard from the City of Montreal on Montreal's proposed Renovation Code. The industry's perspective was put forward by Bob McLaughlin, Chairman of the Canadian Renovators' Council, and by Bruce Clemmensen, Chairman of CHBA's Technical Research Committee. Mark Denhez of the Association of Preservation Technology described the legal implications of the current situation.

The afternoon session was devoted to an open discussion. Terry Robinson summarized the numerous areas of general agreement and identified the key issues needing decisions. Much of the following discussions revolved around the need for a legal basis for interpretation and equivalencies. The subject of triggering mechanisms was also discussed at length.

A consensus emerged and led to the Forum agreeing to recommend to the Provincial/Territorial Committee on Building Standards that it recommend the following to the Canadian Commission on Building and Fire Codes:

- that model administrative guidelines for the use of the NBC be broadened to cover existing buildings and the triggering mechanisms that bring existing buildings within the scope of building code requirements; and
- that deemed-to-satisfy requirements for the application of Part 9 to existing buildings be developed, rather than the Guidelines currently proposed for development.

While there was insufficient time for an in-depth discussion of training needs, the Forum recognized the importance of training and education for building officials, professionals and renovators.

RÉSUMÉ

Pour donner suite aux demandes d'intervention du secteur de la rénovation dans le dossier des codes de rénovation, la Société canadienne d'hypothèques et de logement a fait rédiger un document d'information qu'elle a présenté à la réunion de mai 1992 du conseil canadien des rénovateurs, à Charlottetown. Le document d'information met en évidence les divergences d'opinions entourant l'établissement de directives par opposition à des codes de rénovation. L'une des recommandations formulées dans ce document portait sur l'organisation d'un atelier ou d'un symposium pour traiter des points d'intérêt et arriver à un consensus.

La SCHL a accepté cette recommandation et convenu de parrainer un forum sur les codes de rénovation résidentielle, en poursuivant les objectifs de réunir les principaux intervenants qui seront appelés à faire connaître leur position respective, à cerner les questions essentielles et à parvenir à un consensus quant à la conduite à adopter. La SCHL a confié à Scanada Consultants Ltd. et à A.T. Hansen le mandat d'organiser le forum qui a eu lieu le 17 décembre 1992 à Ottawa. Presque toutes les personnes invitées y ont assisté, soit 25 participants en tout représentant les organismes fédéraux, provinciaux et municipaux ainsi que le secteur de la rénovation.

La séance du matin a donné lieu à une série d'exposés. Richard Desserud, du Centre canadien des codes, du CNRC, a souligné la façon courante d'élaborer des directives concernant l'application des exigences du code aux bâtiments existants. Ken Richardson, du Laboratoire national de l'incendie, du CNRC, a décrit le modèle d'évaluation des risques et des coûts que l'on est en train d'élaborer dans le but de déterminer des équivalences en matière de sécurité incendie. Des représentants de trois autorités compétentes ont relaté leurs expériences respectives avec les codes et règlements en matière de rénovation. John Gryffyn du ministère du Logement de l'Ontario, a traité de la partie 11 du Ontario Building Code; Bob Maki, de la ville de Vancouver, du règlement de construction de Vancouver; et Laurent Ricard, de la ville de Montréal, du projet de code de rénovation de Montréal. Pour leur part, Bob McLaughlin, président du conseil canadien des rénovateurs, et Bruce Clemmensen, président du comité de recherche technique de l'ACCH, ont exposé les vues de l'industrie sur le sujet. Mark Denhez, de l'Association de la préservation et ses

techniques, a fait part des conséquences de la situation actuelle sur le plan juridique.

La séance de l'après-midi a été consacrée à une discussion libre. Terry Robinson a résumé les nombreux domaines d'accord général et relevé les points essentiels qui demandent la prise de décisions. La grande part des discussions qui se sont ensuivies ont gravité autour de la nécessité d'asseoir les questions d'interprétation et d'équivalences sur un fondement légal. Le sujet des mécanismes de déclenchement a aussi été débattu à fond.

Un consensus s'est ensuivi, de sorte que les membres du forum ont convenu de recommander au Comité provincial/territorial des normes de construction de proposer à la Commission canadienne des codes du bâtiment et de prévention des incendies :

- * d'étendre les directives administratives modèles concernant l'utilisation du CNB aux bâtiments existants et aux mécanismes de déclenchement qui ramènent les bâtiments existants à l'intérieur du domaine d'application des exigences du code du bâtiment; et
- * d'élaborer à l'égard des bâtiments existants des exigences jugées conformes dans le cadre de l'application de la partie 9, plutôt que le présent projet de directives.

Le temps n'a pas permis de traiter à fond des besoins de formation, mais les membres du forum ont reconnu l'importance de former et d'éduquer les agents du bâtiment, les spécialistes et les rénovateurs.

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Canada

HOUSING RENOVATION CODES

REPORT ON A FORUM SPONSORED BY CMHC

December 17, 1992
Citadel Inn, Ottawa

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I. Background

The issue of how to sensibly apply building codes to renovation projects is not new. The renovation industry has raised this issue on many occasions and has often called for the development of a national renovation code. The Canadian Codes Centre of the National Research Council and the Canadian Commission on Building and Fire Codes have been dealing with this challenge since the first building code was published, and particularly during the past decade with the gradual development of guidelines on applying codes to existing buildings. Some jurisdictions, notably Ontario and Vancouver, have had several years of successful experience with provincial codes or municipal bylaws specifically written to facilitate the rehabilitation of older buildings.

Since the volume of renovation work now exceeds the volume of new construction, the issue has become increasingly more critical. The lack of a uniform approach in applying code requirements is seen as one obstacle to rehabilitation. Concern over the fate of heritage buildings is also increasing.

Canada Mortgage and Housing Corporation has held a long-standing interest in the regulation of renovation activity, particularly because of the impact on the preservation and upgrading of the housing stock, which is the major source of affordable housing in Canada. CMHC developed minimum renovation standards for use by the Residential Rehabilitation Assistance Program in the 1970s. In the mid-80s, CMHC assisted NRC in a study on applying code requirements to existing buildings, and more recently, CMHC's ACT program, a joint venture with CHBA, FCM and CHRA, funded the Association for Preservation Technology to undertake a study entitled "Technical Code Update for Residential Renovation" in 1991.

In the spring of 1992, CMHC funded the development of a background paper on residential renovation codes and presented this at the May meeting of the Canadian Renovators' Council. The backgrounder highlighted the current divergence of opinion, with the Canadian Commission on Building and Fire Codes, the Provincial/Territorial Committee on Building Standards and the National Research Council favouring guidelines on applying code requirements to existing buildings, and the industry and some provinces and municipalities favouring separate renovation standards. One of the recommendations in the background paper was that the key stakeholders involved should be brought together in a workshop or symposium to discuss the issues and to develop a consensus approach.

CMHC accepted this recommendation and agreed to sponsor a Forum on Housing Renovation Codes in the fall of 1992. The objectives of the Forum were as follows:

- to bring together the key stakeholders for a face-to-face dialogue;
- to identify the most important issues to be resolved;
- to clarify the positions of the various stakeholders and hopefully develop a consensus position;
- to develop an action plan for future directions.

Scanada Consultants Ltd and A. T. Hansen were retained by CMHC to organize and report on the Forum. A broad range of agencies and individuals were contacted. All expressed interest in attending. The full-day Forum was held in Ottawa on December 17, 1992, and included 25 participants (see section II. Forum Participants).

The following materials were sent to participants in advance of the Forum:

- Residential Renovation Codes: A Backgrounder (1992)
- CBD 230: Applying Building Codes to Existing Buildings (1984)
- Guidelines for Application of Part 3 of the NBC to an Existing Building (1992)
- Technical Code Update for Residential Renovation (1991)
- excerpts from the Ontario Building Code, Part 11: Renovation (1990)
- excerpts from the BC Building Code: Rehabilitation of Heritage Buildings (1992)

This report provides a summary of the discussions which took place and highlights the conclusions reached.

II. Forum Participants

In attendance:

Richard Desserud	NRC Canadian Codes Centre	Ottawa
Alastair Aikman	NRC Canadian Codes Centre	Ottawa
John Haysom	NRC Canadian Codes Centre	Ottawa
John Reimer	Chairman, Provincial/Territorial Committee on Building Standards	Winnipeg
Ken Richardson	NRC National Fire Laboratory	Ottawa
John Broniek	Canadian Home Builders' Association	Ottawa
Bob McLaughlin	Chairman, Canadian Renovators' Council	Saint John
Mark Denhez	Association for Preservation Technology	Ottawa
Laverne Brubacher	Menno S. Martin Contractor	St. Jacob's
Bruce Clemmensen	Clemmensen & Associates	Toronto
John Gryffyn	Ontario Ministry of Housing	Toronto
Robert Lemon	Planning Dept, City of Vancouver	Vancouver
Bob Maki	Permits & Licenses Dept, City of Vancouver	Vancouver
Laurent Ricard	Housing and Urban Development, City of Montréal	Montréal
Bob Andrews	Housing Commissioner's Office, City of Ottawa	Ottawa
Doug Crawford	Research and Standards, Ontario Fire Marshall's Office	Toronto
Daniel McGregor	Federation of Canadian Municipalities	Ottawa
Rosemary Kinnis	Federation of Canadian Municipalities	Ottawa
Don Johnston (Chair)	CMHC Housing Innovation Division	Ottawa
Jacques Rousseau	CMHC Housing Innovation Division	Ottawa
Terry Marshall	CMHC Housing Innovation Division	Ottawa
Laurie Lithgow	CMHC Professional Standards Division	Ottawa
Jacques Soucy	CMHC Professional Standards Division	Ottawa
A. T. (Oz) Hansen	A. T. Hansen Consulting Services	Ottawa
Terry Robinson (Secretary)	Scanada Consultants Ltd	Ottawa

Regrets

Wayne Purchase	Chairman, Standing Committee on Housing and Small Buildings	St. John's
Mark Walsh	Secretary, CCBFC and PTCBS	Ottawa
Bob Sloat	Canadian Home Builders' Association	Ottawa
Michael DeLint	Ontario Ministry of Housing	Toronto
Ken Rauch	CMHC Professional Standards Division	Ottawa
Alain Croteau	CMHC Program Operations Division	Ottawa

III. Proceedings

1. Welcome and Overview

The Forum Chairman, Don Johnston of CMHC, welcomed all participants and outlined CMHC's objectives in sponsoring the Forum - to clarify the positions of the various stakeholders, to develop a consensus and to identify the next steps for action. Participants introduced themselves and spoke briefly about their interest in the subject of renovation codes.

Mr. Johnston then provided a brief historical overview and summarized the key issues to be discussed at the Forum:

- the need for uniform interpretation
- establishing a basis for equivalencies
- the nature of triggering mechanisms for the enforcement of code requirements
- life safety versus other requirements
- training and liability of building officials
- the acceptability of different standards for new, renovated and existing buildings

2. Current Code Directions

a) Applying Code Requirements to Renovated Buildings

Richard Desserud of NRC's Canadian Codes Centre indicated that the Canadian Commission on Building and Fire Codes (formerly the Associate Committees on the National Building Code and the National Fire Code) began dealing with this challenge on a formal basis in 1981. He briefly described the issues from NRC's perspective:

- Life safety versus property protection: NRC has made life safety the priority, and have

favoured levels of safety which are "appropriate", rather than equivalent to new building requirements.

- Administrative versus technical requirements: NRC has focussed on completing the technical requirements. Administrative requirements, such as triggering mechanisms, will follow.
- Guidelines versus code: It is very difficult to write a code for existing buildings and to determine equivalencies without knowing the original intent of the building code. Specifying this intent is the purpose of the Guidelines approach, which has been undertaken with the concurrence of the Provincial/Territorial Committee on Building Standards.
- Double standard: While it is reasonable to allow different levels of property protection in new and old buildings, it is difficult to justify different levels of life safety. NRC has therefore preferred a single standard for life safety.

NRC's Canadian Codes Centre has chosen the Guidelines route, which they feel allows the most flexibility. The intent of building code requirements is being identified and their relative importance ranked. It is assumed that professionals (ie. engineers and architects) will be involved in determining appropriate solutions to specific building situations. Economic factors are also being considered. If a requirement is found to be unnecessary for renovated buildings, its appropriateness for new buildings is also being questioned.

In terms of future directions, the Part 3 Guidelines are being verified and will be distributed by April. Part 9 Guidelines will then be developed, which may lend themselves more to compliance alternatives, due to the highly prescriptive nature of Part 9. Administrative guidelines also need to be developed. The trend toward replacing prescriptive with performance requirements may eventually eliminate the need for two codes. Modelling techniques are becoming more sophisticated and will also help.

Mark Denhez of the Association of Preservation Technology questioned the issue of lower levels of life safety in renovated buildings. Mr. Desserud replied that every time a new code is issued, a "double standard" is created, and that it is important to ensure an appropriate level of life safety. Alastair Aikman of NRC's Canadian Codes Centre added that while

there have been no major changes in small buildings in 30 years, substantial improvements have been made in high rise safety, such as smoke control strategies. Such buildings may be difficult to retrofit to current standards, so one must try to achieve a reasonable level of safety.

b) Evaluating Fire Safety Equivalencies

Ken Richardson of NRC's National Fire Laboratory asserted that a renovation code is not needed, since the risk-cost assessment model being developed by his group allows any building, new or old, to be evaluated against the NBC life safety requirements. The model provides a technical evaluation, rather than an opinion, allows maximum flexibility and is ideally suited to performance code applications. Submodels simulate fire growth, smoke spread, warning systems and evacuation, for different types of fires. The model's components have been fully validated. It calculates the expected risk to life (expected deaths over the design life divided by the population of the building and the design life), and the fire-cost expectation (cost of fire protection plus fire losses, divided by the building cost). The model can be used for design and compliance, for evaluating code change proposals and for research. NRC is a world leader in this field, and has undertaken the work in collaboration with Victoria University in Australia. Mr. Richardson went through a typical example of a three-story wood frame apartment building and the impact on safety of various measures.

In response to questions about the model's capability and use, Mr. Richardson indicated that almost any situation can be modelled; that the model is not yet "user-friendly" but a front and back end is being developed for Public Works Canada; that an increased level of knowledge will be required at the municipal level by designers and inspectors; that the model is being rewritten to run on a PC; and that it will be available in two to ten years, with the residential applications available first.

Laurie Lithgow of CMHC noted the need for education in the move toward performance codes. Richard Desserud added that modelling techniques are not always available for other non-fire-related issues such as mechanical systems or health.

3. Experiences with Renovation Codes

a) Part 11 of the Ontario Building Code

John Gryffyn of the Buildings Branch of the Ontario Ministry of Housing gave an overview of Part 11. This section of the OBC has been in place for more than 5 years now, providing a range of approaches including compliance alternatives and alternative measures. Although building officials found it complicated initially, the experience has been generally positive. Part 11 deals mostly with the building superstructure. Not all areas are covered, such as accessibility, acoustics, seniors' needs and conversions from singles to multiples. The Ministry has found that some alternate measures have not been effective, such as specifying smoke detectors in the supply and return ducts as a substitute for duct fire dampers. Defining existing levels of safety in heritage buildings poses a difficulty. Large municipalities are better staffed to handle alternative measures than small municipalities. There remains some confusion between basic renovations and more substantial upgrading. A revision process for Part 11 will be initiated in January.

In response to questions, Mr. Gryffyn indicated that the five year definition of existing buildings is based on the code cycle; that Part 11 has been effective in most cases; that it has facilitated renovations and change in use, stimulated rehabilitation of the stock and led to the increased preservation of heritage buildings; and that training for officials was hampered by the fact that many inspectors are only part-time or seasonal. Oz Hansen noted that there has been a special need for Part 11 in Ontario, since building officials may have less freedom to make judgements than in other jurisdictions.

Mr. Gryffyn also indicated that Ontario is developing a code for existing buildings, which will be available for comment in February, and may be implemented in 1995. This code will require upgrading without a building permit trigger. "Superinspectors" will be needed. Doug Crawford of the Ontario Fire Marshall's Office added that fire related issues will be excluded for now.

b) City of Vancouver's Building Bylaw

Bob Maki, from Vancouver's Permits and Licenses Department, described the historical evolution of Vancouver's Building Bylaw. This began with the revitalization of the Gastown area in the 1960s, and led to a comprehensive set of guidelines for joint building and fire inspections by 1978. In the early 1980s, phase-in upgrades were recognized, allowing occupancy and revenue generation while upgrading proceeded. Seismic requirements have involved the codifying of Canadian guidelines. Mr. Maki expressed that the triggering mechanism is the most important aspect of an upgrading program. The BC Assessment Authority has used the ratio of the cost of the work to the value of the building, but with market swings, the value can be based primarily on the land, with only a residual value for the building. Therefore, they are now using the Marshall & Swift method of valuation, and accept quantity surveyors' estimates of replacement costs less depreciation. Building inspectors use a table of life safety equivalencies, with most decisions made in the field. Approximately 30 buildings are processed every day, and the City has found that their system works well, even for large buildings.

Mr. Maki provided the following additional information in response to various questions: inspectors file reports on their decisions and add comments to the building plans; a formula is applied to determine how much life safety needs to be added; inspectors will look beyond the scope of voluntary upgrading to examine the route to the exterior; the Fire Department does not need to participate if a building permit is involved; the secondary suite program has been agreed to by most districts and is linked to sprinklering; legally designated heritage buildings are specifically dealt with in the recent changes to the BC Building Code; maintaining enough water pressure for widespread sprinklering is not a problem in Vancouver, and waterlines are currently being upgraded for seismic resistance.

Robert Lemon of Vancouver's Planning Department noted the importance of valuation mechanisms on heritage buildings. Vancouver's Housing Renovation Centre has been effective in dealing with single family residences and secondary suites, with professionals (usually architects) bridging the gap between the building department and the owner. This approach may be expanded to other types of buildings.

c) City of Montreal's Proposed Renovation Code

Laurent Ricard described the City of Montreal's Building Code (Regulation 1900), which was initially adopted in 1948, and has been changed incrementally over the years. The Fire Protection Code and the Housing Code add further requirements, while the provincial building code applies to buildings with 8 units or more. The requirements of the various codes often differ. A recent legal decision has rendered the Appeal Committee for the Housing Code illegal, meaning that the Housing Code cannot be interpreted and must apply in full to renovations. Municipal renovation grants cannot be given without an inspection listing all items of non-compliance, often resulting in no grant funds being left for the renovation! A study of renovation codes has been undertaken, with the goals of balancing conflicting code requirements, distinguishing between major and minor renovations, and providing precise guidelines. As most Quebec municipalities are not as well equipped as Montreal, the province is leaning toward prescriptive rather than performance standards. A Renovation Code will be in place by 1994, to be followed by work on administrative aspects. Training of professionals will be undertaken.

In response to Alastair Aikman's question about major urban centres versus neighbouring communities, Mr. Ricard described the competition among municipalities, with outlying communities often having the advantage with less restrictive requirements, and stressed the need for common renovation guidelines. Robert Lemon noted the problem of having different standards on opposite sides of the street.

Mr. Ricard later circulated a copy of the City of Montreal's study, entitled "Étude de la réglementation relative aux bâtiments résidentiels existants - Ville de Montréal".

4. Industry Perspectives and Legal Aspects

a) Impact on the Renovation Industry

Bob McLaughlin, a renovator from Fredericton and current Chairman of the Canadian Renovators' Council, re-stated the CRC's call for action on the issue of renovation codes,

which he indicated had been a problem for the industry for a long time. The industry feels that no one is willing to take responsibility for compliance decisions, and therefore everything falls on the shoulders of the renovator.

Bruce Clemmensen, a builder/renovator from Toronto and current Chairman of CHBA's Technical Research Committee, stressed that codes must encourage renovation or buildings will be left to deteriorate. A model national renovation code needs to be developed, based on a consensus among user groups. Without such consensus, each jurisdiction will create their own approach. He felt it was too early to evaluate the usefulness of NRC's Guidelines approach, and expressed his satisfaction with Part 11 of the OBC. There is a need for both performance and prescriptive requirements in any code, combining statements of expected performance with prescriptive examples of how to achieve it.

b) Legal Implications

Mark Denhez put on his "lawyer's hat" to outline the legal difficulties inherent in the current situation. The Association of Preservation Technology is not in favour of the relaxation of safety standards, but rather in favour of the preservation of buildings. Mr. Denhez liked the use of a risk-cost assessment model, but stressed three concerns.

- the education levels required by inspectors to use the model effectively;
- the need to address other, non-fire-related issues, such as seismic upgrading;
- the ability of models and guidelines to satisfy a judge.

He then described the typical legal process arising when a death or accident has occurred. If the building renovation is found to not meet a legal standard, then the usual response is to sue. If the building inspector involved has used his own judgement and not followed the letter of the law, then the inspector must defend his decisions in court. Neither the "intent" of the requirements, nor computer modelling, will hold much credibility in court. Losses arising from such suits must be paid for out of municipal treasuries where the municipality is self-insured, and therefore municipalities will be reluctant to give their inspectors much discretion. There is therefore a need for a system of codification for inspectors to rely upon.

This approach will ultimately encourage renovation and reduce the number of deaths which occur in unrenovated buildings.

In response to a question from John Haysom of NRC's Canadian Codes Centre as to whether NRC's Guidelines or OBC's Part 11 met these legal requirements, Mr. Denhez replied that Part 11 has served as a buffer, but that NRC's Guidelines don't insulate the inspector from a negligence lawsuit.

Richard Desserud noted that NRC's Guidelines were based on the assumption that a professional would be involved in the renovation. Mr. Denhez indicated that the inspector would be protected, where he relied upon the opinion of the professional. The professional would then be the one to defend his judgement, and could rely upon his liability insurance. It would never be possible to have a renovation code which addressed all possible circumstances. However, the current degree of legal exposure must be reduced, as it is deterring renovation. Mr. Desserud added that the Guidelines are not intended as a legal document, but rather as the first step for someone else to create a legal document.

Oz Hansen noted that even new buildings have many deviations from the Building Code, and questioned whether we were overemphasizing the liability issue. Bob Maki stressed that all of their lawsuits involve deviations from the Code. In 1980, Vancouver passed legislation to protect inspectors, but this hasn't always worked. However, codified items have been found to be defensible in court.

Robert Lemon recommended that prescriptive requirements are needed where technical or professional expertise doesn't exist. Ken Richardson called for greater education and licensing of designers, engineers and building officials. John Gryffyn noted that building officials have also been sued for requiring measures beyond those stipulated by code.

Doug Crawford agreed that all buildings deviate from Code requirements. He noted that the Ontario Fire Code allows ample discretionary authority. For mandatory upgrading, either prescriptive standards or a professional's report can be followed.

John Reimer, the Chairman of the Provincial/Territorial Committee on Building Standards, inquired whether Vancouver's Municipal Act has protected building officials, and also whether a cap was possible on municipal liability. Mark Denhez replied that Vancouver still

gets sued, but that most suits are unsuccessful. He felt that caps on liability are politically undesirable, and that it was better to provide a defense rather than a cap.

5. Summary of Views and Issues

After the lunch break, Terry Robinson summarized the areas where there appeared to be general agreement among Forum participants (see list in section IV. Conclusions).

Alastair Aikman noted that there was a need for improved definitions of terminology, such as distinguishing renovation from maintenance, defining a heritage building, etc. Laurie Lithgow raised a concern that by not allowing any compromise with respect to life safety, this may discourage renovations which would provide for at least some improvement. Doug Crawford suggested that a minimum level of life safety be established and require mandatory upgrading to that level, such as is being proposed for Ontario.

Mr. Robinson also outlined the key issues which had emerged from the morning's presentations, and which needed further discussion by the Forum participants.

a) Legal Basis for Interpretation and Equivalencies

What is the next step beyond NRC's Guidelines? Is there a need for a deemed-to-satisfy set of equivalencies linked to the NBC? Is a separate code needed for renovation? Is there a need for a national model approach, which can be adapted easily by provinces and municipalities? Who will undertake the necessary work?

b) Training for Building Officials, Professionals and Renvators

How can this be facilitated?

6. Discussion of Key Issues and Future Directions

a) Legal Basis for Interpretation and Equivalencies

(Note: Some re-ordering of participants' comments has been undertaken to group together comments on a particular subject.)

Bruce Clemmensen emphasized the industry's need for deemed-to-satisfy requirements and clarification of the intent of code requirements. There is a need to ensure that all buildings have a minimum level of life safety.

John Reimer noted that building officials will be relying more on the competence of the building industry. Robert Lemon referred to the recommendation in the ACT study regarding a letter of agreement which transfers some liability to the building owner, by having the owner hold the municipality harmless as a result of particular non-conforming features of the building. Mark Denhez elaborated upon this. Such an agreement would not apply to assembly use, nor to situations involving tenants. The agreement could be attached to the property title, which would require an amendment to the Registry Act. The transfer of liability is a good tool for certain situations, but should not be viewed as a panacea.

John Haysom asked for the industry's opinion of Ontario's Part 11. Laverne Brubacher, a renovator from southwestern Ontario, replied that Part 11 is a good framework, that he likes its flexibility, that Part 11 clearly defines what is affected in a renovation, and that it has facilitated on-site negotiations among the renovator, the building official and the owner. He indicated that the biggest remaining problem is the lack of uniformity from one jurisdiction to the next, and called for increased training. Bob McLaughlin added that Part 11 has given the Ontario renovation industry a distinct advantage. In other provinces, no one wants to take responsibility for deviations from code requirements.

John Reimer said that the provinces have agreed to use the NBC with as few changes as possible. The PTCBS wants to update the model administrative requirements, which could then be used by municipalities. There are three levels where consistency is needed: technical requirements, administrative requirements and building official training. John Haysom added the need for consistency at a fourth level - material evaluation - where the Canadian Construction Material Centre is playing a role.

Bob Maki praised BC's Certified Professional Program, which has put the liability for code compliance on knowledgeable professionals, and has resulted in fast-track service. Bruce Clemmensen spoke of the industry's support for a similar program in Ontario, but the proposed program was opposed by building officials and engineers, and was not implemented. John Reimer noted the US trend to sue educational institutions and certifying agencies.

Mark Denhez called for the elevation of renovation tools, such as compliance alternatives, to legal status, and recommended that NRC carry its work one step further to a level which has the same legal status as the Code. Richard Desserud agreed, but indicated that costs were involved, and that NRC must be confident that its documents will in fact be used. He noted the time and resources required for developing model codes, and stressed the need for tangible support from other agencies in the form of funding various studies, etc. Advice from the PTCBS needs to be sought. Mr. Desserud questioned whether the major municipalities would be willing to give up their approaches.

In response to questions about NRC's Guidelines, Richard Desserud and John Haysom replied that all types of buildings would be looked at. Guidelines have now been developed for Part 3, and Part 9 is next. Bob McLaughlin indicated that the industry's main problems are with small buildings, where there are many disputes with officials. Robert Lemon suggested that since there will always be existing buildings, there needs to be some reference to existing conditions in the NBC. Richard Desserud indicated that the NBC has no effect until enacted into law by provinces and municipalities. Guidelines, on the other hand, can be used by provinces to assist in legal interpretation.

Doug Crawford questioned the need for a national renovation standard, since the renovation industry tends to be very localized. Bruce Clemmensen countered that some provinces do not have the infrastructure to develop their own standards. Laverne Brubacher stressed the need for uniformity within a province.

John Reimer suggested that a performance standard combined with a code of practice would be a desirable approach. Don Johnston questioned whether the Part 9 Guidelines could be linked to a code of practice. John Haysom indicated that the Part 9 Guidelines would still be an advisory document only, and asked whether NRC should be developing a model Part 11 on renovation.

In response to questions about CMHC's point of view, Don Johnston replied that CMHC is not a regulatory agency and defers to NRC on issues of regulation. However, CMHC wants to facilitate the rehabilitation of the housing stock by removing obstacles to renovation.

Several participants noted the importance of triggering mechanisms in determining when and where upgrading is required. Mark Denhez described the renovator's nightmare of "cascading" requirements, where the added costs of each stage of requirements propels the project into the next stage of more demanding requirements.

Richard Desserud noted that triggering mechanisms bogged down the code committees, and so administrative requirements were separated completely. Bob Maki added that it is a question of risk management, and that there needs to be brakes on triggering mechanisms to avoid cascading effects.

Alastair Aikman stressed that although triggering mechanisms are regarded as an administrative issue, it is important to identify such mechanisms before developing technical requirements; otherwise, one may end up with requirements, but no way to implement them.

Richard Desserud recommended that a group be assembled under the PTCBS to examine triggering mechanisms. John Reimer noted that different jurisdictions will judge the quality of the housing stock in different ways, but agreed that there was a need for a model standard, and will bring this up at the next meeting of the PTCBS.

Bruce Clemmensen sought to clarify the difference between minimum standards for buildings and renovation code requirements for voluntary upgrading. Alistair Aikman indicated the overlap between the two; a base level needs to be established, which then becomes enforced via the triggering mechanism. John Reimer felt that the marketplace should be the trigger, since greater levels of conformance will enhance the value of the building. John Gryffyn noted that there are too many "minimums" now, and that a single minimum standard is needed.

Drawing upon the various recommendations which had been made, John Haysom proposed that the Forum recommend to the PTCBS that it recommend the following to the CCBFC:

- that model administrative guidelines for the use of the NBC be broadened to cover

existing buildings and the triggering mechanisms that bring existing buildings within the scope of building code requirements; and

- that deemed-to-satisfy requirements for the application of Part 9 to existing buildings be developed, rather than the Guidelines currently proposed for development.

Discussions were held on the proposed recommendation and there was a general consensus that it should be adopted by the Forum.

John Reimer agreed to put these issues on the agenda for the next meeting of the PTCBS in May in Newfoundland. He asked that representatives from the Forum be identified to attend the PTCBS meeting. Anyone wishing to present their views to the PTCBS should contact Mr. Reimer in advance.

b) Training for Building Officials, Professionals and Renovators

Robert Lemon stressed the need for improved understanding of archaic forms of construction. Administrators and the public need to be educated regarding the need for alternatives, so they do not regard alternatives as relaxations of safety requirements.

John Reimer indicated that the PTCBS has written to the Canadian Council of Building Officials in support of increased training. The four western provinces have met recently to discuss certification. John Haysom indicated that the PTCBS has asked NRC to not pursue the training of building officials. Bob McLaughlin noted that code training is available to provincial home builders' associations, and that there was a need to get more code training into the school systems.

[Note: CMHC has initiated plans for a similar type of forum to discuss inspector training.]

7. Wrap-Up and Closure

Don Johnston thanked the participants for attending and for sharing their views. He indicated that CMHC would be following up on the Forum and would be distributing a report on the Forum proceedings.

IV. Conclusions

1. Assessment of the Forum

CMHC's Housing Renovation Code Forum appears to have been successful in fulfilling its objectives. The response from the many stakeholders invited was enthusiastic, with almost all attending the Forum (25 in total). The varying views on the optimum approach to regulating renovation were thoroughly expressed. All participants had an opportunity to develop a better understanding of the two major approaches - guidelines on applying codes to existing buildings and codes and bylaws written specifically for renovation.

The discussions were frank, insightful and stimulating. There was a surprising degree of agreement on most areas of concern. In addition, specific recommendations emerged which were supported by all Forum participants. In summary, it would appear that the face-to-face dialogue among the various stakeholders was an effective method for reaching a consensus.

2. Points of General Agreement

The following list summarizes the major points of agreement which emerged.

- Life safety should not be compromised; property protection and other measures may be.
- Whatever approach is adopted, it must encourage renovation, since the lack of renovation perpetrates unsafe conditions and leads to a greater number of deaths and losses. (How to maintain high standards for life safety without discouraging those renovations involving only minor improvements in life safety was left as an unresolved issue.)
- Building officials are currently in a legally vulnerable position where judgement calls are made regarding life safety; this vulnerability leads to a literal interpretation of code requirements, which in turn discourages renovation.

- There is a growing body of knowledge, experience and modelling capability regarding equivalencies. However, this knowledge needs to be "codified" in some manner which has legal status in order give building officials a more defensible basis on which to accept alternatives.
- Jurisdictions which have adopted renovation codes and bylaws are reported to have had positive experiences. Spokespersons for the renovation industry have indicated that such codes and bylaws are well liked by the industry. Certain weaknesses and gaps have been discovered and therefore there is an ongoing need to upgrade their approaches.
- NRC's Guidelines are welcomed in that they clarify the intent of the NBC requirements.
- There is a vast difference in municipal needs and capabilities between large urban centres versus small towns and rural areas. As a result, there is a need for national or at least provincial standards.
- Training needs to be increased for building officials, professionals and renovators. Jurisdictions which have introduced training and certification for professionals have reported the approach to be successful.
- There is a need to coordinate regulatory approaches among provincial and municipal building codes, fire codes, seismic requirements and mandatory upgrades.
- The triggering mechanism for the application of code requirements to renovated buildings is very important. There is a need for model administrative requirements to deal with this issue. In areas where property values are fluctuating wildly and the residual value of the building itself is very low, alternate approaches to estimating construction costs may have to be used as a triggering mechanism.
- Codes and standards for existing buildings, combined with mandatory upgrading to a certain minimum level of life safety, is a growing trend for municipalities.

3. Specific Recommendations Arising From the Forum

The Forum agreed to recommend to the Provincial and Territorial Committee on Building Standards that it recommend the following to the Canadian Commission on Building and Fire Codes:

- a) that model administrative guidelines for the use of the NBC be broadened to cover existing buildings and the triggering mechanisms that bring existing buildings within the scope of building code requirements; and
- b) that deemed-to-satisfy requirements for the application of Part 9 to existing buildings be developed, rather than the Guidelines currently proposed for development.

While no specific recommendations emerged with regard to the need for training and education, this was perhaps because of lack of time (and energy) as the Forum wound down. Clearly, all participants at the Forum regarded training and education as vitally important, and organizations such as CMHC, NRC and CHBA may wish to pursue the development of national training programs, in collaboration with provincial agencies and with professional and building official associations.

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