ASSESSING THE SOCIAL PREFERENCE FOR HISTORIC PRESERVATION OF UNITED STATES AIR FORCE FACILITIES

THESIS

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The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.

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Presented to the Faculty of the Graduate School of Engineering

of the Air Force Institute of Technology

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In Partial Fulfillment of the Requirements for the Degree of

Master of Science in Engineering and Environmental Management

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Patrick R. Breaux

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Abstract

The Air Force is required to inform the public and solicit their comments when proposing actions to historic facilities. However, the Department of Defense has been criticized for the lack of consistent and adequate public involvement in this process. This research effort developed a hierarchy to capture public's general preferences for historic preservation treatments. This information could be utilized as an early input to the decision making process.

Expert participants provided inputs regarding the building characteristics which influence historic preservation decisions, the objectives of preservation, and the treatments which are applied to historic buildings. Focus group discussions were conducted with members of the public to gather qualitative data about historic preservation.

Experts and members of the interested public completed questionnaires consisting of pairwise comparisons. The questionnaires provided the data needed to determine preferences for the building characteristics, action objectives, and treatments. The results of the research were weighted priorities for historic preservation treatments based on specific combinations of building characteristics.

ASSESSING THE SOCIAL PREFERENCE FOR HISTORIC PRESERVATION OF UNITED STATES AIR FORCE FACILITIES

I. Introduction

Background

The National Historic Preservation Act (NHPA) of 1966 and its amendments were enacted to establish a "national policy to preserve for public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States" [16 USC §461]. The importance of the public's role in architectural historic preservation is also expressed throughout the corresponding sections of the United States Code (USC) and the Code of Federal Regulations (CFR). Air Force Instruction (AFI) 32-7065, Cultural Resources Management [AFI 32-7065: 4-5], requires Major Commands and other Air Force installations to establish comprehensive programs so as to comply with the NHPA. This document also provides guidance regarding how the requirements of the Act are to be implemented within the Air Force. In March of 1997, the office of the Air Force Civil Engineer reiterated the legal requirements of the NHPA in a letter to all Major Commands [Erickson, 1997]. This letter is included in Appendix P.

As a part of the formal process of designating a property as an historic landmark, the CFR explicitly cites public perception as a determinant of national significance [36 CFR §65.1, §65.4]. Additionally, the Advisory Council on Historic Preservation and

individual State Historic Preservation Officers (SHPOs) are directed to advocate the interests of the citizens and their culture, as well as ensure that members of the public have an opportunity to participate in the preservation process [36 CFR §800.1, §800.5].

Although historic preservation is a legal requirement, the Department of Defense (DoD) has traditionally regarded it as a goal that is incompatible or secondary to the military mission. [DoD, 1994:21; ACHP, 1994: ix-x]. However, this view has increasingly come under fire. A study by the DoD's Legacy Resource Management Program found that "cultural resources can benefit both the mission and the military budget if they are properly managed and integrated into the operations of the agency, installation or base" [DoD, 1994:21].

The assumption that preservation is always more expensive than other, less restrictive options has been shown to be questionable. Although construction-related costs can vary significantly, one study found that the cost of preserving or rehabilitating an existing building can be 3-16% less when compared to new construction if demolition is required [Ryphema, 1991: 7]. Other data has shown that the cost to rehabilitate facilities to meet functional and energy requirements can be "one-quarter to one-third" of the replacement cost [DoD, 1994: 21, 23, 25-27]. Such data indicates that the actual financial costs of possible preservation actions must be more thoroughly analyzed when considering facility projects. However, even when restoration of a structure does not provide a realization of cost savings, some form of historic preservation may be necessary in "meeting our legal requirements while ensuring a balance with our readiness and fiscal obligations" [Erickson, 1997].

In addition to possible economic benefits to be gained from preserving buildings, other advantages are supported. Ryphema argues that community pride and quality of life are other areas in which advances can be made through historic preservation and urban renewal efforts [Ryphema, 1991:9]. A study conducted by the Buffalo Organization for Social and Technological Innovation (BOSTI) of seventy offices around the country determined that productivity of employees can be significantly affected by the conditions of their work environment (such as lighting, views, temperature) [Hiss, 1990: 17-19]. Military personnel, their dependents, and DoD civilian employees that have direct contact with military historic properties benefit from exposure to the rich traditions, history, and culture of the military. The positive influence such an "experience of place" can have in promoting esprit de corps and bettering mental, physical, and spiritual health are documented by behavioral scientists [DoD, 1994: 21, 23, 33]. As the military continues to draw down its forces, people will increasingly be viewed as valuable resources in the workplace, and commanders should welcome any performance increases.

The psychological benefits are not restricted to those who work or live on Air Force installations. These benefits extend to the communities that surround the bases. Since all DoD property is held in public trust, preservation of historic architecture is clearly a form of good stewardship of those resources [ACHP, 1994: 15-16, 39-40]. As such, they are a reflection of the cultures and traditions of a "shared historical experience" and should be passed on to future generations. Given the close relationship many communities have with the military installations located nearby, proper protection of these

historic facilities can positively influence the affiliation between Air Force personnel and the local population [DoD, 1994: 8, 31-32, 35].

Communities, businesses and individuals across the country have started to realize the advantages of architectural historic preservation. Rehabilitation of existing facilities is expected to continue to increase as a percentage of total construction contracts. Currently, modifications to existing (historic and non-historic) buildings constitute approximately 48% of all construction contracts. That measure is expected to increase to 51% during 2001-2005, and to 54% during 2006-2010 [McKee, 1997: 121].

Significance of the Research

Legal requirements, morale, community involvement, and cost all play an important role in determining both an installation's overall preservation policy and decisions regarding specific buildings. However, the decision process should also include society's preference for the preservation treatment being considered. This requirement to include the public as a part of the process is well defined and is included in the Section 106 process, which is described in the CFR [36 CFR §800].

Federal agencies have come under attack from preservation groups for being deficient in their solicitation of public input during the Section 106 process. In its report to the President and Congress, the Advisory Council on Historic Preservation (ACHP) indicated that existing regulations allowed unjustified variation in the method and level of public participation among federal agencies. The Council found that the regulations could

be revised to establish acceptable methods to coordinate and increase public involvement in the Section 106 process [ACHP, 1993: 34-36].

The DoD's lack of community interaction regarding architectural historic preservation was repeated in the ACHP's 1994 compliance study, when the department's record was found to be "mediocre" and "inconsistent." The report concluded that although departments within the Air Force were often involved in preservation decisions, local historic preservation organizations and individuals were involved much less frequently. Public participation was characterized as "minimal." When Air Force installations were asked to complete a questionnaire as a part of the report, only 43% stated that the public had been involved in identification, protection or rehabilitation of cultural resources at the installation in the past and only 29% indicated that ongoing public participation in cultural resource activities occurred. Overall, the DoD scored "Fair to Poor" with "substantial room for improvement" on its external coordination and consultation practices (including public engagement) [ACHP, 1994: ix-x, 56-60, 64-65].

Research Objective

The purpose of this research is to develop a decision support model that accurately depicts local community residents' social values regarding the application of historic preservation standards of treatment to United States Air Force buildings. The hypotheses to be tested in this research are as follows:

- H_0 (Null Hypothesis): Local residents' preference for historic preservation treatments do not change when the building characteristics are changed.

- H_a (Alternate Hypothesis): Local residents' preference for historic preservation treatments change depending upon the combination of building characteristics under consideration.

By knowing the public's preferences (i.e., social value) for treatments given a particular combination of building characteristics, Air Force decision makers can include anticipated community reaction into the overall decision process for specific projects.

Research Questions

This research attempts to answer several fundamental questions regarding historic preservation, including the following:

- What are the basic objectives of architectural historic preservation, in what terms are they defined, and how are they related to each of the treatments?
- Against which building characteristics are preservation objectives judged, and how are they defined?
- Which building characteristics are the most influential in determining society's value of a particular treatment?
- Using Wright-Patterson Air Force Base as the data source for the research, which treatment maximizes social value, given a particular combination of building characteristics?

Organization of the Research Document

The first step in developing an acceptable model for rank-ordering the treatment alternatives is to understand the scope of historic preservation, including all applicable

laws, regulations, and other guidance. Additionally, an understanding of multi-attribute decision making techniques and their implementation in aggregating the results from a group of participants is paramount to the development of the research. The Literature Review accomplishes these objectives in Chapter Two.

In Chapter Three, Methodology, a detailed description of the techniques used to gather and analyze the data is presented. This chapter also delineates the methods applied to develop the hierarchy used in the research.

Finally, the results of the research are presented in Chapter Four, Analysis and Findings, while Chapter Five, Conclusions and Recommendations, puts forward the conclusions reached as well as possible topics for further study.

II. Literature Review

Overview

The following literature review provides background information and forms the basic foundation upon which this research is built. First, the Secretary of the Interior's standards for the treatment of historic properties are examined. These treatments provide a basic knowledge of preservation and are the starting point for the development of the hierarchy employed in the methodology.

Second, the concept of social choice is explored. Since members of the public usually do not make decisions completely independent from the rest of society, the impact of other opinions on an individual's choice is explained. Focus groups are proposed as a method to gather research data from the public.

Finally, decision support and decision analysis techniques are reviewed. The first of these, the Delphi technique, is proposed as a method to solicit expert opinion regarding the construct of historic preservation. Afterward, the Analytic Hierarchy Process (AHP) is described. The AHP is used to solve complicated, multi-criteria decisions with the assistance of Expert Choice software. The application of the AHP to group decisions is also investigated.

Treatment Standards

The Secretary of the Interior has defined four sets of standards for the treatment of historic properties. According to the CFR, a single set of standards, or treatment, should

be implemented at an historic property; however, the CFR does not indicate the consequences of applying standards from multiple treatments. The selected treatment depends upon several criteria, including the building's significance, condition, documentation available, economic feasibility, and technical feasibility [36 CFR §68.3]. The Secretary's four treatments are defined within the CFR in the following order [36 CFR §68.2]:

> Preservation means the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.
>
> Rehabilitation means the act or process of making possible an efficient compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.
>
> Restoration means the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.
>
> Reconstruction means the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

Rehabilitation is the least stringent of the treatments. The CFR describes rehabilitation as using a property as it was historically or giving it a new use that requires

minimal changes to its distinctive features. The property's historic character and any historically significant changes are retained and preserved. Distinctive materials, features, finishes, construction techniques, and examples of craftsmanship are preserved. Rehabilitation avoids the removal of distinctive materials or alteration of characteristic features, spaces and spatial relationships; each property is recognized as a physical record of its time, place, and use. Additionally, changes that create a false sense of historical development, such as adding conjectural features, are not allowed. Deteriorated historic features are repaired rather than replaced. Where replacement of a distinctive feature is necessary, the new work is documented and matches the old in design, color, texture, and materials. New additions, exterior alterations, or related new construction are not allowed to destroy historic materials, features, spaces, and spatial relationships. The new work is differentiated from, but is compatible with the old design to protect the integrity of the property. New additions and other related new construction are applied in a manner that, if removed in the future, the integrity of the historic property would be undamaged [36 CFR §68.3].

As defined in the CFR, preservation of a property indicates that it will either be used as it was historically or be given a new use that maximizes the retention of distinctive materials and features. Greater emphasis is placed on retention of historic materials and features than with rehabilitation. The historic character of a property and any historically significant changes are retained and preserved. The replacement of undamaged or repairable historic materials or alteration of historic features and spaces is avoided. Required work is physically and visually compatible. Distinctive materials, features,

finishes, construction techniques, and craftsmanship are preserved. Where repair or limited replacement is required, the new material matches the old in design, color, texture, and materials [36 CFR §68.3].

Restoration is the most rigorous treatment defined within the CFR. When restoration of an historic property is undertaken, it is used as it was historically or it is given a use which reflects one specific time period in the property's history. Materials and features from the restoration period are retained and preserved. Removal of materials or alteration of features, spaces, and relationships characteristic of the period is not allowed. Each property is recognized as a physical record of its time, place, and use. Work required to stabilize and conserve period materials and features must be physically and visually compatible with the existing work. Distinctive materials, features, and finishes that characterize the restoration period are preserved; deteriorated features from the restoration period are repaired rather than replaced. Where replacement is required, the new feature matches the old in design, color, texture, and materials. Replacement of missing features from the restoration period is substantiated by documentary and physical evidence. Furthermore, a false sense of history, created by adding conjectural features or by combining features that never existed together historically, is specifically excluded. Designs of features and spatial relationships that never existed historically are not allowed [36 CFR §68.3].

Reconstruction is not applied to an existing historic property, but is used where a non-surviving property or portion of a property is to be depicted. It is usually attempted when deemed essential to the public understanding of the property. Reconstruction

includes measures needed to preserve any remaining historic materials and features. Reconstruction is based on the accurate duplication of historic features and elements substantiated by evidence, rather than on conjectural designs or features from other historic properties. Reconstructed properties are clearly identified as contemporary re-creations. Designs that were never executed historically are not allowed under this treatment [36 CFR §68.3]. Although the CFR indicates that reconstruction can apply to a portion of a property, it does not distinguish whether this means an entire building that was part of a collection (such as a plantation) or a destroyed section of a surviving building.

The standards that define these four treatments are somewhat ambiguous and stated in general terms. This is due, in part, to the fact that the objectives of the treatments are similar, but the degree to which they protect the various elements of historic buildings varies. Even within a treatment, the degree to which the standards protect elements of a property may vary from one building to another. As such, the treatments can be viewed as ranges along a continuum rather than discrete, narrowly-defined levels.

Social Choice

Since the Advisory Council on Historic Preservation "encourages maximum public participation in the Section 106 process" [36 CFR §800.1 (c) (2) (iv)], an understanding of how social choices are made is needed. Social choices, as described by Arrow, can be made by only two methods in a capitalist democracy: voting and market action. Both of

these methods consolidate the tastes and decisions of many individuals into a social choice [Arrow, 1963: 1-2]. Each individual's preference for different social states is determined not only by the benefits he or she receives, but also his or her "general standards of equity." That is, preference includes both tastes and values. "It is the ordering according to values which takes into account all the desires of the individual, including the highly important socializing desires, and which is primarily relevant for the achievement of a social maximum" [Arrow, 1963: 17-18]. The choices made by individuals are assumed to be rational. Arrow states that this assumption of rationality allows the choice from a set of alternatives to be determined by analyzing the choices made between pairs of the alternatives [Arrow, 1963: 20].

Hansson further refines Arrow's work by including a "procedural component" to the concept of social choice. He states that voting is a "highly cooperative endeavor in which inner-individual cooperation has a major role...It is a rule-bound system of interaction with the purpose of making social decisions." Rather than simply aggregating individual preferences to determine a social preference, it is during the process of voting and interacting with other individuals that the popular will is discovered [Hansson, 1996: 216-217, 221, 229]. The group AHP methodology (described later in this chapter) and focus group discussions are essentially the application of the voting process.

Focus Groups

Focus groups provide a means of gathering information needed to determine social choice. They create a permissive environment which encourages differing points of view

without pressuring participants to reach a consensus. Analysis of the discussions that take place provides understanding of the perceptions of the group members. The discussions should be relaxed, and participants should be allowed to influence others' thinking about the topic at hand [Krueger, 1988: 18].

According to Krueger, the following characteristics distinguish focus groups from other data-gathering techniques [Krueger, 1988: 27-31]:

- Focus groups typically involve seven to ten people. This is small enough to allow everyone an opportunity to actively participate, but large enough to provide a breadth of perceptions. (However, Patton suggests a range of five to eight participants per focus group [Patton, 1990: 173].)
- Focus group members should be similar to each other. However, the degree of homogeneity depends upon the topic under study and can be either broadly or narrowly defined.
- Focus groups generally have the narrow purpose of determining the perceptions and opinions of a group. They provide data to researchers, but they are not intended to reach a consensus, solve a problem, or make a decision.
- Focus groups provide qualitative data via open-ended questions and group discussions. They are a "natural environment" where individuals influence and are influenced by others. However, the discussions are moderated by the researcher.

- The topic of a focus group is narrowly targeted to allow in-depth study and discussion. Open-ended, predetermined questions are used by the moderator in a logical sequence.

While focus groups are generally considered a qualitative procedure, they can be used in combination with quantitative methods. Krueger states that the two methods can be used at the same time to obtain both breadth and depth of information about an issue [Krueger, 1988:39-40].

One advantage of focus groups is that they encompass the interactive nature of social decision-making. They create a dynamic, real-world environment in which members of the group can hear other's comments and respond to them [Krueger, 1988: 44-45]. Focus groups provide a "social context where people can consider their own views in the context of the views of others" [Patton, 1990: 335]. This clearly agrees with Arrow's and Hansson's views of social choice.

Krueger outlines several methods of identifying participants for focus groups. The preferred method is the use of an existing list. If the list provides more names than are necessary for the groups, either a systematic or random sampling procedure is suggested to select potential participants. However, caution must be used when enlisting existing groups. Formal or informal relationships, such as supervisor-subordinate or husband-wife associations, may influence the responses [Krueger, 1988:94-97].

Results are not usually obtained from a single focus group. Generally, the first two groups provide the most significant amount of new information, and almost all useful information is covered by the third or fourth groups. Krueger suggests planning for four

groups, but evaluating after completion of the third group; if new information is discovered during the third session, the fourth focus group should be conducted. However, the number of groups is dependent upon the topic being studied, the range of participants' exposure to the topic, and the diversity of the participants themselves [Krueger, 1988: 97-98].

Delphi Technique

Delphi procedures were developed by Dr. Olaf Helmer and Norman Dalkey at the RAND Corporation as a method of obtaining long-range forecasts. This technique has been used in a variety situations that require creative solutions to a problem [Oxenfeldt, 1978: 167]. The Delphi methodology solicits judgements or opinions from a panel of experts through a series of iterative questionnaires. Typically, the experts do not meet face-to-face.

Delphi has several advantages over committees and other face-to-face decision making groups. The first of these is convenience. Since experts within a field of study are often spread over a large geographic area and their services are in demand, trying to convene such a group is often difficult [Oxenfeldt, 1978: 167]. Another advantage is anonymity. In the typical group environment, the majority opinion is often unduly influenced or determined by the views of the individual who assumes the dominant role in the group. However, Delphi eliminates effects of a dominant person since the responses of all participants are anonymous. [Dalkey, 1967: 2-3; Dalkey, 1968: 3-4]. Anonymity of the members also lessens the possible influence of bandwagon effects and reduces the

unwillingness of participants to abandon publicly expressed opinions [Brown, 1968: 2-3; Dalkey, 1967: 2-3]. Reduction of influence among the experts is desired so that all possible information is expressed to ensure completeness of the research.

Delphi utilizes controlled feedback to reduce the amount of extraneous material or "noise" that would otherwise inhibit the process. Dalkey defines noise as "irrelevant or redundant material that obscures the directly relevant material offered by participants" [Dalkey, 1967: 3]. As a part of the feedback process, the researcher can filter out irrelevant data and summarize the pertinent information; the summaries are then provided to the members of the group in successive iterations of the questionnaire [Dalkey, 1968: 3-4]. According to Brown and Dalkey, a final advantage offered by the Delphi technique is minimization of pressure to conform to the group. A statistical group response is usually included as a part of the summaries provided to the participants. However, there is no group pressure to compromise since consensus is not a requirement of the Delphi method; minority views can be included in the final result [Brown, 1968: 6; Dalkey, 1967: 3-4]. Brown states that including the respondents' justification and reasoning as a part of the feedback "may serve to stimulate the experts into taking into due account considerations they might through inadvertence have neglected, and to give due weight to factors they were inclined to dismiss as unimportant on first thought" [Brown, 1968: 3, 6].

Analytic Hierarchy Process

According to Kloeber, humans have difficulty making consistent decisions in complex situations. In these cases, intuition or prior experience is often used, leading to

sub-optimal results [Kloeber, 1992:1]. The Analytic Hierarchy Process (AHP) was developed by Thomas Saaty in 1977 to allow decision makers to set priorities on the basis of their objectives for complex problems. It combines a deductive approach — focusing on the parts of a problem — with a systems approach — concentrating on the workings of the whole — into a single, integrated framework. It also can accommodate feelings and intuition into the logical framework of a hierarchy [Saaty, Thomas L., 1982: 5-7, 12-13]. As such, AHP is based on three basic ideas [Kloeber, 1992: 2]:

- A human can make accurate, relative, comparison between two alternatives.
- All problems are multiple criteria problems that have an inherent hierarchical structure.
- Accurate, pairwise comparisons can be consistently combined within a hierarchy to produce the best alternative or to rank available alternatives.

Saaty states that three basic tasks are involved in solving a problem using AHP: decomposition, comparative judgments, and synthesis [Saaty, R. W., 1987: 166]. Decomposition involves the structuring of the hierarchy. The focus or goal of the problem is indicated at the top, the criteria bearing on the focus are listed in the second level, sub-criteria listed on the third, and so on, moving from the general to the specific. All possible alternatives are listed at the bottom of the hierarchy. After the hierarchy is complete, comparative judgments are performed. Pairwise comparisons of the relative importance of the elements within each level, with respect to each of the criteria in the level above, accomplish this task. Finally, synthesis of the priorities is required. At each level below the focus, the local priorities of each element are multiplied by the priority of the criterion

in the preceding level, then added to determine a composite priority or weight of that element. This, in turn, is used to weight the local priorities of the elements within the next level, until the bottom level of the hierarchy is reached. When the final level is completed, the decision maker arrives at a ranking of the alternatives based upon their relative weights. These calculations are carried out with the use of matrices. The number of judgments typically required for each matrix is $n(n\text{-}1)/2$, where n is the number of elements on a level of the hierarchy. The number of matrices that must be completed for each level is determined by the number of elements on the level above it.

Since the AHP asks the decision maker to compare each element on a level to every other one, some inconsistency can enter into a person's judgments. In the AHP, this is measured by an inconsistency ratio (IR). The IR is calculated by comparing the consistency of the entered judgments to an average matrix of random judgments. An IR of zero is perfectly consistent and an IR of .10 or less is generally considered acceptable [Saaty, Thomas L., 1980: 20-21; Saaty, Thomas L, 1982: 82-85]. For further information regarding calculations of the IR, the reader is directed to the references listed.

The Expert Choice software package can aid in the AHP by facilitating the formulation of the hierarchy and quickly calculating the weights of the elements at each level. Once all comparisons are entered, the program synthesizes the weights of the alternatives and calculates the inconsistency ratios. The software simplifies sensitivity analysis for the user and is capable of graphing the findings [Expert Choice, 1996: 55-58, 81-87, 139-145, 151-167, 179].

An extension of AHP has evolved for group decision making. Often, technically and politically complex problems require the input of groups of individuals. When assembling a group to participate in the AHP, a pre-existing group can sometimes be used; otherwise, the members must be selected. To avoid the problems that can sometimes accompany groups consisting of individuals with varying levels of "power," the group can be assembled from participants with equal stature [Saaty, Thomas L, 1989: 59-60]. Additionally, groups should be small and comprised of individuals who have a genuine interest in the outcome [Saaty, Thomas L., 1982: 225-226].

When the decision making session is actually conducted, the hierarchy is typically constructed by the decision making group itself. Once this is complete, the pairwise judgments must be generated. Two methods can be used: consensus or individual judgments. Consensus calls for the group to come to single decision regarding each comparison, often requiring considerable discussion. Alternatively, each member of the group can make his or her own judgments, which are combined using a geometric mean to obtain the group judgment. The geometric mean is preferred since it preserves the reciprocal property in the combined pairwise comparison matrix. [Saaty, Thomas L., 1982: 226-227; Saaty, Thomas L., 1989: 61-64]. The Expert Choice software also allows for input of the multiple individual judgments. The geometric means are then calculated internally by the program [Expert Choice, 1996: 263-265].

Participants often complain that the Analytic Hierarchy Process is extremely taxing, requiring them to make large numbers of judgments. To alleviate this problem, a reduced set of comparisons may be used by introducing a *spanning tree* or *spanning set*

(Harker refers to this as the incomplete pairwise comparison method). For a hierarchy consisting of n elements at a particular level, use of a spanning set would require only (n-1) judgments for that matrix. However, if only (n-1) judgments are made, there is no possibility of inconsistency, so the calculated inconsistency ratio is zero [Harker, 1989:34-35; Saaty, Thomas L., 1982: 230-231; Saaty, Thomas, L, 1989: 64]. For n elements to be compared, the Expert Choice software allows the user to enter any number of judgments between (n-1) and $n(n-1)/2$, inclusive [Expert Choice, 1996: 84].

III. Methodology

Overview

This chapter describes the methodology used to discover the characteristics and objectives that influence historic preservation decisions, as well as society's preferences for those characteristics and objectives. The methodology consists of two separate phases: 1) first, working with experts from applicable professions, the Delphi technique was used to discover the specific elements at each level of a hierarchy representative of the decision making process; 2) next, experts and interested, informed public participants completed pairwise comparisons as a part of the AHP to determine their preferences regarding historic preservation.

Structuring the Hierarchy

The first step in developing the structure of the hierarchy was to examine the decision making process. Analysis of the available literature regarding historic preservation (36 CFR §65, §68) indicated that the selection of a particular treatment of a building is based on a specific number of building characteristics. These building characteristics "establish the qualitative framework in which a comparative professional analysis is made" [36 CFR §65.4]. Located at the bottom of the structure are the alternatives, which are the historic preservation treatments. The CFR defines the treatments by a set of standards [36 CFR §68.2], which are the actions or objectives that each treatment accomplishes. Some of these standards are loosely defined and overlap several treatments.

The first question regarding the structure of the hierarchy revolved around the possible inclusion of an intermediate level. If the hierarchy were to transition from the characteristics directly to the treatments, the effect of misunderstanding or varying interpretations of the treatment definitions by the public participants had to be considered. By inserting an intermediate level into the process, the treatments are more easily differentiated from one another. This middle level consists of the various objectives defined by the treatment standards. Figure 1 is a graphic representation of the decision-making process used to define the hierarchy.

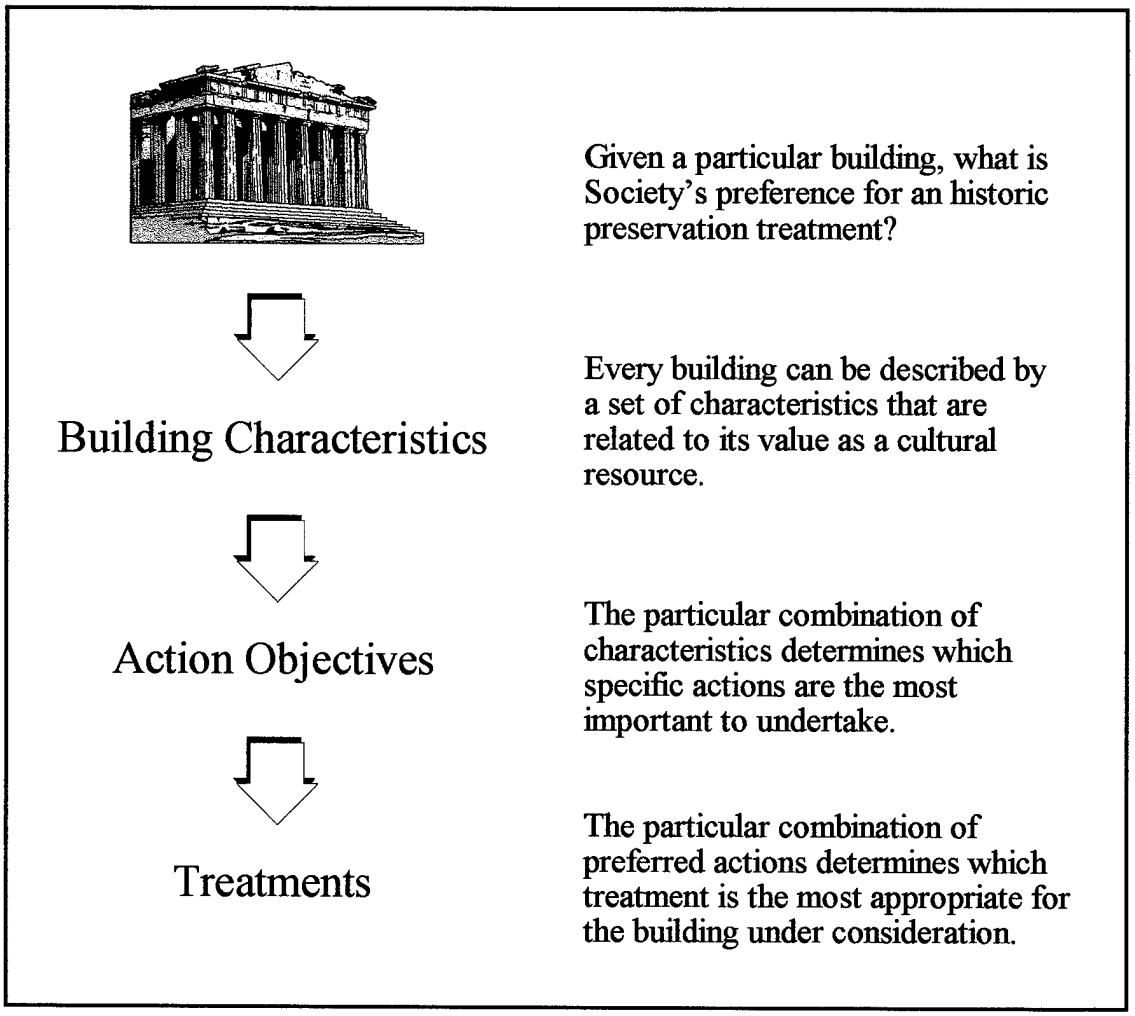


Figure 1 - Historic Preservation Decision Process

The second dilemma regarding the hierarchy concerned the number of questions needed in the AHP questionnaire. As originally conceived, the hierarchy was comprised of three levels. The top level, the goal, was to determine the appropriate historic preservation treatment for a *single, unique building type*, as defined by a particular combination of building characteristics. This hierarchy is represented in Figure 2. However, since the number of unique building types was estimated to be approximately 729 (assuming six building characteristics with three increments each: $3^6 = 729$), the number of individual hierarchies required would have also been 729. Even if the number of pairwise questions needed were reduced through the use of spanning sets,

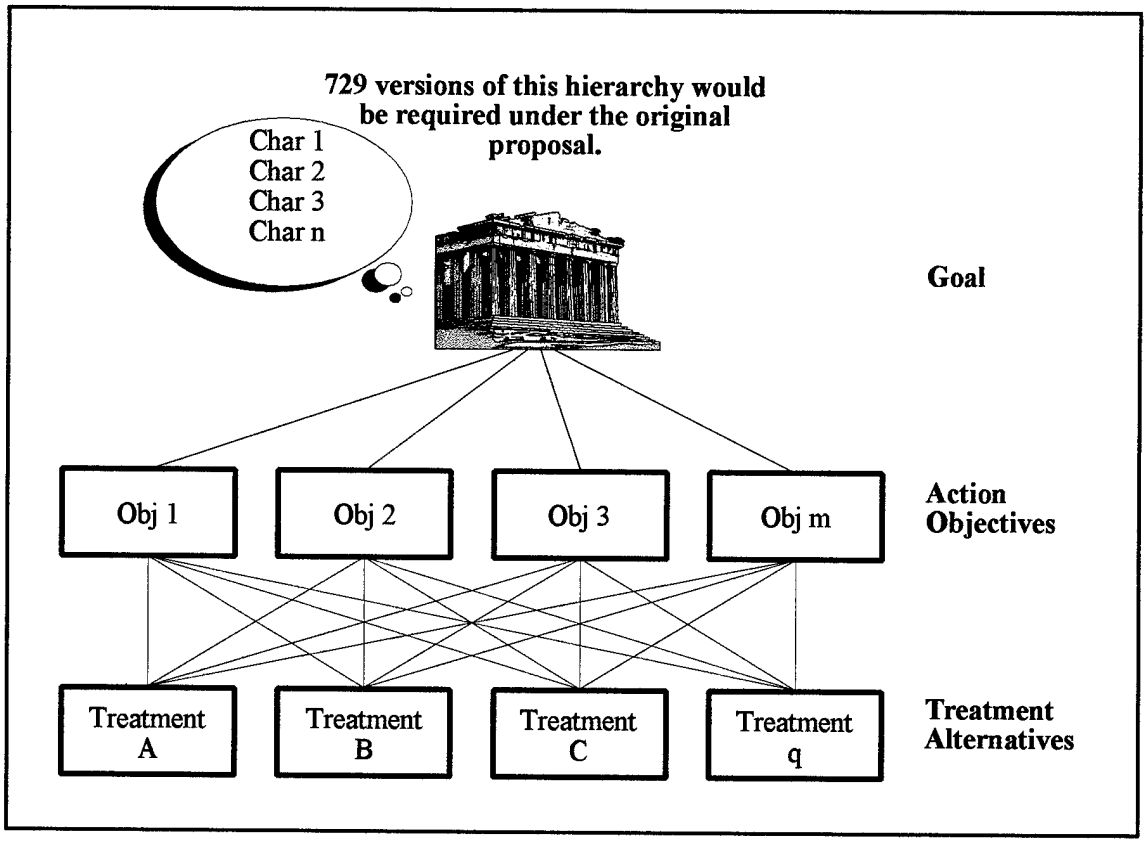


Figure 2 - Structure of the Original AHP Hierarchies

approximately five questions would have been required for the action objectives level of each hierarchy (assuming six different action objectives), for a total of 3645 questions (five questions for each of the 729 building types). This number does not include the comparisons needed to transition to the final level of the hierarchies. Assuming five treatments, the number of pairwise comparisons predicted at the bottom level of the hierarchy was 60 for complete matrices (ten questions for each of the six action objectives) or 24 using spanning sets (four questions for each action objective). Since the degree to which each treatment accomplishes each action objective is independent of the building type, this set of comparisons would be the same for all 729 variations of this hierarchy.

An alternative hierarchy was developed to reduce the number of required comparisons. Rather than create a separate hierarchy for each unique building type, the building characteristics were moved to the first level of a single hierarchy which would be used for all buildings. This alternative hierarchy is shown in Figure 3. The goal, therefore, is to determine the appropriate historic preservation treatment for *any building*. Each building characteristic is divided into several discrete increments. When conducting the AHP pairwise comparisons, rather than simply assessing the preferences for the action objectives according to each building characteristic, the action objectives are assessed given a *particular increment* of each characteristic. In this way, the preferred treatment can be determined for a particular building type (as was proposed in the first hierarchy) by using the appropriate set of comparisons. This hierarchy dramatically reduced the number of required comparisons. The expected number of pairwise comparisons required for the

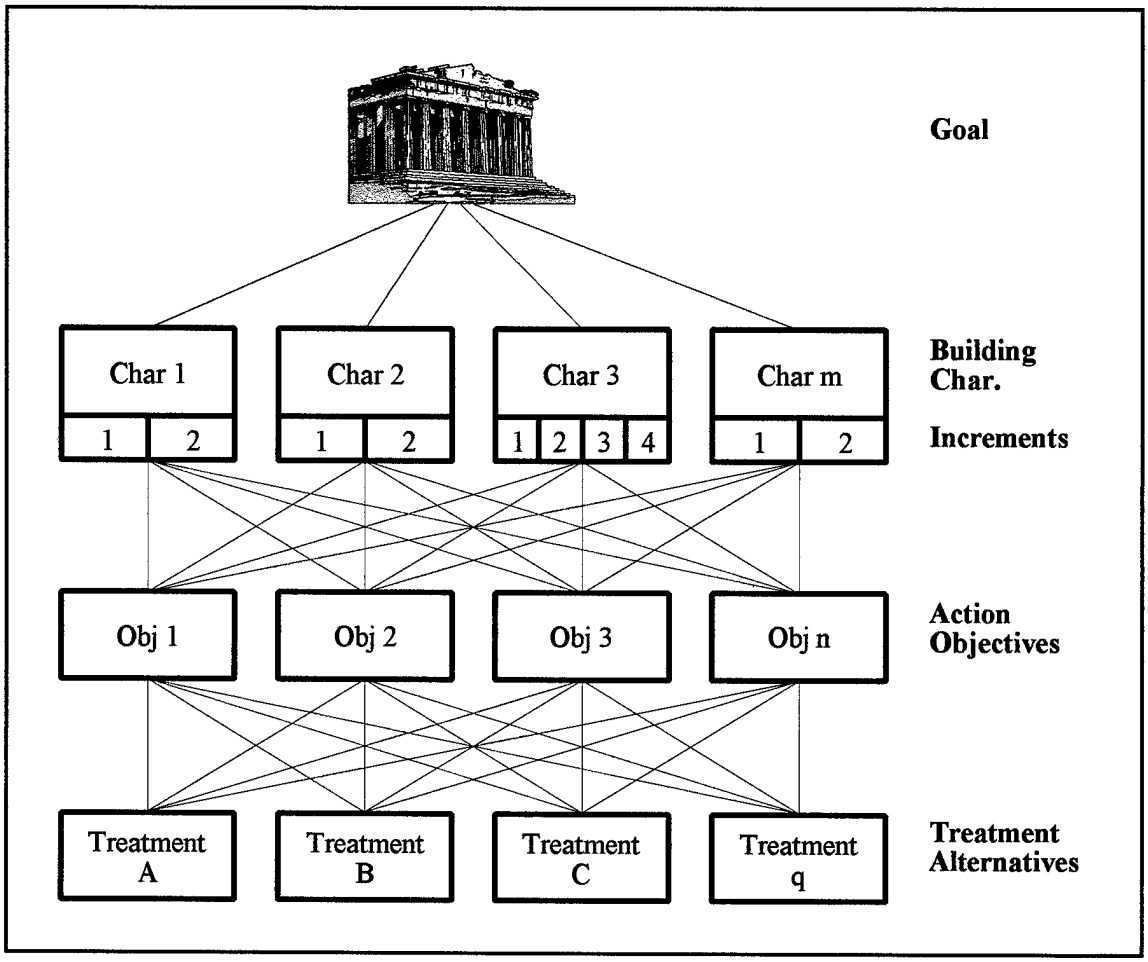


Figure 3 - Final Structure of the AHP Hierarchy

building characteristics was 15 for the full matrix or five for spanning sets (assuming six characteristics). Using spanning sets, 90 comparisons were anticipated for the action objectives (18 total characteristic increments with five action objective comparisons for each increment). Although the predicted number of comparisons using this method was still over 100 (not including the questions necessary to transition to the final level), this number was manageable and much improved over the 3645 comparisons required using

the first hierarchy. The number of comparisons to transition to the final level of treatment alternatives remained unchanged.

Defining the Criteria

The CFR provided the starting point for deriving the elements at each level of the hierarchy [36 CFR §65.4, §68.2-68.3], but expert opinion was sought to confirm the information. Use of the Delphi method, primarily through electronic mail and facsimile transmittal, allowed experts from outside the local area to easily participate. Ten experts in the fields of architecture, history, planning and preservation, in private practice, education, and various levels of the government were enlisted. An initial list of 17 expert participants was developed through contacts at Wright-Patterson AFB and through historic preservation organizations and agencies. To facilitate the Delphi process, this list was pared down to 12, while ensuring that each of the fields indicated above were equally represented. While no minimum number of years of expertise was set, preference was given to those with longer tenure in their field. Of these 12, two member had to drop out of the research due to personal reasons. The remaining ten experts represented the various areas of importance in the following number (some members overlapped several fields of expertise): architecture (4), history (4), planning (3), preservation (4), private practice (1), education (2), federal government service (6). The list of expert participants and their credentials is included at Appendix A.

In addition to the inputs provided by the expert participants, some deviations from the CFR's criteria were initiated to improve the research. In particular, the treatment "No

Special Consideration," which is not listed in the CFR, was added. Incorporating this treatment alternative allowed the research to include marginally historic buildings which the public may or may not prefer to preserve.

The increments of each building characteristic were also generated from the Delphi questionnaires. In some cases, the CFR provided a starting point to discuss the possible increments of each characteristic; for example, a building's age of 50 years is listed as the cut-off in the criteria for National Historic Landmark designation [26 CFR §65.4 (6) (b)]. In other cases, the input and resulting feedback from the experts delineated the increments for each of the characteristics.

Three iterations of the questionnaire were executed. The first questionnaire gave an overview of the proposed hierarchy, provided definitions and explained the research. It also included a few building characteristics, action objectives, and treatments that were discovered in the literature search. These inclusions served to focus the participants on the specific requirements of the research, define its intent, and reduce the number of iterations necessary. The experts were allowed to provide comments about the listed items or delete them. This first questionnaire asked the participants to add their own thoughts about what should be included at each level of the hierarchy and to clearly define their additions. In the case of the building characteristics, the participants were also asked to recommend increments for each characteristic. The questionnaire used in Round One of the Delphi is included in Appendix B.

The questionnaire used in Round Two provided the participants with a summary of the comments from Round One, including the approximate proportion of respondents that

held the stated opinions. This questionnaire queried the participants to provide feedback on the other respondents' comments and the new additions at each level of the hierarchy; participants were also allowed to add items at each level. The respondents were asked if some of the elements at each level could be combined with other, similar elements. The Round Two Delphi questionnaire is included in Appendix C.

The questionnaire used in the last round of the Delphi again provided summary comments from the previous round and the proportion of respondents expressing each opinion. The participants were asked for comments about the elements included at each level of the hierarchy and were allowed to add any items if they wished. The participants were asked for input regarding the definitions for each of the elements. This questionnaire also incorporated non-preservation objectives into the hierarchy. Since consensus was not required (nor expected), this final questionnaire asked respondents to rate the strength of their conviction. In cases of widely varying opinion, this weighting helped to determine which judgments were more strongly held. Figure 4 lists the scale used in this iteration of the Delphi technique. The questionnaire used in the third round is included in Appendix D. The responses to the questionnaires are included in Appendix E.

Defining the Focus Groups

This phase of the research focused on collecting the data to determine the public's preferences regarding historic preservation. Focus groups provided a means to collect the quantitative data needed to complete the Analytic Hierarchy Process. It also provided a forum to gather any qualitative data relevant to the research.

Numerical Value	Definition
1	I am slightly committed to my position on this point; I could be persuaded to change.
2	I am moderately committed to my position on this point only a compelling argument could entice me to change.
3	I am extremely committed to my position on this point; I could not be persuaded to change.

Figure 4 - Strength of Comment Scale for Delphi Questionnaire

The focus groups provided an atmosphere in which the members of the public could hear opinions other than their own. According to Hannson, such interaction is necessary to incorporate the procedural component of social choice into the voting process [Hansson, 1996: 216-217]. If the public participants completed the questionnaires in isolation, without feedback from other members of society, the resulting information would simply have been an average of individuals' preferences rather than a true societal preference.

Participants representing the interested, informed public were recruited by two methods. The first group of participants was contacted through the local preservation group, Preservation Dayton, Incorporated (PDI). This group provided a means to contact members of the public who were both deeply interested in historic preservation and informed about other's views. PDI's permission to contact their membership was sought first. Appendix F presents the letter sent to PDI requesting their assistance. Once PDI's

board had approved their involvement with the research, a notice was included in their quarterly newsletter. This article is illustrated in Appendix G. The second corps of participants representing the interested segment of the public were students at Sinclair Community College. These students were members of an advanced historic preservation class. The approval for their participation was obtained via conversations with their instructor, Ms. Sue Messersmith. Although these two groups do not represent the entire population-at-large, they represent the population of interest; they already had an understanding of historic preservation and were more likely to be interested in voicing their opinions as a part of any data-gathering process regarding historic preservation (including the Section 106 process and other public hearings).

Each individual who agreed to participate in the focus groups was scheduled for a session. Before each session, the researcher called the participants to remind them about the meeting time and location. However, in the case of the Sinclair Community College students, the session was scheduled to coincide with their regular class meeting time. Appendix H lists the individuals who participated in the research.

Table 1 summarizes the four focus groups that were conducted. The topics and questionnaires were the same for all focus groups; each session followed the same format according to the script included in Appendix I. The researcher first presented the historic preservation hierarchy developed by the expert participants in the Delphi technique. The definitions of the building characteristics and their increments were distributed and discussed. After this discussion, members of the group completed the first part of the AHP questionnaire. Afterward, the definitions of the action objectives were distributed

Table 1 - Summary of Focus Groups

Session	Recruited From	Date
1	Preservation Dayton	24 Sept 97
2	Sinclair Community College	30 Sept 97
3	Sinclair Community College	1 Oct 97
4	Preservation Dayton	2 Oct 97

and discussed. Each of the remaining six sections was distributed and completed, one section at a time. Each section was carefully explained to ensure members understood that each page of the questionnaire dealt with only one increment of one characteristic.

Participants were encouraged to continue to ask questions and engage in discussions while the questionnaires were being completed. The focus group members were given another opportunity to provide both oral and written comments at the conclusion of the meeting.

Measurement Tool for the Analytic Hierarchy Process

The pairwise comparisons employed in the AHP phase were developed from the hierarchy constructed in the Delphi phase of the research. AHP was chosen because of its ability to break a complex decision into simple, pairwise comparisons. Use of pairwise comparisons is compatible with Arrow's assumption that social choice can be determined by preferences made from pairs of alternatives [Arrow, 1963: 20].

The hierarchy consisted of four levels. The goal of selecting the best historic preservation treatment was stated at the top level. Six building characteristics, with a total of 21 increments, comprised the first level under the goal. The next level of the hierarchy consisted of seven action objectives. Finally, the bottom level of the hierarchy was composed of five treatments. Each question consisted of a comparison between two of the elements on a level of the hierarchy. The participants indicated the degree of their preference or importance for each pair. Figure 5 presents the generic scale used for the pairwise comparisons.

Two questionnaires were used to gather the necessary data: one for the public participants and one for the expert participants. The questionnaire given to the public participants consisted of seven sections and was employed during the focus groups. The questionnaire and all reference materials utilized during the focus groups are included in

Numerical Value	Definition
1	Equally important or preferred
3	Slightly more important or preferred
5	Strongly more important or preferred
7	Very strongly more important or preferred
9	Extremely more important or preferred
2,4,6,8	Intermediate values to reflect compromise.

Figure 5 - Measurement Scale for the Analytic Hierarchy Process [Harker, 1989: 5]

Appendix J. This questionnaire included all pairwise comparisons needed to transition from the top level of the hierarchy to the action objectives. The first section consisted of 15 comparisons between the building characteristics. This section provided the data for a complete matrix; therefore, the Inconsistency Ratio (IR) was calculated. Figure 6 shows the structure of a typical comparison for Part One of this questionnaire.

For questions 1-15, which characteristic do you consider to be a more important factor in determining the appropriate action objectives for a building? Circle the value that best defines your preference for each pair of building characteristics.

1.	Age of the Building	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Building Function

Figure 6 - Typical Question from Part One of Focus Group Questionnaire

Parts Two through Seven of the focus group questionnaire asked the participants to perform a series of pairwise comparisons of the action objectives. Each comparison considered only one increment of one building characteristic. The use of spanning sets allowed the number of pairwise comparisons necessary for each increment to be reduced from 21 to 6. As shown in Figure 7, seven sets of six comparisons were derived. These were rotated throughout the questionnaire — each set of questions comparing one action objective to all others. In this manner, the point of reference changed throughout the

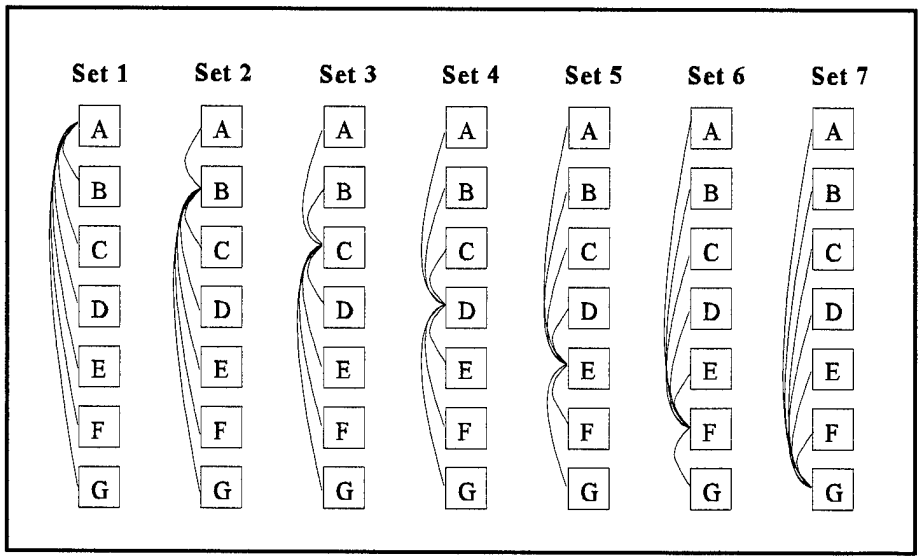


Figure 7 - Seven Sets of Action Objective Comparisons

questionnaire, ensuring that participants were not limited to a single perspective, which might have affected their responses.

Information about inconsistency cannot be obtained using this method. Figure 8 presents the structure of a typical comparison from Parts Two through Seven. A total of

For questions 1-6, which action objective is more important **given that a building is of national historic or cultural significance? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

1.	No new additions to the exterior.	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials

Figure 8 - Typical Question from Parts Four through Seven of Focus Group Questionnaire

126 comparisons were asked in these sections. In order to obtain individual and group IRs, each participant would have had to make 441 comparisons, rather than 126.

A second questionnaire was developed to transition from the action objectives level of the hierarchy to the treatment alternatives. This questionnaire consisted of seven parts and a total of 70 questions. The decision was made to ask the expert participants to complete this set of pairwise comparisons. While the public participants provided the inputs needed to weight the building characteristics and the action objectives, the expert participants determined which treatments best accomplish each of the action objectives. Completion of this questionnaire by the experts allowed the research to benefit from their experience in the field while still gathering the public's preferences for specific actions that are undertaken on historic buildings. As an additional benefit, it also reduced the number of comparison questions the public answered. The structure of a typical question from this questionnaire is shown in Figure 9. The complete questionnaire and reference materials provided to the expert participants are presented in Appendix K.

For questions 1-10, which treatment do you consider best meets the action objective of "No New Additions to the Building" as defined above? Do not consider any other action objectives. Circle the value that best defines your preference for each pair of treatments.

1. Preservation **9** 8 **7** 6 **5** 4 **3** 2 **1** 2 **3** 4 **5** 6 **7** 8 **9** Restoration

Figure 9 - Typical Question from Expert Participants' Questionnaire

Photographs were considered as a means to help participants visualize the characteristics and action objectives they were being asked to compare. However, there was concern that the participants might focus on the specifics of the photographs being presented, rather than the generalities of the characteristics and objectives under consideration. Therefore, photographic examples were not included in this methodology.

Synthesis and Sensitivity Analysis

Using the Expert Choice software, the raw comparisons from the expert and public participants were entered and the results synthesized. Each unique combination of the building characteristic increments was analyzed to determine preferences for the alternative treatments. In addition, the weights of the characteristics, the action objectives, and the treatments were computed. Inconsistency Ratios were calculated for the building characteristics and the treatment alternatives.

Sensitivity analysis was conducted to determine whether the preferences for the treatment alternatives would be altered by changes to the weights of the building characteristics [Expert Choice, 1996:151]. Although the Expert Choice software package allows the operator to conduct several types of sensitivity analysis, Gradient Sensitivity provides the most useful information about a single criterion in an easy-to-read graph. The graphs created by the software delineate the changes to priorities of the alternatives as the weight of the criterion is altered [Expert Choice, 1996: 160-163].

IV. Analysis and Findings

Overview

The analysis used in this research was two-fold. First, the specific elements of each level of the decision hierarchy were derived using the Delphi technique. The building characteristics, discrete increments of the characteristics, action objectives, and treatment alternatives were identified. Second, the AHP was applied to determine societal preferences for the elements at each level of the hierarchy and for the treatments themselves. The Expert Choice software expedited the AHP calculations and analysis.

The data used in the Delphi phase were collected from experts located throughout the United States, within various levels of government service and in private practice. The data used for the AHP phase was obtained from focus groups conducted in the Wright-Patterson AFB area. Appendix A lists the expert participants and their qualifications while focus group participants are listed in Appendix H.

With 1440 unique building types, the analysis of the findings could have been quite extensive. Rather than analyzing each of the 1440 combinations of building characteristics, this research focused on determining the weights of the elements at each level of the hierarchy and presentation of the preferred treatments for each building type. The IR for the public participants' preferences among the building characteristics was calculated. The IR was also computed for the expert participants' preferences among the treatments. Finally, some of the general building types were analyzed to determine the sensitivity of the results to changes in the building characteristic weights.

Delphi Technique - Round One

Three iterations of the Delphi questionnaire were conducted with a total of ten experts, although not all participants responded to each questionnaire. Their responses are included in Appendix E. The first iteration focused on explaining the rationale of the research and adding elements to each level of the hierarchy; eight experts returned comments. Five respondents added a total of five new building characteristics to that list: "Cultural Significance," "Building Condition," "Integrity," "Engineering Significance," and "Uniqueness." As described in Chapter Three, the questionnaire included several examples of building characteristics when it was sent to the experts: "Age of the Building," "Building Function," "Architectural Significance," and "Historical Significance." The characteristics of "Building Condition" and "Integrity" were independently added by two respondents. The definition suggested for "Integrity" was "location, design, setting, materials, workmanship, feeling, and association;" this definition is derived from the CFR [36 CFR §65.4 (a)]. No one eliminated any characteristics, but several participants questioned whether "Building Function" was a factor in the decision-making process. Several participants added new increments to the "Building Function" characteristic.

The "Architectural Significance" and "Historical Significance" characteristics produced some of the more varied responses about both its definition and increments. Many stated that "Architectural Significance" refers to buildings that are the work of a "master," an ideal specimen of a style, or possessing unique materials and craftsmanship. Two others included ordinary or mundane buildings in the definition. Two approaches to

labeling increments surfaced for this characteristic and for the "Historical Significance" characteristic: National/Regional/State/Local and Very Significant/Somewhat Significant/ Insignificant. One person added a third set of increments for the "Historical Significance" characteristic: Individually Eligible for the National Register/Contributing Part of Historic District/Not Significant/Intrusive Element. One person also thought that "Historical Significance" could apply to those buildings associated with ordinary people.

Three experts added a total of four objectives during the first iteration: "Maintain Appropriate Historical Context," "Preserve Exterior Facade Only," "Demolition," and "Mothball." The objectives listed on the questionnaire when it was forwarded to the experts were "No New Building Additions," "Return Building to Exact Condition as it Existed at One Point in Time," "Keep Expenses Low," and "Upgrade Building Systems Only as Required by Code and Law." Several participants provided little or no feedback to this level of the hierarchy at that time. Approximately half of the respondents commented that the objective "Return Building to Exact Condition as it Existed at One Point in Time" was actually the treatment "Restoration," although most didn't suggest eliminating the objective. A few participants suggested modifying the names of the objectives "No New Building Additions," "Keep Expenses Low," and "Upgrade Building Systems Only as Required by Code and Law." "Keep Expenses Low" provoked the most negative responses, with several experts stating that it is not an objective of historic preservation.

Universal agreement was found for inclusion of the "Preservation" and "Restoration" treatments; respondents also agreed that the Secretary of the Interior's

definitions should be applied. "Rehabilitation" was added by most participants, using the Secretary of the Interior's definition. One person added "Reconstruction" as a treatment and another added "Replacement" using nearly the same meaning. One participant added "Compatible Additions" as a treatment. "Adaptive Reuse," which was included in the questionnaire, was removed as a treatment by two people; one proposed including it in "Rehabilitation" and the other suggested listing it as an objective. "No Special Consideration" was deleted by two participants, since it isn't an historic treatment.

Round Two

Nine expert participants responded to the second Delphi questionnaire, which attempted to refine the list of items at each level of the hierarchy. No one added new characteristics. An overwhelming majority of respondents agreed that two increments of the characteristic "Age of the Building" would be adequate. Nearly all experts also agreed that "Uniqueness" could be folded into the definitions of the other building characteristics. However, the other items didn't receive such a consensus of opinion. "Building Function" was kept by about three-quarters of the respondents with the increments of Administrative, Residential, Industrial, and Specialized. More than one-half thought that "Unique" should be included as an additional increment, in lieu of a separate "Uniqueness" characteristic. One participant also included a "Cultural and Recreational" increment.

For this iteration, "Engineering Significance" was consolidated with "Architectural Significance" to form a single characteristic; no one disagreed with this combination. When participants were asked which set of increments should be used, the responses were

highly fragmented with no clear preference. Several participants included comments to further define this characteristic. The comments for "Historical Significance" roughly paralleled those of "Architectural Significance." "Cultural Significance" also drew a variety of responses; however, more than half of the respondents agreed that it could be incorporated into the "Historical Significance" characteristic.

Although a majority of participants thought that "Integrity" should be kept as a building characteristic, there was some disagreement about the increments to be employed. Most thought that good/fair/poor were adequate, but two experts noted that these were too vague or needed to be more clearly defined. One person commented that "Integrity" was redundant with other characteristics. About one-quarter of the experts thought that "Building Condition" could be incorporated into "Integrity" or eliminated altogether. Disagreement was also prevalent regarding the increments for "Building Condition."

Many more comments were received regarding the preservation objectives during this iteration than the first. Widely varying responses for the objectives "No New Building Additions," "Preserve Exterior Facade," and "Return Building to Exact Condition as it Existed in One Point in Time" were received. Many found the definitions to be vague; their comments were often repeated for each of the objectives. Several participants indicated that one objective should apply to the volume of the building and another to the materials. There was also wide disagreement about how these objectives should be defined more precisely.

The experts were roughly equally split on whether the "Keep Expenses Low" objective should be kept in the hierarchy; several indicated that it shouldn't be an objective

of preservation. Regarding the objective "Upgrade Building Systems Only as Required by Code and Law," many stated that this was not a good objective to differentiate the treatments since "*only* as required by code and law" is a *fixed* level of effort. "Maintain Appropriate Historical Context" was eliminated by one-half of the participants as redundant. One person pointed out that this objective would actually apply to the building surroundings and should be eliminated since the research was concentrating only on the buildings. "New Work Compatible with Existing" was also deleted by about three-quarters of the participants since it is an inherent part of any preservation action and does not help to differentiate between the treatments.

The participants' comments regarding the treatments were more uniform than those on the other levels of the hierarchy. The experts universally agreed upon the use of the Secretary of the Interior's definitions for "Preservation," "Restoration," and "Rehabilitation." Two-thirds agreed upon keeping "Adaptive Reuse" as a treatment, although most also thought that it could be considered a sub-category of "Rehabilitation." Definitions for this treatment varied slightly from person to person. The "No Special Consideration" treatment received a small variety of comments; about one-quarter stated that it should be eliminated while another quarter thought that it could be deleted if the research only deals with buildings already designated as significant. A majority of participants commented that "Reconstruction" could be eliminated, although a few people also thought it might be useful if it applies to a missing section or part of a building, as opposed to the more typical definition that applies to the entire building.

Round Three

Six expert participants responded to the third Delphi questionnaire. This final round of questions attempted to finalize the list of criteria at each level of the hierarchy and refine their definitions. Where wide disagreement among the participants existed, a simple rating scale was employed to weight the strength of their opinions.

With a few notable exceptions, the participants generally agreed with the six proposed building characteristics and their increments. One person stated that a new building could be important because of its mission, in which case the age would be of no importance. However, in this case, the other building characteristics regarding significance would capture its importance. One participant also included an "Other" increment under "Building Function." Although this is not an unreasonable addition to the list, it was not used in the AHP phase of the research; trying to compare action objectives based on a building function described only as one that doesn't fit into any other defined categories would be extremely difficult and of little use.

Two stronger opinions dealt with the "Historical and Cultural Significance" characteristic. One person thought that "State" should be included as an additional increment and the definition should include more ordinary reasons for significance; the definition was changed in the AHP phase to reflect this comment. The other respondent indicated that a level of significance dependent upon whether the building is in an historic district should also be included. However, no other experts included this comment during this round; a similar inclusion was rejected by most participants in an earlier round of questions. Adding this additional building characteristic (assuming two increments) would

have increased the number of AHP questions for the public participants by 18. The characteristics, their increments, and definitions developed from the final Delphi round are listed below (in no particular order):

- Age of the Building: Age of the oldest portion of the building. If the original portion of the building is insignificant as compared to the rest of the structure, the building's age is defined by the age of the most important section of the building. A building's age can be defined as:
  - Less than 50 years old
  - 50 years and older

- Building Function: The function that the building housed. If the building housed several different functions over its life, the building function is defined as the one that was the most significant. Building functions are defined as:
  - Administrative
  - Residential
  - Industrial (such as aircraft hangers, warehouses, etc.)
  - Specialized or unique
  - Recreational or cultural (such as chapels, officers' club, etc.)

- Historic and Cultural Significance: Significance due to an important person, an historic event, the work that occurred there (including the mundane or ordinary), and cultural significance. Historic and cultural significance can be characterized according to several levels:
  - National
  - Regional
  - Local
  - None

- Integrity: Based on the *location* (whether a building is in its original location), *design* (has the same basic layout, style and function as it did historically), *setting* (exists in a compatible setting as it did historically), *materials* (basically unchanged from original materials), *workmanship* (in good condition and hasn't been altered), *feeling* (the overall impression one gets from the building), and *association* (is associated by the public with the history of the area). Integrity can be described as:
  - Good (meets 5 or more of the 7 criteria listed)
  - Fair (meets 3 or 4 of the criteria)
  - Poor (meets fewer than 3 of the criteria)

- Architectural and Engineering Significance: Significance pertaining to the architecture or engineering of the building itself (not individual architectural

elements). Significance would be indicated if the building is a work of a "master," is a good example of a particular style, or is of a unique or rare style. Architectural and engineering significance can be characterized according to several levels:

- National
- Regional
- Local
- None

- Building Condition: The current condition of the building's structural system, building systems (such as electrical, ventilation, etc.), and materials. Building condition can be described as:
  - Good (structurally sound, with minimal deterioration of materials or building systems)
  - Fair (requires some structural work and a large portion of the materials and building systems must be replaced or repaired)
  - Poor (structural system must receive significant repairs and a majority of the building systems and materials must be repaired or replaced)

The experts also generally agreed with the seven proposed action objectives, although some objectives did invoke strong replies. Two participants moderately disagreed with "Keep Expenses Low" as an objective. They also strongly disagreed with deleting "Maintain Appropriate Historic Context" and "New Work Compatible with Existing." However, the other experts concurred with the deletions. Additionally, inclusion of these two objectives would have increased the number of AHP questions by 44 for the public participants and 10 for the expert participants. Listed below are the action objectives and definitions derived from the Delphi questionnaires:

- No New Additions to Exterior: major, visible additions to the overall volume of the building should not be allowed. This does not include work to the exterior materials and smaller architectural details.

- Prevent Alteration of Interior Materials: alteration or removal of materials, finishes, and architectural features on the interior of the building should be prevented. Where repair or replacement of historic features is required, they will match the old in design, color, texture and materials. This would include

the design or layout of the spaces, since changes to the plan would require removal and patching of finishes and architectural features.

- Prevent Alteration of Exterior Materials: alteration or removal of materials, finishes, and architectural features on the exterior of the building should be prevented. Where repair or replacement of historic features is required, they will match the old in design, color, texture and materials. This does not include changes to the volume of the building.

- Use Building as It Was Historically: the building should be used as it was historically or given a new use which reflects the building's most important period.

- Keep Costs Low: economical materials and finishes should be used as a part of a comprehensive plan to reduce construction costs (even if they are less compatible with the building's original design and materials). Replace or remove damaged details and materials rather than repair them.

- Upgrade Building Systems: existing building systems should be replaced with modern lighting, electrical service, heating/ventilation/air conditioning, plumbing, and any other systems as necessary to meet code requirements, improve efficiency, and increase comfort.

- Provide Functional Interior Layout: interior partitions should be removed, added or relocated as necessary to provide a more useful or efficient plan.

The respondents primarily agreed with the five proposed treatments either strongly or moderately; this level of the hierarchy enjoyed the most accord among the experts. However, several participants made comments which were incorporated into the final definitions of the treatments, especially "Adaptive Reuse." The treatments obtained from the expert participants are defined below:

- Restoration means the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

- Preservation means the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

- Rehabilitation means the act or process of making possible an efficient compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

- Adaptive Reuse means the act or process of making possible an efficient use for a property not necessarily compatible with its historic use, by allowing major changes to the interior or exterior of the building, but preserving those portions or features which convey its historical, cultural or architectural values.

- No Special Consideration means that the building is of little or no significance. Application of preservation actions is not required. Routine maintenance and repair actions should be used as necessary in cases where the building will continue to be used. Demolition is an acceptable action where the building is no longer needed.

These building characteristics, increments, action objectives, and treatments were integrated into the hierarchy structure developed in Chapter Three. Figure 10 illustrates the hierarchy employed to develop the pairwise comparisons used in the AHP questionnaires.

Building Characteristics

Four focus groups, consisting of a total of 25 participants, engaged in discussions about historic preservation and completed the pairwise comparisons needed for the AHP. For the most part, the discussions were somewhat limited since most participants knew the

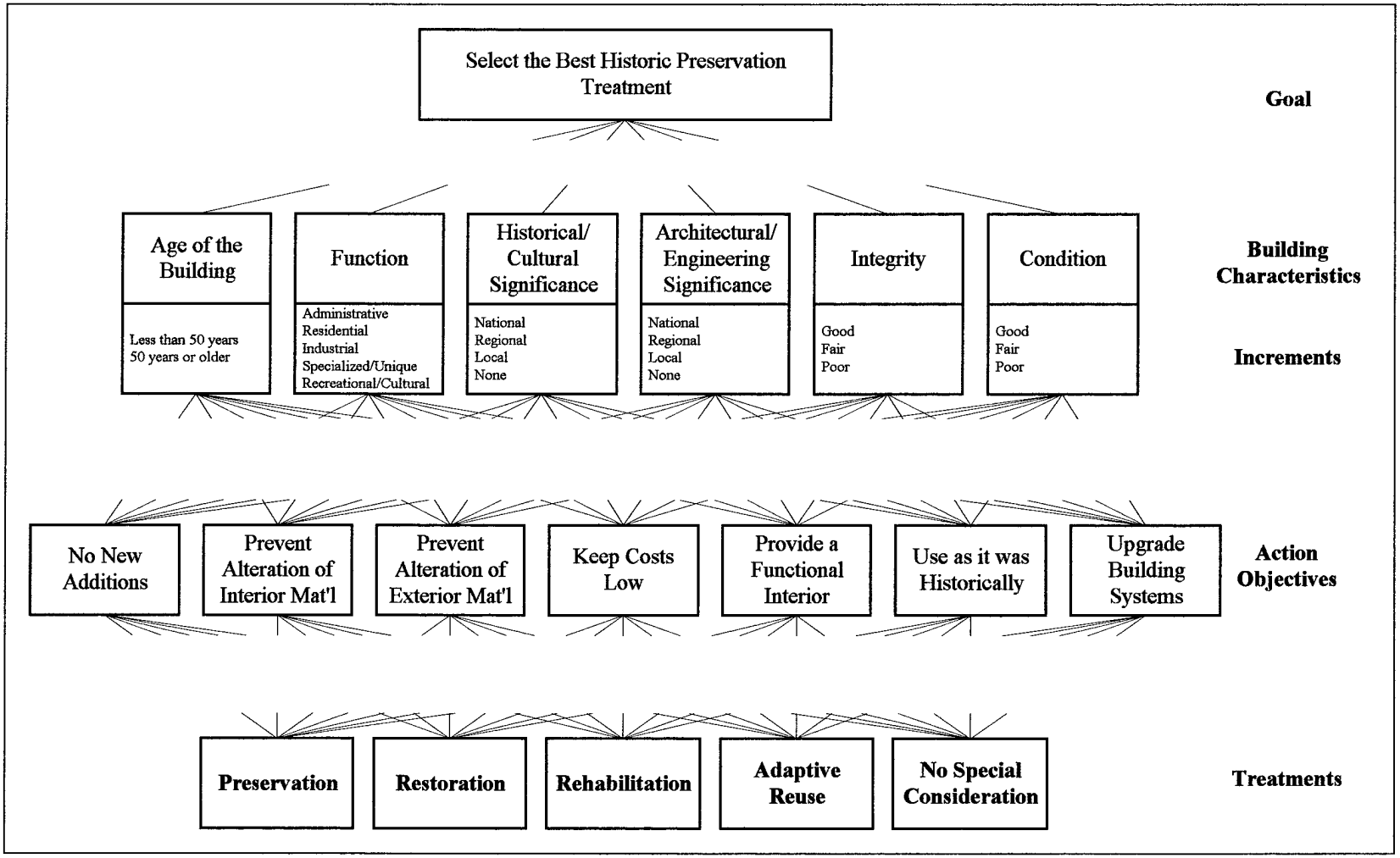


Figure 10 - Final Hierarchy

other group members and their opinions regarding historic preservation. However, the discussions did provide some useful qualitative information. Appendix L contains a synopsis of the comments generated during the discussions. In conducting the synthesis of the AHP hierarchy, the responses from all focus groups were combined to determine the weights of the building characteristics and action objectives. Utilizing the Expert Choice software package, the participants' preferences for each pairwise comparison were entered into the matrix; the raw group data is contained in Appendix M.

The calculated weights for the characteristics are illustrated in Figure 11. Two characteristics — "Historical and Cultural Significance" and "Architectural and Engineering Significance" — constitute over half the weight placed on the characteristics

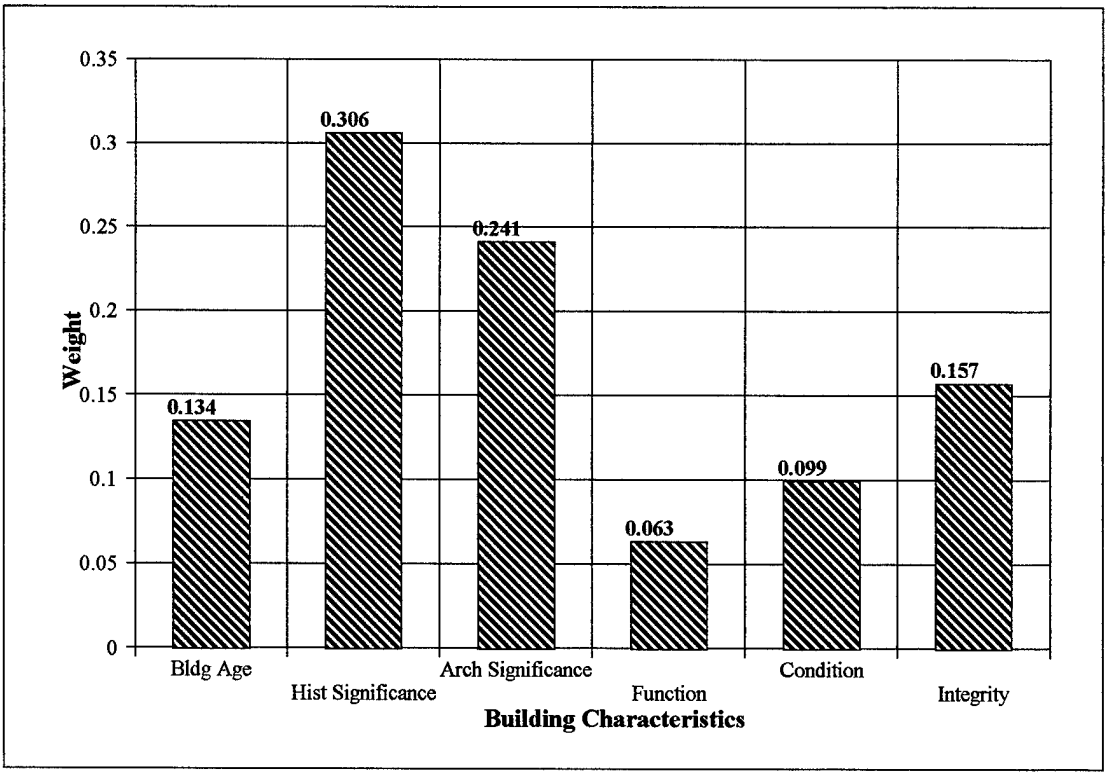


Figure 11 - Weights of Building Characteristics

by the public. The third most influential building characteristic is "Integrity," with "Age of the Building" rated closely behind. Although several people in different focus groups commented that integrity was difficult to rate because of its wide scope and imprecise definition, the participants still thought that it has a significant impact on historic preservation decisions. The AHP results confirmed the verbal information communicated during the discussions and in the Delphi questionnaires: function plays a relatively small role in historic preservation decisions.

Weights placed on each of the characteristics by the individuals were also computed. Using these weights, two-sample *t* test was conducted to determine whether the PDI participants' responses are significantly different from the Sinclair students' responses. The level of significance (α) used in this test was 0.05. That is, there is a 5% probability of concluding that the two populations answered differently when they are actually the same. The distribution of the weights applied by the members of the two groups were tested for normality — all were fairly normally distributed. However, since the two groups' sample variance are very different for some characteristics, the Smith-Satterthwaite test was employed. The test statistic was calculated as shown below.

$$t' = \frac{\bar{x} - \bar{y}}{\sqrt{\frac{s_1^2}{m} + \frac{s_2^2}{n}}} \qquad \text{degrees of freedom} \quad v = \frac{\left(\frac{s_1^2}{m} - \frac{s_2^2}{n}\right)^2}{\frac{\left(s_1^2/m\right)^2}{m-1} + \frac{\left(s_2^2/n\right)^2}{n-1}}$$

Since the degrees of freedom varies, the critical value of *T'* must be recalculated for each characteristic. If the calculated *t'* values for each of the characteristics are greater than the

critical T' value, then the hypothesis that the two groups' weights are the same must be rejected. Alternatively, the calculated p values can be compared to α. If the p value is less than α, the two groups are believed to be significantly different. The calculated t' and p values for each characteristic are shown in Table 2. In all cases, the means of the two groups' weights of the characteristics are not significantly different at a 0.05 level of confidence.

Table 2 - Smith-Satterthwaite Test Results for Building Characteristics

Building Characteristic	v	t' **value**	T'_{crit} **value**	p **value**	**Significant Difference?**
Building Age	13.7	2.02	2.14	.063	No
Hist. & Cult. Significance	22.7	0.73	2.07	.472	No
Arch & Eng. Significance	18.7	1.22	2.09	.236	No
Building Function	15.9	0.83	2.12	.416	No
Building Condition	20.9	1.97	2.08	.063	No
Integrity	17.3	0.82	2.11	.425	No
				$p_{crit} = 0.05$	

The group Inconsistency Ratio (IR) for this level of the hierarchy is 0.04. Considering that an IR of 0.1 is generally considered to be acceptable consistency, the calculated IR is low for an area that tends to spark heated debate among concerned

members of the community. However, all individual's IRs for the building characteristics are higher than the group IR. The mean individual IR is computed as 0.230, with a low of 0.05 and a high of 0.55. A Smith-Satterthwaite *T'* test was also conducted for the two samples' IRs to determine whether one group was significantly more consistent than the other. The calculated *t'* value was 0.56 (*p* value of 0.580), indicating no significant difference between the means of the two groups (the critical *T'* value was calculated as 2.08; the degrees of freedom $\nu = 21.4$).

Action Objectives Based on "Historic and Cultural Significance"

Figure 12 delineates the weights of the action objectives based upon a building's historic and cultural significance. "Keep Costs Low," "Prevent Alteration of Interior Materials," and "Use Building as It was Historically" are consistently ranked at the bottom of the action objectives when considering a building's historic and cultural significance. Given that a building possesses no historic or cultural significance, providing a functional interior is approximately twice as important than one which possesses a higher level of significance; providing a functional interior and upgrading the building systems are by far the most important action objectives when the building demonstrates no historic or cultural significance. "Upgrade Building Systems" and "Keep Costs Low" are also slightly more important given no historical or cultural significance. Protecting the interior materials of a building receives approximately the same weight under any of the four increments.

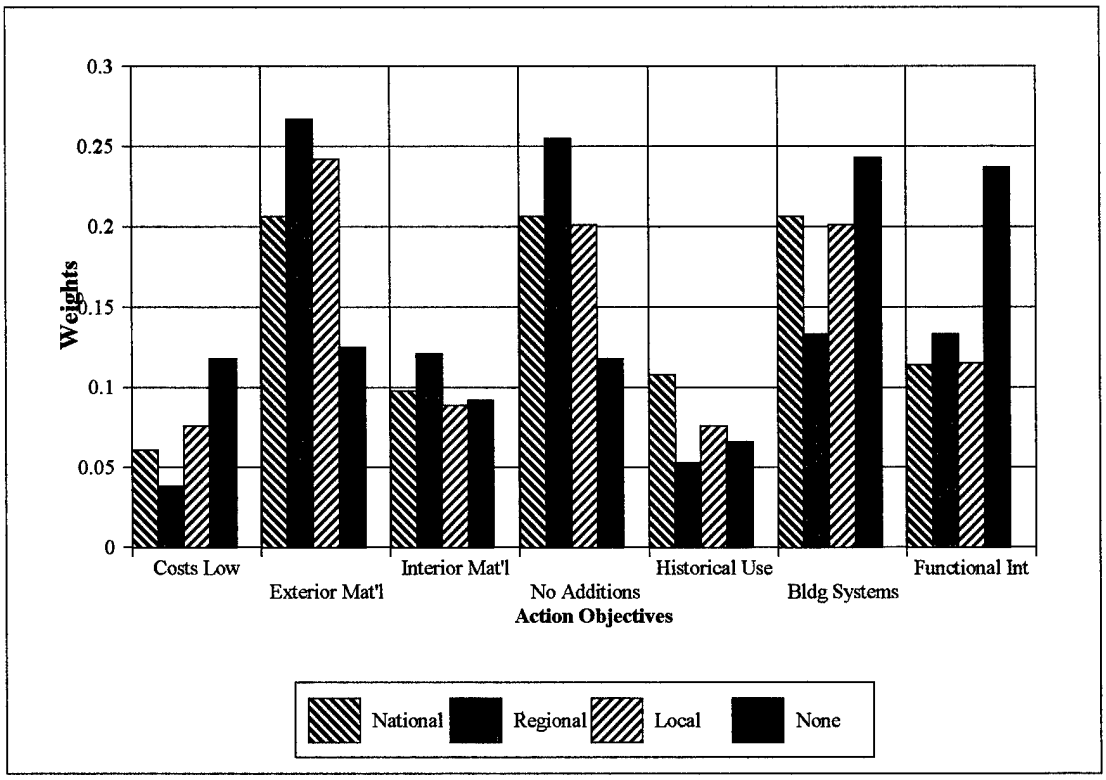


Figure 12 - Weights of Action Objectives Based on Historic and Cultural Significance

Interestingly, "Prevent Alteration of Exterior Materials," "Prevent Alteration of Interior Materials," and "No New Additions to Exterior" are weighted heavier when the building is regionally significant than when it is nationally significant; protecting the exterior materials is ranked higher for locally significant buildings than those with national significance. Using the building as it was historically earned a slightly higher score when the building is of local significance than when it is regionally significant.

Overall, the action objectives are weighted similarly based on the increments of "National" and "Local;" the "Regional" increment was not greatly different, either. Under these three increments, the participants prefer to protect the exterior materials, prevent building additions, and upgrade the building systems. The increment of "None" produces

results that were the most different from the other increments; in this case, the preference is to upgrade building systems and provide a functional interior.

Action Objectives Based on "Architectural and Engineering Significance"

The calculated weights of the action objectives based on a specific increment of "Architectural and Engineering Significance" are shown in Figure 13. Again, "Prevent Alteration of Exterior Materials" is more heavily weighted given a regionally significant building than one of national significance. To a lesser extent, "Prevent Alteration of Interior Materials" also exhibits this trait. However, the weight of "Prevent Alteration of

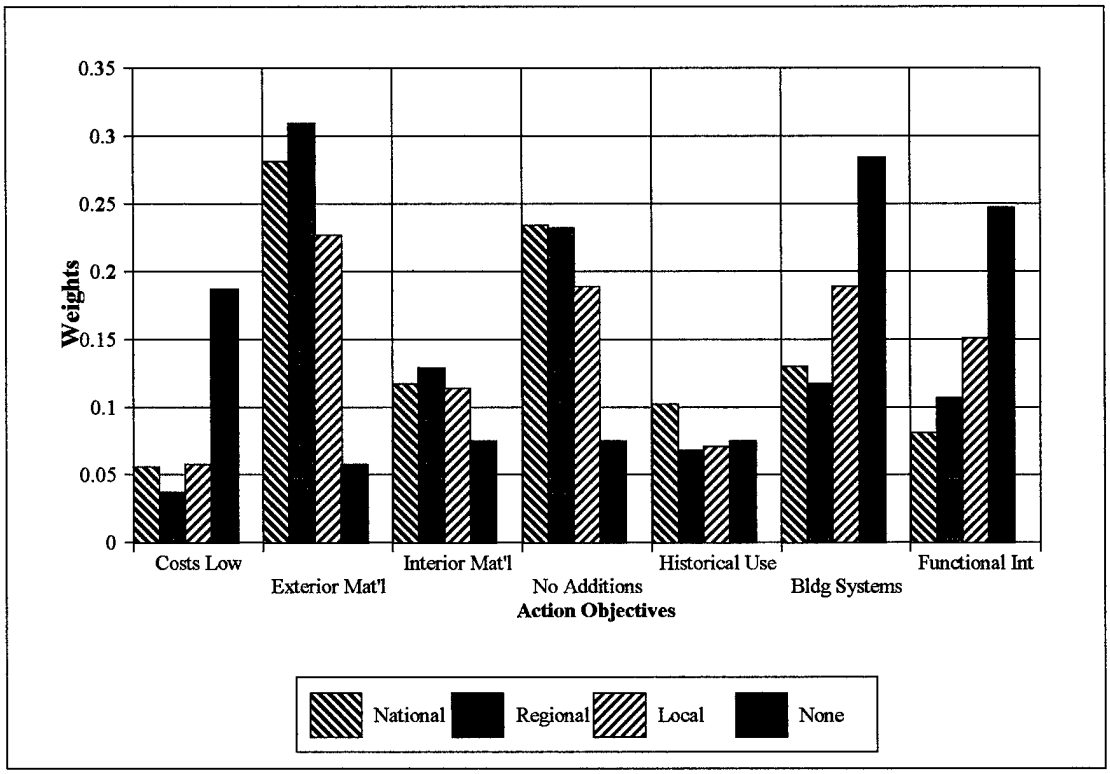


Figure 13 - Weights of Action Objectives Based on Architectural and Engineering Significance

Interior Materials" is roughly the same given national, regional, or local significance but lower if the building has no significance.

Several other trends were also identified. Given national, regional, or local significance, the importance of keeping costs low was deemed to be approximately the same; the weight of this action objective more than triples when the building has no architectural and engineering significance. Although the weight of "Upgrade Building Systems" decreases slightly when moving from national to regional significance, the weights of this action objective and "Provide Functional Interior Layout" generally increase as significance decreases. In comparison, the weight of "No New Additions to Exterior" decreases as significance decreases. The participants' preferences for the action objectives based on architectural and engineering significance roughly parallel those based on historic and cultural significance.

Action Objectives Based on "Integrity"

Figure 14 illustrates the weights of the action objectives based upon a building's integrity. As expected, the participants' concern for the protection of interior materials, exterior materials, new additions, and historical use decreases as a building's integrity degrades. In general, the opposite relationship exists for the remaining action objectives, although the weights assigned to upgrading building systems are indistinguishable given either good or fair integrity. "Use Building as It Was Historically," is least preferred of all action objectives given any increment of integrity.

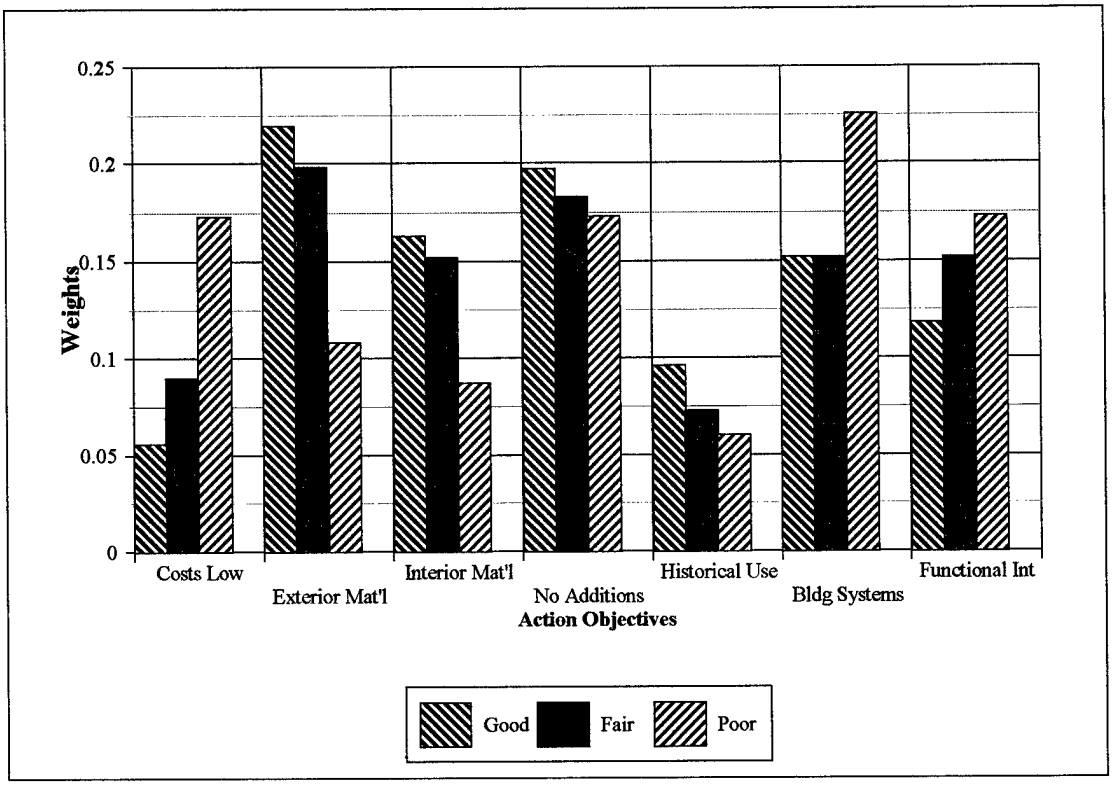


Figure 14 - Weights of Action Objectives Based on Integrity

Action Objectives Based on "Age of the Building"

The weights of each of the action objectives were calculated given that the age of the building was either less that 50 years old or 50 years and older. Figure 15 illustrates the weights of the action objectives based upon the building's age. Given that a building is less than 50 years old, upgrading the building systems and providing a functional interior layout are the two most heavily weighted objectives; the weights of each are over 0.25. However, if the building is 50 years old or more, "Prevent Alteration of Exterior Materials" is by far the most heavily weighted action objective. "Use Building as it Was Historically" is ranked lowest and receives about the same weight in either case; this action objective does not appear to be affected by a building's age.

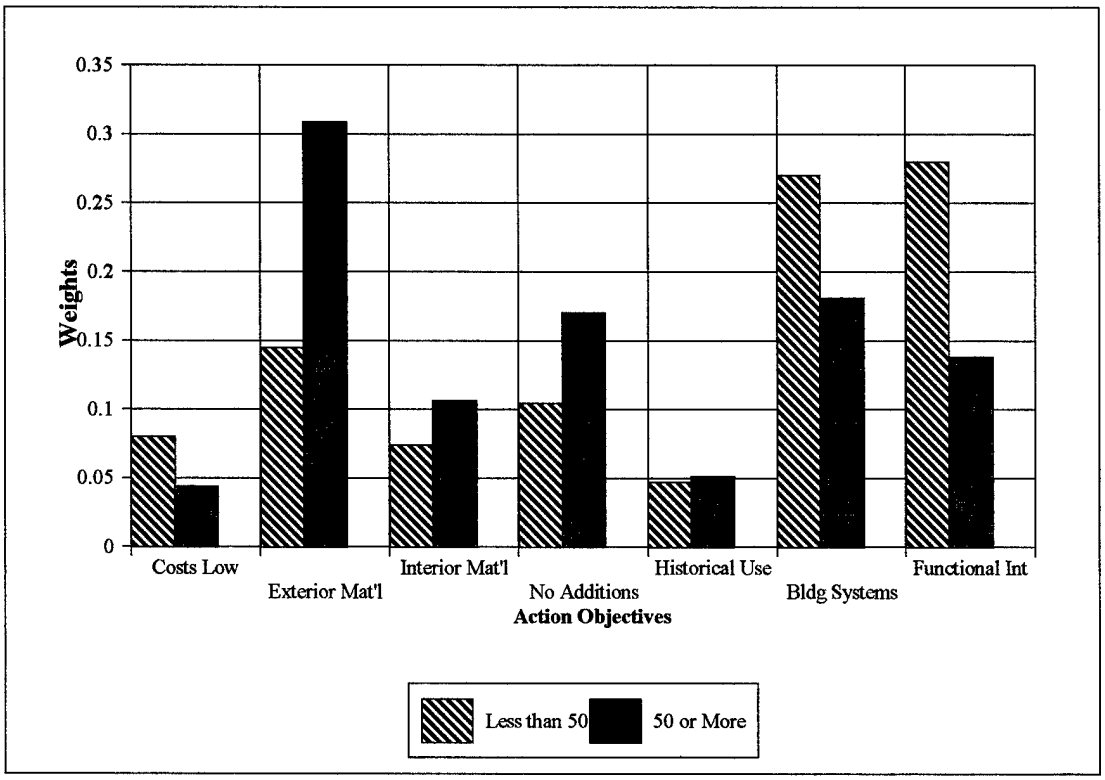


Figure 15 - Weights of Action Objectives Based on Age of the Building

"Provide Functional Interior Layout" experiences the largest decrease in weight when changing from the younger age increment to the older. Keeping the costs low earned a slightly lower score when the building is old enough to be placed on the National Register of Historic Places, while "Prevent Alteration of Interior Materials" and "No New Additions to Exterior" are more important.

Action Objectives Based on "Building Condition"

When the action objectives are compared based upon the building's condition, the results shown in Figure 16 are obtained. While "Keep Costs Low" becomes more important as condition worsens, "Prevent Alteration of Exterior Materials" and "No New

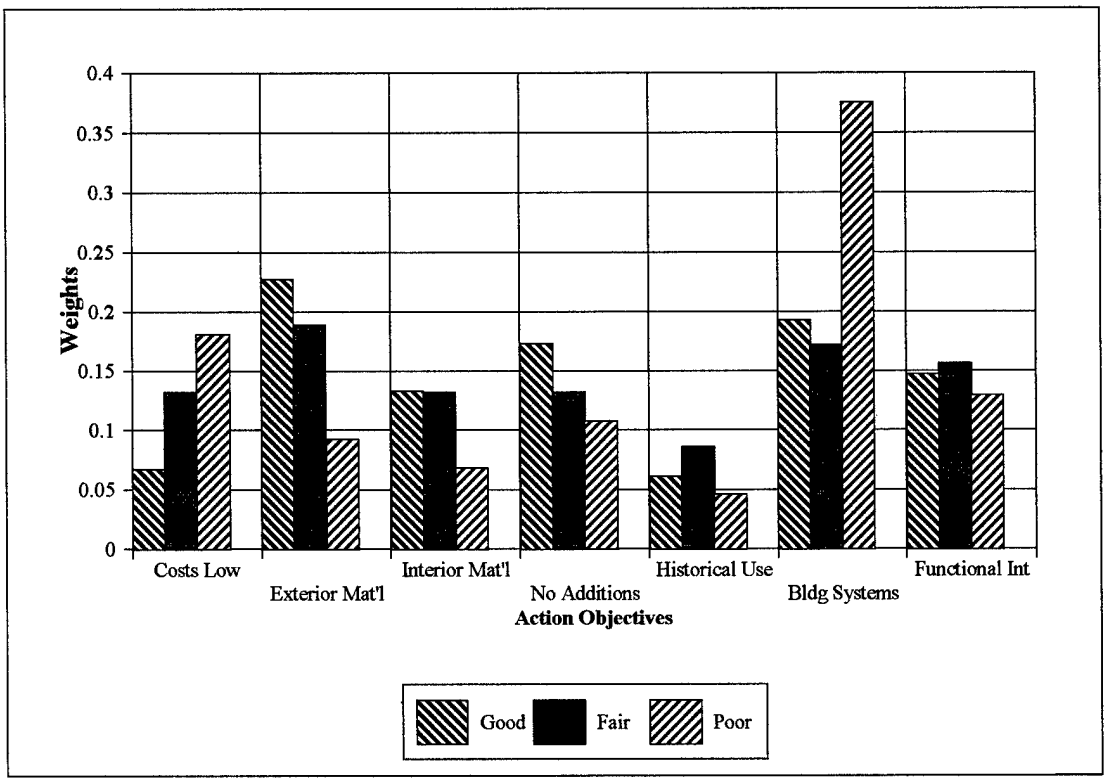


Figure 16 - Weights of Action Objectives Based on Building Condition

Additions" decreases in importance. The weight for "Prevent Alteration of Interior Materials" remains virtually unchanged between good and fair condition, but decreases given a poor condition.

Analysis of the weights based on condition reveals several anomalies. The first is an increase in the weight of "Use the Building as It Was Historically" when the increment changes from good to fair condition. To lesser extent, this same increase occurs for the objective of providing a functional interior layout. The other unexpected finding involves the action objective of "Upgrade Building Systems." In this case, the weight of the

objective decreases slightly when the building condition changes from good to fair, then roughly doubles when the condition changes from fair to poor.

Other than the large jump in weight of "Upgrade Building Systems," the priorities of the action objectives do not vary much from one increment to another. This seems to make some sense — when a building is in good condition, the building's systems probably do not require much repair or replacement. However, a building that is in poor condition requires more attention to its various systems.

Action Objectives Based on "Building Function"

The weights of the action objectives based upon a building's function are depicted in Figure 17. Assessment of the action objectives given this building characteristic produces some of the most varied weights. Unlike the other characteristics, whose increments can be seen as parts of a continuum, the increments of "Building Function" are simply different from one another; it is difficult to conceive of various building functions as constituting some sort of order or hierarchy.

When a building houses an administrative function, preventing alteration of the exterior materials and upgrading the building systems are the highest ranked objectives. This also holds true for cultural or recreational buildings, but the weights assigned to these two objectives are smaller. "Prevent Alteration of Exterior Materials" is paramount when a building houses a specialized or unique function. The objectives of "Upgrade Building Systems" and "Provide a Functional Interior" garnered the highest scores when considering either industrial or residential functions.

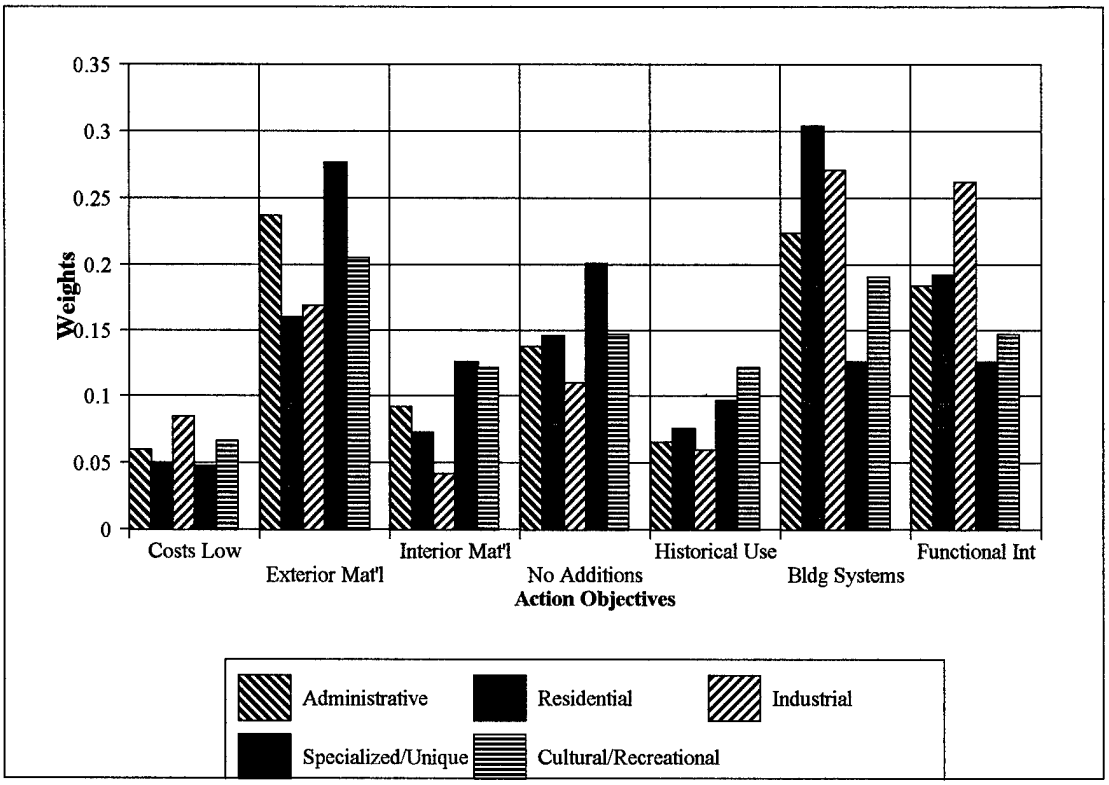


Figure 17 - Weights of Action Objects Based on Building Function

For all functions other than "Industrial," "Keep Costs Low" ranks the lowest. This objective also receives roughly the same weighting under any type of function. Although a few of the building functions exhibit the same weights for an action objective, most of the weights for an action objective vary greatly from one function to another.

Preferences for Action Objectives

Using the weights derived for the building characteristics level and action objectives level of the hierarchy, the preferences for the action objectives were synthesized. The weights of the action objectives given each unique combination of characteristics is listed in Appendix P.

The objective "Prevent Alteration of Exterior Materials" is weighted the heaviest in 820 (of 1440) of the unique characteristic combinations. It ranks second most important 312 times and third 273 times — it is ranked in the top three a total of 1405 times. Interestingly, "Upgrade Building Systems" is weighted the heaviest 620 times, second 380 times, and third 440 times. In other words, "Upgrade Building Systems" ranks as one of the top three action objectives in *all* 1440 cases.

The action objective to be rated in the top three the next most frequently is "No New Additions to the Exterior." It is never the highest weighted objective, but it is ranked and second or third a total of 927 times. "Provide Functional Interior Layout" also appears as the second or third most important action objective a total of 525 times. The only other objective to appear in the top three is "Keep Costs Low" — it appears as the third most heavily weighted objective a total of 23 times.

Treatments

Six expert participants completed the pairwise comparisons necessary to determine the degree to which the treatments accomplish each of the action objectives. The expert participants' responses for each of the pairwise comparisons are included in Appendix N. The geometric means of their responses were entered into the matrices to derive the weights illustrated in Figure 18.

Analysis of the treatments reveals a definite pattern. The objectives of "No New Additions to Exterior," "Prevent Alteration of Exterior Materials," "Prevent Alteration of Interior Materials," and "Use Building as It Was Historically" are best accomplished by

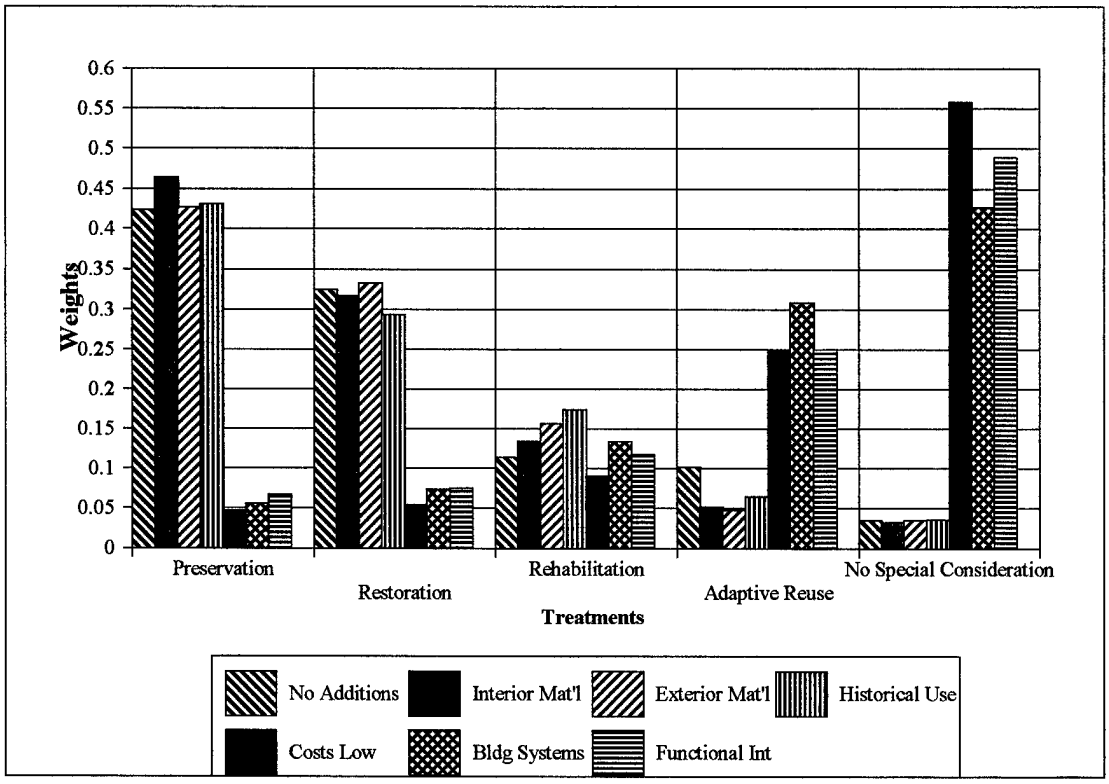


Figure 18 - Degree to Which the Treatments Accomplish Each Action Objective

"Preservation." "Restoration" engenders these objectives next best, followed by "Rehabilitation." As might be expected, "Adaptive Reuse" and "No Special Consideration" were thought to achieve these four objectives poorly.

"No Special Consideration" excels at accomplishing the action objectives of "Keep Costs Low," "Upgrade Building Systems," and "Provide Functional Interior Layout." Following, in order, are "Adaptive Reuse" and "Rehabilitation." "Preservation" and "Rehabilitation" do not achieve these objectives very well.

While the treatments of "Preservation" and "Restoration" accomplish the more preservation-related objectives well, "No Special Consideration" and, to a lesser extent,

"Adaptive Reuse" accomplish the pragmatic objectives better. "Rehabilitation," by comparison, is mediocre at accomplishing any of the action objectives.

The IRs were calculated for the weights of the treatments based on each of the action objectives. The results are presented in Table 3. The group IRs are all under the standard acceptable limit of 0.1, with "Prevent Alteration of Interior Materials" causing the most inconsistency. Unlike the public participants, however, the some experts' responses were more consistent than the group as a whole. These IRs should not be directly compared with the IRs calculated for the public participants' IRs, since one is

Table 3 - IRs of Treatment Comparisons Given Each Action Objective

Action Objective	Experts (identified by the randomly assigned number used in Appendix E)						Group IR
	3	4	5	6	7	8	
No New Additions to Exterior	.04	.20	.15	.07	.50	.16	.06
Prevent Alteration of Interior Materials	.13	.23	.10	.03	.34	.16	.09
Prevent Alteration of Exterior Materials	.11	.13	0.0	.04	.34	.03	.04
Use Building as it Was Historically	.02	.15	.08	.01	.34	.10	.04
Keep Costs Low	.01	.29	.25	.03	.07	.19	.05
Upgrade Building Systems	.02	0.0	*	.12	.40	.06	.06
Provide Functional Interior Layout	.17	0.0	0.0	.06	.07	.16	.03

* - Participant did not complete this section of the questionnaire

based on comparisons of the building characteristics and the other is based on comparisons of the treatments. The difference between the IRs may mean that one set of comparisons is naturally easier to accomplish.

Using the weights derived at each level of the AHP hierarchy, the preferences for the treatments were synthesized. The final weights for each of the treatments given a specific, unique combination of characteristic increments are presented in Appendix O. These results were then compared against an "intuitive line" representing the results that were expected for a particular set of characteristics. This intuitive line was constructed based on several assumptions. First, since the treatments of "Restoration" and "Preservation" usually require the most effort and cost more than the treatments, they are usually reserved for the more significant buildings. In contrast, "No Special Consideration" has the least restrictions regarding work that can be performed on a building; it would not be applied to facilities of significance or importance. The treatments of "Rehabilitation" and "Adaptive Reuse" span the interval between the two extremes; they are not as restrictive as "Preservation" and "Restoration," but do provide more protection of various visual elements than "No Special Consideration."

Several unexpected trends were discovered during the analysis of these weights. The first insight involves the weights for very significant buildings in good condition. When a building that is considered to be very historically and architecturally significant, in good condition, with good integrity, one might expect "Preservation" or "Restoration" to be the most heavily weighted treatment, followed by "Rehabilitation," "Adaptive Reuse," and "No Special Consideration," since this ordering would roughly parallel the continuum

of effort required. However, the results do not support this assumption. "Preservation" and "Restoration" are the most favored treatments, but "No Special Consideration" and "Adaptive Reuse" rank above "Rehabilitation." Reviewing the comments generated from the focus groups, answer as to why "Restoration" is weighted less than "Preservation" can be found. Even for historic facilities, the visual appearance is the most important aspect for many people; several participants indicated that only when the building is of extreme importance should it be used as it was historically (and, therefore, restore the building). Figure 19 illustrates the expected weights and the actual results; the bars represent the averages of the weights given the following characteristics: any age, any function, national

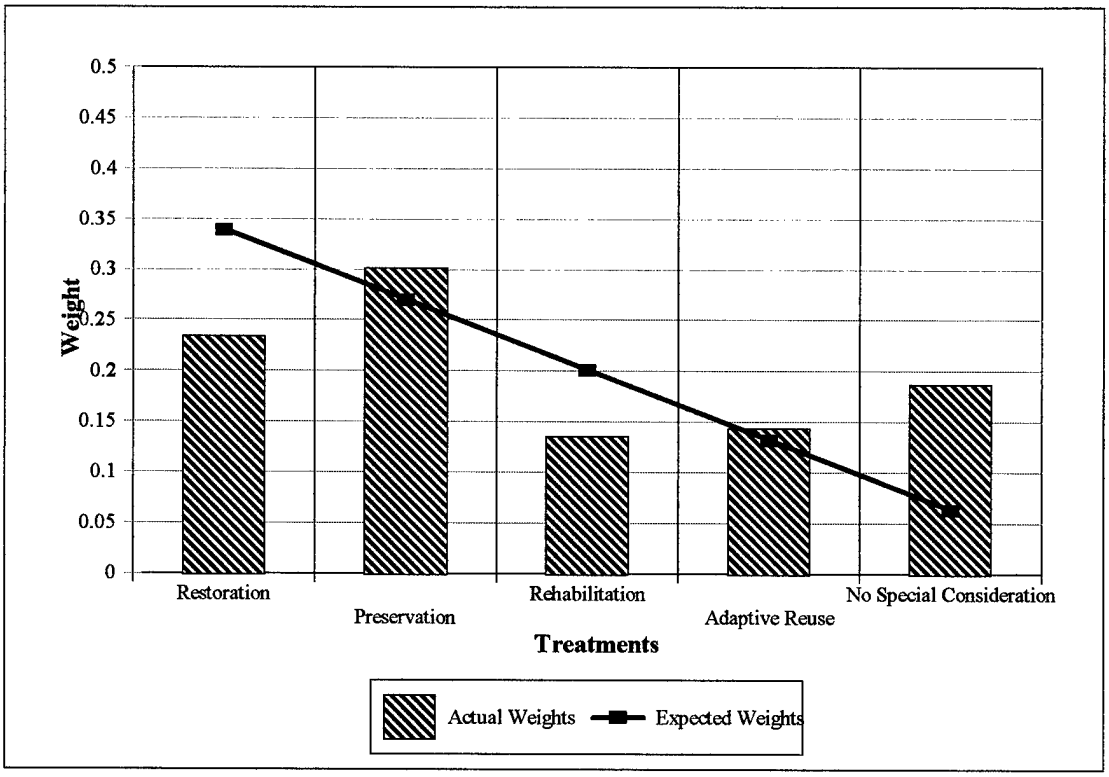


Figure 19 - Expected vs Actual Weights for Very Significant/Good Condition Buildings

historic significance, national architectural significance, good condition, and good integrity. The line indicates the general slope of the anticipated weights.

The next discovery pertains to the final weights of the treatments when the building is insignificant and in poor condition. In this case, one might expect to find that "No Special Consideration" the most heavily weighted treatment, followed by "Adaptive Reuse" and "Rehabilitation." "Restoration" and "Preservation" were expected to be the least favored treatments, since the effort, time, and cost required to execute these treatments would not be justified by the building's condition and significance. While "No Special Consideration" is the highest ranking treatment, "Preservation" and "Restoration" rank above "Rehabilitation" and sometimes "Adaptive Reuse." Figure 20 illustrates the difference between the expected and actual results when a building is of no architectural significance, no historic significance, in poor condition, and poor integrity. The bars indicating the "Actual Weights" in Figure 20 were calculated by averaging the weights under the following conditions: any age, any function, no historic significance, no architectural significance, poor building condition, poor integrity.

The final discovery regarding the weights revolves around buildings that exhibit moderate architectural or historic significance and moderate condition and integrity. Under these conditions, one might expect to find the greatest weight applied to "Rehabilitation" or perhaps "Adaptive Reuse." Intuition suggests that "Preservation," and "Restoration" would garner lower scores because these treatments are not justified for buildings of only moderate significance. However, "No Special Consideration" would not be justified either, as some consideration would be expected. As shown in Figure 21, the

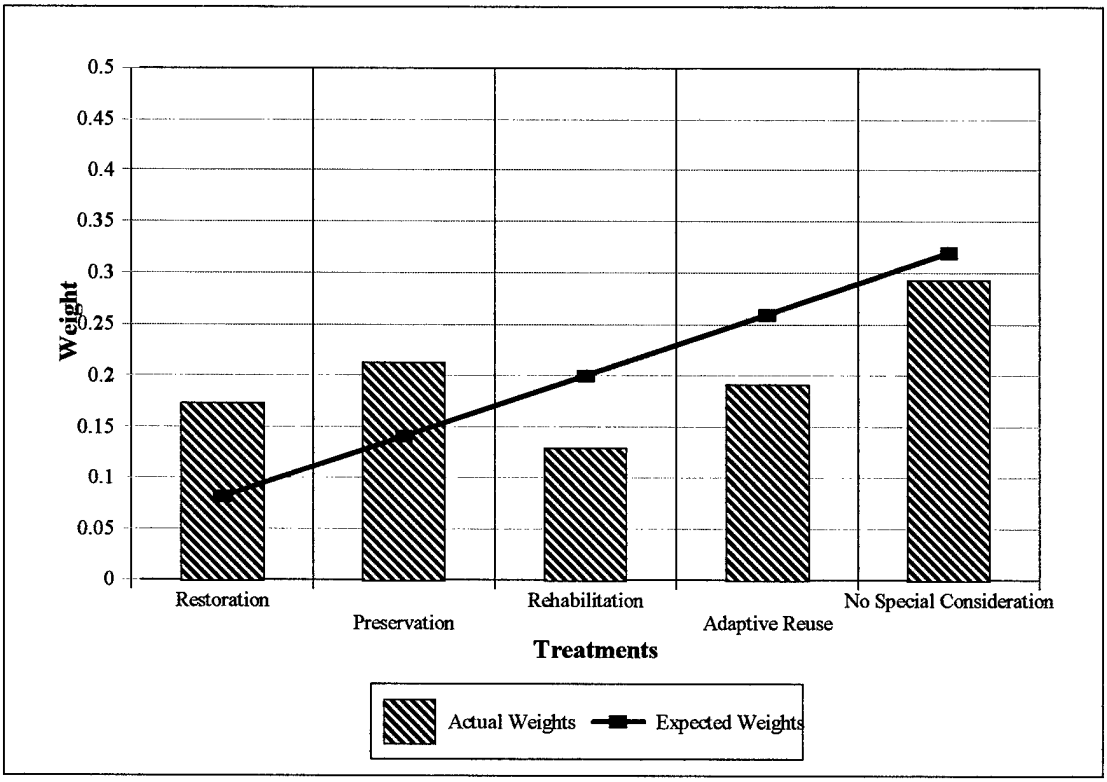


Figure 20 - Expected vs Actual Weights for Insignificant/Poor Condition Buildings

opposite relationship was discovered. "No Special Consideration" and "Preservation" possess the most weight, followed by "Restoration" and "Adaptive Reuse." "Rehabilitation" is the lowest ranking treatment. The bars indicating the "Actual Weights" depicted in Figure 21 were calculated by averaging the weights given the following conditions: any age, any function, either national historic significance matched with no architectural significance or no historic significance matched with national architectural significance, and either good condition matched with poor integrity or poor condition matched with good integrity. For all 1440 combinations of building

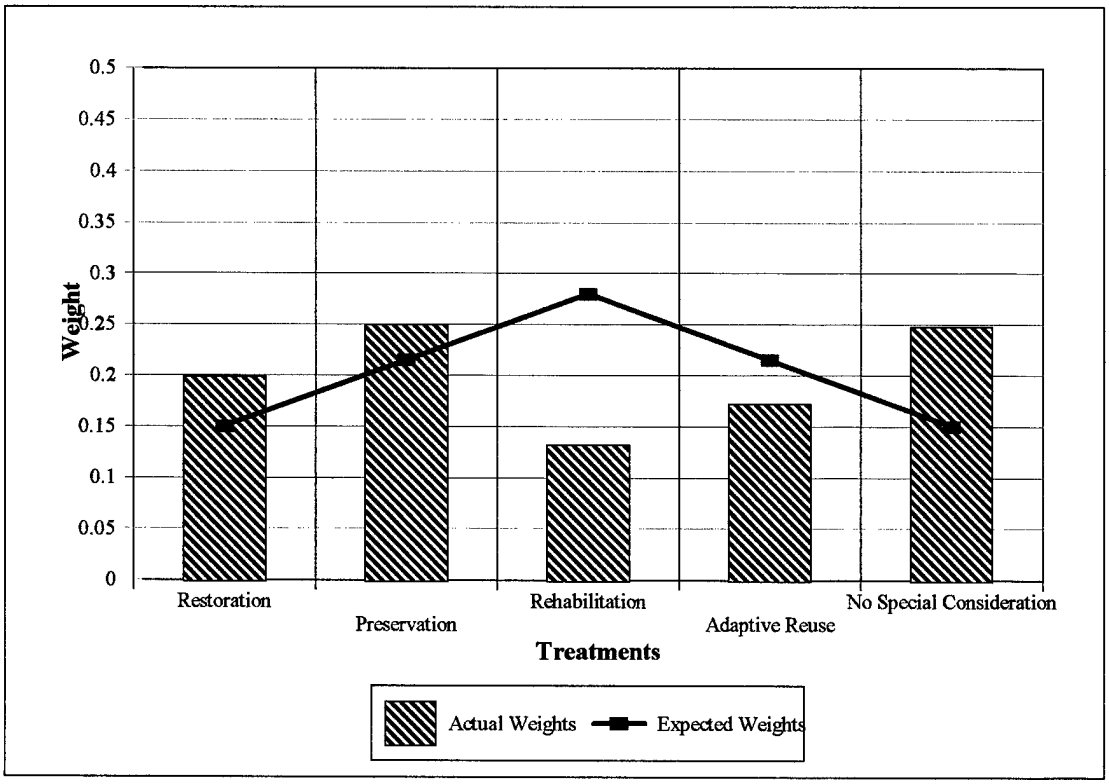


Figure 21 - Expected vs Actual Weights for Somewhat Significant/Fair Condition Buildings

characteristics listed in Appendix O, "Rehabilitation" rates at the bottom of the five treatments. Its weight varies only a few thousandths under any set of conditions.

Sensitivity Analysis

During the Delphi questionnaires and focus group discussions, participants questioned whether building function is a significant factor in determining preference among preservation treatments. Although the public participants assigned the lowest weight of all building characteristics to "Building Function," the weights of the various

action objectives fluctuate notably as the increments change (see Figure 17). Therefore, sensitivity analysis was performed on the "Building Function" characteristic to determine whether this characteristic has any impact on the preferred treatment. Expert Choice's "Gradient Sensitivity" mode was used to conduct this analysis. The graph produced by this analysis places the weight of the criteria along the X-axis and the weights of the alternatives along the Y-axis; a vertical line indicates the original weight of the characteristic under consideration. As the vertical line is moved along the X-axis, the points at which the lines representing the treatment alternatives cross indicate the new weights of the treatments. Several different combinations of the building characteristics were selected to determine if changing the weight of "Building Function" to zero (thus eliminating it as a factor) would have any significant effect.

The first combination of characteristics analyzed included national or regional architectural significance, national or regional historic significance, good condition, and good integrity. Figure 22 is indicative of the results obtained from this genre of buildings. (Specifically, Figure 22 presents the analysis on the following characteristics: over 50 years old, administrative, national historic significance, national architectural significance, good integrity, good condition.) In these cases, reducing the weight of "Building Function" to zero has no effect on the preferred treatment alternative.

The next general building type analyzed are those of little or no significance, poor condition, and poor integrity. Several combinations of characteristics were analyzed; Figure 23 represents some of the findings from this type of building. (In particular, Figure 23 presents the results from the following characteristics: over 50 years old, specialized/

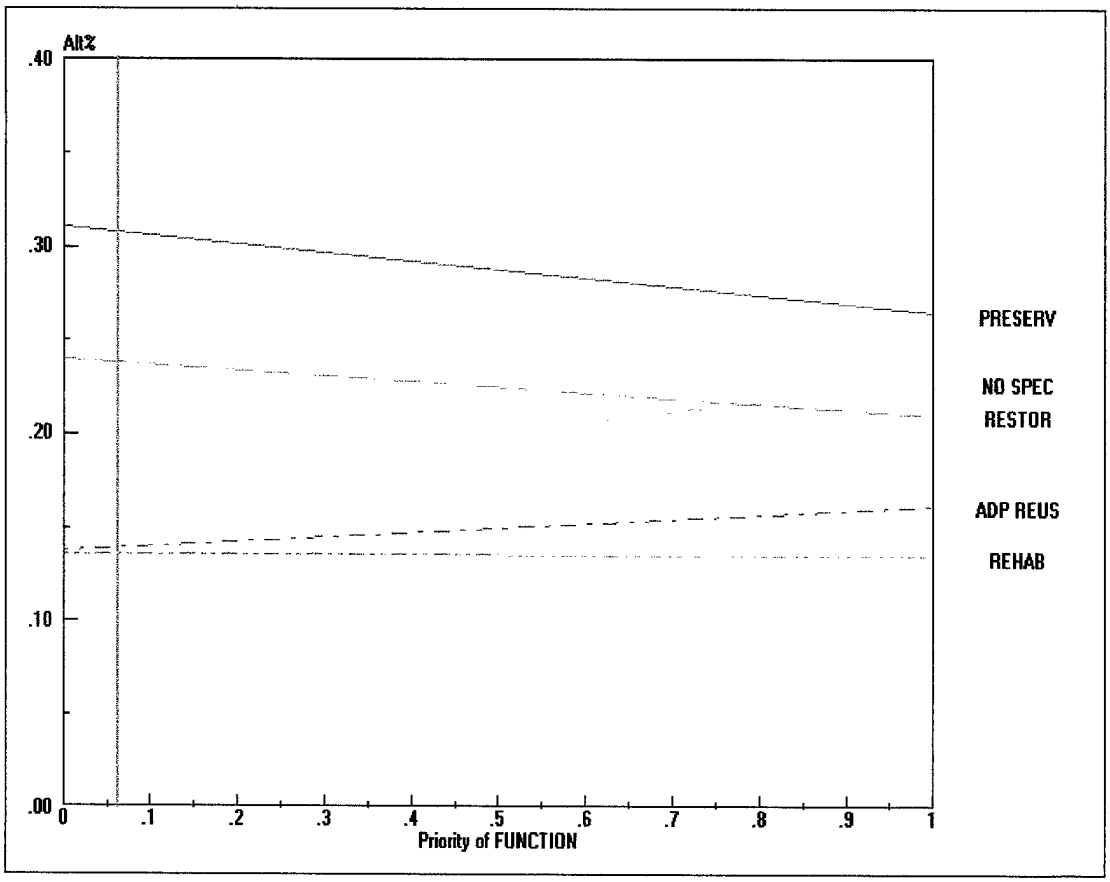


Figure 22 - Sensitivity Analysis of "Building Function" Given High Significance

unique function, no historic significance, no architectural significance, poor integrity, fair condition.) Once again, changing the weight of "Building Function" to zero does not change the preferred treatment, although it does change the actual weights of the treatments.

In some cases, however, changing the weight of "Building Function" to zero for buildings with little significance, in poor condition, and of poor integrity did affect the preferred treatment. Figure 24 represents this type of building. (Figure 24 actually illustrates the results from a building with the following characteristics: more than 50 years

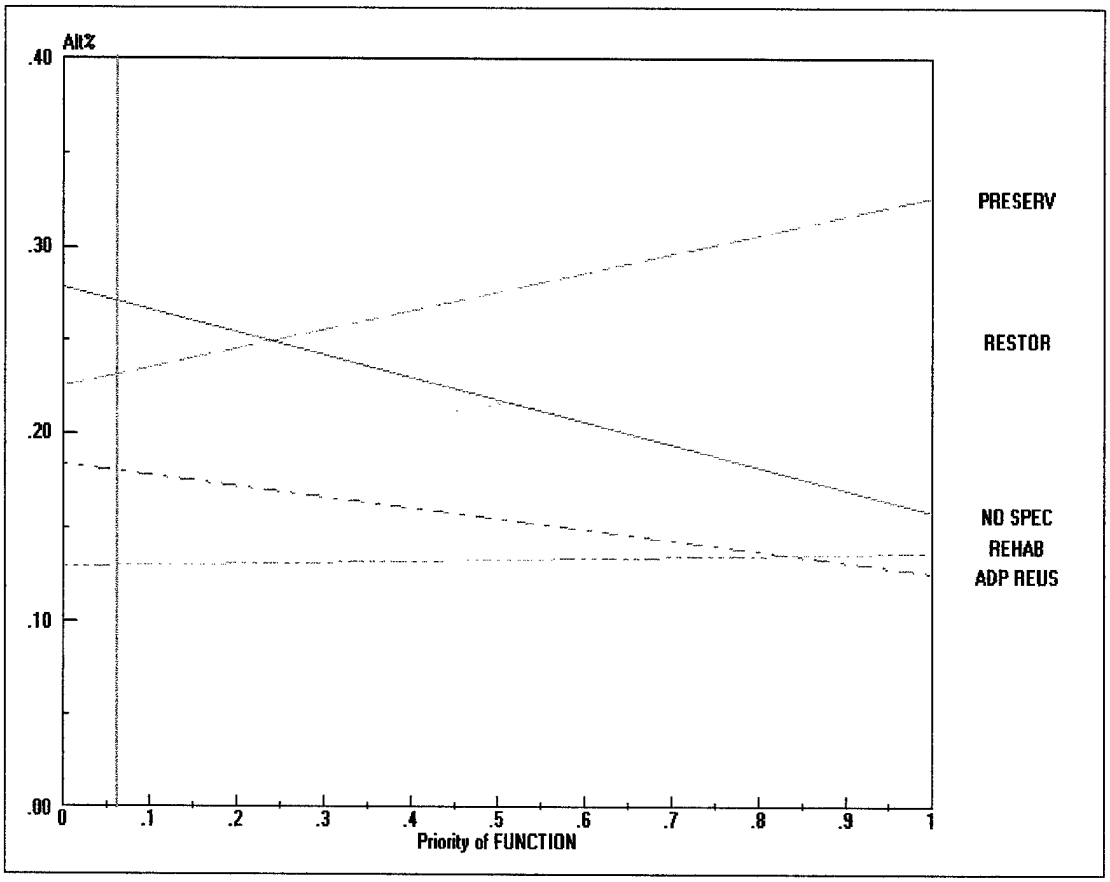


Figure 23 - Sensitivity Analysis of "Building Function" Given Low Significance; No Change in Priority of Treatments

old, specialized/unique function, no historic significance, local architectural significance, poor integrity, poor condition.) In this case, changing the weight of "Building Function" from 0.063 to zero does change the preferred treatment. When the first and second ranked treatments are extremely close in weight, building function can play a role in determining the preference among treatments.

Another analysis of the results involved the "Architectural and Engineering Significance" characteristic. Since the weights of the action objectives given a "National" or "Regional" significance are similar (but opposite of the expected trend), the question

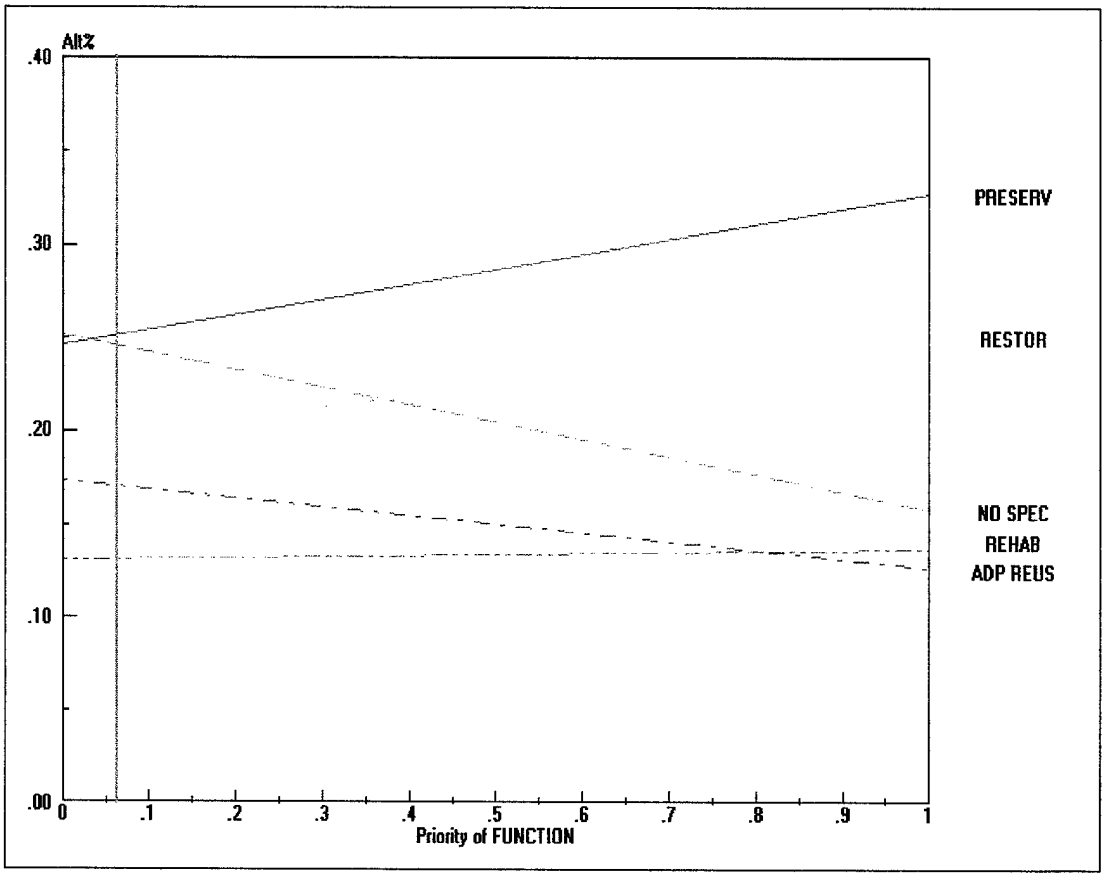


Figure 24 - Sensitivity Analysis of "Building Function" Given Low Significance; Change Occurs in Priority of Treatments

arises as to whether the final weights of the treatments are affected by the inverted relationship. Holding all other characteristics the same, the weights of the treatments were compared as "Architectural and Engineering Significance" was changed from "National" to "Regional." Under these conditions, the weights of the treatments often did not change, or moved only one thousandth of one point. This indicates that the public participants make little distinction between national and regional architectural significance.

This same analysis was performed regarding the historic significance of a building; all other characteristics were held constant while "Historic and Cultural Significance" was

changed from "National" to "Regional." In this case, however, different results were obtained. The treatments of "Preservation" and "Restoration" increased approximately ten thousandths of a point, while "Adaptive Reuse" and "No Special Consideration" decreased by roughly this amount. This response suggests that, contrary to conventional thinking, the public participants place more importance on regional than national historic significance; they are willing to press for the more restrictive treatments for regionally historically significant buildings than nationally historically significant buildings.

In the course of synthesizing the weights of the treatments presented in Appendix O, another interesting relationship was discovered. Holding all other characteristics constant, "Integrity" was revised from fair to poor while simultaneously changing "Building Condition" from poor to good. The weights under these two conditions were approximately the same; the largest change usually consisted of two treatments' weights changing by one thousandth. All other things being equal, the participants treated buildings with fair integrity and poor condition the same as those with poor integrity and good condition. This relationship reinforces the results found in other areas of the research: the participants place more importance on integrity than building condition.

V. Conclusions and Recommendations

Overview

The intention of this research was to determine the preferences for historic preservation treatments given certain general building characteristics. In support of this goal, experts were enlisted to refine a hierarchy representing the decision-making process. Individuals residing in the Wright-Patterson AFB area provided the quantitative and qualitative input needed to capture the public's preferences for historic preservation treatments when given specific building characteristics.

Summary of Findings

The relevant building characteristics, appropriate increments of those, management action objectives, and historic preservation treatments were postulated through a review of the literature and refined by experts during the Delphi questionnaires. The building characteristics arrived at through this method are: "Age of the Building," "Building Function," "Architectural and Engineering Significance," "Historic and Cultural Significance," "Integrity," and "Building Condition." The action objectives are: "No New Additions to Exterior," "Prevent Alteration of Interior Materials," "Prevent Alteration of Exterior Materials," "Use Building as It Was Historically," "Upgrade Building Systems," "Provide Functional Interior," and "Keep Costs Low." The treatments developed are "Preservation," "Restoration," "Rehabilitation," "Adaptive Reuse," and "No Special Consideration."

Public preferences for each set of criteria were determined by employing the AHP in focus group sessions. The public participants, interested local stakeholders typical of those who might attend a public hearing on the subject, completed questionnaires comprising pairwise comparisons of the building characteristics and action objectives. The expert participants completed similar questionnaires consisting of pairwise comparisons of the treatment alternatives. Using these data, the preferences for treatments given each unique combination of building characteristics were determined.

The participants placed the greatest importance on two building characteristics: "Historic and Cultural Significance" and "Architectural and Engineering Significance." The least importance was attached to "Building Function." Each of the characteristics affected the preferences for the action objectives in different ways. This differing importance for the action objectives usually impacted the preferences for the treatments. These findings support the Alternative Hypothesis stated in Chapter One of this research; the surveyed local residents' preferences for historic preservation treatments *do* change based upon the building's characteristics.

Two separate subgroups of the public participants, members of Preservation Dayton, Inc. and historic preservation students at Sinclair Community College, were polled to determine whether their responses were significantly different from one another. With the exception of their preference for "Age of the Building," the two groups' responses were not significantly different. The responses from both the public participants and the expert participants were also analyzed to ascertain their consistency. In both cases, the groups' calculated responses were below the IR consistency threshold of 0.1.

Insights Formed

Although historic preservation is an area that often summons a wide variety of opinions, the experts agreed with one another on most items at each level of the decision hierarchy. However, there was often disagreement. Opinions vary widely on several historic preservation issues and finding common ground among their comments was often a difficult task. One expert participant summarized, "Trying to balance so many opinions is obviously a challenge." The most consensus was found when addressing the historic preservation treatments, which are well established within the preservation community by the Secretary of the Interior and the CFR.

The relevant, interested public were very clear in their opinions about the most important characteristics: "Historic and Cultural Significance" and "Architectural and Engineering Significance." And although the participants expressed some confusion regarding the precise definition of "Integrity," they still weighted it as the third most important characteristic in determining historic preservation objectives.

Although no significant statistical difference was identified between the weights placed on the building characteristics by the two subgroups of the public participants, "Age of the Building" and "Building Condition" did exhibit the widest difference. The difference in importance placed by the two subgroups of public participants on "Age of the Building" could be explained by several reasons. While the members of PDI predominantly live in historic neighborhoods and older homes, most of the Sinclair students do not. Their priorities regarding this characteristic may be impacted by their surroundings. Alternatively, one of the main objectives of PDI is to save older structures;

the PDI social and political agenda may reasonably be reflected in its members' preference for older buildings. By comparison, the members of PDI placed less importance on "Building Condition." This too, may be a response to the fact that they live in older homes and neighborhoods that are (sometimes) in need of repair. They may more easily see beyond the current physical condition of the structures.

Review of the preferences of the treatments under all combinations of building characteristics reveals that "Preservation" was always preferred to "Restoration." Perhaps this relationship indicates that the "default" position of the participants is to preserve significant buildings. "Restoration" may be reserved for buildings that exhibit some other special characteristics or hold some special significance that was not adequately defined in this survey of general characteristics. Perhaps "Restoration" is the treatment reserved for truly extraordinary buildings.

The identified trends of the preferences for the treatments are somewhat inconsistent with what might be expected. These results may have any of several causes. First, the similarities between "Rehabilitation" and "Adaptive Reuse" may have impacted the priorities, dividing the weight that would have been applied to a single treatment incorporating both their meanings. Additionally, "No Special Consideration" and "Preservation" accomplish some of the action objectives very well; causing these treatments to dominate when those action objectives are even moderately important. "Rehabilitation" and to a lesser extent, "Adaptive Reuse" do not accomplish any of the objectives very well; these treatments garner mediocre scores for all of the action objectives. Finally, the methodology employed assumes that the elements at each level of

the hierarchy are independent of one another. However, some dependency may exist between the building characteristics or between the action objectives. For example, the weights of certain action objectives might be higher (or lower) when certain characteristics are found together, than would be expected by simply adding the weights when those characteristics are evaluated separately. Any dependencies could have an impact on the weights at each level of the hierarchy.

Suggestions for Further Research

The results of this research are not intended to replace the need to solicit public input when action is being contemplated for an historic building; every building should be judged on it individual merits and public hearings are still required to comply with the CFR. This research addresses only general characteristics which may not fully capture an individual building's significance. It can, however, significantly reduce the amount of input required and minimize the likelihood of public disapproval of an historic preservation decision.

As this research stands, it can provide significant, relevant input to a decision maker or as one input to a decision model. Future research on this subject should include decision modeling. Public preference is only one factor that influences a decision maker's choice among the alternatives. Modeling the decision process from the decision maker's point of reference, using techniques such as Operations Research, could greatly benefit decision makers throughout the Air Force and in communities across the United States. In addition to preferences of the "concerned public," such a model should also include other

factors such as cost, functional requirements, and specific Air Force and base-level preferences (based on historic significance, architectural significance, age, etc.).

Using this research as a starting point, the historic preservation hierarchy could be further refined to include other characteristics and action objectives not used here. One characteristic that might be considered for inclusion is whether a building is part of an historic district. Additionally, determining whether the treatment "Adaptive Reuse" should be included has the potential to significantly improve future research. Another point for additional research involves the increments of "Historic and Cultural Significance" and "Architectural and Engineering Significance." The experts participating in this research effort expressed some difficulty in trying to define which increments are best suited to this use. An alternative set of increments could include High/Moderate/ Low, as proposed by one expert.

This research effort focused on a small segment of the public. Future research could also include participants from other groups, such as base employees (civilian, officer, and enlisted) and those who are not part of an historic preservation group. Comparisons between these groups' preferences and the preferences indicated by the groups in this research could prove to be important. Future research might also focus on some of the other limitations of this thesis, such as increasing the sample size of the participants or including a visual component to the questionnaires.

Appendix A

List of Expert Participants

(Listed alphabetically with self-reported qualifications)

Ann Deines
Historian
Dayton Aviation Heritage National Historical Park
Areas of expertise: preservation, cultural resource management
Years of relevant experience: 5

James E. Dolph
Museum Director
Portsmouth Naval Shipyard Museum (NH)
Area of expertise: cultural resources coordination

Lynn Engelman
Cultural Resource Manager
HQ AFMC, US Air Force
Area of expertise: program management
Years of relevant experience: 8 ½

Jan Ferguson, PhD.
Historic Preservation Program Manager
Wright-Patterson AFB, OH
Areas of expertise: historic preservation, archaeology, historic buildings
Years of relevant experience: 20

Elizabeth Freese
Safety/Environmental Department Head
Department of Navy/Naval District Washington
Areas of expertise: Resource Conservation and Recovery Act compliance, community outreach, environmental justice, historic and cultural resources
Years of relevant experience: 12

Glenn A. Harper
Regional Coordinator
Ohio Historic Preservation Office
Ohio Historical Society
Areas of expertise: historic preservation, architectural history
Years of relevant experience: 10

Thomas E. Kuepper
Design Manager, Wright Field Facilities Team
Wright Patterson AFB, OH
Areas of expertise: architecture, planning, environmental
Years of relevant experience: 19

Susan Messersmith
Architect/owner; Architecture Instructor
Sinclair Community College
Areas of expertise: residential/commercial additions, renovations
Years of relevant experience: 20

David Salay, Ph.D.
Associate Professor, Department of Museum Studies
Baylor University
Areas of expertise: historic preservation, museum administration, historic site interpretation
Years of relevant experience: 30

George Siekkinen
National Trust for Historic Preservation

Appendix B

Delphi E-mail and Questionnaire, Round One

(E-mailed to participants 14 July 97)

Dear Participant:

1. Thank you for agreeing to participate in this research endeavor. As part of my master's degree research at the Air Force Institute of Technology (AFIT), I am analyzing the social value of historic preservation of Air Force facilities. The National Historic Preservation Act requires the Air Force to inform the public of any proposed actions to historical facilities and solicit their comments. I hope to discover the public's preference for an historic preservation treatment based on a small number of building characteristics and preservation objectives. My thesis will focus specifically on individual buildings (as opposed to districts) within Air Force installations. Base leaders could use the information gathered as part of their decision making process. Your participation will make a significant contribution by helping to specify the fundamental building characteristics, preservation objectives, and treatment standards used in the model.

2. You were selected to participate in this research because of your special knowledge and experience. In this first phase of the research, you are among approximately ten other experts in the fields of architecture, history, preservation, and planning. The approach being used is known as the "Delphi" process.

3. Using a panel of experts, the Delphi process facilitates a group decision regarding a particular subject. Several iterations of the questionnaire are usually required to arrive at a final response. I will aggregate all responses to this first round of questions and return a set of the summarized opinions to each participant. At this point, you will have an opportunity to examine and comment on the responses of the other participants, as well as revise your own statements, if desired. This technique intentionally keeps the members of the group separate from one another during the process; complete confidentially will be maintained at all times, allowing you to fully express your honest opinions. Since some of you provided me with names of other potential participants, I ask that you not discuss your answers and comments with your colleagues until this phase of the research is complete. I anticipate three or four iterations of the questionnaire will be necessary to complete this portion of the research.

4. After the final Delphi survey, a different questionnaire will be sent to you. This second phase of the research will ask you to compare and rank the building characteristics, preservation characteristics, and treatment standards identified through the Delphi process. I will complete the thesis by November 1997; I'll gladly send you a copy upon request.

5. Attached are the first round instructions and questionnaire. To ensure completion of the thesis research within the time constraints established by AFIT, your prompt response to each round of questions is appreciated. Therefore, I am requesting that you PLEASE COMPLETE THE QUESTIONNAIRE NO LATER THAN 22 JULY 1997. The completed survey can either be e-mailed or faxed to me at the following:

E-mail: pbreaux@afit.af.mil
Fax: 937/656-4699

Those participants returning their responses via e-mail can use any word processor program (including the "Notepad") to open the attachments; use the "Courier" font if you wish to maintain formatting. If you e-mail your responses back to me, the file should be saved as a simple ".txt" file to ensure compatibility across varying computers and programs. Alternatively, the files may be printed and your responses faxed to me at the number listed above. If you have any problems receiving or understanding any part of this package, please contact me immediately. In addition to e-mail and fax, you can also reach me at the following:

Voice mail: 785-3636 x6365 (DSN)
937/255-3636 x6365 (Commercial)
Home: 937/236-6580

Once again, thank you for taking the time to further this research effort.

Sincerely,

/s/
PATRICK R. BREAUX, Capt, USAF
AFIT Graduate Student

INSTRUCTIONS
(ROUND 1)

1. Definitions of Key Terms:

BUILDING CHARACTERISTICS: Those basic attributes and other traits that describe a building and are relevant to a decision regarding a building's historic value. Do not include Building Characteristics that do not aid in a decision regarding historic preservation.

INCREMENTS: The levels of magnitude of each building characteristic. Each building characteristic must contain at least two discrete Increments or be measurable on a continuous scale (use a continuous scale only if you can quantify the characteristic numerically).

PRESERVATION OBJECTIVES: Specific goals that can be achieved by undertaking some level of preservation of an historic building. Preservation Objectives do not have to be exclusive to an historic building; that is, a Preservation Objective may also be applicable to non historical buildings. Not all Preservation Objectives need be compatible with each other.

TREATMENT STANDARDS: A level or degree of historic preservation of a building that can be defined in terms of the specific Preservation Objectives it seeks to achieve. Some treatment standards may contain one or several of the same Preservation Objectives, but should be sufficiently dissimilar from each other to be easily differentiated.

2. Background:

As a part of the work completed to date, I have developed a model to determine the appropriate treatment standard, based upon building characteristics and preservation objectives. The model takes the form of a hierarchy as follows:

BUILDING CHARACTERISTICS: Each facility can be described by a set of specific Building Characteristics that are related to its value as a cultural resource.

PRESERVATION OBJECTIVES: The particular combination of Building Characteristics determines which Preservation Objectives are the most important for an individual facility.

TREATMENT STANDARDS: The particular combination and ranking of the Preservation Objectives determine which Preservation Treatment Standard is the most appropriate for each individual facility.

3. Please Note:

YOUR PARTICIPATION AND MEANINGFUL RESPONSES ARE FUNDAMENTAL TO THE SUCCESS OF THIS RESEARCH. NO THOUGHT OR OPINION IS TOO TRIVIAL TO BE INCLUDED. WHAT YOU BELIEVE IS AN INSIGNIFICANT COMMENT MIGHT TRIGGER A RESPONSE IN ONE OF THE OTHER PARTICIPANTS IN THE NEXT ITERATION.

HISTORIC PRESERVATION QUESTIONNAIRE
ROUND 1

(Personal information will not be used during the Delphi process itself; however, your qualifications are relevant to the research effort and will be included in the thesis.)

Name:
Title/Position:
Company:
Area(s) of Expertise:
Years of Relevant Experience:

The survey is designed to allow short-answer listings of answers at each level of the hierarchy. My initial research has revealed some of the possible items within each level of the hierarchy; these are included as a starting point. You may add, delete, or modify any criteria you feel are appropriate. If several items are similar in meaning or function, perhaps a single, more broadly defined item would be appropriate. You can include as much or little information as you believe is necessary to convey your opinion. Please add additional pages if necessary. Please briefly justify your markups.

LEVEL ONE: BUILDING CHARACTERISTICS

In your opinion, what fundamental Building Characteristics determine a building's historic value? For each Building Characteristic, specify the discrete increments in which you believe it should be measured. If you believe that a continuous scale can measure a characteristic, please note this next to the measurement. Also, please justify your opinions regarding the measurements of each characteristic.

Characteristic: AGE OF THE FACILITY
Increments: 0-50 years
50-100 years
over 100 years
Comments:

Characteristic: FACILITY FUNCTION
Increments: Industrial (such as warehouse, hanger)
Administrative
Residential
Comments:

Characteristic: ARCHITECTURAL SIGNIFICANCE
Increments: Very Significant
Somewhat Significant
Insignificant
Comments:

Characteristic: HISTORICAL SIGNIFICANCE
Increments:

Comments:

Characteristic:
Increments:

Comments:

Characteristic:
Increments:

Comments:

LEVEL TWO: PRESERVATION OBJECTIVES

In your opinion, what fundamental Preservation Objectives should be pursued? Keep in mind, a Preservation Objective may not apply to all buildings. If you believe that Preservation Objective is applicable to some historic buildings, it should be listed. For each Preservation Objective, provide a specific definition (if necessary).

Preservation Objective: NO NEW BUILDING ADDITIONS
Definition:

Comments:

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME

Definition:

Comments:

Preservation Objective: KEEP EXPENSES LOW

Definition:

Comments:

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW

Definition:

Comments:

Preservation Objective:

Definition:

Comments:

Preservation Objective:

Definition:

Comments:

Preservation Objective:
Definition:

Comments:

LEVEL THREE: TREATMENT STANDARDS

In your opinion, what fundamental Treatment Standards should be used as a guide when deciding to preserve a building? At a minimum, each Treatment Standard should be defined in terms of the Preservation Objectives it seeks to achieve. Inputs to this level of the hierarchy may require more explanation that the Building Characteristics or Treatment Standards.

Treatment Standard: PRESERVATION
Definition:

Comments:

Treatment Standard: RESTORATION
Definition:

Comments:

Treatment Standard: ADAPTIVE REUSE
Definition:

Comments:

Treatment Standard: NO SPECIAL CONSIDERATION
Definition:

Comments:

Treatment Standard:
Definition:

Comments:

Treatment Standard:
Definition:

Comments:

Appendix C

Delphi E-mail and Questionnaire, Round Two

(E-mailed to participants 28 July 87)

Dear Participant:

1. Thank you for your responses to the first Delphi questionnaire. I have compiled the results from all respondents. Based upon the inputs provided, I have prepared the second round of questions. Please note that if you did not participate in the first questionnaire, you are still encouraged to complete this second questionnaire.

2. When I was compiling the results from the first round of questions, I combined the comments for easier reading if they were similar or contained only slight semantic differences. This summary information is included with each criterion for your review. I have also included the approximate frequency that a particular response was given. I ask that you review the responses from the first round and make any changes or additional comments that you feel are important. At this point in the research, ranking of each set of criteria is not required. Once all building characteristics, preservation objectives, and treatment standards have been identified and defined, a final questionnaire will request your preferences within each category.

3. Attached is the second round questionnaire. To ensure completion of the thesis research within the time constraints established by AFIT, your prompt response is appreciated. Therefore, I am requesting that you PLEASE COMPLETE THE QUESTIONNAIRE NO LATER THAN 8 AUGUST 1997. The completed survey can either be e-mailed or faxed to me at the following:

E-mail: pbreaux@afit.af.mil
Fax: 937/656-4699

Again, those participants returning their responses via e-mail can use any word processor program (including the "Notepad") to open the attachments; use the "Courier" font if you wish to maintain formatting. If you e-mail your responses back to me, the file should be saved as a simple ".txt" file to ensure compatibility across varying computers and programs. Alternatively, the files may be printed and your responses faxed to me at the number listed above. If you have any problems receiving or understanding any part of this package, please contact me immediately. In addition to e-mail and fax, you can also reach me at the following:

Voice mail: 785-3636 x6365 (DSN)
937/255-3636 x6365 (Commercial)
Home: 937/236-6580

Once again, thank you for taking the time to further this research effort.

Sincerely,

/s/

PATRICK R. BREAUX, Capt, USAF
AFIT Graduate Student

HISTORIC PRESERVATION QUESTIONNAIRE
ROUND 2

Name:

Included are summaries of the comments from the first round of questions. While this questionnaire includes specific questions for each criteria in the "Notes from Round 1," you are encouraged to include any other comments you feel are important. You may add, delete, or modify any criteria you feel are appropriate. You can include as much or little information necessary to convey your opinion. Do not hesitate to add new criteria in this round of questions.

LEVEL ONE: BUILDING CHARACTERISTICS
In your opinion, what fundamental Building Characteristics determine a building's historic value? For each Building Characteristic, specify the discrete increments in which you believe it should be measured.

Characteristic: AGE OF THE FACILITY

Increments: 0-50 years
50-100 years
over 100 years

Notes from Round 1: Although no one eliminated this characteristic from the list, one participant thought that this was not a good indicator of a building's historic value. Also, no one indicated that a continuous measurement should be used (i.e., each year older would mean more significance). However, approximately half of respondents thought that just two increments are adequate to divide this characteristic; those two increments would be 0-50 yrs. and over 50 yrs. The other half believed that there is significance to having another break over the 50-year mark. One participant remarked that the 50-year time frame may not be realistic for industrial structures due to changing technologies. Do you think that just the two increments are adequate or a third is needed? If you believe that the third increment is required, at what point should it start (100 years as originally proposed, or some other point)?
Your Comments:

Characteristic: FACILITY FUNCTION

Increments: Industrial (such as warehouse, hanger)
Administrative
Residential
Specialized

Notes from Round 1: Over half of respondents thought that function was not necessarily a good indicator of a building's historic significance. Another comment was that a "specialized" category should be included due to the unique functions that

Air Force facilities sometimes house. One participant included exterior spaces; however, I am restricting this initial research effort to buildings in order to keep the project manageable. Do you believe that "BUILDING FUNCTION" should be eliminated as a characteristic that affects the historic value of a building? If so, do you agree with the categories listed? Also, should it apply to the historical function or current function of the building (if they are different)?
Your Comments:

Characteristic: OVERALL ARCHITECTURAL/ENGINEERING SIGNIFICANCE

Increments:	Very Significant		National
	Somewhat Significant	OR	Regional
	Insignificant		State
			Local

Notes from Round 1: This item produced a variety of comments. Some comments indicated that not just "high style" or work of noted architects be included here, but also those that are significant examples of a type of architecture (including the "mundane," such as industrial, etc), materials, craftsmanship, construction, or techniques. Most respondents included a national-to-local scale. Would both scales be used sequentially (first assessing the sphere of significance then ranking it), both used concurrently (where the increments would be National=Very significant, etc), or only one of the scales used? Could the "regional" and "state" increments be combined?
Your Comments:

Characteristic: HISTORIC SIGNIFICANCE

Increments:	Important Individual		National
	Historic Events	OR	Regional
			State
			Local

Notes from Round 1: Nearly all respondents listed great individuals and historic events as increments for this criterion. Approximately one quarter also included a national-to-local scale, as well. One person questioned whether this characteristic would also apply to those buildings associated with "ordinary people." Another listed the following increments: individually eligible for National Register, contributing part of historic district, not significant, and intrusive element. Should this scale be used here or as a separate characteristic? Should both the national-to-local and the individual/event increments be used? If not, which one is better?
Your Comments:

Characteristic: INTEGRITY

Increments:			
	Retains integrity		Good
	Doesn't retain integrity	OR	Fair
			Poor

Notes from Round 1: About one quarter of respondents added this characteristic to the list, with the definition including location, design, setting, materials, workmanship, feeling, and association. One participant indicated that "retains integrity" means that it meets at least four of the seven criteria listed in the definition. Another thought that the good-to-poor scale was appropriate. Do you think that this characteristic affects a building's historic value? If so, which increment scale is more appropriate?
Your Comments:

Characteristic: CULTURAL SIGNIFICANCE

Increments: High
Medium
Low

Notes from Round 1: One person added this characteristic in round one. It was defined as "elements that are more than architectural or historical--artistic significance" such as murals and logos. Given that this research is focusing on buildings, should this be listed as a separate characteristic, or could it's definition be incorporated into one of the other characteristics? If it should be kept separate, what should the increments be?
Your Comments:

Characteristic: BUILDING CONDITION

Increments: Good
Fair
Poor

Notes from Round 1: Approximately one quarter of respondents added this characteristic. The reasoning given was that if a building is in poor condition (even if it has some historic value), its restoration value may be limited. Where a rare example of a style or important historical site in poor condition is in question, restoration may be a viable option; however, if many similar buildings exist, perhaps limited resources should be spent on the ones in better condition. One participant included additional increments of Excellent and Condemned. Do you believe that this characteristic should be included? If so, what are the increments?
Your Comments:

Characteristic: UNIQUENESS

Increments: One of a kind (architecturally or historically)
One of a type that exhibit minor variations
One of many standard facilities

Notes from Round 1: One person added "uniqueness" as being especially important to Department of Defense facilities. The participant indicated that this characteristic might apply specifically to buildings that have architectural significance or are representative of a special type (such as Strategic Air Command alert facilities, munitions storage bunkers, etc.). Do you think that this characteristic should be added, be included as a part of another characteristic, or eliminated from the list? If it should be included as a characteristic, what are the increments?

Your Comments:

Characteristic:

Increments:

Your comments:

Characteristic:

Increments:

Your comments:

LEVEL TWO: PRESERVATION OBJECTIVES

In your opinion, what fundamental Preservation Objectives should be pursued? Keep in mind, a Preservation Objective may not apply to all buildings. If you believe that Preservation Objective is applicable to some historic buildings, it should be listed.

General notes from Round 1: There appeared to be some misunderstanding about the purpose of the "Preservation Objectives" in the first round of questions. The preservation objectives are meant to provide a way of moving from the building characteristics to the appropriate treatment standard. For the most part, the treatment standards will ultimately be defined in terms of the preservation objectives. Not all preservation objectives will apply to all treatment standards (or to all buildings), and the same preservation objective may be included in more than one treatment standard. I was originally using the Secretary of the Interior's definitions of treatment standards as a starting point for the research--and that may be your collective preference as well. However, I wanted to allow you to voice your own opinions about the treatment standards and the preservation objectives, even if it didn't necessarily agree with the Secretary of the Interior's guidance. One participant stated that the appropriate treatment standard is selected first, which in turn specifies the preservation actions to

be undertaken. This is true to the extent that the treatment standards are defined in terms of the preservation objectives (which, once undertaken, would determine the exact preservation actions). However, the preferred preservation objectives for a particular building may not exactly match the preservation actions that define a particular treatment standard. In such a case, the treatment standard that most closely achieves the preferred preservation objectives would be chosen. Therefore, in trying to list all preservation objectives, it may be easier to think in terms of the definitions of the treatment standards that you propose (or that the Secretary of the Interior uses), and list as preservation objectives all actions that could be included in the treatment standards.

Preservation Objective: NO NEW BUILDING ADDITIONS

Notes from Round 1: About one quarter of respondents thought that this objective specifically applied to the exterior of the building or to work within the existing volume of the building (with one person preferring the term "NO ADDITIONS"). Another questioned whether it should also apply to interior items, such as lighting when changed from kerosene to electrical. One respondent thought that this objective would apply only to the "most significant buildings" and additions would be possible on less significant buildings if they were sensitive to the original design. Should this objective only apply to the addition of exterior structures?
Your Comments:

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME

Notes from Round 1: Nearly one half of respondents identified this as the precise definition of the treatment standard "Restoration" (as opposed to a single objective that is part of restoration). Approximately one quarter indicated that it would create a "museum piece," and should only be applied to the most significant buildings. Another person pointed out that previous additions may also be historic and left on a building. Perhaps this objective should be broken into several, more specific objectives, such as "USE A PROPERTY AS IT WAS HISTORICALLY;" "PRESERVE HISTORIC MATERIALS, FEATURES, AND FINISHES;" and "PREVENT REMOVAL/ALTERATION OF HISTORIC MATERIALS AND FEATURES." Should this objective be kept as is, changed, or eliminated?
Your Comments:

Preservation Objective: KEEP EXPENSES LOW

Notes from Round 1: This objective generated some of the more diverse responses. While most participants generally agreed that this is not a preservation "objective" (one person pointed out that low costs are rarely associated with historic

preservation), some type of economic factor is needed to differentiate the treatment standards, since some treatment standards will generally cost more than others. Some of the alternative names for this objective offered were "KEEP EXPENSES REASONABLE" and "KEEP EXPENSES AFFORDABLE."
Your Comments:

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW

Notes from Round 1: Although no one eliminated this objective from the list, approximately one half of respondents modified the wording; some of the responses were "MINIMIZE LOSS OF ORIGINAL BUILDING FEATURES, UNLESS REQUIRED BY CODE OR LAW," and elimination of the word "only" from the name above. Almost one half of respondents indicated that the level of alterations or improvements will vary with the treatment standard (but not dependent upon most building characteristics). About one quarter of respondents indicated that some improvements are almost always required. Therefore, should this be kept as an objective? Does it relate to all building characteristics, or just perhaps "Age" and "Building Condition?"
Your Comments:

Preservation Objective: PRESERVE EXTERIOR FACADE

Notes from Round 1: One person added this objective to the list defining it as preservation of features unique to the facility. Should this objective be included? Should it be incorporated into another preservation objective?
Your Comments:

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT

Notes from Round 1: One person added this objective to the list, defining it as ensuring that changes to the land and surrounding buildings are appropriate and sympathetic to the historical character of the building. Should this objective be included? Can it be incorporated into another objective?
Your Comments:

Preservation Objective: NEW WORK COMPATIBLE WITH EXISTING

Notes from Round 1: Although no one included this specific preservation objective in their response to the first round of questions, several comments made vague reference

to it and this general phrase is used in the Secretary of the Interior's definitions for several preservation treatment standards. Do you think that it should be included as a preservation objective, eliminated, or included with another objective?
Your Comments:

Preservation Objective:
Your Comments:

Preservation Objective:
Your Comments:

LEVEL THREE: TREATMENT STANDARDS
In your opinion, what fundamental Treatment Standards should be used as a guide when deciding to preserve a building?
General notes from Round 1: The comments from the General note for the preservation objectives also apply here. Also, it appears that nearly all participants agreed with the Secretary of the Interior's historic preservation treatment standards, although some respondents did include additional standards.

Treatment Standard: PRESERVATION
Treatment Standard: RESTORATION
Notes from Round 1: All respondents agreed with these two standards, with a few people making general comments about their definitions or frequency of use. All definitions appeared to parallel the Secretary of the Interior's definitions.
Your Comments:

Treatment Standard: REHABILITATION
Notes from Round 1: About one quarter of respondents added this standard to the list (in keeping with the Secretary of the Interior's standards).
Your Comments:

Treatment Standard: ADAPTIVE REUSE
Notes from Round 1: One person thought that this was more appropriate as a preservation objective than a treatment standard. Another person thought that it could

be classified as either "PRESERVATION" or "REHABILITATION". All others made no comment or agreed to include this standard. It was defined by these respondents as using an older building for a use other than its original purpose. One participant stated that it focuses more on the interior than the exterior of a building (doors and windows being an exception). Should this treatment standard be kept as a separate item, broken into "PRESERVATION"and "REHABILITATION," or simply included as a subset of the "NO SPECIAL CONSIDERATION" category?
Your Comments:

Treatment Standard: RECONSTRUCTION

Notes from Round 1: One person added this treatment standard, using the same definition as the Secretary of the Interior. This standard is used to recreate a non-surviving building. However, my original intention for this research was to focus on existing, individual buildings. Given the list of building characteristics that are being used to describe a building, should this treatment standard be included in the list? If so, should another increment be added to the "BUILDING CONDITION" characteristic that would include demolished or non-surviving buildings? One person added a "REPLACEMENT" treatment standard and defined it using modern materials to replicate the form and materials of original building components. Should this be considered the same as "RECONSTRUCTION," listed as a separate treatment standard, or considered more of a preservation objective?
Your Comments:

Treatment Standard: NO SPECIAL CONSIDERATION

Notes from Round 1: This treatment standard was defined as maintaining the building "as is" and making alterations and additions as necessary to fit the building to the institution's use. It generally ignores preservation interests. One participant thought that this should not be an option, another was not sure it is a treatment, and a third preferred the term "interpretation." While it is not a true treatment standard, this option could be applied to those buildings with little or no significance. Should this item be included as a treatment standard? Should it include other "treatments" such as "ADAPTIVE REUSE?" One respondent listed "DEMOLITION" and "MOTHBALL" as other choices. Should this treatment standard include these items, or should they be listed as separate treatment standards?
Your Comments:

Treatment Standard:
Your Comments:

Appendix D

Delphi E-mail and Questionnaire, Round Three

(E-mailed to participants 27 August 1997)

Dear Participant:

1. Thank you for your responses to the first two Delphi questionnaires. I have analyzed the comments from Round Two and used them to prepare this final round of open-ended questions. Please note that if you did not participate in either of the first two questionnaires, you are still encouraged to complete this one.

2. In this round, I have listed the various criteria as I propose to use them in the next phase of the research. This is based upon your collective comments from the two previous rounds, as well as constraints of the Analytic Hierarchy Process methodology to be used in the second phase of data gathering. Along with your comments to the open-ended questions, please evaluate the strength of your beliefs for each comment according to the numerical scale provided with the questionnaire.

3. Attached is the third round Delphi questionnaire. To ensure completion of the thesis research within the time constraints established by AFIT, your prompt response is appreciated. Therefore, I am requesting that you PLEASE RETURN THIS QUESTIONNAIRE NO LATER THAN 4 SEPTEMBER 1997. The completed survey can either be e-mailed or faxed to me at the following:

E-mail: pbreaux@afit.af.mil
Fax: 937/656-4699

Again, those participants returning their responses via e-mail can use any word processor program (including the "Notepad") to open the attachments; use the "Courier" font if you wish to maintain formatting. If you e-mail your responses back to me, the file should be saved as a simple ".txt" file to ensure compatibility across varying computers and programs. Alternatively, the files may be printed and your responses faxed to me at the number listed above. If you have any problems receiving or understanding any part of this package, please contact me immediately. In addition to e-mail and fax, I can also be reached at the following:

Voice mail: 785-3636 x6365 (DSN)
937/255-3636 x6365 (Commercial)
Home phone: 937/236-6580

Once again, thank you for taking the time to further this research effort.

Sincerely,

/s/

PATRICK R. BREAUX, Capt, USAF
AFIT Graduate Student

HISTORIC PRESERVATION QUESTIONNAIRE
ROUND 3

NAME:

I am proposing that each criteria be used as it is listed below. Included with each item are definitions and summaries of the comments from the second round of questions. While this questionnaire includes specific questions about each criteria in the "Notes," you are encouraged to include any other comments you feel are important. You can included as much or little information necessary to convey your opinion.

In addition, please use the following scale to indicate how strongly you feel about your comments about each criteria. Do not rate the criteria itself, but your confidence in the comments you have made about the item. A final questionnaire (to be sent at a later date) will ask you to rank-order the criteria within each level of the hierarchy.

Numerical Value	Definition
1	I am slightly committed to my position on this point; I could be persuaded to change.
2	I am moderately committed to my position on this point only a compelling argument could entice me to change.
3	I am extremely committed to my position on this point; I could not be persuaded to change.

LEVEL ONE: BUILDING CHARACTERISTICS

Characteristic: AGE OF THE BUILDING
Increments: Less than 50 years
50 years or more
Notes: Although a couple of participants thought that a third category could indicate a greater urgency for buildings that are more than 100 years old, there was near universal agreement on the two increments listed above are adequate. I propose that the age of the building be defined by the oldest or the most important portion of the building.
Your Comments:

How strongly do you feel about your comments?

Characteristic: BUILDING FUNCTION
Increments: Industrial (such as warehouse, hangar, etc)
Administrative
Residential
Specialized/Unique
Cultural/Recreational
Notes: Two participants thought that this characteristic should be eliminated (one thought that it would only be important if a building was the last of a type and another thought that it should only be used for internal management decisions, not analysis). Approximately three quarters thought that function was important and all categories should be kept. Over half of respondents indicated that this characteristic should include a category for unique functions. One person included a "Cultural and Recreational" increment and thought that Specialized should be changed to "Other." I propose combining Unique with Specialized (and eliminating "Uniqueness" as a separate characteristic). Should this characteristic be kept? What are the increments? Should the building be assessed according to its original function, most important function, or most recent function?
Your Comments:

How strongly do you feel about your comments?

Characteristic: HISTORICAL/CULTURAL SIGNIFICANCE
Increments: National
Regional
Local
None
Notes: There was some variation of comments about this characteristic. Approximately one quarter of participants disagreed with the use of the increment "Regional" in favor of "State." About one third thought that the increments of individual/event should be used. Over half of respondents thought that historical significance would also apply to ordinary people and ordinary lives. Almost three quarters thought that cultural significance should be included. I propose that the definition of this characteristic should include significance due to an important person, an historical event, the work that occurred there (including the mundane or ordinary), and cultural significance, but not list these as increments. I suggest using the increments listed above.
Your Comments:

How strongly do you feel about your comments?

Characteristic: ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Increments: National
Regional
Local
None
Notes: There was a large variety of comments regarding the increments for this characteristic. One person thought that the increment "Regional" should be eliminated in favor of "State." About one half of respondents thought that the National-Local scale of increments should be used with the Very Significant-Insignificant scale. One person pointed out that using the two scales together is too complex. I propose defining this characteristic as pertaining to the building itself (not individual elements) and using the National- Local increment scale. Significance would be indicated if the building is a work of a "Master," is a good example of a particular style, or is of a unique or rare style. (This definition is based on comments made in the first two rounds, the language in the National Historic Preservation Act, and elimination of the "Uniqueness" characteristic.)
Your Comments:

How strongly do you feel about your comments?

Characteristic: INTEGRITY
Increments: Good
Fair
Poor
Notes: One person thought that this characteristic is redundant with the "Condition" and "Uniqueness" characteristics (I am proposing that "Uniqueness" be eliminated as a separate characteristic -- I have incorporated it within Architectural Significance and Building Function; three quarters of respondents also thought that the characteristic "Uniqueness" could be deleted. Also, I suggest leaving "Building Condition" as a separate characteristic; about three quarters of participants though that it was different enough from "Integrity" to keep it separate.) Over half of participants thought that the good-fair-poor scale of increments was appropriate; one also added excellent. One person preferred the meets/doesn't meet scale. One thought that both scales were too vague. The comment from Round One listed "Integrity" as location, design, setting, materials, workmanship, feeling, and association. I suggest defining Integrity as referring to whether a building is in its original location, has the same basic design (layout, style and function), exists in a compatible setting, and features original materials and workmanship. What do the terms "association" and "feeling" refer to? I propose that the increment of good would indicate that the building meets 5 or more of the 7 criteria listed in the definition, fair indicates that it meets 3 or 4 of the criteria, and poor means that it meets less than 3 of the criteria.

Your Comments:

How strongly do you feel about your comments?

Characteristic: BUILDING CONDITION
Increments: Good
Fair
Poor
Notes: Approximately one quarter of respondents thought that this characteristic should be eliminated or combined with "Integrity." All others thought that it should be kept. One person thought that the increments should also include "excellent" and "condemned." About half of respondents thought that three increments were sufficient. I suggest that only three increments should be used. "Good" means that a building is structurally sound, with minimal deterioration of materials. "Fair" means that the building requires some structural work and a substantial portion of the materials and building systems must be replaced or repaired. "Poor" means that the structural system must receive significant repairs and a majority of the building systems and materials must be repaired or replaced.
Your Comments:

How strongly do you feel about your comments?

Characteristic:
Increments:

Your Comments:

How strongly do you feel about your comments?

LEVEL TWO: ACTION OBJECTIVES

General Note: This level of the hierarchy was originally labeled as "Preservation Objectives." However, several participants pointed out the list of Treatments to be considered included a non-preservation alternative (No Special Consideration). Although I could focus strictly on preservation alternatives and eliminate the "No Special

Consideration" option from Level Three (in which case the basic question to be answered would be "Given that a building has been determined to be historic, what treatment should be applied?"), I would prefer leave this research open to all buildings, including those that may be considered to be "border-line." This would allow buildings which might or might not be historic to be analyzed with the focus remaining on the various preservation-related treatments. In order to do this, however, I have added some non-preservation objectives to Level Two. They include more "typical" design goals not necessarily conducive to "preservation" objectives.

Action Objective: NO NEW ADDITIONS TO EXTERIOR OF BUILDING
Notes: Originally listed as "No New Building Additions," approximately two thirds of respondents thought that this objective should apply only to the exterior of the building. About one third of respondents thought that it would mean working within the existing volume of space. I suggest that the definition be altered slightly to would mean not allowing major, visible additions to the exterior of the building (i.e., a small sub-basement for the purpose of adding required mechanical could be allowed?). I propose using a separate objective for the interior of the building and another for exterior materials and smaller features (suggested by about half of respondents).
Your Comments:

How strongly do you feel about your comments?

Action Objective: PREVENT ALTERATION/REMOVAL OF INTERIOR MATERIALS, FINISHES, AND FEATURES
Notes: This objective was not originally included on the list, but was derived from the preservation objective "Return Building to Exact Condition as it Existed at One Point in Time" and from respondents' comments to "No New Building Additions." About half of participants indicated that this objective should be separated from the "No New Building Additions" objective.
Your Comments:

How strongly do you feel about your comments?

Action Objective: PREVENT ALTERATION/REMOVAL OF EXTERIOR MATERIALS, FINISHES, AND FEATURES
Notes: Originally listed as "Preserve Exterior Facade," this objective was changed to incorporate comments to the objectives "Return Building to Exact Condition as it Existed

at One Point in Time" and "No New Building Additions." Nearly all participants thought that this objective should be kept in some form or combined with the "Return Building to...One Point in Time" objective.
Your Comments:

How strongly do you feel about your comments?

Action Objective: USE BUILDING AS IT WAS HISTORICALLY
Notes: This objective was originally included as a part of the "Return Building to...One Point in Time" objective. There was wide disagreement about whether to break this objective out separately or not. However, I propose that this objective be listed separately as a counterbalance to the "Functional Interior Layout" objective listed below.
Your Comments:

How strongly do you feel about your comments?

Action Objective: KEEP EXPENSES LOW
Notes: Approximately half of respondents thought that this objective should be removed since it wasn't a "Preservation Objective." However, since the research will include some buildings which may be considered as having questionable value, I am proposing to keep it. For example, buildings with little historic value or significance would tend to rate this objective higher than significant buildings would, which in turn would cause the "No Special Consideration" treatment to rate higher than for other buildings that have more historic value.
Your Comments:

How strongly do you feel about your comments?

Action Objective: UPGRADE BUILDING SYSTEMS
Notes: This objective was originally listed as "Upgrade Building Systems Only as Required by Code and Law." Over half of participants indicated that, as stated, this is always required to some degree and would have little effect of differentiating the various treatments. These comments, coupled with the need to include non-reservation objectives, caused me to modify the language of this objective. Since "as required by code and law" does little to separate the treatments, I propose that the objective, as modified above,

could be a balance to the two "Prevent Alteration/Removal..." objectives, and provide a means to effectively differentiate the alternative treatments.
Your Comments:

How strongly do you feel about your comments?

Action Objective: FUNCTIONAL INTERIOR LAYOUT
Notes: This objective was not included in the last round of questions; it was added as a non-preservation objective. I propose that it be used to counterbalance the "Use Building as it Was Historically" objective. To a lesser degree, it could also provide a contrast to the "No New Building Additions" objective.
Your Comments:

How strongly do you feel about your comments?

DELETED Action Objective: MAINTAIN APPROPRIATE HISTORICAL CONTEXT
Notes: Approximately half of participants thought that this objective should be eliminated as redundant. One participant pointed out that since exterior spaces and historic districts aren't being included in the research, it should be eliminated. Additionally, the "Integrity" building characteristic includes "setting" as a part of its definition. I propose that this objective be eliminated.
Your Comments:

How strongly do you feel about your comments?

DELETED Action Objective: NEW WORK COMPATIBLE WITH EXISTING
Notes: Approximately three quarters of respondents thought that this objective was not needed or was an inherent part of preservation work. One person wondered whether this should apply to the materials, architectural design, or both. Although it does apply to all preservation treatments, it could differentiate between "No Special Consideration," "Adaptive Reuse," and the preservation-related treatments. I propose that this objective be eliminated. Should this objective be eliminated?
Your Comments:

How strongly do you feel about your comments?

Action Objective:
Your Comments:

How strongly do you feel about your comments?

LEVEL THREE: TREATMENTS

General Note: This level of the hierarchy was originally labeled as "Treatment Standards." It has been changed to conform to the Secretary of the Interior's use of the term "standards ."

Treatment: PRESERVATION
Notes: Participants universally agreed to keep this treatment. I propose using the Secretary of the Interior's definition of "sustaining the existing form, integrity, and materials of the building; it focuses on protecting and stabilizing the building using ongoing maintenance and repair rather than extensive replacement and new construction."
Your Comments:

How strongly do you feel about your comments?

Treatment: RESTORATION
Notes: Participants universally agreed to keep this treatment. I propose using the Secretary of the Interior's definition of "accurately depicting the form, features, and character of the building as it appeared at one point in time by removing features from other periods of time and reconstructing missing features."
Your Comments:

How strongly do you feel about your comments?

Treatment: REHABILITATION
Notes: Participants universally agreed to keep this treatment. I propose using the Secretary of the Interior's definition of "using a building in a compatible way through

repair, alterations, and additions while preserving the portions or features which convey its historic, cultural, or architectural value."
Your Comments:

How strongly do you feel about your comments?

Treatment: ADAPTIVE REUSE
Notes: Approximately two thirds of respondents thought that this treatment should be kept, even though some thought that it could be considered a subcategory of "Rehabilitation." One person thought that it was more of an objective than a treatment. I propose keeping this treatment; its definition would be "using a building in a manner not necessarily compatible with its historic use by allowing major changes to the interior of the building but preserving some of the features that convey its historic, cultural, or architectural value.
Your Comments:

How strongly do you feel about your comments?

Treatment: NO SPECIAL CONSIDERATION
Notes: Approximately one quarter of participants indicated that this treatment should be eliminated, with another quarter qualifying their response by stating that it could be eliminated if the research deals only with significant buildings. Since I intended the research to include buildings that might or might not be considered significant, I propose that this treatment should be kept and defined as "the building is of little historic significance. Application of preservation actions is not required. Routine maintenance and repair actions should be used as necessary in cases where the building is to be kept. Demolition is an acceptable action, where the building is not needed."
Your Comments:

How strongly do you feel about your comments?

DELETED Treatment: RECONSTRUCTION
Notes: Only two people indicated that this treatment should be kept, "in spite of its problems." One person stated that it could apply to a portion of a building. I suggest eliminating this treatment, unless it could apply to a definable, missing portion of a

surviving building (for example, a wing of a building). Should this treatment be eliminated? If it can be applied to a portion of a building, what would its definition be to differentiate it from the other treatments?
Your Comments:

How strongly do you feel about your comments?

Appendix E

Expert Responses Received from Delphi Technique

(Experts are identified by randomly assigned numbers to protect the anonymity of their responses)

Round 1

Expert #1:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: I think each of the increments have meaning, and may help put the significance into perspective.

Characteristic: FACILITY FUNCTION
Comments: I don't think these functions should decide whether something is worth retaining. I think categories such as utility sheds, pump houses, etc would be ones we could put in to help eliminate types of facilities. (unless in districts, or they were a significant element of a "process" that is considered historical. The importance is more in why are the facilities considered important.

Characteristic: ARCHITECTURAL SIGNIFICANCE
Comments: This element is going to depend on why the facility is considered historical- if it is because of its architecture then it is very significant, if significance is related to a person, or their actions, then the architecture may be insignificant other than to designated a time frame- 1800s, etc (and not even that will hold true because we have so many older styles of homes even being built today.)

Characteristic: HISTORICAL SIGNIFICANCE
(No comments)

Added Characteristic: QUANTITY OF SIMILAR FACILITIES, OR UNIQUENESS OF FACILITY.
Increments: One of a kind (architecturally, or it is a specific facility where something; important happened; One of a type that may exhibit minor variations in style; One of many standard facilities
Comments: This is important for DOD facilities, how many SAC alert facilities need to be on the nat. reg. How many WWII chapels, etc. This characteristic only would apply to

facilities significant to facilities that have architectural significance, or are representative of a type- alert facilities, munitions storage, etc.

Added Characteristic: CONDITION
Increments: Good condition- needs little repair to make reusable; Fair- needs considerable work to bring back to usable condition; Poor- structural problems, code problems; Has alternations that need removal
(No additional comments)

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
(No comments)

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
(No comments)

Preservation Objective: KEEP EXPENSES LOW
Comments: This is not really preservation objective unless tied to #2, or#3, or one of the treatment standards

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
(No comments)

Preservation Objective: PRESERVE EXTERIOR FACADE ONLY
(No additional comments)

Preservation Objective: PRESERVE EXTERIOR FACADE AND INTERIORS TO REFLECT ARCHITECTURAL, INTERIOR FEATURES UNIQUE TO THE FACILITY. BUT ALLOWS ADDITIONS AS LONG AS BUILT IN A MANNER THAT DOES NOT DETRACT, FROM ORIGINAL DESIGN.
(No additional comments)

Level 3:

Treatment Standard: PRESERVATION
(No comments)

Treatment Standard: RESTORATION
(No comments)

Treatment Standard: ADAPTIVE REUSE
(No comments)

Treatment Standard: NO SPECIAL CONSIDERATION
Comments: Instead of this one, I would use interpretation, or documentation, instead.

Expert #2:
(Did not respond to Round 1 questionnaire)

Expert #3:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: As you know, the National Register criteria, which is what federal agencies must work with, stipulates 50 years as the threshold with some exceptions for resources less than 50 years. In reality, I think there is also merit in having an "over 100 yrs" category as well, even though it's really a subset of the over 50 category.

Characteristic: FACILITY FUNCTION
Added Increment: Specialized
Comments: This is a tricky one. I would include a "specialized" category to capture unique items (like wind tunnels) or specialized research facilities (maybe just call it "research" rather than "specialized". Industrial is too broad a category to capture everything that we could have. Also, would this be noting current function or original function?

Characteristic: ARCHITECTURAL SIGNIFICANCE
Comments: This is also a tricky one. For federal agencies, we use the term "not significant" rather than "insignificant". It would also need to be made clear how this characteristic differs from the one immediately following. "Significant" has a legal meaning with respect to the next characteristic. I'm also not sure how this characteristic would be defined. You can have a building that is not architecturally significant, in that its architecture is not what makes the building historic, yet it might well have architecturally significant features.

Characteristic: HISTORICAL SIGNIFICANCE
Added Increments: Individually eligible for the National Register; Contributing element of a historic district; Not significant; Intrusive element
(No additional comments)

Added Characteristic: ENGINEERING/OTHER SIGNIFICANCE
Increments: Very Significant; Somewhat Significant; Not Significant

Comments: This is to parallel the architectural significance characteristic. Either or both could contribute to a building's being historic. For example, a building that has no redeeming architectural features may none the less be historic because it is associated with an important person (someone's birth place, for example) or an important event (signing of a treaty for example).

Added Characteristic: INTEGRITY
Increments: Retains Integrity; Does not retain integrity
Comments: The National Park Service requires that a resource meet at least 4 of the 7 criteria for integrity. If the building doesn't meet at least 4, it is by default not historic. The 7 criteria are: location, design, setting, materials, workmanship, feeling, or association.

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: Disagree; building additions are possible as long as they are accomplished in a sympathetic manner. There are guidelines for that.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Comments: Disagree; normally we don't want to create "museum" pieces; we want to let buildings continue to evolve. Of course, additions or alterations that have been done over time that are not sympathetic to the original should be undone as time and funds permit.

Preservation Objective: KEEP EXPENSES REASONABLE
Definition: Maintain the building in good working order through regular maintenance to preserve and extend its useful life.
Comments: This one is tricky - I'm not sure what you want here. The definition of "low" or "reasonable" is to some degree a subjective one. We have found that lack of proper maintenance rather than age is what contributes most to the cost of upkeep of older facilities.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: Hmmm. You could have a change in use of a building that might necessitate an upgrade to a building system. Maybe rephrase to say "minimize loss of original building features, unless required by code or law" or something like that...

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Definition: Ensure that any changes to the land and buildings surrounding the historic building are appropriate and sympathetic to the historic character of the building.

Level 3:

(No comments made to Level 3)

Expert #4:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: Documentation of age assumed to be available

Characteristic: FACILITY FUNCTION
Comments: Exterior Spaces - ADD. i.e. courtyards, landscaping, park, adjacent to facilities.

Characteristic: ARCHITECTURAL SIGNIFICANCE
Comments: Based on other buildings in area or complex?

Characteristic: HISTORICAL SIGNIFICANCE
Added Increments: Famous person; Special event; Unique use of building materials
(No other comments)

Level 2:

Preservation Objective: NO ADDITIONS ("NEW BUILDING" deleted)
Definition: Original site, floor plan(s), elevations
Comments: To work within original volume

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Definition: Based on historical significance
Comments: 50 years, or more, ago

Preservation Objective: KEEP EXPENSES AFFORDABLE ("LOW" deleted)
(No additional comments)

Preservation Objective: UPGRADE BUILDING SYSTEMS AS REQUIRED BY CODE AND LAW ("ONLY" deleted)
Definition: Health, safety, accessibility)
(No additional comments)

Preservation Objective: DEMOLITION
Comments: And develop "reuse" plan of site

Preservation Objective: MOTHBALL UNTIL AFFORDABLE
Comments: Protect from H_2O Penetration

Level 3:

Treatment Standard: PRESERVATION
Comments: Original materials and construction techniques

Treatment Standard: RESTORATION
Comments: New technology but original outward appearance

Treatment Standard: ADAPTIVE REUSE
Comments: Define the best use for today using restoration treatment

Treatment Standard: NO SPECIAL CONSIDERATION deleted
Comments: Not an option

Treatment Standard: COMPATIBLE ADDITIONS
Comments: i.e. proportions, textures, colors

Expert #5:
(Did not respond to Round 1 questionnaire)

Expert #6:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: The important guideline for age is if a building is more than 50 years old. There is not always a dividing point beyond that. A 60 year-old building can be as significant as a 120 year old building.

Characteristic: FACILITY FUNCTION
(No comments)

Characteristic: ARCHITECTURAL SIGNIFICANCE
Added Increments: National; State; Local
Comments: Architectural significance needs to be assessed as to what it is and if it is national, state, or local. Then it can be ranked as to how significant it is.

Characteristic: HISTORICAL SIGNIFICANCE
Increments: National; State; Local and Individuals; Events

Comments: Historical significance is similar to architectural. First you figure out why it is significant and if it si national, state or local. Then compare with those already existing to determine how significant the resource is within its historic context.

Added Characteristic: INTEGRITY
Increments: Good; Fair; Poor
Comments: Integrity consists of location, design, setting, materials, workmanship, feeling, and association. A building needs to possess several, if not all, of these characteristics to convey its significance.

Level 2:

General Comment: Preservation objectives are determined by the treatments determined for a structure on a case by case basis. I am not sure how they can be determined in advance without making the treatment decision. The decision should be based on the significance of the building and its potential use. Then after a treatment is selected, an objective can be determined. Each treatment does not always have the same objectives. (No comments given for each of the Preservation Objectives)

Level 3:

Treatment Standard: PRESERVATION
Definition: The maintenance and repair of a structure and retention of a property's form as it evolved over time. Stabilization.
(No additional comments)

Treatment Standard: RESTORATION
Definition: Undertaken to depict a property at a particular time in its history. Requires removing evidence of other periods.
(No additional comments)

Treatment Standard: ADAPTIVE REUSE
Definition: The use of a historic building for something other than its intended use.
Comments: Adaptive re-use buildings can either be preserved or rehabilitated.

Treatment Standard: NO SPECIAL CONSIDERATION
(No comments)

Added Treatment Standard: REHABILITATION
Definition: Acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.
(No additional comments)

Expert #7:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: The National Park Service's National Register of Historic Places, and many State Historic Preservation Offices have established guidelines for the questions you are asking. Traditionally, buildings/object must be 50 years or older to be considered. This time frame seems less realistic when considering industrial structures and the rapid rise and demise of technologies.

Characteristic: FACILITY FUNCTION
Comments: All have equal value depending on the factors considered: role in technological or cultural development, relationship to noted events or people, or, even, as part of a composite whole to show the relationships (physical and technological) between processes and functions.

Characteristic: ARCHITECTURAL SIGNIFICANCE
Comments: Architectural significance always rates highly in surveys of this type. However, what qualifies to make a structure or building architecturally significant has changed over time. Previously high style or the work of noted architects were limiting factors. More recently, with the emphasis on the "new social history" and everyday lives/everyday work, those factors have changed. What might be considered mundane architecture, such as worker's housing or barracks, can be considered significant examples of a type of architecture. Since I have worked extensively with industrial buildings and workers' housing, I tend to this viewpoint.

Characteristic: HISTORICAL SIGNIFICANCE
Increments: According to the NR guidelines this can be national, regional, state, or local.
Comments: Once again, things were much simpler (although less accurate) when we were dealing with just high style architecture or the lives of "great men." When dealing with the lives of ordinary people (enlisted men) or technological history, significance takes on a series of different meanings.

Added Characteristic: CULTURAL SIGNIFICANCE
Increments: High; medium; low
Comments: This can relate to elements that are more than architectural or historical--artistic significance might be one quality. Nose art on airplanes comes to mind; the same may apply to murals in or on buildings, logos, and so forth. The furnishings (decorative arts) of a building may have significance reflecting a time or event, as well.

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Definition: Does this refer specifically to the addition of a structure or does it include alterations to the interior as well as the exterior. Would new wiring--or lighting--fall into this character. This could be significant if the change was from kerosene to electrical lighting or from incandescent to flourescent fixtures.
Comments: No new additions or alterations is the ideal in historic restoration, but is rarely found. Humans always make some modification, whether large or small. Thus, "typical" is a misnomer in historic preservation or restoration.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Definition: Buildings had been typically "restored" to their original, "as built," appearance or to the time associated with a specific event or individual, i.e. a plethora of colonial and Civil War structures.
Comments: More recently, preservationists have realized that the historic accretions (additions) to a building have significance as well. The debate still rages. One might consider the institution's mission statement and the statement of purpose for the site, the building, and the program. A mission statement, by the way, is critical for preservation efforts at any site or museum.

Preservation Objective: KEEP EXPENSES LOW
Definition: Stabilize the structure or building to prevent further deterioration for future preservation/restoration efforts.
Comments: This has been done at historic villages where all needed work could not be done at once, or with historical societies that wanted to preserve a building but did not have the funds to "restore" the structure. At minimum that means providing a sound roof, enclosing doors and windows, stabilizing the foundation, and providing security to prevent vandalism. Low costs are rarely feasible in historic preservation because of the philosophy of historic preservation and the nature of old buildings. Cheap is not necessarily better, and much current work is involved with undoing cheap, unwise decisions made previously.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Definition: If the building is going to be used for its original purpose, adaptively reused, or used as an historic structure with visitors, state and city codes may require alterations and improvements--fire alarms, handicapped access, additional entrance/egress.
Comments: Code and safety inspectors have often proved accommodating and adaptable to accomplish the required goal and maintain the historic fabric and appearance of a structure or building. What may be minimal standards for a building used for its original purpose or adaptively reused for industrial or commercial purposes may not always apply to historic sites or buildings. Regardless, safety of staff and visitors should always be a first priority.

Treatment Standard: PRESERVATION

Definition: Maintaining a building or structure with all, or as much, of its original fabric as possible. Repairs and replacements made with comparable materials, technologies, and processes.
Comments: This is rarely done because of the lack of materials or expense. Some believe that only visible elements need be similar; hidden work (studs, plaster and lath) can utilize modern materials to lower costs and meet codes. Some add modern conveniences, electricity, to help custodial staff and for special programs--others think this abhorrent.

Treatment Standard: RESTORATION
Definition: Alterations to a building or structure to repair damage or to return it to a specific moment in time.
Comments: This is most common and is accepted within stated guidelines. The NR and Historic Preservation Offices have guidelines which must be followed to maintain eligibility to the National Register or tax benefits.

Treatment Standard: ADAPTIVE REUSE
Definition: Changes to a building to fit it for use other than its original purpose, i.e. an historic jail refitted as an architect's office, a warehouse refitted for light manufacturing.
Comments: Adaptive reuse is often an acceptable alternative for building use. One consideration is that a building be used, rather than standing idle, is less apt to suffer vandalism or damage from the elements. Another thought is that adaptive reuse is preferable to demolition. Most often, adaptive reuse focuses on interior, rather than exterior, elements--doors and windows being the exception.

Treatment Standard: NO SPECIAL CONSIDERATION
Definition: Maintaining the building as is and making whatever alterations are necessary to fit the building to the institution's use.
Comments: This generally ignores preservation interests and changes often result in a loss of fabric or integrity that removes the building or structure from further consideration.

Expert #8:

General Comment: NOTE: In completing this survey, I made the assumption that we are talking about Government owned buildings for which we (the Government) are funding the restoration work. For privately owned buildings, there should be consideration given to building owners for the additional cost of a restoration project. Designation as an historic landmark may severely restrict the possible uses for a building. Thus the building owner is hit with the double burden of meeting strict standards for any improvements and additional restrictions on how the building may be used.
Some building owners have been prevented from expanding the building which they own because it has been designated as historic. The result can be a loss of income and the right to develop their own property. Any landmark designation should be done in cooperation with the building owner. There should be some method of compensation included reimburse the owner for the increased cost of construction or loss of use of the property.

This could be in the form of tax abatements or even an offer to buy the property if it is of great enough significance.

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: A good starting point, but not an indicator of a building's historic value.

Characteristic: FACILITY FUNCTION
Comments: Again, this is a good starting point, and helps in classification of a building. But, unless it is a very unique or specialized function it does not necessarily make the building historic.

Characteristic: ARCHITECTURAL SIGNIFICANCE
Comments: These increments must be well defined. What characteristics make a building significant? Some possibilities include: Designed by a highly regarded architect, A style of which few examples remain, A structure that was the first or early use of a new building technology, Contains examples of exceptional craftsmanship, Unique to a particular area or region,

Characteristic: HISTORICAL SIGNIFICANCE
Comments: Similar to comments above, except related to the events or activities that occurred in the building.

Added Characteristic: BUILDING CONDITION
Increments: Excellent; Good; Fair; Poor; Condemned
Comments: Perhaps should be given secondary value. A building may be historic in terms of style or construction type, but if it is in poor condition, there may be limited value in restoration. A rare example of a particular style may be worth restoring. If many similar buildings exist, resources should be spent on the ones in better condition. Building condition could also be balanced against the historical
significance.

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Definition: No extensions or alterations to the exterior of the building.
Comments: This should apply to only the most significant buildings. Additions should be allowed on less significant buildings if done in a manner sensitive to the original design.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Definition: Restoration using the original materials and methods to the greatest extent possible.

Comments: Again, this should apply to only the most significant buildings. This is a very labor intensive and expensive process. It also limits the ability for the building to be used for modern occupancies. This objective creates a museum piece more than a functional building.

Preservation Objective: KEEP EXPENSES LOW
Definition: Self defined.
Comments: This is an objective of the owner more than the preservationist. The greater the level of preservation, the higher the cost will be.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: This would affect the interior of the building more than the exterior. If a building is to remain functional, this must be done. The preservation issue is not so much whether the systems should be upgraded as how much effort is put into concealing them. Except in some restricted uses, these upgrades are required.

Level 3:

General Comment: I'm not clear on what you are looking for here. The treatment standards should be based objective criteria for the preservation of an historic building. The definition of the Treatment Standard should be the same regardless of which Preservation Objective it seeks to achieve. The selection would then be which treatment standards to apply to a given project.

Treatment Standard: PRESERVATION
Definition: Make repairs and prevent further deterioration using modern materials which are compatible with the historic structure.
(No additional comments)

Treatment Standard: RESTORATION
Definition: This is the most stringent standard. Return to original condition or the condition of the building at the time of the historic event. Use materials which replicate the original in components and appearance. Reuse of materials from other buildings of similar age and style may be appropriate. Materials such as paints, concrete, should be made using the same formula used in the original building.
(No additional comments)

Treatment Standard: ADAPTIVE REUSE
Comments: This term seems more appropriate as a Preservation Objective than a Treatment Standard.

Treatment Standard: NO SPECIAL CONSIDERATION
(No comments)

Added Treatment Standard: REPLACEMENT
Comments: Replacement may be the only option for some building components. This would involve using modern materials which attempt to replicate the form and details of the original components.

Expert #9:

Level 1:

General Comment: We normally define building characteristics as those contributing to both historic and architectural significance.

Characteristic: AGE OF THE FACILITY
Comments: The Nat. pk. service uses the 50 yr. cutoff as one means of determining historic/arch. significance. However there are exceptions to the "50 year rule."

Characteristic: FACILITY FUNCTION
Comments: To me, function may determine hist. value but blgds no matter what their function may be significant.

Characteristic: ARCHITECTURAL SIGNIFICANCE
Comments: We determine significance or value according to properties assoc. with -broad patters of our history; -assoc. with lives of persons significant in our past; -architectural merit incl. type, style, materials, const. techniques; -potential for yielding info about our history

Characteristic: HISTORICAL SIGNIFICANCE
Comments: Very significant

Level 2:

General Comment: Preservation obj normally need to be compatible. Not sure what you mean here.

Preservation Objective: NO NEW BUILDING ADDITIONS
(No comments)

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Definition: This is called restoration. See enclosed brochure.

Preservation Objective: KEEP EXPENSES LOW
Comments: To me, this is not a preservation objective; it is an economic issue which may affect the quality and type of preservation.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW

(No comments)

Level 3:

General Comment: The appropriate treatment may also depend heavily on the buildings condition/problems. i.e. are there structural problems. Is there water damage. Has building been altered.

Treatment Standard: PRESERVATION
Definition: See definition we use.

Treatment Standard: RESTORATION
Definition: See definition we use.

Treatment Standard: PRESERVATION
Definition: See definition we use.

Treatment Standard: ADAPTIVE REUSE
(No comments)

Treatment Standard: NO SPECIAL CONSIDERATION
Comments: Not sure this is a treatment.

Added Treatment Standard: RECONSTRUCTION
Definition: See definition we use

Added Treatment Standard: REHABILITATION
Definition: See definition we use
Comments: This is the worst prevalent preservation treatment. It is really what to use in the real world.

(Attachments included the Secretary of the Interior's Standards for the Treatment of Historic Properties and information regarding the National Register of Historic Places)

Expert #10:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: All three are relevant, however, neither could stand alone.

Characteristic: FACILITY FUNCTION

Comments: Very significant in determining historical context of facility.

Characteristic: ARCHITECTURAL SIGNIFICANCE
Comments: Very important, could stand alone in some cases if necessary.

Characteristic: HISTORICAL SIGNIFICANCE
Comments: Architectural, Important Person/Event, Industrial/Engineering/Scientific, Military, Other

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: Building additions should be allowed if necessary to meet required safety codes or if they match existing context of facility. (Example: As the mission of the Portsmouth Naval Shipyard has changed, buildings have to be enlarged or modified. Additions can be constructed in the same style of the existing structure.)

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Comments: Only in a museum setting or if building has great significance.

Preservation Objective: KEEP EXPENSES LOW
Comments: Can work within minimum requirements, however, it will be governed by existing preservation laws and current condition of the structure.

Level 3:

Treatment Standard: PRESERVATION
Comments: Existing architectural features should be preserved.

Treatment Standard: RESTORATION
Comments: Depends on future use of building and its setting (Example: Years of point covering architectural features in a building such as an Officers' Quarters doesn't affect its use. It would be costly to remove the paint. However, removing woodwork such as doorways and window frames is a different story.)

Treatment Standard: ADAPTIVE REUSE
Comments: This is mandatory to comply with the law and mad good sense to use existing facilities prior to demolition and/or new construction.

Treatment Standard: NO SPECIAL CONSIDERATION
Comments: (No comment)

Round 2

Expert #1:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: I believe two will adequately cover, however I do agree with the concern about industrial technologies-We may have to do something special for those type of facilities- AFMC has the majority of the industrial facilities in the Air Force.

Characteristic: FACILITY FUNCTION
Comments: Eliminate. These may be categories the base can use internally for management decisions, but not in the up front analysis.

Characteristic: OVERALL ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: I agree about the other examples of architecture. I am not sure how the national to local scale would work- we have to be careful not to negate National register coverage. We (the AF) tried to work the exceptionally significant issues for cold war, saying we were only going to look at National level significance, but the lawyers shot us down.

Characteristic: HISTORIC SIGNIFICANCE
Comments: I think we should use both sets of increments, but I don't believe it matters if they are together or separate characteristics.

Characteristic: INTEGRITY
Comments: To use good, fair and poor, we would need definitions/bounds. So that one persons good isn't someone else's poor. As far as integrity goes how would we deal with the changes that effect original characteristics, and thus integrity, but are now themselves important. We may have to use two different levels, integrity at one period, and then look at it from the second level of integrity (i.e. with the changes). If we can set out the rules by which to apply the integrity it would probably be best.

Characteristic: CULTURAL SIGNIFICANCE
Comments: This characteristic really muddies the water as it is very subjective as to something's cultural significance. Obviously there are cases where it is very plain that such things as murals may have cultural significance. We have the German POW murals here at wright pat painted on the wall of a facility, hence we have a connection with buildings. Increments may be better in national, local, regional, state, etc as far as significance goes.

Characteristic: BUILDING CONDITION

Comments: Include this as a characteristic. It is vital to management decisions. I would not include condemned. This term automatically means demolition within the AF for a lot of reason- physical condition is not the only one. We need to make sure our condition increments are defined somehow.

Characteristic: UNIQUENESS
Comments: Include it. Increments could be common, rare, unique- we would have to define, rare and unique. Such as rare could be less than 10 in the country, Unique would one either one of a kind, or maybe two of a kind.

Level 2:

General Comment: I don't think that many of these are preservation objectives. I would call a great number of these management objectives. I believe one of the first things that must be done when trying to determine how to handle a historic property should be to determine what is historically significant about the building and what understanding or knowledge you would like the public to get from it. If the building or something about the building style is important, then the first question to ask, is what is the important feature of the buildings- Is it Exteriors, Interiors, both? Is it the adjacency of other buildings (i.e. neighborhood) or a landscape- (ie important of French Long Lot survey- house up front, and fields back towards river (ok so that's and odd one but it was the only one I could think of.)). Landscape is another important one as far as districts go. If it something related to people, then it must be determined what it is about the building that is important to get across to the public. Is it the way someone was able to live and work in a primitive facility and come up with great technology. Is it the mere fact that someone famous came out of a neighborhood and the building is evidence of where they worked and lived (i.e. Wright Brother Bicycle shop.- in this case it is important to show how someone was able to take a simple living and convert it into larger ideas such as flying.).

These important aspects are what have to be considered preservation objectives. We then have to determine how it is best to manage these- nomination and reuse, nomination and preserve, recordation/demolition, etc. These then translate to one of the four treatments, each of which have their standards, or perhaps a combination of treatments and their standards.

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: Since the definition of addition in the Air Force is increased square footage, then yes, additional volume is the definition. Interior changes may be considered alterations/renovations/repair.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Comments: Change it to the more specific objectives

Preservation Objective: KEEP EXPENSES LOW
Comments: This is not an preservation objective, this is always a objective of every project. If this is considered an objective, then the standard would always be record the building and tear it down. Since that is the cheapest way to go. I would remove this one totally.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: I think that we will have to comply with whatever code the AF is using- UCB, or others. We have had a problem with new life safety codes for windows on old bldgs, because they called for wider windows which would have really made changes in the exterior facade. Following the codes may be a conflict that has to be worked.

Preservation Objective: PRESERVE EXTERIOR FACADE
Comments: This is a good objective.

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Comments: I do not see another objective it can be combined with at this point. I would keep it. surrounding landscapes are important for districts, and within districts. This may not be a universal possibility.

Preservation Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: Are we talking about architectural compatibility in terms of adjacent buildings, or compatibility in terms of building materials when we may put on additions? I believe it is important to keep this in mind.

Level 3:

Treatment Standard: PRESERVATION
Treatment Standard: RESTORATION
Comments: Note that these are not standards, these are the treatments. The Standards are how e carry out the treatment.

Treatment Standard: REHABILITATION
(No comment)

Treatment Standard: ADAPTIVE REUSE
Comments: I believe that adaptive reuse is a form of rehabilitation. The first standard under rehabilitation is property shall be used as it was historically or be given a new use that requires minimal change to distinctive materials. It is an interesting question about definition and use of the word adaptive. Does "adaptive" mean we adapt the use to the building, or does it mean we adapt the building to the use? We would need to define what we meant. We may use the term because it makes people less nervous than "rehabilitation."

Treatment Standard: RECONSTRUCTION
Comments: I would not include this.

Treatment Standard: NO SPECIAL CONSIDERATION
Comments: Demolition and Mothball to the Air Force means they will eventually be torn down so I would not include these terms.

Expert #2:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: The 50 years is the Federal regulatory threshold found in the National Register. I would see that as a basic increment. For the special and more recent structures, one would need to have an overview and comparative inventory and from this hopefully one could determine if a more recent structure is of significant qualities to warrant a preservation approach. Regarding another increment, I am still grappling with this question.

Characteristic: FACILITY FUNCTION
Comments: In conducting an inventory of the AF structures on the various bases, I would see some value in having a question on building function. Also, I would develop a function category that responds to the various types of specialized structures one would expect to find on an AF base.

Characteristic: OVERALL ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: The significance question should respond to the various themes that one would find related to an AF base and its context. I suggest looking at the National Register materials for guidance on significance and themes.

Characteristic: HISTORIC SIGNIFICANCE
Comments: Regarding historic significance, great people and events would be surely important to note. For the broader themes of history, one should be able to pick up sites associated with everyday themes. The National Register listing individually or part of a district should be part of the analysis.

Characteristic: INTEGRITY
Comments: Yes, integrity of building and its setting does contribute.

Characteristic: CULTURAL SIGNIFICANCE
(No comment)

Characteristic: BUILDING CONDITION
Comments: Yes, the three levels appear to be possible.

Characteristic: UNIQUENESS
Comments: Again, this relates to your overall inventory of structures, AF-wide and base-wide. Uniqueness may be handled in your functional category if you break it out more completely, or in one of the other categories.

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: The term "addition" generally applies to exterior of buildings. For changes on interiors, some other term, such as "alteration" or something equivalent maybe more appropriate.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Comments: Again, I would say that your basis for definitions should come from the National Park Service and the Advisory Council for Historic Preservation and those agencies' regulations.

Preservation Objective: KEEP EXPENSES LOW
Comments: Economics does figure into to any preservation project. Where to evaluate a project with regards to the proposed budget is a management call with the input from the preservation professionals laying out the options.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: Code and life safety are another important factor in making preservation decisions. No responsible preservation professional or manager of an operation should make a preservation project decision and not consider the issues of codes and life safety if the scope of the project is such that it would encounter such factors. This needs to be another filtering screen in the decision making process.

Preservation Objective: PRESERVE EXTERIOR FACADE
Comments: You may have an hierarchy of exterior elevations. In most local historic district commission decision making, the front facades and those parts of the other facades visible from the public rights of way are given the greatest attention. The less visible and usually rear facades often have received more alterations over time.

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Comments: Context of an historic building and an grouping of historic buildings is important and it includes the historic infrastructure and the landscape elements. Think of a parade ground surrounded by mature trees lined with officer quarters and the base command. The building's individually may receive preservation treatment but the overall context could be badly damaged if not considered, i.e., a major area of the center lawn is ripped up and paved or the trees are cut down for some parking.

Preservation Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: New construction does have impact. You may need to consider an overall base and its various components and identify areas of preservation and other areas for future change and development.

Level 3:

Treatment Standard: PRESERVATION
Treatment Standard: RESTORATION
Comments: Use the NPS standards and definitions, why try to invent another wheel if these could serve the AF purpose?

Treatment Standard: REHABILITATION
(No comment)

Treatment Standard: ADAPTIVE REUSE
(No comment)

Treatment Standard: RECONSTRUCTION
(No comment)

Treatment Standard: NO SPECIAL CONSIDERATION
Comments: Demolition and mothball are realities for management dealing with limited budgets and limited programs.

Expert #3:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: Two increments are adequate, as long as there is a provision for being able to add comments, in this case being able to indicate that the facility is +100 years.

Characteristic: FACILITY FUNCTION
Comments: I believe both the original function and the current function need to be noted. Original function(s) would be what makes the facility historic. If the current function is the same (e.g, this facility has served as the medical complex for the installation since 1938), that can add to the significance. If the current function is different, depending on the nature of the current function and the changes, if any, made to the facility to accommodate the new function, that can impact whether the facility retains integrity. In sum, current function won't tell you significant/not significant, but can address degree of significance.

Characteristic: OVERALL ARCHITECTURAL/ENGINEERING SIGNIFICANCE

Comments: Hmmm. The federal legislation states that a property can be very significant even if only at the local level, so the two scales are not linked. The exception here is for National Historic Landmarks, which are the premier historic resources, which must be significant at the national level. Regional is used for things like "first silver mine in the West," so it's not quite the same as state. My concern is that this still doesn't capture the fact that you can have a resource, such as the house/ranch where the "A" bomb was invented, that is nationally significant because of the research that went on inside, and not at all because of the architecture.

Characteristic: HISTORIC SIGNIFICANCE
Comments: In the federal historic preservation sphere, there are actually three, not two, reasons a facility might be historic: associated with historic individual, significant event, OR an example of the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master. This last type would need to be captured in your list. I agree that the distinctions between being individually eligible for the National Register versus being part of a historic district are important for management decisions. The other two categories — not significant , and intrusive element are important, esp. If you are classifying all the facilities in a particular area. The level of significance of a facility can play a role in what you can/can't do to the facility.

Characteristic: INTEGRITY
Comments: This characteristic is critical to a building's historic value. If this is to be used on federal installations, then the meaning four out of seven is required, but the good/fair/ poor scale is appropriate for evaluating each of the seven. Both scales are needed.

Characteristic: CULTURAL SIGNIFICANCE
Comments: I think that artistic significance is subsumed in the other criteria, particularly in the expanded version of "historic significance."

Characteristic: BUILDING CONDITION
Comments: Building condition, under ideal conditions, would be addressed under the "integrity" criteria. However, in realistic terms, it deserves to be prominently addressed. I'm troubled by your use of the word "restoration." That implies a fairly high level of "fix up" of a building. Restoration is certainly not required in the vast majority of cases, and is not even appropriate for many. In most cases, we would do "rehabilitation" and there is wide latitude for what that means. I agree that not all buildings can or should be saved. In order to make wise decisions about which buildings should have money invested in them, and which shouldn't requires having all the relevant information about significance and integrity for all the buildings. This is rarely possible, given the way the Air Force funds projects.

Characteristic: UNIQUENESS
Comments: This would normally be captured as part of the historic significance characteristic. Again, though, the uniqueness of a facility is relative to the scale at which it

is significant (e.g., a resource might be significant as the only covered bridge in Ohio, even though there are dozens of them in other states). I still think this has merit and this data ought to be explicitly documented somewhere.

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: Yes. Lighting, etc. would be covered under "upgrades" or something similar. I still think building additions are appropriate in some cases (and keeping a building in use through an addition would be preferable to demolishing the structure).

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Comments: I believe that your three more specific objectives are each more valid than this one. This one really is "restoration."

Preservation Objective: KEEP EXPENSES LOW
Comments: I like "KEEP EXPENSES REASONABLE." I strongly disagree that low costs are rarely associated with historic preservation. Historic preservation is almost always cheaper than new construction, plus it has added, intangible values.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: Maybe the preservation objective should be something like"USE COMPATIBLE METHODS TO MEET CURRENT BUILDING CODES." We'd want the buildings to meet code requirements, but normally this does not have to be done at the expense of any historic characteristics.

Preservation Objective: PRESERVE EXTERIOR FACADE
Comments: This would depend on how critical the exterior facade or portions therof are to the significance of the facility. I would call it "Preserve significant features," whether interior or exterior.

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Comments: I still like this one!! I'm interested on the feed back you get on this one.

Preservation Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: I think this would probably be captured in the other objectives, but retain an open mind on this one.

Level 3:

Treatment Standard: PRESERVATION
Treatment Standard: RESTORATION

(No comment)

Treatment Standard: REHABILITATION
Comments: This one is very important for military installations since we are more likely to be in a position where preservation is not an option (the facility has already been changed over time) and when restoration is not financially feasible nor appropriate for whatever mission might be put in the facility.

Treatment Standard: ADAPTIVE REUSE
Comments: This treatment standard frequently has more to do with the function of the building than its use, but changing the function often means that changes need to be made to the facility. If one were to rank the treatment standards from most purist (or most restrictive) to lease it would be:

Preservation
Restoration
Rehabilitation
Adaptive Reuse

Treatment Standard: RECONSTRUCTION
Comments: I don't think this one is particular applicable to DoD installations. A reconstructed building is normally not considered to be historic. "Replacement" is really a subset of some of the other standards (Restoration and Rehabilitation in particular) and does not warrant listing as a separate standard.

Treatment Standard: NO SPECIAL CONSIDERATION
Comments: This one really doesn't really work. Maintaining buildings "as is" is a valid practice, and is what we do for most buildings for most of the time, but eventually something on the building will need to be repaired or replaced, at which point a decision will need to be made as to what treatment standard to use. I will reserve judgment on mothballing and demolition until next go round.

Expert #4:
(Did not participate in Round 2)

Expert #5:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: Two increments are sufficient: 0-50 years, over 50 years.

Characteristic: FACILITY FUNCTION
Comments: All four increments should be kept. This is extremely important in determining if a facility has historic value for its use.

Characteristic: OVERALL ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: Increments and scale should be combined.

Characteristic: HISTORIC SIGNIFICANCE
Comments: Increments and scale should be combined.

Characteristic: INTEGRITY
Comments: Scale should read: Excellent, Good, Fair, Poor

Characteristic: CULTURAL SIGNIFICANCE
Comments: Increments should remain the same, artistic significance should be listed as a separate characteristic.

Characteristic: BUILDING CONDITION
Comments: Increments should be: Excellent
Good
Fair
Poor
Abandoned
Condemned

Characteristic: UNIQUENESS
Comments: This should be combined with Facility Function Characteristic.

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: Should be applied on a case-by-case basis.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Comments: Should be a treatment standard governed by existing laws and cirbumstances determining the required use of the facility.

Preservation Objective: KEEP EXPENSES LOW
Comments: Treatment Standard. Keep Expenses Reasonable. This will be determined by the existing laws governing the use and treatment of historic structures.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: Eliminate only.

Preservation Objective: PRESERVE EXTERIOR FACADE
Comments: Keep.

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Comments: This will be determined by the required use of a facility and its current setting.

Preservation Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: Eliminate.

Level 3:

Treatment Standard: PRESERVATION
Treatment Standard: RESTORATION
Comments: Use Secretary of Interior Standards

Treatment Standard: REHABILITATION
Comments: Use Secretary of Interior Standards

Treatment Standard: ADAPTIVE REUSE
Comments: Use Secretary of Interior Standards

Treatment Standard: RECONSTRUCTION
Comments: Use Secretary of Interior Standards

Expert #6:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: Only two increments are needed, but with allowances for highly significant examples for incorporating various new technologies.

Characteristic: FACILITY FUNCTION
Comments: Historical function in only important as a comparison to other buildings, not for ranking significance. Only historic function should be used. If there is only one type of a certain building left, it may be more important than if there are ten.

Characteristic: OVERALL ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: Buildings would be ranked by significance within national, state, and local categories. Regional is not needed. The national, state, and local categories are parallel and can't be ranked against each other.

Characteristic: HISTORIC SIGNIFICANCE
Comments: As well as individual/events increments, technology should be included. Maybe the best way to do this is to use the criteria for the National Register. That way you would be working with an established system instead of your own. As above, the national, state, and local increments are separate and not always compared.

Characteristic: INTEGRITY
Comments: Integrity is the greatest defining feature of historic value. Using the seven defined components, a ranking of good, fair, poor can be used.

Characteristic: CULTURAL SIGNIFICANCE
Comments: These would be outstanding features of a building, and I would include them under historic significance.

Characteristic: BUILDING CONDITION
Comments: Agree it should be included. Increments — good, fair, poor.

Characteristic: UNIQUENESS
Comments: I believe that this would fall under facility function.

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: No additions is a better phrase. Should apply to the exterior of a building as well as working with existing building volume.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Comments: Objective is fine as stated but it is restoration. Inherent in the definition of restoration is the fact that later components of a building may be lost.

Preservation Objective: KEEP EXPENSES LOW
Comments: Affordable expenses are always desired. I don't believe this is an objective. It goes against some preservation goals and could change the outcome for the worse.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: Since improvements are almost always required this in not a valid objective. It will always be a constant.

Preservation Objective: PRESERVE EXTERIOR FACADE
Comments: This would be another increment in possibilities of preservation. Does this just refer to the front or all elevations?

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Comments: You invalidated the discussion of exterior spaces under the facility function characteristic. Isn't this the same idea?

Preservation Objective: NEW WORK COMPATIBLE WITH EXISTING

Comments: Should be included as an objective but once again this is an idea inherent in preservation.

Level 3:

Treatment Standard: PRESERVATION
Treatment Standard: RESTORATION
(No comment)

Treatment Standard: REHABILITATION
Comments: Should be included.

Treatment Standard: ADAPTIVE REUSE
Comments: Should be kept as a separate item. Focus on interior changes with exterior as preserved as possible.

Treatment Standard: RECONSTRUCTION
(No comment)

Treatment Standard: NO SPECIAL CONSIDERATION
To me, no special consideration means the building is not significant and does not need preserving. If you are only including significant buildings in this project, it is not needed.

Expert #7:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: Since this is an artificial category-two divisions would be fine.

Characteristic: FACILITY FUNCTION
Comments: Function is important. It is one of the five characteristics used in material culture studies (E. McClung Fleming, et al) when defining/describing artifacts which includes buildings). Keep the list but add cultural/recreational, maintenance (or some equivalent), and instead of specialized, perhaps an "Other" category.

Characteristic: OVERALL ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: Regional and state should be kept separate. Southeastern would cover a broader spectrum then something specifically identified with New Mexico, for example. The two scales are used together. Something might be very significant on a national scale — that means that it would have significance at each lower level as well.

Characteristic: HISTORIC SIGNIFICANCE

Comments: I still think that with the latest approaches to social history, leaving out structures that are good representatives of ordinary people, ordinary lives (ground crews, non-officer support staff) is important. It would be viewed as a gap by academics interested in material culture studies and social history. The scale should have the same relationship as architecture and be used the same way.

Characteristic: INTEGRITY
Comments: Excellent addition. The language used retains, does not retain, or good, fair, poor, is too vague. There should be some clarification. Stating four of seven criteria used by the NR is not sufficient either. Need refined.

Characteristic: CULTURAL SIGNIFICANCE
Comments: Since this was my suggestion, no comment.

Characteristic: BUILDING CONDITION
Comments: This relates to integrity, and the two could be combined, or this eliminated in lieu of integrity--a better term.

Characteristic: UNIQUENESS
Comments: Does uniqueness relate to one of the characteristics listed above (architecture, history, etc) and if representative, this would fit my addition under historical significance. Seems repetitive.

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: Still think it applies to interior and exterior and to all buildings equally.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Comments: Keep and clarify according to the Secretary of the Interior's standards.

Preservation Objective: KEEP EXPENSES LOW
Comments: Eliminate category.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: These are important thoughts: modify the wording-- "MINIMIZE LOSS OF ORIGINAL BUILDING FEATURES, UNLESS REQUIRED BY CODE OR LAW," and eliminate the word "only" from the name above. This is a general observation not relating just to age or any one characteristic.

Preservation Objective: PRESERVE EXTERIOR FACADE
Comments: Can this be incorporated in the "return to" category?

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Comments: Good luck. This is a related but separate issue. Where possible, it should be done. Guess I would go along with the addition.

Preservation Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: Good, and useful, addition. Ties in with integrity issue, and maintenance of architectural, historic, cultural significance.

Level 3:

Treatment Standard: PRESERVATION
Treatment Standard: RESTORATION
Comments: No additional comments. Secretary's Standards appear to use accepted criteria.

Treatment Standard: REHABILITATION
Comments: Good addition.

Treatment Standard: ADAPTIVE REUSE
Comments: This is an accepted term. It seems more descriptive than rehabilitation. Depends on how you define each, but I would keep this one.

Treatment Standard: RECONSTRUCTION
Comments: This is not appropriate if you are dealing with existing structures. It takes on a whole new direction.

Treatment Standard: NO SPECIAL CONSIDERATION
Comments: All buildings cannot be save, or should be restored. If there is are good standards for defining those that should be preserved that includes all relevant characteristics, this may be necessary to show that historic preservation is not "ivory tower" thinking. One consideration, however. So-called unimportant buildings, both in number, location, and overall style, add to the setting (historic context) of those deemed important.

Expert #8:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: A third category of 100+ years could be helpful to show a greater urgency to prevent deterioration of a building.

Characteristic: FACILITY FUNCTION

Comments: Do not eliminate. This characteristic can be useful to catalog historic building and may increase the significance of a building if it is built to serve a unique function.

Characteristic: OVERALL ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: Multiple scales get too complex. Local/regional significance should be factors on a single scale.

Characteristic: HISTORIC SIGNIFICANCE
Comments: Again, sounds too complex. Use a single scale with consideration given to various factors. Perhaps a point system.

Characteristic: INTEGRITY
Comments: This seems to be redundant with condition and uniqueness.

Characteristic: CULTURAL SIGNIFICANCE
Comments: This should be a factor of other characteristics, not a stand alone.

Characteristic: BUILDING CONDITION
Comments: Yes, excellent, good, fair, poor, condemned.

Characteristic: UNIQUENESS
Comments: Yes, above increments good.

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: Apply to the exterior of a building/additional volume.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Comments: No additional comments. Keep as is.

Preservation Objective: KEEP EXPENSES LOW
Comments: Changing the name does not change the fact that quality pereservation adds to the cost. Costs will be controlled by those who must pay for the work. There should be a limit as to how much a regulator can force a building owner to spend on required preservation work.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: The objective should be to do what is required an integrate that work into the historic context of the building. (See cost issue) Owners should be able to seek a variance or creative alternative to codes where a significant building feature is at risk.

Preservation Objective: PRESERVE EXTERIOR FACADE
Comments: This appears to be a level of preservation where there are no limits on the building interior. It has been used successfully in many locations.

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Comments: This seems to be what the creation of an historic district does. Seems redundant with other objectives.

Preservation Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: Not required as an additional objective. This is already covered by the other objectives.

Level 3:

Treatment Standard: PRESERVATION
Treatment Standard: RESTORATION
Comments: No additional comments.

Treatment Standard: REHABILITATION
Comments: No additional comments.

Treatment Standard: ADAPTIVE REUSE
Comments: This is a preservation objective not a treatment standard. It addresses the general use of a building not the specific treatments involved. It is similar to "preserve exterior facade" in that it has few, if any restrictions on the interior of the building.

Treatment Standard: RECONSTRUCTION
Comments: As a treatment standard, this would seem to apply only to a severely deteriorated building where much or most of the structure would have to be rebuilt with new materials. Replacement indicates that no building currently exists and would by definition not be a preservation issue.

Treatment Standard: NO SPECIAL CONSIDERATION
Comments: I do not consider this to be a treatment standard. If a building is not selected for historic status, then there is no reason to have regulations for it.

Expert #9:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: This should be a floating 50-100. For example, bldg constructed in 1949 will qualify for this characteristic in 1999 (made in reference to the 50-100 year increment). Two are fine as long as you adjust according to passage of time.

Characteristic: FACILITY FUNCTION
Comments: Function may contribute to historic significance. For example, bldg where early wind tunnel experiments were conducted. I suggest keeping this criteria but tailoring to unique Air Force functions.

Characteristic: OVERALL ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: Absolutely (made in reference to phrase regarding type of architecture). There are properties which are of national significance (obviously also locally significant). Example: Wright Bros. Bicycle Shop. Other properties are locally or regionally significant (see Nat. Reg. criteria and local significance).

Characteristic: HISTORIC SIGNIFICANCE
Comments: Same as above.

Characteristic: INTEGRITY
Comments: OK (made in reference to Good and Fair increments). Would not be significant (made in reference to Poor increment). NR criteria (made in reference definition of Integrity). If the building is so altered or has deteriorated to the point that it no longer represents the criteria for which it is being nominated.

Characteristic: CULTURAL SIGNIFICANCE
Comments: It can be incorporated into architectural significance.

Characteristic: BUILDING CONDITION
Comments: This is what contributes or detracts from integrity. Not necessary to make it a separate criteria.

Characteristic: UNIQUENESS
Comments: Should be included as part of what makes building historically or architecturally significant.

Level 2:

General Comment: These should always serve as basic standards (made in reference to statement about the Secretary of the Interior's definitions).

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: It is fine to say no new additions to historic buildings. However, that isn't what takes place in the real world. See Secretary of the Interior's standards for new construction. There may be some nationally significant buildings for which new additions are simply not allowed. See National Historic Landmark standard.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME

Comments: I think the parameters of restoration are fairly well defined. The question is what is the goal of the restoration — to what point in the building's life (what period of significance) are you trying to return the building to?

Preservation Objective: KEEP EXPENSES LOW
Comments: Not a preservation objective. Expenses obviously must be considered, but not as an historic preservation objective. Rather they should be addressed in the way the project is carried out (i.e., phasing a project, perhaps use of alternative materials, etc.).

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: How about this: minimize loss of original building features when upgrading systems as required by code and law. Applies to all building characteristics.

Preservation Objective: PRESERVE EXTERIOR FACADE
Comments: Preserving the facade is critical to any preservation objective. Never-th-less, it could be incorporated into all rehab/restoration objectives.

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Comments: ("Context" crossed-out and replaced with "Setting?"). Is important but it too could be incorporated into preservation/restoration objectives.

Preservation Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: This is clearly described in standard new addition, alterations related new construction. Applies to restoration and rehab.

Level 3:

Treatment Standard: PRESERVATION
Treatment Standard: RESTORATION
(No comment)

Treatment Standard: REHABILITATION
Comments: Rehab is the most common treatment standard. You can hardly ignore it.

Treatment Standard: ADAPTIVE REUSE
Comments: Adaptive reuse is usually what takes place when a building undergoes rehab.

Treatment Standard: RECONSTRUCTION
Comments: See enclosed definition of reconstruction. Despite problems associated with this treatment, it should probably be included.

Treatment Standard: NO SPECIAL CONSIDERATION
Comments: It seems to me that "No special consideration" applies to non-historic bldgs.

(The following text was attached to this participant's response)

The Parameters of Physical Intervention
in the Built World

Preservation
Implies maintaining the property in the same condition as when it was received. Nothing is added to or subtracted from the aesthetic corpus of the property. Any interventions necessary to preserve it physical integrity (e.g., protection against fire, theft, or intrusion, heating, cooling, lighting) are to be cosmetically unobtrusive. (Example FDR Home, Hyde Park, New York)

Restoration
The process of returning the property to the physical condition in which it would have been at some previous stage of its morphological development. The precise stage is determined either by historical association (the way it was when Washington slept there) or aesthetic integrity (the portico at Mount Vernon must have all its columns). Intervention at this level is more radical than simple preservation. (Examples: Mount Vernon; Monticello)

Conservation and Consolidation
Describes physical intervention in the actual fabric of the building to ensure its continued structural integrity. Such measures can be relatively minor, (such as fumigation against termites) or very radical (such as epoxy consolidation of deteriorated wood or insertion of new foundations).

Reconstruction
A more radical version of the above, in which the building can be saved only by piece-by-piece reassembly, either in situ or on a new site. Reconstruction in situ is ordinarily the consequence of disaster such as war or earthquakes, in which most of the original building material remains but us scattered. On occasion, a building may be dismantled and reassembled on the same site (example: Old State Capital, Springfield, Illinois). Reconstruction on a new site is much more prevalent, usually the consequence of the transplanted structure being too big or bulky to have been moved intact. (Examples: Sauder Village, Archbole, Ohio; London Bridge, Lake Havasu, Arizona; the log houses "cabins" on countless fairgrounds, city parks and historical society properties).

Rehabilitation
The process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient, contemporary use (adaptive use) while preserving those portion and features of the property which are historically, architecturally, or culturally significant. Rehabilitation is the most prevalent preservation treatment currently in use. It is often the only economic way to save historic properties. Rehabilitation can sometimes involve fairly radical interventions, especially in the internal organization of space, in

which any or all of the above levels of intervention may be called for. (Examples: Union Station, Indianapolis, now a festival marketplace; Darke County Sheriff's residence, now County Commissioners offices; the local bed and breakfast).

Reconstruction
The recreation of vanished buildings on their original site. The reconstructed building acts as the tangible, dimensional surrogate of the original structure, its physical form being established by archaeological, archival and literary evidence. This is one of the most radical levels of intervention. It is also one of the most hazardous, culturally. All attempts to reconstruct the past, no matter what academic and scientific resources are available to the preservationist, necessarily involve subjective hypotheses. (Example: governor's Place and House of Burgesses, Colonial Williamsburg, Virginia)

Replication
The construction of an exact copy of a still-standing building on a site removed from the prototype. In other words, the replica coexists with the original. Physically, the replica can be more accurate than reconstruction, since the prototype is available as a control on proportion, color, texture, etc. Replication is the most radical and the most hazardous of all forms of intervention. It is, however, appropriate in certain situations, e.g., to stand in open air as a surrogate for a fragile original which must be moved to the controlled environment of a museum.

Most of the above information is from Historic Preservation, Curatorial Management of the Built World, by James Marston Fitch.

Expert #10:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: Two increments are sufficient: 0-50 years, over 50 years.

Characteristic: FACILITY FUNCTION
Comments: All four increments should be kept. This is extremely important in determining if a facility has historic value for its use.

Characteristic: OVERALL ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: Increments and scale should be combined.

Characteristic: HISTORIC SIGNIFICANCE
Comments: Increments and scale should be combined.

Characteristic: INTEGRITY
Comments: Scale should read: Excellent, Good, Fair, Poor

Characteristic: CULTURAL SIGNIFICANCE
Comments: Increments should remain the same, artistic significance should be listed as a separate characteristic.

Characteristic: BUILDING CONDITION
Comments: Increments should be:
Excellent
Good
Fair
Poor
Abandoned
Condemned

Characteristic: UNIQUENESS
Comments: This should be combined with Facility Function Characteristic.

Level 2:

Preservation Objective: NO NEW BUILDING ADDITIONS
Comments: Should be applied on a case-by-case basis.

Preservation Objective: RETURN BUILDING TO EXACT CONDITION AS IT EXISTED AT ONE POINT IN TIME
Comments: Should be a treatment standard governed by existing laws and cirbumstances determining the required use of the facility.

Preservation Objective: KEEP EXPENSES LOW
Comments: Treatment Standard. Keep Expenses Reasonable. This will be determined by the existing laws governing the use and treatment of historic structures.

Preservation Objective: UPGRADE BUILDING SYSTEMS ONLY AS REQUIRED BY CODE AND LAW
Comments: Eliminate only.

Preservation Objective: PRESERVE EXTERIOR FACADE
Comments: Keep.

Preservation Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Comments: This will be determined by the required use of a facility and its current setting.

Preservation Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: Eliminate.

Level 3:

Treatment Standard: PRESERVATION
Treatment Standard: RESTORATION
Comments: Use Secretary of Interior Standards

Treatment Standard: REHABILITATION
Comments: Use Secretary of Interior Standards

Treatment Standard: ADAPTIVE REUSE
Comments: Use Secretary of Interior Standards

Treatment Standard: RECONSTRUCTION
Comments: Use Secretary of Interior Standards

Round 3

Expert #1:

Level 1:

Characteristic: AGE OF THE FACILITY
Comments: Agree.
Strength of Comments: 2

Characteristic: BUILDING FUNCTION
Comments: What is a cultural function? I can agree with recreational as a function, but not cultural until I know what is meant by this. The function of the building is assessed at should be the function it was performing at the time of its significance-i.e. if a WWII warehouse was significant for some reason, and later turned into an office bldg., it should not be assessed as an office building.
Strength of Comments: 2

Characteristic: HISTORICAL/CULTURAL SIGNIFICANCE
Comments: Sounds ok-
Strength of Comments: 1

Characteristic: ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: Sounds ok
Strength of Comments: 1

Characteristic: INTEGRITY
Comments: Since "layout, style and function" define design, there are only 4 criteria. If you cannot these as separate criteria, design can't be called criteria, and you only have 6 criteria. How are you counting 7. I agree with the concept- do we need to weight these at all- are some aspects of a buildings integrity more important than other aspects?
Strength of Comments: 2

Characteristic: BUILDING CONDITION
Comments: Agree
Strength of Comments: 1

Level 2:

Action Objective: NO NEW ADDITIONS TO EXTERIOR OF BUILDING
Comments: You might need to further modify it with visual additions. Eg a sub-basement added to a building that did not have one would definitely be a change, but if it was not visible then it isn't really a big deal.
Strength of Comments: 1

Action Objective: PREVENT ALTERATION/REMOVAL OF INTERIOR
Comments: No comment- this is a normal part of preservation techniques
Strength of Comments: (No comment)

Action Objective: PREVENT ALTERATION/REMOVAL OF EXTERIOR
Comments: (No comment)
Strength of Comments: (No comment)

Action Objective: USE BUILDING AS IT WAS HISTORICALLY
Comments: (No comment)
Strength of Comments: (No comment)

Action Objective: KEEP EXPENSES LOW
Comments: This should be a sub-objective to other types of objectives- i.e. Use buildings as it was historically, but keep costs low, prevent alterations/removal of exterior materials, finishes, etc, but keep costs low. This is a universal objective for all preservation activities, unless you are filthy rich and have a "spare no expense attitude. I still don't like this one.
Strength of Comments: 3

Action Objective: UPGRADE BUILDING SYSTEMS
Comments: In preservation, I would doubt that upgrade building systems is the biggest deal. In fact this is one of the things that gives SHPOS fits- how are you going to put a new system in a building not designed for it. How does upgrading building systems equal a building preservation treatment?
Now that I have thought about this, I think this is something we often need to do with historic buildings, but has nothing to do with any type of preservation.
Strength of Comments: 2

Action Objective: FUNCTIONAL INTERIOR LAYOUT
Comments: What about functional interior layout- change it or keep it the same? There is no definition here to base comments on.
Strength of Comments: (No comment)

DELETED Action Objective: MAINTAIN APPROPRIATE HISTORICAL CONTEXT
Comments: ok, but do we then have a problem with including context under integrity?
Strength of Comments: (No comment)

DELETED Action Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: What makes this different from the other action objectives- most of them are inherent parts of preservation- preserve materials, prevent alterations, etc. This one may come in when we are told we can make external modifications, but it must be done so that people don't think they were part of the original building.
Strength of Comments: 1

Level 3:

Treatment: PRESERVATION
Comments: (No comment)
Strength of Comments: (No comment)

Treatment: RESTORATION
Comments: (No comment)
Strength of Comments: (No comment)

Treatment: REHABILITATION
Comments: Compatible with what? Who defines what is compatible? Are offices compatible with houses? Stores?, etc. The standard goes on to say-"used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships. Do we mean only those uses that would have or could have coexisted with this building under its original function? I am concerned that there really isn't enough distinction between rehabilitation and adaptive reuse.
Strength of Comments: 2

Treatment: ADAPTIVE REUSE
Comments: Again, who determines what is not compatible- factory to apartments? Schools to apartments, or shops, or offices? By compatible, or not compatible, do we mean things that would never been located near that type of building when it was operating under it's original function?
Strength of Comments: 2

Treatment: NO SPECIAL CONSIDERATION
Comments: OK, but remember if mission dictates there is no other need, and no reuse, then demolition is always acceptable if there are no alternatives and we mitigate.
Strength of Comments: (No comment)

DELETED Treatment: RECONSTRUCTION
Comments: Agree with deletion.
Strength of Comments: (No comment)

Expert #2:
(Did not participate in Round 3)

Expert #3:

Level 1:

Characteristic: AGE OF THE BUILDING

Comments: Concur with the categories. I am intrigued by your definition of age, to include something other than when the building was built.
Strength of Comments: 2

Characteristic: BUILDING FUNCTION
Comments: Should be original function. Increments okay as defined here.
Strength of Comments: 3 (for first statement). 2 (for second statement).

Characteristic: HISTORICAL/CULTURAL SIGNIFICANCE
Comments: Concur. Somewhere there needs to be a level of significance characteristic, that talks about whether a building is significant on its own or only as part of a district.
Strength of Comments: 3

Characteristic: ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: I now find it hard to distinguish this characteristic from the previous one. They appear to be redundant.
Strength of Comments: n/a

Characteristic: INTEGRITY
Comments: Recommend "fair" = 4 or more; "poor" = 3 or less since National Register threshold is 4 of 7. Maybe have just 2 categories.
Strength of Comments: 2

Characteristic: BUILDING CONDITION
Comments: Concur.
Strength of Comments: 2

Level 2:

Action Objective: NO NEW ADDITIONS TO EXTERIOR OF BUILDING
Comments: (No comment)
Strength of Comments: (No comment)

Action Objective: PREVENT ALTERATION/REMOVAL OF INTERIOR MATERIAL, FINISHES, AND FEATURES
Comments: (No comment)
Strength of Comments: (No comment)

Action Objective: PREVENT ALTERATION/REMOVAL OF EXTERIOR MATERIAL, FINISHES, AND FEATURES
Comments: Add the word "Significant" otherwise not valid.
Strength of Comments: 3

Action Objective: USE BUILDING AS IT WAS HISTORICALLY

Comments: ??Concur if building still has original function. If it doesn't, there often isn't any value to returning it to that function.
Strength of Comments: 2

Action Objective: KEEP EXPENSES LOW
Comments: Still prefer use of another word other than "low." It's too subjective.
Strength of Comments: 2

Action Objective: UPGRADE BUILDING SYSTEMS
Comments: Still needs better definition
Strength of Comments: 2

Action Objective: FUNCTIONAL INTERIOR LAYOUT
Comments: This seems like a valid objective for everyone (and should not be viewed as a contrast to historic use!)
Strength of Comments: 2

DELETED Action Objective: MAINTAIN APPROPRIATE HISTORIC CONTEXT
Comments: Strongly recommend it not be deleted. Appropriate planning looks beyond just an individual building — a whole area/base/neighborhood, etc. is planned.
Strength of Comments: 3

DELETED Action Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: Strongly recommend it not be deleted. To me, this is more valid than some of the other criteria.
Strength of Comments: 3

Level 3:

Treatment: PRESERVATION
Comments: Concur.
Strength of Comments: 3

Treatment: RESTORATION
Comments: This treatment is rarely done; would be even less frequently done be DoD. It could be kept to show there are more expensive options...
Strength of Comments: 2

Treatment: REHABILITATION
Comments: Concur.
Strength of Comments: 3

Treatment: ADAPTIVE REUSE

Comments: Adaptive reuse can also lead to major changes to the exterior. It is a form of rehabilitation.
Strength of Comments: 2

Treatment: NO SPECIAL CONSIDERATION
Comments: OK
Strength of Comments: 2

DELETED Treatment: RECONSTRUCTION
Comments: I would delete it. If it is used on a part of a building, it applies only to that feature and not the building. It isn't needed here.
Strength of Comments: 3

Expert #4:

Level 1:

Characteristic: AGE OF THE BUILDING
Comments: Agree — most important portion age rather than general...
Strength of Comments: 2

Characteristic: BUILDING FUNCTION
Comments: Yes (in reference to Specialized); No (in reference to eliminating "Uniqueness"). Most important function.
Strength of Comments: 2

Characteristic: HISTORICAL/CULTURAL SIGNIFICANCE
Comments: OK.
Strength of Comments: 3

Characteristic: ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: "I propose defining this characteristic as pertaining to the building itself" highlighted.
Strength of Comments: 2

Characteristic: INTEGRITY
Comments: I suggest defining Integrity as referring to whither a building is in its original location, has the same basic design (layout, style and function), exists in a compatible setting, and features original materials and workmanship" highlighted.
Strength of Comments 2

Characteristic: BUILDING CONDITION
Comments: Fine definitions.
Strength of Comments: 3

Level 2:

Action Objective: NO NEW ADDITIONS TO EXTERIOR OF BUILDING
Comments: OK
Strength of Comments: 3

Action Objective: PREVENT ALTERATION/REMOVAL OF INTERIOR MATERIAL, FINISHES AND FEATURES
Comments: Difficult to achieve (in reference to "Prevent").
Strength of Comments: 1

Action Objective: PREVENT ALTERATION/REMOVAL OF EXTERIOR MATERIAL, FINISHES AND FEATURES
Comments: Allowing new technologies, i.e. epoxies to be incorporated
Strength of Comments: 2

Action Objective: USE BUILDING AS IT WAS HISTORICALLY
Comments: OK
Strength of Comments: 1

Action Objective: KEEP EXPENSES LOW
Comments: OK
Strength of Comments: 1

Action Objective: UPGRADE BUILDING SYSTEMS
Comments: Good
Strength of Comments: 3

Action Objective: FUNCTIONAL INTERIOR LAYOUT
Comments: OK
Strength of Comments: 2

DELETED Action Objective: MAINTAIN APPROPRIATE HISTORICAL CONTEXT
Comments: "eliminate" highlighted. OK
Strength of Comments: 2

DELETED Action Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: YES
Strength of Comments: 3

Level 3:

Treatment: PRESERVATION
Comments: OK

Strength of Comments: 3

Treatment: RESTORATION
Comments: OK
Strength of Comments: 3

Treatment: REHABILITATION
Comments: OK
Strength of Comments: 3

Treatment: ADAPTIVE REUSE
Comments: OK
Strength of Comments: 2

Treatment: NO SPECIAL CONSIDERATION
Comments: Good
Strength of Comments: 3

DELETED Treatment: RECONSTRUCTION
Comments: "eliminate" highlighted. Yes
Strength of Comments: 2

Expert # 5:

Level 1:

Characteristic: AGE OF THE BUILDING
Comments: The age increments are important, however, a new building might be significant because of its mission, and the age will be of no importance as a deciding factor.
Strength of Comments: 3

Characteristic: BUILDING FUNCTION
Comments: Agree with combining Unique and Specialized. An increment titled "Other" would be good to catch an unforseen use. Each building will have to assessed independently, therefore, its function (original function, most important function and recent function) will be determined at that time within the context of the overall criteria.
Strength of Comments: 3

Characteristic: HISTORICAL/CULTURAL SIGNIFICANCE
Comments: I agree with your proposal.
Strength of Comments: 3

Characteristic: ARCHITECTURAL/ENGINEERING SIGNIFICANCE

Comments: I agree with your proposal.
Strength of Comments: 3

Characteristic: INTEGRITY
Comments: I agree with your proposal.
Strength of Comments: 3

Characteristic: BUILDING CONDITION
Comments: I agree with your proposal providing that the increments are defined in great detail. For example, I know of buildings that have been totally rebuilt and could not be restored to their original condition. This would need to be defined under the "poor" increment.
Strength of Comments: 3

Level 2:

Action Objective: NO NEW ADDITIONS TO THE EXTERIOR OF BUILDING
Comments: I agree with your proposal.
Strength of Comment: 3

Action Objective: PREVENT ALTERATION/REMOVAL OF INTERIOR MATERIAL, FINISHES AND FEATURES
Comments: Will be defined by existing laws governing the use and treatment of historic structures.
Strength of Comments: 3

Action Objective: PREVENT ALTERATION/REMOVAL OF EXTERIOR MATERIAL, FINISHES AND FEATURES
Comments: Will be defined by existing laws governing the use and treatment of historic structures.
Strength of Comments: 3

Action Objective: USE BUILDING AS IT WAS HISTORICALLY
Comments: I agree with your proposal.
Strength of Comments: 3

Action Objective: KEEP EXPENSES LOW
Comments: I agree with your proposal.
Strength of Comments: 3

Action Objective: UPGRADE BUILDING SYSTEMS
Comments: Upgrade systems within the guidelines established by the "Secretary of Interior Standards." A brick will surrounding a fire escape required by law can be constructed keeping within the historic context of the structure.

Strength of Comments: 3

Action Objective: FUNCTIONAL INTERIOR LAYOUT
Comments: I agree with your proposal.
Strength of Comments: 3

DELETED Action Objective: MAINTAIN APPROPRIATE HISTORICAL CONTEXT
Comments: (No comment)
Strength of Comments: (No comment)

DELETED Action Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: (No comment)
Strength of Comments: (No comment)

Level 3:

Treatment: PRESERVATION
Comments: I agree with using the Secretary of Interior's Standards.
Strength of Comments: 3

Treatment: RESTORATION
Comments: I agree with using the Secretary of Interior's Standards.
Strength of Comments: 3

Treatment: REHABILITATION
Comments: I agree with using the Secretary of Interior's Standards.
Strength of Comments: 3

Treatment: ADAPTIVE REUSE
Comments: I agree with your proposal.
Strength of Comments: 3

Treatment: NO SPECIAL CONSIDERATION
Comments: I agree with your proposal.
Strength of Comments: 3

DELETED Treatment: RECONSTRUCTION
Comments: I agree with your proposal to eliminate this treatment.
Strength of Comments: 3

Expert #6:
(Did not participate in Round 3)

Expert #7:

Level 1:

Characteristic: AGE OF THE BUILDING
Comments: Reasonable - follows NPS guidelines. Questionable - does not recognize speed of technological development/alteration to physical environment
Strength of Comments: 2

Characteristic: BUILDING FUNCTION
Comments. No (in reference to elimination). Yes (in reference to keeping all categories). Prefer Other (in reference to eliminating the "Uniqueness" characteristic). All or any one could be a determining factor (in reference to which function). Because of your profession, is "military" a consideration (or is it an offshoot of technology). More musing than a serious concern!
Strength of Comments: 1

Characteristic: HISTORICAL/CULTURAL SIGNIFICANCE
Comments: These are apples and oranges (in reference to listed increments and definitions). No (in reference to using individual/event increments). Yes (in reference to ordinary people/events and cultural significance). Still disagree - we have advanced far beyond the great man/great even focus on history. Still thing state (in addition to regional) is important.
Strength of Comments: 3

Characteristic: ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: Sorry to read that it is still the unique or rare that is the most compelling factors in this survey. A very typical and limiting approach.
Strength of Comments: 3

Characteristic: INTEGRITY
Comments: Yes (in reference keeping "Building Condition" as a separate characteristic and the list of seven terms defining integrity). Too Vague (in reference to definition of design).
Strength of Comments: 1

Characteristic: BUILDING CONDITION
Comments: Thought that 5 was the minimum acceptable in scaling/rating system. How does this relate to previous query? Unclear.
Strength of Comments: 2

Level 2:

Action Objective: NO NEW ADDITIONS TO EXTERIOR OF BUILDING
Comments: Good! (In reference to separating objectives for interior and exterior materials)

Strength of Comments: 1

Action Objective: PREVENT ALTERATION/REMOVAL OF INTERIOR MATERIALS, FINISHES, AND FEATURES
Comments: OK
Strength of Comments: 1

Action Objective: PREVENT ALTERATION/REMOVAL OF EXTERIOR MATERIALS, FINISHES, AND FEATURES
Comments: Unclear, don't understand what you are combining/retaining. If "Return Building to One Point in Time" is goal, disagree.
Strength of Comments: 3

Action Objective: USE BUILDING AS IT WAS HISTORICALLY
Comments: OK
Strength of Comments: 2

Action Objective: KEEP EXPENSES LOW
Comments: Drop it.
Strength of Comments: 2

Action Objective: UPGRADE BUILDING SYSTEMS
Comments: Unclear. This really deals with two different issues: code/law and historical/preservation issues.
Strength of Comments: 1

Action Objective: FUNCTIONAL INTERIOR LAYOUT
Comments: The language is getting confusing.
Strength of Comments: (No comment)

DELETED Action Objective: MAINTAIN APPROPRIATE HISTORICAL CONTEXT
Comments: (No comment)
Strength of Comments: (No comment)

DELETED Action Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: No.
Strength of Comments: 3

Level 3:

Treatment: PRESERVATION
Comments: OK
Strength of Comments: 2

Treatment: RESTORATION
Comments: OK
Strength of Comments: 2

Treatment: REHABILITATION
Comments: OK
Strength of Comments: 2

Treatment: ADAPTIVE REUSE
Comments: OK
Strength of Comments: 2

Treatment: NO SPECIAL CONSIDERATION
Comments: OK
Strength of Comments: 2

DELETED Treatment: RECONSTRUCTION
Comments: Not if dealing with additions to a structure (in reference to elimination).
Strength of Comments: 2

General Comment: Trying to balance so many opinions is obviously a challenge. Best of Luck.

Expert #8:
(Did not participate in Round 3)

Expert #9:
(Did not participate in Round 3)

Expert #10:

Level 1:

Characteristic: AGE OF THE BUILDING
Comments: The age increments are important.
Strength of Comments: 3

Characteristic: BUILDING FUNCTION
Comments: Agree with combining Unique and Specialized.
Strength of Comments: 3

Characteristic: HISTORICAL/CULTURAL SIGNIFICANCE
Comments: I agree with your proposal.
Strength of Comments: 3

Characteristic: ARCHITECTURAL/ENGINEERING SIGNIFICANCE
Comments: Agree.
Strength of Comments: 3

Characteristic: INTEGRITY
Comments: Agree..
Strength of Comments: 3

Characteristic: BUILDING CONDITION
Comments: Agree.
Strength of Comments: 3

Level 2:

Action Objective: NO NEW ADDITIONS TO THE EXTERIOR OF BUILDING
Comments: Agree.
Strength of Comment: 3

Action Objective: PREVENT ALTERATION/REMOVAL OF INTERIOR MATERIAL, FINISHES AND FEATURES
Comments: Defined by existing laws governing the use and treatment of historic structures.
Strength of Comments: 3

Action Objective: PREVENT ALTERATION/REMOVAL OF EXTERIOR MATERIAL, FINISHES AND FEATURES
Comments: Defined by existing laws governing the use and treatment of historic structures.
Strength of Comments: 3

Action Objective: USE BUILDING AS IT WAS HISTORICALLY
Comments: Agree.
Strength of Comments: 3

Action Objective: KEEP EXPENSES LOW
Comments: Agree.
Strength of Comments: 3

Action Objective: UPGRADE BUILDING SYSTEMS
Comments: Upgrade systems within the guidelines established by the "Secretary of Interior Standards."
Strength of Comments: 3

Action Objective: FUNCTIONAL INTERIOR LAYOUT

Comments: Agree.
Strength of Comments: 3

DELETED Action Objective: MAINTAIN APPROPRIATE HISTORICAL CONTEXT
Comments: (No comment)
Strength of Comments: (No comment)

DELETED Action Objective: NEW WORK COMPATIBLE WITH EXISTING
Comments: (No comment)
Strength of Comments: (No comment)

Level 3:

Treatment: PRESERVATION
Comments: Agree.
Strength of Comments: 3

Treatment: RESTORATION
Comments: Agree.
Strength of Comments: 3

Treatment: REHABILITATION
Comments: Agree.
Strength of Comments: 3

Treatment: ADAPTIVE REUSE
Comments: Agree.
Strength of Comments: 3

Treatment: NO SPECIAL CONSIDERATION
Comments: Agree.
Strength of Comments: 3

DELETED Treatment: RECONSTRUCTION
Comments: Agree.
Strength of Comments: 3

Appendix F

Letter to Preservation Dayton, Inc.

12 June 97

MEMORANDUM FOR Preservation Dayton, Inc.
PO Box 3614
Dayton, OH 45401
Attn: Linda Caron, President

FROM: AFIT/ENV
Box 4365
2950 P. Street
Wright-Patterson AFB, OH 45433-7765

SUBJECT: Historic Preservation Research

1. As part of my master's degree research at the Air Force Institute of Technology (AFIT), I am analyzing the social value of historic preservation at Air Force installations. To this end, I am respectfully soliciting your organization's participation in prioritizing the fundamental attributes and characteristics that are used to assess the value of an historic site.

2. The National Historic Preservation Act requires the Air Force to inform the public of any proposed actions to historical facilities and solicit their comments. My research attempts to discover the value which the public places on the underlying building characteristics of historic facilities. This information could then be used by base leaders as part of their decision making process. For example, knowledge of the value placed on various aspects of historic facilities would allow the decision makers to anticipate public reaction to a preservation decision, and include their inputs early in the decision process.

3. Preservation Dayton could make a significant contribution to this work and influence the Air Force's approach to historic facility preservation both here in Dayton and across the nation. If the membership of Preservation Dayton would care to become involved in this research project, I am asking that they participate in small group discussions to be held in a few months (the exact dates and times will be determined as that time approaches and will be dependent upon your member's schedules). Each focus group will meet for approximately two hours. During this time, the participants will discuss historic preservation issues and answer a questionnaire to determine their preferences. After all focus groups are concluded, I will consolidate and analyze the responses. At the completion of the thesis in November of 1997, a copy of the research will be provided to you.

4. I will be out of town for a couple of weeks, but when I return I would like to discuss the possibility of working with you on this project. I think that Preservation Dayton could bring a wealth of knowledge and experience to this research endeavor and the results will be mutually beneficial. If you have any questions or concerns regarding this research, please do not hesitate to contact either myself or my thesis advisor. We can be reached at the following:

Student: Captain Patrick R. Breaux
AFIT/EN 365 Box 4365
2950 P. Street
Wright-Patterson AFB, OH 45433-7765
work voice-mail: (937) 255-3636 x6365
home: (937) 236-6580
e-mail: pbreaux@afit.af.mil

Advisor: Major Brent Nixon, PhD, PE
Asst Prof, Engineering & Environmental Management
AFIT/EN
2950 P. Street
Wright-Patterson AFB, ON 45433-7765
work: (937) 255-3636 x4591
e-mail: bnixon@afit.af.mil

Thank you for your kind consideration. I look forward to talking with you.

PATRICK R. BREAUX, Capt, USAF
AFIT Graduate Student

Appendix G

Notice in Preservation Dayton Press

Volume 6 Issue 3, Summer/Fall 1997

(As edited by Preservation Dayton, Inc.)

A Chance to be Heard: Grad Student Requests our Expert Advice

Captain Patrick R. Breaux, a graduate student at the Air Force Institute of Technology (AFIT), is engaged in researching a master's thesis which will analyze the social value of historic preservation at Air Force installations: in other words, he wants to find out exactly what the public values about historic buildings owned by the military. The Air Force could use this information as they try to decide which structures to preserve. He is interested in the opinions of PDI members: after all, we're probably the ones who would raise a ruckus if important buildings were destroyed! If you would be willing to spend an hour or so participating in a focus group and answering a questionnaire please contact Captain Breaux: his home phone is 236-6580, work voice mail is 255-3636 x6365, and e-mail is pbreaux@afit.af.mil. This is certainly a way we can help encourage the military to participate in the preservation movement before bad decisions are made: please help out!

Appendix H

List of Public Participants

(Listed alphabetically)

Elizabeth Breaux
JoeAnne Conners
Rebecca Coy
Jim Davis
Don Dawson
Seth Gross
Eric Gustavus
Shawn Hamm
Scott Hanson
Joanne Henkel
Christina Johnson
Wendy Johnson
Elizabeth Jutte
Dan Livesay
Sandy McNamara
Rosie Miller
Sarah E. C. Obach
Lora Sebald
Shawnna Sizemore
David Stellrach
Aharyn Swabb
Ken Wheller
Susan Wheller
B. Jenna Whitaker
Adrienne Wilt

Appendix I

Focus Group Moderator Script

Good (evening). I'd like to thank all of you for taking time out of your schedule to participate in this discussion. I am Captain Patrick Breaux. I'm a graduate student at the Air Force Institute of Technology working on my masters degree in the area of historic preservation.

First, I'd like to tell you about my project. The Air Force is required to solicit public input for any projects that will impact a historically significant facility. However, the public input often comes after base leaders and experts have made some preliminary decisions and are presenting their proposed actions to the local community. My research hopes to gather information about the public's general preferences retarding historic preservation. In this way, the decision makers can have some idea about the public's opinion at the beginning of the process.

I am proposing that any building can be described by a small set of characteristics. These characteristics, in turn, determine what actions a person believes should be undertaken on the building. The preferred actions would determine which specific treatment is applied to the building. Although this process could be applied to any historical property such as parks, bridges, districts, etc., my thesis is focusing only on individual buildings.

The purpose of today's discussion is to try to determine the altitudes that people have regarding historic preservation and understand the reasons they feel the way they do. I am focusing on the public's opinions regarding the building characteristics and action objectives. The format of our meeting today will consist of a number of short discussions, followed by a questionnaire which will ask you to compare the criteria we've just discussed.

Working with a number of architects, historians, planners and preservation experts, in private practice, teaching, and various levels of the government, we have narrowed the list of relevant building characteristics to six: age of the facility, building function, historic or cultural significance, architectural or engineering significance, integrity, and building condition. We believe that these are building characteristics that have the greatest influence on determining the action objectives are to be undertaken. This handout lists the definitions for each of the characteristics. (pass out definitions) Please take a couple of minutes to look over the explanations. (pause)

Does anyone have any other examples of important building characteristics? Does anyone think that a characteristic listed isn't appropriate? Does anyone have an example or

personal experience that they would like to share regarding how a particular building characteristic had an impact on the actions that were undertaken for an historical building?

Now that we've discussed the various building characteristics, I'd like for each of you to complete the first section of the questionnaire. It contains 5 questions. Your answers will be used to determine how much emphasis you place on each of the building characteristics when evaluating which actions are appropriate for any building. If you have any questions while you are completing the questionnaire, please do not hesitate to ask. It is very important to clarify for the whole group if something is confusing. (questionnaire part 1)

Next, I'd like to discuss the action objectives that can be applied to historic buildings. Some of these are specifically oriented towards preservation; they are no new additions to exterior of the building, prevent the alteration or removal of interior materials, finishes and features, prevent the alteration or removal of exterior materials, finishes and features, and use the building as it was historically. Some of the other action objectives could be applied to any building, not just historical properties. They are keep expenses low, upgrade building systems, and provide a function interior layout. This next handout lists the definitions for each of the action objectives. (pass out definitions) Please take a couple of minutes to look over the explanations. (pause)

The first action objective I'd like to discuss is no new additions to the exterior of the building. Does anyone have any comments regarding this objective? Does anyone know of an example where this objective was applied, or should have been applied and wasn't? When do you think this action objective should be applied to a building?

The next action objective I'd like to discuss is prevent the alteration or removal of interior materials, finishes and features. Does anyone have any comments regarding this objective? Does anyone know of an example where this objective was applied, or should have been applied and wasn't? When do you think this action objective should be applied to a building?

The third action objective is prevent the alteration or removal of exterior materials, finishes and features. Does anyone have any comments regarding this objective? Does anyone know of an example where this objective was applied, or should have been applied and wasn't? When do you think this action objective should be applied to a building?

The next action objective is use the building as it was historically. Does anyone have any comments regarding this objective? Does anyone know of an example where this objective was applied, or should have been applied and wasn't? When do you think this action objective should be applied to a building?

The forth action objective I'd like to discuss is keep expenses low. Does anyone have any comments regarding this objective? Does anyone know of an example where this

objective was applied, or should have been applied and wasn't? When do you think this action objective should be applied to a building?

The fifth action objective I'd like to discuss is upgrade building systems. Does anyone have any comments regarding this objective? Does anyone know of an example where this objective was applied, or should have been applied and wasn't? When do you think this action objective should be applied to a building?

The last action objective is provide a functional interior layout. Does anyone have any comments regarding this objective? Does anyone know of an example where this objective was applied, or should have been applied and wasn't? When do you think this action objective should be applied to a building?

In a moment, I'll ask you to answer another section of the questionnaire. It is similar to the first section in that you are to compare the action objectives. However, in this case, you will compare them several times, each time thinking about the building characteristic listed at the top of the page. But before we begin, let's take a short break. (5-10 minute break)

I'd like for each of you to complete the second section of the questionnaire. It contains 12 questions. Your answers will be used to determine how much emphasis you place on each of the action objectives, given the age of the building. When answering the first 6 questions, keep in mind that the building is less that 50 years old. The last 6 questions are for buildings that are 50 years or older. If you think that the age of the building doesn't affect the rankings of the action objectives, you should have no differences between the two sets of comparisons. If you think that age does affect the rankings, you might have one comparison different, several comparisons different, or all of them different. If you have any questions while you are completing the questionnaire, please do not hesitate to ask. It is very important to clarify for the whole group if something is confusing. (questionnaire part 2)

I'd like for each of you to complete the next section of the questionnaire. It contains 30 questions. Your answers will be used to determine how much emphasis you place on each of the action objectives, given the function of the building. When answering the first 6 questions, keep in mind that the building is used for industrial purposes. The next 6 questions are for administrative buildings. This is followed by 6 comparisons for residential buildings, specialized and unique buildings, and cultural buildings. If you think that the function of the building doesn't affect the rankings of the action objectives, you should have no differences between the two sets of comparisons. However, if you think that function does affect the rankings, you will have some differences between the 5 groups of questions. If you have any questions while you are completing the questionnaire, please do not hesitate to ask. (questionnaire part 3)

The next section contains 24 questions. Your answers will be used to determine how much emphasis you place on each of the action objectives, given the building's historic and cultural significance. When answering the first 6 questions, remember that the building is of national significance. The next 6 questions are for regional significance. This is followed by 6 comparisons for local significance and 6 for no historic significance. Once again, if you think that the historic and cultural significance of a building doesn't affect the rankings of the action objectives, you should have no differences between the two sets of comparisons. However, if you think that historic and cultural significance does affect the rankings, you will have some differences between the 4 groups of questions. If you have any questions while you are completing the questionnaire, please do not hesitate to ask. (questionnaire part 4)

I'd like for each of you to complete the next section of the questionnaire. It contains 24 questions. Your answers will be used to determine how much emphasis you place on each of the action objectives, given the architectural or engineering significance of the building. When answering the first 6 questions, keep in mind that the building is of national significance. The next 6 questions are for buildings significant to the region . This is followed by 6 comparisons for local significance and 6 for no architectural or engineering significance. If you think that architectural or engineering significance doesn't affect the rankings of the action objectives, you should have no differences between the two sets of comparisons. However, if you think that it does affect the rankings, you will have some differences between the 4 groups of questions. If you have any questions while you are completing the questionnaire, please do not hesitate to ask. (questionnaire part 5)

I'd like for each of you to complete the sixth section of the questionnaire. It contains 18 questions. Your answers will be used to determine how much emphasis you place on each of the action objectives, given the integrity of the building. When answering the first 6 questions, keep in mind that the building has a good integrity. The next 6 questions are for buildings with fair integrity and the last 6 questions are for buildings with poor integrity. If you think that the integrity of the building doesn't affect the rankings of the action objectives, you should have no differences between the two sets of comparisons. However, if you think that it does affect the rankings, you will have some differences between the 3 groups of questions. If you have any questions while you are completing the questionnaire, please do not hesitate to ask. (questionnaire part 6)

The last section contains 18 questions. Your answers will be used to determine how much emphasis you place on each of the action objectives, given the building's condition. When answering the first 6 questions, keep in mind that the building is in good condition. The next 6 questions are for buildings in fair condition and the last 6 questions are for buildings in poor condition. If you think that the building condition doesn't affect the rankings of the action objectives, you should have no differences between the two sets of comparisons. However, if you think that condition does affect the rankings, you will have some differences between the 3 groups of questions. If you have any questions while you are completing the questionnaire, please do not hesitate to ask. (questionnaire part 7)

We've come to the end of the discussion; all of the questions have been completed. We've talked about the various building characteristics and action objects that could be applied to historic buildings; but we haven't talked about the various treatments that could be applied to historic buildings. Examples of treatments would be preservation, restoration, rehabilitation, and adaptive reuse. I have reserved this section of comparisons for the experts to determine which action objectives best accomplish each of the treatments.

Does anyone have any additional comments about any of the things we've discussed or about the questions themselves?

Again, I'd like to thank all of you for participating in the discussions and questionnaire today. If you have any comments, please take a few moments to write them on this sheet, or you may take the sheet with you and send it to me. I can also be reached by e-mail; my address is also on the comment sheet. Thank you.

Appendix J

AHP Questionnaire and Definitions for Public Participants

Comparison Scale

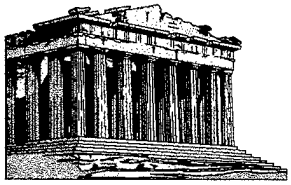
Please use the following scale when comparing each of the criteria in the questionnaire.

Numerical Value	Definition
1	Either item is **equally** important to me.
3	One item is **slightly more** important to me than the other.
5	One item is **strongly more** important to me than the other.
7	One item is **very strongly more** important to me than the other.
9	One item is **extremely more** important to me than the other.

For example, if you thought that A was strongly more important to you than B, you would mark the scale as follows:

A **9** 8 **7** 6 (**5**) 4 **3** 2 **1** 2 **3** 4 **5** 6 **7** 8 **9** **B**

Historic Preservation Decision Making



Building Characteristics
(define the building)

Action Objectives
(what to do to the building)

Treatments
(such as preservation, restoriation, rehilitation, etc.)

Building Characteristics

- Age of the Building: Age of the oldest portion of the building. If the original portion of the building is insignificant as compared to the rest of the structure, the building's age is defined by the age of the most important section of the building. A building's age can be defined as
  - Less than 50 years old
  - 50 years and older

- Building Function: The function that the building housed. If the building housed several different functions over its life, the building function is defined as the one that was the most significant. Building functions are defined as
  - Administrative
  - Residential
  - Industrial (such as aircraft hangers, warehouses, etc.)
  - Specialized or unique
  - Recreational or cultural (such as chapels, officers' club, etc.)

- Historic and Cultural Significance: Significance due to an important person, an historic event, the work that occurred there (including the mundane or ordinary), and cultural significance. Historic and cultural significance can be listed according to several levels:
    - National
    - Regional
    - Local
    - None

- Integrity: Based on the *location* (whether a building is in its original location), *design* (has the same basic layout, style and function as it did historically), *setting* (exists in a compatible setting as it did historically), *materials* (basically unchanged from original materials), *workmanship* (in good condition and hasn't been altered), *feeling* (the overall impression one gets from the building), and *association* (is associated by the public with the history of the area). Integrity can be described as
    - Good (meets 5 or more of the 7 criteria listed)
    - Fair (meets 3 or 4 of the criteria)
    - Poor (meets less than 3 of the criteria.)

- Architectural and Engineering Significance: Significance pertaining to the architecture or engineering of the building itself (not individual architectural elements). Significance would be indicated if the building is a work of a "master," is a good example of a particular style, or is of a unique or rare style. Architectural and engineering significance can be listed according to several levels:
    - National
    - Regional
    - Local
    - None

- Building Condition: The current condition of the building's structural system, building systems (such as electrical, ventilation, etc), and materials. Building condition can be described as
    - Good (structurally sound, with minimal deterioration of materials or building systems)
    - Fair (requires some structural work and a large portion of the materials and building systems must be replaced or repaired)
    - Poor (structural system must receive significant repairs and a majority of the building systems and materials must be repaired or replaced)

Action Objectives

- No new additions to the exterior: major, visible additions to the overall volume of the building should not be allowed. This does not include work to the exterior materials and smaller architectural details.

- Prevent alteration of interior materials: alteration or removal of materials, finishes, and architectural features on the interior of the building should be prevented. Where repair or replacement of historic features is required, they will match the old in design, color, texture and materials. This would include the design or layout of the spaces, since changes to the plan would require removal and patching of finishes and architectural features.

- Prevent alteration of exterior materials: alteration or removal of materials, finishes, and architectural features on the exterior of the building should be prevented. Where repair or replacement of historic features is required, they will match the old in design, color, texture and materials. This does not include changes to the volume of the building.

- Use building as it was historically: the building should be used as it was historically or given a new use which reflects the building's most important period.

- Keep expenses low: economical materials and finishes should be used as a part of a comprehensive plan to reduce construction costs (even if they are less compatible with the building's original design and materials). Replace or remove damaged details and materials rather than repair them.

- Upgrade building systems: existing building systems should be replaced with modern lighting, electrical service, heating/ventilation/air conditioning, plumbing, and any other systems as necessary to meet code requirements, improve efficiency, and increase comfort.

- Provide functional interior layout: interior partitions should be removed, added or relocated as necessary to provide a more useful or efficient plan.

Historic Preservation Questionnaire, Part 1

Building Characteristics

This set of questions deals with making comparisons among the different building characteristics.

For questions 1-15, which characteristic do you consider to be a more important factor in determining the appropriate action objectives for a building? Circle the value that best defines your preference for each pair of building characteristics.

1.	Age of the Building	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Building Function
2.	Age of the Building	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Historic and Cultural Significance
3.	Age of the Building	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Integrity
4.	Age of the Building	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Architectural and Engineering Significance
5.	Age of the Building	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Building Condition
6.	Building Function	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Historic and Cultural Significance
7.	Building Function	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Integrity

8.	Building Function	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Architectural and Engineering Significance
9.	Building Function	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Building Condition
10.	Historic and Cultural Significance	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Integrity
11.	Historic and Cultural Significance	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Architectural and Engineering Significance
12.	Historic and Cultural Significance	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Building Condition
13.	Integrity	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Architectural and Engineering Significance
14.	Integrity	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Building Condition
15	Architectural and Engineering Significance	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Building Condition

Historic Preservation Questionnaire, Part 2

Age of the Building

This set of questions deals with making comparisons among the different action objectives based on the age of the building. Only think about the age of the building as you make your choices.

For questions 1-6, which action objective is more important **given that the age of a building is less that 50 years old? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

1.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
2.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
3.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
4.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
5.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
6.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 7-12, which action objective is more important **given that the age of a building is 50 years or older? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

7.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
8.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
9.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
10.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
11.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
12.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

Historic Preservation Questionnaire, Part 3

Building Function

This set of questions deals with making comparisons among the different action objectives based on the building's function. Only think about the building function as you make your choices.

For questions 1-6, which action objective is more important **given that the function of a building is administrative? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

1.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
2.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
3.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
4.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
5.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
6.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 7-12, which action objective is more important **given that the function of a building is residential? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

7.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
8.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
9.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
10.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
11.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
12.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 13-18, which action objective is more important **given that the function of a building is industrial? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

13.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
14.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
15.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
16.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
17.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
18.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 19-24, which action objective is more important **given that the function of a building is specialized or unique? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

19.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
20.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
21.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
22.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
23.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
24.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 25-30, which action objective is more important **given that the function of a building is recreational or cultural? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

25.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
26.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
27.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
28.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
29.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
30.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems

Historic Preservation Questionnaire, Part 4

Historic and Cultural Significance

This set of questions deals with making comparisons among the different action objectives based on the building's historic and cultural significance. Only think about the historic and cultural significance of a building as you make your choices.

For questions 1-6, which action objective is more important **given that a building is of national historic or cultural significance? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

1.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
2.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
3.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
4.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
5.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
6.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 7-12, which action objective is more important **given that a building is of regional historic or cultural significance? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

7.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
8.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
9.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
10.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
11.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
12.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 13-18, which action objective is more important **given that a building is of local historic or cultural significance? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

13.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
14.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
15.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
16.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
17.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
18.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 19-24, which action objective is more important **given that a building has no historic or cultural significance? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

19.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
20.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
21.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
22.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
23.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
24.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

Historic Preservation Questionnaire, Part 5

Integrity

This set of questions deals with making comparisons among the different action objectives based on the building's integrity. Only think about the integrity of a building as you make your choices.

For questions 1-6, which action objective is more important **given that a building's integrity is good? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

1.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
2.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
3.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
4.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
5.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
6.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 7-12, which action objective is more important **given that a building's integrity is fair? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

7.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
8.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
9.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
10.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
11.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
12.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 13-18, which action objective is more important **given that a building's integrity is poor? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

13.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
14.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
15.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
16.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
17.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
18.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems

Historic Preservation Questionnaire, Part 6

Architectural and Engineering Significance

This set of questions deals with making comparisons among the different action objectives based on the building's architectural and engineering significance. Only think about the architectural and engineering significance of a building as you make your choices.

For questions 1-6, which action objective is more important **given that a building is of national architectural or engineering significance? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

1.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
2.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
3.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
4.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
5.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
6.	No new additions to the exterior	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 7-12, which action objective is more important **given that a building is of regional architectural or engineering significance? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

7.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
8.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
9.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
10.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
11.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
12.	Prevent alteration of interior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 13-18, which action objective is more important **given that a building is of local architectural or engineering significance? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

13.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
14.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
15.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
16.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
17.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
18.	Prevent alteration of exterior materials	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 19-24, which action objective is more important **given that a building has no architectural or engineering significance? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

19.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
20.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
21.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
22.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
23.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
24.	Use building as it was historically	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

Historic Preservation Questionnaire, Part 7

Building Condition

This set of questions deals with making comparisons among the different action objectives based on the building's condition. Only think about the condition of a building as you make your choices.

For questions 1-6, which action objective is more important **given that a building is in good condition? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

1.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
2.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
3.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
4.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
5.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems
6.	Keep expenses low	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 7-12, which action objective is more important **given that a building is in fair condition? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

7.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
8.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
9.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
10.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
11.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
12.	Upgrade building systems	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Provide functional interior layout

For questions 13-18, which action objective is more important **given that a building is in poor condition? Do not consider any other characteristics.** Circle the value that best defines your preference for each pair of action objectives.

13.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No new additions to the exterior
14.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of interior materials
15.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Prevent alteration of exterior materials
16.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Use building as it was historically
17.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Keep expenses low
18.	Provide functional interior layout	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Upgrade building systems

Appendix K

AHP Questionnaire and Definitions for Expert Participants

Dear Participant:

1. Thank you for your responses to the Delphi questionnaires. I have analyzed your comments and used them to prepare this final round comparison questions.

2. Each page of questions focuses on a different action objective. For each pair of treatments listed, indicate which treatment best accomplishes the action objective being examined. The definitions of the treatments and the action objectives are provided for your convenience. Please use the included numerical scale when making your comparisons. Keep in mind that not all treatments will accomplish all action objectives equally well.

3. To ensure completion of the thesis research within the time constraints established by AFIT, your prompt response is appreciated. Therefore, I am requesting that you PLEASE COMPLETE THE QUESTIONNAIRE NO LATER THAN 3 OCTOBER 1997. The completed survey can be faxed to me at the following:

Fax: 937/656-4699

If you have any problems receiving or understanding any part of this package, please contact me immediately. In addition to fax, you can also reach me at the following:

Voice mail: 785-3636 x6365 (DSN)
937/255-3636 x6365 (Commercial)
Home: 937/236-6580
E-mail: pbreaux@afit.af.mil

Once again, thank you for taking the time to further this research effort.

Sincerely,

PATRICK R. BREAUX, Capt, USAF
AFIT Graduate Student

Comparison Scale

Please use the following scale when comparing each of the criteria in the questionnaire.

Numerical Value	Definition
1	I **equally** prefer either item.
3	I **slightly** prefer one item to the other.
5	I **strongly** prefer one item to the other.
7	I **very strongly** prefer one item to the other.
9	I **extremely** prefer one item to the other.

For example, if you strongly preferred A over B, you would mark the scale as follows:

A **9** 8 **7** 6 (**5**) 4 **3** 2 **1** 2 **3** 4 **5** 6 **7** 8 **9** **B**

Treatment Definitions

Preservation means the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Rehabilitation means the act or process of making possible an efficient compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

Restoration means the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Adaptive Reuse means the act or process of making possible an efficient use for a property not necessarily compatible with its historic use, by allowing major changes to the interior or exterior of the building, but preserving those portions or features which convey its historical, cultural or architectural values.

No Special Consideration means that the building is of little or no significance. Application of preservation actions is not required. Routine maintenance and repair actions should be used as necessary in cases where the building will continue to be used. Demolition is an acceptable action where the building is no longer needed.

No New Additions to the Exterior

No new additions to the exterior: major, visible additions to the overall volume of the building should not be allowed. This does not include work to the exterior materials and smaller architectural details.

For questions 1-10, which treatment do you consider best meets the action objective of "No New Additions to the Building" as defined above? Do not consider any other action objectives. Circle the value that best defines your preference for each pair of treatments.

1.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Restoration
2.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
3.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
4.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
5.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
6.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
7.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
8.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
9.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
10.	Adaptive Reuse	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration

Prevent Alteration of Interior Materials

Prevent alteration of interior materials: alteration or removal of materials, finishes, and architectural features on the interior of the building should be prevented. Where repair or replacement of historic features is required, they will match the old in design, color, texture and materials. This includes the design or layout of the spaces, since changes to the plan would require removal and patching of finishes and architectural features.

For questions 11-20, which treatment do you consider best meets the action objective of "Prevent Alteration of Interior Materials" as defined above? Do not consider any other objectives. Circle the value that best defines your preference for each pair of treatments.

11.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Restoration
12.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
13.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
14.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
15.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
16.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
17.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
18.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
19.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
20.	Adaptive Reuse	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration

Prevent Alteration of Exterior Materials

Prevent alteration of exterior materials: alteration or removal of materials, finishes, and architectural features on the exterior of the building should be prevented. Where repair or replacement of historic features is required, they will match the old in design, color, texture and materials. This does not include changes to the volume of the building.

For questions 21-30, which treatment do you consider best meets the action objective of "Prevent Alteration of Exterior Materials" as defined above? Do not consider any other action objectives. Circle the value that best defines your preference for each pair of treatments.

21.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Restoration
22.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
23.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
24.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
25.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
26.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
27.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
28.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
29.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
30.	Adaptive Reuse	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration

Use Building as it was Historically

Use building as it was historically: the building should be used as it was historically or given a new use which reflects the building's most important period.

For questions 31-40, which treatment do you consider best meets the action objective of "Use Building as it was Historically" as defined above? Do not consider any other action objectives. Circle the value that best defines your preference for each pair of treatments.

31. Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Restoration
32. Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
33. Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
34. Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
35. Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
36. Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
37. Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
38. Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
39. Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
40. Adaptive Reuse	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration

Keep Expenses Low

Keep expenses low: economical materials and finishes should be used as a part of a comprehensive plan to reduce construction costs (even if they are less compatible with the building's original design and materials). Replace or remove damaged details and materials rather than repair them.

For questions 41-50, which treatment do you consider best meets the action objective of "Keep Expenses Low" as defined above? Do not consider any other action objectives. Circle the value that best defines your preference for each pair of treatments.

41.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Restoration
42.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
43.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
44.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
45.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
46.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
47.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
48.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
49.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
50.	Adaptive Reuse	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration

Upgrade Building Systems

Upgrade building systems: existing building systems should be replaced with modern lighting, electrical service, heating/ventilation/air conditioning, plumbing, and any other systems as necessary to meet code requirements, improve efficiency, and increase comfort.

For questions 51-60, which treatment do you consider best meets the action objective of "Upgrade Building Systems" as defined above? Do not consider any other action objectives. Circle the value that best defines your preference for each pair of treatments.

51.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Restoration
52.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
53.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
54.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
55.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
56.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
57.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
58.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
59.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
60.	Adaptive Reuse	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration

Provide Functional Interior Layout

Provide functional interior layout: interior partitions should be removed, added or relocated as necessary to provide a more useful or efficient plan.

For questions 61-37, which treatment do you consider best meets the action objective of "Provide Functional Interior Layout" as defined above? Do not consider any other action objectives. Circle the value that best defines your preference for each pair of treatments.

61.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Restoration
62.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
63.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
64.	Preservation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
65.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Rehabilitation
66.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
67.	Restoration	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
68.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	Adaptive Reuse
69.	Rehabilitation	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration
70.	Adaptive Reuse	**9**	8	**7**	6	**5**	4	**3**	2	**1**	2	**3**	4	**5**	6	**7**	8	**9**	No Special Consideration

Appendix L

Focus Group Comment Summaries

Preservation Dayton: 24 Oct 97

- Most buildings in Air Force inventory are less than 50 years old; Wright-Patterson is probably the exception
- Relocation of an historic building isn't listed as an objective; should it be?
- Deciding on a preference, especially among some action objectives, is difficult
- Most people know intuitively what they like or want to do, but when it's broken down, it's hard to justify to yourself some of your preferences
- Don't add any more items to the list; the existing objectives are enough from a general standpoint; any more would "muddy the waters"
- Public needs to work hard to do all it can to encourage historic preservation
- But not all preservation has to be duplicated; it depends on the building use
- For the general public, the most important part is the exterior; enough examples need to be saved to show the public
- Trade-offs exist for every building
- Need to retain the basics — where it came from, history, importance
- For the interior, retain the "ambiance;" but it must be functional
- There shouldn't be a requirement to use the exact same materials
- Cost vs. Retention of historically significant exteriors is hard, but need to retain the look
- Really need "dyed in the wool" preservationists' help and input
- Objectives and treatment will always depend on the individual site in question
- Many people (at least within Preservation Dayton) are more interested in their own neighborhoods, and to a lesser extent, the community at large. In general, preservation of Air Force facilities is probably not high on their priority lists

Sinclair Community College: 30 Sept 97

- Using the definition listed for "Function" requires a judgment call
- The definitions for the objectives must be a sliding scale; it should be clearer
- The definitions for interior and exterior materials should be clearer regarding lead, asbestos, and other hazardous materials — are they to be preserved too?
- If a building is not significant, what's the point of comparing preservation of interior and exterior materials?
- Different elements of "Integrity" are more important than others, but the questionnaire lists them as all equal
- "Integrity" of the building is still a judgment call

Sinclair Community College: 1 Oct 97

- Depending on who determines the "most important function" of the building, disagreements could occur
- Function has little to do with determining what should be done to an historic building
- Using a building as it was historically is difficult to accomplish
- Sometimes repair of a feature or material is cheaper than replacement
- Making comparisons in general terms is difficult; it would be easier if specific buildings were used
- The definition of "Integrity" is too vague; it is hard to consider. Some parts of "Integrity" are more important than others.
- Exterior additions not seen from the street are OK
- Exceptions where repair or replacement is not possible are needed, but without using cheap materials
- "Keep Expenses Low" could be bad if it leads to loss of architectural features
- "Upgrade Building Systems" should be mandatory, except under museum conditions
- "Provide Functional Interior Layout" is fine if there are no "radical" changes

Preservation Dayton: 2 Oct 97

- A separate characteristic for "esthetics" is needed; it is different from architectural significance; a building could look nice, but not be significant
- Maybe a better cut-off for "Age" would be 40, since most buildings on Air Force bases aren't over 50 years old
- Hard to picture Air Force buildings if you've never been on base
- Buildings with large additions could be dealt with as two separate buildings
- Action Objectives should be on a sliding scale
- Using a building as it was historically should only be done if it is significant for cultural reasons; otherwise, displaying the features is more important
- Thinking in terms of one characteristic at a time is extremely difficult

Appendix M

Public Participants' Pairwise Comparison Responses

Note: Values more than 1.000 indicate the that preference was for the right-hand item of the pairwise comparison. Values less than 1.000 indicate that the reciprocal value was applied to the left-hand item of the pairwise comparison. For example, if a person answered

A **9 8 7 6 (5) 4 3 2 1 2 3 4 5 6 7 8 9** **B**

Then the number listed in the table would be 0.200.

Question	Group Geometric Mean	Preservation Dayton, Inc.										
		1	2	3	4	5	6	7	8	9	10	11
Part 1												
1	0.252	0.143	0.143	1.000	0.200	0.200	0.250	0.200	0.200	5.000	0.143	0.167
2	3.091	5.000	1.000	1.000	1.000	1.000	3.000	3.000	7.000	6.000	1.000	5.000
3	1.296	7.000	0.333	5.000	0.333	0.333	0.333	2.000	1.000	0.250	0.143	1.000
4	2.352	6.000	3.000	0.250	0.333	0.333	6.000	3.000	3.000	9.000	3.000	5.000
5	0.773	0.200	0.200	3.000	1.000	1.000	0.333	0.200	0.333	5.000	0.200	1.000
6	2.884	7.000	7.000	0.143	1.000	1.000	1.000	5.000	5.000	3.000	1.000	6.000
7	3.652	7.000	9.000	6.000	5.000	5.000	0.333	5.000	5.000	0.333	5.000	5.000
8	3.161	7.000	7.000	5.000	3.000	3.000	7.000	5.000	5.000	5.000	3.000	5.000
9	1.428	3.000	7.000	6.000	0.200	0.200	0.250	0.333	1.000	0.250	1.000	1.000
10	0.353	1.000	1.000	1.000	0.200	0.200	0.250	0.250	0.200	0.143	0.200	0.200
11	0.881	1.000	1.000	5.000	0.333	0.333	5.000	0.250	1.000	1.000	3.000	1.000
12	0.330	0.200	0.333	0.250	0.200	0.200	0.333	0.200	0.333	0.200	0.333	0.200
13	1.770	0.333	0.333	5.000	0.333	0.333	7.000	3.000	3.000	6.000	5.000	3.000
14	0.598	0.143	7.000	1.000	0.200	0.200	0.250	0.250	0.333	1.000	1.000	0.333
15	0.572	0.143	3.000	4.000	0.333	0.333	0.200	0.200	0.333	0.333	0.200	0.333
Part 2												
1	0.702	3.000	3.000	3.000	0.143	0.143	1.000	3.000	0.200	0.200	0.333	1.000
2	1.386	4.000	3.000	5.000	0.143	0.143	1.000	5.000	1.000	1.000	1.000	1.000
3	0.462	0.333	3.000	1.000	0.143	0.143	1.000	0.333	0.111	0.143	1.000	1.000

Question	Group Geometric Mean	Preservation Dayton, Inc.										
		1	2	3	4	5	6	7	8	9	10	11
4	0.772	0.333	0.333	3.000	0.143	0.143	1.000	3.000	0.111	0.333	1.000	2.000
5	2.591	7.000	0.333	7.000	1.000	1.000	6.000	5.000	1.000	1.000	5.000	3.000
6	2.724	7.000	3.000	3.000	1.000	1.000	6.000	5.000	0.200	1.000	7.000	3.000
7	1.603	3.000	1.000	2.000	9.000	9.000	0.333	0.333	5.000	1.000	7.000	3.000
8	2.935	7.000	1.000	6.000	7.000	7.000	4.000	5.000	3.000	3.000	5.000	3.000
9	0.469	1.000	0.200	2.000	3.000	3.000	0.250	0.200	0.333	0.200	0.200	1.000
10	0.423	0.333	0.333	4.000	0.333	0.333	0.200	0.200	0.143	3.000	0.143	3.000
11	1.692	8.000	0.333	3.000	7.000	7.000	0.333	0.250	5.000	1.000	0.333	3.000
12	1.312	7.000	0.333	7.000	7.000	7.000	4.000	0.200	5.000	1.000	0.250	3.000
Part 3												
1	2.117	1.000	1.000	2.000	7.000	7.000	5.000	6.000	9.000	5.000	1.000	2.000
2	1.435	1.000	1.000	0.200	0.200	0.200	5.000	2.000	7.000	0.333	1.000	1.000
3	3.648	4.000	3.000	1.000	7.000	7.000	5.000	5.000	9.000	5.000	1.000	2.000
4	0.938	0.333	0.333	4.000	0.333	0.333	3.000	0.500	1.000	0.333	0.333	2.000
5	3.420	8.000	1.000	1.000	7.000	7.000	5.000	6.000	5.000	1.000	4.000	3.000
6	2.828	8.000	3.000	4.000	7.000	7.000	5.000	3.000	7.000	3.000	4.000	3.000
7	0.888	1.000	3.000	0.250	9.000	9.000	0.500	3.000	1.000	0.200	1.000	0.500
8	0.449	0.125	1.000	4.000	0.143	0.143	0.333	0.500	0.333	0.167	1.000	0.333
9	0.487	0.125	0.333	1.000	0.143	0.143	0.333	0.333	0.111	0.333	1.000	0.500
10	0.306	0.125	0.200	0.200	0.200	0.200	0.333	0.333	0.111	0.200	1.000	0.500
11	1.914	8.000	1.000	4.000	7.000	7.000	3.000	3.000	1.000	3.000	3.000	1.000
12	1.191	0.125	1.000	3.000	7.000	7.000	3.000	2.000	1.000	3.000	3.000	1.000
13	1.253	1.000	1.000	3.000	9.000	9.000	3.000	0.500	5.000	0.200	1.000	2.000
14	0.514	1.000	1.000	1.000	0.143	0.143	3.000	0.333	0.200	0.333	1.000	0.500
15	2.003	0.333	3.000	2.000	7.000	7.000	3.000	0.500	5.000	7.000	1.000	2.000
16	0.709	0.333	0.333	0.333	5.000	5.000	0.333	0.200	0.200	0.333	1.000	1.000
17	3.212	7.000	3.000	1.000	9.000	9.000	3.000	3.000	1.000	3.000	4.000	2.000
18	3.074	7.000	3.000	5.000	9.000	9.000	3.000	2.000	1.000	8.000	4.000	2.000
19	1.574	3.000	5.000	1.000	7.000	7.000	0.500	0.333	1.000	3.000	0.250	2.000
20	0.980	0.200	5.000	1.000	0.143	0.143	3.000	0.333	1.000	0.200	0.250	2.000
21	2.208	7.000	5.000	0.500	1.000	1.000	3.000	0.333	9.000	5.000	0.250	3.000
22	0.789	1.000	9.000	1.000	0.200	0.200	0.333	0.333	0.200	1.000	1.000	0.500
23	0.390	1.000	1.000	2.000	0.143	0.143	0.333	1.000	0.200	0.333	0.250	0.500
24	1.033	3.000	1.000	1.000	1.000	1.000	3.000	1.000	1.000	0.333	1.000	0.500
25	1.028	0.125	3.000	2.000	9.000	9.000	0.333	2.000	1.000	0.200	0.250	2.000

Question	Group Geometric Mean	Preservation Dayton, Inc.										
		1	2	3	4	5	6	7	8	9	10	11
26	0.838	0.125	3.000	1.000	7.000	7.000	0.333	0.333	0.200	0.200	0.250	0.500
27	1.443	0.125	3.000	0.333	7.000	7.000	0.333	0.333	1.000	0.200	0.200	2.000
28	0.840	0.125	9.000	1.000	1.000	1.000	0.200	0.333	0.143	2.000	0.250	0.500
29	0.448	0.167	1.000	2.000	0.143	0.143	0.200	0.200	1.000	0.333	0.250	0.500
30	1.264	7.000	1.000	1.000	1.000	1.000	3.000	1.000	1.000	3.000	1.000	1.000
Part 4												
1	0.471	1.000	1.000	1.000	0.143	0.143	0.333	0.333	0.111	1.000	2.000	0.333
2	1.048	1.000	3.000	0.333	0.111	0.111	3.000	0.200	1.000	1.000	6.000	3.000
3	0.524	3.000	9.000	2.000	0.143	0.143	0.200	0.333	0.200	0.111	1.000	0.333
4	0.290	0.143	0.200	1.000	0.111	0.111	0.200	0.333	0.143	0.143	1.000	0.333
5	0.971	5.000	0.200	1.000	1.000	1.000	0.200	1.000	0.333	1.000	4.000	0.333
6	0.546	1.000	0.200	3.000	0.143	0.143	0.200	0.500	0.333	1.000	4.000	0.333
7	2.105	3.000	1.000	1.000	9.000	9.000	3.000	1.000	5.000	5.000	0.500	3.000
8	2.176	5.000	1.000	0.333	5.000	5.000	3.000	1.000	5.000	1.000	5.000	3.000
9	0.442	0.333	0.333	0.500	0.200	0.200	0.200	0.333	1.000	0.200	0.500	0.333
10	0.315	0.200	0.333	1.000	0.143	0.143	0.200	0.333	1.000	0.143	0.333	0.333
11	1.052	5.000	0.333	1.000	1.000	1.000	0.200	1.000	3.000	1.000	4.000	0.500
12	1.084	4.000	0.333	4.000	5.000	5.000	0.200	1.000	3.000	1.000	4.000	2.000
13	0.825	1.000	1.000	1.000	9.000	9.000	0.333	9.000	0.143	1.000	0.167	1.000
14	0.366	0.200	1.000	0.500	0.200	0.200	0.200	0.333	0.143	0.333	0.200	1.000
15	0.311	0.200	0.333	1.000	0.200	0.200	0.200	0.200	0.200	0.111	0.250	1.000
16	0.309	0.200	0.333	2.000	0.143	0.143	0.200	0.200	0.200	0.143	0.143	3.000
17	0.817	5.000	0.333	1.000	1.000	1.000	0.200	1.000	1.000	0.333	2.000	3.000
18	0.477	0.333	0.333	3.000	0.200	0.200	0.200	0.333	0.200	0.333	4.000	5.000
19	1.768	3.000	1.000	1.000	7.000	7.000	7.000	1.000	3.000	1.000	1.000	1.000
20	1.448	1.000	1.000	2.000	5.000	5.000	7.000	1.000	1.000	1.000	1.000	0.500
21	1.864	1.000	1.000	0.333	3.000	3.000	7.000	3.000	1.000	5.000	1.000	0.500
22	1.760	0.500	3.000	1.000	0.333	0.333	3.000	3.000	3.000	5.000	6.000	0.500
23	3.748	6.000	3.000	1.000	7.000	7.000	3.000	5.000	5.000	5.000	6.000	0.500
24	3.593	5.000	3.000	1.000	7.000	7.000	5.000	5.000	5.000	7.000	6.000	0.500
Part 5												
1	3.520	7.000	5.000	1.000	7.000	7.000	9.000	3.000	7.000	0.333	1.000	2.000
2	2.941	2.000	5.000	0.500	5.000	5.000	9.000	1.000	5.000	0.200	6.000	0.333
3	3.925	5.000	5.000	0.500	7.000	7.000	9.000	1.000	7.000	1.000	8.000	2.000

Question	Group Geometric Mean	Preservation Dayton, Inc.										
		1	2	3	4	5	6	7	8	9	10	11
4	1.721	2.000	5.000	3.000	7.000	7.000	4.000	0.333	0.143	0.250	5.000	1.000
5	2.716	7.000	1.000	0.250	7.000	7.000	5.000	2.000	1.000	3.000	5.000	2.000
6	2.128	6.000	1.000	2.000	7.000	7.000	5.000	2.000	1.000	3.000	4.000	2.000
7	1.244	0.200	3.000	1.000	7.000	7.000	3.000	0.500	1.000	0.333	0.167	2.000
8	1.019	0.200	3.000	2.000	0.143	0.143	3.000	0.500	1.000	0.200	0.200	0.500
9	1.336	0.200	3.000	0.500	0.143	0.143	3.000	0.500	5.000	0.200	0.250	2.000
10	0.471	0.143	1.000	1.000	0.143	0.143	0.250	0.333	0.200	0.200	0.143	0.500
11	0.572	0.500	1.000	2.000	0.143	0.143	0.250	0.333	1.000	0.333	0.143	0.500
12	1.043	6.000	1.000	0.500	1.000	1.000	3.000	0.500	1.000	1.000	1.000	1.000
13	0.980	1.000	1.000	1.000	7.000	7.000	3.000	1.000	1.000	0.200	0.167	1.000
14	0.513	1.000	0.333	3.000	0.143	0.143	0.333	1.000	1.000	0.200	0.143	0.500
15	0.611	1.000	0.333	0.500	0.200	0.200	5.000	1.000	0.200	0.200	0.143	1.000
16	0.350	0.200	0.333	1.000	0.143	0.143	0.333	1.000	0.111	0.200	0.143	0.500
17	1.044	0.200	5.000	2.000	0.200	0.200	0.250	1.000	1.000	7.000	0.333	2.000
18	1.335	7.000	1.000	0.333	1.000	1.000	0.250	1.000	1.000	0.200	1.000	2.000
Part 6												
1	0.490	0.333	0.333	1.000	0.111	0.111	0.200	0.200	0.200	1.000	1.000	0.200
2	1.249	5.000	1.000	0.500	0.143	0.143	4.000	1.000	5.000	1.000	8.000	2.000
3	0.444	0.333	1.000	0.250	0.143	0.143	0.250	0.111	0.200	0.111	1.000	1.000
4	0.236	0.333	0.200	1.000	0.111	0.111	0.200	0.111	0.200	0.111	1.000	0.333
5	0.571	1.000	0.200	5.000	1.000	1.000	0.200	1.000	0.200	0.200	3.000	0.333
6	0.350	1.000	0.200	1.000	0.143	0.143	0.333	0.200	0.200	0.200	4.000	0.500
7	1.755	5.000	1.000	1.000	9.000	9.000	3.000	5.000	5.000	1.000	0.333	2.000
8	2.385	5.000	1.000	0.500	5.000	5.000	3.000	1.000	5.000	1.000	4.000	4.000
9	0.537	1.000	1.000	1.000	5.000	5.000	0.250	0.200	1.000	0.143	0.333	1.000
10	0.289	0.200	0.333	2.000	0.200	0.200	0.200	0.143	3.000	0.143	0.200	1.000
11	0.934	5.000	0.333	1.000	1.000	1.000	0.200	3.000	5.000	1.000	3.000	1.000
12	0.850	4.000	0.333	0.333	1.000	1.000	0.500	0.333	5.000	1.000	4.000	2.000
13	0.813	1.000	1.000	2.000	9.000	9.000	3.000	1.000	0.200	1.000	0.200	0.333
14	0.498	0.200	1.000	0.500	0.200	0.200	0.333	0.333	0.200	1.000	0.250	0.333
15	0.315	0.200	1.000	1.000	0.200	0.200	0.200	0.143	0.200	0.111	0.167	0.333
16	0.255	0.200	0.333	1.000	0.200	0.200	0.200	0.143	0.143	0.143	0.200	0.333
17	0.842	7.000	0.333	3.000	5.000	5.000	0.250	1.000	0.200	1.000	2.000	0.333
18	0.669	7.000	0.333	0.333	5.000	5.000	0.200	0.200	0.333	0.333	0.333	0.333
19	1.044	0.333	1.000	0.250	1.000	1.000	3.000	9.000	3.000	5.000	1.000	1.000

Question	Group Geometric Mean	Preservation Dayton, Inc.										
		1	2	3	4	5	6	7	8	9	10	11
20	0.987	1.000	1.000	1.000	0.200	0.200	3.000	1.000	1.000	3.000	1.000	1.000
21	1.344	1.000	1.000	3.000	0.333	0.333	5.000	5.000	3.000	3.000	1.000	1.000
22	2.536	1.000	5.000	1.000	1.000	1.000	5.000	5.000	5.000	7.000	4.000	3.000
23	3.842	5.000	5.000	2.000	7.000	7.000	5.000	5.000	5.000	7.000	5.000	3.000
24	3.261	5.000	5.000	1.000	5.000	5.000	5.000	3.000	5.000	7.000	5.000	3.000
Part 7												
1	2.602	0.500	1.000	1.000	5.000	5.000	7.000	1.000	0.200	9.000	1.000	2.000
2	2.023	0.250	1.000	0.500	1.000	1.000	7.000	2.000	0.143	5.000	3.000	1.000
3	3.363	0.250	1.000	0.500	5.000	5.000	7.000	2.000	1.000	9.000	4.000	3.000
4	0.895	0.250	3.000	1.000	3.000	3.000	3.000	0.333	0.200	0.143	1.000	1.000
5	2.854	5.000	1.000	3.000	5.000	5.000	7.000	1.000	5.000	1.000	3.000	1.000
6	2.199	5.000	1.000	0.250	5.000	5.000	7.000	1.000	3.000	1.000	3.000	1.000
7	0.793	0.500	1.000	0.250	1.000	1.000	3.000	0.333	5.000	5.000	0.200	2.000
8	0.779	0.500	1.000	1.000	1.000	1.000	3.000	0.500	0.200	1.000	0.250	1.000
9	1.129	0.250	1.000	1.000	1.000	1.000	3.000	0.333	0.200	5.000	0.500	2.000
10	0.501	0.200	3.000	2.000	1.000	1.000	0.333	0.200	0.200	0.200	0.250	0.500
11	0.768	0.250	3.000	1.000	1.000	1.000	0.333	0.333	5.000	0.333	0.250	2.000
12	0.902	0.200	3.000	2.000	1.000	1.000	3.000	0.333	0.200	1.000	1.000	1.000
13	0.869	1.000	1.000	1.000	1.000	1.000	3.000	0.333	7.000	1.000	1.000	0.500
14	0.540	0.200	0.333	2.000	1.000	1.000	3.000	0.250	0.333	1.000	0.200	0.500
15	0.718	0.200	0.333	1.000	1.000	1.000	3.000	0.333	0.200	1.000	0.200	1.000
16	0.361	0.200	1.000	0.500	1.000	1.000	0.333	0.200	0.200	0.200	0.200	0.500
17	1.363	0.500	1.000	1.000	1.000	1.000	0.333	0.250	5.000	1.000	4.000	2.000
18	2.923	3.000	1.000	3.000	1.000	1.000	0.333	3.000	5.000	1.000	1.000	1.000

Question	Sinclair Community College													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Part 1														
1	0.200	0.333	0.333	0.333	0.167	0.333	0.200	0.200	0.167	0.143	0.250	0.167	0.200	0.333
2	5.000	5.000	5.000	4.000	4.000	5.000	3.000	5.000	6.000	1.000	7.000	2.000	5.000	3.000
3	7.000	0.333	2.000	4.000	3.000	0.500	5.000	0.333	6.000	3.000	1.000	1.000	5.000	5.000
4	7.000	5.000	2.000	1.000	3.000	5.000	0.333	1.000	6.000	1.000	7.000	4.000	3.000	3.000
5	1.000	1.000	5.000	0.167	2.000	0.250	5.000	5.000	0.250	0.333	0.200	4.000	0.143	6.000
6	9.000	3.000	1.000	6.000	4.000	1.000	7.000	1.000	6.000	5.000	7.000	7.000	5.000	3.000
7	9.000	5.000	4.000	2.000	1.000	4.000	5.000	1.000	4.000	7.000	5.000	7.000	5.000	5.000
8	9.000	5.000	5.000	3.000	4.000	1.000	0.200	1.000	4.000	5.000	1.000	1.000	5.000	2.000
9	9.000	2.000	4.000	1.000	4.000	0.500	7.000	1.000	2.000	7.000	0.200	5.000	1.000	5.000
10	0.333	0.333	0.200	2.000	0.333	0.200	0.143	1.000	0.111	1.000	0.250	1.000	0.143	1.000
11	1.000	1.000	1.000	1.000	5.000	1.000	0.143	1.000	1.000	1.000	1.000	0.200	0.143	1.000
12	0.200	2.000	0.167	0.167	4.000	0.250	0.143	1.000	0.143	1.000	0.143	0.333	0.143	3.000
13	5.000	1.000	6.000	3.000	3.000	0.333	5.000	1.000	6.000	3.000	5.000	0.333	1.000	0.333
14	0.333	3.000	5.000	0.333	4.000	0.200	5.000	1.000	0.250	0.143	0.200	1.000	0.200	1.000
15	0.143	3.000	1.000	1.000	3.000	0.333	3.000	1.000	0.167	0.167	0.143	3.000	0.333	3.000
Part 2														
1	1.000	5.000	3.000	0.333	1.000	0.333	0.143	1.000	1.000	1.000	1.000	0.250	0.333	0.333
2	3.000	1.000	3.000	1.000	1.000	1.000	7.000	0.200	1.000	1.000	5.000	1.000	3.000	3.000
3	3.000	0.167	0.250	0.200	0.500	3.000	0.200	3.000	0.167	1.000	1.000	0.250	0.200	0.200
4	1.000	5.000	3.000	0.333	3.000	1.000	0.143	5.000	0.167	7.000	0.333	0.250	0.333	3.000
5	7.000	0.333	4.000	3.000	4.000	3.000	7.000	3.000	1.000	7.000	4.000	5.000	1.000	3.000
6	5.000	6.000	3.000	3.000	3.000	3.000	7.000	5.000	0.167	9.000	3.000	5.000	1.000	5.000
7	0.333	7.000	0.250	1.000	4.000	3.000	7.000	0.143	1.000	0.143	4.000	5.000	7.000	0.167
8	7.000	0.143	3.000	1.000	2.000	0.333	9.000	5.000	1.000	1.000	4.000	5.000	7.000	7.000
9	0.333	0.143	0.333	0.200	0.500	3.000	7.000	0.143	0.167	0.143	0.333	0.200	0.333	1.000
10	0.333	0.250	0.143	0.333	3.000	0.333	0.333	0.200	0.167	0.333	0.250	0.200	0.333	5.000
11	3.000	5.000	1.000	3.000	5.000	0.333	3.000	1.000	1.000	0.250	4.000	7.000	1.000	2.000
12	0.333	2.000	0.167	3.000	5.000	0.333	0.200	1.000	0.167	0.333	3.000	4.000	1.000	5.000
Part 3														
1	0.333	3.000	4.000	0.200	4.000	0.333	7.000	0.333	6.000	5.000	1.000	7.000	1.000	1.000
2	1.000	5.000	4.000	5.000	3.000	3.000	0.200	5.000	6.000	5.000	1.000	5.000	1.000	0.333
3	3.000	5.000	2.000	5.000	4.000	3.000	5.000	3.000	6.000	5.000	3.000	7.000	5.000	1.000
4	0.333	2.000	1.000	1.000	4.000	0.333	0.333	1.000	1.000	5.000	5.000	1.000	0.333	5.000

Question	Sinclair Community College													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
5	5.000	5.000	3.000	2.000	4.000	3.000	5.000	3.000	2.000	7.000	7.000	4.000	1.000	3.000
6	3.000	7.000	0.333	3.000	5.000	3.000	0.200	0.200	1.000	3.000	8.000	4.000	3.000	3.000
7	0.333	1.000	0.250	5.000	0.200	0.200	7.000	0.143	1.000	1.000	1.000	1.000	1.000	0.333
8	0.200	0.143	0.250	5.000	0.333	3.000	0.143	1.000	1.000	5.000	0.200	0.250	0.200	0.250
9	3.000	0.200	1.000	9.000	0.250	1.000	7.000	3.000	0.167	1.000	0.200	0.200	0.143	0.333
10	0.333	0.333	0.167	0.167	4.000	0.333	0.143	1.000	0.167	0.333	0.250	0.250	0.143	2.000
11	5.000	3.000	0.500	2.000	5.000	1.000	5.000	0.333	0.500	1.000	7.000	0.333	0.200	3.000
12	1.000	2.000	0.333	0.167	5.000	0.500	5.000	3.000	0.167	0.333	3.000	0.200	0.143	4.000
13	0.333	5.000	0.200	9.000	0.250	0.333	0.143	1.000	6.000	0.200	3.000	3.000	3.000	0.333
14	0.200	5.000	0.200	0.250	0.200	0.333	0.143	1.000	6.000	0.200	0.200	3.000	1.000	0.250
15	1.000	5.000	0.167	0.500	0.200	4.000	7.000	1.000	6.000	3.000	3.000	3.000	3.000	3.000
16	5.000	1.000	1.000	0.333	0.200	0.333	1.000	1.000	2.000	1.000	0.200	1.000	1.000	1.000
17	7.000	5.000	3.000	4.000	5.000	3.000	7.000	1.000	2.000	1.000	8.000	3.000	3.000	2.000
18	5.000	5.000	3.000	9.000	0.200	4.000	7.000	1.000	1.000	1.000	7.000	2.000	3.000	3.000
19	0.333	0.333	5.000	4.000	4.000	5.000	3.000	0.143	6.000	0.333	0.200	4.000	3.000	5.000
20	0.333	0.333	5.000	4.000	3.000	4.000	0.200	7.000	6.000	5.000	0.200	4.000	0.333	1.000
21	3.000	1.000	5.000	3.000	5.000	5.000	0.333	0.333	6.000	3.000	4.000	5.000	3.000	5.000
22	0.333	0.200	5.000	8.000	0.167	1.000	1.000	3.000	6.000	1.000	0.250	0.333	0.333	3.000
23	0.143	0.143	0.333	0.333	5.000	0.333	0.200	0.333	0.500	0.333	0.333	0.333	0.333	0.333
24	0.200	1.000	2.000	5.000	5.000	4.000	0.200	1.000	0.500	1.000	1.000	0.250	3.000	0.500
25	0.333	0.200	0.500	1.000	0.250	0.333	7.000	3.000	6.000	1.000	0.200	3.000	7.000	0.333
26	0.200	0.200	0.500	5.000	0.167	3.000	7.000	0.333	6.000	3.000	1.000	5.000	0.333	0.333
27	1.000	0.333	0.500	5.000	4.000	3.000	7.000	1.000	6.000	1.000	5.000	4.000	7.000	3.000
28	3.000	0.143	2.000	1.000	0.250	5.000	9.000	1.000	2.000	1.000	0.250	1.000	1.000	1.000
29	1.000	0.143	2.000	1.000	0.250	0.333	0.143	3.000	1.000	0.200	0.167	0.500	0.333	3.000
30	5.000	1.000	0.500	1.000	4.000	1.000	0.200	1.000	2.000	0.200	7.000	3.000	0.333	1.000
Part 4														
1	1.000	0.333	1.000	0.333	0.200	1.000	0.111	5.000	1.000	1.000	0.333	0.333	0.143	0.200
2	5.000	3.000	1.000	4.000	0.167	5.000	5.000	3.000	1.000	1.000	4.000	0.200	0.200	0.200
3	5.000	0.333	1.000	0.333	0.200	1.000	5.000	1.000	0.167	1.000	0.200	0.333	0.143	0.200
4	0.143	0.200	1.000	0.125	4.000	0.200	0.200	1.000	0.167	0.143	0.200	0.200	0.143	3.000
5	5.000	1.000	2.000	1.000	5.000	1.000	3.000	3.000	0.167	0.143	0.500	7.000	0.143	1.000
6	0.333	3.000	2.000	0.167	5.000	1.000	1.000	3.000	0.167	0.200	0.250	0.250	0.143	0.333
7	3.000	3.000	1.000	0.250	6.000	5.000	7.000	0.333	1.000	1.000	4.000	0.333	7.000	3.000
8	7.000	3.000	1.000	2.000	5.000	1.000	5.000	1.000	1.000	1.000	4.000	0.333	7.000	3.000

Question	Sinclair Community College													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
9	0.333	0.333	2.000	0.250	0.250	0.200	7.000	3.000	0.167	0.333	0.250	0.333	0.200	5.000
10	0.200	0.333	0.333	0.250	4.000	0.333	0.333	1.000	0.167	0.143	0.250	0.333	0.200	0.200
11	0.333	5.000	2.000	0.500	6.000	0.333	5.000	3.000	0.167	0.143	3.000	5.000	0.200	0.500
12	0.333	3.000	2.000	0.500	7.000	0.200	1.000	3.000	0.167	0.333	0.250	5.000	0.200	0.200
13	1.000	1.000	1.000	0.250	6.000	0.167	0.333	0.333	1.000	1.000	0.250	0.333	3.000	0.200
14	0.200	0.333	1.000	0.200	0.200	1.000	0.200	1.000	1.000	1.000	0.250	0.250	0.143	1.000
15	0.333	0.200	1.000	0.200	0.200	0.333	3.000	0.333	0.167	0.333	0.200	0.250	0.143	1.000
16	0.200	0.200	0.250	0.200	6.000	0.200	0.333	1.000	0.167	0.143	0.200	1.000	0.143	0.250
17	1.000	1.000	2.000	0.500	5.000	0.333	3.000	0.333	0.167	0.143	0.333	5.000	0.143	1.000
18	0.200	3.000	3.000	0.333	6.000	0.333	0.200	0.333	0.167	0.143	0.250	0.333	0.143	0.333
19	1.000	1.000	4.000	0.333	1.000	0.333	9.000	3.000	1.000	5.000	5.000	1.000	5.000	0.333
20	1.000	1.000	1.000	1.000	1.000	0.333	9.000	5.000	1.000	5.000	4.000	1.000	1.000	0.200
21	3.000	1.000	3.000	2.000	1.000	0.200	9.000	3.000	6.000	7.000	6.000	1.000	3.000	0.500
22	1.000	5.000	0.333	1.000	1.000	5.000	9.000	1.000	6.000	1.000	3.000	5.000	3.000	1.000
23	5.000	7.000	5.000	5.000	6.000	5.000	9.000	3.000	1.000	5.000	3.000	7.000	3.000	1.000
24	3.000	7.000	4.000	4.000	7.000	3.000	9.000	0.333	6.000	5.000	3.000	7.000	3.000	1.000
Part 5														
1	3.000	3.000	9.000	5.000	4.000	5.000	5.000	3.000	6.000	5.000	5.000	5.000	7.000	0.333
2	3.000	3.000	6.000	5.000	6.000	3.000	5.000	3.000	6.000	7.000	5.000	5.000	1.000	3.000
3	7.000	3.000	5.000	6.000	5.000	3.000	7.000	0.333	6.000	7.000	7.000	5.000	7.000	5.000
4	5.000	1.000	4.000	4.000	0.250	3.000	5.000	1.000	0.167	3.000	1.000	5.000	1.000	3.000
5	5.000	5.000	2.000	3.000	5.000	1.000	9.000	3.000	1.000	3.000	3.000	5.000	3.000	1.000
6	3.000	3.000	1.000	2.000	5.000	3.000	0.333	0.333	0.167	5.000	3.000	5.000	3.000	1.000
7	0.200	0.333	1.000	2.000	0.200	3.000	5.000	0.333	6.000	0.333	4.000	3.000	5.000	3.000
8	0.333	0.333	1.000	2.000	0.200	4.000	3.000	3.000	6.000	5.000	3.000	3.000	1.000	5.000
9	0.200	0.333	0.500	3.000	4.000	5.000	7.000	3.000	6.000	5.000	4.000	3.000	5.000	4.000
10	0.333	0.200	2.000	3.000	0.200	3.000	0.200	1.000	1.000	0.200	1.000	0.500	1.000	2.000
11	0.143	0.200	1.000	0.500	5.000	1.000	0.200	5.000	4.000	1.000	0.333	0.333	0.333	2.000
12	0.200	1.000	2.000	0.333	7.000	3.000	0.200	3.000	0.250	1.000	0.500	3.000	1.000	1.000
13	1.000	0.200	0.200	0.333	0.200	0.333	0.111	7.000	4.000	1.000	1.000	5.000	3.000	3.000
14	0.333	1.000	0.200	0.333	0.200	0.333	1.000	0.200	3.000	5.000	0.500	0.333	3.000	0.500
15	0.333	0.200	0.200	0.333	0.167	0.333	3.000	7.000	3.000	0.333	1.000	5.000	3.000	0.500
16	0.333	0.200	3.000	0.333	0.167	0.200	1.000	0.333	0.333	1.000	0.500	0.250	1.000	0.500
17	0.333	0.200	5.000	6.000	6.000	1.000	1.000	1.000	1.000	5.000	0.500	3.000	1.000	0.333
18	3.000	1.000	6.000	3.000	0.167	1.000	9.000	3.000	2.000	1.000	3.000	3.000	1.000	1.000

Question	Sinclair Community College													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Part 6														
1	1.000	1.000	0.250	0.200	0.167	0.333	3.000	7.000	1.000	1.000	1.000	0.250	0.143	4.000
2	5.000	1.000	0.250	3.000	4.000	0.333	7.000	0.200	1.000	1.000	1.000	4.000	0.143	4.000
3	3.000	0.200	0.333	7.000	0.200	0.333	3.000	5.000	0.167	0.200	0.167	0.333	0.143	4.000
4	1.000	0.333	0.250	0.167	0.167	0.200	0.200	0.333	0.167	0.200	0.167	0.333	0.143	0.200
5	5.000	5.000	0.500	2.000	0.167	0.250	3.000	0.333	0.167	0.333	0.250	0.250	0.143	0.200
6	3.000	3.000	0.200	1.000	0.143	0.200	0.200	0.200	0.167	0.200	0.167	0.333	0.143	0.333
7	3.000	3.000	5.000	0.200	7.000	1.000	0.200	5.000	1.000	1.000	1.000	0.200	5.000	1.000
8	5.000	5.000	0.500	6.000	6.000	1.000	9.000	1.000	1.000	1.000	3.000	1.000	5.000	3.000
9	0.333	0.200	0.500	2.000	0.167	0.200	5.000	0.333	0.167	0.143	0.333	0.250	0.200	2.000
10	0.200	0.333	0.167	0.333	0.167	0.200	0.200	0.333	0.167	0.143	0.250	0.250	0.200	1.000
11	3.000	0.200	0.333	2.000	6.000	0.200	3.000	5.000	0.167	0.200	0.500	0.250	0.200	2.000
12	0.333	0.200	0.250	2.000	7.000	3.000	3.000	3.000	0.167	0.333	0.333	0.250	0.200	1.000
13	0.200	1.000	5.000	0.143	0.167	1.000	0.111	3.000	1.000	1.000	1.000	0.333	1.000	0.333
14	0.333	0.333	2.000	8.000	0.167	1.000	0.111	1.000	1.000	1.000	0.333	1.000	0.333	1.000
15	0.333	0.143	0.333	5.000	0.143	0.200	5.000	0.333	0.167	0.143	0.167	0.200	0.333	1.000
16	0.200	0.200	0.200	0.143	4.000	0.200	0.111	0.333	0.167	0.143	0.250	0.200	0.333	1.000
17	0.333	1.000	0.500	2.000	5.000	1.000	0.333	3.000	0.167	0.200	0.250	0.250	0.333	2.000
18	0.333	3.000	0.500	2.000	6.000	1.000	0.200	3.000	0.167	1.000	0.200	0.333	0.333	0.333
19	1.000	1.000	0.200	1.000	1.000	0.200	1.000	0.200	6.000	0.200	1.000	3.000	3.000	1.000
20	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.200	6.000	0.333	1.000	5.000	1.000	1.000
21	1.000	1.000	1.000	1.000	1.000	0.200	1.000	3.000	6.000	0.200	1.000	5.000	3.000	2.000
22	5.000	5.000	0.333	6.000	3.000	3.000	5.000	3.000	4.000	3.000	1.000	1.000	1.000	3.000
23	7.000	5.000	3.000	5.000	5.000	3.000	9.000	3.000	2.000	1.000	2.000	5.000	3.000	1.000
24	7.000	7.000	3.000	5.000	7.000	3.000	5.000	3.000	1.000	1.000	1.000	2.000	3.000	1.000
Part 7														
1	3.000	3.000	6.000	2.000	5.000	1.000	3.000	5.000	6.000	3.000	3.000	5.000	7.000	5.000
2	3.000	1.000	7.000	3.000	5.000	3.000	5.000	0.333	6.000	7.000	3.000	5.000	3.000	4.000
3	5.000	3.000	5.000	3.000	5.000	3.000	7.000	4.000	6.000	7.000	4.000	7.000	7.000	4.000
4	0.333	0.333	4.000	0.500	0.250	5.000	7.000	0.333	0.250	1.000	2.000	1.000	1.000	1.000
5	5.000	5.000	2.000	4.000	5.000	1.000	7.000	7.000	1.000	7.000	3.000	1.000	3.000	2.000
6	5.000	5.000	2.000	2.000	5.000	3.000	3.000	3.000	0.250	3.000	2.000	3.000	3.000	1.000
7	0.143	0.333	3.000	0.333	0.167	0.333	0.143	0.333	6.000	0.143	3.000	3.000	5.000	0.500
8	0.143	0.200	3.000	0.500	0.167	3.000	0.333	3.000	6.000	1.000	1.000	4.000	0.200	0.500

Question	Sinclair Community College													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
9	0.333	0.333	5.000	0.500	0.167	3.000	3.000	3.000	6.000	0.333	4.000	5.000	5.000	0.333
10	0.143	0.200	3.000	2.000	0.167	5.000	0.333	0.200	0.250	1.000	1.000	0.333	0.200	0.500
11	0.200	0.333	5.000	0.500	5.000	1.000	0.143	1.000	1.000	3.000	0.500	0.333	0.333	1.000
12	0.333	1.000	3.000	0.500	7.000	5.000	0.143	5.000	0.250	1.000	0.500	1.000	0.200	1.000
13	0.200	0.333	0.143	1.000	0.167	0.200	1.000	7.000	6.000	0.143	2.000	0.250	3.000	3.000
14	0.200	0.200	0.143	1.000	0.167	0.333	1.000	0.200	6.000	0.143	3.000	0.250	3.000	0.500
15	0.200	0.333	4.000	1.000	0.167	0.200	3.000	0.200	6.000	0.333	3.000	2.000	3.000	0.500
16	0.143	0.143	0.250	0.500	0.167	0.200	0.333	0.200	1.000	0.333	1.000	1.000	0.333	0.500
17	0.333	1.000	7.000	7.000	5.000	7.000	0.333	0.200	4.000	3.000	1.000	0.333	3.000	3.000
18	9.000	1.000	5.000	9.000	8.000	5.000	9.000	5.000	4.000	7.000	4.000	6.000	5.000	4.000

Appendix N

Expert Participants' Pairwise Comparison Responses

Note: Values more than 1.000 indicate the that preference was for the right-hand item of the pairwise comparison. Values less than 1.000 indicate that the reciprocal value was applied to the left-hand item of the pairwise comparison. For example, if a person answered

A **9 8 7 6 (5) 4 3 2 1 2 3 4 5 6 7 8 9** **B**

Then the number listed in the table would be 0.200.

Question	Group Geometric Mean	Experts (identified by the randomly assigned number used in Appendix E)					
		3	4	5	6	7	8
Part 1							
1	0.530	1.000	1.000	0.200	1.000	0.111	1.000
2	0.200	0.143	1.000	0.200	0.143	0.111	0.143
3	0.291	0.111	4.000	1.000	0.111	0.111	0.111
4	0.128	0.111	0.143	0.200	0.111	0.111	0.111
5	0.184	0.333	0.111	0.200	0.333	0.111	0.143
6	0.365	0.111	4.000	1.000	0.143	0.111	0.333
7	0.130	0.111	0.143	0.200	0.125	0.111	0.111
8	0.693	1.000	4.000	5.000	0.250	0.111	0.200
9	0.177	0.333	0.143	0.200	0.200	0.111	0.143
10	0.319	1.000	0.143	0.200	0.333	0.111	1.000
Part 2							
1	0.530	0.200	1.000	1.000	1.000	0.111	1.000
2	0.171	0.143	0.143	0.200	0.167	0.111	0.333
3	0.130	0.111	0.143	0.200	0.125	0.111	0.111
4	0.130	0.111	0.143	0.200	0.125	0.111	0.111
5	0.244	0.333	1.000	0.200	0.200	0.111	0.143
6	0.143	0.143	0.143	0.200	0.167	0.111	0.111
7	0.143	0.143	0.143	0.200	0.167	0.111	0.111

Question	Group Geometric Mean	Experts (identified by the randomly assigned number used in Appendix E)					
		3	4	5	6	7	8
8	0.231	0.200	0.143	1.000	0.333	0.111	0.143
9	0.160	0.143	0.143	0.200	0.333	0.111	0.111
10	0.352	0.333	0.143	0.200	1.000	1.000	0.200
Part 3							
1	0.693	1.000	1.000	1.000	1.000	0.111	1.000
2	0.230	0.250	0.111	1.000	0.143	0.111	0.333
3	0.136	0.143	0.111	0.200	0.125	0.111	0.143
4	0.125	0.111	0.111	0.200	0.125	0.111	0.111
5	0.338	0.200	1.000	1.000	0.200	0.111	0.333
6	0.139	0.143	0.111	0.200	0.143	0.111	0.143
7	0.128	0.111	0.111	0.200	0.143	0.111	0.111
8	0.209	0.200	0.167	0.200	0.333	0.111	0.333
9	0.160	0.143	0.111	0.200	0.333	0.111	0.143
10	0.567	0.200	1.000	1.000	0.500	1.000	0.333
Part 4							
1	0.514	1.000	1.000	1.000	0.500	0.111	0.333
2	0.281	0.333	1.000	0.200	0.333	0.111	0.200
3	0.192	0.143	0.111	1.000	0.200	0.111	0.143
4	0.131	0.111	0.111	0.200	0.167	0.111	0.111
5	0.428	0.333	1.000	1.000	0.500	0.111	0.333
6	0.199	0.143	0.111	1.000	0.250	0.111	0.143
7	0.135	0.111	0.111	0.200	0.200	0.111	0.111
8	0.273	0.333	0.111	1.000	0.500	0.111	0.200
9	0.153	0.143	0.111	0.200	0.333	0.111	0.111
10	0.442	1.000	0.111	0.200	1.000	1.000	0.333
Part 5							
1	1.308	1.000	1.000	5.000	1.000	1.000	1.000
2	2.768	1.000	9.000	5.000	5.000	2.000	1.000
3	5.030	5.000	9.000	5.000	8.000	3.000	3.000
4	7.504	9.000	9.000	5.000	9.000	7.000	7.000
5	1.979	1.000	1.000	5.000	4.000	3.000	1.000

Question	Group Geometric Mean	Experts (identified by the randomly assigned number used in Appendix E)					
		3	4	5	6	7	8
6	5.477	5.000	9.000	5.000	8.000	5.000	3.000
7	7.359	9.000	9.000	5.000	8.000	7.000	7.000
8	4.272	5.000	9.000	5.000	3.000	3.000	3.000
9	6.433	9.000	9.000	5.000	5.000	5.000	7.000
10	4.096	3.000	9.000	5.000	1.000	7.000	5.000
Part 6							
1	1.838	1.000	1.000	*	3.000	7.000	1.000
2	3.380	3.000	1.000	*	7.000	7.000	3.000
3	4.258	7.000	1.000	*	8.000	5.000	5.000
4	4.904	9.000	1.000	*	9.000	5.000	7.000
5	2.853	3.000	1.000	*	3.000	7.000	3.000
6	4.020	7.000	1.000	*	6.000	5.000	5.000
7	4.789	9.000	1.000	*	8.000	5.000	7.000
8	3.936	3.000	1.000	*	9.000	7.000	5.000
9	4.872	7.000	1.000	*	8.000	7.000	7.000
10	1.719	1.000	1.000	*	1.000	5.000	3.000
Part 7							
1	1.348	1.000	1.000	1.000	3.000	2.000	1.000
2	1.864	3.000	1.000	1.000	7.000	2.000	1.000
3	4.017	7.000	1.000	5.000	8.000	3.000	5.000
4	5.071	9.000	6.000	5.000	9.000	1.000	7.000
5	2.117	3.000	1.000	1.000	3.000	2.000	5.000
6	3.672	7.000	1.000	5.000	5.000	2.000	7.000
7	4.943	9.000	6.000	5.000	6.000	1.000	9.000
8	2.768	3.000	1.000	5.000	3.000	2.000	5.000
9	4.347	5.000	6.000	5.000	5.000	1.000	9.000
10	3.229	7.000	6.000	1.000	3.000	1.000	9.000

* - Participant did not complete this section of the questionnaire.

Appendix O

Weights of Preservation Treatments Based on Building Characteristics

Key:

Age of the Building:

>50	50 years or older
<50	Less than 50 years old

Building Function:

A	Administrative
R	Residential
I	Industrial
S	Specialized/Unique
C	Cultural/Recreational

Historic & Cultural Significance:

N	National
R	Regional
L	Local
–	None

Architectural & Engineering Significance:

N	National
R	Regional
L	Local
-	None

Integrity:

G	Good
F	Fair
P	Poor

Building Condition:

G	Good
F	Fair
P	Poor

Note: Weights for each row may not equal 1.000 due to rounding.

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	A	N	N	G	G	0.308	0.238	0.136	0.140	0.179	0.057	0.244	0.117	0.199	0.090	0.176	0.118
>50	A	N	N	G	F	0.306	0.237	0.136	0.140	0.181	0.064	0.240	0.117	0.195	0.092	0.174	0.118
>50	A	N	N	G	P	0.297	0.231	0.135	0.146	0.190	0.069	0.231	0.111	0.193	0.088	0.194	0.116
>50	A	N	N	F	G	0.304	0.236	0.135	0.141	0.183	0.063	0.241	0.115	0.197	0.086	0.176	0.123
>50	A	N	N	F	F	0.302	0.234	0.135	0.142	0.186	0.069	0.237	0.115	0.193	0.089	0.174	0.124
>50	A	N	N	F	P	0.294	0.229	0.135	0.148	0.195	0.074	0.227	0.109	0.190	0.085	0.194	0.121
>50	A	N	N	P	G	0.294	0.229	0.134	0.147	0.195	0.076	0.227	0.105	0.195	0.084	0.187	0.126
>50	A	N	N	P	F	0.292	0.228	0.134	0.148	0.198	0.082	0.223	0.105	0.191	0.087	0.185	0.127
>50	A	N	N	P	P	0.283	0.222	0.134	0.154	0.207	0.087	0.213	0.099	0.189	0.083	0.205	0.124
>50	A	N	R	G	G	0.308	0.239	0.136	0.139	0.178	0.053	0.251	0.120	0.198	0.082	0.173	0.124
>50	A	N	R	G	F	0.307	0.238	0.136	0.140	0.181	0.059	0.247	0.120	0.194	0.084	0.170	0.125
>50	A	N	R	G	P	0.298	0.232	0.135	0.145	0.190	0.064	0.237	0.113	0.192	0.080	0.191	0.122
>50	A	N	R	F	G	0.305	0.236	0.135	0.141	0.183	0.058	0.247	0.118	0.196	0.078	0.173	0.129

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	A	N	R	F	F	0.303	0.235	0.135	0.141	0.185	0.064	0.244	0.118	0.192	0.080	0.170	0.130
>50	A	N	R	F	P	0.294	0.229	0.135	0.147	0.195	0.069	0.234	0.112	0.190	0.076	0.191	0.127
>50	A	N	R	P	G	0.294	0.230	0.134	0.147	0.195	0.071	0.233	0.108	0.195	0.076	0.184	0.132
>50	A	N	R	P	F	0.293	0.228	0.134	0.147	0.197	0.077	0.230	0.108	0.191	0.078	0.182	0.133
>50	A	N	R	P	P	0.284	0.223	0.134	0.153	0.207	0.082	0.220	0.101	0.188	0.074	0.202	0.131
>50	A	N	L	G	G	0.296	0.230	0.135	0.146	0.192	0.058	0.231	0.116	0.188	0.082	0.190	0.134
>50	A	N	L	G	F	0.294	0.229	0.135	0.147	0.195	0.064	0.227	0.116	0.184	0.085	0.188	0.135
>50	A	N	L	G	P	0.286	0.223	0.135	0.152	0.204	0.069	0.218	0.110	0.182	0.081	0.208	0.133
>50	A	N	L	F	G	0.292	0.228	0.135	0.148	0.197	0.063	0.228	0.114	0.186	0.079	0.190	0.140
>50	A	N	L	F	F	0.291	0.227	0.135	0.149	0.199	0.070	0.224	0.114	0.182	0.081	0.188	0.141
>50	A	N	L	F	P	0.282	0.221	0.134	0.154	0.209	0.074	0.214	0.108	0.179	0.077	0.208	0.138
>50	A	N	L	P	G	0.282	0.221	0.134	0.154	0.209	0.076	0.214	0.104	0.184	0.077	0.201	0.143
>50	A	N	L	P	F	0.280	0.220	0.134	0.155	0.211	0.083	0.210	0.104	0.180	0.079	0.199	0.144
>50	A	N	L	P	P	0.272	0.221	0.133	0.160	0.214	0.087	0.200	0.098	0.178	0.075	0.219	0.141
>50	A	N	-	G	G	0.269	0.211	0.133	0.161	0.226	0.089	0.190	0.107	0.161	0.083	0.213	0.158
>50	A	N	-	G	F	0.267	0.210	0.133	0.162	0.228	0.095	0.186	0.107	0.157	0.086	0.211	0.158
>50	A	N	-	G	P	0.258	0.204	0.133	0.167	0.238	0.100	0.177	0.100	0.154	0.082	0.231	0.156
>50	A	N	-	F	G	0.265	0.209	0.133	0.163	0.231	0.094	0.187	0.105	0.158	0.080	0.213	0.163
>50	A	N	-	F	F	0.263	0.207	0.133	0.164	0.233	0.101	0.183	0.105	0.154	0.082	0.211	0.164
>50	A	N	-	F	P	0.254	0.202	0.132	0.169	0.243	0.105	0.174	0.099	0.152	0.078	0.231	0.161
>50	A	N	-	P	G	0.254	0.202	0.132	0.169	0.243	0.107	0.173	0.095	0.157	0.078	0.224	0.166
>50	A	N	-	P	F	0.253	0.200	0.132	0.170	0.245	0.114	0.169	0.095	0.153	0.080	0.222	0.167
>50	A	N	-	P	P	0.244	0.195	0.131	0.175	0.255	0.118	0.159	0.088	0.150	0.076	0.242	0.164
>50	A	R	N	G	G	0.317	0.245	0.135	0.134	0.169	0.050	0.263	0.124	0.214	0.073	0.153	0.123
>50	A	R	N	G	F	0.315	0.244	0.135	0.135	0.171	0.057	0.259	0.124	0.210	0.075	0.151	0.124
>50	A	R	N	G	P	0.306	0.238	0.135	0.140	0.181	0.062	0.249	0.118	0.208	0.071	0.171	0.122
>50	A	R	N	F	G	0.313	0.243	0.135	0.136	0.174	0.056	0.259	0.122	0.212	0.069	0.153	0.129
>50	A	R	N	F	F	0.311	0.241	0.135	0.136	0.176	0.062	0.256	0.122	0.208	0.072	0.151	0.130
>50	A	R	N	F	P	0.303	0.236	0.134	0.142	0.185	0.067	0.246	0.116	0.205	0.068	0.171	0.127
>50	A	R	N	P	G	0.303	0.236	0.134	0.142	0.186	0.069	0.245	0.112	0.210	0.067	0.165	0.132
>50	A	R	N	P	F	0.301	0.234	0.134	0.142	0.188	0.075	0.241	0.112	0.206	0.070	0.163	0.133
>50	A	R	N	P	P	0.293	0.229	0.133	0.148	0.197	0.080	0.232	0.106	0.204	0.066	0.183	0.130
>50	A	R	R	G	G	0.317	0.246	0.135	0.133	0.168	0.046	0.269	0.127	0.213	0.065	0.150	0.130
>50	A	R	R	G	F	0.316	0.244	0.135	0.134	0.171	0.052	0.266	0.127	0.209	0.067	0.148	0.131
>50	A	R	R	G	P	0.307	0.239	0.135	0.140	0.180	0.057	0.256	0.120	0.207	0.063	0.168	0.128
>50	A	R	R	F	G	0.314	0.243	0.135	0.135	0.173	0.051	0.266	0.125	0.211	0.061	0.150	0.135
>50	A	R	R	F	F	0.312	0.242	0.135	0.136	0.176	0.057	0.262	0.125	0.207	0.064	0.148	0.136
>50	A	R	R	F	P	0.303	0.236	0.134	0.141	0.185	0.062	0.253	0.119	0.205	0.060	0.168	0.133
>50	A	R	R	P	G	0.304	0.236	0.134	0.141	0.185	0.064	0.252	0.115	0.210	0.059	0.162	0.138
>50	A	R	R	P	F	0.302	0.235	0.134	0.142	0.187	0.070	0.248	0.115	0.206	0.062	0.160	0.139
>50	A	R	R	P	P	0.293	0.229	0.133	0.147	0.197	0.075	0.239	0.109	0.203	0.058	0.180	0.137
>50	A	R	L	G	G	0.305	0.237	0.135	0.140	0.182	0.051	0.250	0.123	0.203	0.065	0.168	0.140

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	A	R	L	G	F	0.304	0.236	0.135	0.141	0.185	0.057	0.246	0.123	0.199	0.068	0.166	0.141
>50	A	R	L	G	P	0.295	0.230	0.134	0.147	0.194	0.062	0.236	0.117	0.197	0.064	0.186	0.138
>50	A	R	L	F	G	0.302	0.235	0.134	0.142	0.187	0.056	0.246	0.122	0.201	0.062	0.168	0.146
>50	A	R	L	F	F	0.300	0.233	0.134	0.143	0.190	0.062	0.243	0.121	0.197	0.064	0.166	0.146
>50	A	R	L	F	P	0.291	0.228	0.134	0.149	0.199	0.067	0.233	0.115	0.194	0.060	0.186	0.144
>50	A	R	L	P	G	0.291	0.228	0.133	0.148	0.199	0.069	0.232	0.111	0.199	0.060	0.179	0.149
>50	A	R	L	P	F	0.290	0.227	0.133	0.149	0.201	0.076	0.228	0.111	0.195	0.062	0.177	0.150
>50	A	R	L	P	P	0.281	0.221	0.133	0.155	0.211	0.080	0.219	0.105	0.193	0.058	0.197	0.147
>50	A	R	-	G	G	0.278	0.218	0.133	0.155	0.216	0.082	0.209	0.114	0.176	0.066	0.190	0.163
>50	A	R	-	G	F	0.276	0.217	0.133	0.156	0.218	0.088	0.205	0.114	0.172	0.069	0.188	0.164
>50	A	R	-	G	P	0.267	0.211	0.132	0.162	0.228	0.093	0.196	0.107	0.169	0.065	0.209	0.162
>50	A	R	-	F	G	0.274	0.216	0.133	0.157	0.221	0.087	0.206	0.112	0.173	0.063	0.190	0.169
>50	A	R	-	F	F	0.272	0.214	0.132	0.158	0.223	0.094	0.202	0.112	0.169	0.065	0.188	0.170
>50	A	R	-	F	P	0.263	0.208	0.132	0.164	0.233	0.098	0.192	0.106	0.167	0.061	0.209	0.167
>50	A	R	-	P	G	0.264	0.209	0.132	0.163	0.233	0.100	0.191	0.102	0.172	0.061	0.202	0.172
>50	A	R	-	P	F	0.262	0.207	0.131	0.164	0.235	0.107	0.188	0.102	0.168	0.063	0.200	0.173
>50	A	R	-	P	P	0.253	0.201	0.131	0.170	0.245	0.111	0.178	0.095	0.165	0.059	0.220	0.170
>50	A	L	N	G	G	0.307	0.238	0.135	0.140	0.180	0.062	0.255	0.114	0.197	0.080	0.174	0.118
>50	A	L	N	G	F	0.305	0.237	0.135	0.140	0.183	0.068	0.251	0.114	0.193	0.082	0.172	0.119
>50	A	L	N	G	P	0.296	0.231	0.135	0.146	0.192	0.073	0.242	0.108	0.191	0.078	0.192	0.116
>50	A	L	N	F	G	0.303	0.236	0.135	0.142	0.185	0.067	0.252	0.112	0.195	0.076	0.174	0.123
>50	A	L	N	F	F	0.301	0.234	0.135	0.142	0.187	0.074	0.248	0.112	0.191	0.079	0.172	0.124
>50	A	L	N	F	P	0.293	0.229	0.134	0.148	0.197	0.078	0.238	0.106	0.189	0.075	0.192	0.121
>50	A	L	N	P	G	0.293	0.229	0.134	0.148	0.197	0.080	0.238	0.102	0.194	0.074	0.186	0.127
>50	A	L	N	P	F	0.291	0.227	0.134	0.148	0.199	0.087	0.234	0.102	0.190	0.077	0.184	0.127
>50	A	L	N	P	P	0.282	0.222	0.134	0.154	0.209	0.092	0.224	0.096	0.187	0.073	0.204	0.125
>50	A	L	R	G	G	0.307	0.239	0.135	0.139	0.180	0.057	0.262	0.117	0.197	0.072	0.171	0.124
>50	A	L	R	G	F	0.306	0.237	0.135	0.140	0.182	0.064	0.258	0.117	0.193	0.074	0.169	0.125
>50	A	L	R	G	P	0.297	0.232	0.135	0.145	0.191	0.069	0.248	0.111	0.191	0.070	0.189	0.122
>50	A	L	R	F	G	0.304	0.236	0.135	0.141	0.184	0.063	0.258	0.115	0.195	0.068	0.171	0.129
>50	A	L	R	F	F	0.302	0.235	0.135	0.142	0.187	0.069	0.255	0.115	0.191	0.071	0.169	0.130
>50	A	L	R	F	P	0.293	0.229	0.134	0.147	0.196	0.074	0.245	0.109	0.188	0.067	0.189	0.128
>50	A	L	R	P	G	0.293	0.229	0.134	0.147	0.196	0.076	0.244	0.105	0.193	0.066	0.183	0.133
>50	A	L	R	P	F	0.292	0.228	0.134	0.148	0.199	0.082	0.241	0.105	0.189	0.069	0.180	0.134
>50	A	L	R	P	P	0.283	0.222	0.133	0.152	0.208	0.087	0.231	0.099	0.187	0.065	0.201	0.131
>50	A	L	L	G	G	0.295	0.230	0.135	0.146	0.194	0.062	0.242	0.113	0.187	0.072	0.188	0.135
>50	A	L	L	G	F	0.293	0.229	0.135	0.147	0.196	0.069	0.238	0.113	0.183	0.075	0.186	0.136
>50	A	L	L	G	P	0.285	0.223	0.134	0.153	0.205	0.074	0.229	0.107	0.180	0.071	0.206	0.133
>50	A	L	L	F	G	0.291	0.228	0.134	0.148	0.198	0.068	0.239	0.112	0.184	0.069	0.188	0.140
>50	A	L	L	F	F	0.290	0.226	0.134	0.149	0.201	0.074	0.235	0.112	0.180	0.071	0.186	0.141
>50	A	L	L	F	P	0.281	0.221	0.134	0.154	0.210	0.079	0.225	0.105	0.178	0.067	0.206	0.138
>50	A	L	L	P	G	0.281	0.221	0.134	0.154	0.210	0.081	0.225	0.102	0.183	0.067	0.200	0.143

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	A	L	L	P	F	0.279	0.220	0.133	0.155	0.213	0.087	0.221	0.101	0.179	0.069	0.198	0.144
>50	A	L	L	P	P	0.271	0.214	0.133	0.160	0.222	0.092	0.211	0.095	0.176	0.065	0.218	0.142
>50	A	L	-	G	G	0.267	0.211	0.133	0.161	0.227	0.093	0.201	0.104	0.159	0.073	0.211	0.158
>50	A	L	-	G	F	0.266	0.209	0.133	0.162	0.230	0.100	0.197	0.104	0.155	0.076	0.209	0.159
>50	A	L	-	G	P	0.257	0.204	0.132	0.168	0.239	0.105	0.188	0.098	0.153	0.072	0.229	0.156
>50	A	L	-	F	G	0.264	0.208	0.133	0.163	0.232	0.099	0.198	0.102	0.157	0.070	0.211	0.163
>50	A	L	-	F	F	0.262	0.207	0.133	0.164	0.235	0.105	0.194	0.102	0.153	0.072	0.209	0.164
>50	A	L	-	F	P	0.253	0.201	0.132	0.170	0.244	0.110	0.185	0.096	0.150	0.068	0.229	0.161
>50	A	L	-	P	G	0.253	0.201	0.132	0.169	0.244	0.112	0.184	0.092	0.155	0.068	0.223	0.167
>50	A	L	-	P	F	0.251	0.200	0.132	0.170	0.247	0.118	0.180	0.092	0.151	0.070	0.221	0.167
>50	A	L	-	P	P	0.243	0.194	0.131	0.176	0.256	0.123	0.170	0.086	0.149	0.066	0.241	0.165
>50	A	-	N	G	G	0.284	0.222	0.134	0.152	0.208	0.075	0.219	0.115	0.172	0.077	0.187	0.155
>50	A	-	N	G	F	0.283	0.221	0.134	0.152	0.210	0.081	0.215	0.115	0.168	0.079	0.185	0.156
>50	A	-	N	G	P	0.274	0.215	0.133	0.158	0.220	0.086	0.206	0.109	0.166	0.075	0.205	0.153
>50	A	-	N	F	G	0.281	0.220	0.134	0.153	0.212	0.080	0.216	0.113	0.170	0.073	0.187	0.161
>50	A	-	N	F	F	0.279	0.218	0.133	0.154	0.215	0.086	0.212	0.113	0.166	0.076	0.185	0.161
>50	A	-	N	F	P	0.270	0.213	0.133	0.160	0.224	0.091	0.203	0.107	0.163	0.072	0.205	0.159
>50	A	-	N	P	G	0.270	0.213	0.133	0.159	0.225	0.093	0.202	0.103	0.168	0.071	0.198	0.164
>50	A	-	N	P	F	0.269	0.212	0.133	0.160	0.227	0.100	0.198	0.103	0.164	0.074	0.196	0.165
>50	A	-	N	P	P	0.260	0.206	0.132	0.166	0.237	0.104	0.188	0.097	0.162	0.070	0.217	0.162
>50	A	-	R	G	G	0.285	0.223	0.134	0.151	0.207	0.070	0.226	0.118	0.172	0.069	0.184	0.161
>50	A	-	R	G	F	0.283	0.222	0.134	0.152	0.210	0.077	0.222	0.118	0.167	0.071	0.182	0.162
>50	A	-	R	G	P	0.275	0.216	0.133	0.157	0.219	0.081	0.213	0.112	0.165	0.067	0.202	0.160
>50	A	-	R	F	G	0.281	0.220	0.134	0.153	0.212	0.075	0.223	0.116	0.169	0.065	0.184	0.167
>50	A	-	R	F	F	0.280	0.219	0.133	0.154	0.214	0.082	0.219	0.116	0.165	0.068	0.182	0.168
>50	A	-	R	F	P	0.271	0.213	0.133	0.159	0.224	0.087	0.209	0.110	0.163	0.064	0.202	0.165
>50	A	-	R	P	G	0.271	0.214	0.133	0.159	0.224	0.088	0.208	0.106	0.168	0.063	0.195	0.170
>50	A	-	R	P	F	0.269	0.212	0.133	0.160	0.227	0.095	0.205	0.106	0.164	0.066	0.193	0.171
>50	A	-	R	P	P	0.260	0.206	0.132	0.165	0.236	0.100	0.195	0.100	0.161	0.062	0.213	0.168
>50	A	-	L	G	G	0.273	0.214	0.133	0.158	0.221	0.075	0.206	0.114	0.161	0.069	0.201	0.172
>50	A	-	L	G	F	0.271	0.213	0.133	0.159	0.224	0.082	0.202	0.114	0.157	0.072	0.199	0.173
>50	A	-	L	G	P	0.262	0.207	0.133	0.165	0.233	0.086	0.193	0.108	0.155	0.068	0.219	0.170
>50	A	-	L	F	G	0.269	0.212	0.133	0.160	0.226	0.081	0.203	0.113	0.159	0.066	0.201	0.177
>50	A	-	L	F	F	0.267	0.211	0.133	0.161	0.229	0.087	0.199	0.113	0.155	0.068	0.199	0.178
>50	A	-	L	F	P	0.258	0.205	0.132	0.166	0.238	0.092	0.189	0.106	0.153	0.064	0.219	0.176
>50	A	-	L	P	G	0.259	0.205	0.132	0.166	0.238	0.094	0.189	0.102	0.157	0.064	0.213	0.181
>50	A	-	L	P	F	0.257	0.204	0.132	0.167	0.241	0.100	0.185	0.102	0.153	0.066	0.211	0.182
>50	A	-	L	P	P	0.248	0.198	0.131	0.172	0.250	0.105	0.175	0.096	0.151	0.062	0.231	0.179
>50	A	-	-	G	G	0.245	0.195	0.132	0.173	0.256	0.106	0.165	0.105	0.134	0.070	0.224	0.195
>50	A	-	-	G	F	0.243	0.193	0.132	0.174	0.258	0.113	0.162	0.105	0.130	0.073	0.222	0.196
>50	A	-	-	G	P	0.234	0.188	0.131	0.180	0.268	0.118	0.152	0.099	0.127	0.069	0.242	0.193
>50	A	-	-	F	G	0.241	0.192	0.131	0.175	0.260	0.112	0.162	0.103	0.132	0.067	0.224	0.201

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	A	-	-	F	F	0.239	0.191	0.131	0.176	0.263	0.118	0.158	0.103	0.127	0.069	0.222	0.201
>50	A	-	-	F	P	0.230	0.185	0.131	0.182	0.273	0.123	0.149	0.097	0.125	0.065	0.242	0.199
>50	A	-	-	P	G	0.230	0.185	0.130	0.182	0.273	0.125	0.148	0.093	0.130	0.065	0.236	0.204
>50	A	-	-	P	F	0.228	0.184	0.130	0.182	0.276	0.131	0.144	0.093	0.126	0.067	0.234	0.205
>50	A	-	-	P	P	0.219	0.178	0.130	0.188	0.285	0.136	0.135	0.087	0.124	0.063	0.254	0.202
>50	R	N	N	G	G	0.306	0.237	0.136	0.141	0.181	0.057	0.239	0.116	0.199	0.090	0.181	0.118
>50	R	N	N	G	F	0.304	0.236	0.136	0.142	0.183	0.063	0.235	0.116	0.195	0.093	0.179	0.119
>50	R	N	N	G	P	0.295	0.230	0.135	0.147	0.192	0.068	0.226	0.109	0.193	0.089	0.199	0.116
>50	R	N	N	F	G	0.302	0.235	0.135	0.143	0.185	0.062	0.236	0.114	0.197	0.087	0.181	0.123
>50	R	N	N	F	F	0.300	0.233	0.135	0.143	0.188	0.068	0.232	0.114	0.193	0.089	0.179	0.124
>50	R	N	N	F	P	0.292	0.228	0.135	0.149	0.197	0.073	0.222	0.108	0.191	0.085	0.199	0.122
>50	R	N	N	P	G	0.292	0.228	0.135	0.149	0.197	0.075	0.222	0.104	0.196	0.085	0.192	0.127
>50	R	N	N	P	F	0.290	0.226	0.134	0.149	0.200	0.081	0.218	0.104	0.192	0.087	0.190	0.128
>50	R	N	N	P	P	0.282	0.221	0.134	0.155	0.209	0.086	0.208	0.097	0.189	0.083	0.210	0.125
>50	R	N	R	G	G	0.306	0.238	0.136	0.140	0.180	0.052	0.246	0.119	0.199	0.082	0.178	0.124
>50	R	N	R	G	F	0.305	0.236	0.135	0.141	0.183	0.058	0.242	0.119	0.195	0.085	0.176	0.125
>50	R	N	R	G	P	0.296	0.231	0.135	0.147	0.192	0.063	0.232	0.112	0.193	0.081	0.196	0.123
>50	R	N	R	F	G	0.303	0.235	0.135	0.142	0.185	0.057	0.243	0.117	0.197	0.079	0.178	0.130
>50	R	N	R	F	F	0.301	0.234	0.135	0.143	0.187	0.064	0.239	0.117	0.193	0.081	0.176	0.131
>50	R	N	R	F	P	0.292	0.228	0.135	0.148	0.197	0.069	0.229	0.110	0.190	0.077	0.196	0.128
>50	R	N	R	P	G	0.292	0.228	0.134	0.148	0.197	0.070	0.228	0.107	0.195	0.077	0.189	0.133
>50	R	N	R	P	F	0.291	0.227	0.134	0.149	0.199	0.077	0.225	0.107	0.191	0.079	0.187	0.134
>50	R	N	R	P	P	0.282	0.221	0.134	0.154	0.209	0.082	0.215	0.100	0.189	0.075	0.207	0.131
>50	R	N	L	G	G	0.294	0.229	0.135	0.148	0.194	0.057	0.226	0.115	0.189	0.083	0.195	0.135
>50	R	N	L	G	F	0.293	0.228	0.135	0.148	0.197	0.063	0.222	0.115	0.185	0.085	0.193	0.136
>50	R	N	L	G	P	0.284	0.222	0.134	0.154	0.206	0.068	0.213	0.109	0.182	0.081	0.213	0.133
>50	R	N	L	F	G	0.291	0.221	0.135	0.149	0.199	0.062	0.223	0.113	0.186	0.079	0.195	0.140
>50	R	N	L	F	F	0.289	0.225	0.134	0.150	0.201	0.069	0.219	0.113	0.182	0.082	0.193	0.141
>50	R	N	L	F	P	0.280	0.220	0.134	0.156	0.211	0.074	0.209	0.107	0.180	0.078	0.213	0.139
>50	R	N	L	P	G	0.280	0.220	0.134	0.155	0.211	0.075	0.209	0.103	0.185	0.077	0.206	0.144
>50	R	N	L	P	F	0.279	0.219	0.134	0.156	0.213	0.082	0.205	0.103	0.181	0.080	0.204	0.144
>50	R	N	L	P	P	0.270	0.213	0.133	0.162	0.223	0.087	0.195	0.097	0.178	0.076	0.224	0.142
>50	R	N	-	G	G	0.267	0.210	0.133	0.163	0.228	0.088	0.185	0.106	0.161	0.084	0.218	0.158
>50	R	N	-	G	F	0.265	0.208	0.133	0.163	0.230	0.095	0.182	0.106	0.157	0.086	0.216	0.159
>50	R	N	-	G	P	0.256	0.203	0.133	0.169	0.240	0.099	0.172	0.099	0.155	0.082	0.236	0.156
>50	R	N	-	F	G	0.263	0.207	0.133	0.164	0.233	0.093	0.182	0.104	0.159	0.080	0.218	0.163
>50	R	N	-	F	F	0.261	0.206	0.133	0.165	0.235	0.100	0.178	0.104	0.155	0.083	0.216	0.164
>50	R	N	-	F	P	0.252	0.200	0.132	0.171	0.245	0.105	0.169	0.097	0.153	0.079	0.236	0.162
>50	R	N	-	P	G	0.252	0.200	0.132	0.170	0.245	0.107	0.168	0.094	0.157	0.078	0.229	0.167
>50	R	N	-	P	F	0.251	0.199	0.132	0.171	0.247	0.113	0.164	0.094	0.153	0.081	0.227	0.168
>50	R	N	-	P	P	0.242	0.193	0.131	0.177	0.257	0.118	0.155	0.087	0.151	0.077	0.247	0.165
>50	R	R	N	G	G	0.315	0.244	0.135	0.135	0.171	0.050	0.258	0.123	0.214	0.074	0.158	0.124

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	R	R	N	G	F	0.313	0.342	0.135	0.136	0.173	0.056	0.254	0.123	0.210	0.076	0.156	0.125
>50	R	R	N	G	P	0.305	0.237	0.135	0.142	0.183	0.061	0.244	0.116	0.208	0.072	0.176	0.122
>50	R	R	N	F	G	0.311	0.241	0.135	0.137	0.176	0.055	0.254	0.121	0.212	0.070	0.158	0.129
>50	R	R	N	F	F	0.310	0.240	0.135	0.138	0.178	0.061	0.251	0.121	0.208	0.072	0.156	0.130
>50	R	R	N	F	P	0.301	0.234	0.134	0.143	0.187	0.066	0.241	0.115	0.206	0.068	0.176	0.127
>50	R	R	N	P	G	0.301	0.235	0.134	0.143	0.187	0.068	0.240	0.111	0.211	0.068	0.170	0.133
>50	R	R	N	P	F	0.299	0.233	0.134	0.144	0.190	0.074	0.237	0.111	0.207	0.070	0.168	0.133
>50	R	R	N	P	P	0.291	0.227	0.133	0.149	0.199	0.079	0.227	0.104	0.204	0.066	0.188	0.131
>50	R	R	R	G	G	0.315	0.244	0.135	0.135	0.170	0.045	0.265	0.126	0.214	0.065	0.155	0.130
>50	R	R	R	G	F	0.314	0.243	0.135	0.135	0.173	0.051	0.261	0.126	0.210	0.068	0.153	0.131
>50	R	R	R	G	P	0.305	0.237	0.135	0.141	0.182	0.056	0.251	0.119	0.208	0.064	0.173	0.128
>50	R	R	R	F	G	0.312	0.242	0.135	0.137	0.175	0.050	0.261	0.124	0.212	0.062	0.155	0.135
>50	R	R	R	F	F	0.310	0.241	0.135	0.137	0.177	0.057	0.257	0.124	0.208	0.064	0.153	0.136
>50	R	R	R	F	P	0.301	0.235	0.134	0.143	0.187	0.062	0.248	0.118	0.205	0.060	0.173	0.134
>50	R	R	R	P	G	0.302	0.235	0.134	0.142	0.187	0.063	0.247	0.114	0.210	0.060	0.167	0.139
>50	R	R	R	P	F	0.300	0.234	0.133	0.143	0.189	0.070	0.243	0.114	0.206	0.062	0.165	0.140
>50	R	R	R	P	P	0.291	0.228	0.133	0.149	0.199	0.075	0.234	0.107	0.204	0.058	0.185	0.137
>50	R	R	L	G	G	0.303	0.236	0.135	0.142	0.184	0.050	0.245	0.122	0.204	0.066	0.173	0.141
>50	R	R	L	G	F	0.302	0.235	0.134	0.143	0.187	0.056	0.241	0.122	0.200	0.069	0.171	0.142
>50	R	R	L	G	P	0.293	0.229	0.134	0.148	0.196	0.061	0.231	0.116	0.197	0.065	0.191	0.139
>50	R	R	L	F	G	0.300	0.234	0.134	0.144	0.189	0.055	0.241	0.120	0.201	0.062	0.173	0.146
>50	R	R	L	F	F	0.298	0.232	0.134	0.144	0.191	0.062	0.238	0.120	0.197	0.065	0.171	0.147
>50	R	R	L	F	P	0.289	0.227	0.134	0.150	0.201	0.067	0.228	0.114	0.195	0.061	0.191	0.144
>50	R	R	L	P	G	0.289	0.227	0.133	0.150	0.201	0.068	0.227	0.110	0.200	0.060	0.184	0.149
>50	R	R	L	P	F	0.288	0.225	0.133	0.150	0.203	0.075	0.224	0.110	0.196	0.063	0.182	0.150
>50	R	R	L	P	P	0.279	0.220	0.133	0.156	0.213	0.080	0.214	0.104	0.193	0.059	0.202	0.148
>50	R	R	-	G	G	0.276	0.217	0.133	0.157	0.218	0.081	0.204	0.113	0.176	0.067	0.196	0.164
>50	R	R	-	G	F	0.274	0.215	0.133	0.157	0.220	0.088	0.200	0.113	0.172	0.070	0.193	0.165
>50	R	R	-	G	P	0.265	0.210	0.132	0.163	0.230	0.092	0.191	0.106	0.170	0.066	0.214	0.162
>50	R	R	-	F	G	0.272	0.214	0.132	0.159	0.223	0.086	0.201	0.111	0.174	0.063	0.196	0.169
>50	R	R	-	F	F	0.270	0.213	0.132	0.159	0.225	0.093	0.197	0.111	0.170	0.066	0.193	0.170
>50	R	R	-	F	P	0.262	0.207	0.132	0.165	0.235	0.098	0.187	0.105	0.168	0.062	0.214	0.167
>50	R	R	-	P	G	0.262	0.207	0.132	.165.	0.235	0.099	0.187	0.101	0.172	0.061	0.207	0.173
>50	R	R	-	P	F	0.260	0.206	0.131	0.165	0.237	0.106	0.183	0.101	0.168	0.064	0.205	0.173
>50	R	R	-	P	P	0.251	0.200	0.131	0.171	0.247	0.111	0.173	0.094	0.166	0.060	0.225	0.171
>50	R	L	N	G	G	0.305	0.237	0.135	0.141	0.182	0.061	0.250	0.113	0.198	0.081	0.179	0.118
>50	R	L	N	G	F	0.303	0.235	0.135	0.142	0.185	0.068	0.246	0.113	0.194	0.083	0.177	0.119
>50	R	L	N	G	P	0.294	0.230	0.135	0.147	0.194	0.072	0.237	0.107	0.192	0.079	0.197	0.117
>50	R	L	N	F	G	0.301	0.234	0.135	0.143	0.187	0.066	0.247	0.111	0.196	0.077	0.179	0.124
>50	R	L	N	F	F	0.299	0.233	0.135	0.144	0.189	0.073	0.243	0.111	0.192	0.079	0.177	0.125
>50	R	L	N	F	P	0.291	0.227	0.134	0.149	0.199	0.078	0.233	0.105	0.189	0.075	0.197	0.122
>50	R	L	N	P	G	0.291	0.227	0.134	0.149	0.199	0.080	0.233	0.101	0.194	0.075	0.191	0.127

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	R	L	N	P	F	0.289	0.226	0.134	0.150	0.201	0.086	0.229	0.101	0.190	0.077	0.189	0.128
>50	R	L	N	P	P	0.280	0.220	0.133	0.155	0.211	0.091	0.219	0.095	0.188	0.073	0.209	0.125
>50	R	L	R	G	G	0.305	0.237	0.135	0.141	0.182	0.057	0.257	0.116	0.197	0.072	0.176	0.125
>50	R	L	R	G	F	0.304	0.236	0.135	0.141	0.184	0.063	0.253	0.116	0.193	0.075	0.174	0.126
>50	R	L	R	G	P	0.295	0.230	0.135	0.147	0.193	0.068	0.244	0.109	0.191	0.071	0.194	0.123
>50	R	L	R	F	G	0.302	0.235	0.135	0.142	0.186	0.062	0.254	0.114	0.195	0.069	0.176	0.130
>50	R	L	R	F	F	0.300	0.234	0.135	0.143	0.189	0.068	0.250	0.114	0.191	0.071	0.174	0.131
>50	R	L	R	F	P	0.291	0.228	0.134	0.149	0.198	0.073	0.240	0.108	0.189	0.067	0.194	0.128
>50	R	L	R	P	G	0.291	0.228	0.134	0.148	0.198	0.075	0.239	0.104	0.194	0.067	0.188	0.133
>50	R	L	R	P	F	0.290	0.227	0.134	0.149	0.201	0.081	0.236	0.104	0.190	0.069	0.185	0.134
>50	R	L	R	P	P	0.281	0.221	0.133	0.155	0.210	0.086	0.226	0.098	0.187	0.065	0.206	0.132
>50	R	L	L	G	G	0.293	0.229	0.135	0.148	0.196	0.062	0.237	0.112	0.187	0.073	0.193	0.135
>50	R	L	L	G	F	0.291	0.228	0.135	0.148	0.198	0.068	0.233	0.112	0.183	0.076	0.191	0.136
>50	R	L	L	G	P	0.283	0.222	0.134	0.154	0.207	0.073	0.224	0.106	0.181	0.072	0.211	0.133
>50	R	L	L	F	G	0.289	0.226	0.134	0.150	0.200	0.067	0.234	0.111	0.185	0.069	0.193	0.141
>50	R	L	L	F	F	0.288	0.225	0.134	0.150	0.203	0.073	0.230	0.110	0.181	0.072	0.191	0.141
>50	R	L	L	F	P	0.279	0.219	0.134	0.156	0.212	0.078	0.220	0.104	0.178	0.068	0.211	0.139
>50	R	L	L	P	G	0.279	0.220	0.133	0.155	0.212	0.080	0.220	0.100	0.183	0.067	0.205	0.144
>50	R	L	L	P	F	0.277	0.218	0.133	0.156	0.215	0.086	0.216	0.100	0.179	0.070	0.203	0.145
>50	R	L	L	P	P	0.269	0.213	0.133	0.162	0.224	0.091	0.206	0.094	0.177	0.066	0.223	0.142
>50	R	L	-	G	G	0.265	0.210	0.133	0.163	0.229	0.093	0.196	0.103	0.160	0.074	0.216	0.158
>50	R	L	-	G	F	0.264	0.208	0.133	0.163	0.232	0.099	0.193	0.103	0.156	0.077	0.214	0.159
>50	R	L	-	G	P	0.255	0.202	0.132	0.169	0.241	0.104	0.183	0.096	0.153	0.073	0.234	0.157
>50	R	L	-	F	G	0.262	0.207	0.133	0.165	0.234	0.098	0.193	0.101	0.157	0.070	0.216	0.164
>50	R	L	-	F	F	0.260	0.206	0.132	0.165	0.237	0.105	0.189	0.101	0.153	0.073	0.214	0.165
>50	R	L	-	F	P	0.251	0.200	0.132	0.171	0.246	0.109	0.180	0.095	0.151	0.069	0.234	0.162
>50	R	L	-	P	G	0.251	0.200	0.132	0.171	0.246	0.111	0.179	0.091	0.156	0.068	0.228	0.167
>50	R	L	-	P	F	0.249	0.199	0.132	0.171	0.249	0.118	0.175	0.091	0.152	0.071	0.226	0.168
>50	R	L	-	P	P	0.241	0.193	0.131	0.177	0.258	0.122	0.166	0.085	0.149	0.067	0.246	0.165
>50	R	-	N	G	G	0.282	0.221	0.134	0.153	0.210	0.074	0.214	0.114	0.173	0.078	0.192	0.156
>50	R	-	N	G	F	0.281	0.220	0.134	0.154	0.212	0.080	0.211	0.114	0.168	0.080	0.190	0.157
>50	R	-	N	G	P	0.272	0.214	0.133	0.159	0.221	0.085	0.201	0.107	0.166	0.076	0.210	0.154
>50	R	-	N	F	G	0.279	0.218	0.133	0.155	0.214	0.079	0.211	0.112	0.170	0.074	0.192	0.161
>50	R	-	N	F	F	0.277	0.217	0.133	0.155	0.217	0.086	0.207	0.112	0.166	0.076	0.190	0.162
>50	R	-	N	F	P	0.268	0.211	0.133	0.161	0.226	0.091	0.198	0.106	0.164	0.072	0.210	0.159
>50	R	-	N	P	G	0.268	0.212	0.133	0.161	0.227	0.092	0.197	0.102	0.169	0.072	0.204	0.164
>50	R	-	N	P	F	0.267	0.210	0.133	0.162	0.229	0.099	0.193	0.102	0.165	0.074	0.201	0.165
>50	R	-	N	P	P	0.258	0.204	0.132	0.167	0.238	0.104	0.184	0.096	0.162	0.070	0.222	0.163
>50	R	-	R	G	G	0.283	0.222	0.134	0.152	0.209	0.069	0.221	0.117	0.172	0.069	0.189	0.162
>50	R	-	R	G	F	0.281	0.220	0.134	0.153	0.212	0.076	0.217	0.117	0.168	0.072	0.187	0.163
>50	R	-	R	G	P	0.273	0.215	0.133	0.159	0.221	0.081	0.208	0.110	0.166	0.068	0.207	0.160
>50	R	-	R	F	G	0.279	0.219	0.133	0.154	0.214	0.075	0.218	0.115	0.170	0.066	0.189	0.167

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	R	-	R	F	F	0.278	0.218	0.133	0.155	0.216	0.081	0.214	0.115	0.166	0.068	0.187	0.168
>50	R	-	R	F	P	0.269	0.212	0.133	0.161	0.226	0.086	0.204	0.109	0.163	0.064	0.207	0.166
>50	R	-	R	P	G	0.269	0.212	0.133	0.160	0.226	0.088	0.204	0.105	0.168	0.064	0.200	0.171
>50	R	-	R	P	F	0.267	0.211	0.132	0.161	0.229	0.094	0.200	0.105	0.164	0.066	0.198	0.172
>50	R	-	R	P	P	0.258	0.205	0.132	0.167	0.238	0.099	0.190	0.098	0.162	0.062	0.218	0.169
>50	R	-	L	G	G	0.271	0.213	0.133	0.160	0.223	0.074	0.201	0.113	0.162	0.070	0.206	0.173
>50	R	-	L	G	F	0.269	0.212	0.133	0.160	0.226	0.081	0.198	0.113	0.158	0.073	0.204	0.173
>50	R	-	L	G	P	0.260	0.206	0.133	0.166	0.235	0.086	0.188	0.107	0.155	0.069	0.224	0.171
>50	R	-	L	F	G	0.267	0.211	0.133	0.161	0.228	0.080	0.198	0.111	0.159	0.066	0.206	0.178
>50	R	-	L	F	F	0.265	0.209	0.133	0.162	0.231	0.086	0.194	0.111	0.155	0.069	0.204	0.179
>50	R	-	L	F	P	0.256	0.203	0.132	0.168	0.240	0.091	0.185	0.105	0.153	0.065	0.224	0.176
>50	R	-	L	P	G	0.257	0.204	0.132	0.168	0.240	0.093	0.184	0.101	0.158	0.064	0.218	0.181
>50	R	-	L	P	F	0.255	0.202	0.132	0.168	0.243	0.099	0.180	0.101	0.154	0.067	0.216	0.182
>50	R	-	L	P	P	0.246	0.197	0.131	0.174	0.252	0.104	0.171	0.095	0.151	0.063	0.236	0.179
>50	R	-	-	G	G	0.243	0.193	0.132	0.175	0.258	0.106	0.161	0.104	0.134	0.071	0.229	0.196
>50	R	-	-	G	F	0.241	0.192	0.131	0.176	0.260	0.112	0.157	0.104	0.130	0.073	0.227	0.197
>50	R	-	-	G	P	0.232	0.186	0.131	0.181	0.270	0.117	0.147	0.097	0.128	0.070	0.247	0.194
>50	R	-	-	F	G	0.236	0.191	0.131	0.177	0.262	0.111	0.157	0.102	0.132	0.067	0.229	0.201
>50	R	-	-	F	F	0.237	0.189	0.131	0.177	0.265	0.117	0.154	0.102	0.128	0.070	0.227	0.202
>50	R	-	-	F	P	0.228	0.184	0.131	0.183	0.275	0.122	0.144	0.096	0.126	0.066	0.247	0.199
>50	R	-	-	P	G	0.228	0.184	0.130	0.183	0.275	0.124	0.143	0.092	0.130	0.065	0.241	0.204
>50	R	-	-	P	F	0.226	0.182	0.130	0.184	0.278	0.130	0.139	0.092	0.126	0.068	0.239	0.205
>50	R	-	-	P	P	0.217	0.177	0.130	0.189	0.287	0.135	0.130	0.085	0.124	0.064	0.259	0.203
>50	I	N	N	G	G	0.304	0.236	0.136	0.142	0.183	0.059	0.240	0.114	0.197	0.089	0.179	0.122
>50	I	N	N	G	F	0.303	0.235	0.135	0.142	0.185	0.065	0.236	0.114	0.193	0.092	0.177	0.123
>50	I	N	N	G	P	0.294	0.229	0.135	0.148	0.194	0.070	0.226	0.107	0.191	0.088	0.197	0.121
>50	I	N	N	F	G	0.301	0.234	0.135	0.143	0.187	0.064	0.236	0.112	0.195	0.086	0.179	0.128
>50	I	N	N	F	F	0.299	0.232	0.135	0.144	0.190	0.071	0.233	0.112	0.191	0.088	0.177	0.129
>50	I	N	N	F	P	0.290	0.227	0.135	0.150	0.199	0.075	0.223	0.106	0.189	0.084	0.197	0.126
>50	I	N	N	P	G	0.290	0.227	0.134	0.149	0.199	0.077	0.222	0.102	0.193	0.084	0.190	0.131
>50	I	N	N	P	F	0.289	0.225	0.134	0.150	0.202	0.084	0.218	0.102	0.189	0.086	0.188	0.132
>50	I	N	N	P	P	0.280	0.220	0.134	0.156	0.211	0.088	0.209	0.095	0.187	0.082	0.208	0.129
>50	I	N	R	G	G	0.305	0.237	0.135	0.141	0.182	0.054	0.246	0.117	0.197	0.081	0.176	0.129
>50	I	N	R	G	F	0.303	0.235	0.135	0.142	0.185	0.061	0.243	0.117	0.193	0.084	0.173	0.130
>50	I	N	R	G	P	0.294	0.230	0.135	0.147	0.194	0.066	0.233	0.110	0.190	0.080	0.194	0.127
>50	I	N	R	F	G	0.301	0.234	0.135	0.143	0.187	0.060	0.243	0.115	0.195	0.078	0.176	0.134
>50	I	N	R	F	F	0.299	0.233	0.135	0.143	0.189	0.066	0.239	0.115	0.190	0.080	0.173	0.135
>50	I	N	R	F	P	0.291	0.227	0.134	0.149	0.199	0.071	0.230	0.109	0.188	0.076	0.194	0.132
>50	I	N	R	P	G	0.291	0.227	0.134	0.149	0.199	0.073	0.229	0.105	0.193	0.076	0.187	0.137
>50	I	N	R	P	F	0.289	0.226	0.134	0.149	0.201	0.079	0.225	0.105	0.189	0.078	0.185	0.138
>50	I	N	R	P	P	0.281	0.220	0.134	0.155	0.211	0.084	0.216	0.098	0.187	0.074	0.205	0.136
>50	I	N	L	G	G	0.293	0.228	0.135	0.148	0.196	0.059	0.227	0.113	0.186	0.082	0.193	0.139

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	I	N	L	G	F	0.291	0.227	0.135	0.149	0.199	0.066	0.223	0.113	0.182	0.084	0.191	0.140
>50	I	N	L	G	P	0.282	0.221	0.134	0.154	0.208	0.071	0.213	0.107	0.180	0.080	0.211	0.138
>50	I	N	L	F	G	0.290	0.226	0.135	0.149	0.200	0.065	0.223	0.111	0.184	0.078	0.193	0.145
>50	I	N	L	F	F	0.288	0.224	0.135	0.150	0.203	0.071	0.220	0.111	0.180	0.081	0.191	0.146
>50	I	N	L	F	P	0.279	0.219	0.135	0.155	0.212	0.076	0.210	0.105	0.178	0.077	0.211	0.143
>50	I	N	L	P	G	0.279	0.219	0.134	0.156	0.213	0.078	0.209	0.101	0.183	0.076	0.204	0.148
>50	I	N	L	P	F	0.277	0.218	0.133	0.157	0.215	0.084	0.205	0.101	0.179	0.079	0.202	0.149
>50	I	N	L	P	P	0.268	0.212	0.133	0.162	0.225	0.089	0.196	0.095	0.176	0.075	0.222	0.146
>50	I	N	-	G	G	0.265	0.209	0.133	0.163	0.230	0.090	0.186	0.104	0.159	0.083	0.216	0.162
>50	I	N	-	G	F	0.263	0.207	0.133	0.164	0.233	0.097	0.182	0.104	0.155	0.085	0.214	0.163
>50	I	N	-	G	P	0.254	0.202	0.133	0.169	0.242	0.102	0.173	0.097	0.152	0.081	0.234	0.161
>50	I	N	-	F	G	0.261	0.206	0.133	0.165	0.235	0.096	0.183	0.102	0.157	0.079	0.216	0.168
>50	I	N	-	F	F	0.259	0.205	0.133	0.166	0.237	0.102	0.179	0.102	0.153	0.082	0.214	0.169
>50	I	N	-	F	P	0.251	0.199	0.132	0.171	0.247	0.107	0.169	0.096	0.150	0.078	0.234	0.166
>50	I	N	-	P	G	0.251	0.199	0.132	0.171	0.247	0.109	0.169	0.092	0.155	0.077	0.227	0.171
>50	I	N	-	P	F	0.249	0.198	0.132	0.172	0.250	0.115	0.165	0.092	0.151	0.080	0.225	0.172
>50	I	N	-	P	P	0.240	0.192	0.131	0.177	0.259	0.120	0.155	0.085	0.149	0.076	0.245	0.169
>50	I	R	N	G	G	0.313	0.243	0.135	0.136	0.173	0.052	0.258	0.121	0.212	0.073	0.156	0.128
>50	I	R	N	G	F	0.312	0.241	0.135	0.137	0.175	0.058	0.255	0.121	0.208	0.075	0.154	0.129
>50	I	R	N	G	P	0.303	0.236	0.135	0.142	0.185	0.063	0.245	0.114	0.206	0.071	0.174	0.127
>50	I	R	N	F	G	0.310	0.240	0.135	0.138	0.178	0.057	0.255	0.119	0.210	0.069	0.156	0.134
>50	I	R	N	F	F	0.308	0.239	0.135	0.138	0.180	0.064	0.251	0.119	0.206	0.071	0.154	0.135
>50	I	R	N	F	P	0.299	0.233	0.134	0.144	0.189	0.068	0.242	0.113	0.204	0.067	0.174	0.132
>50	I	R	N	P	G	0.300	0.234	0.134	0.144	0.190	0.070	0.241	0.109	0.208	0.067	0.168	0.137
>50	I	R	N	P	F	0.298	0.232	0.134	0.144	0.192	0.077	0.237	0.109	0.204	0.069	0.166	0.138
>50	I	R	N	P	P	0.289	0.226	0.133	0.150	0.201	0.081	0.228	0.102	0.202	0.065	0.186	0.135
>50	I	R	R	G	G	0.314	0.243	0.135	0.135	0.172	0.047	0.265	0.124	0.212	0.064	0.153	0.135
>50	I	R	R	G	F	0.312	0.242	0.135	0.136	0.175	0.054	0.261	0.124	0.208	0.067	0.151	0.135
>50	I	R	R	G	P	0.304	0.236	0.134	0.141	0.184	0.059	0.252	0.117	0.205	0.063	0.171	0.133
>50	I	R	R	F	G	0.310	0.241	0.135	0.137	0.177	0.053	0.262	0.122	0.210	0.061	0.153	0.140
>50	I	R	R	F	F	0.309	0.240	0.134	0.138	0.180	0.059	0.258	0.122	0.205	0.063	0.151	0.141
>50	I	R	R	F	P	0.300	0.234	0.134	0.143	0.189	0.064	0.248	0.116	0.203	0.059	0.171	0.138
>50	I	R	R	P	G	0.300	0.234	0.134	0.143	0.189	0.066	0.248	0.112	0.208	0.059	0.165	0.143
>50	I	R	R	P	F	0.289	0.233	0.134	0.144	0.191	0.072	0.244	0.112	0.204	0.061	0.163	0.144
>50	I	R	R	P	P	0.290	0.227	0.133	0.149	0.201	0.077	0.234	0.105	0.202	0.057	0.183	0.141
>50	I	R	L	G	G	0.302	0.235	0.134	0.142	0.186	0.052	0.245	0.120	0.201	0.065	0.171	0.145
>50	I	R	L	G	F	0.300	0.234	0.134	0.143	0.189	0.059	0.242	0.120	0.197	0.068	0.168	0.146
>50	I	R	L	G	P	0.291	0.228	0.134	0.149	0.198	0.064	0.232	0.114	0.195	0.064	0.189	0.143
>50	I	R	L	F	G	0.298	0.233	0.134	0.144	0.191	0.058	0.242	0.118	0.199	0.061	0.171	0.151
>50	I	R	L	F	F	0.296	0.231	0.134	0.145	0.194	0.064	0.238	0.118	0.195	0.064	0.168	0.151
>50	I	R	L	F	P	0.288	0.226	0.133	0.150	0.203	0.069	0.229	0.112	0.193	0.060	0.189	0.149
>50	I	R	L	P	G	0.288	0.226	0.133	0.150	0.203	0.071	0.228	0.108	0.198	0.059	0.182	0.154

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	I	R	L	P	F	0.286	0.224	0.133	0.151	0.206	0.077	0.224	0.108	0.194	0.062	0.180	0.155
>50	I	R	L	P	P	0.277	0.219	0.133	0.156	0.215	0.082	0.215	0.102	0.191	0.058	0.200	0.152
>50	I	R	-	G	G	0.274	0.216	0.133	0.157	0.220	0.083	0.205	0.111	0.174	0.066	0.193	0.168
>50	I	R	-	G	F	0.273	0.214	0.133	0.158	0.223	0.090	0.201	0.111	0.170	0.068	0.191	0.169
>50	I	R	-	G	P	0.264	0.209	0.132	0.164	0.232	0.095	0.191	0.104	0.167	0.065	0.211	0.167
>50	I	R	-	F	G	0.270	0.213	0.132	0.159	0.225	0.089	0.201	0.109	0.172	0.062	0.193	0.174
>50	I	R	-	F	F	0.269	0.212	0.132	0.160	0.227	0.095	0.198	0.109	0.168	0.065	0.191	0.175
>50	I	R	-	F	P	0.260	0.206	0.132	0.166	0.237	0.100	0.188	0.103	0.165	0.061	0.211	0.172
>50	I	R	-	P	G	0.260	0.206	0.131	0.165	0.237	0.102	0.187	0.099	0.170	0.060	0.205	0.177
>50	I	R	-	P	F	0.258	0.205	0.131	0.166	0.240	0.108	0.183	0.099	0.166	0.063	0.203	0.178
>50	I	R	-	P	P	0.249	0.199	0.131	0.172	0.249	0.113	0.174	0.092	0.164	0.059	0.223	0.175
>50	I	L	N	G	G	0.303	0.236	0.135	0.142	0.184	0.063	0.251	0.111	0.196	0.080	0.177	0.123
>50	I	L	N	G	F	0.301	0.234	0.135	0.142	0.187	0.070	0.247	0.111	0.192	0.082	0.175	0.124
>50	I	L	N	G	P	0.293	0.229	0.135	0.148	0.196	0.075	0.237	0.105	0.189	0.078	0.195	0.121
>50	I	L	N	F	G	0.299	0.233	0.135	0.143	0.189	0.069	0.247	0.109	0.193	0.076	0.177	0.128
>50	I	L	N	F	F	0.298	0.232	0.135	0.144	0.191	0.075	0.244	0.109	0.189	0.078	0.175	0.129
>50	I	L	N	F	P	0.289	0.226	0.134	0.150	0.201	0.080	0.234	0.103	0.187	0.074	0.195	0.126
>50	I	L	N	P	G	0.289	0.226	0.134	0.149	0.201	0.082	0.233	0.099	0.192	0.074	0.189	0.131
>50	I	L	N	P	F	0.288	0.225	0.134	0.150	0.203	0.088	0.229	0.099	0.188	0.076	0.187	0.132
>50	I	L	N	P	P	0.279	0.219	0.134	0.156	0.213	0.093	0.220	0.093	0.185	0.072	0.207	0.130
>50	I	L	R	G	G	0.304	0.236	0.135	0.141	0.184	0.059	0.257	0.114	0.195	0.071	0.174	0.129
>50	I	L	R	G	F	0.302	0.235	0.135	0.142	0.186	0.065	0.254	0.114	0.191	0.074	0.172	0.130
>50	I	L	R	G	P	0.293	0.229	0.135	0.147	0.195	0.070	0.244	0.108	0.189	0.070	0.192	0.127
>50	I	L	R	F	G	0.300	0.234	0.135	0.143	0.188	0.064	0.254	0.112	0.193	0.068	0.174	0.134
>50	I	L	R	F	F	0.298	0.233	0.135	0.144	0.191	0.071	0.250	0.112	0.189	0.070	0.172	0.135
>50	I	L	R	F	P	0.290	0.227	0.134	0.149	0.200	0.075	0.241	0.106	0.187	0.066	0.192	0.133
>50	I	L	R	P	G	0.290	0.227	0.134	0.149	0.200	0.077	0.240	0.102	0.191	0.066	0.185	0.138
>50	I	L	R	P	F	0.288	0.226	0.134	0.150	0.203	0.084	0.236	0.102	0.187	0.068	0.183	0.139
>50	I	L	R	P	P	0.279	0.220	0.133	0.155	0.212	0.089	0.227	0.096	0.185	0.064	0.203	0.136
>50	I	L	L	G	G	0.292	0.228	0.135	0.148	0.198	0.064	0.238	0.110	0.185	0.072	0.191	0.140
>50	I	L	L	G	F	0.290	0.227	0.135	0.149	0.200	0.070	0.234	0.110	0.181	0.075	0.189	0.141
>50	I	L	L	G	P	0.281	0.221	0.134	0.154	0.209	0.075	0.224	0.104	0.178	0.071	0.209	0.138
>50	I	L	L	F	G	0.288	0.225	0.134	0.150	0.202	0.069	0.234	0.109	0.183	0.068	0.191	0.145
>50	I	L	L	F	F	0.286	0.224	0.134	0.151	0.205	0.076	0.231	0.108	0.179	0.071	0.189	0.146
>50	I	L	L	F	P	0.277	0.218	0.134	0.156	0.214	0.081	0.221	0.102	0.176	0.067	0.209	0.143
>50	I	L	L	P	G	0.278	0.219	0.133	0.156	0.214	0.082	0.220	0.098	0.181	0.066	0.203	0.148
>50	I	L	L	P	F	0.276	0.217	0.133	0.157	0.217	0.089	0.216	0.098	0.177	0.069	0.201	0.149
>50	I	L	L	P	P	0.267	0.212	0.133	0.162	0.226	0.094	0.207	0.092	0.175	0.065	0.221	0.147
>50	I	L	-	G	G	0.264	0.209	0.133	0.163	0.231	0.095	0.197	0.101	0.157	0.073	0.214	0.163
>50	I	L	-	G	F	0.262	0.207	0.133	0.164	0.234	0.101	0.193	0.101	0.153	0.076	0.212	0.164
>50	I	L	-	G	P	0.253	0.201	0.132	0.170	0.243	0.106	0.184	0.094	0.151	0.072	0.232	0.161
>50	I	L	-	F	G	0.260	0.206	0.132	0.165	0.236	0.100	0.194	0.099	0.155	0.069	0.214	0.168

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	**Preservation**	**Restoration**	**Rehabilitation**	**Adaptive Reuse**	**No Special Consideration**	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	I	L	-	F	F	0.258	0.205	0.132	0.166	0.238	0.107	0.190	0.099	0.151	0.072	0.212	0.169
>50	I	L	-	F	P	0.250	0.199	0.132	0.172	0.248	0.112	0.180	0.093	0.149	0.068	0.232	0.166
>50	I	L	-	P	G	0.250	0.199	0.132	0.171	0.249	0.113	0.180	0.089	0.154	0.067	0.226	0.171
>50	I	L	-	P	F	0.248	0.198	0.131	0.172	0.251	0.120	0.176	0.089	0.150	0.070	0.224	0.172
>50	I	L	-	P	P	0.239	0.192	0.131	0.178	0.261	0.125	0.166	0.083	0.147	0.066	0.244	0.170
>50	I	-	N	G	G	0.281	0.220	0.134	0.154	0.212	0.076	0.215	0.112	0.170	0.077	0.190	0.160
>50	I	-	N	G	F	0.279	0.219	0.134	0.154	0.214	0.083	0.211	0.112	0.166	0.079	0.188	0.161
>50	I	-	N	G	P	0.270	0.213	0.133	0.160	0.224	0.088	0.202	0.106	0.164	0.075	0.208	0.158
>50	I	-	N	F	G	0.277	0.217	0.133	0.155	0.217	0.082	0.212	0.110	0.168	0.073	0.190	0.165
>50	I	-	N	F	F	0.275	0.216	0.133	0.156	0.219	0.088	0.208	0.110	0.164	0.075	0.188	0.166
>50	I	-	N	F	P	0.267	0.210	0.133	0.162	0.228	0.093	0.198	0.104	0.162	0.071	0.208	0.164
>50	I	-	N	P	G	0.267	0.211	0.133	0.161	0.229	0.095	0.197	0.100	0.167	0.071	0.201	0.169
>50	I	-	N	P	F	0.265	0.209	0.133	0.162	0.231	0.101	0.194	0.100	0.162	0.073	0.199	0.170
>50	I	-	N	P	P	0.256	0.203	0.132	0.168	0.241	0.106	0.184	0.094	0.160	0.069	0.219	0.167
>50	I	-	R	G	G	0.282	0.221	0.134	0.153	0.211	0.072	0.222	0.115	0.170	0.068	0.187	0.166
>50	I	-	R	G	F	0.280	0.219	0.134	0.154	0.214	0.078	0.218	0.115	0.166	0.071	0.185	0.167
>50	I	-	R	G	P	0.271	0.214	0.133	0.159	0.223	0.083	0.208	0.108	0.163	0.067	0.205	0.165
>50	I	-	R	F	G	0.278	0.218	0.133	0.155	0.216	0.077	0.218	0.113	0.168	0.065	0.187	0.172
>50	I	-	R	F	F	0.276	0.217	0.133	0.155	0.219	0.083	0.215	0.113	0.164	0.067	0.185	0.173
>50	I	-	R	F	P	0.267	0.211	0.133	0.161	0.228	0.088	0.205	0.107	0.161	0.063	0.205	0.170
>50	I	-	R	P	G	0.267	0.211	0.132	0.161	0.228	0.090	0.204	0.103	0.166	0.063	0.198	0.175
>50	I	-	R	P	F	0.266	0.210	0.132	0.161	0.231	0.097	0.200	0.103	0.162	0.065	0.196	0.176
>50	I	-	R	P	P	0.257	0.204	0.132	0.167	0.240	0.101	0.191	0.096	0.160	0.061	0.216	0.173
>50	I	-	L	G	G	0.269	0.212	0.133	0.160	0.225	0.077	0.202	0.111	0.159	0.069	0.204	0.177
>50	I	-	L	G	F	0.267	0.211	0.133	0.161	0.228	0.083	0.198	0.111	0.155	0.072	0.202	0.178
>50	I	-	L	G	P	0.259	0.205	0.133	0.166	0.237	0.088	0.189	0.105	0.153	0.068	0.222	0.175
>50	I	-	L	F	G	0.265	0.210	0.133	0.162	0.230	0.082	0.199	0.110	0.157	0.065	0.204	0.182
>50	I	-	L	F	F	0.264	0.208	0.133	0.163	0.233	0.089	0.195	0.109	0.153	0.068	0.202	0.183
>50	I	-	L	F	P	0.255	0.202	0.132	0.168	0.242	0.093	0.185	0.103	0.151	0.064	0.222	0.181
>50	I	-	L	P	G	0.255	0.203	0.132	0.168	0.242	0.095	0.184	0.099	0.156	0.063	0.216	0.186
>50	I	-	L	P	F	0.253	0.201	0.132	0.169	0.245	0.102	0.181	0.099	0.152	0.066	0.214	0.187
>50	I	-	L	P	P	0.244	0.195	0.131	0.174	0.254	0.106	0.171	0.093	0.149	0.062	0.234	0.184
>50	I	-	-	G	G	0.241	0.192	0.131	0.175	0.260	0.108	0.161	0.102	0.132	0.070	0.227	0.200
>50	I	-	-	G	F	0.239	0.191	0.131	0.176	0.262	0.114	0.157	0.102	0.128	0.072	0.225	0.201
>50	I	-	-	G	P	0.230	0.185	0.131	0.182	0.272	0.119	0.148	0.095	0.126	0.069	0.245	0.198
>50	I	-	-	F	G	0.237	0.190	0.131	0.177	0.265	0.113	0.158	0.100	0.130	0.066	0.227	0.205
>50	I	-	-	F	F	0.235	0.188	0.131	0.178	0.267	0.120	0.154	0.100	0.126	0.069	0.225	0.206
>50	I	-	-	F	P	0.226	0.183	0.130	0.184	0.277	0.124	0.144	0.094	0.123	0.065	0.245	0.204
>50	I	-	-	P	G	0.227	0.183	0.130	0.184	0.277	0.126	0.144	0.090	0.128	0.064	0.239	0.209
>50	I	-	-	P	F	0.225	0.181	0.130	0.184	0.280	0.133	0.140	0.090	0.124	0.067	0.236	0.210
>50	I	-	-	P	P	0.216	0.175	0.129	0.190	0.289	0.138	0.130	0.083	0.122	0.063	0.257	0.207
>50	S	N	N	G	G	0.312	0.241	0.136	0.137	0.174	0.057	0.246	0.119	0.203	0.092	0.170	0.114

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	**Preservation**	**Restoration**	**Rehabilitation**	**Adaptive Reuse**	**No Special Consideration**	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	S	N	N	G	F	0.310	0.239	0.136	0.138	0.177	0.063	0.243	0.119	0.199	0.094	0.167	0.115
>50	S	N	N	G	P	0.301	0.234	0.135	0.144	0.186	0.068	0.233	0.113	0.196	0.090	0.188	0.112
>50	S	N	N	F	G	0.308	0.238	0.135	0.139	0.179	0.062	0.243	0.117	0.201	0.088	0.170	0.119
>50	S	N	N	F	F	0.302	0.237	0.135	0.140	0.182	0.068	0.239	0.117	0.197	0.091	0.167	0.120
>50	S	N	N	F	P	0.298	0.231	0.135	0.145	0.191	0.073	0.230	0.111	0.194	0.087	0.188	0.117
>50	S	N	N	P	G	0.298	0.132	0.135	0.145	0.191	0.075	0.229	0.107	0.199	0.086	0.181	0.123
>50	S	N	N	P	F	0.296	0.130	0.134	0.146	0.193	0.081	0.225	0.107	0.195	0.089	0.179	0.123
>50	S	N	N	P	P	0.287	0.225	0.134	0.151	0.206	0.086	0.216	0.101	0.193	0.085	0.199	0.121
>50	S	N	R	G	G	0.312	0.241	0.136	0.137	0.174	0.052	0.253	0.122	0.202	0.083	0.166	0.120
>50	S	N	R	G	F	0.311	0.240	0.136	0.137	0.176	0.058	0.249	0.122	0.198	0.086	0.164	0.121
>50	S	N	R	G	P	0.302	0.235	0.135	0.143	0.185	0.063	0.240	0.116	0.196	0.082	0.184	0.118
>50	S	N	R	F	G	0.309	0.239	0.135	0.139	0.178	0.057	0.250	0.120	0.200	0.080	0.166	0.126
>50	S	N	R	F	F	0.307	0.238	0.135	0.139	0.181	0.064	0.246	0.120	0.196	0.082	0.164	0.126
>50	S	N	R	F	P	0.298	0.232	0.135	0.145	0.190	0.069	0.237	0.114	0.194	0.078	0.184	0.124
>50	S	N	R	P	G	0.298	0.232	0.134	0.145	0.190	0.070	0.236	0.110	0.199	0.078	0.178	0.129
>50	S	N	R	P	F	0.297	0.231	0.134	0.145	0.193	0.077	0.232	0.110	0.195	0.080	0.176	0.130
>50	S	N	R	P	P	0.288	0.225	0.134	0.151	0.202	0.082	0.222	0.104	0.192	0.076	0.196	0.127
>50	S	N	L	G	G	0.300	0.233	0.135	0.144	0.188	0.057	0.233	0.118	0.192	0.084	0.184	0.131
>50	S	N	L	G	F	0.298	0.232	0.135	0.145	0.190	0.063	0.230	0.118	0.188	0.087	0.182	0.132
>50	S	N	L	G	P	0.290	0.226	0.135	0.150	0.199	0.068	0.220	0.112	0.186	0.083	0.202	0.129
>50	S	N	L	F	G	0.296	0.231	0.135	0.146	0.192	0.062	0.230	0.117	0.190	0.081	0.184	0.136
>50	S	N	L	F	F	0.295	0.229	0.135	0.146	0.195	0.069	0.226	0.117	0.186	0.083	0.182	0.137
>50	S	N	L	F	P	0.286	0.224	0.134	0.152	0.204	0.074	0.217	0.110	0.183	0.079	0.202	0.134
>50	S	N	L	P	G	0.286	0.224	0.134	0.152	0.204	0.075	0.216	0.106	0.188	0.079	0.195	0.139
>50	S	N	L	P	F	0.284	0.222	0.134	0.152	0.207	0.082	0.212	0.106	0.184	0.081	0.193	0.140
>50	S	N	L	P	P	0.276	0.217	0.133	0.158	0.216	0.087	0.203	0.100	0.182	0.077	0.213	0.138
>50	S	N	-	G	G	0.273	0.214	0.134	0.159	0.221	0.088	0.193	0.109	0.165	0.085	0.207	0.154
>50	S	N	-	G	F	0.271	0.212	0.133	0.160	0.224	0.095	0.189	0.109	0.161	0.088	0.205	0.155
>50	S	N	-	G	P	0.262	0.207	0.133	0.165	0.233	0.099	0.179	0.103	0.158	0.084	0.225	0.152
>50	S	N	-	F	G	0.269	0.211	0.133	0.161	0.226	0.093	0.189	0.107	0.162	0.082	0.207	0.159
>50	S	N	-	F	F	0.267	0.210	0.133	0.161	0.229	0.100	0.186	0.107	0.158	0.084	0.205	0.160
>50	S	N	-	F	P	0.258	0.204	0.132	0.167	0.238	0.105	0.176	0.101	0.156	0.080	0.225	0.157
>50	S	N	-	P	G	0.258	0.204	0.132	0.167	0.238	0.106	0.175	0.097	0.161	0.080	0.218	0.163
>50	S	N	-	P	F	0.257	0.203	0.132	0.168	0.241	0.113	0.172	0.097	0.157	0.082	0.216	0.163
>50	S	N	-	P	P	0.248	0.197	0.132	0.173	0.250	0.118	0.162	0.091	0.154	0.078	0.236	0.161
>50	S	R	N	G	G	0.321	0.248	0.135	0.132	0.165	0.049	0.265	0.126	0.218	0.075	0.147	0.120
>50	S	R	N	G	F	0.319	0.246	0.135	0.132	0.167	0.056	0.261	0.126	0.214	0.077	0.145	0.121
>50	S	R	N	G	P	0.310	0.241	0.135	0.138	0.176	0.061	0.252	0.120	0.211	0.073	0.165	0.118
>50	S	R	N	F	G	0.317	0.245	0.135	0.134	0.169	0.055	0.262	0.124	0.216	0.071	0.147	0.125
>50	S	R	N	F	F	0.315	0.244	0.135	0.134	0.172	0.061	0.258	0.124	0.212	0.074	0.145	0.126
>50	S	R	N	F	P	0.307	0.238	0.134	0.140	0.181	0.066	0.248	0.118	0.209	0.070	0.165	0.123
>50	S	R	N	P	G	0.307	0.238	0.134	0.139	0.181	0.068	0.248	0.114	0.214	0.069	0.159	0.128

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	S	R	N	P	F	0.305	0.237	0.134	0.140	0.184	0.074	0.244	0.114	0.210	0.072	0.157	0.129
>50	S	R	N	P	P	0.297	0.231	0.134	0.146	0.193	0.079	0.234	0.108	0.208	0.068	0.177	0.127
>50	S	R	R	G	G	0.321	0.248	0.135	0.131	0.164	0.045	0.272	0.129	0.217	0.067	0.144	0.126
>50	S	R	R	G	F	0.320	0.247	0.135	0.132	0.166	0.051	0.268	0.129	0.213	0.069	0.142	0.127
>50	S	R	R	G	P	0.311	0.241	0.133	0.137	0.176	0.056	0.259	0.123	0.211	0.065	0.162	0.124
>50	S	R	R	F	G	0.318	0.246	0.135	0.133	0.169	0.050	0.269	0.127	0.215	0.063	0.144	0.131
>50	S	R	R	F	F	0.316	0.245	0.135	0.134	0.171	0.057	0.265	0.127	0.211	0.066	0.142	0.132
>50	S	R	R	F	P	0.307	0.239	0.134	0.139	0.180	0.062	0.255	0.121	0.209	0.062	0.162	0.130
>50	S	R	R	P	G	0.307	0.239	0.134	0.139	0.181	0.063	0.254	0.117	0.214	0.061	0.156	0.135
>50	S	R	R	P	F	0.306	0.238	0.134	0.140	0.183	0.070	0.251	0.117	0.210	0.063	0.153	0.136
>50	S	R	R	P	P	0.297	0.232	0.133	0.145	0.192	0.075	0.241	0.111	0.207	0.060	0.174	0.133
>50	S	R	L	G	G	0.309	0.240	0.135	0.138	0.178	0.050	0.252	0.125	0.207	0.067	0.161	0.137
>50	S	R	L	G	F	0.308	0.239	0.135	0.139	0.180	0.056	0.248	0.125	0.203	0.070	0.159	0.137
>50	S	R	L	G	P	0.299	0.233	0.134	0.144	0.190	0.061	0.239	0.119	0.201	0.066	0.179	0.135
>50	S	R	L	F	G	0.306	0.237	0.134	0.140	0.183	0.055	0.249	0.124	0.205	0.064	0.161	0.142
>50	S	R	L	F	F	0.304	0.236	0.134	0.141	0.185	0.062	0.245	0.124	0.201	0.066	0.159	0.143
>50	S	R	L	F	P	0.295	0.230	0.134	0.146	0.194	0.067	0.235	0.117	0.198	0.062	0.179	0.140
>50	S	R	L	P	G	0.295	0.231	0.134	0.146	0.195	0.068	0.235	0.113	0.203	0.062	0.173	0.145
>50	S	R	L	P	F	0.294	0.229	0.133	0.147	0.197	0.075	0.231	0.113	0.199	0.064	0.171	0.146
>50	S	R	L	P	P	0.285	0.224	0.133	0.152	0.206	0.080	0.221	0.107	0.197	0.060	0.191	0.143
>50	S	R	-	G	G	0.282	0.221	0.133	0.152	0.211	0.081	0.211	0.116	0.180	0.068	0.184	0.160
>50	S	R	-	G	F	0.280	0.219	0.133	0.154	0.214	0.087	0.208	0.116	0.176	0.071	0.182	0.161
>50	S	R	-	G	P	0.271	0.214	0.132	0.159	0.223	0.092	0.198	0.110	0.173	0.067	0.202	0.158
>50	S	R	-	F	G	0.278	0.218	0.133	0.155	0.216	0.086	0.208	0.114	0.177	0.065	0.184	0.165
>50	S	R	-	F	F	0.276	0.217	0.132	0.156	0.219	0.093	0.204	0.114	0.173	0.067	0.182	0.166
>50	S	R	-	F	P	0.267	0.211	0.132	0.161	0.228	0.098	0.195	0.108	0.171	0.063	0.202	0.163
>50	S	R	-	P	G	0.268	0.211	0.132	0.161	0.228	0.099	0.194	0.104	0.176	0.063	0.196	0.168
>50	S	R	-	P	F	0.261	0.210	0.132	0.162	0.231	0.106	0.190	0.104	0.172	0.065	0.194	0.169
>50	S	R	-	P	P	0.257	0.204	0.131	0.167	0.240	0.111	0.181	0.098	0.169	0.061	0.214	0.167
>50	S	L	N	G	G	0.310	0.241	0.136	0.138	0.176	0.061	0.257	0.116	0.201	0.082	0.168	0.114
>50	S	L	N	G	F	0.309	0.239	0.135	0.138	0.178	0.068	0.254	0.116	0.197	0.084	0.166	0.115
>50	S	L	N	G	P	0.300	0.234	0.135	0.144	0.188	0.072	0.244	0.110	0.195	0.080	0.186	0.112
>50	S	L	N	F	G	0.307	0.238	0.135	0.139	0.181	0.066	0.254	0.115	0.199	0.078	0.168	0.120
>50	S	L	N	F	F	0.305	0.237	0.135	0.140	0.183	0.073	0.250	0.115	0.195	0.081	0.166	0.120
>50	S	L	N	F	P	0.296	0.231	0.135	0.146	0.192	0.078	0.241	0.108	0.193	0.077	0.186	0.118
>50	S	L	N	P	G	0.297	0.231	0.134	0.145	0.192	0.079	0.240	0.104	0.198	0.076	0.179	0.123
>50	S	L	N	P	F	0.295	0.230	0.134	0.146	0.195	0.086	0.236	0.104	0.194	0.079	0.177	0.124
>50	S	L	N	P	P	0.286	0.224	0.134	0.152	0.204	0.091	0.227	0.098	0.191	0.075	0.197	0.121
>50	S	L	R	G	G	0.311	0.241	0.136	0.137	0.175	0.057	0.264	0.119	0.201	0.074	0.165	0.120
>50	S	L	R	G	F	0.309	0.240	0.135	0.138	0.178	0.063	0.260	0.119	0.197	0.076	0.163	0.121
>50	S	L	R	G	P	0.301	0.234	0.135	0.143	0.187	0.068	0.251	0.113	0.194	0.072	0.183	0.119
>50	S	L	R	F	G	0.307	0.239	0.135	0.139	0.180	0.062	0.261	0.118	0.199	0.070	0.165	0.126

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	S	L	R	F	F	0.306	0.237	0.135	0.139	0.182	0.068	0.257	0.117	0.195	0.073	0.163	0.127
>50	S	L	R	F	P	0.297	0.232	0.134	0.145	0.192	0.073	0.248	0.111	0.192	0.069	0.183	0.124
>50	S	L	R	P	G	0.297	0.232	0.134	0.154	0.192	0.075	0.247	0.107	0.197	0.068	0.176	0.129
>50	S	L	R	P	F	0.296	0.231	0.134	0.145	0.194	0.081	0.243	0.107	0.193	0.071	0.174	0.130
>50	S	L	R	P	P	0.287	0.225	0.134	0.151	0.204	0.086	0.233	0.101	0.191	0.067	0.194	0.127
>50	S	L	L	G	G	0.299	0.233	0.135	0.144	0.189	0.062	0.244	0.116	0.191	0.074	0.182	0.131
>50	S	L	L	G	F	0.297	0.231	0.132	0.145	0.192	0.068	0.241	0.116	0.187	0.077	0.180	0.132
>50	S	L	L	G	P	0.289	0.226	0.134	0.150	0.201	0.073	0.231	0.109	0.184	0.073	0.200	0.129
>50	S	L	L	F	G	0.295	0.230	0.135	0.146	0.194	0.067	0.241	0.114	0.188	0.071	0.182	0.136
>50	S	L	L	F	F	0.294	0.229	0.134	0.147	0.196	0.073	0.237	0.114	0.184	0.073	0.180	0.137
>50	S	L	L	F	P	0.285	0.223	0.134	0.152	0.206	0.078	0.228	0.107	0.182	0.069	0.200	0.135
>50	S	L	L	P	G	0.285	0.224	0.134	0.152	0.206	0.080	0.227	0.104	0.187	0.069	0.194	0.140
>50	S	L	L	P	F	0.283	0.222	0.134	0.153	0.208	0.086	0.223	0.104	0.183	0.071	0.192	0.141
>50	S	L	L	P	P	0.275	0.216	0.133	0.158	0.218	0.091	0.214	0.097	0.180	0.067	0.212	0.138
>50	S	L	-	G	G	0.271	0.213	0.133	0.159	0.223	0.093	0.204	0.106	0.163	0.075	0.205	0.154
>50	S	L	-	G	F	0.270	0.212	0.133	0.160	0.225	0.099	0.200	0.106	0.159	0.078	0.203	0.155
>50	S	L	-	G	P	0.261	0.206	0.133	0.165	0.235	0.104	0.190	0.100	0.157	0.074	0.223	0.152
>50	S	L	-	F	G	0.268	0.211	0.133	0.161	0.228	0.098	0.200	0.104	0.161	0.072	0.205	0.160
>50	S	L	-	F	F	0.266	0.210	0.133	0.162	0.230	0.104	0.197	0.104	0.157	0.074	0.203	0.160
>50	S	L	-	F	P	0.257	0.204	0.132	0.167	0.240	0.109	0.187	0.098	0.154	0.070	0.223	0.158
>50	S	L	-	P	G	0.257	0.204	0.132	0.167	0.240	0.111	0.186	0.094	0.159	0.070	0.217	0.163
>50	S	L	-	P	F	0.255	0.203	0.132	0.168	0.243	0.117	0.183	0.094	0.155	0.072	0.214	0.164
>50	S	L	-	P	P	0.247	0.197	0.131	0.173	0.252	0.122	0.173	0.088	0.153	0.068	0.235	0.161
>50	S	-	N	G	G	0.288	0.225	0.134	0.149	0.203	0.074	0.222	0.117	0.176	0.079	0.181	0.152
>50	S	-	N	G	F	0.287	0.224	0.134	0.150	0.206	0.080	0.218	0.117	0.172	0.081	0.179	0.152
>50	S	-	N	G	P	0.278	0.218	0.134	0.156	0.215	0.085	0.208	0.111	0.170	0.077	0.199	0.150
>50	S	-	N	F	G	0.285	0.222	0.134	0.151	0.208	0.079	0.218	0.116	0.174	0.075	0.181	0.157
>50	S	-	N	F	F	0.283	0.221	0.133	0.152	0.211	0.086	0.215	0.115	0.170	0.078	0.179	0.158
>50	S	-	N	F	P	0.274	0.215	0.133	0.157	0.220	0.091	0.205	0.109	0.167	0.074	0.199	0.155
>50	S	-	N	P	G	0.274	0.216	0.133	0.157	0.220	0.092	0.204	0.105	0.172	0.073	0.192	0.160
>50	S	-	N	P	F	0.273	0.214	0.133	0.158	0.223	0.099	0.201	0.105	0.168	0.076	0.190	0.161
>50	S	-	N	P	P	0.264	0.208	0.132	0.163	0.232	0.104	0.191	0.099	0.166	0.072	0.210	0.158
>50	S	-	R	G	G	0.289	0.226	0.134	0.149	0.203	0.069	0.228	0.120	0.176	0.071	0.178	0.158
>50	S	-	R	G	F	0.287	0.224	0.134	0.149	0.205	0.076	0.225	0.120	0.171	0.073	0.176	0.159
>50	S	-	R	G	P	0.278	0.219	0.133	0.155	0.214	0.081	0.215	0.114	0.169	0.069	0.196	0.156
>50	S	-	R	F	G	0.285	0.223	0.134	0.151	0.207	0.075	0.225	0.118	0.173	0.067	0.178	0.163
>50	S	-	R	F	F	0.284	0.222	0.134	0.151	0.210	0.081	0.221	0.118	0.169	0.070	0.176	0.164
>50	S	-	R	F	P	0.275	0.216	0.133	0.157	0.219	0.086	0.212	0.112	0.167	0.066	0.196	0.161
>50	S	-	R	P	G	0.275	0.216	0.133	0.157	0.220	0.088	0.211	0.108	0.172	0.065	0.189	0.166
>50	S	-	R	P	F	0.273	0.215	0.133	0.157	0.222	0.094	0.207	0.108	0.168	0.067	0.187	0.167
>50	S	-	R	P	P	0.264	0.209	0.132	0.163	0.231	0.099	0.198	0.102	0.165	0.064	0.207	0.165
>50	S	-	L	G	G	0.277	0.217	0.134	0.156	0.217	0.074	0.209	0.117	0.165	0.071	0.195	0.168

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	S	-	L	G	F	0.275	0.216	0.133	0.157	0.219	0.081	0.205	0.116	0.161	0.074	0.193	0.169
>50	S	-	L	G	P	0.266	0.210	0.133	0.162	0.229	0.086	0.195	0.110	0.159	0.070	0.213	0.167
>50	S	-	L	F	G	0.273	0.215	0.133	0.158	0.222	0.080	0.205	0.115	0.163	0.068	0.195	0.174
>50	S	-	L	F	F	0.271	0.213	0.133	0.158	0.224	0.086	0.202	0.115	0.159	0.070	0.193	0.175
>50	S	-	L	F	P	0.262	0.207	0.133	0.164	0.234	0.091	0.192	0.108	0.157	0.066	0.213	0.172
>50	S	-	L	P	G	0.263	0.208	0.132	0.164	0.234	0.093	0.191	0.105	0.161	0.066	0.207	0.177
>50	S	-	L	P	F	0.261	0.206	0.132	0.165	0.236	0.099	0.187	0.105	0.157	0.068	0.204	0.178
>50	S	-	L	P	P	0.252	0.200	0.132	0.170	0.246	0.104	0.178	0.098	0.155	0.064	0.225	0.175
>50	S	-	-	G	G	0.249	0.197	0.132	0.171	0.251	0.106	0.168	0.107	0.138	0.072	0.218	0.192
>50	S	-	-	G	F	0.247	0.196	0.132	0.172	0.254	0.112	0.164	0.107	0.134	0.075	0.216	0.192
>50	S	-	-	G	P	0.238	0.190	0.131	0.178	0.263	0.117	0.155	0.101	0.131	0.071	0.236	0.190
>50	S	-	-	F	G	0.245	0.195	0.131	0.173	0.256	0.111	0.165	0.105	0.135	0.069	0.218	0.197
>50	S	-	-	F	F	0.242	0.193	0.131	0.174	0.259	0.117	0.161	0.105	0.131	0.071	0.216	0.198
>50	S	-	-	F	P	0.234	0.188	0.131	0.180	0.268	0.122	0.151	0.099	0.129	0.067	0.236	0.195
>50	S	-	-	P	G	0.234	0.188	0.130	0.179	0.268	0.124	0.151	0.095	0.134	0.067	0.229	0.200
>50	S	-	-	P	F	0.232	0.186	0.130	0.180	0.271	0.130	0.147	0.095	0.130	0.069	0.227	0.201
>50	S	-	-	P	P	0.223	0.181	0.131	0.186	0.281	0.135	0.137	0.089	0.127	0.065	0.247	0.198
>50	C	N	N	G	G	0.309	0.239	0.136	0.139	0.177	0.058	0.242	0.119	0.200	0.093	0.174	0.115
>50	C	N	N	G	F	0.308	0.238	0.136	0.139	0.180	0.064	0.238	0.119	0.195	0.096	0.172	0.116
>50	C	N	N	G	P	0.299	0.232	0.135	0.145	0.189	0.069	0.229	0.112	0.193	0.092	0.192	0.113
>50	C	N	N	F	G	0.306	0.237	0.135	0.141	0.182	0.063	0.239	0.117	0.197	0.090	0.174	0.121
>50	C	N	N	F	F	0.304	0.235	0.135	0.141	0.184	0.069	0.235	0.117	0.193	0.092	0.172	0.121
>50	C	N	N	F	P	0.295	0.230	0.135	0.147	0.194	0.074	0.225	0.111	0.191	0.088	0.192	0.119
>50	C	N	N	P	G	0.295	0.230	0.135	0.147	0.194	0.076	0.225	0.107	0.196	0.088	0.185	0.124
>50	C	N	N	P	F	0.294	0.229	0.134	0.147	0.196	0.083	0.221	0.107	0.192	0.090	0.183	0.125
>50	C	N	N	P	P	0.285	0.223	0.134	0.153	0.206	0.087	0.211	0.100	0.189	0.086	0.203	0.122
>50	C	N	R	G	G	0.310	0.240	0.136	0.138	0.177	0.053	0.249	0.122	0.199	0.085	0.170	0.122
>50	C	N	R	G	F	0.308	0.238	0.136	0.139	0.179	0.060	0.245	0.122	0.195	0.088	0.168	0.122
>50	C	N	R	G	P	0.299	0.233	0.135	0.144	0.188	0.064	0.235	0.115	0.193	0.084	0.189	0.120
>50	C	N	R	F	G	0.306	0.237	0.135	0.140	0.181	0.058	0.245	0.120	0.197	0.081	0.170	0.127
>50	C	N	R	F	F	0.304	0.236	0.135	0.141	0.184	0.065	0.242	0.120	0.193	0.084	0.168	0.128
>50	C	N	R	F	P	0.296	0.230	0.135	0.146	0.193	0.070	0.232	0.114	0.190	0.080	0.189	0.125
>50	C	N	R	P	G	0.296	0.231	0.134	0.146	0.193	0.071	0.231	0.110	0.195	0.079	0.182	0.130
>50	C	N	R	P	F	0.294	0.229	0.134	0.147	0.196	0.078	0.227	0.110	0.191	0.082	0.180	0.131
>50	C	N	R	P	P	0.286	0.223	0.134	0.152	0.205	0.083	0.218	0.103	0.189	0.078	0.200	0.128
>50	C	N	L	G	G	0.298	0.231	0.135	0.145	0.190	0.058	0.229	0.118	0.189	0.086	0.188	0.132
>50	C	N	L	G	F	0.296	0.230	0.135	0.146	0.193	0.065	0.225	0.118	0.185	0.088	0.186	0.133
>50	C	N	L	G	P	0.287	0.224	0.135	0.152	0.204	0.069	0.216	0.112	0.182	0.084	0.206	0.130
>50	C	N	L	F	G	0.294	0.229	0.135	0.147	0.195	0.064	0.226	0.116	0.186	0.082	0.188	0.137
>50	C	N	L	F	F	0.292	0.228	0.135	0.148	0.198	0.070	0.222	0.116	0.182	0.085	0.186	0.138
>50	C	N	L	F	P	0.284	0.222	0.135	0.153	0.207	0.075	0.212	0.110	0.180	0.081	0.206	0.136
>50	C	N	L	P	G	0.284	0.222	0.134	0.153	0.207	0.077	0.211	0.106	0.185	0.080	0.199	0.141

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	C	N	L	P	F	0.282	0.221	0.134	0.154	0.210	0.083	0.208	0.106	0.181	0.083	0.197	0.142
>50	C	N	L	P	P	0.273	0.215	0.133	0.159	0.219	0.088	0.198	0.100	0.178	0.079	0.217	0.139
>50	C	N	-	G	G	0.270	0.212	0.133	0.160	0.224	0.089	0.188	0.109	0.161	0.087	0.211	0.155
>50	C	N	-	G	F	0.268	0.211	0.133	0.161	0.227	0.096	0.184	0.109	0.157	0.089	0.209	0.156
>50	C	N	-	G	P	0.260	0.205	0.133	0.167	0.236	0.101	0.175	0.102	0.155	0.085	0.229	0.153
>50	C	N	-	F	G	0.266	0.209	0.133	0.162	0.229	0.095	0.185	0.107	0.159	0.083	0.211	0.161
>50	C	N	-	F	F	0.265	0.208	0.133	0.163	0.232	0.101	0.181	0.107	0.155	0.086	0.209	0.161
>50	C	N	-	F	P	0.256	0.202	0.132	0.169	0.241	0.106	0.172	0.101	0.153	0.082	0.229	0.159
>50	C	N	-	P	G	0.256	0.203	0.132	0.168	0.241	0.108	0.171	0.097	0.157	0.081	0.222	0.164
>50	C	N	-	P	F	0.254	0.201	0.132	0.169	0.244	0.114	0.167	0.097	0.153	0.084	0.220	0.165
>50	C	N	-	P	P	0.245	0.195	0.132	0.175	0.253	0.119	0.157	0.090	0.151	0.080	0.240	0.162
>50	C	R	N	G	G	0.318	0.246	0.135	0.135	0.167	0.051	0.261	0.126	0.215	0.076	0.151	0.121
>50	C	R	N	G	F	0.317	0.245	0.135	0.134	0.170	0.057	0.257	0.126	0.210	0.079	0.149	0.122
>50	C	R	N	G	P	0.308	0.239	0.135	0.139	0.179	0.062	0.247	0.119	0.208	0.075	0.169	0.119
>50	C	R	N	F	G	0.315	0.243	0.135	0.135	0.172	0.056	0.257	0.124	0.212	0.073	0.151	0.126
>50	C	R	N	F	F	0.313	0.242	0.135	0.136	0.174	0.062	0.254	0.124	0.208	0.075	0.149	0.127
>50	C	R	N	F	P	0.304	0.236	0.134	0.141	0.184	0.067	0.244	0.118	0.206	0.071	0.169	0.125
>50	C	R	N	P	G	0.304	0.237	0.134	0.141	0.184	0.069	0.243	0.114	0.211	0.071	0.163	0.130
>50	C	R	N	P	F	0.303	0.235	0.134	0.142	0.186	0.075	0.239	0.114	0.207	0.073	0.161	0.131
>50	C	R	N	P	P	0.294	0.230	0.134	0.147	0.196	0.080	0.230	0.108	0.204	0.069	0.181	0.128
>50	C	R	R	G	G	0.319	0.246	0.135	0.133	0.167	0.046	0.267	0.129	0.214	0.068	0.148	0.127
>50	C	R	R	G	F	0.317	0.245	0.135	0.133	0.169	0.053	0.264	0.129	0.210	0.071	0.146	0.128
>50	C	R	R	G	P	0.309	0.240	0.135	0.139	0.178	0.057	0.254	0.122	0.208	0.067	0.166	0.126
>50	C	R	R	F	G	0.315	0.244	0.135	0.134	0.171	0.051	0.264	0.127	0.212	0.065	0.148	0.133
>50	C	R	R	F	F	0.314	0.243	0.165	0.134	0.174	0.058	0.260	0.127	0.208	0.067	0.146	0.134
>50	C	R	R	F	P	0.305	0.237	0.134	0.141	0.183	0.063	0.251	0.121	0.205	0.063	0.166	0.131
>50	C	R	R	P	G	0.305	0.237	0.134	0.140	0.183	0.064	0.250	0.117	0.210	0.063	0.160	0.136
>50	C	R	R	P	F	0.303	0.236	0.134	0.141	0.186	0.071	0.246	0.117	0.206	0.065	0.158	0.137
>50	C	R	R	P	P	0.295	0.230	0.133	0.147	0.195	0.076	0.237	0.110	0.204	0.061	0.178	0.134
>50	C	R	L	G	G	0.307	0.238	0.135	0.140	0.181	0.051	0.248	0.125	0.204	0.069	0.166	0.138
>50	C	R	L	G	F	0.305	0.237	0.135	0.140	0.183	0.058	0.244	0.125	0.200	0.071	0.163	0.139
>50	C	R	L	G	P	0.296	0.231	0.134	0.146	0.192	0.062	0.234	0.119	0.197	0.067	0.184	0.136
>50	C	R	L	F	G	0.303	0.236	0.134	0.142	0.185	0.056	0.244	0.123	0.201	0.065	0.166	0.143
>50	C	R	L	F	F	0.301	0.234	0.134	0.142	0.188	0.063	0.241	0.123	0.197	0.068	0.163	0.144
>50	C	R	L	F	P	0.293	0.229	0.134	0.148	0.197	0.068	0.231	0.117	0.195	0.064	0.184	0.141
>50	C	R	L	P	G	0.293	0.229	0.133	0.147	0.197	0.070	0.230	0.113	0.200	0.063	0.177	0.147
>50	C	R	L	P	F	0.291	0.228	0.133	0.148	0.200	0.076	0.226	0.113	0.196	0.066	0.175	0.147
>50	C	R	L	P	P	0.282	0.222	0.133	0.154	0.209	0.081	0.217	0.107	0.193	0.062	0.195	0.145
>50	C	R	-	G	G	0.279	0.219	0.133	0.155	0.214	0.082	0.207	0.116	0.176	0.070	0.188	0.161
>50	C	R	-	G	F	0.278	0.217	0.133	0.155	0.217	0.089	0.203	0.116	0.172	0.072	0.186	0.162
>50	C	R	-	G	P	0.269	0.212	0.132	0.161	0.226	0.094	0.193	0.109	0.170	0.068	0.206	0.159
>50	C	R	-	F	G	0.276	0.216	0.133	0.156	0.219	0.088	0.204	0.114	0.174	0.066	0.188	0.166

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	**Preservation**	**Restoration**	**Rehabilitation**	**Adaptive Reuse**	**No Special Consideration**	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	C	R	-	F	F	0.274	0.215	0.132	0.157	0.222	0.094	0.200	0.114	0.170	0.069	0.186	0.167
>50	C	R	-	F	P	0.265	0.209	0.132	0.163	0.231	0.099	0.190	0.108	0.168	0.065	0.206	0.165
>50	C	R	-	P	G	0.265	0.209	0.132	0.163	0.231	0.101	0.189	0.104	0.172	0.064	0.200	0.170
>50	C	R	-	P	F	0.263	0.208	0.132	0.163	0.234	0.107	0.186	0.104	0.168	0.067	0.198	0.171
>50	C	R	-	P	P	0.255	0.202	0.131	0.169	0.243	0.112	0.176	0.097	0.166	0.063	0.218	0.168
>50	C	L	N	G	G	0.308	0.239	0.136	0.139	0.179	0.062	0.253	0.116	0.198	0.083	0.172	0.116
>50	C	L	N	G	F	0.306	0.237	0.135	0.140	0.181	0.069	0.249	0.116	0.194	0.086	0.170	0.116
>50	C	L	N	G	P	0.298	0.232	0.136	0.145	0.190	0.074	0.240	0.110	0.192	0.082	0.190	0.114
>50	C	L	N	F	G	0.304	0.236	0.135	0.141	0.183	0.068	0.250	0.114	0.196	0.080	0.172	0.121
>50	C	L	N	F	F	0.303	0.235	0.135	0.141	0.183	0.074	0.246	0.114	0.192	0.082	0.170	0.122
>50	C	L	N	F	P	0.294	0.229	0.135	0.147	0.195	0.079	0.236	0.108	0.189	0.078	0.190	0.119
>50	C	L	N	P	G	0.294	0.230	0.134	0.147	0.195	0.081	0.236	0.104	0.194	0.078	0.184	0.124
>50	C	L	N	P	F	0.293	0.228	0.134	0.147	0.198	0.087	0.232	0.104	0.190	0.080	0.181	0.125
>50	C	L	N	P	P	0.284	0.223	0.134	0.153	0.207	0.092	0.222	0.098	0.188	0.076	0.202	0.122
>50	C	L	R	G	G	0.309	0.239	0.135	0.138	0.178	0.058	0.260	0.119	0.198	0.075	0.169	0.122
>50	C	L	R	G	F	0.307	0.238	0.135	0.139	0.181	0.064	0.256	0.119	0.193	0.078	0.167	0.123
>50	C	L	R	G	P	0.298	0.232	0.135	0.145	0.190	0.069	0.246	0.113	0.191	0.074	0.187	0.120
>50	C	L	R	F	G	0.305	0.237	0.135	0.140	0.183	0.063	0.256	0.117	0.195	0.072	0.169	0.127
>50	C	L	R	F	F	0.303	0.236	0.135	0.141	0.185	0.069	0.253	0.117	0.191	0.074	0.167	0.128
>50	C	L	R	F	P	0.295	0.230	0.134	0.146	0.194	0.074	0.243	0.111	0.189	0.070	0.187	0.125
>50	C	L	R	P	G	0.295	0.230	0.134	0.146	0.195	0.076	0.242	0.107	0.194	0.070	0.180	0.130
>50	C	L	R	P	F	0.293	0.229	0.134	0.147	0.197	0.083	0.239	0.107	0.190	0.072	0.178	0.131
>50	C	L	R	P	P	0.284	0.223	0.134	0.152	0.206	0.087	0.229	0.101	0.187	0.068	0.198	0.129
>50	C	L	L	G	G	0.297	0.231	0.135	0.145	0.192	0.063	0.240	0.115	0.187	0.076	0.186	0.132
>50	C	L	L	G	F	0.295	0.230	0.135	0.146	0.194	0.069	0.236	0.115	0.183	0.078	0.184	0.133
>50	C	L	L	G	P	0.286	0.224	0.134	0.152	0.204	0.074	0.227	0.109	0.181	0.075	0.204	0.131
>50	C	L	L	F	G	0.293	0.229	0.135	0.147	0.197	0.068	0.237	0.114	0.185	0.072	0.186	0.138
>50	C	L	L	F	F	0.291	0.227	0.134	0.148	0.199	0.075	0.233	0.114	0.181	0.075	0.184	0.139
>50	C	L	L	F	P	0.282	0.222	0.134	0.154	0.208	0.079	0.223	0.107	0.179	0.071	0.204	0.136
>50	C	L	L	P	G	0.283	0.222	0.134	0.153	0.209	0.081	0.223	0.103	0.183	0.070	0.198	0.141
>50	C	L	L	P	F	0.281	0.220	0.133	0.154	0.211	0.088	0.219	0.103	0.179	0.073	0.196	0.142
>50	C	L	L	P	P	0.272	0.215	0.133	0.160	0.221	0.092	0.209	0.097	0.177	0.069	0.216	0.139
>50	C	L	-	G	G	0.269	0.212	0.133	0.160	0.226	0.094	0.199	0.106	0.160	0.077	0.209	0.156
>50	C	L	-	G	F	0.267	0.210	0.133	0.161	0.228	0.100	0.195	0.106	0.156	0.079	0.207	0.156
>50	C	L	-	G	P	0.258	0.205	0.133	0.167	0.238	0.105	0.186	0.100	0.153	0.075	0.227	0.154
>50	C	L	-	F	G	0.265	0.209	0.133	0.162	0.231	0.099	0.196	0.104	0.157	0.073	0.209	0.161
>50	C	L	-	F	F	0.263	0.208	0.133	0.163	0.233	0.106	0.192	0.104	0.153	0.076	0.207	0.162
>50	C	L	-	F	P	0.255	0.202	0.132	0.169	0.243	0.110	0.183	0.098	0.151	0.072	0.227	0.159
>50	C	L	-	P	G	0.255	0.202	0.132	0.168	0.243	0.112	0.182	0.094	0.156	0.071	0.221	0.164
>50	C	L	-	P	F	0.253	0.201	0.132	0.169	0.245	0.119	0.178	0.094	0.152	0.074	0.219	0.165
>50	C	L	-	P	P	0.244	0.195	0.131	0.175	0.255	0.124	0.168	0.088	0.149	0.070	0.239	0.162
>50	C	-	N	G	G	0.286	0.223	0.134	0.151	0.201	0.075	0.217	0.117	0.173	0.080	0.185	0.153

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
>50	C	-	N	G	F	0.284	0.222	0.134	0.151	0.209	0.082	0.213	0.117	0.169	0.083	0.183	0.154
>50	C	-	N	G	P	0.275	0.216	0.134	0.157	0.218	0.086	0.204	0.111	0.166	0.079	0.203	0.151
>50	C	-	N	F	G	0.282	0.221	0.134	0.153	0.211	0.080	0.214	0.115	0.170	0.077	0.185	0.158
>50	C	-	N	F	F	0.280	0.219	0.134	0.153	0.213	0.087	0.210	0.115	0.166	0.079	0.183	0.159
>50	C	-	N	F	P	0.272	0.214	0.133	0.159	0.223	0.092	0.200	0.109	0.164	0.075	0.203	0.156
>50	C	-	N	P	G	0.272	0.214	0.133	0.159	0.223	0.094	0.200	0.105	0.169	0.075	0.196	0.162
>50	C	-	N	P	F	0.270	0.212	0.133	0.159	0.226	0.100	0.196	0.105	0.165	0.077	0.194	0.162
>50	C	-	N	P	P	0.261	0.207	0.132	0.165	0.235	0.105	0.186	0.099	0.162	0.073	0.214	0.160
>50	C	-	R	G	G	0.287	0.224	0.134	0.150	0.205	0.071	0.224	0.120	0.172	0.072	0.182	0.159
>50	C	-	R	G	F	0.285	0.222	0.134	0.151	0.208	0.077	0.220	0.120	0.168	0.075	0.180	0.160
>50	C	-	R	G	P	0.276	0.217	0.133	0.156	0.217	0.082	0.211	0.113	0.166	0.071	0.200	0.157
>50	C	-	R	F	G	0.283	0.221	0.134	0.152	0.210	0.076	0.221	0.118	0.170	0.069	0.182	0.164
>50	C	-	R	F	F	0.281	0.220	0.133	0.153	0.213	0.082	0.217	0.118	0.166	0.071	0.180	0.165
>50	C	-	R	F	P	0.272	0.214	0.133	0.158	0.222	0.087	0.207	0.112	0.163	0.067	0.200	0.163
>50	C	-	R	P	G	0.272	0.214	0.133	0.158	0.222	0.089	0.206	0.108	0.168	0.067	0.193	0.168
>50	C	-	R	P	F	0.271	0.213	0.133	0.159	0.225	0.095	0.203	0.108	0.164	0.069	0.191	0.169
>50	C	-	R	P	P	0.262	0.207	0.132	0.164	0.234	0.100	0.193	0.102	0.162	0.065	0.211	0.166
>50	C	-	L	G	G	0.274	0.215	0.134	0.157	0.220	0.076	0.204	0.116	0.162	0.073	0.199	0.170
>50	C	-	L	G	F	0.272	0.214	0.133	0.158	0.222	0.082	0.200	0.116	0.158	0.075	0.197	0.171
>50	C	-	L	G	P	0.264	0.208	0.133	0.164	0.232	0.087	0.191	0.110	0.155	0.071	0.217	0.168
>50	C	-	L	F	G	0.270	0.213	0.133	0.159	0.224	0.081	0.201	0.115	0.160	0.069	0.199	0.175
>50	C	-	L	F	F	0.269	0.211	0.133	0.160	0.227	0.087	0.197	0.114	0.156	0.072	0.197	0.176
>50	C	-	L	F	P	0.260	0.206	0.132	0.166	0.236	0.092	0.187	0.108	0.153	0.068	0.217	0.173
>50	C	-	L	P	G	0.260	0.203	0.132	0.165	0.237	0.094	0.187	0.104	0.158	0.067	0.211	0.178
>50	C	-	L	P	F	0.258	0.204	0.132	0.166	0.239	0.100	0.183	0.104	0.154	0.070	0.209	0.179
>50	C	-	L	P	P	0.249	0.199	0.132	0.172	0.249	0.105	0.173	0.098	0.152	0.066	0.229	0.177
>50	C	-	-	G	G	0.246	0.196	0.132	0.173	0.254	0.107	0.163	0.107	0.134	0.074	0.222	0.193
>50	C	-	-	G	F	0.244	0.194	0.132	0.173	0.257	0.113	0.160	0.107	0.130	0.076	0.220	0.194
>50	C	-	-	G	P	0.235	0.188	0.131	0.179	0.266	0.118	0.150	0.100	0.128	0.072	0.240	0.191
>50	C	-	-	F	G	0.242	0.193	0.131	0.175	0.259	0.112	0.160	0.105	0.132	0.070	0.222	0.198
>50	C	-	-	F	F	0.240	0.192	0.131	0.175	0.262	0.118	0.156	0.105	0.128	0.073	0.220	0.199
>50	C	-	-	F	P	0.232	0.186	0.131	0.181	0.271	0.123	0.147	0.099	0.126	0.069	0.240	0.196
>50	C	-	-	P	G	0.232	0.186	0.130	0.181	0.271	0.125	0.146	0.095	0.131	0.068	0.234	0.202
>50	C	-	-	P	F	0.230	0.185	0.130	0.181	0.274	0.132	0.142	0.095	0.126	0.071	0.231	0.202
>50	C	-	-	P	P	0.221	0.179	0.130	0.187	0.283	0.136	0.133	0.089	0.124	0.067	0.252	0.200
<50	A	N	N	G	G	0.295	0.229	0.135	0.147	0.194	0.062	0.222	0.113	0.190	0.089	0.188	0.137
<50	A	N	N	G	F	0.293	0.228	0.135	0.148	0.196	0.069	0.218	0.113	0.186	0.092	0.186	0.137
<50	A	N	N	G	P	0.284	0.222	0.134	0.153	0.206	0.073	0.209	0.106	0.184	0.088	0.206	0.135
<50	A	N	N	F	G	0.291	0.227	0.135	0.149	0.199	0.067	0.219	0.111	0.188	0.086	0.188	0.142
<50	A	N	N	F	F	0.289	0.226	0.134	0.149	0.201	0.074	0.215	0.111	0.184	0.088	0.186	0.143
<50	A	N	N	F	P	0.281	0.220	0.134	0.155	0.210	0.079	0.205	0.104	0.181	0.084	0.206	0.140
<50	A	N	N	P	G	0.281	0.220	0.134	0.155	0.211	0.080	0.205	0.101	0.186	0.084	0.199	0.145

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	A	N	N	P	F	0.279	0.219	0.164	0.155	0.213	0.087	0.201	0.101	0.182	0.086	0.197	0.146
<50	A	N	N	P	P	0.270	0.213	0.133	0.161	0.223	0.092	0.191	0.094	0.180	0.082	0.217	0.143
<50	A	N	R	G	G	0.295	0.230	0.135	0.146	0.193	0.058	0.229	0.116	0.190	0.081	0.185	0.143
<50	A	N	R	G	F	0.294	0.229	0.135	0.147	0.196	0.064	0.225	0.115	0.186	0.083	0.182	0.144
<50	A	N	R	G	P	0.285	0.223	0.134	0.154	0.205	0.069	0.215	0.109	0.183	0.080	0.203	0.141
<50	A	N	R	F	G	0.292	0.228	0.134	0.145	0.198	0.063	0.225	0.114	0.187	0.077	0.185	0.148
<50	A	N	R	F	F	0.290	0.226	0.134	0.149	0.201	0.069	0.222	0.114	0.183	0.080	0.182	0.149
<50	A	N	R	F	P	0.281	0.221	0.134	0.154	0.210	0.074	0.212	0.107	0.181	0.076	0.203	0.146
<50	A	N	R	P	G	0.282	0.221	0.134	0.154	0.210	0.076	0.211	0.104	0.186	0.075	0.196	0.152
<50	A	N	R	P	F	0.280	0.219	0.133	0.155	0.213	0.082	0.208	0.104	0.182	0.078	0.194	0.152
<50	A	N	R	P	P	0.271	0.214	0.133	0.160	0.222	0.087	0.198	0.097	0.179	0.074	0.214	0.150
<50	A	N	L	G	G	0.283	0.222	0.134	0.153	0.207	0.063	0.209	0.112	0.179	0.082	0.202	0.153
<50	A	N	L	G	F	0.282	0.220	0.134	0.154	0.210	0.069	0.205	0.112	0.175	0.084	0.200	0.154
<50	A	N	L	G	P	0.273	0.215	0.134	0.160	0.219	0.074	0.196	0.106	0.173	0.080	0.220	0.152
<50	A	N	L	F	G	0.280	0.219	0.134	0.155	0.212	0.068	0.206	0.110	0.177	0.078	0.202	0.159
<50	A	N	L	F	F	0.278	0.218	0.134	0.156	0.215	0.074	0.202	0.110	0.173	0.081	0.200	0.160
<50	A	N	L	F	P	0.269	0.212	0.133	0.162	0.224	0.079	0.192	0.104	0.171	0.077	0.220	0.157
<50	A	N	L	P	G	0.269	0.212	0.133	0.161	0.224	0.081	0.192	0.100	0.176	0.076	0.213	0.162
<50	A	N	L	P	F	0.267	0.211	0.133	0.162	0.227	0.087	0.188	0.100	0.171	0.079	0.211	0.163
<50	A	N	L	P	P	0.259	0.205	0.132	0.168	0.236	0.092	0.178	0.094	0.169	0.075	0.231	0.160
<50	A	N	-	G	G	0.255	0.202	0.133	0.169	0.241	0.094	0.168	0.103	0.152	0.083	0.225	0.177
<50	A	N	-	G	F	0.254	0.201	0.132	0.169	0.244	0.100	0.164	0.102	0.148	0.085	0.223	0.177
<50	A	N	-	G	P	0.245	0.195	0.132	0.175	0.253	0.105	0.155	0.096	0.145	0.081	0.243	0.175
<50	A	N	-	F	G	0.252	0.200	0.132	0.170	0.246	0.099	0.165	0.101	0.150	0.079	0.225	0.182
<50	A	N	-	F	F	0.250	0.198	0.132	0.171	0.249	0.105	0.161	0.101	0.146	0.082	0.223	0.183
<50	A	N	-	F	P	0.241	0.192	0.132	0.177	0.258	0.110	0.152	0.094	0.143	0.078	0.243	0.180
<50	A	N	-	P	G	0.241	0.193	0.131	0.177	0.259	0.112	0.151	0.091	0.148	0.077	0.236	0.185
<50	A	N	-	P	F	0.239	0.191	0.131	0.177	0.261	0.118	0.147	0.091	0.144	0.080	0.234	0.186
<50	A	N	-	P	P	0.230	0.185	0.131	0.183	0.271	0.123	0.137	0.084	0.142	0.076	0.254	0.183
<50	A	R	N	G	G	0.304	0.236	0.135	0.141	0.184	0.055	0.241	0.120	0.205	0.072	0.165	0.142
<50	A	R	N	G	F	0.302	0.235	0.134	0.142	0.187	0.061	0.237	0.120	0.201	0.075	0.163	0.143
<50	A	R	N	G	P	0.294	0.229	0.134	0.147	0.196	0.066	0.227	0.113	0.199	0.071	0.183	0.141
<50	A	R	N	F	G	0.300	0.234	0.134	0.143	0.189	0.060	0.237	0.118	0.203	0.069	0.165	0.148
<50	A	R	N	F	F	0.299	0.232	0.134	0.144	0.191	0.067	0.234	0.118	0.199	0.071	0.163	0.149
<50	A	R	N	F	P	0.290	0.227	0.134	0.149	0.201	0.072	0.224	0.112	0.196	0.067	0.183	0.146
<50	A	R	N	P	G	0.290	0.227	0.133	0.149	0.201	0.073	0.223	0.108	0.201	0.067	0.177	0.151
<50	A	R	N	P	F	0.288	0.226	0.133	0.150	0.203	0.080	0.219	0.108	0.197	0.069	0.175	0.152
<50	A	R	N	P	P	0.280	0.220	0.133	0.155	0.213	0.085	0.210	0.101	0.195	0.065	0.195	0.149
<50	A	R	R	G	G	0.305	0.237	0.134	0.141	0.184	0.050	0.247	0.123	0.205	0.064	0.162	0.149
<50	A	R	R	G	F	0.303	0.235	0.134	0.141	0.186	0.057	0.244	0.122	0.201	0.067	0.160	0.150
<50	A	R	R	G	P	0.294	0.230	0.134	0.147	0.195	0.062	0.234	0.116	0.198	0.063	0.180	0.147
<50	A	R	R	F	G	0.301	0.234	0.134	0.142	0.188	0.056	0.244	0.121	0.202	0.061	0.162	0.154

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	A	R	R	F	F	0.299	0.233	0.134	0.143	0.191	0.062	0.240	0.121	0.198	0.063	0.160	0.155
<50	A	R	R	F	P	0.291	0.227	0.133	0.149	0.200	0.067	0.231	0.114	0.196	0.059	0.180	0.152
<50	A	R	R	P	G	0.291	0.228	0.133	0.148	0.200	0.069	0.230	0.111	0.201	0.059	0.174	0.157
<50	A	R	R	P	F	0.289	0.226	0.133	0.149	0.203	0.075	0.226	0.111	0.197	0.061	0.172	0.158
<50	A	R	R	P	P	0.280	0.221	0.133	0.155	0.212	0.080	0.217	0.104	0.194	0.057	0.192	0.156
<50	A	R	L	G	G	0.292	0.228	0.134	0.148	0.198	0.056	0.228	0.119	0.194	0.065	0.180	0.159
<50	A	R	L	G	F	0.291	0.227	0.134	0.148	0.200	0.062	0.224	0.119	0.190	0.067	0.177	0.160
<50	A	R	L	G	P	0.282	0.221	0.133	0.154	0.209	0.067	0.214	0.113	0.188	0.063	0.198	0.158
<50	A	R	L	F	G	0.289	0.226	0.133	0.150	0.202	0.061	0.224	0.117	0.192	0.061	0.180	0.165
<50	A	R	L	F	F	0.287	0.225	0.133	0.150	0.205	0.067	0.221	0.117	0.188	0.064	0.177	0.166
<50	A	R	L	F	P	0.278	0.219	0.133	0.156	0.214	0.072	0.211	0.111	0.186	0.060	0.198	0.163
<50	A	R	L	P	G	0.278	0.219	0.133	0.156	0.215	0.074	0.210	0.107	0.191	0.059	0.191	0.168
<50	A	R	L	P	F	0.277	0.218	0.132	0.156	0.217	0.080	0.206	0.107	0.186	0.062	0.189	0.169
<50	A	R	L	P	P	0.268	0.212	0.132	0.162	0.226	0.085	0.197	0.101	0.184	0.058	0.209	0.166
<50	A	R	-	G	G	0.265	0.209	0.132	0.163	0.231	0.087	0.187	0.110	0.167	0.066	0.202	0.182
<50	A	R	-	G	F	0.263	0.208	0.132	0.164	0.234	0.093	0.183	0.109	0.163	0.068	0.200	0.183
<50	A	R	-	G	P	0.254	0.202	0.132	0.169	0.243	0.098	0.174	0.103	0.160	0.064	0.220	0.181
<50	A	R	-	F	G	0.261	0.206	0.132	0.165	0.236	0.092	0.184	0.108	0.165	0.062	0.202	0.188
<50	A	R	-	F	F	0.259	0.205	0.132	0.165	0.239	0.098	0.180	0.108	0.161	0.065	0.200	0.189
<50	A	R	-	F	P	0.250	0.199	0.131	0.171	0.248	0.103	0.170	0.101	0.158	0.061	0.220	0.186
<50	A	R	-	P	G	0.250	0.199	0.131	0.171	0.248	0.105	0.169	0.098	0.163	0.060	0.214	0.191
<50	A	R	-	P	F	0.249	0.198	0.131	0.172	0.251	0.111	0.166	0.098	0.159	0.063	0.212	0.192
<50	A	R	-	P	P	0.240	0.192	0.130	0.177	0.261	0.116	0.156	0.091	0.157	0.059	0.232	0.189
<50	A	L	N	G	G	0.294	0.229	0.135	0.147	0.195	0.067	0.233	0.110	0.189	0.079	0.186	0.137
<50	A	L	N	G	F	0.292	0.228	0.135	0.148	0.198	0.073	0.229	0.110	0.185	0.082	0.184	0.138
<50	A	L	N	G	P	0.283	0.222	0.134	0.153	0.207	0.078	0.220	0.103	0.182	0.078	0.204	0.135
<50	A	L	N	F	G	0.290	0.227	0.134	0.149	0.200	0.072	0.230	0.108	0.186	0.076	0.186	0.142
<50	A	L	N	F	F	0.288	0.225	0.134	0.150	0.203	0.078	0.226	0.108	0.182	0.078	0.184	0.143
<50	A	L	N	F	P	0.280	0.220	0.134	0.155	0.212	0.083	0.216	0.102	0.180	0.074	0.204	0.140
<50	A	L	N	P	G	0.280	0.220	0.133	0.155	0.212	0.085	0.216	0.098	0.185	0.074	0.198	0.146
<50	A	L	N	P	F	0.278	0.218	0.133	0.156	0.215	0.091	0.212	0.098	0.181	0.076	0.195	0.146
<50	A	L	N	P	P	0.269	0.213	0.133	0.161	0.224	0.096	0.202	0.092	0.178	0.072	0.216	0.144
<50	A	L	R	G	G	0.294	0.230	0.135	0.146	0.195	0.062	0.240	0.113	0.188	0.071	0.183	0.143
<50	A	L	R	G	F	0.293	0.228	0.134	0.147	0.197	0.069	0.236	0.113	0.184	0.074	0.181	0.144
<50	A	L	R	G	P	0.284	0.223	0.134	0.153	0.207	0.073	0.226	0.106	0.182	0.070	0.201	0.141
<50	A	L	R	F	G	0.291	0.227	0.134	0.148	0.200	0.067	0.236	0.111	0.186	0.068	0.183	0.149
<50	A	L	R	F	F	0.289	0.226	0.134	0.149	0.202	0.074	0.233	0.111	0.182	0.070	0.181	0.149
<50	A	L	R	F	P	0.280	0.220	0.134	0.155	0.211	0.079	0.223	0.105	0.179	0.066	0.201	0.147
<50	A	L	R	P	G	0.280	0.220	0.133	0.154	0.212	0.080	0.222	0.101	0.184	0.066	0.194	0.152
<50	A	L	R	P	F	0.279	0.219	0.133	0.155	0.214	0.087	0.219	0.101	0.180	0.068	0.192	0.153
<50	A	L	R	P	P	0.270	0.213	0.133	0.161	0.223	0.092	0.209	0.094	0.178	0.064	0.212	0.150
<50	A	L	L	G	G	0.282	0.221	0.134	0.154	0.209	0.067	0.220	0.109	0.178	0.072	0.200	0.154

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	**Preservation**	**Restoration**	**Rehabilitation**	**Adaptive Reuse**	**No Special Consideration**	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	A	L	L	G	F	0.280	0.220	0.134	0.154	0.211	0.074	0.216	0.109	0.174	0.074	0.198	0.155
<50	A	L	L	G	P	0.272	0.214	0.133	0.160	0.221	0.078	0.207	0.103	0.171	0.070	0.218	0.152
<50	A	L	L	F	G	0.278	0.219	0.134	0.155	0.214	0.072	0.217	0.107	0.176	0.068	0.200	0.159
<50	A	L	L	F	F	0.277	0.217	0.133	0.156	0.216	0.079	0.213	0.107	0.171	0.071	0.198	0.160
<50	A	L	L	F	P	0.268	..212	0.133	0.162	0.226	0.084	0.203	0.101	0.169	0.067	0.218	0.157
<50	A	L	L	P	G	0.268	0.212	0.133	0.162	0.226	0.086	0.203	0.097	0.174	0.066	0.212	0.162
<50	A	L	L	P	F	0.266	0.211	0.133	0.162	0.228	0.092	0.199	0.097	0.170	0.069	0.210	0.163
<50	A	L	L	P	P	0.258	0.205	0.132	0.167	0.238	0.097	0.189	0.091	0.168	0.065	0.230	0.161
<50	A	L	-	G	G	0.254	0.202	0.132	0.169	0.243	0.098	0.179	0.100	0.150	0.073	0.223	0.177
<50	A	L	-	G	F	0.253	0.200	0.132	0.169	0.246	0.105	0.175	0.100	0.146	0.075	0.221	0.178
<50	A	L	-	G	P	0.244	0.195	0.132	0.175	0.255	0.110	0.166	0.093	0.144	0.071	0.241	0.175
<50	A	L	-	F	G	0.250	0.199	0.132	0.171	0.248	0.104	0.176	0.098	0.148	0.069	0.223	0.182
<50	A	L	-	F	F	0.249	0.198	0.132	0.171	0.250	0.110	0.172	0.098	0.144	0.072	0.221	0.183
<50	A	L	-	F	P	0.240	0.192	0.131	0.177	0.260	0.115	0.163	0.092	0.142	0.068	0.241	0.180
<50	A	L	-	P	G	0.240	0.192	0.131	0.177	0.260	0.117	0.162	0.088	0.147	0.067	0.235	0.186
<50	A	L	-	P	F	0.238	0.191	0.131	0.178	0.272	0.123	0.158	0.088	0.142	0.070	0.233	0.186
<50	A	L	-	P	P	0.229	0.185	0.130	0.183	0.272	0.128	0.148	0.081	0.140	0.066	0.253	0.184
<50	A	-	N	G	G	0.271	0.213	0.133	0.159	0.223	0.080	0.197	0.111	0.163	0.076	0.199	0.174
<50	A	-	N	G	F	0.270	0.212	0.133	0.160	0.226	0.086	0.193	0.111	0.159	0.079	0.197	0.175
<50	A	-	N	G	P	0.261	0.206	0.133	0.165	0.235	0.091	0.184	0.104	0.157	0.075	0.217	0.172
<50	A	-	N	F	G	0.268	0.211	0.133	0.161	0.228	0.085	0.194	0.109	0.161	0.073	0.199	0.180
<50	A	-	N	F	F	0.266	0.209	0.133	0.162	0.231	0.091	0.190	0.109	0.157	0.075	0.197	0.180
<50	A	-	N	F	P	0.257	0.204	0.132	0.167	0.240	0.096	0.181	0.103	0.155	0.071	0.217	0.178
<50	A	-	N	P	G	0.257	0.204	0.132	0.167	0.240	0.098	0.180	0.099	0.159	0.071	0.210	0.183
<50	A	-	N	P	F	0.255	0.202	0.132	0.168	0.243	0.104	0.176	0.099	0.155	0.073	0.208	0.184
<50	A	-	N	P	P	0.247	0.197	0.131	0.173	0.252	0.109	0.166	0.092	0.153	0.069	0.228	0.181
<50	A	-	R	G	G	0.272	0.214	0.133	0.158	0.223	0.075	0.204	0.114	0.163	0.068	0.196	0.181
<50	A	-	R	G	F	0.270	0.213	0.133	0.159	0.225	0.081	0.200	0.114	0.159	0.071	0.194	0.181
<50	A	-	R	G	P	0.261	0.207	0.133	0.165	0.234	0.086	0.191	0.107	0.156	0.067	0.214	0.179
<50	A	-	R	F	G	0.268	0.211	0.133	0.160	0.227	0.080	0.201	0.112	0.161	0.065	0.196	0.186
<50	A	-	R	F	F	0.266	0.210	0.133	0.161	0.230	0.087	0.197	0.112	0.156	0.067	0.194	0.187
<50	A	-	R	F	P	0.258	0.204	0.132	0.167	0.239	0.092	0.187	0.106	0.154	0.063	0.214	0.184
<50	A	-	R	P	G	0.258	0.204	0.132	0.166	0.240	0.093	0.187	0.102	0.159	0.062	0.207	0.189
<50	A	-	R	P	F	0.256	0.203	0.132	0.167	0.242	0.100	0.183	0.102	0.155	0.065	0.205	0.190
<50	A	-	R	P	P	0.247	0.197	0.131	0.173	0.252	0.105	0.173	0.095	0.153	0.061	0.225	0.187
<50	A	-	L	G	G	0.260	0.205	0.133	0.166	0.237	0.080	0.184	0.110	0.152	0.069	0.213	0.191
<50	A	-	L	G	F	0.258	0.204	0.132	0.166	0.239	0.086	0.180	0.110	0.148	0.071	0.211	0.192
<50	A	-	L	G	P	0.249	0.198	0.132	0.172	0.249	0.091	0.171	0.104	0.146	0.067	0.231	0.189
<50	A	-	L	F	G	0.256	0.203	0.132	0.168	0.242	0.085	0.181	0.108	0.150	0.065	0.213	0.196
<50	A	-	L	F	F	0.254	0.201	0.132	0.168	0.244	0.092	0.177	0.108	0.146	0.068	0.211	0.197
<50	A	-	L	F	P	0.245	0.196	0.132	0.174	0.254	0.097	0.168	0.102	0.144	0.064	0.231	0.195
<50	A	-	L	P	G	0.245	0.196	0.131	0.174	0.254	0.098	0.167	0.098	0.149	0.063	0.225	0.200

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	A	-	L	P	F	0.244	0.194	0.131	0.174	0.257	0.105	0.163	0.098	0.145	0.066	0.223	0.201
<50	A	-	L	P	P	0.235	0.189	0.131	0.180	0.266	0.110	0.153	0.092	0.142	0.062	0.243	0.198
<50	A	-	-	G	G	0.231	0.186	0.131	0.181	0.271	0.111	0.143	0.101	0.125	0.070	0.236	0.214
<50	A	-	-	G	F	0.229	0.184	0.131	0.182	0.274	0.118	0.140	0.101	0.121	0.072	0.234	0.215
<50	A	-	-	G	P	0.221	0.178	0.130	0.187	0.284	0.122	0.130	0.094	0.118	0.068	0.254	0.212
<50	A	-	-	F	G	0.227	0.183	0.130	0.183	0.276	0.116	0.140	0.099	0.123	0.066	0.236	0.220
<50	A	-	-	F	F	0.226	0.181	0.130	0.184	0.279	0.123	0.136	0.099	0.119	0.069	0.234	0.220
<50	A	-	-	F	P	0.217	0.176	0.130	0.189	0.289	0.128	0.127	0.093	0.116	0.065	0.254	0.218
<50	A	-	-	P	G	0.217	0.176	0.129	0.189	0.289	0.129	0.126	0.089	0.121	0.064	0.248	0.223
<50	A	-	-	P	F	0.215	0.174	0.129	0.190	0.292	0.136	0.122	0.089	0.117	0.067	0.245	0.224
<50	A	-	-	P	P	0.206	0.168	0.129	0.196	0.301	0.141	0.113	0.082	0.115	0.063	0.266	0.221
<50	R	N	N	G	G	0.293	0.228	0.135	0.148	0.196	0.061	0.217	0.111	0.191	0.090	0.193	0.137
<50	R	N	N	G	F	0.291	0.227	0.135	0.149	0.198	0.068	0.213	0.111	0.187	0.092	0.191	0.138
<50	R	N	N	G	P	0.283	0.221	0.134	0.154	0.208	0.073	0.204	0.105	0.184	0.088	0.211	0.135
<50	R	N	N	F	G	0.289	0.226	0.134	0.150	0.201	0.067	0.214	0.110	0.188	0.086	0.193	0.142
<50	R	N	N	F	F	0.288	0.224	0.134	0.151	0.203	0.073	0.210	0.110	0.184	0.089	0.191	0.143
<50	R	N	N	F	P	0.279	0.219	0.134	0.156	0.212	0.078	0.200	0.103	0.182	0.085	0.211	0.141
<50	R	N	N	P	G	0.279	0.219	0.134	0.156	0.213	0.080	0.200	0.100	0.187	0.084	0.204	0.146
<50	R	N	N	P	F	0.277	0.217	0.133	0.157	0.215	0.086	0.196	0.099	0.183	0.087	0.202	0.147
<50	R	N	N	P	P	0.269	0.212	0.133	0.162	0.224	0.091	0.186	0.093	0.180	0.083	0.222	0.144
<50	R	N	R	G	G	0.294	0.229	0.135	0.148	0.195	0.057	0.224	0.114	0.190	0.082	0.190	0.143
<50	R	N	R	G	F	0.292	0.227	0.135	0.148	0.198	0.063	0.220	0.114	0.186	0.084	0.187	0.144
<50	R	N	R	G	P	0.283	0.222	0.134	0.154	0.207	0.068	0.211	0.108	0.184	0.080	0.208	0.142
<50	R	N	R	F	G	0.290	0.226	0.134	0.150	0.200	0.062	0.221	0.113	0.188	0.078	0.190	0.149
<50	R	N	R	F	F	0.288	0.225	0.134	0.150	0.203	0.069	0.217	0.113	0.184	0.080	0.187	0.150
<50	R	N	R	F	P	0.279	0.219	0.134	0.156	0.212	0.073	0.207	0.106	0.182	0.077	0.208	0.147
<50	R	N	R	P	G	0.280	0.219	0.133	0.155	0.212	0.075	0.206	0.102	0.186	0.076	0.201	0.152
<50	R	N	R	P	F	0.278	0.218	0.233	0.156	0.215	0.082	0.203	0.102	0.182	0.078	0.199	0.153
<50	R	N	R	P	P	0.269	0.212	0.133	0.162	0.224	0.086	0.193	0.096	0.180	0.074	0.219	0.150
<50	R	N	L	G	G	0.281	0.220	0.134	0.155	0.209	0.062	0.204	0.111	0.180	0.082	0.207	0.154
<50	R	N	L	G	F	0.280	0.219	0.134	0.156	0.212	0.068	0.200	0.111	0.176	0.085	0.205	0.155
<50	R	N	L	G	P	0.271	0.213	0.134	0.161	0.221	0.073	0.191	0.104	0.173	0.081	0.225	0.152
<50	R	N	L	F	G	0.278	0.218	0.134	0.157	0.214	0.067	0.201	0.109	0.178	0.079	0.207	0.159
<50	R	N	L	F	F	0.276	0.216	0.134	0.157	0.217	0.074	0.197	0.109	0.174	0.081	0.205	0.160
<50	R	N	L	F	P	0.267	0.211	0.133	0.163	0.226	0.079	0.187	0.103	0.171	0.077	0.225	0.158
<50	R	N	L	P	G	0.267	0.211	0.133	0.163	0.226	0.080	0.187	0.099	0.176	0.077	0.218	0.163
<50	R	N	L	P	F	0.266	0.209	0.133	0.163	0.229	0.087	0.183	0.099	0.172	0.079	0.216	0.164
<50	R	N	L	P	P	0.257	0.204	0.132	0.169	0.238	0.092	0.173	0.092	0.170	0.075	0.236	0.161
<50	R	N	-	G	G	0.253	0.201	0.132	0.170	0.243	0.093	0.163	0.101	0.152	0.083	0.230	0.177
<50	R	N	-	G	F	0.252	0.199	0.132	0.171	0.246	0.099	0.160	0.101	0.148	0.086	0.228	0.178
<50	R	N	-	G	P	0.243	0.194	0.132	0.176	0.255	0.104	0.150	0.095	0.146	0.082	0.248	0.175
<50	R	N	-	F	G	0.250	0.198	0.132	0.172	0.248	0.098	0.160	0.100	0.150	0.080	0.230	0.182

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	R	N	-	F	F	0.251	0.197	0.132	0.173	0.248	0.105	0.156	0.100	0.146	0.082	0.228	0.183
<50	R	N	-	F	P	0.239	0.191	0.131	0.178	0.260	0.110	0.147	0.093	0.144	0.078	0.248	0.181
<50	R	N	-	P	G	0.239	0.191	0.131	0.178	0.260	0.111	0.146	0.089	0.149	0.078	0.241	0.186
<50	R	N	-	P	F	0.237	0.190	0.131	0.179	0.263	0.118	0.142	0.089	0.144	0.080	0.239	0.187
<50	R	N	-	P	P	0.229	0.184	0.131	0.184	0.273	0.123	0.133	0.083	0.142	0.076	0.259	0.184
<50	R	R	N	G	G	0.302	0.235	0.134	0.142	0.186	0.054	0.236	0.119	0.206	0.073	0.170	0.143
<50	R	R	N	G	F	0.300	0.233	0.134	0.143	0.189	0.061	0.232	0.118	0.202	0.075	0.168	0.144
<50	R	R	N	G	P	0.292	0.228	0.134	0.149	0.198	0.066	0.222	0.112	0.199	0.072	0.188	0.141
<50	R	R	N	F	G	0.298	0.232	0.134	0.144	0.191	0.060	0.232	0.117	0.203	0.069	0.170	0.148
<50	R	R	N	F	F	0.297	0.231	0.134	0.145	0.193	0.066	0.229	0.117	0.199	0.072	0.168	0.149
<50	R	R	N	F	P	0.288	0.225	0.133	0.151	0.203	0.071	0.219	0.110	0.197	0.068	0.188	0.146
<50	R	R	N	P	G	0.288	0.226	0.133	0.150	0.203	0.073	0.218	0.107	0.202	0.067	0.182	0.152
<50	R	R	N	P	F	0.286	0.224	0.133	0.151	0.204	0.079	0.215	0.106	0.198	0.070	0.180	0.152
<50	R	R	N	P	P	0.278	0.219	0.133	0.157	0.215	0.084	0.205	0.100	0.195	0.066	0.200	0.150
<50	R	R	R	G	G	0.303	0.235	0.134	0.142	0.185	0.050	0.243	0.121	0.205	0.065	0.167	0.149
<50	R	R	R	G	F	0.301	0.234	0.134	0.143	0.188	0.056	0.239	0.121	0.201	0.067	0.165	0.150
<50	R	R	R	G	P	0.292	0.228	0.134	0.148	0.197	0.061	0.229	0.115	0.199	0.063	0.185	0.147
<50	R	R	R	F	G	0.299	0.233	0.134	0.144	0.190	0.055	0.239	0.120	0.203	0.061	0.167	0.155
<50	R	R	R	F	F	0.297	0.232	0.134	0.144	0.193	0.062	0.235	0.120	0.199	0.064	0.165	0.155
<50	R	R	R	F	P	0.289	0.226	0.133	0.150	0.202	0.066	0.226	0.113	0.197	0.060	0.185	0.153
<50	R	R	R	P	G	0.289	0.226	0.133	0.150	0.202	0.068	0.225	0.109	0.201	0.059	0.179	0.158
<50	R	R	R	P	F	0.287	0.225	0.133	0.150	0.205	0.075	0.221	0.109	0.197	0.062	0.177	0.159
<50	R	R	R	P	P	0.278	0.219	0.132	0.156	0.214	0.079	0.212	0.103	0.195	0.058	0.197	0.156
<50	R	R	L	G	G	0.209	0.227	0.134	0.149	0.199	0.055	0.223	0.118	0.195	0.066	0.185	0.160
<50	R	R	L	G	F	0.289	0.226	0.134	0.150	0.202	0.061	0.219	0.118	0.191	0.068	0.182	0.161
<50	R	R	L	G	P	0.280	0.220	0.133	0.155	0.211	0.066	0.209	0.111	0.188	0.064	0.203	0.158
<50	R	R	L	F	G	0.287	0.225	0.133	0.151	0.204	0.060	0.219	0.116	0.193	0.062	0.185	0.165
<50	R	R	L	F	F	0.285	0.223	0.133	0.152	0.207	0.067	0.216	0.116	0.189	0.064	0.182	0.166
<50	R	R	L	F	P	0.276	0.218	0.133	0.157	0.216	0.071	0.206	0.110	0.186	0.060	0.203	0.163
<50	R	R	L	P	G	0.276	0.218	0.133	0.157	0.216	0.073	0.205	0.106	0.191	0.060	0.196	0.168
<50	R	R	L	P	F	0.275	0.216	0.132	0.158	0.219	0.080	0.202	0.106	0.187	0.062	0.194	0.169
<50	R	R	L	P	P	0.266	0.211	0.132	0.163	0.228	0.084	0.192	0.099	0.185	0.058	0.214	0.167
<50	R	R	-	G	G	0.263	0.208	0.132	0.164	0.233	0.086	0.182	0.108	0.167	0.066	0.207	0.183
<50	R	R	-	G	F	0.261	0.206	0.132	0.165	0.236	0.092	0.178	0.108	0.163	0.069	0.205	0.184
<50	R	R	-	G	P	0.252	0.200	0.131	0.171	0.245	0.097	0.169	0.102	0.161	0.065	0.225	0.181
<50	R	R	-	F	G	0.259	0.205	0.132	0.166	0.238	0.091	0.179	0.107	0.165	0.063	0.207	0.188
<50	R	R	-	F	F	0.257	0.204	0.131	0.167	0.241	0.098	0.175	0.107	0.161	0.065	0.205	0.189
<50	R	R	-	F	P	0.248	0.198	0.131	0.172	0.250	0.103	0.165	0.100	0.159	0.061	0.225	0.186
<50	R	R	-	P	G	0.248	0.198	0.131	0.172	0.250	0.104	0.165	0.096	0.164	0.061	0.219	0.192
<50	R	R	-	P	F	0.247	0.197	0.131	0.173	0.253	0.111	0.161	0.096	0.159	0.063	0.217	0.192
<50	R	R	-	P	P	0.238	0.191	0.130	0.179	0.263	0.116	0.151	0.090	0.157	0.059	0.237	0.190
<50	R	L	N	G	G	0.292	0.228	0.135	0.148	0.197	0.066	0.228	0.109	0.189	0.080	0.191	0.137

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	R	L	N	G	F	0.290	0.226	0.134	0.149	0.200	0.072	0.224	0.109	0.185	0.083	0.189	0.138
<50	R	L	N	G	P	0.281	0.221	0.134	0.155	0.209	0.077	0.215	0.102	0.183	0.079	0.209	0.136
<50	R	L	N	F	G	0.288	0.225	0.134	0.150	0.202	0.071	0.225	0.107	0.187	0.076	0.191	0.143
<50	R	L	N	F	F	0.286	0.224	0.134	0.151	0.205	0.078	0.221	0.107	0.183	0.079	0.189	0.144
<50	R	L	N	F	P	0.278	0.218	0.134	0.157	0.214	0.083	0.211	0.101	0.180	0.075	0.209	0.141
<50	R	L	N	P	G	0.278	0.218	0.133	0.156	0.214	0.084	0.211	0.097	0.185	0.074	0.203	0.146
<50	R	L	N	P	F	0.276	0.217	0.133	0.157	0.217	0.091	0.207	0.097	0.181	0.077	0.201	0.147
<50	R	L	N	P	P	0.267	0.211	0.133	0.163	0.226	0.096	0.197	0.090	0.179	0.073	0.221	0.144
<50	R	L	R	G	G	0.292	0.228	0.134	0.148	0.197	0.061	0.235	0.112	0.189	0.072	0.188	0.144
<50	R	L	R	G	F	0.291	0.227	0.134	0.148	0.199	0.068	0.231	0.112	0.185	0.074	0.186	0.145
<50	R	L	R	G	P	0.282	0.221	0.134	0.154	0.209	0.073	0.222	0.105	0.182	0.070	0.206	0.142
<50	R	L	R	F	G	0.289	0.226	0.133	0.150	0.202	0.067	0.232	0.110	0.186	0.068	0.188	0.149
<50	R	L	R	F	F	0.287	0.225	0.134	0.150	0.204	0.073	0.228	0.110	0.182	0.071	0.186	0.150
<50	R	L	R	F	P	0.278	0.219	0.133	0.156	0.213	0.078	0.218	0.103	0.180	0.067	0.206	0.147
<50	R	L	R	P	G	0.278	0.219	0.133	0.156	0.214	0.080	0.217	0.100	0.185	0.066	0.199	0.152
<50	R	L	R	P	F	0.277	0.218	0.133	0.156	0.216	0.086	0.214	0.100	0.181	0.069	0.197	0.153
<50	R	L	R	P	P	0.268	0.212	0.133	0.162	0.225	0.091	0.204	0.093	0.178	0.065	0.217	0.151
<50	R	L	L	G	G	0.280	0.220	0.134	0.155	0.211	0.066	0.215	0.108	0.178	0.073	0.205	0.154
<50	R	L	L	G	F	0.279	0.219	0.134	0.156	0.213	0.073	0.211	0.108	0.174	0.075	0.203	0.155
<50	R	L	L	G	P	0.270	0.213	0.133	0.161	0.223	0.078	0.202	0.102	0.172	0.071	0.223	0.152
<50	R	L	L	F	G	0.276	0.217	0.134	0.157	0.216	0.072	0.212	0.106	0.176	0.069	0.205	0.160
<50	R	L	L	F	F	0.275	0.218	0.133	0.158	0.216	0.078	0.208	0.106	0.172	0.071	0.203	0.161
<50	R	L	L	F	P	0.266	0.210	0.133	0.163	0.227	0.083	0.198	0.100	0.170	0.067	0.223	0.158
<50	R	L	L	P	G	0.266	0.211	0.133	0.163	0.228	0.085	0.198	0.096	0.174	0.067	0.217	0.163
<50	R	L	L	P	F	0.264	0.209	0.133	0.164	0.230	0.091	0.194	0.096	0.170	0.069	0.215	0.164
<50	R	L	L	P	P	0.256	0.203	0.132	0.169	0.240	0.096	0.184	0.090	0.168	0.065	0.235	0.161
<50	R	L	-	G	G	0.252	0.200	0.132	0.170	0.245	0.098	0.174	0.099	0.151	0.074	0.228	0.177
<50	R	L	-	G	F	0.251	0.199	0.132	0.171	0.248	0.104	0.171	0.098	0.147	0.076	0.226	0.178
<50	R	L	-	G	P	0.242	0.193	0.132	0.177	0.257	0.109	0.161	0.092	0.144	0.072	0.246	0.176
<50	R	L	-	F	G	0.249	0.198	0.132	0.172	0.250	0.103	0.171	0.097	0.149	0.070	0.228	0.183
<50	R	L	-	F	F	0.247	0.196	0.132	0.173	0.252	0.109	0.167	0.097	0.145	0.072	0.226	0.184
<50	R	L	-	F	P	0.238	0.191	0.131	0.178	0.262	0.114	0.158	0.090	0.142	0.068	0.246	0.181
<50	R	L	-	P	G	0.238	0.191	0.131	0.178	0.262	0.116	0.157	0.087	0.147	0.068	0.240	0.186
<50	R	L	-	P	F	0.236	0.189	0.131	0.179	0.265	0.122	0.153	0.087	0.143	0.070	0.238	0.187
<50	R	L	-	P	P	0.227	0.184	0.130	0.185	0.274	0.127	0.144	0.080	0.141	0.066	0.258	0.184
<50	R	-	N	G	G	0.269	0.212	0.133	0.160	0.225	0.079	0.192	0.110	0.164	0.077	0.204	0.175
<50	R	-	N	G	F	0.268	0.211	0.133	0.161	0.228	0.085	0.189	0.110	0.160	0.079	0.202	0.176
<50	R	-	N	G	P	0.259	0.205	0.133	0.167	0.237	0.090	0.179	0.103	0.157	0.075	0.222	0.173
<50	R	-	N	F	G	0.266	0.209	0.133	0.162	0.230	0.084	0.189	0.108	0.161	0.073	0.204	0.180
<50	R	-	N	F	F	0.264	0.208	0.133	0.163	0.233	0.091	0.185	0.108	0.157	0.076	0.202	0.181
<50	R	-	N	F	P	0.255	0.202	0.132	0.169	0.242	0.095	0.176	0.101	0.155	0.072	0.222	0.178
<50	R	-	N	P	G	0.255	0.202	0.132	0.168	0.242	0.097	0.175	0.098	0.160	0.071	0.215	0.183

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	**Preservation**	**Restoration**	**Rehabilitation**	**Adaptive Reuse**	**No Special Consideration**	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	R	-	N	P	F	0.253	0.201	0.132	0.169	0.245	0.104	0.171	0.098	0.156	0.074	0.213	0.184
<50	R	-	N	P	P	0.245	0.195	0.131	0.175	0.254	0.108	0.162	0.091	0.153	0.070	0.233	0.182
<50	R	-	R	G	G	0.270	0.213	0.133	0.160	0.224	0.074	0.199	0.113	0.163	0.069	0.201	0.181
<50	R	-	R	G	F	0.268	0.211	0.133	0.160	0.227	0.081	0.195	0.112	0.159	0.071	0.199	0.182
<50	R	-	R	G	P	0.260	0.206	0.132	0.166	0.236	0.086	0.186	0.106	0.157	0.067	0.219	0.179
<50	R	-	R	F	G	0.266	0.210	0.133	0.162	0.229	0.080	0.196	0.111	0.161	0.065	0.201	0.186
<50	R	-	R	F	F	0.265	0.209	0.133	0.162	0.232	0.086	0.192	0.111	0.157	0.068	0.199	0.187
<50	R	-	R	F	P	0.256	0.203	0.132	0.168	0.241	0.091	0.182	0.104	0.155	0.064	0.219	0.185
<50	R	-	R	P	G	0.256	0.203	0.132	0.168	0.242	0.093	0.182	0.101	0.159	0.063	0.212	0.190
<50	R	-	R	P	F	0.254	0.202	0.132	0.168	0.244	0.099	0.178	0.100	0.155	0.066	0.210	0.191
<50	R	-	R	P	P	0.245	0.196	0.131	0.174	0.254	0.104	0.168	0.094	0.153	0.062	0.230	0.188
<50	R	-	L	G	G	0.258	0.204	0.133	0.167	0.239	0.079	0.179	0.109	0.153	0.070	0.218	0.192
<50	R	-	L	G	F	0.256	0.203	0.132	0.168	0.241	0.086	0.176	0.109	0.149	0.072	0.216	0.193
<50	R	-	L	G	P	0.247	0.197	0.132	0.173	0.251	0.091	0.166	0.102	0.146	0.068	0.236	0.190
<50	R	-	L	F	G	0.254	0.202	0.132	0.169	0.244	0.085	0.176	0.107	0.151	0.066	0.218	0.197
<50	R	-	L	F	F	0.252	0.200	0.132	0.170	0.246	0.091	0.172	0.107	0.147	0.068	0.216	0.198
<50	R	-	L	F	P	0.243	0.194	0.131	0.175	0.256	0.096	0.163	0.101	0.144	0.064	0.236	0.195
<50	R	-	L	P	G	0.243	0.195	0.131	0.175	0.256	0.098	0.162	0.097	0.149	0.064	0.230	0.200
<50	R	-	L	P	F	0.242	0.193	0.131	0.176	0.259	0.104	0.158	0.097	0.145	0.066	0.228	0.201
<50	R	-	L	P	P	0.233	0.187	0.131	0.181	0.268	0.109	0.149	0.091	0.143	0.062	0.248	0.198
<50	R	-	-	G	G	0.229	0.184	0.131	0.182	0.273	0.110	0.139	0.100	0.125	0.070	0.241	0.215
<50	R	-	-	G	F	0.228	0.183	0.131	0.183	0.276	0.117	0.135	0.099	0.121	0.073	0.239	0.216
<50	R	-	-	G	P	0.219	0.177	0.130	0.189	0.285	0.122	0.125	0.093	0.119	0.069	0.259	0.213
<50	R	-	-	F	G	0.225	0.182	0.130	0.184	0.278	0.116	0.135	0.098	0.123	0.067	0.241	0.220
<50	R	-	-	F	F	0.224	0.180	0.130	0.185	0.281	0.122	0.132	0.098	0.119	0.069	0.239	0.221
<50	R	-	-	F	P	0.215	0.174	0.130	0.191	0.291	0.127	0.122	0.091	0.117	0.065	0.259	0.218
<50	R	-	-	P	G	0.215	0.174	0.129	0.191	0.291	0.129	0.121	0.088	0.122	0.065	0.253	0.223
<50	R	-	-	P	F	0.213	0.173	0.129	0.191	0.294	0.135	0.117	0.087	0.118	0.067	0.250	0.224
<50	R	-	-	P	P	0.204	0.167	0.129	0.197	0.303	0.140	0.108	0.081	0.115	0.063	0.271	0.222
<50	I	N	N	G	G	0.291	0.227	0.135	0.149	0.198	0.064	0.218	0.110	0.188	0.089	0.191	0.142
<50	I	N	N	G	F	0.290	0.226	0.135	0.149	0.201	0.070	0.214	0.109	0.184	0.091	0.189	0.142
<50	I	N	N	G	P	0.281	0.220	0.134	0.155	0.210	0.075	0.204	0.103	0.182	0.087	0.209	0.140
<50	I	N	N	F	G	0.288	0.225	0.134	0.151	0.203	0.069	0.214	0.108	0.186	0.085	0.191	0.147
<50	I	N	N	F	F	0.286	0.223	0.134	0.151	0.205	0.075	0.211	0.108	0.182	0.088	0.189	0.148
<50	I	N	N	F	P	0.277	0.218	0.134	0.157	0.215	0.080	0.201	0.101	0.180	0.084	0.209	0.145
<50	I	N	N	P	G	0.277	0.218	0.133	0.157	0.215	0.082	0.200	0.098	0.185	0.083	0.202	0.150
<50	I	N	N	P	F	0.276	0.217	0.133	0.157	0.216	0.088	0.197	0.097	0.181	0.086	0.200	0.151
<50	I	N	N	P	P	0.267	0.211	0.133	0.163	0.227	0.093	0.187	0.091	0.178	0.082	0.220	0.148
<50	I	N	R	G	G	0.292	0.228	0.135	0.148	0.197	0.059	0.224	0.112	0.188	0.081	0.187	0.148
<50	I	N	R	G	F	0.290	0.226	0.134	0.149	0.200	0.066	0.221	0.112	0.184	0.083	0.185	0.149
<50	I	N	R	G	P	0.282	0.221	0.134	0.154	0.209	0.070	0.211	0.106	0.181	0.079	0.205	0.146
<50	I	N	R	F	G	0.288	0.225	0.134	0.150	0.202	0.064	0.221	0.111	0.186	0.077	0.187	0.153

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	I	N	R	F	F	0.287	0.224	0.134	0.151	0.205	0.071	0.217	0.111	0.182	0.079	0.185	0.154
<50	I	N	R	F	P	0.278	0.218	0.134	0.156	0.214	0.076	0.208	0.104	0.179	0.076	0.205	0.151
<50	I	N	R	P	G	0.278	0.218	0.133	0.156	0.214	0.077	0.207	0.100	0.184	0.075	0.199	0.156
<50	I	N	R	P	F	0.276	0.217	0.133	0.157	0.217	0.084	0.203	0.100	0.180	0.077	0.197	0.157
<50	I	N	R	P	P	0.268	0.211	0.133	0.162	0.226	0.089	0.194	0.094	0.178	0.073	0.217	0.155
<50	I	N	L	G	G	0.280	0.219	0.134	0.155	0.211	0.064	0.205	0.109	0.178	0.081	0.205	0.158
<50	I	N	L	G	F	0.278	0.218	0.134	0.156	0.214	0.071	0.201	0.109	0.173	0.084	0.203	0.159
<50	I	N	L	G	P	0.269	0.212	0.134	0.162	0.223	0.075	0.191	0.102	0.171	0.080	0.223	0.157
<50	I	N	L	F	G	0.276	0.217	0.134	0.157	0.216	0.069	0.201	0.107	0.175	0.078	0.205	0.164
<50	I	N	L	F	F	0.274	0.215	0.134	0.158	0.219	0.076	0.198	0.107	0.171	0.080	0.203	0.165
<50	I	N	L	F	P	0.266	0.210	0.133	0.164	0.228	0.081	0.188	0.101	0.169	0.076	0.223	0.162
<50	I	N	L	P	G	0.266	0.210	0.133	0.163	0.228	0.083	0.187	0.097	0.174	0.076	0.216	0.167
<50	I	N	L	P	F	0.264	0.208	0.133	0.164	0.231	0.089	0.183	0.097	0.170	0.078	0.214	0.168
<50	I	N	L	P	P	0.255	0.203	0.132	0.170	0.240	0.094	0.174	0.090	0.167	0.074	0.234	0.165
<50	I	N	-	G	G	0.252	0.200	0.132	0.171	0.245	0.095	0.164	0.099	0.150	0.082	0.228	0.182
<50	I	N	-	G	F	0.250	0.198	0.132	0.171	0.248	0.102	0.160	0.099	0.146	0.085	0.226	0.182
<50	I	N	-	G	P	0.241	0.193	0.132	0.177	0.257	0.107	0.151	0.093	0.144	0.081	0.246	0.180
<50	I	N	-	F	G	0.248	0.197	0.132	0.172	0.250	0.101	0.161	0.098	0.148	0.079	0.228	0.187
<50	I	N	-	F	F	0.246	0.196	0.132	0.173	0.253	0.107	0.157	0.098	0.144	0.081	0.226	0.188
<50	I	N	-	F	P	0.237	0.190	0.131	0.179	0.262	0.112	0.147	0.091	0.141	0.077	0.246	0.185
<50	I	N	-	P	G	0.238	0.190	0.131	0.179	0.263	0.114	0.147	0.087	0.146	0.077	0.239	0.190
<50	I	N	-	P	F	0.236	0.189	0.131	0.179	0.265	0.120	0.143	0.087	0.142	0.079	0.237	0.191
<50	I	N	-	P	P	0.227	0.183	0.130	0.185	0.275	0.125	0.133	0.081	0.140	0.075	0.257	0.188
<50	I	R	N	G	G	0.301	0.234	0.134	0.143	0.188	0.057	0.236	0.117	0.203	0.072	0.168	0.147
<50	I	R	N	G	F	0.299	0.232	0.134	0.144	0.191	0.063	0.233	0.116	0.199	0.074	0.166	0.148
<50	I	R	N	G	P	0.290	0.227	0.134	0.149	0.200	0.068	0.223	0.110	0.197	0.071	0.186	0.146
<50	I	R	N	F	G	0.297	0.231	0.134	0.145	0.193	0.062	0.233	0.115	0.201	0.068	0.168	0.153
<50	I	R	N	F	F	0.295	0.230	0.134	0.146	0.195	0.068	0.229	0.115	0.197	0.071	0.166	0.154
<50	I	R	N	F	P	0.286	0.224	0.133	0.151	0.205	0.073	0.220	0.108	0.195	0.067	0.186	0.151
<50	I	R	N	P	G	0.287	0.225	0.133	0.151	0.205	0.075	0.219	0.105	0.200	0.066	0.180	0.156
<50	I	R	N	P	F	0.285	0.223	0.133	0.152	0.207	0.081	0.215	0.105	0.196	0.069	0.178	0.157
<50	I	R	N	P	P	0.276	0.217	0.132	0.157	0.217	0.086	0.206	0.098	0.193	0.065	0.198	0.154
<50	I	R	R	G	G	0.301	0.235	0.134	0.143	0.188	0.052	0.243	0.119	0.203	0.064	0.165	0.154
<50	I	R	R	G	F	0.299	0.233	0.134	0.143	0.190	0.058	0.239	0.119	0.199	0.066	0.163	0.154
<50	I	R	R	G	P	0.291	0.227	0.134	0.149	0.199	0.063	0.230	0.113	0.196	0.062	0.183	0.152
<50	I	R	R	F	G	0.297	0.232	0.134	0.144	0.192	0.057	0.240	0.118	0.201	0.060	0.165	0.159
<50	I	R	R	F	F	0.296	0.231	0.134	0.145	0.195	0.064	0.236	0.118	0.197	0.063	0.163	0.160
<50	I	R	R	F	P	0.287	0.225	0.133	0.151	0.204	0.069	0.226	0.111	0.194	0.059	0.183	0.157
<50	I	R	R	P	G	0.287	0.225	0.133	0.150	0.204	0.070	0.226	0.108	0.199	0.058	0.177	0.162
<50	I	R	R	P	F	0.285	0.224	0.133	0.151	0.207	0.077	0.222	0.107	0.195	0.061	0.175	0.163
<50	I	R	R	P	P	0.277	0.218	0.132	0.157	0.216	0.082	0.212	0.101	0.193	0.057	0.195	0.160
<50	I	R	L	G	G	0.289	0.226	0.134	0.150	0.202	0.057	0.223	0.116	0.193	0.065	0.182	0.164

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	I	R	L	G	F	0.287	0.225	0.134	0.150	0.204	0.064	0.220	0.116	0.188	0.067	0.180	0.165
<50	I	R	L	G	P	0.279	0.219	0.133	0.156	0.213	0.068	0.210	0.109	0.186	0.063	0.200	0.162
<50	I	R	L	F	G	0.285	0.224	0.133	0.152	0.206	0.062	0.220	0.114	0.190	0.061	0.182	0.170
<50	I	R	L	F	F	0.284	0.222	0.133	0.152	0.209	0.069	0.216	0.114	0.186	0.063	0.180	0.170
<50	I	R	L	F	P	0.275	0.217	0.133	0.158	0.218	0.074	0.207	0.108	0.184	0.059	0.200	0.168
<50	I	R	L	P	G	0.275	0.217	0.132	0.158	0.218	0.075	0.206	0.104	0.189	0.059	0.194	0.173
<50	I	R	L	P	F	0.273	0.215	0.132	0.158	0.221	0.082	0.202	0.104	0.185	0.061	0.192	0.174
<50	I	R	L	P	P	0.264	0.210	0.132	0.164	0.230	0.087	0.193	0.097	0.182	0.057	0.212	0.171
<50	I	R	-	G	G	0.261	0.207	0.132	0.165	0.235	0.088	0.183	0.106	0.165	0.065	0.205	0.187
<50	I	R	-	G	F	0.259	0.205	0.132	0.166	0.238	0.095	0.179	0.106	0.161	0.068	0.203	0.188
<50	I	R	-	G	P	0.251	0.199	0.131	0.171	0.247	0.099	0.169	0.100	0.159	0.064	0.223	0.186
<50	I	R	-	F	G	0.257	0.204	0.133	0.167	0.240	0.094	0.179	0.105	0.163	0.062	0.205	0.193
<50	I	R	-	F	F	0.256	0.203	0.131	0.167	0.243	0.100	0.176	0.105	0.159	0.064	0.203	0.194
<50	I	R	-	F	P	0.247	0.197	0.131	0.173	0.252	0.105	0.166	0.098	0.156	0.060	0.223	0.191
<50	I	R	-	P	G	0.247	0.197	0.131	0.173	0.253	0.107	0.165	0.094	0.161	0.060	0.217	0.196
<50	I	R	-	P	F	0.245	0.196	0.130	0.174	0.255	0.113	0.161	0.094	0.157	0.062	0.215	0.197
<50	I	R	-	P	P	0.236	0.190	0.130	0.179	0.265	0.118	0.152	0.088	0.155	0.058	0.235	0.194
<50	I	L	N	G	G	0.290	0.227	0.134	0.149	0.199	0.068	0.229	0.107	0.187	0.079	0.189	0.142
<50	I	L	N	G	F	0.289	0.225	0.134	0.150	0.202	0.075	0.225	0.107	0.183	0.082	0.187	0.143
<50	I	L	N	G	P	0.280	0.220	0.134	0.155	0.211	0.080	0.215	0.100	0.180	0.078	0.207	0.140
<50	I	L	N	F	G	0.287	0.224	0.134	0.151	0.104	0.074	0.225	0.105	0.185	0.075	0.189	0.147
<50	I	L	N	F	F	0.285	0.223	0.134	0.151	0.207	0.080	0.222	0.105	0.181	0.078	0.187	0.148
<50	I	L	N	F	P	0.276	0.217	0.133	0.157	0.216	0.085	0.212	0.099	0.178	0.074	0.207	0.145
<50	I	L	N	P	G	0.276	0.217	0.133	0.157	0.216	0.087	0.211	0.095	0.183	0.073	0.201	0.150
<50	I	L	N	P	F	0.275	0.216	0.133	0.157	0.219	0.093	0.208	0.095	0.179	0.076	0.198	0.151
<50	I	L	N	P	P	0.266	0.210	0.133	0.163	0.228	0.098	0.198	0.088	0.177	0.072	0.219	0.149
<50	I	L	R	G	G	0.291	0.227	0.134	0.148	0.199	0.064	0.235	0.110	0.186	0.071	0.186	0.148
<50	I	L	R	G	F	0.289	0.226	0.134	0.149	0.201	0.070	0.232	0.110	0.182	0.073	0.184	0.149
<50	I	L	R	G	P	0.280	0.220	0.134	0.155	0.211	0.075	0.222	0.103	0.180	0.069	0.204	0.146
<50	I	L	R	F	G	0.287	0.225	0.134	0.150	0.204	0.069	0.232	0.108	0.184	0.067	0.186	0.153
<50	I	L	R	F	F	0.285	0.224	0.134	0.151	0.206	0.075	0.228	0.108	0.180	0.070	0.184	0.154
<50	I	L	R	F	P	0.277	0.218	0.133	0.157	0.215	0.080	0.219	0.101	0.178	0.066	0.204	0.152
<50	I	L	R	P	G	0.277	0.218	0.133	0.156	0.216	0.082	0.218	0.098	0.183	0.065	0.197	0.157
<50	I	L	R	P	F	0.275	0.217	0.133	0.157	0.218	0.088	0.214	0.098	0.179	0.068	0.195	0.158
<50	I	L	R	P	P	0.266	0.211	0.132	0.163	0.228	0.093	0.205	0.091	0.176	0.064	0.215	0.155
<50	I	L	L	G	G	0.279	0.219	0.134	0.156	0.213	0.069	0.216	0.106	0.176	0.072	0.203	0.159
<50	I	L	L	G	F	0.277	0.218	0.134	0.156	0.216	0.075	0.212	0.106	0.172	0.074	0.201	0.160
<50	I	L	L	G	P	0.268	0.212	0.133	0.162	0.225	0.080	0.202	0.100	0.170	0.070	0.221	0.157
<50	I	L	L	F	G	0.275	0.216	0.133	0.157	0.218	0.074	0.212	0.104	0.174	0.068	0.203	0.164
<50	I	L	L	F	F	0.273	0.215	0.133	0.158	0.220	0.081	0.209	0.104	0.170	0.070	0.201	0.165
<50	I	L	L	F	P	0.264	0.209	0.133	0.164	0.230	0.085	0.199	0.098	0.167	0.066	0.221	0.162
<50	I	L	L	P	G	0.265	0.210	0.133	0.163	0.230	0.087	0.198	0.094	0.172	0.066	0.215	0.167

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	I	L	L	P	F	0.263	0.208	0.132	0.164	0.232	0.094	0.195	0.094	0.168	0.068	0.213	0.168
<50	I	L	L	P	P	0.254	0.202	0.132	0.170	0.242	0.098	0.185	0.088	0.166	0.064	0.233	0.166
<50	I	L	-	G	G	0.251	0.199	0.132	0.171	0.247	0.100	0.175	0.097	0.149	0.073	0.226	0.182
<50	I	L	-	G	F	0.249	0.198	0.132	0.171	0.250	0.106	0.171	0.097	0.144	0.075	0.224	0.183
<50	I	L	-	G	P	0.240	0.192	0.131	0.177	0.259	0.111	0.162	0.090	0.142	0.071	0.244	0.180
<50	I	L	-	F	G	0.247	0.197	0.132	0.173	0.252	0.105	0.172	0.095	0.146	0.069	0.226	0.187
<50	I	L	-	F	F	0.245	0.195	0.131	0.173	0.255	0.112	0.168	0.095	0.142	0.071	0.224	0.188
<50	I	L	-	F	P	0.236	0.190	0.131	0.179	0.264	0.116	0.158	0.088	0.140	0.067	0.244	0.185
<50	I	L	-	P	G	0.236	0.190	0.131	0.179	0.264	0.118	0.158	0.085	0.145	0.067	0.238	0.190
<50	I	L	-	P	F	0.235	0.188	0.131	0.180	0.267	0.125	0.154	0.085	0.141	0.069	0.236	0.191
<50	I	L	-	P	P	0.226	0.183	0.130	0.185	0.276	0.129	0.144	0.078	0.138	0.065	0.256	0.189
<50	I	-	N	G	G	0.268	0.211	0.133	0.161	0.227	0.081	0.193	0.108	0.161	0.076	0.202	0.179
<50	I	-	N	G	F	0.266	0.210	0.133	0.162	0.230	0.088	0.189	0.108	0.157	0.078	0.200	0.180
<50	I	-	N	G	P	0.257	0.204	0.132	0.167	0.339	0.092	0.180	0.101	0.155	0.074	0.220	0.177
<50	I	-	N	F	G	0.264	0.208	0.133	0.163	0.232	0.086	0.190	0.106	0.159	0.072	0.202	0.184
<50	I	-	N	F	F	0.262	0.207	0.132	0.163	0.235	0.093	0.186	0.106	0.155	0.075	0.200	0.185
<50	I	-	N	F	P	0.254	0.201	0.132	0.169	0.244	0.098	0.176	0.100	0.153	0.071	0.220	0.183
<50	I	-	N	P	G	0.254	0.201	0.132	0.169	0.244	0.099	0.175	0.096	0.158	0.070	0.213	0.188
<50	I	-	N	P	F	0.252	0.200	0.132	0.170	0.247	0.106	0.172	0.096	0.154	0.073	0.211	0.189
<50	I	-	N	P	P	0.243	0.194	0.131	0.175	0.256	0.111	0.162	0.089	0.151	0.069	0.231	0.186
<50	I	-	R	G	G	0.268	0.212	0.133	0.160	0.227	0.077	0.200	0.111	0.161	0.068	0.199	0.185
<50	I	-	R	G	F	0.267	0.210	0.133	0.161	0.229	0.083	0.196	0.110	0.157	0.070	0.197	0.186
<50	I	-	R	G	P	0.258	0.204	0.132	0.167	0.239	0.088	0.186	0.104	0.155	0.066	0.217	0.184
<50	I	-	R	F	G	0.265	0.209	0.133	0.162	0.231	0.082	0.196	0.109	0.159	0.064	0.199	0.191
<50	I	-	R	F	F	0.263	0.208	0.132	0.163	0.234	0.088	0.193	0.109	0.155	0.067	0.197	0.192
<50	I	-	R	F	P	0.254	0.202	0.132	0.169	0.243	0.093	0.183	0.102	0.152	0.063	0.217	0.189
<50	I	-	R	P	G	0.254	0.202	0.132	0.168	0.244	0.095	0.182	0.099	0.157	0.062	0.210	0.194
<50	I	-	R	P	F	0.252	0.201	0.131	0.169	0.246	0.101	0.178	0.099	0.153	0.065	0.208	0.195
<50	I	-	R	P	P	0.244	0.195	0.131	0.175	0.256	0.106	0.169	0.092	0.151	0.061	0.228	0.192
<50	I	-	L	G	G	0.256	0.203	0.132	0.168	0.241	0.082	0.180	0.107	0.151	0.068	0.216	0.196
<50	I	-	L	G	F	0.254	0.202	0.132	0.168	0.244	0.088	0.176	0.107	0.147	0.071	0.214	0.197
<50	I	-	L	G	P	0.246	0.196	0.132	0.174	0.253	0.093	0.167	0.101	0.144	0.067	0.234	0.194
<50	I	-	L	F	G	0.252	0.200	0.132	0.170	0.246	0.087	0.177	0.105	0.148	0.065	0.216	0.201
<50	I	-	L	F	F	0.251	0.199	0.132	0.170	0.248	0.093	0.173	0.105	0.144	0.067	0.214	0.202
<50	I	-	L	F	P	0.242	0.193	0.131	0.176	0.258	0.098	0.163	0.099	0.142	0.063	0.234	0.200
<50	I	-	L	P	G	0.242	0.193	0.131	0.176	0.258	0.100	0.162	0.095	0.147	0.063	0.228	0.205
<50	I	-	L	P	F	0.240	0.192	0.131	0.176	0.261	0.106	0.159	0.095	0.143	0.065	0.226	0.206
<50	I	-	L	P	P	0.231	0.186	0.130	0.182	0.270	0.111	0.149	0.089	0.140	0.061	0.246	0.203
<50	I	-	-	G	G	0.228	0.183	0.131	0.183	0.276	0.113	0.139	0.098	0.123	0.069	0.239	0.219
<50	I	-	-	G	F	0.226	0.182	0.130	0.184	0.278	0.119	0.135	0.097	0.119	0.072	0.237	0.220
<50	I	-	-	G	P	0.217	0.176	0.130	0.189	0.288	0.124	0.126	0.091	0.117	0.068	0.257	0.217
<50	I	-	-	F	G	0.224	0.181	0.130	0.185	0.281	0.118	0.136	0.096	0.121	0.066	0.239	0.224

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	I	-	-	F	F	0.222	0.179	0.130	0.186	0.283	0.124	0.132	0.096	0.117	0.068	0.237	0.225
<50	I	-	-	F	P	0.213	0.173	0.130	0.191	0.293	0.129	0.123	0.089	0.114	0.064	0.257	0.223
<50	I	-	-	P	G	0.213	0.173	0.129	0.191	0.293	0.131	0.122	0.086	0.119	0.064	0.250	0.228
<50	I	-	-	P	F	0.211	0.172	0.129	0.192	0.296	0.137	0.118	0.086	0.115	0.066	0.248	0.229
<50	I	-	-	P	P	0.202	0.166	0.129	0.198	0.305	0.142	0.108	0.079	0.113	0.062	0.269	0.226
<50	S	N	N	G	G	0.299	0.232	0.135	0.145	0.190	0.061	0.224	0.115	0.194	0.091	0.181	0.133
<50	S	N	N	G	F	0.297	0.231	0.135	0.145	0.192	0.068	0.221	0.115	0.190	0.094	0.179	0.134
<50	S	N	N	G	P	0.288	0.225	0.134	0.151	0.201	0.073	0.211	0.108	0.188	0.090	0.199	0.131
<50	S	N	N	F	G	0.295	0.229	0.135	0.146	0.194	0.067	0.221	0.113	0.192	0.088	0.181	0.138
<50	S	N	N	F	F	0.293	0.228	0.135	0.147	0.197	0.073	0.217	0.113	0.188	0.090	0.179	0.139
<50	S	N	N	F	P	0.285	0.222	0.134	0.153	0.206	0.078	0.208	0.107	0.185	0.086	0.199	0.137
<50	S	N	N	P	G	0.285	0.223	0.134	0.152	0.206	0.080	0.207	0.103	0.190	0.085	0.193	0.142
<50	S	N	N	P	F	0.283	0.221	0.134	0.153	0.209	0.086	0.203	0.103	0.186	0.088	0.191	0.142
<50	S	N	N	P	P	0.274	0.216	0.133	0.159	0.218	0.091	0.194	0.096	0.184	0.084	0.211	0.140
<50	S	N	R	G	G	0.299	0.233	0.135	0.144	0.189	0.057	0.231	0.118	0.194	0.083	0.178	0.139
<50	S	N	R	G	F	0.298	0.231	0.135	0.145	0.191	0.063	0.227	0.118	0.190	0.085	0.176	0.140
<50	S	N	R	G	P	0.289	0.226	0.134	0.150	0.201	0.068	0.218	0.111	0.187	0.081	0.196	0.137
<50	S	N	R	F	G	0.296	0.230	0.135	0.146	0.194	0.062	0.228	0.116	0.191	0.079	0.178	0.145
<50	S	N	R	F	F	0.294	0.229	0.134	0.147	0.196	0.069	0.224	0.116	0.187	0.082	0.176	0.145
<50	S	N	R	F	P	0.285	0.225	0.134	0.152	0.205	0.073	0.215	0.110	0.185	0.078	0.196	0.143
<50	S	N	R	P	G	0.285	0.223	0.134	0.152	0.206	0.075	0.214	0.106	0.190	0.077	0.190	0.148
<50	S	N	R	P	F	0.284	0.222	0.134	0.153	0.208	0.082	0.210	0.106	0.186	0.080	0.188	0.149
<50	S	N	R	P	P	0.275	0.216	0.133	0.158	0.217	0.086	0.200	0.099	0.183	0.076	0.208	0.146
<50	S	N	L	G	G	0.287	0.224	0.134	0.151	0.203	0.062	0.211	0.114	0.183	0.084	0.196	0.150
<50	S	N	L	G	F	0.286	0.223	0.134	0.152	0.206	0.068	0.208	0.114	0.179	0.086	0.194	0.151
<50	S	N	L	G	P	0.277	0.217	0.134	0.157	0.215	0.073	0.198	0.108	0.177	0.082	0.214	0.148
<50	S	N	L	F	G	0.283	0.222	0.134	0.153	0.208	0.067	0.208	0.112	0.181	0.080	0.196	0.155
<50	S	N	L	F	F	0.282	0.220	0.134	0.154	0.210	0.074	0.204	0.112	0.177	0.083	0.194	0.156
<50	S	N	L	F	P	0.273	0.215	0.133	0.159	0.220	0.078	0.195	0.106	0.175	0.079	0.214	0.153
<50	S	N	L	P	G	0.273	0.215	0.133	0.159	0.220	0.080	0.194	0.102	0.179	0.078	0.207	0.158
<50	S	N	L	P	F	0.271	0.213	0.133	0.160	0.222	0.087	0.190	0.102	0.175	0.081	0.205	0.159
<50	S	N	L	P	P	0.262	0.208	0.133	0.165	0.232	0.091	0.181	0.096	0.173	0.077	0.225	0.157
<50	S	N	-	G	G	0.259	0.205	0.133	0.166	0.237	0.093	0.171	0.105	0.156	0.085	0.219	0.173
<50	S	N	-	G	F	0.258	0.203	0.133	0.167	0.240	0.099	0.167	0.105	0.152	0.087	0.216	0.174
<50	S	N	-	G	P	0.249	0.198	0.132	0.173	0.249	0.104	0.157	0.098	0.149	0.083	0.237	0.171
<50	S	N	-	F	G	0.256	0.202	0.132	0.168	0.242	0.098	0.167	0.103	0.154	0.081	0.219	0.178
<50	S	N	-	F	F	0.254	0.201	0.132	0.169	0.244	0.105	0.164	0.103	0.150	0.084	0.216	0.179
<50	S	N	-	F	P	0.245	0.195	0.132	0.175	0.254	0.110	0.154	0.097	0.147	0.080	0.237	0.177
<50	S	N	-	P	G	0.245	0.195	0.131	0.174	0.254	0.111	0.153	0.093	0.152	0.079	0.230	0.182
<50	S	N	-	P	F	0.243	0.194	0.131	0.175	0.257	0.118	0.150	0.093	0.148	0.081	0.228	0.182
<50	S	N	-	P	P	0.234	0.188	0.131	0.181	0.266	0.123	0.140	0.086	0.146	0.078	0.248	0.180
<50	S	R	N	G	G	0.308	0.239	0.135	0.139	0.180	0.054	0.243	0.122	0.209	0.074	0.159	0.139

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	**Preservation**	**Restoration**	**Rehabilitation**	**Adaptive Reuse**	**No Special Consideration**	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	S	R	N	G	F	0.306	0.237	0.135	0.140	0.182	0.061	0.239	0.122	0.205	0.077	0.157	0.140
<50	S	R	N	G	P	0.298	0.232	0.134	0.145	0.191	0.066	0.230	0.115	0.203	0.073	0.177	0.137
<50	S	R	N	F	G	0.304	0.236	0.134	0.141	0.184	0.060	0.240	0.120	0.207	0.071	0.159	0.144
<50	S	R	N	F	F	0.303	0.235	0.134	0.141	0.187	0.066	0.236	0.120	0.203	0.073	0.157	0.145
<50	S	R	N	F	P	0.294	0.229	0.134	0.147	0.196	0.071	0.227	0.114	0.200	0.069	0.177	0.142
<50	S	R	N	P	G	0.294	0.229	0.133	0.147	0.196	0.073	0.226	0.110	0.205	0.069	0.171	0.147
<50	S	R	N	P	F	0.292	0.228	0.133	0.147	0.196	0.079	0.222	0.110	0.201	0.071	0.169	0.148
<50	S	R	N	P	P	0.284	0.222	0.133	0.153	0.208	0.084	0.212	0.103	0.199	0.067	0.189	0.146
<50	S	R	R	G	G	0.308	0.239	0.135	0.138	0.179	0.050	0.250	0.125	0.209	0.066	0.156	0.145
<50	S	R	R	G	F	0.307	0.238	0.134	0.139	0.182	0.056	0.246	0.125	0.205	0.069	0.154	0.146
<50	S	R	R	G	P	0.298	0.232	0.134	0.145	0.191	0.061	0.237	0.118	0.202	0.065	0.174	0.143
<50	S	R	R	F	G	0.305	0.237	0.134	0.140	0.184	0.055	0.247	0.123	0.206	0.063	0.156	0.150
<50	S	R	R	F	F	0.303	0.236	0.134	0.141	0.186	0.061	0.243	0.123	0.202	0.065	0.154	0.151
<50	S	R	R	F	P	0.294	0.230	0.134	0.146	0.196	0.066	0.233	0.117	0.200	0.061	0.174	0.149
<50	S	R	R	P	G	0.295	0.230	0.133	0.146	0.196	0.068	0.232	0.113	0.205	0.060	0.167	0.154
<50	S	R	R	P	F	0.293	0.229	0.133	0.147	0.198	0.075	0.229	0.113	0.201	0.063	0.165	0.155
<50	S	R	R	P	P	0.284	0.223	0.133	0.152	0.208	0.079	0.219	0.106	0.198	0.059	0.185	0.152
<50	S	R	L	G	G	0.296	0.231	0.134	0.146	0.193	0.055	0.230	0.121	0.198	0.067	0.173	0.156
<50	S	R	L	G	F	0.295	0.230	0.134	0.146	0.196	0.061	0.226	0.121	0.194	0.069	0.171	0.157
<50	S	R	L	G	P	0.286	0.224	0.133	0.152	0.205	0.066	0.217	0.115	0.192	0.065	0.191	0.154
<50	S	R	L	F	G	0.293	0.229	0.134	0.147	0.198	0.060	0.227	0.119	0.196	0.063	0.173	0.161
<50	S	R	L	F	F	0.291	0.227	0.133	0.148	0.200	0.067	0.223	0.119	0.192	0.066	0.171	0.162
<50	S	R	L	F	P	0.282	0.221	0.133	0.154	0.210	0.071	0.213	0.113	0.190	0.062	0.191	0.159
<50	S	R	L	P	G	0.282	0.222	0.133	0.153	0.210	0.073	0.213	0.109	0.194	0.061	0.185	0.164
<50	S	R	L	P	F	0.281	0.220	0.133	0.154	0.212	0.080	0.209	0.109	0.190	0.064	0.183	0.165
<50	S	R	L	P	P	0.272	0.215	0.132	0.160	0.222	0.084	0.199	0.103	0.188	0.060	0.203	0.162
<50	S	R	-	G	G	0.269	0.212	0.132	0.161	0.227	0.086	0.189	0.112	0.171	0.068	0.196	0.179
<50	S	R	-	G	F	0.267	0.210	0.132	0.161	0.230	0.092	0.186	0.112	0.167	0.070	0.194	0.180
<50	S	R	-	G	P	0.258	0.204	0.132	0.167	0.239	0.097	0.176	0.105	0.164	0.066	0.214	0.177
<50	S	R	-	F	G	0.265	0.209	0.132	0.162	0.232	0.091	0.186	0.110	0.169	0.064	0.196	0.184
<50	S	R	-	F	F	0.263	0.208	0.132	0.163	0.234	0.098	0.182	0.110	0.165	0.067	0.194	0.185
<50	S	R	-	F	P	0.254	0.202	0.131	0.169	0.244	0.102	0.173	0.104	0.162	0.063	0.214	0.182
<50	S	R	-	P	G	0.254	0.202	0.131	0.169	0.244	0.104	0.172	0.100	0.167	0.062	0.208	0.187
<50	S	R	-	P	F	0.253	0.201	0.131	0.169	0.247	0.111	0.168	0.100	0.163	0.065	0.206	0.188
<50	S	R	-	P	P	0.244	0.195	0.130	0.175	0.256	0.116	0.159	0.093	0.161	0.061	0.226	0.186
<50	S	L	N	G	G	0.298	0.232	0.135	0.145	0.191	0.066	0.236	0.112	0.193	0.081	0.180	0.133
<50	S	L	N	G	F	0.296	0.230	0.135	0.145	0.194	0.072	0.232	0.112	0.189	0.084	0.178	0.134
<50	S	L	N	G	P	0.287	0.225	0.134	0.151	0.203	0.077	0.222	0.106	0.186	0.080	0.198	0.131
<50	S	L	N	F	G	0.294	0.229	0.134	0.147	0.196	0.071	0.232	0.110	0.190	0.078	0.180	0.139
<50	S	L	N	F	F	0.292	0.228	0.134	0.147	0.198	0.078	0.228	0.110	0.186	0.080	0.178	0.139
<50	S	L	N	F	P	0.284	0.222	0.134	0.153	0.208	0.083	0.219	0.104	0.184	0.076	0.198	0.137
<50	S	L	N	P	G	0.284	0.222	0.134	0.153	0.208	0.084	0.218	0.100	0.189	0.076	0.191	0.142

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	S	L	N	P	F	0.282	0.221	0.133	0.153	0.210	0.091	0.214	0.100	0.185	0.078	0.189	0.143
<50	S	L	N	P	P	0.273	0.215	0.133	0.159	0.220	0.096	0.205	0.094	0.182	0.074	0.209	0.140
<50	S	L	R	G	G	0.298	0.232	0.135	0.144	0.190	0.061	0.242	0.115	0.192	0.073	0.177	0.140
<50	S	L	R	G	F	0.297	0.231	0.135	0.145	0.193	0.068	0.239	0.115	0.188	0.076	0.175	0.140
<50	S	L	R	G	P	0.288	0.225	0.134	0.150	0.202	0.073	0.229	0.109	0.186	0.072	0.195	0.138
<50	S	L	R	F	G	0.295	0.230	0.134	0.146	0.195	0.067	0.239	0.113	0.190	0.070	0.177	0.145
<50	S	L	R	F	F	0.293	0.229	0.134	0.147	0.198	0.073	0.235	0.113	0.186	0.072	0.175	0.146
<50	S	L	R	F	P	0.284	0.223	0.134	0.152	0.207	0.078	0.226	0.107	0.183	0.068	0.195	0.143
<50	S	L	R	P	G	0.284	0.223	0.133	0.152	0.207	0.080	0.225	0.103	0.188	0.068	0.188	0.148
<50	S	L	R	P	F	0.283	0.222	0.133	0.153	0.210	0.086	0.221	0.103	0.184	0.070	0.186	0.149
<50	S	L	R	P	P	0.274	0.216	0.133	0.158	0.219	0.091	0.211	0.097	0.182	0.066	0.206	0.146
<50	S	L	L	G	G	0.286	0.224	0.134	0.151	0.204	0.066	0.223	0.111	0.182	0.074	0.194	0.150
<50	S	L	L	G	F	0.284	0.222	0.134	0.152	0.207	0.073	0.219	0.111	0.178	0.076	0.192	0.151
<50	S	L	L	G	P	0.276	0.217	0.134	0.158	0.216	0.078	0.209	0.105	0.175	0.072	0.212	0.148
<50	S	L	L	F	G	0.282	0.221	0.134	0.153	0.209	0.072	0.219	0.110	0.180	0.070	0.194	0.155
<50	S	L	L	F	F	0.281	0.220	0.134	0.154	0.212	0.078	0.215	0.109	0.175	0.073	0.192	0.156
<50	S	L	L	F	P	0.272	0.214	0.133	0.160	0.221	0.083	0.206	0.103	0.173	0.069	0.212	0.154
<50	S	L	L	P	G	0.272	0.215	0.133	0.159	0.221	0.085	0.205	0.099	0.178	0.068	0.206	0.159
<50	S	L	L	P	F	0.270	0.213	0.133	0.160	0.224	0.091	0.201	0.099	0.174	0.071	0.204	0.160
<50	S	L	L	P	P	0.262	0.207	0.132	0.166	0.233	0.096	0.192	0.093	0.172	0.067	0.224	0.157
<50	S	L	-	G	G	0.258	0.204	0.132	0.166	0.238	0.097	0.182	0.102	0.154	0.075	0.217	0.173
<50	S	L	-	G	F	0.257	0.203	0.132	0.167	0.241	0.104	0.178	0.102	0.150	0.077	0.215	0.174
<50	S	L	-	G	P	0.248	0.197	0.132	0.173	0.250	0.109	0.168	0.095	0.148	0.073	0.235	0.171
<50	S	L	-	F	G	0.254	0.202	0.132	0.168	0.243	0.103	0.178	0.100	0.152	0.071	0.217	0.179
<50	S	L	-	F	F	0.253	0.200	0.132	0.169	0.246	0.109	0.175	0.100	0.148	0.074	0.215	0.179
<50	S	L	-	F	P	0.244	0.195	0.131	0.175	0.255	0.114	0.165	0.094	0.146	0.070	0.235	0.177
<50	S	L	-	P	G	0.244	0.195	0.131	0.174	0.256	0.116	0.164	0.090	0.150	0.069	0.229	0.182
<50	S	L	-	P	F	0.242	0.193	0.131	0.175	0.258	0.122	0.161	0.090	0.146	0.072	0.226	0.183
<50	S	L	-	P	P	0.233	0.188	0.130	0.181	0.268	0.127	0.151	0.084	0.144	0.068	0.247	0.180
<50	S	-	N	G	G	0.275	0.216	0.133	0.157	0.219	0.079	0.200	0.113	0.167	0.078	0.193	0.171
<50	S	-	N	G	F	0.274	0.214	0.133	0.157	0.221	0.085	0.196	0.113	0.163	0.081	0.191	0.171
<50	S	-	N	G	P	0.265	0.209	0.133	0.163	0.231	0.090	0.186	0.107	0.161	0.077	0.211	0.169
<50	S	-	N	F	G	0.272	0.213	0.133	0.159	0.223	0.084	0.196	0.111	0.165	0.075	0.193	0.176
<50	S	-	N	F	F	0.270	0.212	0.133	0.159	0.226	0.091	0.193	0.111	0.161	0.077	0.191	0.177
<50	S	-	N	F	P	0.261	0.206	0.133	0.165	0.235	0.095	0.183	0.105	0.159	0.073	0.211	0.174
<50	S	-	N	P	G	0.261	0.206	0.132	0.165	0.236	0.097	0.182	0.101	0.163	0.073	0.204	0.179
<50	S	-	N	P	F	0.259	0.205	0.132	0.165	0.238	0.104	0.179	0.101	0.159	0.075	0.202	0.180
<50	S	-	N	P	P	0.251	0.199	0.131	0.171	0.248	0.108	0.169	0.095	0.157	0.071	0.222	0.177
<50	S	-	R	G	G	0.276	0.217	0.133	0.156	0.218	0.074	0.206	0.116	0.167	0.070	0.190	0.177
<50	S	-	R	G	F	0.274	0.215	0.133	0.157	0.221	0.081	0.203	0.116	0.163	0.073	0.188	0.178
<50	S	-	R	G	P	0.265	0.209	0.133	0.162	0.230	0.085	0.193	0.109	0.160	0.069	0.208	0.175
<50	S	-	R	F	G	0.272	0.214	0.133	0.158	0.223	0.080	0.203	0.114	0.164	0.066	0.190	0.182

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	S	-	R	F	F	0.270	0.213	0.133	0.159	0.226	0.086	0.199	0.114	0.160	0.069	0.188	0.183
<50	S	-	R	F	P	0.262	0.207	0.132	0.164	0.235	0.091	0.190	0.108	0.158	0.065	0.208	0.180
<50	S	-	R	P	G	0.262	0.207	0.132	0.164	0.235	0.093	0.189	0.104	0.163	0.064	0.201	0.185
<50	S	-	R	P	F	0.260	0.206	0.132	0.165	0.238	0.099	0.185	0.104	0.159	0.067	0.199	0.186
<50	S	-	R	P	P	0.251	0.200	0.131	0.170	0.247	0.104	0.176	0.097	0.156	0.063	0.219	0.184
<50	S	-	L	G	G	0.264	0.208	0.133	0.163	0.232	0.079	0.187	0.112	0.156	0.071	0.207	0.187
<50	S	-	L	G	F	0.262	0.207	0.133	0.164	0.235	0.086	0.183	0.112	0.152	0.073	0.205	0.188
<50	S	-	L	G	P	0.253	0.201	0.132	0.170	0.244	0.091	0.173	0.106	0.150	0.069	0.225	0.186
<50	S	-	L	F	G	0.260	0.205	0.132	0.165	0.237	0.085	0.183	0.111	0.154	0.067	0.207	0.193
<50	S	-	L	F	F	0.258	0.204	0.132	0.166	0.240	0.091	0.180	0.110	0.150	0.070	0.205	0.194
<50	S	-	L	F	P	0.249	0.198	0.132	0.172	0.249	0.096	0.170	0.104	0.148	0.066	0.225	0.191
<50	S	-	L	P	G	0.249	0.198	0.131	0.171	0.249	0.098	0.169	0.100	0.153	0.065	0.218	0.196
<50	S	-	L	P	F	0.248	0.197	0.131	0.172	0.252	0.104	0.166	0.100	0.148	0.068	0.216	0.197
<50	S	-	L	P	P	0.239	0.191	0.131	0.178	0.261	0.109	0.156	0.094	0.146	0.064	0.236	0.194
<50	S	-	-	G	G	0.235	0.188	0.131	0.179	0.267	0.110	0.146	0.103	0.129	0.072	0.230	0.211
<50	S	-	-	G	F	0.234	0.187	0.131	0.179	0.270	0.117	0.142	0.103	0.125	0.074	0.228	0.211
<50	S	-	-	G	P	0.225	0.181	0.130	0.185	0.279	0.122	0.133	0.096	0.122	0.070	0.248	0.209
<50	S	-	-	F	G	0.231	0.186	0.131	0.181	0.273	0.116	0.143	0.101	0.127	0.068	0.230	0.216
<50	S	-	-	F	F	0.230	0.184	0.130	0.181	0.275	0.122	0.139	0.101	0.123	0.071	0.228	0.217
<50	S	-	-	F	P	0.221	0.178	0.130	0.187	0.284	0.127	0.129	0.095	0.120	0.067	0.248	0.214
<50	S	-	-	P	G	0.221	0.178	0.130	0.187	0.284	0.129	0.129	0.091	0.125	0.066	0.241	0.219
<50	S	-	-	P	F	0.219	0.177	0.129	0.188	0.287	0.135	0.125	0.091	0.121	0.069	0.239	0.220
<50	S	-	-	P	P	0.210	0.171	0.129	0.193	0.296	0.140	0.115	0.084	0.119	0.065	0.259	0.217
<50	C	N	N	G	G	0.296	0.230	0.135	0.146	0.192	0.063	0.220	0.115	0.191	0.093	0.186	0.134
<50	C	N	N	G	F	0.295	0.229	0.135	0.147	0.195	0.069	0.216	0.114	0.187	0.095	0.183	0.135
<50	C	N	N	G	P	0.286	0.223	0.134	0.152	0.204	0.074	0.207	0.108	0.184	0.091	0.204	0.132
<50	C	N	N	F	G	0.293	0.228	0.135	0.148	0.197	0.068	0.217	0.113	0.188	0.089	0.186	0.140
<50	C	N	N	F	F	0.291	0.226	0.134	0.149	0.200	0.074	0.213	0.113	0.184	0.092	0.183	0.140
<50	C	N	N	F	P	0.282	0.221	0.134	0.154	0.209	0.079	0.203	0.106	0.182	0.088	0.204	0.138
<50	C	N	N	P	G	0.282	0.221	0.134	0.154	0.209	0.081	0.203	0.103	0.187	0.087	0.197	0.143
<50	C	N	N	P	F	0.281	0.220	0.134	0.155	0.212	0.087	0.199	0.103	0.183	0.090	0.195	0.144
<50	C	N	N	P	P	0.272	0.214	0.133	0.160	0.221	0.092	0.189	0.096	0.180	0.086	0.215	0.141
<50	C	N	R	G	G	0.297	0.231	0.135	0.145	0.192	0.058	0.227	0.117	0.190	0.085	0.182	0.141
<50	C	N	R	G	F	0.295	0.230	0.135	0.146	0.194	0.064	0.223	0.117	0.186	0.087	0.180	0.141
<50	C	N	R	G	P	0.287	0.224	0.134	0.152	0.203	0.069	0.213	0.111	0.184	0.083	0.200	0.139
<50	C	N	R	F	G	0.293	0.228	0.135	0.147	0.196	0.063	0.223	0.116	0.188	0.081	0.182	0.146
<50	C	N	R	F	F	0.292	0.227	0.134	0.148	0.199	0.070	0.220	0.116	0.184	0.083	0.180	0.147
<50	C	N	R	F	P	0.283	0.221	0.134	0.154	0.208	0.075	0.210	0.109	0.182	0.079	0.200	0.144
<50	C	N	R	P	G	0.283	0.222	0.134	0.153	0.208	0.076	0.209	0.106	0.186	0.079	0.194	0.149
<50	C	N	R	P	F	0.281	0.220	0.134	0.154	0.211	0.083	0.206	0.105	0.182	0.081	0.192	0.150
<50	C	N	R	P	P	0.273	0.215	0.133	0.160	0.220	0.088	0.196	0.099	0.180	0.077	0.212	0.147
<50	C	N	L	G	G	0.285	0.222	0.134	0.153	0.206	0.063	0.207	0.114	0.180	0.085	0.200	0.151

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	C	N	L	G	F	0.283	0.221	0.134	0.153	0.208	0.069	0.203	0.114	0.176	0.088	0.198	0.152
<50	C	N	L	G	P	0.274	0.215	0.134	0.159	0.218	0.074	0.194	0.107	0.173	0.084	0.218	0.149
<50	C	N	L	F	G	0.281	0.220	0.134	0.155	0.211	0.068	0.204	0.112	0.178	0.082	0.200	0.156
<50	C	N	L	F	F	0.279	0.219	0.134	0.155	0.213	0.075	0.200	0.112	0.174	0.084	0.198	0.157
<50	C	N	L	F	P	0.271	0.213	0.133	0.161	0.222	0.080	0.190	0.106	0.171	0.080	0.218	0.155
<50	C	N	L	P	G	0.271	0.213	0.133	0.161	0.223	0.081	0.190	0.102	0.176	0.080	0.211	0.160
<50	C	N	L	P	F	0.269	0.212	0.133	0.161	0.225	0.088	0.186	0.102	0.172	0.082	0.209	0.161
<50	C	N	L	P	P	0.260	0.206	0.133	0.167	0.234	0.093	0.176	0.095	0.170	0.078	0.229	0.158
<50	C	N	-	G	G	0.257	0.203	0.133	0.168	0.240	0.094	0.166	0.104	0.152	0.086	0.223	0.174
<50	C	N	-	G	F	0.255	0.201	0.133	0.138	0.242	0.101	0.162	0.104	0.148	0.089	0.221	0.175
<50	C	N	-	G	P	0.252	0.196	0.132	0.174	0.246	0.105	0.153	0.098	0.146	0.085	0.241	0.172
<50	C	N	-	F	G	0.253	0.200	0.132	0.170	0.245	0.099	0.163	0.103	0.150	0.083	0.223	0.180
<50	C	N	-	F	F	0.251	0.199	0.132	0.173	0.247	0.106	0.159	0.103	0.146	0.085	0.221	0.181
<50	C	N	-	F	P	0.243	0.193	0.132	0.176	0.257	0.111	0.150	0.096	0.144	0.081	0.241	0.178
<50	C	N	-	P	G	0.243	0.193	0.131	0.176	0.257	0.112	0.149	0.092	0.149	0.081	0.234	0.183
<50	C	N	-	P	F	0.241	0.192	0.131	0.176	0.260	0.119	0.145	0.092	0.145	0.083	0.232	0.184
<50	C	N	-	P	P	0.232	0.186	0.131	0.182	0.269	0.124	0.135	0.086	0.142	0.079	0.252	0.181
<50	C	R	N	G	G	0.305	0.237	0.135	0.140	0.182	0.055	0.239	0.122	0.206	0.076	0.163	0.140
<50	C	R	N	G	F	0.304	0.236	0.135	0.141	0.185	0.062	0.235	0.121	0.202	0.078	0.161	0.141
<50	C	R	N	G	P	0.295	0.230	0.134	0.147	0.194	0.067	0.225	0.115	0.199	0.074	0.181	0.138
<50	C	R	N	F	G	0.302	0.235	0.134	0.142	0.187	0.061	0.235	0.120	0.203	0.072	0.163	0.145
<50	C	R	N	F	F	0.300	0.233	0.134	0.143	0.190	0.067	0.232	0.120	0.199	0.075	0.161	0.146
<50	C	R	N	F	P	0.291	0.225	0.134	0.148	0.199	0.072	0.222	0.113	0.197	0.071	0.181	0.144
<50	C	R	N	P	G	0.292	0.228	0.133	0.148	0.199	0.074	0.221	0.110	0.202	0.070	0.175	0.149
<50	C	R	N	P	F	0.290	0.226	0.133	0.149	0.202	0.080	0.217	0.110	0.198	0.073	0.173	0.150
<50	C	R	N	P	P	0.281	0.221	0.133	0.154	0.211	0.085	0.208	0.103	0.195	0.069	0.193	0.147
<50	C	R	R	G	G	0.306	0.238	0.135	0.140	0.182	0.051	0.245	0.124	0.205	0.068	0.160	0.146
<50	C	R	R	G	F	0.304	0.236	0.134	0.140	0.184	0.057	0.242	0.124	0.201	0.070	0.158	0.147
<50	C	R	R	G	P	0.296	0.231	0.134	0.145	0.194	0.062	0.232	0.118	0.199	0.066	0.178	0.145
<50	C	R	R	F	G	0.302	0.235	0.134	0.142	0.187	0.056	0.242	0.123	0.203	0.064	0.160	0.152
<50	C	R	R	F	F	0.301	0.234	0.134	0.145	0.189	0.063	0.238	0.123	0.199	0.067	0.158	0.153
<50	C	R	R	F	P	0.292	0.228	0.134	0.148	0.198	0.068	0.229	0.116	0.197	0.063	0.178	0.150
<50	C	R	R	P	G	0.292	0.228	0.133	0.148	0.199	0.069	0.228	0.113	0.201	0.062	0.172	0.155
<50	C	R	R	P	F	0.290	0.227	0.133	0.148	0.201	0.076	0.224	0.112	0.197	0.065	0.169	0.156
<50	C	R	R	P	P	0.282	0.221	0.133	0.154	0.210	0.081	0.215	0.106	0.195	0.061	0.190	0.153
<50	C	R	L	G	G	0.294	0.229	0.134	0.147	0.196	0.056	0.226	0.121	0.195	0.068	0.177	0.157
<50	C	R	L	G	F	0.292	0.228	0.134	0.148	0.198	0.062	0.222	0.121	0.191	0.071	0.175	0.158
<50	C	R	L	G	P	0.284	0.222	0.133	0.153	0.208	0.067	0.212	0.114	0.188	0.067	0.195	0.155
<50	C	R	L	F	G	0.290	0.227	0.134	0.149	0.201	0.061	0.222	0.119	0.193	0.065	0.177	0.162
<50	C	R	L	F	F	0.289	0.225	0.133	0.149	0.203	0.068	0.219	0.119	0.189	0.067	0.175	0.163
<50	C	R	L	F	P	0.280	0.220	0.133	0.155	0.212	0.073	0.209	0.113	0.186	0.063	0.195	0.161
<50	C	R	L	P	G	0.280	0.220	0.133	0.155	0.213	0.074	0.208	0.109	0.191	0.063	0.189	0.166

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	C	R	L	P	F	0.278	0.219	0.133	0.155	0.215	0.081	0.204	0.109	0.187	0.065	0.187	0.166
<50	C	R	L	P	P	0.269	0.213	0.132	0.161	0.225	0.086	0.195	0.102	0.185	0.061	0.207	0.164
<50	C	R	-	G	G	0.266	0.210	0.132	0.162	0.230	0.087	0.185	0.111	0.167	0.069	0.200	0.180
<50	C	R	-	G	F	0.264	0.208	0.132	0.163	0.232	0.093	0.181	0.111	0.163	0.072	0.198	0.181
<50	C	R	-	G	P	0.256	0.203	0.132	0.168	0.242	0.098	0.172	0.105	0.161	0.068	0.218	0.178
<50	C	R	-	F	G	0.262	0.207	0.132	0.164	0.235	0.092	0.182	0.110	0.165	0.066	0.200	0.185
<50	C	R	-	F	F	0.261	0.206	0.132	0.165	0.237	0.099	0.178	0.110	0.161	0.068	0.198	0.186
<50	C	R	-	F	P	0.252	0.200	0.131	0.170	0.247	0.104	0.168	0.103	0.159	0.064	0.218	0.184
<50	C	R	-	P	G	0.252	0.200	0.131	0.170	0.247	0.105	0.167	0.100	0.164	0.064	0.212	0.189
<50	C	R	-	P	F	0.250	0.199	0.131	0.171	0.249	0.112	0.164	0.099	0.160	0.066	0.210	0.190
<50	C	R	-	P	P	0.241	0.193	0.130	0.176	0.259	0.117	0.154	0.093	0.157	0.062	0.230	0.187
<50	C	L	N	G	G	0.295	0.230	0.135	0.146	0.194	0.067	0.231	0.112	0.189	0.083	0.184	0.135
<50	C	L	N	G	F	0.294	0.229	0.135	0.147	0.196	0.074	0.227	0.112	0.185	0.085	0.182	0.135
<50	C	L	N	G	P	0.285	0.223	0.134	0.152	0.206	0.078	0.218	0.105	0.183	0.081	0.202	0.133
<50	C	L	N	F	G	0.292	0.227	0.134	0.148	0.199	0.072	0.228	0.110	0.187	0.079	0.184	0.140
<50	C	L	N	F	F	0.290	0.226	0.134	0.149	0.201	0.079	0.224	0.110	0.183	0.082	0.182	0.141
<50	C	L	N	F	P	0.281	0.220	0.134	0.154	0.210	0.084	0.214	0.104	0.181	0.078	0.202	0.138
<50	C	L	N	P	G	0.281	0.221	0.133	0.154	0.211	0.085	0.214	0.100	0.185	0.077	0.195	0.143
<50	C	L	N	P	F	0.280	0.219	0.133	0.155	0.213	0.092	0.210	0.100	0.181	0.080	0.193	0.144
<50	C	L	N	P	P	0.271	0.214	0.133	0.160	0.221	0.097	0.200	0.093	0.179	0.076	0.214	0.141
<50	C	L	R	G	G	0.296	0.231	0.135	0.146	0.193	0.063	0.238	0.115	0.189	0.075	0.181	0.141
<50	C	L	R	G	F	0.294	0.229	0.135	0.146	0.196	0.069	0.234	0.115	0.185	0.077	0.179	0.142
<50	C	L	R	G	P	0.285	0.224	0.134	0.152	0.205	0.074	0.224	0.108	0.182	0.073	0.199	0.139
<50	C	L	R	F	G	0.292	0.228	0.134	0.147	0.198	0.068	0.234	0.113	0.186	0.071	0.181	0.146
<50	C	L	R	F	F	0.290	0.227	0.134	0.148	0.201	0.074	0.231	0.113	0.182	0.074	0.179	0.147
<50	C	L	R	F	P	0.282	0.221	0.134	0.154	0.210	0.079	0.221	0.107	0.180	0.070	0.199	0.144
<50	C	L	R	P	G	0.282	0.221	0.133	0.153	0.210	0.081	0.220	0.103	0.185	0.069	0.192	0.149
<50	C	L	R	P	F	0.280	0.220	0.133	0.154	0.213	0.087	0.217	0.103	0.181	0.072	0.190	0.150
<50	C	L	R	P	P	0.271	0.214	0.133	0.160	0.222	0.092	0.207	0.096	0.178	0.068	0.210	0.148
<50	C	L	L	G	G	0.284	0.222	0.134	0.153	0.207	0.068	0.218	0.111	0.178	0.075	0.198	0.151
<50	C	L	L	G	F	0.282	0.221	0.134	0.153	0.210	0.074	0.214	0.111	0.174	0.078	0.196	0.152
<50	C	L	L	G	P	0.273	0.215	0.134	0.159	0.219	0.079	0.205	0.105	0.172	0.074	0.216	0.150
<50	C	L	L	F	G	0.280	0.220	0.134	0.155	0.212	0.073	0.215	0.109	0.176	0.072	0.198	0.157
<50	C	L	L	F	F	0.278	0.218	0.134	0.155	0.215	0.079	0.211	0.109	0.172	0.074	0.196	0.158
<50	C	L	L	F	P	0.269	0.213	0.133	0.161	0.224	0.084	0.201	0.103	0.170	0.070	0.216	0.155
<50	C	L	L	P	G	0.270	0.213	0.133	0.161	0.224	0.086	0.201	0.099	0.175	0.070	0.210	0.160
<50	C	L	L	P	F	0.268	0.211	0.133	0.161	0.227	0.092	0.197	0.099	0.170	0.072	0.208	0.161
<50	C	L	L	P	P	0.259	0.206	0.132	0.167	0.236	0.097	0.187	0.093	0.168	0.068	0.228	0.158
<50	C	L	-	G	G	0.256	0.203	0.132	0.168	0.241	0.099	0.177	0.102	0.151	0.076	0.221	0.175
<50	C	L	-	G	F	0.254	0.201	0.132	0.169	0.244	0.105	0.173	0.102	0.147	0.079	0.219	0.175
<50	C	L	-	G	P	0.253	0.195	0.132	0.174	0.245	0.110	0.164	0.095	0.144	0.075	0.239	0.173
<50	C	L	-	F	G	0.252	0.200	0.132	0.170	0.246	0.104	0.174	0.100	0.149	0.073	0.221	0.180

Building Characteristics						Treatments					Action Objectives						
Age of Bldg.	Function	Hist. & Cult.	Arch. & Eng.	Integrity	Condition	Preservation	Restoration	Rehabilitation	Adaptive Reuse	No Special Consideration	Keep Cost Low	Ext. Material	Int. Material	No Additions	Use Historically	Upgrade Building Systems	Functional Interior
<50	C	L	-	F	F	0.250	0.199	0.132	0.171	0.249	0.110	0.170	0.100	0.145	0.075	0.219	0.181
<50	C	L	-	F	P	0.241	0.193	0.131	0.176	0.258	0.115	0.161	0.094	0.142	0.071	0.239	0.178
<50	C	L	-	P	G	0.241	0.193	0.131	0.176	0.258	0.117	0.160	0.090	0.147	0.071	0.233	0.183
<50	C	L	-	P	F	0.240	0.192	0.131	0.177	0.261	0.123	0.156	0.090	0.143	0.073	0.231	0.184
<50	C	L	-	P	P	0.231	0.186	0.130	0.182	0.271	0.128	0.146	0.083	0.141	0.069	0.251	0.181
<50	C	-	N	G	G	0.273	0.214	0.133	0.158	0.221	0.080	0.195	0.113	0.164	0.080	0.197	0.172
<50	C	-	N	G	F	0.271	0.213	0.133	0.159	0.224	0.086	0.191	0.113	0.160	0.082	0.195	0.173
<50	C	-	N	G	P	0.262	0.207	0.133	0.164	0.233	0.091	0.182	0.106	0.157	0.078	0.215	0.170
<50	C	-	N	F	G	0.269	0.212	0.133	0.160	0.226	0.085	0.192	0.111	0.162	0.076	0.197	0.177
<50	C	-	N	F	F	0.267	0.210	0.133	0.161	0.229	0.092	0.188	0.111	0.158	0.079	0.195	0.178
<50	C	-	N	F	P	0.259	0.204	0.132	0.166	0.238	0.097	0.179	0.105	0.155	0.075	0.215	0.175
<50	C	-	N	P	G	0.259	0.205	0.132	0.166	0.239	0.098	0.178	0.101	0.160	0.074	0.208	0.181
<50	C	-	N	P	F	0.257	0.203	0.132	0.167	0.241	0.105	0.174	0.101	0.156	0.077	0.206	0.181
<50	C	-	N	P	P	0.248	0.197	0.131	0.172	0.251	0.110	0.164	0.094	0.154	0.073	0.226	0.179
<50	C	-	R	G	G	0.274	0.215	0.133	0.158	0.221	0.075	0.202	0.116	0.163	0.072	0.194	0.178
<50	C	-	R	G	F	0.272	0.213	0.133	0.158	0.223	0.082	0.198	0.116	0.159	0.074	0.192	0.179
<50	C	-	R	G	P	0.263	0.208	0.133	0.164	0.233	0.087	0.189	0.109	0.157	0.070	0.212	0.176
<50	C	-	R	F	G	0.270	0.212	0.133	0.159	0.226	0.081	0.199	0.114	0.161	0.068	0.194	0.184
<50	C	-	R	F	F	0.268	0.211	0.133	0.160	0.228	0.087	0.195	0.114	0.157	0.071	0.192	0.184
<50	C	-	R	F	P	0.259	0.205	0.132	0.166	0.238	0.092	0.185	0.107	0.155	0.067	0.212	0.182
<50	C	-	R	P	G	0.259	0.205	0.132	0.165	0.238	0.094	0.184	0.104	0.160	0.066	0.205	0.187
<50	C	-	R	P	F	0.258	0.204	0.132	0.166	0.241	0.100	0.181	0.104	0.155	0.069	0.203	0.188
<50	C	-	R	P	P	0.249	0.198	0.131	0.172	0.250	0.105	0.171	0.097	0.153	0.065	0.223	0.185
<50	C	-	L	G	G	0.261	0.206	0.133	0.165	0.235	0.080	0.182	0.112	0.153	0.072	0.211	0.189
<50	C	-	L	G	F	0.259	0.205	0.133	0.165	0.238	0.087	0.178	0.112	0.149	0.075	0.209	0.190
<50	C	-	L	G	P	0.251	0.199	0.132	0.171	0.247	0.092	0.169	0.106	0.146	0.071	0.229	0.187
<50	C	-	L	F	G	0.257	0.204	0.132	0.167	0.240	0.086	0.179	0.110	0.151	0.069	0.211	0.194
<50	C	-	L	F	F	0.256	0.202	0.132	0.167	0.243	0.092	0.175	0.110	0.147	0.071	0.209	0.195
<50	C	-	L	F	P	0.252	0.197	0.132	0.173	0.247	0.097	0.166	0.104	0.144	0.067	0.229	0.192
<50	C	-	L	P	G	0.252	0.197	0.131	0.173	0.247	0.099	0.165	0.100	0.149	0.067	0.223	0.197
<50	C	-	L	P	F	0.245	0.195	0.131	0.174	0.255	0.105	0.161	0.100	0.145	0.069	0.220	0.198
<50	C	-	L	P	P	0.236	0.189	0.131	0.179	0.264	0.110	0.151	0.094	0.143	0.065	0.241	0.196
<50	C	-	-	G	G	0.233	0.186	0.131	0.180	0.270	0.112	0.141	0.103	0.125	0.073	0.234	0.212
<50	C	-	-	G	F	0.231	0.185	0.131	0.181	0.272	0.118	0.138	0.102	0.121	0.076	0.232	0.213
<50	C	-	-	G	P	0.222	0.179	0.130	0.187	0.282	0.123	0.128	0.096	0.119	0.072	0.252	0.210
<50	C	-	-	F	G	0.229	0.184	0.130	0.182	0.275	0.117	0.138	0.101	0.123	0.070	0.234	0.217
<50	C	-	-	F	F	0.227	0.182	0.130	0.183	0.277	0.123	0.134	0.101	0.119	0.072	0.232	0.218
<50	C	-	-	F	P	0.218	0.176	0.130	0.189	0.287	0.128	0.125	0.094	0.117	0.068	0.252	0.215
<50	C	-	-	P	G	0.218	0.177	0.130	0.188	0.287	0.130	0.124	0.091	0.122	0.068	0.245	0.221
<50	C	-	-	P	F	0.216	0.175	0.129	0.189	0.290	0.136	0.120	0.091	0.118	0.070	0.243	0.221
<50	C	-	-	P	P	0.207	0.169	0.129	0.195	0.299	0.141	0.111	0.084	0.115	0.066	0.263	0.219

Appendix P

Letter from Gary M. Erickson

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, DC

MEMORANDUM FOR ALMAJCOM/CE HQ USAFA/CE HQ AFCEE/CC 27 MAR 1997

FROM: HQ USAF/ILE
1260 Air Force Pentagon
Washington, DC 20330-1260

SUBJECT: Air Force Compliance with the National Historic Preservation Act (NHPA)

We recently briefed SAF/MI on the management of historic facilities as prescribed by the NHPA. SAF/MI stressed the importance of meeting our legal requirements while ensuring a balance with our readiness and fiscal obligations. To achieve this balance the Air Force must pursue active dialogue with the State Historic Preservation Officer (SHPO) and the President's Advisory Council on Historic Preservation. This memo summarizes our responsibilities under the NHPA.

Section 110 states we must: identify, evaluate, and nominate eligible resources to the National Register of Historic Places. If the SHPO disagrees with our evaluation, we must request a formal determination of eligibility from the Keeper of the National Register. The Keeper's determination of eligibility is final. However, once eligibility of a resource is determined, we are responsible for its nomination to the National Register.

National Park Service Bulletin 16 A outlines the eligibility criteria for inclusion in the National Register. Our cultural resources inventories provide the data we need to make eligibility determinations. We typically prepare our inventories by contract; therefore, we must work with our contractors to ensure Air Force eligibility determinations are made based on a supportable application of the National Register criteria. We have attached a copy of the eligibility criteria and evaluation guidelines for your use.

Section 106 states we must: (1) Consult with the SHPO prior to initiating an action that may affect a historic resource. (2) Provide the Advisory Council an opportunity to comment if we cannot reach consensus with the SHPO. If we do not agree with the Council's comments, we have the option to terminate consultation and proceed with the planned action. We should, however, terminate consultation only when our efforts to consult in good faith with the SHPO and the Council fail and we are unable to reach agreement. Whenever possible, we should plan and implement reasonable alternatives in an effort to maintain a cooperative relationship with the SHPO. We have attached a Section 106 process chart for your use.

If the members of your staff have any questions regarding NHPA compliance, please have them contact our POC, Ms. Stephanie Stevenson, DSN 225-6118, e-mail: stevenss@afce.hq.af.mil.

GARY M. ERICKSON, P.E.
Acting Deputy Civil Engineer
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2 Attachments:
1. National Register Eligibility Criteria
2. Section 106 Process Chart

cc:
SAF/MI/MIQ/MII

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Vita

Captain Patrick R. Breaux was born on 26 February 1967 at Cigli Air Base in Izmir, Turkey . He graduated high school from the Louisiana School for Math, Science and the Arts in 1985 and entered undergraduate studies at Louisiana State University and A&M College. He graduated with a Bachelor of Architecture degree in May 1990. Captain Breaux is married to the former Miss Elizabeth M. Rabalais of Baton Rouge, Louisiana.

Captain Breaux entered Officer Training School in November 1991 and received his USAF commission in April 1992. His first assignment was at Moody AFB, Georgia where he served as Base Architect from April 1992 to April 1995. His next assignment was a one-year remote tour at Thule Air Base, Greenland. While at Thule AB, Captain Breaux performed duties as both Chief of Operations and Chief of Design. In May 1996, he entered the Air Force Institute of Technology (AFIT) School of Engineering. Upon the completion of his tour at AFIT, his next duty station will be Little Rock AFB, Arkansas.

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13. ABSTRACT *(Maximum 200 words)*

The Air Force is required to inform the public and solicit their comments when proposing actions to historic facilities. However, the Department of Defense has been criticized for the lack of consistent and adequate public involvement in this process. This research effort developed a hierarchy to capture the public's general preferences for historic preservation treatments. Expert participants provided inputs about the building characteristics which influence historic preservation decisions, the objectives of preservation, and the treatments which are applied to historic buildings. Focus group discussions were conducted with members of the public to gather qualitative data about historic preservation. Experts and members of the interested public completed questionnaires consisting of pairwise comparisons. These questionnaires provided the data needed to determine preferences for the building characteristics, action objectives, and treatments. The results of the research were weighted priorities for historic preservation treatments based on specific combinations of building characteristics.

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