



SALEM HISTORICAL COMMISSION GUIDELINES NOTEBOOK

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With amendments to 2010

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These guidelines were formulated and approved by the Salem Historical Commission. They are reproduced here so that the property owner can get an idea of the criteria the Commission uses in evaluating proposed changes to properties in historic districts. All changes must still be approved by the Commission and the appropriate Certificate issued.

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HOW TO USE THIS GUIDE

Rev. 1/4/95

This notebook serves a dual purpose. First, it is a compilation of the design review guidelines used in the administration of Salem's historic districts and second, it provides property owners throughout Salem with information on the preservation, repair, and restoration of historic properties. The Salem Historical Commission supports a property owner efforts to improve their property and can guide them on historical appropriateness.

The guidelines listed on the following pages have been voted upon and approved by members of the Salem Historical Commission. While they establish the context in which changes to buildings in Salem's historic districts will be reviewed, they are meant to be applied on a case by case basis. Since circumstances vary from property to property, the Commission allows for a certain amount of flexibility. The important thing to remember is that property owners should consult the Commission early in their planning and certainly before making any changes to their properties. In the long run, this will make the process smoother both for the applicant and the Commission.

The Salem Historical Commission is a volunteer board of Salem residents appointed by the Mayor and approved by the City Council. Design review by the Salem Historical Commission is mandated under Chapter 40C of the Massachusetts General Laws and the Salem Historical Commission Ordinances which established Salem's historic districts. The Commission is responsible for the review and approval of all proposed exterior alterations to properties located in a local historic district. A local historic district is an area with specific boundaries that has been recognized for its historically and architecturally significant quality. A person commencing or completing work to the exterior of a building in an historic district without the necessary approval of the Commission is subject to fines of up to \$500 per day from the date of violation. The Commission is not responsible for an owner's neglect to inquire about necessary City permits and approvals. All records are public and we will confidentially assist you if you are concerned that someone in your neighborhood is in violation.

The property owner must receive Commission approval before undertaking work. There are three types of Certificates that constitute approval:

- A *Certificate of Appropriateness* is required for changes visible from a public way. A representative from the commission will determine that which is visible or not visible. Examples of changes include but are not limited to the following:
 1. Additions, new construction, and alterations. Alterations may include changes in design, material, color or outward appearance of the structure including, but not limited to, doors, walls, fences, entrances, gutters, railings, roofs, chimneys, porches/decks, skylights, windows and exterior staircases.
 2. Removal of any features (i.e. shutters, porches, siding, windows, fences, railings, doors, chimneys, etc).
 3. Demolition including structural, walls, fences, exterior staircases, garages, sheds, etc.
 4. Paint colors (including windows, doors, porches & storms, etc.), satellite dishes, solar panels.
 5. Roof color and materials.
 6. Free standing light posts/fixtures. Signs and sign posts. Note: Signs must also conform to the City of Salem sign ordinance.
- A *Certificate of Hardship* is used for the same type of changes as a Certificate of Appropriateness. It can only be issued when a Certificate of Appropriateness would be denied as inappropriate and such denial will involve a substantial hardship, financial or otherwise, to the applicant. Approval of a Certificate of Hardship must not affect the historic district in general, must be without substantial detriment to the public welfare and must not cause departure from the intent and purposes of the Historic Districts Act. The Commission will not approve a Certificate of Hardship in instances where the hardship was self-created (i.e. financial burden to undo work performed that had not been approved by the Commission).
- A *Certificate of Non-Applicability* is a way of ratifying that a Certificate of Appropriateness is not required for the work being performed. This certificate, along with the pictures to be taken, protects the property owner from questions about changes have been made without authorization. A Certificate of Non-Applicability is required for the following:
 1. Additions, alterations or new construction not visible from a public way, public street or public park. A representative from the Commission will determine that which is visible or not visible.
 2. Temporary structures or signs, subject, however, only to such conditions as to duration or use, location, lighting, removal and similar matters as the Commission may reasonably specify.
 3. The reconstruction, substantially similar in exterior design, of a building, structure, or exterior architectural features damaged or destroyed by fire, storm or other disaster, provided such reconstruction is begun within one year thereafter and carried forward with due diligence.

4. Ordinary maintenance, repair or replacement of any exterior architectural feature which is damaged or worn provided the work does not involve a change in design, material, color, or outward appearance of the structure.

The Commission has no jurisdiction over the following:

1. Terraces, walks, driveway materials, sidewalks and similar structures provided that any structure is substantially at grade level.
2. Storms doors, storm windows, screens, window air conditioners, lighting fixtures attached to the building, antennae and similar appurtenances. (Note that the Commission does have jurisdiction over the paint colors of storm doors and windows. Note that the Commission does have jurisdiction over satellite dishes and solar collectors.)
3. Interior work that does not affect the exterior in material, design or outward appearance.
4. Landscaping. (Note that the Commission does have jurisdiction over retaining walls - e.g. railroad ties.)

Through these guidelines, the Commission works to preserve and protect the distinctive characteristics of buildings and sites within the historic districts, to maintain and improve the settings of these buildings, and to encourage new design compatible with existing structures. The guidelines are based on the Secretary of Interior's Standards of Rehabilitation which encourage the retention of existing historic materials and architectural features whenever possible. When replacement is necessary, new materials should be historically appropriate. New building elements should be designed with architectural compatibility in mind so that the harmonious exterior relationships of a given building or buildings are preserved.

In addition to the Secretary of Interior's Standards, the Commission's guidelines reflect Salem's architectural traditions so as to encourage preservation of those elements that make Salem unique.

The Commission makes a clear distinction between changes which would be appropriate for the principal elevations of a building and those acceptable at rear, private, "family-living" sections. Intrusive contemporary features should be avoided on the front facade and where visibility from public ways is high. Since, historically, rear elevations were altered over time to meet changing family needs, modern day alterations - skylights, greenhouse windows, French doors, decks - should be restricted to the less important facades of the house. In this way, the contemporary needs of Salem's property owners can be served without compromising the architectural integrity of Salem's buildings and streetscapes.

The notebook's technical information on home repair and restoration is organized by topic. The purpose of this data is not to provide construction specifications or a do-it-yourself guide, but to inform owners of what is historically appropriate (or inappropriate) and what kind of work is involved for a variety of repairs. The property owner can use this information as the basis for further research or when consulting contractors. While contractors may be knowledgeable of their crafts, they may not know exactly what the property owner wants unless they are told. Also, they may not be experienced in working on historic buildings. It is the property owner who should decide what type of work is most appropriate for his house. The Commission urges property owners to use this notebook as a means of becoming more informed and more involved in the repair and restoration process. The Commission supports your efforts to improve your property and can guide you on historical appropriateness. Further information, in the form of articles and pamphlets, City-wide architectural inventories, and photographs, as well as this notebook's bibliography are available at the Historical Commission's office at One Salem Green.

This project was made possible by a grant from Yankee Magazine administered through the National Trust for Historic Preservation. Historic Salem, Inc. provided the matching funds necessary to receive the grant. - May 1984

Sections have been periodically amended after first receiving a majority vote from the Salem Historical Commission.

PROCEDURES FOR FILING APPLICATIONS

Rev. 10/12/04

- A. Be prepared to apply for approvals well in advance of commencing any exterior work. Before making any changes to the exterior of a property in an historic district, the owner should call or visit the Commission representative at the Department of Planning & Community Development to discuss proposed alterations and to determine the category of the application (Appropriateness, Non-Applicability or Hardship).
- B. The Commission normally meets on the first and third Wednesdays of each month and notices are posted at City Hall. The meetings are held at 120 Washington Street, 3rd floor, and begin at 7:30 p.m. All meetings are open to the public and any person is entitled to appear and be heard on any matter before the Commission before it reaches a decision.
- C. Applications for Certificates of Appropriateness or Hardship must be received by 3:00 p.m. on the Monday 16 days before the meeting in order to make the agenda. An application for a Certificate of Non-Applicability may normally be added to the agenda up to the day of the meeting. In some cases, a Certificate of Non-Applicability may be issued by the Clerk, without review by the full Commission, after notifying Commission members and allowing 24 hours for any objection. There is no fee for any applications.
- D. All applications for Certificates of Appropriateness or Hardship require a public hearing. Notice of the hearing must be posted with the City Clerk 14 days before the hearing and abutters must be notified in writing. Commission staff will handle these procedures. A public hearing is not required for a Certificate of Non-Applicability.
- E. Applications must be submitted by the owner of the property. A contractor for the owner, at the owner's request, may submit an application on the owner's behalf. In case of a tenant, a waiver of the owner's appearance may be granted at the discretion of the Commission if it is requested by the owner.
- F. All applications must include three to four 35mm photographs of existing conditions. No certificates can be issued prior to receipt of photographs.
- G. An application will not be considered complete unless all work items are thoroughly described on scaled drawings and include specifications regarding dimensions, materials, and any other information needed for the Commission to visualize the changes in order to make a determination. Applications for paint colors should include a paint chip or chart. The following items should be included in your drawings as applicable:
 - 1. Site plan showing location of improvements;
 - 2. Elevation drawings of the specific improvements;
 - 3. Details/profiles (i.e. moldings, fence caps, cornices, vents, etc.);
 - 4. Materials (i.e. wood, brick, etc.);
 - 5. Dimensions (i.e. size of trim); and
 - 6. Transformers, heat pump and condenser locations, electrical entries and meters, lamp posts, stove pipes.
- H. At the hearing, the Commission will discuss the application with the applicant or his representative, hear the abutters and take a vote. Owners having professional consultants such as architects or contractors are urged to have them be present at the hearing. If the application is approved, a Certificate will be mailed to the mailing address provided on the application and copies will be sent to the City Clerk and Building Inspector. Please note that the application can be continued until the next meeting if the Commission deems necessary (i.e. for reasons of incomplete drawings, to perform a site visit, etc.). In any case, the Commission must make a determination within 60 days from the date the application is received, unless the applicant waives that requirement in writing.
- I. A property owner or a contractor cannot receive a building permit unless a Certificate has been issued. Please be sure to obtain appropriate permits from the Inspector of Buildings (or other necessary permits and approvals) prior to commencing work.
- J. The homeowner may opt not to commence the work approved (unless it relates to resolving an outstanding violation). Work commenced must be completed within one year from the Certificate date unless otherwise indicated.
- K. The Commission reserves the right to inspect the project to determine compliance with the conditions set forth in the Certificate issued.

Violations

A person commencing or completing work to the exterior of a building in an historic district without the necessary approval of the Commission is subject to fines of up to \$500 per day from the date of violation. The Commission is not responsible for an owner's neglect to inquire about necessary City permits and approvals. All records are public and we will confidentially assist you if you are concerned that someone in your neighborhood is in violation.

SECRETARY OF INTERIOR'S STANDARDS FOR REHABILITATION

U.S. Department of the Interior, National Park Service
Revised 1990

*The Secretary of the Interior is responsible for establishing standards for all national preservation programs under Departmental authority and for advising Federal agencies on the preservation of historic properties listed or eligible for listing in the National Register of Historic Places. The Standards for Rehabilitation, a section of the Secretary's Standards for Historic Preservation Projects, address the most prevalent preservation treatment today: **rehabilitation**.*

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 uses.

The Standards that follow were originally published in 1977 and revised in 1990. They pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior of historic buildings. The Standards also encompass related landscape features and the building's site and environment as well as attached, adjacent or related new construction.

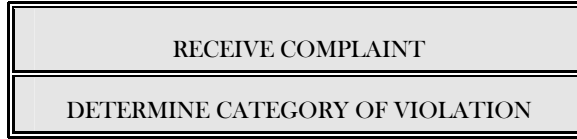
The Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

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 should 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 archaeological 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 massing, size, scale and architectural features and 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.

Note: To be eligible for Federal tax incentives, a rehabilitation project must meet all ten Standards.

ADDRESSING VIOLATIONS: UNAPPROVED WORK COMPLETED

Rev. 2/1/95



- INSIGNIFICANT** - Work that would be approved as is and requiring no building permit (e.g. painting, in kind maintenance or repairs of existing conditions).
- MINOR** - Work that consists of changes to existing conditions but would be approved or work that is an in kind replacement. Work that requires homeowner to submit application, but will likely result in approval as is.
- MAJOR** -
- (i) Work that has resulted in an inappropriate change to the existing conditions and will require additional work to resolve.
 - (ii) Work approved by the Commission but after (a) time period agreed upon or (b) one year from date of Certificate has lapsed, is in partial state of completion and therefore not as approved.
 - (iii) Work approved by the Commission but not completed as approved and requiring changes to make it as approved.
- EGREGIOUS** -
- (i) A Major violation that has been outstanding for three (3) months after the Commission notified the owner of the violation and the owner has not commenced to address the violation;
 - (ii) A Major violation that has been outstanding for six (6) months after the Commission notified the owner of the violation and the owner has not completed the actions required by the Commission;
 - (iii) Inappropriate changes of important features, demolition, building additions or other new construction, replacement of windows, installation of skylights, installation of exterior stairs, removal of any historic features, siding replacement or any other action which the Commission deems to have a significantly detrimental effect on the architectural features of a building.

STEP	INSIGNIFICANT VIOLATION	MINOR VIOLATION	MAJOR VIOLATION
1.	SEND LETTER REQUIRING ALL FUTURE WORK BE APPLIED FOR.	SEND LETTER TO APPLY. ATTEMPT TO TELEPHONE IF WORK STILL UNDERWAY.	SEND LETTER TO APPLY (OR COMPLETE OUTSTANDING WORK IF APPLICABLE). HAVE B.I. ISSUE CEASE & DESIST ORDER.
2.		OPTION: COMMISSION MEMBER CONTACTS HOMEOWNER.	AFTER 30 DAYS, SEND 2ND LETTER REQUIRING APPLICATION IN 15 DAYS, CC: CITY SOLICITOR. HAVE B.I. ISSUE 2ND C & D.
3.		AFTER 30 DAYS, SEND 2ND LETTER TO APPLY WITHIN 15 DAYS, CC: CITY SOLICITOR. BUILDING INSPECTOR NOTIFIED IF APPLICABLE.	AFTER 15 DAYS, SEND LETTER TO SOLICITOR REQUESTING ENFORCEMENT, CC: HOMEOWNER.
4.		AFTER 15 DAYS, SEND LETTER TO SOLICITOR REQUESTING ENFORCEMENT, CC: HOMEOWNER.	AFTER 3 MONTHS FROM STEP 1, IF HOMEOWNER HAS NOT COMMENCED TO ADDRESS THE VIOLATION, COMMENCE PROCEDURES FOR EGREGIOUS VIOLATION.

**EGREGIOUS VIOLATIONS &
PROCEDURES FOR USE OF RECORDED CLERK'S CERTIFICATES**

Clerk's Certificate as to Violation: This Clerk's Certificate is to be used when the Commission decides that its order to perform or refrain from activities affecting property in an historic district remains unheeded. This form of Clerk's Certificate is used only for egregious violations. See discussion below on previous page of what constitutes an egregious violation.

STEP	DESCRIPTION OF ACTION	TIMING
1.	Commission determines that an egregious violation exists under the definition of these procedures. Commission votes to (I) notify owner of intent to proceed with the requirements of these procedures for the issuance and recordation of a Clerk's Certificate as to Violation and (ii) place discussion on upcoming public meeting agenda*.	
2.	Commission (I) allows for public comment and (ii) may vote to proceed with the requirements of these procedures for the issuance and recordation of a Clerk's Certificate as to Violation.	*At scheduled public meeting
3.	Commission notifies owner of continuing violation and intention to record Clerk's Certificate as to Violation by a date thirty days late.	Within 10 days of Step 2 meeting.
4.	Clerk of Commission (I) completes and records Clerk's Certificate as to Violation and (ii) mails a copy of same to owner.	After 30 days of Step 3.
5.	Commission votes that violation has ceased.	When outstanding work or work in violation is addressed to the satisfaction of the Commission.
6.	Clerk of the Commission (I) collects recording fees for Clerk's Certificate as to Violation and Completion of Work (\$20.00) from owner and (ii) records Clerk's Certificate as to Completion of Work.	After Step 5.

Clerk's Certificate as to Outstanding Work: This Clerk's Certificate is to be used when (I) the Commission enters into an arrangement with an owner of property in an Historic District under which the Commission agrees to allow a continuing violation for a specified period or (ii) when the Commission has been requested to allow work to be performed under an application for a Certificate of Appropriateness or Certificate of Hardship and, as a condition of allowing such work to proceed, the Commission has required that the work be done within a specified period. The use of this form of Clerk's Certificate is not to be restricted to egregious violations, but may be used as the Commission deems appropriate.

STEP	DESCRIPTION OF ACTION	TIMING
1.	Owner has come before the Commission on a violation, egregious or not egregious, or in connection with an application for a Certificate of Hardship or Certificate of Appropriateness. Commission votes to (I) agree to (a) allow continuing violation for a specified period of time (b) or, as a condition of granting the requested Certificate of Hardship or Certificate of Appropriateness, to grant the application provided the work be completed within a specified period of time, and (ii) proceed with the requirements of these procedures for the issuance and recordation of a Clerk's Certificate as to Outstanding Work.	
2.	Clerk of Commission (I) completes and records Clerk's Certificate as to Outstanding Work, (ii) and gives a copy of same to owner.	After Step 1 meeting.
3.	Commission votes that required work is complete.	When outstanding work or work in violation is addressed to the satisfaction of the Commission.
4.	Clerk of Commission (I) collects recording fees for Clerk's Certificate as to Outstanding Work and Completion of Work (\$20.00) from owner and (ii) records Clerk's Certificate as to Completion of Work.	After Step 3.

Clerk's Certificate as to Completion of Work: This Clerk's Certificate is to be recorded with the land records to reflect that a violation under a Clerk's Certificate as to Violation has ceased or that outstanding work so described in a Clerk's Certificate as to Outstanding Work has been completed. This form of Clerk's Certificate clears the title of the property.

ARCHITECTURAL TRIM AND SIDING

Rev. 1/7/98

Salem Historical Commission Guidelines

1. Trim work is an essential part of a building's architectural character. Features such as cornices, brackets, window moldings, doorway pediments, corner quoins, and all other decorative elements should be retained.
2. Original siding material should be retained whenever possible.
3. Deteriorated material should be repaired or replaced, where necessary, with new material that duplicates the original as closely as possible.
4. Appropriate siding materials in Salem's historic districts are brick, clapboards, and flush or rusticated boarding. Pressed board siding is not recommended.
5. Wood shingles are only appropriate for exterior cladding if they were used as an original siding material such as on some Queen Anne buildings. Shaped shingles and shingle patterns of that period should be duplicated where repair and replacement are necessary.
6. Aluminum or synthetic sidings (such as vinyl and asphalt) or materials that were unavailable when a building was constructed are not appropriate for properties in Salem's historic districts and their installation will not be approved. Removal of such sidings is encouraged.
7. If a house is to be reclapboarded, the clapboards should line up to match the window heads and sills. Clapboards should be applied smooth side exposed.
8. The Commission recommends clear cedar or redwood. White pine is generally not recommended unless quarter-sawn.
9. See also the guidelines section entitled AMechanical Equipment.

Salem Architectural Traditions

Clapboards have been used on Salem's buildings since its earliest settlement by Englishmen and have always been the most popular siding material. As early as the mid-18th century, rusticated boarding could also be found on the front of local houses. Brick was first used as a siding material on some of Salem's finest houses but was not really popular until the Federal period (see section on Masonry).

Clapboards on 17th century houses generally varied from 3 1/4" to 4" to the weather. Cedar was commonly used but oak clapboards can also be found. Length was controlled largely by the spacing of the studs. Toward the end of the first period (1625-1725) and into the 18th century, it was not uncommon to find that the clapboards revealed a greater exposure to the weather at the top of the house than at the bottom. This was probably done because the lower portions of the house were more vulnerable to the elements. Another weather tightening measure was the use of skirt boards over a foot tall covering the building's sill. An example of this was found during the restoration of the Hooper-Hathaway house (54 Turner St., c. 1682, etc., see photo). Sometimes the frame of the house was covered with wide horizontal pine boards. The earliest known example of such underboarding can be found at the Gedney house (21 High Street, c. 1665) over which clapboards are laid.

First period houses, sparsely ornamented, were not without some decorative ornamentation. For instance, doorways were sometimes chamfered, that is, the posts forming the door frame were cut away at about a 45 degree angle. In the second half of the century it was common to find an overhang created by the projection of the second story over the first. These overhangs were often decorated with pendant drops carved from second story posts.

As the Georgian period (c. 1720 - c. 1780) progressed, ornament became richer and was dominated by bold classical details. In the early Georgian houses, corner boards and coved or boxed cornices begin to appear. Often the doorway was the most ornamental feature whether pedimented and pilastered or crowned by a full entablature. Beaded clapboards (clapboards with rounded edges) may also be found during this period.

Later in the century, modillioned cornices, corner quoins, and molded window caps and sills were added as decorative features. In addition to these elements, flush boarding scored to imitate stone was employed on some of the finer houses such as that of

Benjamin Pickman once located at the present site of the Peabody Museum's Japanese garden or Bowman's Bakery building at 266 Essex Street (1761). One of the most elaborate late Georgian houses in Salem is the Peirce-Nichols house (c. 1782, 1801) with its monumental fluted Doric corner pilasters, capped window openings, pedimented portico and turned balusters.

While Federal houses preserve the symmetry of Georgian buildings with central hall plans, five-bay facade arrangements, and the central doorway as the main visual focal point, detail became lighter under the influence of English architect and designer Robert Adam. Ornament was more delicate and attenuated, "often geometric in nature, with free use of curved moldings, surfaces, and arches." Gone are the bold corner quoins. Sometimes the detail is very spare, with most of the attention paid to doorway details such as elliptical fanlights or semi-circular porticos. Other Federal houses are more elaborate, such as the Cook-Oliver house (142 Federal Street, 1802-03, 1808) with its modillioned cornice, molded window frames, columned and dentilled portico, and carved wooden swags, bellflowers, and rosettes applied to the surfaces around the doorway, the beltcourse, and the panels above the second story windows (see photo).

The Greek Revival period (1825-1850) brought a change in orientation from the three-storied, four-square hipped roof houses of the Federal era to 2 2 story houses set gable end to the street in imitation of Greek temples. Trim was designed to contribute to the temple effect with massive pilasters used to support triangular pediments formed by the eaves of the gable roofs. These pediments usually surmounted full cornices. While clapboards continued in use, flush boarding scored to imitate stone became increasingly popular.

Flush boarding was also used on Italian Revival houses. With the introduction of the jigsaw, architectural trim could be produced in mass quantities and houses built during the Victorian period were the beneficiaries. Architects and builders employed heavy wood brackets under the eaves and above doors and windows to support flat hoods. Segmentally arched window hoods were another popular decorative feature. Mansard roofed houses, generally built in Salem between 1860 and 1880, also displayed brackets (often paired) and sometimes flush or rusticated boarding.

Although the Queen Anne style was not common in Salem, the City does have a few examples. These houses display irregular plans, varied gables, and bays, diverse window shapes and sizes, and prominent paneled chimneys. Corner towers are also a popular element. A notable part of the Queen Anne scheme of ornament is the highly textured wall surface featuring a combination of clapboards and various decorative wood shingles. This was the only style in Salem for which wooden shingles were used as an exterior cladding material.

With the Colonial Revival, Salem's architects and builders renewed their interest in details such as medallions, narrow corner boards, balustrades, pilastered or columned doorways, and Palladian windows. Clapboards or brick were the common siding materials for these homes.

Clapboards are usually made of cedar. A survey of some local lumber yards showed cedar is available in 6", 8", and 10" widths. Clear red cedar means no knots and the grain running vertically.

While clapboards are easy to replace if necessary, finding matching trim is another matter. The local lumber yard should be your first source. They may have stock moldings that are close to your original trim or they may be able to do custom millwork to your specifications. If not, the next option is local firms which specialize in millwork.

Siding: Wood v. Aluminum or Vinyl

While clapboards and trim establish the historic character of a house, aluminum and vinyl siding destroy its architectural integrity by encasing it in an artificial skin. Often important ornamental details are removed because it is easier to install siding on flat surfaces, than to work around brackets, quoins, window casings, and door trim. Thus siding reduces a house's three dimensional appearance as it obscures original textures, materials and colors. The number of nail holes required for installation will damage the clapboards; little care is given to existing surfaces since they will be covered up anyway.

An insensitive choice of materials can exaggerate the problem. For instance, siding with an 8" exposure is inappropriate for a house that formerly had 4" clapboards. Also, the attempt to imitate wood by choosing siding with artificial graining makes the contrast between genuine and substitute materials even more obvious. Synthetic sidings cannot hope to capture the richness and variety of real wood.

Siding is usually installed for one of two reasons: to mask existing problems or to reduce the maintenance cost of painting. While siding may cover a problem, it will not rectify it and may even accelerate existing causes of damage. For instance, paint failure and clapboard damage are often caused by faulty gutters and downspouts. If this drainage system is not repaired before installation, runoff water may get trapped behind the siding, causing even more damage.

Siding may create its own moisture problems. Wood clapboards breath by allowing moisture created by differences in temperature

between the inside and outside of the house to migrate to the exterior before condensation occurs in the walls. Unless an interior vapor barrier is installed, the impenetrable layer created by aluminum or vinyl siding will trap excess water vapor which condenses and damages wood. Exterior vents have not proved effective in reducing the moisture content in walls and they can easily be blocked by dust or debris and insects.

It is a myth that the installation of synthetic sidings will result in energy savings. A study called "Insulating the Old House," by the Greater Portland Landmarks, Inc., lists heat loss figures for a two-story house of 900 s.f. per floor with a full basement and 380 s.f. of old, loose windows. If the house has no insulation or storm windows, only 19% of its heat is lost through the walls, the large majority being lost through the roof, windows, and basement. Storm windows and attic insulation are much more cost effective from an energy savings perspective than siding which is too thin to have much insulation value. Although the backing on some sidings is marketed as insulation, its original purpose was as a reinforcement to prevent denting. In fact, the Federal Trade Commission filed suit against one manufacturer of aluminum siding for false advertising of energy conservation claims. Another study in Providence, RI determined that for a two story house, 25 s.f., the payback period of 23 storm windows, 2 storm doors and 6" of attic insulation was 4.4 years while the payback for aluminum siding with an R-factor of 2.5 was 29.96 years.²

As one preservation publication explains:

...the application of aluminum and vinyl siding is frequently considered as an alternative to the maintenance of the original historical material. The implication is that the new material is an economic and long-lasting alternative and that somehow the historic material is fragile, short-lived or problematic. In reality, historic building materials such as wood, brick, and stone usually are not delicate or short-lived. Their existence, frequently in sound condition, after many decades during which they probably suffered periods of neglect, is proof that they are the original economic and long-lasting alternatives. All materials, including the new sidings..., can fall into disrepair if abused or neglected; however the maintenance, repair and retention of "original materials" are always the most architecturally appropriate and usually the most economically sound measures for preserving the unique qualities of historic buildings.³

The Salem Historical Commission prohibits use of vinyl or aluminum siding.

BARRIER FREE ACCESS

Rev. 2/19/97

There is no one solution for incorporating barrier free access in historic buildings. The Salem Historical Commission will work with the property owner to find a solution to achieve both the goals of access and preservation.

The property owner should first conduct a needs assessment of the building, usually performed by an architect or other professional consultant, in order to distinguish historic fabric that cannot be altered from that which can be compromised for accessibility purposes. The consultant, using this study along with scaled drawings, can suggest an appropriate solution(s) that ensures the protection of sensitive building fabric. Every possible option to provide barrier free access should be examined. Solutions may include regrading, lifts and ramps.

Salem Historical Commission Guidelines

1. Under which certificate should a ramp or lift be applied for and under which circumstances?

Appropriateness: Since ramps and lifts are not considered historically appropriate, they should **not** be applied for under a Certificate of Appropriateness.

Non-Applicability: A property owner may apply under a Certificate of Non-Applicability if a proposal to fully screen the lift or ramp is included. Screening (e.g. Fences, landscaping) must be year round to be eligible under Non-Applicability. In the case of screening by a fence, that has yet to be installed, its design will require review and approval via a Certificate of Appropriateness. In the case of screening by landscaping, the Non-applicability application should include a landscaping plan.

A property owner may apply under a Certificate of Non-Applicability if the application states that the ramp or lift is a temporary structure and includes a specific date by which the ramp or lift will be removed.

Hardship: A property owner may apply under a Certificate of Hardship under any circumstances because hardship can be justified by there being a need to provide access to a building. Complete design drawings must be included with the hardship application. Because each building has its own specific historic features, the location, materials and design of a lift or ramp will be reviewed on a case by case basis.

2. For residential properties, excluding group homes, most approvals will be made conditional that the ramp or lift be removed if there is no longer a need for barrier free access.

If a building is open to the public and if barrier free access is not proposed for the primary entrance, the Massachusetts Historical Commission (MHC) has review authority. Please contact the MHC for more information.

PROGRAMMATIC ACCESSIBILITY WITHIN NON-RESIDENTIAL BUILDINGS

Programmatic accessibility means that, when viewed in its entirety, a program is readily accessible to and usable by handicapped persons. Videos, slide presentations and/or exhibits and photographs from inaccessible areas can provide programmatic accessibility. Programmatic accessibility can also include the delivery of services at alternate accessible sites. All of these options must be explored in addition to modification or alteration of a building.

AMERICAN DISABILITIES ACT

The American Disabilities Act (ADA) does not apply to single family homes, churches or private clubs (unless they rent out to the public). The ADA does not require the destruction or alteration of character defining features of an historic building.

DOORS, DOORWAYS, PORTICOS

Rev. 3/15/95

Salem Historical Commission Guidelines

1. Historically appropriate door openings including doors, glass, pediments, hoods, moldings, steps, and all hardware should be retained.
2. The enlargement or reduction of historical or original door openings to fit new stock door sizes is not permitted.
3. The stylistic period or periods a building represents should be respected. Original doors and door hardware should not be discarded when they can be repaired and reused in place. If replacement doors are necessary, the replacements should duplicate the material, design, and hardware of the older or original doors.
4. Residential doors should be made of wood. Pine and fir are most commonly used for exterior doors. Metal doors on houses are not acceptable.
5. The arrangement of door panels is a significant architectural feature and varied from period to period. Replacement doors should have the appropriate panel arrangement for the date of the house's construction.
6. Generally, it is not appropriate to introduce a new door opening into the principal or front elevation. The appropriateness of new side or rear doors depends on their design. (See #7).
7. The elaborateness of the entrance is related to the design of the house. Simple houses tend to have relatively plain doorways while more ornate houses have more highly decorated doorways. Therefore, when a replacement doorway is necessary on the principal facade or new doorway is being added on a side or rear facade, it should harmonize with the style of the house as far as the type and extent of detail. Large sheets of glass are not generally in keeping with the character of a historic house.
8. Doorways above ground floor level which provide secondary egress must be individually evaluated. In general, approval will result only when visibility from the street is minimal. The application of exterior staircases to buildings is generally not acceptable.
9. Porticos, porches, steps, railings that are appropriate to the building and its development should be retained. Porticos or additions reflecting later architectural styles are often important to the building's historical integrity.
10. Deteriorated porticos, porches, steps, and railings should be repaired, where necessary, with materials that duplicate the original as closely as possible.
11. Front steps should be made of granite or wood. Brick, flagstone, or concrete steps were not used historically in Salem and are not appropriate.

Salem's Architectural Traditions

Very few original 17th century doors have survived from the Massachusetts Bay area but those remaining show that early doors were constructed of outer vertical boards an inch or more in thickness which were battened on the reverse with shorter lengths laid horizontally. As architectural historian Abbott Lowell Cummings describes, these layers were fastened together with nails, whose heads formed an exterior diamond pattern. This pattern could be subtly reinforced by lines scored in the surface of the wood, connecting the individual nailheads. The doors, hung with long strap hinges, opened inward. A rabbet was carved into the posts or other frame members to receive the door.¹

As Salem entered the Georgian period (c. 1720-1780), framed and paneled doors replaced the 17th century battened doors. Early Georgian door trim consisted of flat casings which evolved into simple architraves. Later developments included the use of flat caps, followed by projecting heads, complete entablatures, and finally pediments.

Entry halls were often lit by a series of top lights forming a transom over the door. After the Revolution, side lights were added to provide greater illumination to the larger halls and more elaborate stairways that were built.

The number of panels on Georgian doors vary. Early doors often had between seven and ten panels arranged in various combinations (see photos), but toward the end of the 18th century the six-panel door, with two nearly square upper panels and four

identical rectangular panels below, became the most common. Sometimes the two upper panels were replaced with panes of bull's-eye glass.

More elaborate features were introduced after the Revolution, for instance, the portico, either open or closed. Semi-circular fanlights were another post-Revolutionary innovation. In his book The Country Builder's Assistant (1798), Asher Benjamin shows doorways in the Doric, Ionic and Corinthian orders with broken pediments, semi-circular fanlights, and six-panel doors similar to those built in Salem. As the Federal Period (c. 1790-c.1830) progressed, the elliptical fanlight superseded the semi-circular in popularity and can be found on many of Salem's early 19th century houses. The elaborateness of the doorway varied with the lavishness of the house. Some of the Federal mansions also feature semi-circular porticos.

The elliptical fanlight disappeared with the advent of the Greek Revival house in the 1830's and 1840's. While Georgian and Federal doorways stood in the middle of the house, Greek Revival dwellings were often built gable-end to the street with side-hall entries, either recessed or flush with the front facade. Sidelights and transoms were popular and doorways were often decorated with full entablatures and Doric pilasters. With respect to the doors, the six-panel door persisted side by side with new arrangements: the four panel door (two long rectangular panels over two short rectangular panels), the two-panel door (two long rectangular panels running the length of the door), or multi-paneled doors.

During the Victorian period, paired doors (that is two doors sharing the same entryway) became popular. Common panel arrangements were either a top rectangular panel, a middle thin panel, and a bottom square panel or else a top rectangular panel and a bottom square one. Often the panels on Victorian doors were elaborately carved. Many were varnished to enhance the grain of the wood rather than painted.

Colonial Revival doorways mixed pre- and post-Revolutionary elements with contemporary motifs. Elaborate porticos reappear along with sidelights and elliptical fanlights but the scale of the elements and their relationships to each other are often different than those of the periods from which they were derived. The doors themselves vary from copies of earlier six-panel styles to modern innovations where the door is divided by a large rectangular or square pane of glass at the top, a small rectangular panel at the middle, and two rectangular or square panels at the bottom.

For most of Salem's older homes, doorways above grade level were usually reached by granite steps. Occasionally wooden steps were constructed.

Storm Doors

Although the Historical Commission does not have jurisdiction over storm doors, we make the following suggestions. Consider purchasing storm doors of wood. Wood is a more sympathetic material to historic houses.

Select a storm door that is appropriate for your entrance. Storm doors are available that consist almost completely of glass which would block very little of the historic door. Doors marketed as "Colonial" with a crossbuck on the bottom half and a scalloped frame around the upper window are not appropriate to historic houses.

FENCES

Rev. 4/5/95

Salem Historical Commission Guidelines

1. Fences are significant architectural features. They were sometimes architect designed, as those of Samuel McIntire. Therefore, architecturally important fences should be repaired or replaced, where necessary, with new materials that duplicate the old as closely as possible. Other fences may be architecturally unimportant, the result of fence replacement in more recent years. In these cases, property owners would be encouraged to make the design more appropriate rather than duplicate the existing fence.
2. Fences along the street facades of historic houses were meant to serve a decorative purpose. Such fences should not block a house's view, but complement it; they should be in scale to the property. Narrow pickets (approximately 2 2" in width) are preferred to wide pickets. Back and side yard fences which serve a screening purpose may be higher.
3. The design of a fence should be sensitive to that of the house. Since Federal architecture stressed delicate proportions, the fence in front of such a house should also be delicate in scale, whereas the fence in front of a more massive Victorian house could be heavier. Also, elaborate fences are suitable for elaborate houses; simple houses should have simple fences.
4. If wood is to be used, picket, capped picket, or spindle fences are recommended for anywhere around the yard. Capped flat board fences are most appropriate for side and back yards. The flat board fence with a lattice top is an excellent privacy option.
5. The Commission encourages the retention of suitable cast and wrought iron fences. Such fences should be repaired and painted as necessary. If sections are missing and it is financially feasible, replacement sections should be obtained. Otherwise it is preferable to consolidate the existing sections of the fence than to remove the fence altogether.
6. Historically, fences were located along the sidewalk and the continuity of such fences is an important asset to the street. The Commission generally discourages fence relocation to accommodate off-street parking. Gates may be required as an alternative to relocation.
7. Chain link, stockade, and wire-type fences are not appropriate in historic districts. Low brick walls and brick planters are also not acceptable.

Salem's Architectural Traditions

The most common types of wooden fences found in Salem along the street are spindle, capped picket, and capped flat board fences. Nineteenth century photographs and prints also show a preponderance of these types. Flat board fences were also used at the rear of lots along with lattice-work fences and simple post and rail fences.

Salem's spindle fences are composed of vertical spindles which pierce horizontal rails that are supported by stout square posts. Capped picket fences are constructed of equally spaced flat-topped pickets which are crowned by a molded fence cap, while flat-board fences are made of capped 1" thick boards placed directly against each other. Both capped picket and capped flat-board fences are supported from behind by rails that are secured to posts rooted in the ground.

It is difficult to be specific about which fences were used in each period since very often the construction of existing fences is not documented or surviving drawings and bills refer to fences which no longer stand. We know that fences were used from the earliest settlement of the colonies, for instance histories of Cambridge refer to the "Pallysadoe," a stockade composed of stakes, willows, and a trench erected to fortify the town.

Through the Colonial Period fences evolved from a means of protection and a way of penning livestock into a decorative architectural feature. Pattern book and carpenter's handbooks document popular styles. Asher Benjamin shows two fences in his Country Builder's Assistant (1798) both with slender angular pickets. One is a capped picket which slopes upward at the ends of each section to meet a square post topped by a ball. The other fence has pickets of alternating height and posts featuring banded balls. Fences of similar designs can be found in Salem.

Salem's most well-known fences are associated with the work of Samuel McIntire. One of McIntire's early fences, possibly built for Elias Hasket Derby, is similar to a Benjamin design although the posts are much heavier. Since Benjamin's design is slightly later, it may reflect the trend toward more delicate proportions during the Federal period.

According to Fiske Kimball, McIntire was influenced by the fence Charles Bulfinch designed for the Derby mansion in 1795 (never

built) which shows urns on the posts and a segmental curve to the gate. The fence at the Cook-Oliver House, 142 Federal Street (now altered), is of a similar design although the existing gate is different from the one shown in McIntire's drawing (see illustrations).

Although blacksmiths were creating wrought iron fences during the late 18th century, such metal fences apparently were not popular in Salem since even the designs of McIntire and Bulfinch for the finest late Georgian and Federal houses specified wooden fences. By the Victorian period, cast iron fences had been introduced and were popular enough that in 1850 a cast iron fence was chosen to enclose the Salem Common.

Many of the Colonial Revival fences are copies of Salem's earlier gems. For instance, the fence at the Ropes Mansion is a conjectured copy of a McIntire Federal type erected in 1894 from plans by Stone, Carpenter, & Wilson of Providence, Rhode Island. In general, wooden fences were more in keeping with the renewed interest in the colonial than cast iron.

Fence Purposes and Designs

The purpose of a fence should be considered before making choices as to materials and designs. Fences along the street often serve decorative functions while those at the back of the property are generally installed to maintain privacy. Privacy fences can be merely functional (the flat board fence) or decorative (the flat board fence with a lattice top). Since fences have an architectural impact on a property, they should be thought of as more than just screens.

Wooden Fences

Although wooden fences can be bought commercially, most of the products available locally are too heavy and rustic looking to suit the character of Salem's historic districts. Fences are a good do-it-yourself project or they can be easily managed by a carpenter. A lumber yard could cut the pickets or boards to order and mill a fence cap to your specifications.

Aluminum Pickets

With a spindle fence, some property owners have substituted aluminum piping for wooden spindles. This was done at the Ropes Mansion. Once painted, the round aluminum spindles look no different from wooden ones. For more information, contact the Curator of Historic Properties at the Peabody and Essex Museum.

Cast and Wrought Iron Fences

Cast and wrought iron are often confused with each other. Not only are these two materials handled differently, but they also differ metallurgically. The most basic distinction between the two metals is that cast iron forms are made by pouring molten iron into a mold while wrought iron is heated and hammered into shape. Cast iron contains silicon and 2-4% carbon; it is a more brittle material than wrought iron which only has a 0.1-0.3% carbon content and is relatively elastic. Contemporary wrought iron is actually made from steel.

Nineteenth century fences were sometimes made from combinations of wrought and cast iron. For instance, a wrought iron fence might have cast decorative elements. Since the metals had different properties, they sometimes suited different forms. The wrought iron process tended to eliminate impurities so that wrought iron could be thinner than cast iron. Cast iron, on the other hand, could be molded into very large objects while wrought iron was limited by the strength of the person working it.

In the 19th century when many foundries were operating, it was cheaper to obtain cast iron because it was manufactured using a mass production process whereas wrought iron was an individual craft. Because it was cheaper, cast iron was more readily available to the average homeowner; such fencing reached its height of popularity in the Victorian period. Today, wrought iron is frequently machine produced while casting has become a custom product due to extremely short production runs.

Iron fences were often composed of vertical pickets that were topped by cast iron ornaments. Crosses and spearheads were particularly popular cresting designs. In addition to pickets, rustic motifs with vines and flowers or scroll motifs were also common.

For those homeowners with iron fences, the Commission has some articles on file which describe the repair process and literature from companies that will cast missing pieces or supply historically appropriate metal fences. Some companies stock pieces that may be suitable for replacements.

GUTTERS & DOWNSPOUTS

Rev. 4/19/95

Salem Historical Commission Guidelines

1. Wooden or copper gutters and downspouts can be an important architectural feature. Therefore, gutters should be properly maintained and only replaced in cases of irreparable deterioration.
2. In older houses and buildings, they were often designed as part of the eave moldings. In these cases, the gutters become a particularly important architectural feature and should be treated as such. This treatment should follow the guidelines set for other important features, that is; repair if at all possible; if repair is impossible, replacement should be with like materials and design.
3. In the case of hung/afterthought gutters, more discretion may be shown in what is acceptable. The architectural value of the gutters must still play a major role in the decision making process, but the cost differential between and the environment's effect on different materials may also be taken into account.
4. New gutters and downspouts should be placed in an architecturally sensitive manner and painted the color of the surface on which they are installed; i.e. if a downspout runs down a white corner board, it should be painted white. Painting of copper gutters and downspouts will be evaluated on a case by case basis.
5. Removing trim pieces from the roof line in order to more easily attach gutters is generally not permissible.

General Information

Importance of Gutter Maintenance

Gutters today are generally made of either copper, wood, vinyl or aluminum. Wooden gutters may have liners. Liner materials include: copper, tin, rubber, galvanized or terne metal.

Since water is one of the major causes of building deterioration, gutters and downspouts are a key element in keeping water off your house. Therefore, gutters should be inspected regularly and kept free of debris. Clogged gutters can cause water to overflow or ice to build up. Also any acidic elements in the debris can eat away at the metal of the gutter itself or its liner. Gutter joints should be inspected and either soldered or patched if leaks are found. This work may have to be done by a metalsmith. Wooden gutters must be painted every four or five years and any gutter liners made of tin or galvanized or terne metal must also be kept painted.

Placement of Gutters and Downspouts

Gutters and downspouts should be placed with great sensitivity to the architectural appearance of the house. In some cases, where due to the original style of the building or the richness of cornice or corner detail, gutters or downspouts would not be appropriate. Some wooden gutters are built into the roof and are, therefore, invisible from the street, while others are part of the cornice decoration. Hung gutters should be as unobtrusive as possible. Downspouts should not obstruct the view of quoins. Sensitive painting can do much to hide gutters and downspouts. For instance, gutters lying over trim should be painted trim color while downspouts running down the body of the house should be painted body color. Care should be taken that the new hung gutters detract as little as possible from the house's appearance.

Choosing Among Gutter Materials

Choosing a gutter material is like making a lot of other purchases - you get what you pay for. Cheaper gutters may cost less but they will also deteriorate faster. Since installation is the largest percentage of the cost, it may be more worthwhile to invest in copper rather than settle for aluminum.

Copper v. Aluminum

Whether copper or aluminum, good installation is the key to getting the most out of the material. Since copper requires more attention to detail, it takes more time and care to install.

There are advantages to copper that may make it worth the money. Copper handles better than aluminum and can be repaired more easily. The life of an aluminum gutter depends on its coating. Once that coating is broken, the gutter will start to corrode.

Copper is less sensitive to salt air than aluminum. Also, copper is a better conductor of heat from the sun. Aluminum gutters are often made of a light material and do not absorb heat as well. Copper gutters are encouraged by the Salem Historical Commission because they are more durable and retain their shape. Regular grade aluminum gutters do not hold up well in Winter. Ice and snow tend to cause warpage and sagging. Aluminum gutters may be allowed in some circumstances, conditional that they are of a heavy grade and do not destroy the integrity of the eaves.

Wooden gutters

Wooden gutters are generally an aesthetic choice. These gutters are either hung or built into the structure of the roof or cornice (see drawings). Because of their close proximity to the cornice, any leaks in wooden gutters will cause water to drip into the cornice itself and possibly into the main structure of the house. Thus gutters built into box cornices require careful maintenance to make sure that all seams are watertight and that metal liners are painted as necessary. Properly maintained wooden gutters (linseed oil applied twice a year) can last as long as 50 years. Because built-in wooden gutter can be an integral part of a house's architectural design, they should be maintained if possible.

Sources of Wooden Gutters

The first source for obtaining wooden gutters should be your local lumber yard. The Old House Journal Catalog, available at the Commission office, also has listings of suppliers. Most wooden gutters are made of Douglas fir; western red cedar is a preferable material if it can be obtained.

Prices

The price for installing gutters depends on the job. Since seamless aluminum gutters are cut to size, houses with more angles (for instance those with bay windows), require more cuts and, therefore, the cost will be greater.

HOUSE NUMBERS

Rev. 5/3/95

It is important that your house be clearly numbered should police or fire personnel need to find it. If your house is not clearly numbered, it could also result in fines. Here are the guidelines for house numbers in historic districts:

Salem Historical Commission Guidelines

1. The minimum height of the numbers shall be 32" high and no more than 6" high and they must be of wood or metal (no plastic).
2. While meeting the visibility requirements from the street, house numbers shall be appropriate in size, style and location to the house.
3. The numbers shall be of a contrasting color from the surface it is affixed to but shall be limited to black or a color already used on the house (e.g., shutter color). The homeowner may also use unpainted metal numbers.
4. Stick on house numbers are not permissible.

MASONRY

Rev. 2/21/96

Salem Historical Commission Guidelines

1. Original masonry and mortar should be retained, whenever possible, without the application of any surface treatment. Do not apply waterproof or water repellent coatings unless required to solve a specific technical problem that has been studied and identified.
2. Old mortar should be duplicated in composition, color, and texture. Do not repoint with mortar of a high Portland cement content. Mortar that is harder than the material it is binding will cause masonry to deteriorate.
3. Old mortar should be duplicated in joint size, method of application, and joint profile.
4. Masonry should be cleaned only when it is necessary to halt deterioration and always with the gentlest method possible, such as low pressure water and soft natural bristle brushes. **DO NOT SANDBLAST MASONRY UNDER ANY CIRCUMSTANCES.** Chemical cleaning products which could have an abrasive reaction with masonry should be avoided.
5. Deteriorated original materials should be repaired or replaced, where necessary, with new materials that duplicate the old as closely as possible. Replacement bricks should be carefully matched in size and color to the originals.
6. New construction should follow traditional brick coursing and appearance.
7. Foundations should be repaired or extended with the material of the existing foundation.
8. The original or early color and texture of masonry surfaces should be retained whenever possible. Brick or stone surfaces may have been painted or whitewashed for practical and aesthetic reasons. Indiscriminate removal of paint from masonry surfaces may be historically incorrect and may also subject the building to harmful damage.
9. Chimneys are an important architectural feature. They should not be shortened or removed but repaired as necessary.
10. Existing stucco should be repaired with a stucco mixture that duplicates the original in appearance and texture.

Salem's Architectural Traditions

Brick was not a widely used building material in Salem until after 1800. Although there are some examples of 18th century brick houses, for the most part, Salem's Georgian houses were of wood. It could even be said that there was a prejudice against brick in the 18th century as some masonry houses were torn down and replaced by wood. This was the case of the Pickman house, formerly at 70 Washington Street, which was constructed in 1764 of brick and then remodeled by Samuel McIntire for Elias Haskett Derby in 1786. The remodeling on the exterior consisted of covering the brick facade with a wood front in imitation of the Peirce-Nichols house also designed by McIntire and built in 1782. Apparently the Derbys felt that they were not to be outdone.

Even at the beginning of the Federal era, wood was the most popular building material. Around 1800, William Gray built the first brick Federal house on Essex Street. That structure was followed by the Gardner-Pingree house (1804-05) and from then on brick took its place alongside wood. On some streets, for instance Chestnut or around Salem Common, it is even the predominant material.

It became popular to paint masonry structures beginning in the 1820's because it was thought that unpainted brick carried in moisture and was, therefore, unhealthy. Sometimes the reasons for painting brick were aesthetic, either to imitate another material such as stone or to hide alteration. The Massachusetts State House, a 1798 building, was first painted in 1825 while the Gardner-Pingree house was painted sometime in the 1840's.

After the Federal era, very few houses were constructed of brick although the material remained popular for commercial buildings. Most houses built from the Greek Revival period until the end of the 19th century were of wood. With the resurgence of interest in things colonial, brick was again used for many of Salem's Colonial Revival homes.

About Masonry

Masonry construction refers to building materials made of substances which come from the earth's crust - from rock to soil. One

class of these materials is found rigid in nature and cut into blocks of useful size for construction (granite, limestone, sandstone) while another class is found as uncohesive powdered substances which, when mixed with water, will "set" to become solids (mortar, bricks, adobe).¹ Although brick is only one of many types of masonry, it is by far the most used on in Salem's residential areas and, therefore, the following discussion will be limited to this material.

Types of Brick

"Bricks are man-made masonry units, made by wetting a fine mixture of clay and sand, molding it into the desired shape, allowing it to dry, and then firing it in a kiln at high temperatures. At kiln temperatures, the sand particles turn to glass, a process called vitrification, and exterior face brick is purposely dusted with fine sand when molded so that it will form a highly glazed exterior crust of skin with better weathering capabilities. Until the 1880's, most brick was handmade in wooden forms. When these were hand-packed, air holes were left in the mixture, and much water was needed to make the so-called "soft mud" as plastic as possible. High water content, in turn caused the brick to slump when unmolded, and to shrink and warp while drying, so that variations in size and shape were common. Such bricks, termed "water-struck," needed wide mortar joints to take up their dimensional variations and uneven firing in a kiln made of the piled bricks themselves left surface color very random and textured indeed, with many dark and light highlights. After 1880, a new kind of brick became more popular, made from a stiff mud of drier clay and sand. This stiffer mix was pressed to eliminate air holes and produce a much denser brick. Cast iron molds produced crisper edges, and the higher firing temperatures in gas kilns produced a uniform, dark wine-red brick. Of great dimensional precision, the pressed brick allowed the use of very narrow mortar joints, and mortar tinting was introduced to make such joints even less conspicuous."²

Cleaning

The decision to clean a brick building should be made carefully. Historic buildings are not new and should not be made to look new by taking off the top layer of brick through abrasive cleaning methods. The so-called "dirt" on a masonry building might be weathered brick. Actually a thin layer of dirt is more often protective of the building fabric than it is harmful.

Sometimes masonry buildings are cleaned to remove paint. However, it should be remembered that it was a fashionable 19th century practice to paint brick either to imitate another material, such as stone, or to protect poor quality brick. Paint might also hide alterations or have been added to solve moisture problems. According to one preservation publication, "Unless there are stains, graffiti or dirt and pollution deposits which are destroying the building fabric, it is generally preferable to do as little cleaning as possible, or to repaint where necessary."³ Some paint removal may be required if old paint layers have built up so much that repainting is not possible.

Types of Cleaning

There are basically three ways to clean masonry:

Water Cleaning - Generally the safest method. A low or moderate pressure wash is supplemented by bristle brushes. This method softens the dirt and rinses deposits from the surface.

Chemical Cleaning - A more risky method. First the building is thoroughly wetted to minimize absorption of chemicals and then the chemicals are applied. After a proper reaction time, the wall surface is bristle-brushed and then rinsed.

Abrasive Cleaning - Causes damage to masonry surfaces. Abrasive methods include grit blasting (usually sandblasting which involves spraying sand at high pressure through a nozzle at a building), grinders, and sanding discs, which remove the dirt by abrasion and are usually followed by a water rinse.⁴ The problem with abrasive cleaning is that not only does it erode the dirt or paint, but also the surface of the brick. Since brick is hardest on the outside where it was exposed to higher firing temperatures, sandblasting will remove this outer skin, exposing the soft inner portion of the brick to more rapid deterioration. Also, the increased roughness of the new surface will collect dirt more quickly than smooth brick. **THEREFORE, A BRICK STRUCTURE SHOULD NEVER BE SANDBLASTED.**

Chemical cleaning can also damage brick if the wrong chemicals are used. Some chemical cleaners leave a hazy residue. Before undertaking a cleaning project, one should consult a qualified preservation architect, conservator, or cleaning contractor.

Some Common Masonry Problems

Rising Damp

Rising damp, the suction of groundwater into the base of brick and stone walls through capillary action, is a common masonry problem. Moisture is drawn up into the walls and released at the interior and exterior surfaces, where a horizontal stain or

tidemark is left. Although this is a difficult problem to solve, there are some things to do that will diminish possible damage. The book Respectful Rehabilitation recommends three options. One is to make sure that rainwater does not collect at the base of the walls by sloping the grade of the surrounding soil away from the wall. Another is to install drain tiles (also called French drains) around the building. Although drain tiles will not completely eliminate rising damp, they can minimize the problem and enable the walls to dry out. The third approach is to construct a damp-proof course by inserting a rigid damp-proof material (bituminized fabric, polyethylene sheeting or lead sheets) into a narrow slot cut into the mortar joints just above ground level.

Efflorescence

Efflorescence is a white haze which forms on masonry buildings when the salts within the mortar or masonry units come to the surface and recrystallize as moisture evaporates. According to Respectful Rehabilitation, "The presence of such salts is usually an indication of excess moisture in the wall, which is often caused by rain penetrating open mortar joints or cracked masonry units, by water leaking through roofs or downspouts, or by some other building defect. Efflorescence also can be caused by rising damp or excess moisture introduced during cleaning or repointing." Well-operating gutters and downspouts are crucial to the well-being of a masonry wall and should be repaired before any repointing is undertaken.

Repointing

Before repointing (repairing a building's mortar joints), it is important to understand the relationship of bricks and mortar. Mortar cushions the brick making the wall somewhat shock resistant. In order for mortar to serve this purpose, it must be softer than the brick. If the mortar is harder, shocks will be borne by the masonry and the bricks themselves will deteriorate. Because mortar is a shock absorber, it is inevitable that it will deteriorate to some extent as the building ages, so repointing is a fundamental element in the maintenance of a masonry structure.

Historically, mortar was made from sand, lime, water, and additives such as oyster shells, animal hair, or clay which gave it color and texture. Modern masons tend to use Portland cement mortar or a bagged pre-mix containing Portland cement, sand, a coloring agent and ground limestone. These mortars, while easier to work with, are too hard for historic masonry. Real lime mortar is less convenient to handle but better for the brick.

New mortar should match the old in color. The mortar should be matched to the unweathered color of the existing mortar. Therefore, a chunk from an original mortar joint will have to be removed and broken open. Masonry supply stores sell pigments used in matching. A small sample of the new mortar should be mixed and allowed to dry before comparing it to the existing mortar.

Foundation Repair

Foundations are often made from masonry materials. The Old House Journal lists three principles of foundation repair:

1. Not all foundations in need of repair require total rebuilding. Often sectional or spot repairs may be the most cost effective and sensitive approach.
2. When rebuilding a foundation, try to salvage and reuse the original materials or else stick to close duplicates. Non-original foundation materials can be clad with original materials. For instance, cement can be covered with brick or a stone facing.
3. As with any masonry repair, the mortar should be carefully mixed to match the original in color, texture, and hardness and should be applied using the same joint profile.

MECHANICAL EQUIPMENT

Rev. 1/7/98

Salem Historical Commission Guidelines

The Salem Historical Commission has jurisdiction over vents, HVAC equipment and mechanical equipment that are installed on or protrude through roof surfaces or alter soffits, eaves or exterior walls. See also separate section on Skylights. The location, dimensions and outward appearance of these items must be provided with the application. The Commission also has jurisdiction over the screening of mechanical equipment whether or not it is attached to the building. The Commission is not obligated to approve roof units that the property owner may feel necessary to accommodate a use other than that which the building was originally built for.

If the venting of warm air from the attic is a necessity, the applicant should consider the various types of vents. These include ridge vents, soffit vents (round, rectangular and continuous), gable vents and turbine vents. Try to select a venting method, or combination of methods, that will be the least obtrusive to the architecture but will meet the minimum air circulation or venting requirements for the square footage of the attic space. Vents should be painted to match the color of the surface on which they are installed.

Air conditioners, roof vents and other mechanical equipment should be placed in the most inconspicuous location possible (E.g., behind chimney).

PAINT COLORS

Rev. 3/20/96

Salem Historical Commission Guidelines

1. Paint colors should be chosen with consideration for the colors of surrounding buildings and with sensitivity to the architectural period of the house. The Commission has materials explaining the types of colors used during various architectural periods.
2. The Commission does not require the property owner to select paint colors from a specific set of colors. There is leeway for personal choice.
3. If a two-color scheme is appropriate, clapboards should be painted the body color and all else should be painted the trim color. For certain 19th century buildings, it may be appropriate to pick out some of the trim elements with the body color or to use a three-color scheme. For a more comprehensive discussion of paint color application, refer to the technical information below.
4. With proper preparation, opaque stains are acceptable alternatives to paint.

REMEMBER: A permit must be issued by the Health Department prior to any paint removal process. **Electric sanding on any exterior surfaces is prohibited.** Abrasive blasting is prohibited unless a variance is granted by the Board of Health to allow wet or mist abrasive blasting on certain masonry and metal surfaces. For more information, contact the Salem Board of Health and request a copy of Health Regulation #23.

Salem's Architectural Traditions

Although a great deal is known about what paint colors were used in New England during each period and how the colors were applied, information specifically about Salem paint colors is limited. Paintings, while they provide some information, cannot be completely relied upon because the painter may not have matched his colors exactly to the colors of the scene that he was painting. Also, the colors used in the painting could have faded or darkened over time. Sometimes details such as window muntins or shutters are difficult to make out. While citing these limitations, an examination of paintings in the Essex Institute reveals some information.

A painting entitled "Salem-School Street from the Old Town House" (1765) by Joseph Orne shows a palette of reds and browns. Trim work is not picked out in a different color. In later paintings, the palette lightens with the introduction of yellows and grays. One of the most complete scenes is a painting entitled "Court and Town House Square, Salem" (c.1820). It shows that the Lewis Hunt house (1698) which stood at the corner of Washington and Lynde Streets was painted barn red. Its neighbor, the Pickman-Derby house formerly on the site of the Masonic Temple, is yellow with white trim. Other houses are various shades of beige, yellow, ochre, and even lime green with darker green trim. Of the public buildings, there is a gray church and the red courthouse at the center of the composition. The stereotypical white house with green shutters appears as part of an 1827 watercolor of Federal Street and in a later lithograph of a Greek Revival house made after 1840. These paintings, while not providing conclusive data, reflect a trend from the reds and browns of the mid-18th century to the yellows and grays of the federal period and fit in with a generalization that can be made about New England, i.e., until 1850, later colors tend to be lighter.

Deciding on a Paint Color Scheme: Factors to Consider

Original Colors: One way to make a paint color decision is to determine your house's original color scheme. If a house has not been scraped down to the bare wood at some point in its history, it retains evidence of earlier paint colors which can be discovered by some careful scraping.

The process involved, called cratering, is to expose all the paint layers by sanding down a circular area about 1 2" across.¹ It is best to make several craters for comparison on areas away from direct sunlight and excessive heat since heat and light can accelerate changes in paint colors. Once the craters are made, rubbing them with mineral oil will bring out the colors exposed along the sides of the craters. These should then be examined using a 10X magnifier.

Inspecting the colors revealed by cratering is more difficult than it might seem at first, since paint colors can change with age. For instance, many historic paints used linseed oil as a vehicle (the material which binds the pigment together as a film and allows it to adhere to a surface). Linseed oil yellows with time or with increasing darkness, such as when a new coat of paint is applied. Therefore, it is important to realize that what is revealed by the crater is not an accurate representation of the original color.

If a homeowner wishes to determine quite specifically the original house colors, it is best to hire a preservation consultant with some expertise in paint analysis. The Society for the Preservation of New England Antiquities in Boston, among others, does such

consulting work. Generally speaking, a consultant will come out to Salem with a microscope, special lights, and a scalpel to take paint samples from the house in question. The amount of time this takes depends on the building. If a house has already been stripped, this will affect the paint samples remaining on the wood or brick surface and the procedure will take longer. After making a scraping, the consultant will take the paint samples back to a lab and put them under ultraviolet light to bleach out the oils that have darkened over time. He/she will then mix a paint sample and paint out a chip a few inches square which the homeowner's painter can then match. Interested homeowners should send a photo of the house with its date of construction written on the back to the prospective consultant.

Appropriate Paint Colors by Period: For those who do not want to go to the trouble or expense of paint color analysis, a reasonable way to decide on paint colors is to pick a scheme that might have been used when the house was first built.

Our knowledge of exterior painting in the seventeenth century is limited. Abbott Lowell Cummings reports, "When the French-Andres house in Topsfield was restored during the summer of 1919, and Indian red paint or stain was found behind a later cornice on the board covering the plate. The same kind of evidence was found concealed at the cornice level of the General Sylvanus Thayer birthplace in Braintree, ca. 1720, and a few other examples of an exterior red color are known, among all of which it is clear that the stain had been applied to the trim only and not to the clapboards."²

Apparently, it became common to paint house exteriors in the Georgian period. Early paint colors were made from pigments readily available from nature, for instance earth pigments could be used to make ochre or burnt to make colors such as burnt sienna. Lampblack, a pigment formed by the incomplete combustion of oil or pitch, was used to produce gray. White lead was never used alone as a pigment but was blended with other colors. The barn red that we so commonly see was made from ferric oxide (rust).

For most of the Georgian period it was common that both the body and trim were painted the same color but it was not unheard of to paint the trim in a different color especially if the trim was ornate. Trim was generally painted a different and lighter color than the body although some exceptions in Salem have been found. More research needs to be done to know if this was just an exception to the general rule or a regional variation in Salem. Doors were usually painted a different and darker color than the body, either a deep red, blue, green, or black depending on the colors of the house.

Georgian colors tended to be fairly deep in hue and fairly toned down with gray. Rose became salmon, green was combined with ochre as darker pigments were preferred to lighter ones. Using chips from the Pittsburgh Paints line of Historic Colors (see illustrations section), body colors such as the mud ochres (Ft. Leavenworth or Golden Maple), charcoal gray (Old Silver), greenish grays (Gunstock), or yellowish ochre (Gold dust) might have been used. Ivory was a popular late Georgian trim color. Note: The Salem Historical Commission does not endorse any particular paint brand.

During the Federal period, pigments were whiter and brighter. Trade with Europe and China improved the sources of color pigments. What might have been a deep blue gray in the Georgian period, became a light pearl in the Federal period. Georgian ochre was a mustard shade, Federal ochre was much more yellow. While Georgian trim might be closer to ivory, Federal trim was lighter, closer to white. It is a misconception that Federal shutters were painted dark green; they were bright green, the color of billiard table felt.

Greek Revival colors were still light but slightly duller than in the Federal period. White was first used as a body color during this period to imitate the look of marble, and shutters were commonly green. Gray or yellow with white trim were other possibilities.

In the 1840's, the color palette began to shift again with the influence of critic and landscape architect Andrew Jackson Downing. In his 1842 book Cottage Residences, he criticized white as an unsuitable color because of the glaring contrast it provided to the surrounding foliage, an effect made worse by bright green shutters. Instead, Downing published a plate of six alternative colors consisting of three shades of gray and three shades of fawn or drab. Downing felt that a building should be "integrated with nature and not forced upon it."³ He advocated avoiding colors not found in nature, preferring the colors of rocks, wood, and soil (the materials from which houses were made) but not green since houses were not constructed from foliage. Also he recommended trimming a house with a color some shades darker than the body color but of the same hue.

As the 19th century progressed, the trend was toward darker, stronger colors with more varied color combinations. On Mansard houses, popular between the mid-1850's to the mid-1880's, body colors such as olive green and brown appeared along with the Downing shades.

Changes in paint technology after the Civil War had an effect on color as ready-mixed products became available and containers were produced in which the new paints could be shipped safely. These changes in manufacture and transportation meant that houses in widely varying parts of the country could be painted with the same paints. Through advertisements, the paint companies promoted the use of richer colors to sell their products. A palette greens, olives, browns, terra cottas, roses and pumpkins became popular. Also it was not uncommon to use two different body colors on the first and second floors and a third trim color.

White continued to be unpopular until the Colonial Revival period when taste in paint colors returned full circle to the whites and light pastels used during the early 19th century. Grays, yellows, and light greens were used as body colors, with ivory or white trim.

Trim, Door, and Window Sash Colors: Selecting colors is only part of the painting process. Decisions also must be made as to how the colors will be applied to the building. For most houses built from the late Georgian period until the Victorian period, a two color scheme is appropriate in which the clapboards are painted the body color and all else is painted the trim color. Painting schemes for Victorian houses with milled decorative trim might become more complicated by applying the body color to major areas painted in the trim color. For instance, the recessed panels below a bay window of an Italianate house might be painted the body color against the trim. Brackets might be painted the trim color or, if they are more elaborate, their recessed scrolls and faces might be picked out in the body color. As a general rule, the simpler the house, the fewer colors that should be applied; with the exception of Queen Anne or late Victorian houses, it is preferable to introduce the body color within major areas of the trim than to add a third color. Queen Anne houses were often painted with three colors, for instance one color on the first floor, another body color on the second floor, and a third trim color.

As mentioned above, Georgian doors were often painted a dark color and this trend continued with Federal and Greek Revival houses. Shutters were sometimes painted to match the front door or painted a third contrasting shade to the body and trim colors. Window sash have been treated in a variety of ways. During the 18th century, they might have been painted the color of the body and trim if the house was done in a monochrome, or in a light color to show off the number of panes or in a dark color to create the effect of a large sheet of glass. Federal and Greek Revival sash tended to be light color to match the trim. Victorian sash tended to be darker than the trim, usually deep reddish or chocolate brown, dark green, olive, or black.

Painting v. Staining

Some Salem homeowners are choosing to stain their houses rather than paint them. Stain is essentially thin paint with more oil to soak into the wood and less pigment to cover the surface. There are manufactures of solid color stains which bear a close resemblance to paint because it penetrates deeply and covers the surface well. Semi-solid and semi-transparent stains are not recommended because they don't give the appearance of a painted finish. The advantage of staining is that stain doesn't peel like paint does so that subsequent stain jobs require less preparation (less labor for sanding and scraping).

The main reason a property owner might choose stain instead of paint is if too many layers have built up on the building resulting in paint failure. If the house has to be completely stripped anyway, it may make more sense to apply stain than to go back to paint. There are heavy bodied stains which can be used over paint to avoid further build-up if this is a concern.

When evaluating the costs of painting v. staining, the life expectancy of the work is an important consideration. Since staining a previously painted surface is initially more expensive, such work should last longer than a paint job to be worth the extra money. Life expectancy depends on the quality of the preparation and materials used, the particular exposures of your house, and how the paint or stain will weather. For more advice, consult your painter.

PARKING SOLUTIONS

Rev. 9/18/96

Salem Historical Commission Guidelines

Providing off-street parking may be a significant alteration to a property and the Commission encourages careful consideration of parking alternatives and design options. Sensitivity to the surrounding landscape and the type of paving material used is important. Landscaping can greatly enhance the appearance of a yard and should be considered an integral part of the design and installation of a driveway. **While the Commission does not have jurisdiction over driveway installation per se, it does review fence construction and removal.** Therefore, if alteration or construction of a fence is involved in a driveway installation, the Commission must be consulted. The Commission recommends the use of crushed or washed stones, brick, cobblestones, or Belgian block as surface paving materials. Asphalt or hot top driveways are not recommended.

City Regulations

Check with the Building Department for the minimum set backs in the City of Salem's zoning regulations. To obtain a curb cut, contact the City Engineer.

Design Considerations

Since the car is a relatively modern convenience, most older houses were not designed with parking in mind. Added driveways are an intrusion to one degree or another. Therefore, careful thought should go into the decision to build one because such an alteration can have a negative impact on a historic property. Alternatives to installing a new driveway include petitioning the City Council for on-street parking or seeking out available neighborhood lots and garages.

When a new driveway is the most sensible parking solution, consider the following:

1. How will the driveway affect existing historical features? How will the presence of cars in a driveway affect the view of the house from the street?
2. What paving materials are most suited to the historic character of the house or to the type of yard involved?
3. How will existing landscape features be affected? How can new landscaping enhance the appearance of the driveway?
4. Will a fence have to be altered or moved? How will fence removal or relocation effect the context of the neighborhood?

Often a change to a fence will be required to accommodate a driveway or pull-in. Salem's fences are a key element in establishing the character of each street. Historically, these fences were located along the sidewalk and created a unique rhythm. Converting a fence section into a gate is preferable to destroying or relocating the fence.

Proper drainage must also be taken into account, especially if brick or granite pavers are to be used, otherwise the water will just pool on top of the driveway and sit there. In addition, if water collects below the surface of the driveway, it can freeze, causing the ground to heave and dislodge the surface material.

PORCHES & STEPS

Rev. 10/16/96

1. Complete elevation drawings must be submitted for porch additions clearly detailing all design elements (i.e. railings, balusters, materials, paint color, under porch treatment, the relation of the proposed porch to the building).
2. Such additions must be contextual (i.e. reflect the historic character, architectural detail, and materials of the house). Location, materials, and design are critical components of porch additions. Tacked on porches will be looked on unfavorably.
3. Period porches in Salem should not be left unpainted.

ROOFING

Rev. 1/20/10

Salem Historical Commission Guidelines

1. The roof of a house is an important architectural feature and should be treated as such. Therefore, all efforts should be made to preserve the original roof shape and eave detail and to properly maintain or replace roofing materials as necessary.
2. Slating should be retained whenever possible. Slate should not be removed without a careful evaluation of the cost of its repair.
3. Roof replacement materials should be sensitive to the original. Slate and wood shingles are preferable, but may not be feasible due to cost, longevity, or fire safety considerations. Acceptable alternatives are to install one of the limited group of products which successfully imitate slate or wood or to "render out" the roof by using a dark asphalt or fiberglass shingle which does not draw attention to this feature and the absence of original materials. Solid color asphalt or fiberglass roofs that are not meant to draw attention to themselves should be black or charcoal. Where historically appropriate, the Commission may approve a polychromatic color scheme. White was not a shingle color used on historic roofs; therefore white roofs are not acceptable.
4. If you currently have a 3-tab asphalt roof that needs replacement, "architectural" asphalt shingles are NOT an "in-kind" replacement. To receive approval under Non-Applicability, the 3-tab roof must be replaced with a 3-tab roof. The Commission also has a process to approve a change from any color 3-tab asphalt roof to a black or charcoal gray 3-tab asphalt roof - without the need to attend a Commission meeting.
5. All architectural features that give the roof its essential character, such as dormers, cupolas, cornices, brackets, chimneys, cresting, and weather vanes should be preserved or, if necessary, replaced.
6. Wooden or copper gutters can be an important architectural feature. In older houses they were often designed as part of the eave moldings. Therefore gutters should be properly maintained and only replaced in cases of extreme deterioration.
7. New gutters and downspouts should be placed in an architecturally sensitive manner. This includes color selection.
8. See also the guidelines sections entitled "Mechanical Equipment" and "Gutters & Downspouts".
9. Proper ventilation can add as much as 10 years to the life of your roofing. Venting options are approved on a case by case basis and may include ridge vents, louvered vents or soffit vents.

Roofing Materials used in Salem

Wood coverings for roofs were used early on in Salem's history. An account in the Salem town records of 1638 reports that the Salem meetinghouse was to be "covered with inch and half planck and inch board upon that to meete close."¹ In 1688 repairs to the meeting house roof specified that the workmen "shall Shingle the whole Roofe...with good Short Seader Shingle of half and Inch Thick on the butt End and Joynted or Edged."² While Shakes (extra long shingles) were not used here, conventional wood shingles appeared for house roofing up to the early 20th century when asphalt became popular.

Metal roofs, usually of tin sheets, tin-plated iron or steel, or tern plate (a lead/tin coating over iron or steel) were first used in Salem around 1840 and have been used ever since, although not to a great degree.

Slate had been known as a roofing material favored by the well-to-do in more densely settled regions of Massachusetts Bay during the 17th century. By 1650, Boston had some slate roofed houses and as early as 1633 Cambridge ordered that all houses built there "shalbee Co[vered with] slate or board and not thatch."³ But slate was not widely used in Salem or other parts of New England until the 19th century when the material could be shipped more cheaply from Vermont by railway. The architect Gridley J. F. Bryant specified a slate roof for an Italianate house he designed in 1846 at 9 Pleasant Street. Houses with mansard roofs were most commonly slate covered. Late Victorian buildings sometimes had colorful or elaborately patterned slate work.

Asbestos shingles were used from about 1885 to about 1925. Due to the hazards of handling asbestos, these shingles are no longer in general production.

Roofing repairs

The question of roof repair often centers around slate roofs which are expensive to duplicate or replace. Many slate roofs are

repairable with a contractor who knows how to do the job. Since roofing contractors today are most experienced with asphalt shingles, they tend to recommend replacing slate, metal, or wood shingled roofs with asphalt. As The Old House Journal warns, beware when a roofer says, "It can't be fixed." He may simply be saying that he can't fix it. Therefore, it is advisable to get bids from at least 3 roofing contractors before signing a contract.

Materials

Elements that may have an effect on appropriate roofing material may include roof shape, pitch, color, visibility and sun exposure, building style and height and roof features (dormers, etc.). Therefore, the Commission will review roof changes on a case by case basis through an application for a Certificate of Appropriateness.

Wood

Durability - Since wood shingles are subject to normal organic decay, their life span can be shorter than other roofing materials (either natural or man-made). The flat surfaces of the shingles will erode from exposure to rain and ultraviolet rays. But some species are more hardy than others. While some suppliers claim that both white and red cedar roof shingles can last up to 100 years, experience has shown that one can expect life to be in the 30 year range. The heartwood from the central part of the tree trunk is more durable than the sapwood found just under the bark.

Although fire-retardant shingles are available, these have a reputation for brittleness and shortened life, especially in areas with very cold winters. Copper flashing or nails should not be used with red cedar because red cedar corrodes copper and the life of the roof will thus be greatly reduced.

Slate

Durability - Slate is one of the most durable roofing materials, its life depending on its source. Pennsylvania slate lasts at least 50 years, Vermont, Maine and New York slate has been known to last at least 100 years, and Buckingham, Virginia slate can last as long as 175 years. While slate is expensive, it requires very little maintenance, neither cleaning, painting, waterproofing or fireproofing, preservatives or coatings.

Failure of slate roof is usually due to poor installation, for instance using the wrong nails. Leaks often have to do with flashing problems, missing slates, or gutters that need repairs. Because slates can be brittle, they should be walked on with great care. Also, soft slates are subject to corrosion or attack by airborne particles or chemicals carried in rainwater which can cause the slates to wear at the nail holes, to delaminate or to break.

Colors - Most slate used on Salem buildings probably comes from Vermont. Vermont slate is available in the following colors: Light Gray, Gray-Black, Unfading and Weathering Green, unfading Purple (rare), and Variegated Mottled Green and Purple.

Slate Substitutes

The Commission will consider slate substitutes on a case by case basis.

Asphalt

Asphalt is a very common contemporary roofing material and is often an acceptable alternative to original roofing when installed in a neutral, unobtrusive color. Black and charcoal gray are typically preferred.

3 Tab - This is the most common and least expensive form of composition shingle. As the name implies, they come in strips of three, universally with straight ends, near smooth profiles and uniform pattern. They are available in 20, 25 and 30 year, as well as lifetime (typically 50 years) warranties. .

Architectural - These shingles have a random, variegated pattern which makes for easier lay out. They are generally thicker and heavier than a 3-tab shingle. However, they are also priced 20 to 40 percent higher than standard 3-tab shingles¹. They have a more dimensional, textured effect which, for certain roofs, may draw the eye to the roof and away from the house's historic features. Architectural shingles are generally not appropriate for historic districts. However, there may be some exceptions, such as certain Victorian roofs that were designed to stand out. Once again, elements that may have an effect on appropriate roofing material may include roof shape, pitch, color, visibility and sun exposure, building style and height and roof features (dormers, etc.). Therefore, the Commission will review roof changes on a case by case basis through an application for

¹ According to *Ohio Exterior & Interiors, LLC website*

a Certificate of Appropriateness. Please note that architectural shingles that are cut on an angle are not appropriate and are unlikely to be approved.

In 2008, on a trial basis, the Commission approved a GAF/Elk Grand Slate roof in Bristol Gray, which has a 130 mph limited wind warranty and a lifetime limited transferable warranty.

Metal

The life of a metal roof depends on the material used and the maintenance it is given. Copper, lead and other factory-finished metals don't need any maintenance beyond regular inspections but iron-based roofing materials need to be kept well-painted to prevent corrosion. Also, galvanic action will cause corrosion when dissimilar metals such as copper and iron are used in direct contact (for instance iron cresting on a copper roof).

Metal roofing comes in the form of sheet roofing or shingle designs including barrel tile. Materials include copper or lead-coated copper, tin- and terne-coated steel, lead, zinc, stainless steel, galvanized, steel, and aluminum-coated alloys.

SATELLITE DISHES AND SOLAR COLLECTORS

Rev. 5/21/97

Salem Historical Commission Guidelines

The Historical Commission has jurisdiction over satellite dishes and solar collectors and finds that they are obtrusive as well as historically and architecturally inappropriate elements in historic districts. Therefore, satellite dishes and solar collectors shall not be visible from any public way. If a homeowner is able to locate the dish so as not to be visible from any public way, it will still require a Certificate of Non-Applicability.

SECONDARY EGRESS

Rev. 5/21/97

Salem Historical Commission Guidelines

There are instances where health and building codes require the installation of a secondary egress. Such egress must not only satisfy health and building codes, but must also satisfy the Salem Historical Commission Guidelines.

The Commission will not approve exterior staircases that are visible from any public ways. Therefore, secondary egress should be installed within the building.

If the homeowner is able to demonstrate to the satisfaction of the Commission that space constraints preclude interior installation, the Commission may consider the creation of an interior staircase by the expansion of the building. Such expansion must be sympathetic in scale, material and details and meet zoning requirements. Note: A letter from the Building Inspector or Fire Inspector is required to support the assertion that such expansion is the only possibility in addition to scale drawings describing interior and exterior alterations. The Commission reserves the option of a site visit to confirm independently the assertions of the applicant.

SKYLIGHTS

Rev. 6/3/87

Traditionally, skylights were installed predominantly for ventilation. Generally, only one skylight would be installed and it would be located at the ridge pole, as close to the center of the roof as possible and located on the rear slope or least visible slope of the roof. The size of a skylight was approximately 18" x 24" or smaller.

Salem Historical Commission Guidelines

The Commission does not look favorably on the addition of skylights. If it is possible to document (through photographs or site inspection by a representative of the Commission) the prior existence of a skylight, the Commission may consider its restoration. Such restoration would require that the new skylight be the same or as close as possible to the same size and location as the original skylight.

The creation of living spaces in areas not originally intended as such is not considered justification for the destruction of architectural integrity by the installation of a skylight and therefore it will not be approved. The Commission will not approve skylights that read as roof windows. In particular, bubble skylights are prohibited.

If the homeowner can establish that a particular skylight is appropriate to the architectural style of the building, the Commission may consider such an application.

UTILITIES

Rev. 1/7/98

This section covers the installation of cable television equipment, gas and electric meters, electrical transformers, conduits and entry units, stove pipes, vents, roof air conditioning units, cables, wiring and other service or installation equipment for any utilities.

Salem Historical Commission Guidelines

1. All installation equipment and wiring must be installed so as not to be visible from any public way. Either the utility company (cable, telephone, electric, gas etc.), contractor or the homeowner must apply for a Certificate of Non-Applicability before such installations. (This will save the unnecessary time and money spent should the Commission require the removal of such equipment from an inappropriate location.) The application should state the location of the installation, the dimensions and design of equipment to be placed on the exterior of the building and route of exterior wiring, if any. Representatives of the Commission will make every effort to review such applications within 3 business days. If the Commission agrees that the application will be non-visible, a Certificate will be issued.
2. For circumstances in which equipment or wiring cannot be installed so as not to be visible from the public way, the utility company or the homeowner must apply for a Certificate of Appropriateness or Hardship. Once again, the application should state the location of the installation, the dimensions and design of equipment to be placed on the exterior of the building and route of exterior wiring. It is recommended that a representative of the utility company be present at the public hearing.
3. Installation technicians or their supervisors must not accept verbal "Okays" from tenants, homeowners or other persons to proceed with an installation. Only the approved Certificate should be relied upon and any installation should be as per such approval. If it is necessary to deviate from the Certificate, the utility company or the homeowner must request an amendment in writing from the Commission.
4. As new installations occur, or whenever possible, utility companies must remove excess wiring and avoid leaving low hanging wires.
5. Under no circumstances should equipment or wiring be placed on the main facade of the building. Installation should be made into the basement whenever possible. If not possible, installation should occur on the least visible facade, in the least visible location. Installation wires should be consolidated with other lines whenever possible (E.g.. strung to the same point on the building as existing telephone, electric & cable wires). Wire coming to two different locations on the same house from the pole should be avoided whenever possible.
6. It is always better to bring the wire into the house and fish it, rather than stringing it along the side. When wires are unable to be run inside, they will be run along unobtrusive edges (E.g.. corner of the building). If a wire must be run along the building, run the wires up along the corner board, or down it, and then along the eaves or the foundation. Under no circumstances should wires be run diagonally across a wall. The homeowner will be responsible to have the wires painted the same color as the surface they run along. Pipes and vents should also be painted to match the surface they are installed in.

Gas & Electric Meters

1. The Commission will not approve the installation of meters, etc. on the front facade of a building under any circumstances.
2. In most cases, Massachusetts Electric will allow installation or continuation of meters in the basement.

Transformers

Transformers in historic districts are considered structures and must receive Commission approval. A site plan, dimensions and photographs must be included to review such applications.

WINDOWS

Rev. 12/3/97

THE WINDOW GOSPEL

"Deteriorated historic windows should be repaired rather than replaced wherever possible. In the event replacement is necessary, the new windows should match the historic ones in design, color, size, configuration, reflective qualities, shadow lines, detail, and material. Only when it is not feasible to match the historic fabric should substitute window material be considered...and only when it is shown through such means as field mock-ups that it possible to match closely both the detail and the overall appearance of the historic windows." - from *The Window Handbook*, Edited by Charles E. Fisher

Salem Historical Commission Guidelines

1. Historically appropriate window openings including window sash, glass, lintels, sills, trim, hoods, and shutters should be retained.
2. Windows are an important feature on any building. When an application for substantial window replacement is received, an inspection by a Historical Commission representative or a site visit may be performed to determine the condition of all windows. The feasibility of the following will be assessed:
 - A. Restoration of entire existing windows through repairs to sash, sills, etc.
 - B. Individual sash replacement;
 - C. Full replacement of windows matching existing window layout.
3. The stylistic period or periods a building represents should be respected in the material and design of the windows.
4. New window openings in the principal elevations are rarely appropriate or permitted. Window openings should not be enlarged or reduced to fit stock window sash sizes. Deletion of windows, particularly on principal facades, are rarely, if ever, allowed. Window replacement on a single facade should replicate the remaining windows on that facade. The Commission may consider phasing when the property owner is substantially upgrading.
5. All parts of the replacement windows should match the original or existing historic windows. The mullion thickness and profile of replacement windows should closely match those of the original. Windows with removable mullion bars are unacceptable.
6. Simulated divided light windows and Low E tinted or reflective glass will be considered only on new additions or new construction distinguishable from original building fabric .
7. Insulated glass is only permitted when the use of single-paned sash is appropriate to the architectural style of the building.
8. Replacement windows must be made of wood. Aluminum or vinyl clad windows are not acceptable on period buildings.
9. The frame and decorative window trim should be retained and repaired with materials that duplicate the originals. Salvage old glass lites when repairing sash.
10. Stained glass, beveled glass or other art glass and certain important glass items (diamond pane, leaded, bullseyes, etc.) can be important architectural elements and should be retained and repaired.
11. Exterior Blinds (Commonly Referred to as Shutters)

Vinyl or aluminum shutters are not permitted. Wooden replacement shutters should reflect their original operable use: their size should be such that they would cover the entire window if closed (i.e. arched windows have arched shutters); they should be hinged to the window casing, not nailed. Shutters are hung so that in a closed position over the window they would shed water. The slats should point up when the shutters are open, down when the shutters are closed. Shutters may not be appropriate or necessary to every architectural style. The Commission should be consulted before action is taken to remove or install shutters.

12. Window Repair

Before you consider replacement windows, check to see whether your existing windows are repairable. Often problems that at first glance seem "hopeless" can be taken care of with proper attention. There is a great deal of literature available on window repair to help the homeowner with do-it-yourself jobs.

In his publication "The Proper Care of Sash and Exterior Woodwork," Maximilian Ferro lists two basic principals of wood care:

1. exterior wood should be kept well-painted; and
2. wood left exposed by paint failure should be treated with fungicide applications before repainting.¹¹

If a glazing point job is failing prematurely, the cause should be determined. Problems due to water damage from faulty gutters or excessive moisture migrating from kitchens or bathrooms should be repaired immediately.

A rotted sash does not necessarily have to be entirely replaced. Wood elements which are partially rotted or incomplete may be replaced by wood parts pieced in with certain waterproof exterior glues. Epoxy wood fillers can repair wood elements with dents, gouges, or pockets of rot. Even totally rotted wood can be consolidated or reconstituted by proper application of epoxies.

The Technical Preservation Services Division of the Department of the Interior outlines the following steps required to upgrade a window to "like New" condition:

1. some degree of interior and exterior paint removal;
2. removal and repair of sash (including reglazing where necessary);
3. repairs to the frame;
4. weatherstripping and reinstallation of the sash; and
5. repainting.¹²

For more details on methods and techniques, consult the Commission's reference files.

13. Storm Windows

Although storm windows are not under the jurisdiction of the Commission, wood storms are more in keeping with the architectural character of a historic house.

The most common type of storm window is the aluminum triple track. These windows are permanently installed and have a track for the lower storm sash, another for the upper sash and a third for a screen. Aluminum storms should match the color of the house's trim or be painted to match. Aluminum mid-rails should match the meeting rails of the historic sash.

14. Window Energy Efficiency Priorities

The following energy saving options are listed in order of the greatest effect for the least cost. Also the items at the top of the list have the least damaging effects to the material or appearance of historic window sash.

- A. Caulk and weatherstrip to cut infiltration;
- B. Upgrade existing windows by repairing loose, rotten or broken sash. Reglaze windows;
- C. Install storm windows; and
- D. If replacement windows are unavoidable, install wood sash and frames that copy the original and incorporate modern energy-saving features like hidden weatherstripping and jamb liners.

Salem's Architectural Traditions

In the 17th century, the arrangement of window openings was determined by the framing scheme and functional requirements rather than classical canons. For instance, if a post had been installed to support a transverse summer beam (the summer being the major frame unit running through the ceilings of the principal rooms), then a window could not be centered in the front wall. In most cases, the window studs in the first and second floors were aligned resulting in windows of the same size.

According to Abbott Lowell Cummings, the majority of the first framed houses at Massachusetts Bay had glazing from the outset. "In terms of construction, we can easily differentiate between two basic varieties of window, those which were an inherent part of the house frame and those which were constructed separately and applied to it. In the first case the studs, or occasionally a stud and an adjoining post became the window jambs. Into these were tenoned a header and a sill, which received in turn the tenons of the stout mullions that divided the window into two or more "lights."....The second variety of window was constructed separately and applied to the studs, or in some cases the planking of the house or even the underboarding." Although the second method was less common, it was used in Salem, for instance at the Gedney house (21 High St., c. 1665).

As the 18th century progressed, double-hung sash replaced leaded casements although the Reverend William Bentley writes of

seeing diamond-shaped glass still in place in older Salem homes in 1794 and 1796.³ Also symmetrical window placement became a hallmark of Georgian colonial architecture, the five bay facade being the most common.

Due to limitations of glass technology, early double-hung sash has many relatively smaller panes compared to windows later in the century. "The number of panes tended, of course, to vary with their size, eighteen (9/9) or twenty-four (12/12) panes being generally characteristic of earlier or less pretentious houses, twelve panes (6/6) the common number in the finer and later dwellings." The Clark-Morgan house (358-358 2 Essex St., c. 1729, etc.) has an original 18th century window at the rear of the house with 12/12 sash, panes measuring 6 2" by 8 1/4", and 1 1/4" wide mullion bars. Asher Benjamin in his book The Country Building's Assistant (1798) shows two windows, one with 12 lights (6/6) and the other with 24 lights (12/12).

The Serliana window, commonly called the Palladian window, (a tripartite form composed of a central arched window flanked by two shorter rectangular windows) was employed on some of the finest late Georgian houses around the colonies, it was not much used in Salem until the Federal period when it appears on several of Salem's high style buildings along Chestnut Street and Washington Square. The arched window sometimes assumed a semi-circular form and at other times an elliptical form.

As glass technology improved during the Victorian period, larger panes were possible and 2/2 or 1/1 windows became common. Late in the 19th century 6/1 windows also appeared.

Exterior blinds, commonly called shutters, were probably not used at all in Salem until the late 18th century. A painting by Joseph Orne dated 1765 and entitled Salem - School Street from the Old Town House does not show shutters on any windows. Later in the century, a receipt from the Derby Mansion (built between 1795 and 1799 at Derby Square) lists an order for 14 pairs of shutters.

It is not certain where the shutters were used or why. Shutters are not evident on prints made of the house; it could be that they were affixed to some of the out buildings. By the 1830's, shutters were increasingly popular. An 1826 print of the William Gray house on Essex Street shows that the building is shutterless; by the time a second print was made in 1835-36, shutters had been added. Up to as late as the 1860's drawings at the Essex Institute indicate that shutters were not necessarily used on every window of the house. Shutters could be added gradually over time. A c. 1830 lithograph of the Pickman-Derby house (formerly at 70 Washington Street) shows that this Georgian house only had shutters on the first floor but by 1865 the entire front facade had been shuttered. 19th century photographs and drawings of Salem's houses also made clear that the shutters were functional and that they were open and shut as required and were not merely decorative features.