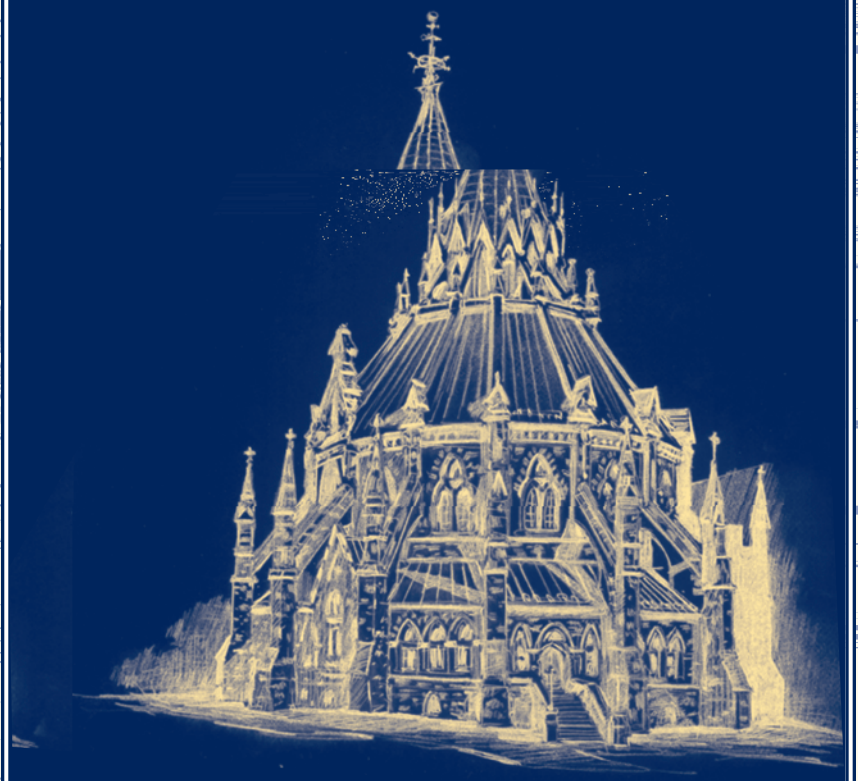
Federal
Heritage Buildings
Review Office
(FHBRO)

FHBRO
Code of Practice



Canadian Heritage
Parks Canada

Patrimoine canadien
Parcs Canada

Canada

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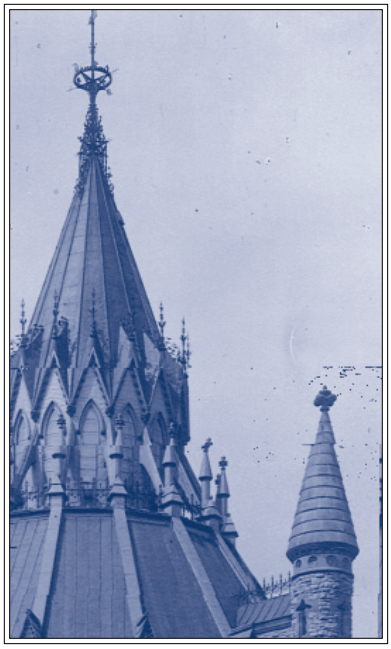
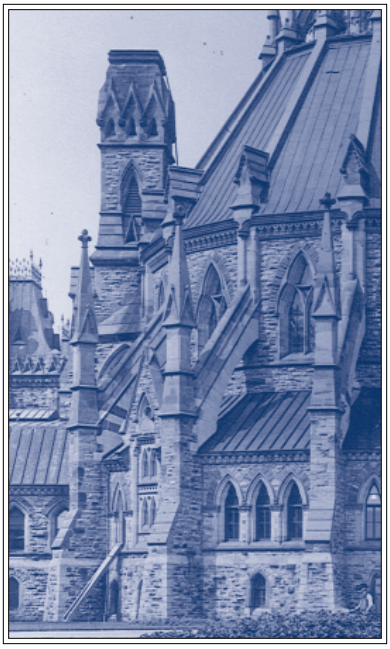
Development of the Code of Practice



Since the inception of FHBRO, strong efforts have been made to base decisions concerning the appropriateness of intervention to Crown-owned heritage buildings on the internationally accepted principles of conservation. These are found in the many charters and doctrinal documents developed and supported by ICOMOS (the International Council on Monuments and Sites) and related organizations. Particular attention has been paid by FHBRO to the central charter in the field, the Venice Charter of 1964. Indeed, FHBRO developed an annotated version of the Charter for its own use in the mid 1980s.

Increasingly, however, given the practical experiences gained in evaluating and reviewing interventions for thousands of buildings, and in the FHBRO training courses offered continuously since 1986, it has become apparent that the needs of property and project managers in the federal government would best be served by a doctrinal text written from their point of view, with their needs foremost in mind.

In 1992, architect Herb Stovel, who has been involved closely with the development and delivery of the FHBRO training programme, was asked by Heritage Conservation Program (HCP) of Architecture and Engineering Services for Parks Canada and Environment Canada, Public Works Canada to develop this new approach. Herb Stovel worked in close collaboration with architect Julian Smith, who was with Parks Canada's Restoration Services Division at the time of FHBRO's inception. Their efforts were directed by a Code of Practice Review Committee consisting of Terry Smythe (acting Chief of the FHBRO), Lyette Fortin, Jean-Pierre Landry, Robin Letellier, Andrew Powter, Gouhar Simison, Jack Vandenberg (all of the Heritage Conservation Program), Gordon Fulton of Architectural History Branch, Parks Canada, and Johanne Fortier, François Leblanc and Donald Pineau of the National Capital Commission. In addition, the document was distributed widely for comment in various sectors of the heritage movement, and to those bearing responsibility for other aspects of historic building management in the federal government, including health, safety, and labour issues. Considerable input was also received from project managers in Public Works Canada and the National Capital Commission. The first draft edition of the document was published in October 1993. In the summer of 1995, Herb Stovel revised the document on the basis of comments gathered from a wide range of users within the FHBRO system. Lyette Fortin and Jean-Pierre Landry led the review process.



Introduction to the Code of Practice

The Government of Canada owns approximately 60,000 buildings. Responsibility for their care and management is spread among 18 departments. The Federal Heritage Buildings Policy applies only to those buildings deemed to have heritage character, that is, at present, to less than a quarter of the buildings so far evaluated. The Federal Heritage Buildings Review Office is prepared to assist all departments in developing management approaches appropriate for these heritage buildings.

The FHBRO Code of Practice is designed to assist property managers and custodians whose decisions affect federal heritage buildings to implement the Federal Heritage Buildings policy. It is drawn from two sources: the accepted international principles of conservation and Government of Canada property management standards and guidelines.

The FHBRO Code of Practice has been organized around a number of guiding principles. It establishes both a policy and a management context for examining intervention decisions relevant under the Federal Heritage Buildings Policy. It focuses attention on the primary objective of the policy: to protect the heritage character of Crown-owned buildings. It presents the principles of heritage conservation which provide those in the field with a general framework for judging the quality of proposed changes to heritage buildings. Finally, and most importantly, it applies the principles of heritage conservation to the nine areas of property management responsibility. In each of these areas, intervention guidelines assist users of the code to assess the impact of proposed changes on heritage character, and to examine available means to reduce or mitigate negative impacts. A series of general questions provided at the beginning of this section will lead managers through the general analysis that FHBRO carries out in its review of proposed interventions.

The Code of Practice presents a series of key statements or articles in each of the areas it covers. A commentary is also provided with each article to give some insight into the reasoning behind the article. The Code of Practice is meant to be applied as a whole to analysis of intervention decisions; while it may prove useful as a quick reference in any one area covered by the Intervention Guidelines, it will give maximum benefits to those who apply the document in its entirety to their decisions.

Use of this Code of Practice is not meant to replace consultation with FHBRO’s technical staff and advisers.

Policy Framework

Gulf of Georgia Cannery, Steveston, B.C.
(Heritage Recording Services, Parks, 1987)

Policy Framework

Managers whose decisions affect buildings under Crown ownership must be aware of and implement the Federal Heritage Buildings policy.

PROTECTING HERITAGE CHARACTER

1. It is the policy of the Government of Canada to protect the heritage character of Crown-owned buildings. This policy is governed by the procedures described in Chapter 1-9 of the Real Property volume of the Treasury Board Manual.

The Real Property volume of the Treasury Board Manual encompasses the nine major mandates currently embraced by Treasury Board in managing government-owned properties. These include achieving market return on disposal, highest and best use, ensuring universal access, meeting environmental standards, ensuring respect for heritage character, ensuring adequacy of accommodation and other factors pertinent to sound property management.

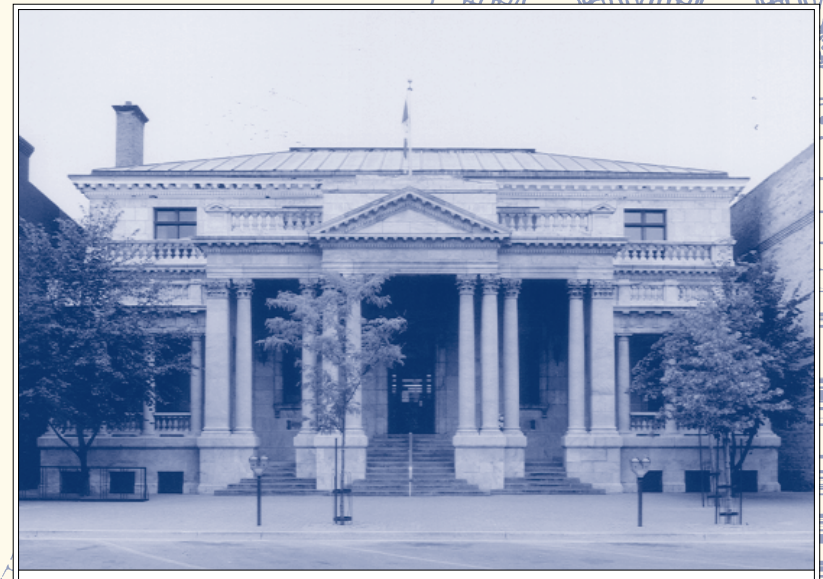
PROPERTY MANAGEMENT MANDATE

2. The policy protects heritage character by placing it on the same level as other significant property management considerations.

All of Treasury Board's real property management mandates are viewed as equal; no one has priority over another. Where conflicts occur, managers are expected to promote compromises which seek to meet all competing objectives to the greatest degree possible, rather than to give one or more priority over others.

The minimum intervention approach offers a useful means of formulating objectives where mandates appear incompatible. This approach suggests that managers seek to meet functional goals by identifying those options which will meet such goals with least negative impact on heritage character.

Management Framework



Federal Building, Collingwood, Ontario
(Heritage Recording Services, Parks, 1984)

Management Framework

It is the responsibility of managers whose decisions affect buildings under Crown ownership to be aware of and support management practices which protect heritage character.

REQUIREMENT FOR RESOURCES

1. Heritage buildings require the allocation of resources (funds, expertise and time) commensurate with their worth as part of our heritage. Where these resources do not exist in-house, they should be sought elsewhere.

It is frequently assumed that the cost of rehabilitation exceeds the cost of building new to provide equivalent space. Where rehabilitation work requires special care for traditional details and unusual materials, costs may indeed be high. However, the apparent high cost of most conservation projects is usually linked to:

- assumed preference, at the concept design stage, for replacement over repair;
- low bid, fixed price tendering systems, which work well where time and materials can be quantified (as in new construction), but which work poorly in predicting costs where work cannot be accurately quantified (as in existing buildings with hidden conditions);
- the practice of covering the risks associated with hidden conditions through over-design and over-specification of unnecessary work (by design professionals) and over-bidding (by contractors);
- unwillingness to invest up-front in levels of research and investigation adequate to clarify building condition;
- the difficulty of obtaining reliable cost-data on successful projects. Cost figures are usually not available, and it is difficult to isolate relevant variables from early project planning stages onward; and
- failure to use life-cycle approaches to project costing.

FHBRO studies have demonstrated that intervention review recommendations consistently reduce project costs, from those foreseen at the design review stage.

LONG-TERM BENEFIT

2. Federal government objectives for heritage buildings give priority to long-term considerations over those concerned with short-term benefit or return.

Despite the common use of short-term planning frameworks to realize benefits during the periods of time for which managers or political leaders may be held accountable, it is sound management practice to make property management decisions in a long-term framework. It is well recognized that decisions based on short-term return are likely to have negative consequences for buildings, by deferring needed maintenance and increasing future capital costs.

COMMITMENT TO MAINTENANCE

3. Appropriate levels of maintenance for heritage buildings substantially reduce long-term capital needs in protecting heritage character.

Departments frequently seek to meet budgetary constraints by reducing operational spending. This often has the effect of reducing maintenance programs for buildings, or promoting investment in so called maintenance-free materials or systems. These materials and systems are misnamed; like all materials, they decay over time, and are not maintenance-free over the long term. Equally, lack of investment in maintenance increases the risk of catastrophic failure of building elements.

The best long-term investment in a building's future is adequate maintenance; this assures a high degree of user satisfaction with building condition, slows rates of building decay and provides the greatest assurance of long-term reductions in capital spending.

CONTRACTING PROCEDURES FOR HERITAGE BUILDINGS

4. Federal government tendering and contracting mechanisms should recognize the special qualities and needs of heritage buildings. Where existing mechanisms prove inadequate, these may require adaptation.

Cost reductions may be achieved in heritage building projects by using the full scope of contracting procedures available to managers working in the federal government, rather than simply employing the standard procedures developed for new (easily quantifiable) construction. Procedures employed should ensure that all those involved in the work are adequately trained and skilled in the special approaches necessary for conservation.

INTERDISCIPLINARY APPROACH

5. Protection of heritage character requires an interdisciplinary team to be established at an early stage in project planning. Team members should possess adequate training, experience and resources for the work at hand.

Conservation is inherently an interdisciplinary process. It requires planners, engineers, architects, researchers, heritage recorders and those executing projects to consult frequently and work closely with building users in teams, to solve problems together. To succeed fully, teams and individuals, while not abandoning their basic training or skills, should be prepared to work toward the common objective of protecting heritage character.

NEED FOR CONSENSUS APPROACH

6. Ensuring consensus at key points in the project decision-making process, among all those with a direct interest in a heritage building's future, is the best way to ensure the building's special qualities are fully understood and adequately respected.

Successful conservation decisions are not imposed; they reflect consensus developed around efforts to give fair attention and weight to all aspects of a building's heritage values and needs. The development of consensus requires commitment of team individuals to honest discussion, and acceptance of shared objectives.

INTEGRATING HERITAGE CONSIDERATIONS

7. It is important to ensure the full integration of heritage character considerations among the conventional criteria normally addressed in departmental planning processes for Crown-owned buildings.

Planners and managers are accustomed to expressing functional requirements and imposed constraints as criteria which can guide decision-making. Heritage character too needs to be expressed as objectively as possible so that tangible criteria for its defence may be formulated and weighed relative to other criteria.

RECORDING AND DOCUMENTATION

8. Full, permanent and accessible recording and documentation of all building conditions prior to, during and after interventions must be assured.

The recording of building elements, spaces and details in their as-found state is a necessary part of the commitment managers must make in documenting the impact of their interventions. This activity, sometimes described as heritage recording within various Canadian and international frameworks, may draw upon a range of technologies. It requires the involvement of managers and recording experts in assessing the recording needs, and levels and types of recording adequate to meet those needs.

ARCHAEOLOGICAL INVOLVEMENT

9. The disturbance of soil adjacent or below a building requires the involvement of an archaeologist to monitor such activity as disturbance may reveal significant cultural information.

In most provinces, salvage archaeology is explicitly provided for within heritage legislation. The broad assumption underlying such legislation is that soil strata around buildings may contain irreplaceable information of potential value to society, and that efforts should be made in construction projects to protect the information. Trained archaeologists with experience in salvage operations are usually able to meet such needs without significant impact on budgets or schedules, if involved early in the process.

Heritage Character

Cereal Barn Building, Ottawa, Ontario.
(Heritage Recording Services, Parks, 1986)

Heritage Character

The protection of heritage character requires managers whose decisions affect buildings under Crown ownership both to understand and respect heritage character in their planning.

DEFINING HERITAGE CHARACTER

1. Heritage character may be defined as the synthesis of a building's heritage values.

Determining appropriate intervention on heritage properties requires measuring the impact of proposed actions on heritage character. The consistent and clear evaluation of heritage character becomes a key step in assuring respectful treatment of heritage buildings. Heritage character may be understood to be a composite amalgam of the various areas of heritage value perceived in a building. In some cases, heritage value may be linked to original building design and attributes, while in others to the changes and additions brought by time.

While the evaluation process may clarify the sources of heritage significance of a structure, in order to provide tangible assistance to designers it is equally important to ensure that the physical elements, materials, systems, patterns of use and relationships which reflect and reveal these sources are accurately identified and described.

The Heritage Character Statement is the means used by FHBRO to clarify both the sources of heritage significance for a building ("reasons for importance") and supporting attributes ("character-defining elements").

SOURCES OF HERITAGE VALUE

2. The heritage values of Crown-owned buildings derive from many sources. These include historical associations, architectural significance, environmental importance and continuity of use.

Heritage character may reflect importance in a broad range of areas. These may include architectural design, but also, for example, the degree to which buildings may reflect important themes in Canadian history. Heritage character may also reflect the contextual importance of a building in its site or setting, or its influence on local development. This approach to heritage values acknowledges the innovative approach developed by architectural historian Harold Kalman for Parks Canada in his 1980 booklet *Evaluation of Historic Buildings*. The factors assessed by FHBRO and their relative weighting represent adaptations of the Kalman system developed over time and modified with experience in the FHBRO context.

FHBRO's evaluation process is based upon research reports prepared by architectural historians working for Parks Canada. Their sources include

plans, historic photographs, written documents, individuals within communities and as often as practically possible, the building itself. As well, the custodian department often brings privileged information about the building to the evaluation discussion which takes place in the Federal Heritage Buildings Committee.

3. In order to guide design decision-making in practical fashion, heritage character must be clearly defined by linking the primary areas of heritage value to related character-defining elements, patterns and relationships.

LINKING HERITAGE VALUES TO BUILDING ATTRIBUTES

In order to ensure that links between areas of significance identified during evaluation and character-defining elements or patterns are fully developed, it may be necessary to carry out additional research to focus on the nature, history and current state of such elements or patterns.

4. Full understanding of heritage character is essential to its protection. Substantial research investment is normally required to ensure this understanding, and its consistent application to all building elements and systems.

RESEARCH NEEDS

Research necessary to support understanding may involve professionals from a variety of research disciplines. Heritage recorders may document the as-found configuration of a building at a range of levels. Historians may use the written, oral, and visual record to present a picture of the circumstances of a building's origin and evolution. Archaeologists may amplify this understanding through excavation and interpretation of sub-surface materials.

5. The determination of heritage character in buildings reflects contemporary values in society, and may require adjustment over time.

SHIFTS IN PERCEPTION

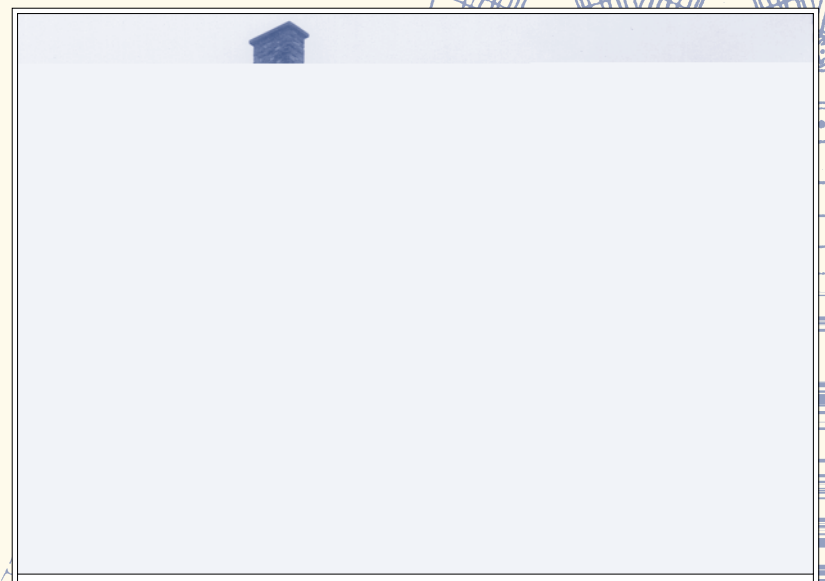
The evaluation process reflects the common values of our time and place. By ensuring consensus about those values within a broad range of interested parties, our evaluations become informed judgements and their objectivity increases to the greatest extent possible within our temporal/cultural framework. This process imparts credibility and consistency to the decisions it supports and permits departments to assign priorities for action and care with a high degree of confidence.

At the same time, it must be acknowledged that as time passes, the values we attribute to buildings are likely to shift. This phenomenon reflects both changes in perspective about heritage importance within each generation, and also the need to recognize the value of changes introduced to buildings

over time. FHBRO recognizes the importance of these shifts and may, as circumstances warrant, review its evaluation process and the inherent assumptions within it.

FHBRO is also open to review evaluations where important shifts in perception may be demonstrated to have taken place, and where significant changes in use, or new information, may warrant.

Heritage Conservation Principles



Maison Maillou, Québec, Québec.
(CIHB, n.d.)

Heritage Conservation Principles

It is the responsibility of managers whose decisions affect buildings under Crown ownership to apply the commonly accepted principles of heritage conservation to ensure interventions respect heritage character.

The principles of heritage conservation recognized internationally have been established through two centuries of exchange among conservation professionals. These principles may be found in a great number of international, regional, national, and thematic documents, such as the 1964 Venice Charter. These texts consolidate principles important in a range of particular contexts.

No one approach, no one set of principles is consistently suitable or universally applicable to all circumstances. Real-life situations demand a mix of approaches and principles, in reflecting the mixed values of complex sites. Successful conservation demands identification of the areas in which value lies, and some sense of their proportional importance. Conservation also prefers, in recognizing the rights of future generations, the most conservative approaches (those involving preservation of the existing state) and the most conservative principles (those involving caution or prudence), to ensure adequacy of evidence supporting proposals, and to minimize risk to the building.

DEFINITION:
HERITAGE CONSERVATION

Heritage Conservation may encompass a range of activities dedicated to the protection and enhancement of heritage buildings, provided these are rooted in respect for the heritage character of those buildings.

Many words may be used to describe activities within the heritage conservation field, including, for example, repair, preservation, stabilization, restoration, reconstruction, replacement, rehabilitation, and so on. All such approaches may be seen to represent lesser or greater levels of intervention; all may be considered to be conservation activities, provided they have as their aim the protection or enhancement of heritage character. It is worth noting that contemporary definitions of conservation are both backward-looking (concerned with protecting important elements from the past) and forward-looking (using the past to enhance, by inspiring the form and direction of future development).

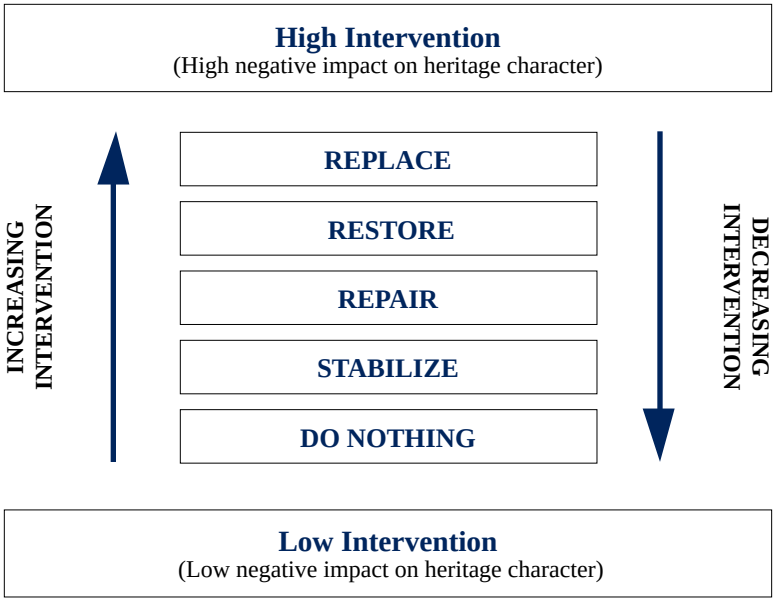
MINIMUM INTERVENTION

1. Heritage character is best protected by a minimum intervention approach, that is, by selecting approaches to meet functional goals which offer least harm to heritage character.

In developing appropriate conservation approaches for buildings, it is always best to employ the doctrine of minimum intervention. In practical terms, this means asking first: can functional goals be met at the lowest level of intervention (say through repair)? If yes, the questioning may stop, and refinement of the chosen approach begin. If no, the same question is posed at the next highest level of intervention (say restoration), proceeding incrementally upward along the intervention scale towards replacement until a fit with needs is made.

The same questioning process may be repeated inside the chosen level of intervention, as part of its articulation and refinement. For example, within restoration as a chosen level of intervention, the intervention scale might range from reduction to addition. The first question might be: can goals be met by reduction, that is, through removal of certain elements? If not, can goals be met through reinforcement, or addition? If not, must elements or motifs be entirely reconstructed or rebuilt? The questioning process is always linear, moving from those approaches offering least negative impact to those of highest impact on the building. If rehabilitation is the chosen level of intervention, can goals be met with the addition of reinforcement, with strengthening devices or laid-in systems? If not, can goals be met with selective replacement of systems or elements? Gutting and stripping of interior systems, floors and finishes would only be considered, but only as a last resort, when all other less demanding approaches have been determined unable to meet needs.

The minimum intervention approach may also be applied to determining treatments appropriate for deteriorated building elements. Where windows require upgrading to meet contemporary standards of energy conservation, for example, it is useful to ask if those goals can be met through simple repair? If not, can they be met through addition (retrofitting) of additional elements? If not, through restoration of missing elements? And if not, can they be met finally by replacement? The thrust of this minimum to maximum orientation ensures that replacement is the last — not the first — option considered, in determining appropriate intervention.



Minimum Intervention Scale

EACH CASE UNIQUE

2. Respect for heritage character requires adoption of a case-by-case approach to intervention analysis and decision-making, built upon understanding of the unique values and circumstances of each heritage building.

Effective heritage conservation demands approaches for buildings and projects that are in tune with their particular qualities and with the conditions encountered. This demands a commitment to research and understanding sufficient to identify those qualities and conditions, and an avoidance of formula-like approaches which provide generalized responses to what are always unique situations.

BALANCING PRINCIPLES

3. Interventions respectful of heritage character will balance application of heritage conservation principles concerned with caution, with honesty and with fit, in relation to the most important values of the heritage building.

Generally speaking, the values of heritage buildings guide the selection of both approaches and principles appropriate for their care. While the body of doctrine in the heritage conservation field encompasses dozens of international, national, and thematic documents or “charters” and hundreds of individual principles, generally speaking these latter fall into three broad areas: those concerned with caution (prudent care), those concerned with honesty (concern for truthful expression), and those concerned with fit (concern for compatibility of the parts and the whole). Conservation approaches will define an appropriate balance among values to be respected, and accordingly require an appropriate balance in the areas of principles to be applied.

Values	Approaches	Principles of ...
material values	preservation	caution
formal values	restoration	honesty
contextual values	adaptation/rehabilitation	fit/compatibility

PRINCIPLES OF CAUTION

4. Interventions respectful of heritage character should be guided by the principles of caution, particularly when dealing with material values. Here, the primary concern is preserving surviving building fabric.

Where material (or artifactual values) are pre-eminent, prolonging the life of surviving historic fabric becomes the primary concern; generally speaking, a preservation approach focused on stabilization/consolidation, and supported by a concern for caution in the conservation principles applied will provide the best means to respect these values.

A principle of caution is investigation: for example, ensuring defects or problems are fully understood before prescribing treatments, and using solutions which have been well tested in the field.

PRINCIPLES OF HONESTY

5. Interventions respectful of heritage character should be guided by the principles of honesty (for example, basing choices on available evidence), particularly when dealing with formal or design values. Here, the primary concern is preserving the visual coherence of a significant form or stage in the evolution of a building in order to re-acquire perceived symbolic importance.

Where formal (or design) values are of most importance, efforts to recover lost or obscured forms become important; in general, approaches requiring restoration of lost coherence or clarity to reinstate symbolic significance, supported by concern for the principles of honesty, will be most appropriate in ensuring respect for those values.

A principle of honesty is legibility: for example, the need to ensure added or altered materials are distinct from significant historic materials, without impairing the aesthetic value of the whole.

PRINCIPLES OF FIT/COMPATIBILITY

6. Interventions respectful of heritage character should be guided by the principles of fit (or compatibility), for example, harmonizing proportions, colour, texture, forms, materials or structural characteristics of added elements, when dealing with contextual values. Where contextual values are concerned with physical relationships, the primary concern may be preserving or re-establishing important relationships between and among building elements and the whole; where these values are concerned with functional context, re-establishing proper fit between a building and its use would become important.

When dealing with contextual values (where the values of individual elements or activities in a building are a function of their relations to a larger whole: building to site, building to use, or elements to the whole), efforts to maintain the quality of existing relations or to regain former relations are encouraged; generally, approaches that adapt or rehabilitate buildings to changing circumstances, supported by application of the principles of fit (or compatibility), will be most appropriate.

A principle of fit is harmony: for example, the need to maintain or re-establish harmonious relations between a building and its site.

INTERDISCIPLINARY COLLABORATION

7. Interventions respectful of heritage character are best supported through wide and ongoing technical consultation with specialists in the field's pertinent disciplines.

Conservation problems are generally complex, and demand technical expertise in a wide variety of areas. Consequently, such problems require interdisciplinary collaboration for their resolution. Departments of the federal government rarely have the requisite expertise in-house; FHBRO technical support units such as the Heritage Conservation Program, Real Property Services, Canadian Heritage/Environment Canada Dedicated Unit are prepared to provide advice for FHBRO projects. This support may come in the form of direct consultation or in directing departments to the sources of expertise which they require.

RESEARCH PRIOR TO INTERVENTION

8. The understanding essential for respectful intervention can only be assured through adequate research prior to intervention.

The research efforts of historians, engineers, building and materials science specialists, architects, heritage recorders and any other disciplines whose skills contribute to achieving adequate levels of understanding of a heritage building should be integrated with research contributions coming from representatives of the custodians. All those involved in the research process must ensure adequate, permanent, and accessible documentation of their

findings. Adequate means of information management must be established and full accessibility of data ensured. Achieving related goals may require the collaboration of information management specialists and custodians in designing information management systems which meet contemporary needs and employ appropriate information transfer technologies, be they computerized data-banks and electronic networks, or paper files.

Intervention Guidelines

Gannet Rock Lighttower, Bay of Fundy, New Brunswick.
(Transport Canada, CCG, 1990)

Intervention Guidelines

The guidelines which follow have been grouped according to the functional and performance goals commonly addressed by managers. Each section deals with the relationship between functional goals and heritage character.

Measures undertaken to meet functional goals constitute interventions when they may affect heritage character.

Achieving functional goals is important to the preservation of heritage values, and may provide the means to enhance heritage character. However, where the negative impact on heritage character is unacceptably high, consideration must be given to altering or downgrading functional goals.

In each of the following sections, managers are asked to explore how to meet functional/performance goals with the least impact on heritage character. The general questions presented below are meant to assist managers to choose the best means to balance these goals, and to become familiar with the analysis carried out by FHBRO during intervention review. They can be applied in each area of the intervention guidelines.

Code of Practice: Follow-up questions

a) Are changes proposed to the building to meet performance standards or user requirements better? Have these requirements been clearly defined?

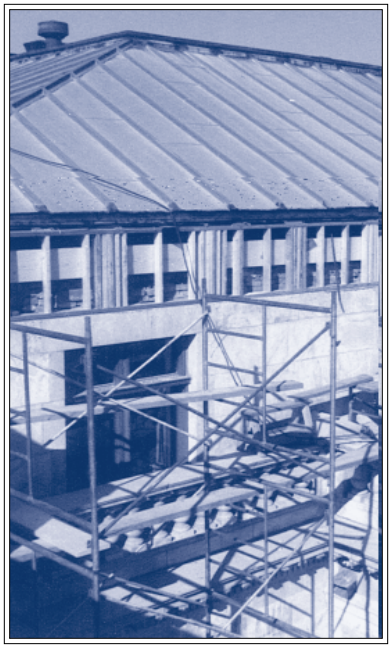
b) Could these changes have an impact on the heritage character of the building? Negative impact? Positive impact? Is this impact acceptable?

c) If changes appear to have an adverse impact on heritage character, have alternative means to meet the defined requirements been explored?

d) If changes appear to have an unacceptably high impact on heritage character, has consideration been given to the suitability of the project for the particular heritage building? Has consideration been given to meeting needs in another building?

e) If changes will have an adverse impact on the heritage character and all alternatives have been explored, have measures to mitigate the loss been put in place?

1 - Maintenance and Repair:



Maintenance is essentially the provision of continuous care, in order to preserve heritage character effectively. Maintenance activity may include routine and periodic inspection, cleaning, repair and refinishing operations, designed to keep the existing form and substance of buildings.

Maintenance measures constitute interventions when these may affect heritage character.

Inadequate or deferred maintenance, or neglect, constitute intervention if heritage character is thereby damaged or threatened.

MAINTENANCE PROGRAMS

1.1 Maintenance programs require building-specific planning, and should incorporate schedules, procedures and remedies linked to the building's specific characteristics and needs.

It is important to recognize that the FHBRO policy is not designed simply for capital (that is, large, or major) interventions. If changing hardware or light fixtures, or repointing would have an impact on heritage character then these are to be regarded as interventions, and the FHBRO process is to be applied.

FHBRO recognizes however, that the time required for intervention review of minor items may appear disproportionate to their intrinsic worth. An appropriate strategy to deal with maintenance issues would be the submission of building maintenance plans (manuals and programmes) for review, approval of which would sanction a wide range of actions which might affect heritage character over a defined period of time.

REDUCING RISK

1.2 All maintenance measures carry the risk of adverse impact on heritage character. Every effort should be made to reduce this risk through adequate prior testing of measures proposed. All maintenance measures should be non-abrasive, non-destructive and environmentally benign.

One of the most important maintenance measures is cleaning. All cleaning measures carry some risk. Chemical treatments may be difficult to manage; air abrasive methods may injure masonry surfaces if pressures are not carefully controlled; water spray may saturate wall assemblies. The keys to successful cleaning involve:

- clear definition of the desired state of cleanliness;
- adequate testing, in situ, of all proposed methods; and
- choice of the method which meets cleanliness goals, respects budget and regulatory conditions, and offers least harm to surfaces.

Attention should also be directed to the quality of site supervision, establishment of reference areas to guide supervision, likelihood of operator fatigue (and measures to balance same) and handling and disposal of toxic products.

RETENTION PREFERABLE TO REPLACEMENT

1.3 Repair or consolidation measures which retain original material are always preferable to those intended to replace it.

Trade skills developed in new construction are naturally most usefully applied to replacement rather than to repair. Yet respect for heritage buildings and the minimum intervention approach suggest a preference for repair over replacement when working on heritage properties. This difficulty can be overcome in part by clearly defining repair needs and procedures and identifying appropriate skills in maintenance manuals or tender documents. Many of the required repair techniques are spelled out in available conservation literature. Once established, they can be easily cost competitive with replacement work.

REPLACEMENT AS LAST OPTION

1.4 Replacement should occur only where the major part of an element is decayed beyond repair.

Replacement of elements decayed beyond repair may be appropriate if such would contribute to protecting heritage character, and if supported by historical evidence adequate to determine the form and substance of missing elements.

APPROPRIATE REPAIR

1.5 Repair measures should retain original material and detailing to the greatest extent possible, except where these cause deterioration of other elements.

The tendency to improve on historic detailing can be counter-productive when working with heritage materials. Repair techniques should return structural adequacy to materials and components, and slow down the rate of decay. Ongoing weathering is usually inevitable and should be accepted.

PROVEN MEASURES

1.6 New materials introduced in repair work to strengthen or consolidate should only be used on the basis of successful field experiences in similar conditions. In all circumstances, new materials should offer the least possible risk to the historic structure, and be reversible to the greatest degree possible.

When new compounds or repair materials, such as masonry or wood consolidants are introduced, qualified professional conservators should be involved to analyze the condition of existing materials, propose solutions, and monitor their implementation. Many of the highly promoted techniques recently introduced to protect materials from decay, using new materials such as vinyls, silicones, epoxies and various metal alloys are not field proven and may indeed accelerate decay.

APPROPRIATE REPLACEMENT

1.7 Replacement measures require, to the greatest extent possible, the use of like materials and detailing, except where these cause deterioration of other elements, or where these are inadequate to meet prescribed performance standards (e.g., fire and life safety, structural stability, energy use).

Where replacement is justified, needs may be met by replacement in kind, or restoration to an earlier appearance. This decision should be made in the context of the overall project needs, impact on heritage character and on the basis of historical evidence.

For replacement in kind of entire building components (e.g., a cornice or a set of windows), an example of the original should always be retained where possible and integrated into the new work. Choice of the best preserved unit provides a control item for the replacement work, and serves as an important piece of evidence for future conservators.

In cases of demonstrated structural weakness, replacement in kind may be an inadequate response to needs; choice of appropriate intervention will require looking at the behaviour of the entire structural system (that is, for example, all floor joists, not just the one being replaced) and involve analysis of a range of options including partial reinforcement of the "in-kind" replacement member.

"MAINTENANCE-FREE" MATERIALS

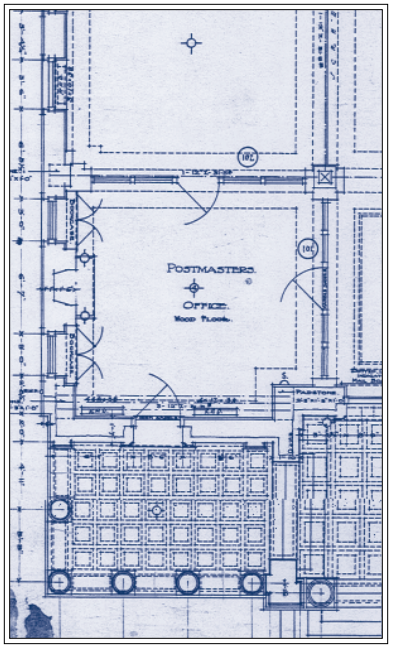
1.8 The substitution of maintenance-free materials such as aluminum, fibreglass or vinyl for original materials is not recommended. These materials reduce heritage character and may alter the desirable characteristics of building envelopes or systems.

The advertising use of the term "maintenance free" is misleading since all materials decay in normal environmental conditions. As well, the

introduction of new materials and associated detailing will often alter the environmental equilibrium of the building envelope. The unexpected build-up of humidity from choice of inappropriate sealants, for example, is a common problem which is often not visible until serious damage has occurred.

2 - Use and Occupancy:

Appropriate use and occupancy are essential to the long-term conservation of a heritage property.



2.1 Where an existing use is an important element in defining a building's heritage character, continuation of that use is a priority. In other cases, returning to the original use may provide opportunities to enhance heritage character.

CONTINUITY OF USE

The original use of a heritage building is often reflected in its design and detailing. The siting, facade treatment, entry sequence, treatment of public spaces, and overall layout may all relate to intended use and occupancy. The retention or reinstatement of original use can often lead to satisfactory design solutions at lower cost with less damage to heritage character than the introduction of radically different uses. If original use is not possible, related uses should be sought which are compatible with the building's heritage character. Building codes are gradually being adapted to recognize the need to protect heritage values, without in any way compromising public safety. Code flexibility is particularly applicable where original use is being maintained.

2.2 Planning for intervention must include an assessment of the impact on heritage character of any new use, modification of use or application of accommodation standards. This assessment should consider patterns of access, spatial hierarchies and sequences, historic room layouts and finishes, building structure and services, and important features.

CHANGE OF USE

With new construction, the question of use and occupancy is determined before design begins. With heritage buildings, the final determination of use should be made only after an assessment of the existing property. This requires flexibility in the planning process.

APPROPRIATE ACCOMMODATION AND SPACE PLANNING

2.3 Successful accommodation and space planning will respect and reinforce the original design intentions, and important subsequent patterns of evolution.

A common conservation approach is to selectively identify important public and semi-public places for restoration, and to organize accommodation patterns around these spaces. Open office layout and other spatial use patterns of high impact on the character of interior spaces can be restricted to areas of low heritage value. As with building code application, flexibility in the application of accommodation standards is increasingly accepted for designated heritage properties.

HERITAGE BUILDINGS TO MEET ACCOMMODATION NEEDS

2.4 Preference should be given to using heritage buildings to meet accommodation needs over constructing new space, provided needs can be appropriately met in heritage buildings, without adverse impact on their heritage character.

Heritage buildings may also be viewed as assets whose characteristics may be suitable to accommodate many of the requirements of the federal government. While many heritage buildings may not be able to provide class A office accommodation, they may meet the needs of departments seeking prestige meeting or working space.

MATCHING HERITAGE BUILDINGS TO USE

2.5 Inventories of properties held by departments may be used to match accommodation needs to the characteristics and capacities of structures of heritage value.

The federal government recognizes the value of reusing heritage properties. With imagination and flexibility, a suitable match can usually be made between the existing inventory of heritage buildings and government space needs. Heritage buildings are often high-profile properties set in prominent locations, accessible to public transportation and other attractive aspects of the urban infrastructure. Their reuse reflects a wider commitment to resource conservation.

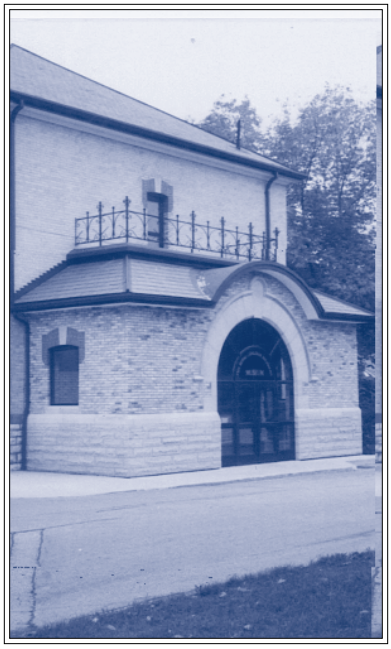
INAPPROPRIATE USE

2.6 Uses, either existing or proposed, which damage heritage character or exceed the reasonable use capacity of the building should be avoided.

Technical design solutions can be found to most of the use and occupancy demands imposed on heritage buildings. However, where such solutions become too demanding or destructive of heritage character, their incompatibility should be acknowledged and accommodation alternatives explored.

3 - Additions and Alterations:

Additions and alterations may be necessary to maintain appropriate use and occupancy, and may, if sensitive to existing heritage character, enhance a building's heritage character.



3.1 The design of additions or alterations to a building must respect its heritage character.

RESPECTING HERITAGE CHARACTER

New additions or significant alterations should respect the architectural presence and integrity of the original building. As with use and occupancy, a final decision on location, site layout and appearance should be made only after careful evaluation of the existing property.

3.2 Heritage character within heritage buildings may reside in important interior spaces, features, finishes and patterns of circulation and use. If significant, these should be respected in proposed alterations.

HERITAGE CHARACTER IN BUILDING INTERIORS

There are many characteristics to evaluate in looking at the impact on heritage character of additions or alterations. These include siting, massing, means of access, and use of materials, colours, textures and architectural language. As important as the question of appearance is the question of layout and circulation. Additions and alterations should strengthen and enhance the original patterns of exterior access and internal circulation, particularly in their relation to important architectural features and public spaces.

RESPECTFUL DESIGN

3.3 Respectful design interventions may extend a building's traditional design characteristics, or in contrast, reflect contemporary design preferences. The appropriate approach will be a function of the relative scale, importance and function of proposed additions or alterations.

In general, for additions of significant scale, if the original building has a strong architectural presence and a high degree of integrity, then additions would best extend and reinforce its significant features. If the original building has an architectural identity which is less strong, additions might acceptably contrast with it.

Additions of modest scale, in almost all cases, should seek to harmonize with the design characteristics of the existing building.

In the last decade, interest has increased in the use of historic precedent and the introduction of revival styles. Such imitative work is usually not appropriate for an addition or alteration to a significant heritage building, because it can confuse and undermine the integrity of the original. It is more appropriate to provide well-detailed, high quality design which derives from, but does not imitate the original.

LEGIBILITY

3.4 Additions and alterations should be recognizable as such on close inspection.

New work that seeks to imitate or extend original or significant design characteristics of an existing building may, without a careful distinction being maintained between original and new material, present a false image of the building's history to viewers. This distinction should not be drawn in ways that would diminish the overall architectural character of the ensemble. "Distinguishability on close inspection" is a useful guideline in assessing the suitability of new work.

FACADISM

3.5 Where the heritage character of a building lies both in its facade and its structure, interior finishes and spatial organization, facadism (or retention of only the facade of a building) is not an acceptable form of conservation. Where the heritage character rests strongly in the facade, and interiors have little value or have been much altered, retention of a facade in whole or in part may be acceptable but only as a solution of last resort.

Facadism became a popular compromise between demolition and new development in the 1980s. It is now recognized as an approach which usually undermines both the integrity of the original building, its heritage character and the integrity of the contemporary design. With increasing interest in maintaining the relationship between building exteriors and interiors, particularly in public buildings, the facadism option is now generally viewed as a less acceptable form of conservation.

INAPPROPRIATE ADDITIONS AND ALTERATIONS

3.6 Additions or alterations which impair heritage character should be reconsidered, and alternative means to meet space requirements sought.

If proposed additions or alterations seriously undermine the heritage character of a site, then it is incumbent upon the manager to recognize this fact and rule out these options. Such restrictions might apply most often in the context of free-standing buildings where the overall massing and quality of individual facades are important elements of heritage character, and where additions could only detract from these compositions.

4 - Accessibility:

It is the policy of the federal government to provide barrier-free access to heritage buildings except where these requirements will have an adverse impact on a building's heritage character.

RESPECTING HERITAGE CHARACTER

4.1 Barrier-free design solutions should reflect and reinterpret the original design intentions and enhance heritage character.

Heritage conservation professionals recognize that providing broad, general access to a heritage building for people of all ages, interests and capacities is a highly desirable goal, and a means to enhance its appreciation within the community. The physical changes to buildings required to ensure access standards should not be seen as destructive of heritage character but as an indication of the interest of our contemporary society in adopting universal access as an important social goal.

Improving accessibility to heritage buildings requires assuring not only adequate physical access to facilities, but ensuring that such is accompanied by adequate psychological comfort and dignity. The more accessible a heritage building, the better its chances of being appreciated, protected and maintained.

Solutions that best fit access needs and heritage character are those that will enhance the use and appreciation of a property for everyone. This is a design challenge from both aesthetic and operational perspectives.

ALTERNATIVE APPROACHES

4.2 A variety of solutions, including alternate building access, redesigned accommodation patterns, and for significant "historic sites" the provision of remote access through various media technologies, should be considered to improve accessibility while retaining heritage character. Such approaches should result from a review of all options by all interested parties, including representatives of groups speaking on behalf of the people with disabilities.

Improved accessibility should be achieved through an evaluation of the current strengths and weaknesses in the building, and an identification of the quality of existing means of site access, building access, internal circulation and wayfinding.

Short term improvements that address a specific issue should be as reversible as possible, in terms of their impact on heritage character. Longer term solutions, based on comprehensive examinations of needs, should explore adapting the use to the building as well as the building to its use.

The available technology to provide barrier-free access (e.g., lifts, automated doors, accessible furniture and fittings) is constantly improving. It is important not to destroy important elements of heritage character for short-term gain when future technological intervention may provide more sensitive long-term solutions.

APPROPRIATE SIGNS

4.3 Signs should communicate information to people with different abilities. Historic signs should be maintained and supplemented with subtle modern signs as necessary to meet contemporary requirements.

Wayfinding is an important component of accessibility. It is important to consider the quality as well as the quantity of information being conveyed. In general, conservation provides for retention of significant original or early work, and the introduction of contemporary changes in ways which are distinguishable as contemporary but aesthetically compatible. If a change is required from unilingual to bilingual signs, for example, the original can usually be maintained and a new bilingual sign carefully added.

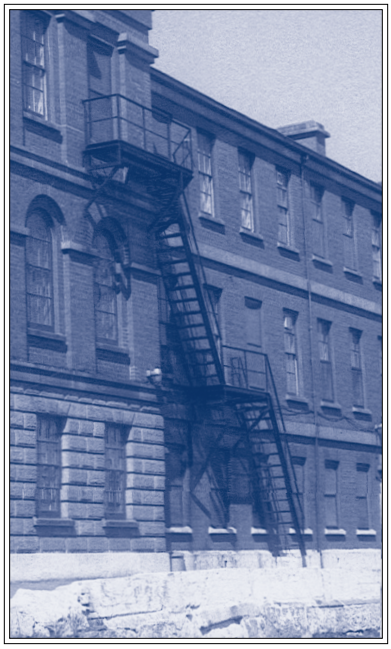
INAPPROPRIATE IMPROVEMENTS

4.4 If barrier-free access is not possible without severely compromising heritage character, then the proposed patterns of property use and occupancy should be re-evaluated, and alternatives sought.

As with any other intervention, it is the responsibility of the manager to recognize the point at which technical design solutions are not going to be able to resolve a building/use conflict. At this point, alternatives at other levels of concern (e.g., use, programming, etc.) should be explored.

5 - Health and Safety:

Adequate standards of public health and safety must be respected in the development of heritage buildings. Managers may be required to explore compliance alternatives for particular codes or regulations in order to reach satisfactory solutions which do not compromise heritage character.



CONSULTATION

5.1 Consultation with code officials and those responsible for standards enforcement should be an early and ongoing part of the design process for buildings with heritage character.

Issues of code compliance are increasingly complex, particularly when dealing with heritage buildings. At the same time, there is much more flexibility in code application than was the case ten or fifteen years ago. A variety of technological advances have also expanded the range of technical compliance options. For all these reasons, the retention of specialized code consultants familiar with historic properties is often advisable. They in turn will assure support for the project with the authorities having jurisdiction.

The strict application of codes designed for new construction presents problems for many heritage building projects. It is important, however, in achieving compliance for heritage buildings to ensure respect for the intent of the codes, without in any way compromising life safety objectives on the one hand, or property protection objectives on the other.

FIRE SAFETY ANALYSIS

5.2 Fire safety analysis should evaluate variables such as combustibility, compartmentalization, means of egress, smoke control, and detection and suppression systems, both individually and in combination. Acceptable solutions will provide maximum benefit with least damage to heritage character.

For large projects, it may be possible to develop a number of alternative solutions to life and fire issues, and to measure each in terms of effectiveness, impact on heritage character, and cost. Considering

the poor fire protection performance of many existing heritage buildings, any upgrading measure is likely to be an improvement; the issue then becomes defining the point of upgrade beyond which strict adherence to contemporary codes increases costs or harm to heritage character to unacceptable levels, without significantly increasing public safety.

Advances in sprinkler system design make their use advantageous in almost all heritage properties, and may provide benefits by reducing compliance standards in other areas. Advances in addressing problems of interconnected floor spaces and smoke control in new construction are applicable to similar situations in historic properties.

STRUCTURAL SAFETY ANALYSIS

5.3 Structural safety analysis should be based on understanding of original design intentions, past performance, structural history of the building, current building code requirements, existing conditions and proposed changes in applied loads or other variables. Interventions to strengthen a building should be designed to minimize their impact on heritage character and to be in harmony with existing structural elements.

As with other code issues, increasing flexibility in the application of structural design codes is becoming evident. Most codes now recognize historical performance as a reasonable guide to future behaviour, providing conditions do not change. In such circumstances, existing structural systems which show insignificant signs of stress or deformation may be assumed to be adequate for imposed loads, if properly maintained. Many historical structural systems have been inappropriately replaced or paralleled with contemporary new systems through inadequate understanding of the capacity of traditional assemblies and detailing. Appropriate expertise must be employed in structural upgrading efforts in order to ensure the balancing of conservation principles and structural needs.

SEISMIC REINFORCEMENT

5.4 Seismic reinforcement requires the clear definition of performance objectives for the building, the examination of various combinations of internal and external reinforcement measures and the assessment of short- and long-term impact on heritage character, in order to determine appropriate means of upgrading.

Inadequate understanding of seismic issues often results in the needless destruction of historic properties or their heritage character. These losses reflect both the application of unnecessarily rigid safety measures, and the lack of preventive measures. Seismic reinforcement is an area requiring special expertise, including the understanding of historic building assemblies and their past performance, knowledge of current international theory and practice in seismic reinforcement, and the evolving technologies being applied to retrofit analysis and design for historic buildings. It is

important to assure those involved in seismic analysis of historic buildings make use of the most up-to-date design guides and references available within the industry.

In urban areas, it may be important to direct analysis to both the subject building and its neighbours. These neighbours may contribute earthquake resistance to a highly valued heritage building.

Upgrading or reinforcement measures introduced should be chosen in response to clear and demonstrated needs, not to hypothetical targets which may require measures severely damaging to heritage character. Only field tested, proven techniques and measures should be employed.

HAZARDOUS SUBSTANCES REMOVAL

5.5 Hazardous substances should be removed unless significant damage to heritage character is inevitable. Encapsulation may provide an alternative solution for an interim period.

Today, there is increased concern for health hazards associated with asbestos, lead paint, bird and bat droppings and other toxic substances which may be found in older buildings. Related problems arise often when such substances are disturbed. Normal maintenance routines and substance encapsulation efforts are frequently required.

When intervention appears likely to cause disturbance, precautions must be taken. New technologies are becoming available which meet health requirements at reasonable cost. Abrasive methods with appropriate containment can be used for lead paint removal; special filtered vacuums are available for bird and bat droppings removal in areas of potential histoplasmosis contamination; and asbestos removal contractors can be found in most urban centres.

Of equal concern is the need to ensure contemporary intervention does not introduce new toxic substances into a heritage property. The widespread use of wood preservatives is now being discouraged, with a corresponding positive emphasis on air circulation and moisture control to avoid decay. In general, traditional materials are less toxic than new composite materials whose adhesives often constitute health hazards.

INAPPROPRIATE IMPROVEMENTS

5.6 If prescribed standards of health and safety cannot be achieved without severely compromising heritage character, then the proposed building use should be re-evaluated.

Some buildings are under-designed or otherwise unsuitable for proposed occupancies. If severe code compliance problems exist, it may be preferable to seek alternative uses, rather than compromise the building's heritage character. Public assembly or residential occupancies usually require more stringent code provisions for life safety than office or retail use.

6 - Energy Management:

Improvements to the energy performance of heritage buildings are important to their sustainability and community benefit, and offer opportunities to enhance a building's functional utility and heritage character.

RESPECTING HERITAGE CHARACTER

6.1 Appropriate approaches to energy management for heritage buildings involve the provision of new building systems, or those modifications to the building envelope which offer the least harm to heritage character.

There are a number of ways to deal with energy management in buildings. Physical changes may be made to the building envelope, by adding vapour barriers, insulation and new finishes, or upgrading the performance of windows or other openings. Building heating, ventilating and air conditioning systems and other building services may be introduced or modified. Equally, the energy requirements of existing or potential occupancies may be modified. All of these options should be considered when improving energy management in heritage buildings. Those cost effective measures which offer least damage to heritage character should be given priority.

ENERGY ANALYSIS

6.2 Analysis of energy management needs should consider the original design intentions and important subsequent modifications as well as current conditions. Proposed solutions should consider changes to patterns of use and occupancy as well as the upgrading of energy systems.

Concerns for improved energy management have inspired excellent modelling systems for building behaviour, and a variety of sophisticated control systems. It is important that analysis involve professionals familiar with the energy performance characteristics of traditional building assemblies, such as the contribution of massive masonry walls to thermal comfort.

MINIMUM INTERVENTION

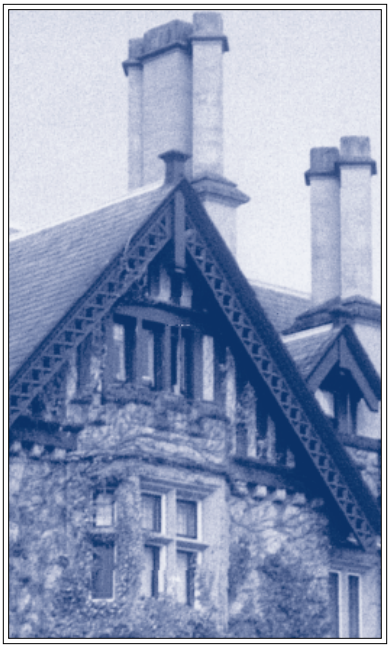
6.3 In general, priority for energy upgrades should be given to measures which provide the most improvement with the least physical intrusion.

It is usually possible to estimate the proportion of heat loss reduction which may be affected through improvements in various building parts (roof, walls, windows, etc.). It is important to not just measure which proposals are most cost effective in reducing energy demands, but to determine also those that have least impact on heritage character.

INAPPROPRIATE MEASURES

6.4 Energy retrofitting measures which would irreparably damage heritage character should be reconsidered, and alternative measures explored, or use demands reduced.

If measures to improve energy management become costly or disruptive, the advantages claimed may become counter-productive. Heritage buildings represent enormous reservoirs of expended energy, and their sensitive rehabilitation is itself an energy conservation measure.



7 - Human Comfort:

Intervention may be required to increase comfort levels, operational efficiency and environmental conditions within heritage buildings. Associated measures could include new heating, ventilating and air conditioning (HVAC) systems, new power/voice/data cabling systems, new lighting systems and fixtures, and other new fittings and furnishings. These goals offer important means to increase the usability of historic buildings and may be attained without severe impact on heritage character.

USING BUILDING OPPORTUNITIES

7.1 New or improved HVAC systems should utilize existing building cavities. If new chases and bulkheads are required, these should be placed so as to have minimum impact on important existing finishes, decorative features, and room proportions.

It is essential that mechanical engineers expert in working with historic structures be involved early in the design process to determine mechanical system requirements and to work within constraints imposed on new building systems by respect for heritage character. Too often mechanical systems are designed in isolation, and are based almost entirely on practices developed for new construction.

Lowered ceilings which obscure important features are not acceptable; solutions should be tailored to specific building characteristics and opportunities, including the use of vertical distribution systems, partial bulkheads, induction units with low profile, high velocity ducts, and distributed mechanical rooms with independent duct systems to reduce duct sizes and provide flexibility of installation and operation.

Exposed mechanical systems may be acceptable, particularly in buildings of industrial character.

HUMIDITY LEVELS

7.2 Increasing building humidity levels for the benefit of contents or museum collections should not be encouraged at the expense of the building itself. Where increased humidification offers significant benefits to a collection, efforts should be made to limit its achievement to specific zones, to provide effective vapour barriers and to ensure ongoing monitoring of harmful effects.

Many heritage buildings function as museums or related occupancies requiring high levels of humidity and temperature control. Significant damage to structures has often resulted from such installations.

Where possible, areas requiring high humidity should be limited to those parts of the building without valuable finishes or decorative features, so that vapour barriers may be installed. Short- or medium-term solutions can involve installation of temporary, reversible self-contained spaces within larger spaces.

PREFERENCE FOR RETAINING WINDOWS OVER REPLACEMENT

7.3 Historic window units should be retained and upgraded rather than replaced. The need for improved thermal performance is best met with interior or exterior storm windows rather than new sealed double or triple units.

Frequently, historic windows which have deteriorated only slightly over a hundred years are being replaced with modern units which have life expectancies of twenty or thirty years. Such substitutions make no sense from a life-cycle costing point of view, and the impact on heritage character is often substantial.

Traditional windows were often made from close, straight grained wood of a quality no longer available. Single glazing avoided current problems associated with the failure of sealed units. The use of divided light sash ensured traditional windows played a significant aesthetic role.

Heritage character is best protected by the repair and upgrading of original or early window units. Sash may have to be removed from the buildings, in order to be repaired, refinished and the glazing reset. New weatherstripping can be applied to the sash or the frame. Frame units can be repaired in place. Existing storms can be refurbished or new exterior storms designed to provide better performance.

When replacement is required, new units should match the material, profile, and detail of the original. This approach maintains heritage character and maintains compatibility with surviving examples of original sash.

ANTICIPATING FUTURE NEEDS

7.4 Provision for integrated power/voice/data cabling systems should be made within major modifications, to avoid the damage and hazard caused by the indiscriminate proliferation of surface cabling and incompatible systems. Where necessary, new chases should be discreetly provided to ensure minimal visual or physical impact on heritage character.

Unless an early wiring system has survived unaltered and intact, replacement of the wiring system may be necessary to address haphazard changes and installations. Many heritage properties have been lost to fires caused by poorly maintained electrical systems or fittings.

When a major intervention is planned, in order to provide new HVAC systems, sprinklers, or other services, integrated systems should be provided where possible for power, voice and data, or whatever services are required by users. Sensitive installation of these services requires appropriate specifications and monitoring. The high rate at which technologies are evolving suggests the need for flexibility in designing conduits and access points.

RESPECTING HISTORIC PRECEDENT IN LIGHTING DESIGN

7.5 Interventions to improve lighting should respect historic precedent. A distinction between ambient lighting and task lighting may facilitate the design of compatible new systems. Historic fixtures specific to the building may be rewired or replicated; otherwise, fixtures of sympathetic contemporary design should be used.

In Canada, interior lighting is a major exterior and interior feature for buildings through the winter months with their short daylight hours. Interiors become clearly visible as part of night-time facades. It is important that careful thought be given to the appearance and performance of installed or adapted lighting systems.

Traditional systems provided relatively low levels of lighting, and here the use of daylight from large windows, skylit atriums, and other devices was important. These daylight sources should be retained and restored, as should the fixtures themselves. Modern lighting should be discreet, with an emphasis on meeting task requirements. Indirect lighting is particularly appropriate to Beaux Arts buildings and others which may have light coloured walls and ceilings. The darker colours of Victorian buildings do not lend themselves as well to indirect lighting; here contemporary downlights or table or floor lamps may be required.

DESIGN OF FITTINGS AND FURNISHINGS

7.6 In general, the design of new fittings and furnishings (such as those associated with open office layouts), should be contemporary in nature and respectful of the heritage character of the building. Provision of details which imitate historic elements is confusing and devalues the importance of genuine surviving building elements.

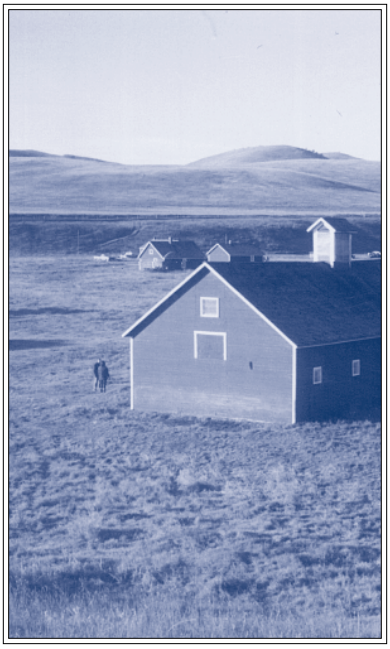
While maintaining original furnishings and fittings may respect heritage character, their functional capacities may conflict with contemporary needs. Many public spaces had fittings very carefully designed and detailed for the spaces they were placed in. Historic evidence may also provide a basis for recreating missing elements. Where original or early furnishings or fittings survive, these should be retained if such is possible without disruption to modern use.

If the use has changed, or historic evidence is not available, consideration should be given to employing contemporary furnishings and finishings which acknowledge the evolution of the building, yet respect the spirit of the original.

INAPPROPRIATE IMPROVEMENTS

7.7 Where intervention to improve building comfort or utility for its users will have a serious impact on heritage character, then alternative means of achieving such goals should be sought, or the associated goals reduced.

Government and departmental standards for accommodation (e.g., furniture, fittings, lighting, and various services), should be relaxed when dealing with heritage interiors. In some areas, above average levels of fit-up will be possible; in other areas, less will be achievable. This flexibility is needed to ensure that heritage character is not compromised.



8 - Site and Setting

A building cannot be disassociated from the site on which it sits and the general setting to which it contributes.

RESPECTING HERITAGE CHARACTER

8.1 Site and setting considerations are an important part of the assessment of heritage character. Where these make a significant contribution to heritage character, they should be respected in intervention planning and design.

The Federal Heritage Buildings Policy is, as its name suggests, a policy concerned with buildings. However buildings have always been designed and used in relation to the opportunities provided by the land on which they sit and the territory or district within which they lie. To treat the building without reference to its landscape is akin to treating a building facade without reference to its interior systems and layout.

RELATION OF BUILDING TO LANDSCAPE

8.2 Where the integrity of the relationship between a building and its associated landscape is relatively unaltered, strong efforts should be made to retain this relationship and the materials which contribute to it.

Assessment of the integrity of the relationship between a building and its associated landscape will involve evaluation of current landscape treatment, the impact of contemporary needs on the landscape, use of plant and surface materials, patterns of movement by pedestrians and vehicles, and use of exterior furniture, illumination and signs.

ROLE IN DEFINING DISTRICT CHARACTER

8.3 Where a building establishes or plays a strong role in reinforcing the character of the area or district in which it sits, strong efforts should be made to retain these relationships.

Assessment of the contribution of a building to the character of its surrounding area involves understanding the evolutionary steps in the development of the area, and the role of the building relative to those important steps. This assessment will involve analysis of a region's routes, vistas, nodes or landmarks, topographical character, prominent vegetation and other structures, and skyline attributes.

LANDMARK VALUE

8.4 Where a building functions as an important or conspicuous symbol of a region or territory, and contributes significantly to its identity, its landmark values should be respected in proposed interventions.

Buildings may play landmark roles in a variety of ways. The contribution of conspicuous towers or spires is relatively easy to perceive and appreciate. Equally, associations within a community – less evident to the visitor – may confer upon a building similarly large landmark importance.

INAPPROPRIATE IMPROVEMENTS

8.5 Where landscape interventions threaten the heritage character associated with a building's site or setting, alternative means to achieve the landscaping goals should be sought.

Meeting contemporary vehicular access needs can easily obliterate early landscapes with new parking, ramps, and widened circulation routes. Every effort should be made to meet these legitimate needs off-site, or within existing vehicular use patterns. Where conventional approaches would appear to threaten heritage character, these should be reconsidered.

VALUE OF ARCHAEOLOGICAL INVESTIGATION

8.6 Archaeological information, gained within a planned archaeological program or by salvage operations, can clarify understanding about the nature of site development and use over time.

Archaeological research involves commitment to professional standards of excavation, of documentation and conservation of excavated materials. Hence the cost of a salvage operation is greater than the cost of the monitoring time spent on site by the archaeologist. However, with careful planning and preparation, the total cost of such operations can be kept to a minimum and high quality results assured. An early commitment to assessment of archaeological potential on a site can provide survey data which can significantly reduce salvage operation costs.

9 - Realty Management:

The effective management of heritage buildings requires recognition of their economic value and potential, and the contribution of heritage character to that value.

RESPECTING HERITAGE CHARACTER

9.1 Acquisition of heritage buildings is encouraged when these can meet program needs without negative impact on their heritage character.

The government's commitment to the protection of heritage buildings extends to its arrangements for acquisition and lease. The match of heritage properties with government needs is a process that requires ongoing coordination and input.

As part of the analysis preceding acquisition, brief surveys to determine logical patterns of occupancy and use should be established, based on an evaluation of existing heritage character.

RETHINKING ECONOMIC ASSESSMENT

9.2 Developing heritage buildings to their highest and best use requires evaluation of the degree to which heritage character may contribute to their economic value.

The formulas for economic assessment of heritage buildings often apply more easily to the size and layout of the property than to their cultural value as designated heritage landmarks. The economic realities of cultural tourism, resource conservation, and urban conservation are only gradually being worked into contemporary formulas on economic value. In every

heritage district designated in Canada in the last 20 years, property values have risen despite the fact that development potential has been reduced. The investment in maintaining and developing heritage buildings has to be evaluated on a broad basis and from a life-cycle costing point of view. Life expectancies for many contemporary buildings are thirty or forty years, considerably less than the life expectancy for the average restored or rehabilitated building.

ALTERNATIVES TO DISPOSAL

9.3 Disposal of heritage buildings is not encouraged without first exploring alternatives such as new uses, and leasing or transfer arrangements which would offer less negative impact on heritage character. Where necessary, disposal should be accompanied by legal instruments (e.g., the use of easements) designed to ensure the ongoing protection of heritage character under new ownership.

The question of disposal sometimes relates to questions of economic assessment. The sale of heritage properties as development sites based purely on land value, particularly in central urban areas, is often an indirect commitment to demolition. Other methods of determining appropriate returns may have to be investigated. Treasury Board has recently recognized the legitimacy of heritage as an element in discussion of market value.

Transfer of Crown-owned designated buildings to other departments assures their continued protection. If the new use is less demanding, protection of heritage character is increased.

RECORDING TO MITIGATE LOSS OR TRANSFER

9.4 Full recording of the state of the building must accompany any decision to dispose of or demolish any heritage building; such recording documents the heritage character of the asset to be disposed of by assuring a permanent and accessible record of its physical organization.

Recording is a means to recover significant information about a building that might otherwise be lost as a result of demolition or disposal to other agencies. It does not alone constitute a means to conserve the heritage character of buildings. Recording should not be seen however as a viable alternative to efforts to ensure the protection of heritage character through appropriate use or rehabilitation.