



CAMBRIDGE HISTORICAL COMMISSION

831 Massachusetts Avenue, 2nd Fl., Cambridge, Massachusetts 02139

Telephone: 617 349 4683 TTY: 617 349 6112 Fax: 617-349-6165

E-mail: histcomm@cambridgema.gov URL: <http://www.cambridgema.gov/Historic>



Bruce A. Irving, *Chair*; Susannah Barton Tobin, *Vice Chair*; Charles Sullivan, *Executive Director*
Joseph V. Ferrara, Chandra Harrington, Elizabeth Lyster, Caroline Shannon, Jo M. Solet, *Members*
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October 30, 2021

To: Members of the Historical Commission

From: Charles Sullivan, Executive Director

Re: Design Guidelines for 727 Massachusetts Avenue (Cambridge Gas-Light Co. building)

The Commission voted on September 2 to initiate a landmark designation study of 727 Massachusetts Avenue, the Cambridge Gas-Light Company building. This initiated a one-year period of interim jurisdiction over publicly-visible exterior alterations while staff prepares a designation study for consideration by the Commission and the City Council.

On October 6 the Commission heard the owner's request for a Certificate of Appropriateness for an addition recently approved by the Cambridge Planning Board. In the course of discussion commissioners and members of the public noted the difficulty of evaluating the applicant's proposal in the absence of the design guidelines that normally emerge during a landmark designation study. With the owner's consent, the Commission voted to continue the hearing for sixty days to allow the staff to prepare design guidelines for review on November 4 and for further consideration of the owner's application on December 2.

Landmark designation reports contain detailed descriptions of the history and significance of the property, its relationship to the criteria for designation, standards for review of exterior alterations, and a proposed designation order. In the absence of this prior analysis commissioners should refer to the landmark evaluation memo dated August 26, 2021.

In the historic preservation field, there are two approaches to standards for review of exterior alterations: "appropriateness", as defined by statute, and the Secretary of the Interior's Standards for the Treatment of Historic Properties.

The Cambridge Historical Commission's standards for review of alterations in historic districts are found in the Massachusetts Historic Districts Act, M.G.L. Ch. 40C, which was enacted in 1960. The Ordinance that established the Cambridge Historical Commission and the city's first historic districts in 1963 (now Ch. 2.78, Art. I) incorporated Section 7 of the Act:

Section 7. In passing upon matters before it the commission shall consider, among other things, the historic and architectural value and significance of the site, building or structure, the general design, arrangement, texture, material and color of the features involved, and the relation of such features to similar features of buildings and structures in the surrounding area. In the case of new construction or additions to existing buildings or structures the commission shall consider the appropriateness of the size and shape of the building or structure both in relation to the land area upon which the building or structure

is situated and to buildings and structures in the vicinity, and the commission may in appropriate cases impose dimensional and set-back requirements in addition to those required by applicable ordinance or by-law. . . .The commission shall not consider interior arrangements or architectural features not subject to public view.

The commission shall not make any recommendation or requirement except for the purpose of preventing developments incongruous to the historic aspects or the architectural characteristics of the surroundings and of the historic district.

The Cambridge Historical Commission has never adopted any additional criteria for granting Certificates of Appropriateness in historic districts. When the Commission drafted the city's neighborhood conservation district and landmark designation ordinance in the early 1980s, it incorporated many sections of M.G.L. Ch. 40C but allowed flexible standards for review that were to be tailored to the specific conditions of the neighborhood or landmark.

The second approach is the Secretary of the Interior's Standards for the Treatment of Historic Properties, which are generally known as "the Secretary's Standards" ([The Secretary of the Interior's Standards—Technical Preservation Services, National Park Service \(nps.gov\)](#)). These include separate standards and guidelines for preservation, rehabilitation, restoration, and reconstruction.

As described by the National Park Service,

The [Standards](#) are a series of concepts about maintaining, repairing, and replacing historic materials, as well as designing new additions or making alterations. The [Guidelines](#) offer general design and technical recommendations to assist in applying the Standards to a specific property. Together, they provide a framework and guidance for decision-making about work or changes to a historic property.

The Standards and Guidelines can be applied to historic properties of all types, materials, construction, sizes, and use. They include both the exterior and the interior and extend to a property's landscape features, site, environment, as well as related new construction.

Federal agencies use the Standards and Guidelines in carrying out their historic preservation responsibilities. State and local officials use them in reviewing both Federal and non-federal rehabilitation proposals. Historic district and planning commissions across the country use the Standards and Guidelines to guide their design review processes.

The Standards for the Treatment of Historic Properties . . . are regulatory for all grant-in-aid projects assisted through the national Historic Preservation Fund.

The [Standards for Rehabilitation](#), . . . are regulatory for the review of rehabilitation work in the [Historic Preservation Tax Incentives program](#).

The Guidelines are advisory, not regulatory.

While many state and local agencies have formally adopted the Secretary's Standards and Guidelines for regulatory purposes, the Cambridge Historical Commission relies on the criteria for granting Certificates of Appropriateness contained in M.G.L. Ch. 40C, Ch. 2.78 of the City Code, and the goals and guidelines developed for the individual neighborhood conservation districts and landmarks. The reasons for this are two-fold:

- [Precedent](#). The Cambridge Historical Commission was established in 1963 before the National Historic Preservation Act of 1966. By the time the Secretary's Standards were adopted in 1977 the CHC had a strong and well-practiced regulatory framework in place.

- Flexibility. Advised by a professional staff since the early 1970s, the Cambridge Historical Commission has always preferred to determine appropriateness on a case-by-case basis, taking into account the nature and significance of the structure and its context. For example, the Commission has adopted practices for substituting synthetic materials in response to longevity issues and climate change that are not allowed under the standards.
- Evolving standards. The Secretary's Standards (based on the Venice Charter of 1964) still hold to the Modernist idea that additions to historic buildings must be readily distinguishable, regardless of context. Contemporary practice holds that "new construction in historic settings, including alterations and additions to existing buildings, should not arbitrarily impose contrasting materials, scales, or design vocabularies, but clarify and extend the character of the place, seeking always continuity and wholeness in the built environment."¹ Similarly, at one time buildings that had been moved from their original sites were deemed ineligible for listing on the National Register; but in Cambridge hundreds of existing buildings have been moved, some multiple times, a fact that actually adds to a structure's significance.

At the hearing on October 7, William Young, the applicant's historic preservation consultant, incorrectly stated that the Secretary's Standards had been adopted by the Cambridge Historical Commission. While the Secretary of the Interior's Standards and Guidelines often represent best practices in the field, CHC staff consider them to be useful guidance rather than diktats to be followed in all circumstances. Commission staff have been professionally trained in historic preservation and generally have the standards and guidelines firmly in mind, but do not advocate their wholesale adoption in a regulatory context. The Standards and Guidelines are more useful on a selective basis.

¹ Hardy, Matthew (Ed.) *The Venice Charter Revisited: Modernism, Conservation and Tradition in the 21st Century*, foreword by HRH The Prince of Wales, Cambridge Scholars Publishing, Newcastle upon Tyne, UK; 2008

Excerpts from the Secretary of the Interior's Standards for Rehabilitation

Introduction to the Standards

The Secretary of the Interior is responsible for establishing standards for all programs under Departmental authority and for advising Federal agencies on the preservation of historic properties listed in or eligible for listing in the National Register of Historic Places.

The Standards for Rehabilitation (codified in 36 CFR 67 for use in the Federal Historic Preservation Tax Incentives program) address the most prevalent treatment. "Rehabilitation" is defined as "the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values."

Initially developed by the Secretary of the Interior to determine the appropriateness of proposed project work on registered properties within the Historic Preservation Fund grant-in-aid program, the **Standards for Rehabilitation** have been widely used over the years--particularly to determine if a rehabilitation qualifies as a Certified Rehabilitation for Federal tax purposes. In addition, the Standards have guided Federal agencies in carrying out their historic preservation responsibilities for properties in Federal ownership or control; and State and local officials in reviewing both Federal and nonfederal rehabilitation proposals. They have also been adopted by historic district and planning commissions across the country.

The intent of the Standards is to assist the long-term preservation of a property's significance through the preservation of historic materials and features. The Standards pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and interior of the buildings. They also encompass related landscape features and the building's site and environment, as well as attached, adjacent, or related new construction. To be certified for Federal tax purposes, a rehabilitation project must be determined by the Secretary to be consistent with the historic character of the structure(s), and where applicable, the district in which it is located.

As stated in the definition, the treatment "rehabilitation" assumes that at least some repair or alteration of the historic building will be needed in order to provide for an efficient contemporary use; however, these repairs and alterations must not damage or destroy materials, features or finishes that are important in defining the building's historic character. For example, certain treatments--if improperly applied--may cause or accelerate physical deterioration of the historic building. This can include using improper repointing or exterior masonry cleaning techniques, or introducing insulation that damages historic fabric. In almost all of these situations, use of these materials and treatments will result in a project that does not meet the Standards. Similarly, exterior additions that duplicate the form, material, and detailing of the structure to the extent that they compromise the historic character of the structure will fail to meet the Standards.

The Secretary of the Interior's Standards for Rehabilitation

The Standards (Department of Interior regulations, 36 CFR 67) pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior, related landscape features and the building's site and environment as well as attached, adjacent, or related new construction. The Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

- 2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.**
- 3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.**
- 4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.**
- 5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.**
- 6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.**
- 7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.**
- 8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.**
- 9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.**
- 10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.**

<https://www.nps.gov/tps/standards/rehabilitation/rehab/stand.htm>

Alterations/Additions to Historic Buildings

Some exterior and interior alterations to historic building are generally needed to assure its continued use, but it is most important that such alterations do not radically change, obscure, or destroy character-defining spaces, materials, features, or finishes.

Alterations may include providing additional parking space on an existing historic building site; cutting new entrances or windows on secondary elevations; inserting an additional floor; installing an entirely new mechanical system; or creating an atrium or light well. Alteration may also include the selective removal of buildings or other features of the environment or building site that are intrusive and therefore detract from the overall historic character.

The construction of an exterior addition to a historic building may seem to be essential for the new use, but it is emphasized in the guidelines that such new additions should be avoided, if possible, and considered only after it is determined that those needs cannot be met by altering secondary, i.e., non character-defining interior spaces. If, after a thorough evaluation of interior solutions, an exterior addition is still judged to be the only viable alternative, it should be designed and constructed to be clearly differentiated from the historic building and so that the character-defining features are not radically changed, obscured, damaged, or destroyed.

Additions to historic buildings are referenced within specific sections of the guidelines such as Site, Roof, Structural Systems, etc., but are also considered in more detail in a separate section, New Additions to Historic Buildings.

An attached exterior addition to a historic building expands its "outer limits" to create a new profile.

Because such expansion has the capability to radically change the historic appearance, an exterior addition should be considered only after it has been determined that the new use cannot be successfully met by altering non-character-defining interior spaces.

If the new use cannot be met in this way, then an attached exterior addition is usually an acceptable alternative. New additions should be designed and constructed so that the character-defining features of the historic building are not radically changed, obscured, damaged, or destroyed in the process of rehabilitation. New design should always be clearly differentiated so that the addition does not appear to be part of the historic resource.

Note: Although the work in this section is quite often an important aspect of rehabilitation projects, it is usually not part of the overall process of preserving character-defining features (identify, protect, repair, replace); rather, such work is assessed for its potential negative impact on the building's historic character. For this reason, particular care must be taken not to obscure, radically change, damage, or destroy character-defining features in the process of constructing a new addition.

Historic Buildings

New Additions



recommended

Placing functions and services required for the new use in non-character-defining interior spaces rather than installing a new addition.

Constructing a new addition so that there is the least possible loss of historic materials and so that character-defining features are not obscured, damaged, or destroyed.

Locating the attached exterior addition at the rear or on an inconspicuous side of a historic building; and limiting its size and scale in relationship to the historic building.

Designing new additions in a manner that makes clear what is historic and what is new.



Small glass connector between two historic buildings with appropriate setback.



Contemporary addition (left) to historic library appropriately placed on secondary side elevation.

Considering the attached exterior addition both in terms of the new use and the appearance of other buildings in the historic district or neighborhood. Design for the new work may be contemporary or may reference design motifs from the historic building.

In either case, it should always be clearly differentiated from the historic building and be compatible in terms of mass, materials, relationship of solids to voids, and color.

Placing new additions such as balconies and greenhouses on non-character-defining elevations and limiting size and scale in relationship to the historic building.

Designing additional stories, when required for the new use, that are set back from the wall plane and are as inconspicuous as possible when viewed from the street.

not recommended



Changing the historic character of the streetscape with additions to rooftop and bay.

Expanding the size of the historic building by constructing a new addition when the new use could be met by altering non-character-defining interior space.

Attaching a new addition so that the character-defining features of the historic building are obscured, damaged, or destroyed.

Designing a new addition so that its size and scale in relation to the historic building are out of proportion, thus diminishing the historic character.

Duplicating the exact form, material, style, and detailing of the historic building in the new addition so that the new work appears to be part of the historic building.

Imitating a historic style or period of architecture in new additions, especially for contemporary uses such as drive-in banks or garages.

Designing and constructing new additions that result in the diminution or loss of the historic character of the resource, including its design, materials, workmanship, location, or setting.

Using the same wall plane, roof line, cornice height, materials, siding lap or window type to make additions appear to be a part of the historic building.

Designing new additions such as multi-story greenhouse additions that obscure, damage, or destroy character-defining features of the historic building.

Constructing additional stories so that the historic appearance of the building is radically changed.



Rooftop addition that dramatically changes the appearance of the historic building.

VII. Proposed Standards for Review of Alterations and Additions at the Cambridge Gas-Light Company building, 727 Massachusetts Avenue

Under the neighborhood conservation district and landmark designation ordinance, Ch. 2.78, Art. III, the Historical Commission is charged with reviewing all construction, demolition or alterations that affects the exterior architectural features (other than color) of a designated landmark. This section of the report describes exterior architectural features that are among the characteristics that led to consideration of the property as a landmark. Except as the Order designating or amending the landmark may otherwise provide, the exterior architectural features described in this report should be preserved and/or enhanced in any proposed alteration or construction that affects those features of the landmark.

The following standards for review provide guidance for consideration of applications for Certificates of Appropriateness for alterations to the landmark described in this report. The standards are not intended to be either prescriptive or comprehensive; the Commission must use its collective judgement in determining the appropriateness of any proposed project.

A. General Standards and Criteria

Subject to review and approval of exterior architectural features under the terms of this report, the following standards shall apply:

1. Significant historic and architectural features of the landmark identified in this report should be preserved.
2. Changes and additions to the landmark which have taken place over time are evidence of the history of the property and the neighborhood. These changes may have acquired significance in their own right and, if so, that significance should be recognized and respected.
3. Deteriorated architectural features should be repaired rather than replaced.
4. When replacement of architectural features is necessary, replacement features should be based on physical or documentary evidence.
5. New materials should, whenever possible, match the material being replaced in physical properties, design, color, texture, and appearance. The use of synthetic replacement materials is discouraged, except when substituted for perishable features exposed to the weather or when necessary to accommodate the effects of climate change.²
6. The surface cleaning of a landmark should be done by the gentlest possible means. Sandblasting and other cleaning methods that damage exterior architectural features shall not be used.
7. Additions should not destroy significant exterior architectural features and should be designed to be subsidiary to the historic structure. They should be recognizable as new architectural elements without compromising the original building's historic aspects, architectural significance, or the distinct character of the landmark, neighborhood, and environment.

² See *Cambridge Historical Commission Practices in Reviewing Synthetic Trim and Gutters*, June 26, 2018

8. Additions should be designed in a way that, if they were to be removed in the future, the essential form and integrity of the landmark would be unimpaired.

B. Suggested Review Guidelines

1. Site Development.

The current building footprint extends to the lot lines on the east, south, and west, leaving a narrow strip of land unencumbered on the north side of the building. The north and west façades of the structure display an industrial character very different from the east and south facades. Subject to zoning constraints and the Certificate of Appropriateness process, new construction should be allowed even if it obscures or destroys the present north façade.

2. Alterations

All publicly-visible exterior alterations are subject to the Certificate of Appropriateness process.

a. Exterior surfaces

Exterior materials on the east and south facades should be preserved insofar as practicable. Special care should be taken to protect and maintain the limestone masonry. Repointing the mortar joints should be done with special care to maintain the strength, color and texture of the mortar and the profile of the joints. Cleaning should be carried out with minimum pressure and minimum concentrations, subject to on-site staff review and approval.

b. Fenestration

Most if not all historic window openings appear to retain their original windows and sash. Original sash should be evaluated for restoration and retrofitted with thermal glazing while maintaining operability if possible. Replacement windows, if allowed, should replicate historic patterns and details as closely as practicable while achieving energy efficiency goals.

c. Exterior features

The entrances at the east and west bays retain original wrought- and cast-iron bars that extend up to the pilaster capitals. The central bay features a cast-iron door surround with a classical entablature. All other bays except one retain their original three-part fenestration and original knee-walls. These should be retained and restored or replicated.

Storefront systems at the Bank of America entrance and at the office entrance consist of modern aluminum components with a black finish. Replacement elements may be contemporary in nature, but historic elements should be retained when possible.

Four reproduction wrought-iron sconces were installed in 2018. These should be retained.

The pilasters on both sides of the center entrance bay and both sides of the pilaster on the southeast corner of the building bear incised bronze lettering denoting the original owner of the building, the Cambridge Gas-Light Company. These should be preserved and not covered with other signage.

d. Roof

The roof of the Gas-Light building contains several skylights and assorted mechanical equipment that are entirely concealed by a parapet. The only visible rooftop structures are an elevator override and a copper-clad penthouse over the main staircase. About half of this one-story structure appears above the parapet.

In general, rooftop HVAC equipment, if required, should be grouped to minimize visual intrusion. Solar panels should be mounted close to the roof so as to be screened by the parapet.

e. Accessibility

Accessibility at street-level entrances on Massachusetts Avenue and Temple Street may be achieved by removing a portion of the granite slab that creates a step up into the building. This should not be done in a way that disturbs the knee walls of the entrances. Doors should be lengthened; jambs should remain in place.

f. Interior features

Although interior features are not subject to the jurisdiction of the Cambridge Historical Commission, the owner should be encouraged to preserve the vaulted two-story ground floor interior that recalls the original purpose of the building as a showcase for modern electric technology.

3. Additions

The nature of the Cambridge Gas-Light Company building site is such that additions can only take place at the back of the site or on the roof. Landmark designation should not necessarily preclude adding new floors to the building, but any rooftop addition should conform to the following guidelines, which are drawn in part from the Secretary of the Interiors' Standards for Rehabilitation (see attachment).

- Additions should respect the essential form of the historic building and be clearly recessive or subsidiary to the original structure in massing, materials, colors, and textures.
- Additions should cause the least possible loss of historic materials so that character-defining features are not obscured, damaged, or destroyed.
- Additions are best located at the rear or on an inconspicuous side of a historic building and limited in size and scale in relationship to the historic building.
- Rooftop additions should be set well back from historic facades so that the historic structure retains its integrity of form and mass. Additional stories, when required for the new use, should be set back from the wall plane and be as inconspicuous as possible when viewed from the street. Designers should take advantage of existing parapets to conceal rooftop structures.
- Additions should be designed in a manner that makes clear what is historic and what is new, but should not arbitrarily impose contrasting materials, scales, or design vocabularies. Design of the new work may be contemporary or may reference design motifs from the historic building.
- Additions should be considered in terms of the appearance of other buildings in the historic district or neighborhood. Additions should clarify and extend the character of the place, always seeking continuity and wholeness in the built environment.
- Additions should always be clearly differentiated from the historic building but still compatible in terms of mass, materials, relationship of solids to voids, and color.
- Additions such as balconies and greenhouses should be placed on non-character-defining elevations and limited in size and scale in relationship to the historic building.