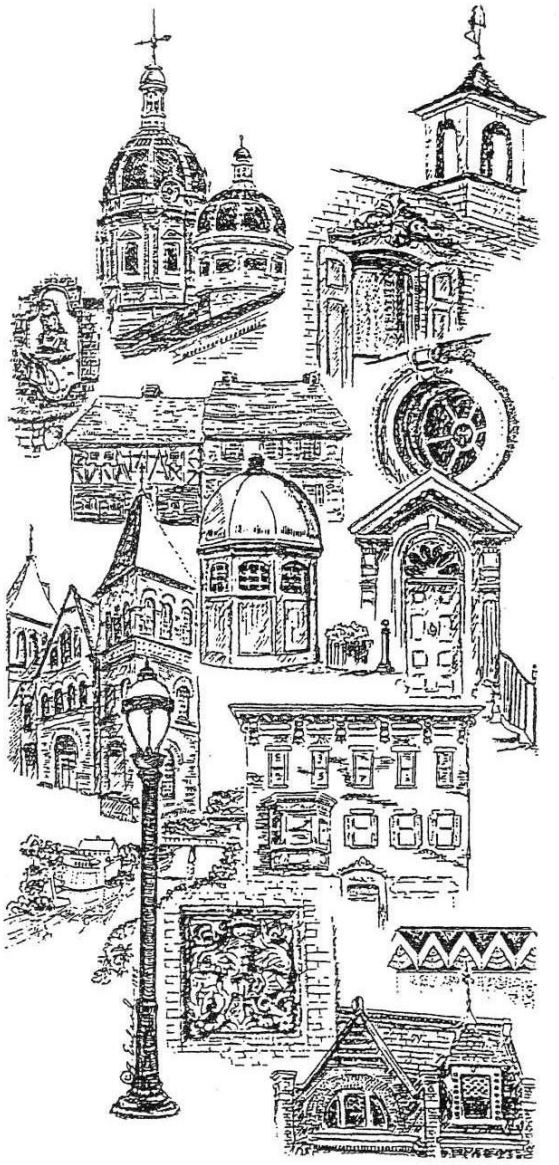
York Design Guidelines

A Guide for Maintaining and Rehabilitating
Buildings in York City's Historic Districts



Prepared for
The York City Historical Architectural Review Board

Historic York, Inc.
2003

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WORKING WITH HARB

"…the historical and cultural foundations of the nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people."

National Historic Preservation Act of 1966

What is HARB?

HARB (Historical Architectural Review Board) is an advisory body created by state and local laws to regulate changes to buildings within a designated district. HARB's main responsibility is the review of all proposals for new construction, demolition, and all alterations to the exteriors of the buildings located within the HARB district. HARB reviews this work to protect the architectural and historical character of York.

HARB's History and Purpose

HARB was established by City Council in 1970 under Pennsylvania's Enabling Legislation, Act 167. This legislation makes it possible for municipalities like York to designate areas as historic districts, and to regulate changes to the exteriors of buildings within those areas. It is believed that by regulating these changes, the City can stabilize or increase property values, encourage tourism and economic development, foster an increase in civic pride, and contribute to the quality of life in the community.

The establishment of a HARB district in York is official recognition that many of the City's buildings are of architectural, cultural, and historic value. Development, growth, changing fashions in building styles and attempts to modernize, weatherize and remodel put constant pressure on owners to change the appearance of their historic buildings. Just as a zoning ordinance protects neighborhoods from uses that would be incompatible and inappropriate, a historic preservation ordinance protects against changes to individual historic buildings that would damage their unique character. HARB tries to mitigate the cumulative effects of these changes by reviewing each change as it is proposed, to make sure that every effort is made to preserve the historic integrity of the buildings in the district.

How do I know if I have to submit an application to HARB?

Refer to the official map of the HARB district (at the end of this chapter) to determine if your property is located within the boundaries. If it is, you must submit your plans for review by HARB if you plan work which will alter any exterior architectural feature visible from a public street or alley. This includes the rears of buildings, and garages or outbuildings visible from the alley. It also includes the installation of signage and fencing and the chemical and/or water cleaning of any masonry surface. It does not include painting a previously painted surface. HARB has no jurisdiction over the choice of paint colors. Proposals for demolition and new construction must also be submitted for approval by HARB.

How do I submit an application to HARB?

HARB meets regularly on the 1st and 3rd Wednesdays of every month at 6:30 PM in the City Council Chambers at One Marketway West, Third Floor, York, PA. Applications to appear on the meeting agenda are due the preceding Wednesday by noon. Applications are available at the Permits desk in the City offices. Applicants must give their name, home address and telephone number on the application as well as that of their contractor if one has been selected. A complete description of the work must also be given. Either the owner or his/her representative must attend the meeting to present the application to

HARB. Required supporting materials include a photograph of the property and plans of the proposed work. All supporting materials become the property of the City and are filed in HARB's permanent archives.

What work must be reviewed by HARB?

- additions
- alterations
- awning installation and changes
- cleaning exterior surfaces with abrasive methods
- colors of permanent building features (roofs, artificial siding, etc.)
- cornice changes
- demolition
- door changes
- fences
- lighting
- masonry work
- materials replacement
- new construction
- porches and decks
- reconstruction
- removal of architectural details
- roofing
- shutters
- siding
- sign design, installation and changes
- storm doors and windows
- window changes

What work does not require HARB review?

- interior work
- repainting or paint color changes
- change in use
- work that is not visible from a public street or alley
- regular maintenance that does not require a change in materials

How does HARB make its decisions?

Prior to each regularly scheduled HARB meeting, HARB members review each application and visit each property. HARB assesses the architectural and historical significance of the property, and considers the effect of the proposal on the overall district, on the street, and on the individual building and its component features. To help make decisions, HARB members are provided with a Preliminary

Review Sheet prepared by the City's Historic Preservation Consultant, and they also apply the Secretary of the Interior's Standards for Rehabilitation. These standards are guidelines developed by the United States Department of the Interior. They are accepted as the national standards for rehabilitating historic buildings.

At the HARB meeting, the applicant or his/her representative present their proposed plans and the HARB members can ask questions or make suggestions. After HARB has considered all the issues, it votes on the proposal and sends its recommendation to City Council.

What are the Secretary of the Interior's Standards for Rehabilitation*?

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will 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 elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of the deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize a property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportions, and massing to protect the integrity of the property and its environment.

10. New additions or adjacent or related new construction will 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.

**From the National Park Service publication The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings, 1995, page 62.*

What happens after my application has been reviewed by HARB?

HARB is a recommending board only. Its recommendations are forwarded to the next scheduled City Council meeting for official approval. Once approved by Council, the applicant can contact the City's Bureau of Permits to obtain any necessary permits. Work cannot begin until this process has been completed.

There are four possible responses to an application that has been presented to HARB. An application may receive a recommendation of APPROVAL AS PRESENTED or APPROVAL AS AMENDED.

An application may be TABLED to allow the applicant to explore other options and/or provide more information at a future HARB meeting.

An application may also receive a recommendation of DENIAL. In that case, the applicant can withdraw his/her application or submit a new application proposing work that will be acceptable to HARB and City Council. He/she can also appeal HARB's decision at the next scheduled City Council meeting. Council will review the application and HARB's summarization of the factors that led to the recommendation. City Council will then render its final decision, either upholding or overturning the HARB recommendation.

What is City Council's role?

City Council makes the final decision on the application, using the same ordinance criteria as HARB in its determination. This approval is called a Certificate of Appropriateness and certifies that the proposed change is appropriate to the character of a building in the historic district and to the historic district as a whole.

Do all applications get presented to HARB?

There are some types of work that can be approved without appearing before HARB. These include Exemptions and Staff Reviews. These items still require an application to be prepared and submitted. Please refer to the following information for clarification.

Items that may be exempted from HARB review:

- All work not visible from a public right-of-way.
- Sidewalks, patios, planter boxes and other landscaping features not listed below.
- Freestanding objects (i.e., statues, flagpoles, light poles, clocks, benches).
- Maintenance activities (no changes in material or design).

- In-kind replacement or repair of roofing material.
- Installation of mailboxes.
- Temporary banners.

Items that may be approved by the Historic Preservation Consultant by means of a Staff Review:

- Replacement, repair or rebuilding in kind of all work except roofing, windows and doors.
- Repair and/or repointing of brick, stone, cast stone, concrete block, terra cotta, structural glass, and other tile or masonry surfaces.
- Pressure cleaning.
- Installation of storm doors and windows.
- Installation of shutters, window grates, window planter boxes and lighting.
- Installation of gutters and spouting.
- Installation of mechanical vents through wall or roof surfaces.
- Installation of chimney caps.
- Certain new and replacement signs.
- Fencing.

What happens if I do work without HARB or City Council approval?

If a property owner initiates work without a building permit and a Certificate of Appropriateness, a stop work order may be issued and the owner may be required to pay a fine.

How do I use these Guidelines?

This design guide is a tool for property owners, design professionals, contractors, HARB and City Council. These guidelines are not meant to be rigid restrictions. They are meant to be used as guiding principles that, when followed, will result in the sound preservation of York's historic buildings.

As a property owner, you are encouraged to review these guidelines when planning changes to your property. Early consultation with Historic York, Inc. and HARB will provide for the most flexibility in planning your project.

Where do I go for further help?

Property owners contemplating changes to their buildings within the historic district are encouraged to call the City's Historic Preservation Consultant, Historic York, Inc., at 717-843-0320. Historic York, Inc. helps property owners apply the guidelines to their proposed project and provides a professional recommendation to HARB for each application.

Because HARB members have specific expertise and interest in issues related to old buildings, HARB can often come up with options for treating properties that owners may not have considered. HARB

may also be able to provide property owners with suggestions for treatments that cost less and are more appropriate.

For Information and Assistance:

HARB Consultant
Historic York, Inc.
25 North Duke Street
Suite 102
York, PA 17401
717-843-0320
717-845-6050 (Fax)

Monday – Friday
9:00 AM – 5:00 PM

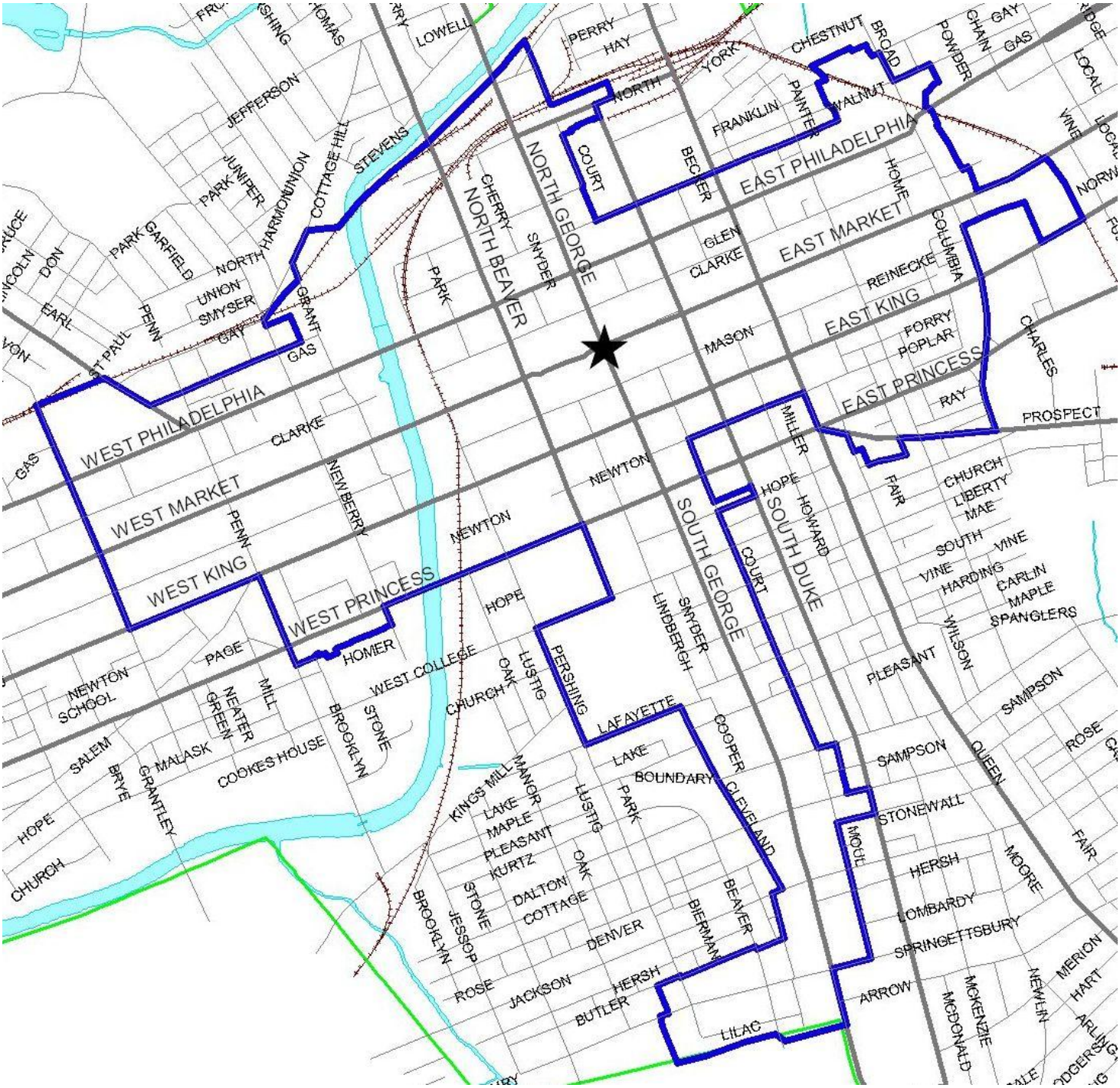
For Applications to HARB:

Bureau of Permits, Planning and Zoning
City of York
One Marketway West
Third Floor
York, PA 17401
717-849-2256
717-849-2329 (Fax)

Monday – Thursday
8:30 AM – 4:00 PM

Friday
8:30 AM – 1:00 PM

HARB District
York, PA



YORK CITY'S ARCHITECTURAL HERITAGE

York City contains a large variety of architectural styles from the Colonial period to the present. Every city and town experiences the loss of architecturally significant buildings. However, York is fortunate to have recognized the importance of its historical architectural heritage and has taken measures to preserve it.

The City of York has grown and changed in many ways since it was first laid out in 1741 along the banks of the Codorus Creek, and nowhere is this evolution more apparent than in its architecture. York's streetscapes are crowded with many different types of residential, commercial, industrial and public buildings dating from every era in its history. These diverse buildings represent a constant progression of development throughout the years, even during hard times like the Civil War when York was fortunate enough to escape the devastation caused in so many other communities in the region. The majority of York's buildings were constructed during the late Victorian time period (about 1870 to 1910) when the small but thriving Colonial town had matured into a prosperous commercial and industrial city.

The distinctive stylistic features of York's historic buildings not only reflect the cultural heritage of its inhabitants but also the architectural trends that swept across the nation at various times. York's earliest buildings reveal the customs of its first settlers, pioneers who migrated from the Palatinate region of Germany as well as some English Quakers who were followers of William Penn. During the 19th century and into the 20th, Yorkers embraced in varying degrees the popular architectural fashions of the day. While some buildings are sophisticated illustrations of a particular style, many others display mixed elements from more than one style. Still others are buildings of simple, even plain, design with only a few or no stylistic embellishments.

To the benefit of both present and future citizens, York City's rich historical architectural character remains largely intact. While examples of insensitive modernization do interrupt the historic pattern in places, other modern buildings have been sympathetically incorporated into the architectural environment.

Colonial Times in York (1740s to 1800)

Most of York's 18th-century buildings were constructed of log while a smaller number were built of brick and a few of stone. They were generally one to two stories tall and of simple design, reflecting either a German Colonial or an English Georgian influence. The practical Germans had a tendency to place doors and windows wherever they were most needed. Their buildings had rather squat proportions and central chimneys. An excellent example of an early German Colonial building is the Golden Plough Tavern at 157 West Market Street. Built in 1741, the tavern has a log first floor and a half-timbered second floor. Half-timbering was a medieval method of construction where the areas between the log framework were filled in with brick or plaster.

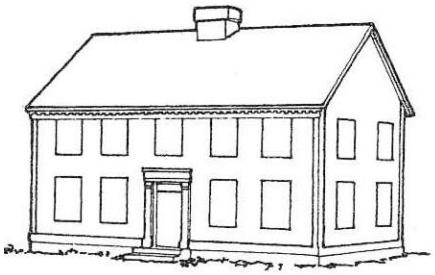
Example of German Colonial Architecture:

Golden Plough Tavern - 157 West Market Street

The Georgian style was more formal in appearance. These buildings were usually constructed of brick or stone and had central doorways and symmetrically positioned, multi-paned windows. Cornices were often ornamented with small tooth-like projections called dentils. The 1751 General Horatio Gates House, which stands next door to the Plough Tavern, illustrates the early Georgian style. Later Georgian buildings were generally more ornate. A good example is located at 300 West Market Street. Built around 1790 and enlarged in the early 1800s, this building displays decorative brickwork, an embellished doorway and cornice, and two dormers.

Examples of Georgian Architecture:

Gates House - 155 West Market Street
300 West Market Street



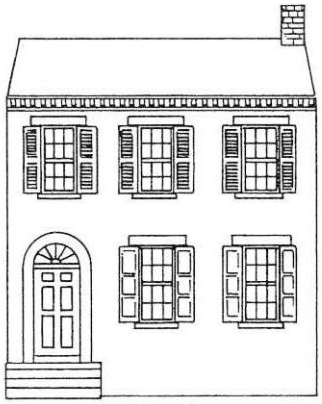
Georgian

The Early Republic Years (1800-1850s)

Two new architectural styles became popular across the nation and in York during this time period: Federal (sometimes called Adam) and Greek Revival. Similar to the Georgian style with regard to symmetrical proportions and multi-paned windows, Federal or Adamesque buildings were more simply designed and had sparse, more delicate ornamentation. Arched fanlights, Palladian (tripartite) windows and dormers were frequently used. Two excellent illustrations of the Federal style are the adjoining mirror-image houses at 243-245 East Market Street. They were built in 1805. Additional examples are the 1851 town house at 124 East Market Street and the row of four attached homes at 103-111 East Market Street, also dating from the 1850s.

Examples of Federal Architecture:

103-111 East Market Street
124 East Market Street
243-245 East Market Street

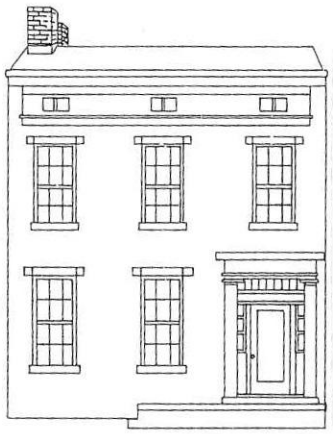


Federal

An interest in classical architecture swept through the country at this time. Americans felt a special affinity for Greece as the founder of democracy, and Greek Revival became the dominant style for 20-30 years beginning around 1825. Features used in this style included deep cornices that sometimes incorporated a band of small frieze windows, flat-roofed porches supported on round or square columns, and narrow transoms and sidelights. The mid-19th-century Greek Revival building at 21-23 East Philadelphia Street was initially designed as two mirror-image dwellings. Notice the small frieze-band windows in the cornice. The 1839 Lafayette Club at 53 East Market Street was also originally constructed as a residence. Washington Hall, an impressive four-story building at 100 South George Street, is modeled after a Greek temple. Built in 1850, it housed York's first library.

Examples of Greek Revival Architecture:

21-23 East Philadelphia Street
Lafayette Club - 53 East Market Street
Washington Hall - 100 South George Street



Greek Revival

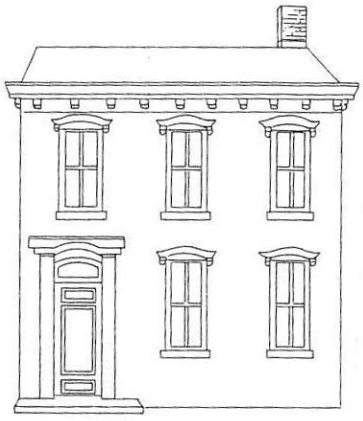
The Victorian Era (1860s-1910)

An abundance of architectural styles bombarded the nation in the opulent Victorian age. Those styles most favored by Yorkers were Italianate, Gothic Revival, Romanesque Revival, Second Empire and Queen Anne. Wealthy industrial barons in the city built lavishly decorated homes and businesses in brick, wood and stone for themselves as well as whole blocks of attached housing (row houses) for their employees. One distinctive Victorian feature that became particularly popular in York is the oriel window, a projecting bay window located above the first story. Oriel windows, usually one story but sometimes taller, display a wide variety of designs and decorative features. They were often added to older buildings to give them an updated or more stylish appearance.

The Italianate style was especially popular for residential buildings in York from the 1860s-'80s. Stylistic features include flat or low-pitched roofs with extended eaves, deep and protruding cornices decorated with ornate brackets, and tall windows that are sometimes paired and sometimes rounded at the top and embellished with trim called a hood or crown. The city abounds with lavishly ornamented examples of the Italianate style including the 1866 Billmeyer House at 225 East Market Street and the 1880 Smyser-Bair House at 30 South Beaver Street. Other excellent illustrations are the late-19th-century residences at 115, 212 and 300 East Market Street. The attached homes at 121-127 North Duke Street represent typical Italianate row houses. A high-style nonresidential Italianate building is the Rex and Laurel Fire Company at 49 South Duke Street. The fire station, which was built in 1878 and enlarged in 1886, also displays a few Gothic Revival details.

Examples of Italianate Architecture:

121-127 North Duke Street
115, 212 and 300 East Market Street
Billmeyer House - 225 East Market Street
Rex & Laurel Fire Company - 49 South Duke Street
Smyser-Bair House - 30 South Beaver Street



Italianate

Most often employed in the design of churches in York City, the Gothic Revival style was generally in use from the 1860s-'90s although some examples were built as late as the 1920s. An easily identifiable feature of the style is the pointed arch, which was used for windows, doorways and bell tower openings. Gothic windows are often decorated with interlacing lines called tracery. Some Gothic Revival buildings look a bit like stone medieval castles with towers topped by battlements. An illustration of this type is one of the only residences in the city with Gothic features. It is located at 448 West Philadelphia Street and was built in 1897. A few of the many churches that were designed in this style include the 1874 First St. John's Evangelical Lutheran Church at 140 West King Street, the 1882 Episcopal Church of St. John the Baptist at 140 North Beaver Street, the 1901 Heidelberg United Church of Christ at 47 West Philadelphia Street, and the 1927 Union Lutheran Church at 408 West Market Street.

Examples of Gothic Revival Architecture:

448 West Philadelphia Street
Episcopal Church of St. John the Baptist -
140 North Beaver Street
First St. John's Evangelical Lutheran Church -
140 West King Street
Heidelberg United Church of Christ -
47 West Philadelphia Street
Union Lutheran Church - 408 West Market Street

Gothic Revival

The Romanesque Revival style, also known as Richardsonian Romanesque, was used mainly for public buildings in York from the 1860s-'90s. Buildings designed in this style are always constructed of masonry and are usually dark in color. Smooth walls are accented with rough trim; for example, dark red brick walls with heavy reddish-brown sandstone (called brownstone) trim. These buildings usually have towers and always have round-arched openings. Doorways are often recessed deep inside a large archway. Trinity United Church of Christ at 32 West Market Street is an 1865 example of the style. Two of York's most prominent Romanesque Revival buildings stand in close proximity to one another. The 1895 Old Post Office sits at the corner of West Philadelphia and North Beaver Streets. Its neighbor, the 1887 Central Market, features two almost identical facades, one fronting onto West Philadelphia and the other onto North Beaver.

Examples of Romanesque Revival Architecture:

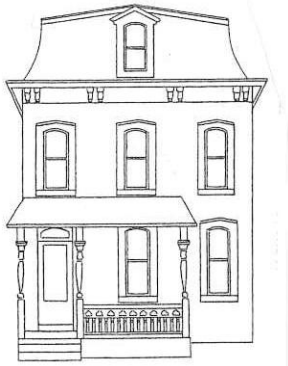
Central Market - facades on both North Beaver & West Philadelphia Streets
Old Post Office - corner of West Philadelphia and North Beaver Streets
Trinity United Church of Christ - 32 West Market Street

Some single buildings and numerous row houses were built in the Second Empire style in York from about 1880-1910. The latter are often called mansard row houses after the distinctive roof, which has slopes that are so steeply pitched as to be virtually parallel to the wall below. These mansard roof slopes

may be curved or straight, usually end at a pronounced and decoratively bracketed cornice, and always have multiple dormers. York's Second Empire buildings are three stories tall and most are brick. An excellent single-unit example is the massive building at 200 East Market Street, which was constructed around 1885. The convex curvature of the slate mansard roof on the residence at 126 North Beaver Street is unique in the city. Typical late-19th-century mansard row houses line the southeast side of Reinecke Place, and another similarly aged row is located around the corner at 51-61 South Pine Street.

Examples of Second Empire Architecture:

126 North Beaver Street
200 East Market Street
51-61 South Pine Street



Second Empire

The picturesque Queen Anne style (about 1880-1910) employed all kinds of ornamental flourishes such as complex forms, multiple rooflines, patterned masonry, shingles of numerous different shapes, decorative half-timbering, towers and turrets, dormers of all types, porches with spindle work, and much more. Two excellent representatives of this style are the 1882 M. B. Spahr House at 43 West King Street and the c. 1890 residence at 57 South Beaver Street. There are a number of beautiful Queen Anne residences along South George Street; for example, those at 709, 713 and 741 South George. A fine example of a Queen Anne town house is the 1886 residence at 135 East Market Street, and five row houses with Queen Anne embellishments stand at 19-29 South Pine Street.

Examples of Queen Anne Architecture:

57 South Beaver Street
709, 713 and 741 South George Street
135 East Market Street
19-29 South Pine Street
M. B. Spahr House - 43 West King Street

Queen Anne

A few other Victorian-era styles were much less frequently used in York, one of which was the Chateauesque (or French Chateau) style. Popular from about 1880-1910, the style is characterized by masonry construction and busy rooflines with many vertical elements and multiple dormers. Chateauesque examples include the two c. 1890 residences at 141 and 145 East Market Street, and the massive 1893 Colonial Hotel on the southwest corner of Center Square, which is still impressive despite the loss of part of its roof in a 1947 fire. Some of York's stylistically ornate buildings display such a variety of features that it is difficult to classify them under one style or another. Many of these are commercial buildings or have a mixed use. Two late-19th-century illustrations of what may simply be called Eclectic Victorian are located at 154 East Philadelphia Street and 337 West Market Street. Other buildings are especially significant for their unusual construction materials, such at the elaborate cast iron facade on the former Hoover Wagon Works, which was constructed in 1887 at 15 East Philadelphia Street, and the white glazed terra cotta facade on the 1911 Fluhrer Building at 17-19 West Market Street.

Examples of Chateauesque Architecture:

141 & 145 East Market Street
Colonial Hotel - southwest corner of Center Square

Examples of Eclectic Victorian Architecture:

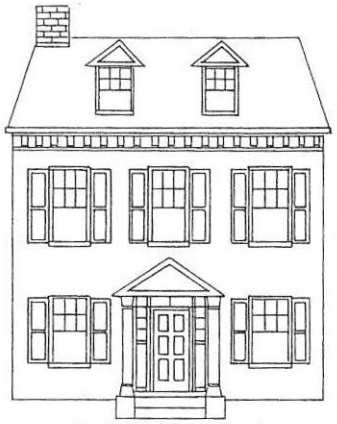
337 West Market Street
154 East Philadelphia Street
Fluhrer Building - 17-19 West Market Street
Hoover Wagon Works - 15 East Philadelphia Street

York in the Early 20th Century (1900-1940s)

A renewal of interest in Georgian and classical styles occurred in America and in York around the turn of the 20th century. The Colonial Revival style, sometimes called Georgian Revival, repeated the formal, symmetrical appearance of earlier buildings on a larger scale. Used for commercial and public buildings as well as for residences, this style often utilized Palladian windows, keystones and decorative round or oval windows. Two of the very earliest houses in York to be designed in the Colonial Revival style are good stylistic examples: the 1893 residence at 904 South George Street, and the William Goodridge House at 123 East Philadelphia Street. The latter is actually an 1847 house that was given a new Colonial Revival facade fifty years later. A nonresidential illustration of the style is the 1935 Martin Library, which is located at 159 East Market Street.

Examples of Colonial Revival Architecture:

904 South George Street
Martin Library - 159 East Market Street
William Goodridge House - 123 East Philadelphia Street


Colonial Revival

The Classical Revival (or Neoclassical) style was also in fashion from about 1900 through the '30s. It was used in the city mainly for impressive stone public buildings such as the 1911 York Post Office at 200 South George Street, the 1924 First National Bank on the northeast corner of Center Square, the 1929 York Water Company at 130 East Market Street, and the c. 1935 City Hall at 50 West King Street. Larger than their Greek Revival predecessors, these buildings are usually characterized by full-height, columned porches and sometimes have roofline balustrades.

Examples of Classical Revival Architecture:

City Hall - 50 West King Street
First National Bank - Northeast corner of Center Square
York Post Office - 200 South George Street
York Water Company - 130 East Market Street

Modernistic styles employed in York include Art Deco (1920s-'30s) and Art Moderne (1930s-40s), particularly for commercial buildings with storefronts. Art Deco buildings have an overall vertical emphasis, smooth walls usually of stone or stucco, tile or glazed brick detailing, and sculptured decorations in low relief. One of York's best examples is the 1929 York Telephone and Telegraph Company building at 31 South Beaver Street. Other excellent examples are located at 10 North Beaver Street, 149 West Market Street and 51 South George Street. Buildings designed in the Art Moderne style have a horizontal emphasis, rounded corners and flat roofs. Sometimes called Streamline Moderne, the style was intended to mimic the sleek, smooth surface of the automobile. Appropriately, the White Rose Motor Club chose this style in 1949 for their building at 118 East Market Street. A 1947 commercial building with a curved Moderne storefront is located at 373 West Market Street.

Examples of Art Deco Architecture:

10 North Beaver Street
51 South George Street
149 West Market Street
York Telephone & Telegraph Company - 31 South Beaver Street

Examples of Art Moderne Architecture:

373 West Market Street
White Rose Motor Club - 118 East Market Street

Many residential buildings in the city have commercial first floors, some original and some added later in time. These street-level businesses generally have display or storefront windows, often with decorative leaded glass transoms. Larger, full-building stores began to be built in the late 19th and early 20th centuries, and the so-called Commercial style became popular from the turn of the 20th century through the 1930s. The Bon-Ton Department Store was constructed in 1911 at the corner of West Market and South Beaver Streets. It was designed in the Chicago style of commercial architecture, which emphasizes the verticality of the building. Ornamentation is minimal on the glazed terra cotta walls, and the large windows are arranged in columnar form. A smaller and simpler version is located at 57 South George Street, and Reiss Jewelers at 22 North Beaver Street is another illustration.

Examples of Commercial Architecture:

57 South George Street
Bon-Ton Department Store - corner of West Market and South Beaver Streets
Reiss Jewelers - 22 North Beaver Street

Modern Architecture in York (1950-present)

Newer buildings in the city were sometimes designed to mimic older architectural styles as a way to complement their historic neighbors. An example of this technique is the Neocolonial (or "new colonial") building at 101 South George Street, constructed in 1978 for the former York Federal Savings and Loan Association. It displays a number of details that are directly associated with the Georgian style such as decorative brickwork and multi-paned windows, yet it is readily identifiable as a contemporary building, particularly because of its much larger size. Another design technique is to interpret historic features in a modern way rather than to simply duplicate them. An example of this method is the 1960s addition that was built onto the north-eastern side of the former First National Bank on Center Square. While the addition's material and features are clearly modeled after those on the Classical Revival bank, they do not exactly copy them. Another illustration is the early 1980s parking garage at 17 West Philadelphia Street, which features decorative brickwork and round-arched openings.

Some new buildings are designed to blend in with their surroundings without imitating historical features. A good example is located at 96 South George Street. This five-story office building, which was constructed in 1988, fits in with the rest of the buildings on the street because of its similar mass, height and setting. Its contemporary design and materials (brick and pinkish marble) also harmonize with its historic neighbors.

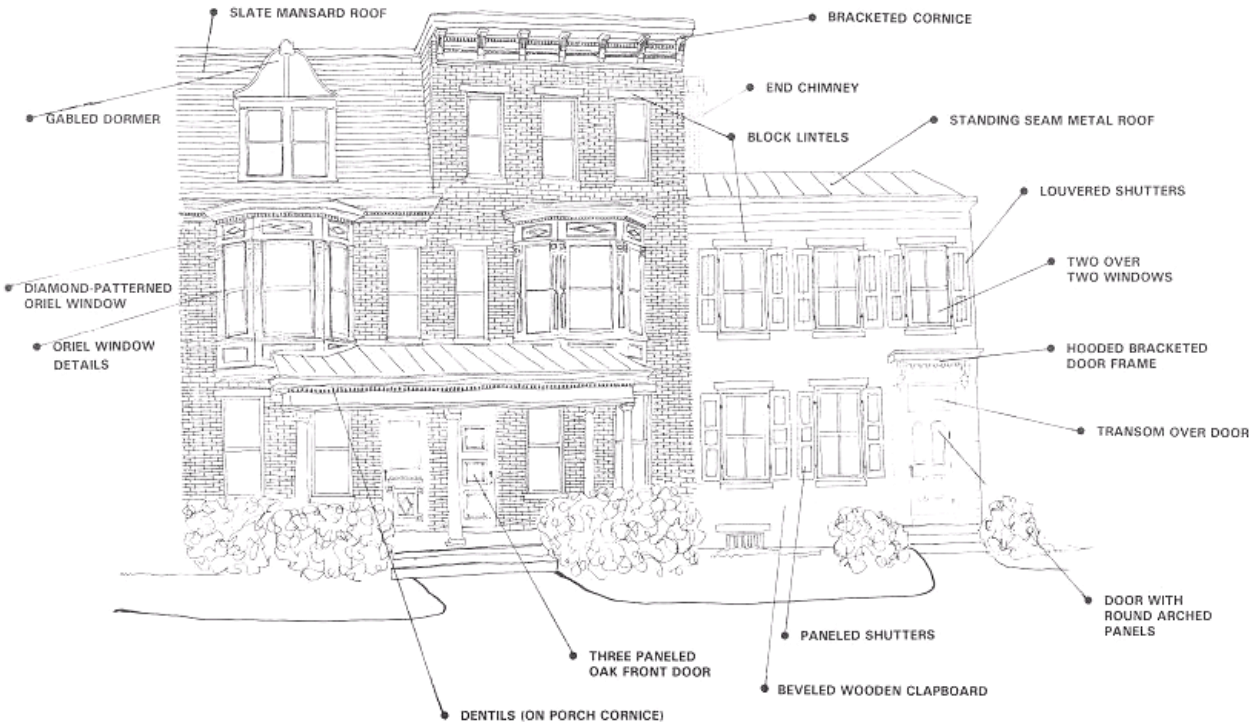
Examples of Neocolonial Architecture:

Addition on northeastern side of First National Bank - Center Square
Parking garage - 17 West Philadelphia Street
York Federal Savings & Loan Association - 101 South George Street

MAINTAINING YOUR BUILDING

All York City buildings are constructed of materials that deteriorate over time – a long-term process caused by the effects of rain, wind, sunlight and temperature changes, by chemicals in the atmosphere, and by insects, birds, rodents and vegetation. Degrees of deterioration vary, and not all deterioration requires replacement of historic material. Historic buildings have survived in York for decades, and with proper treatment, they can continue to survive for decades more – in many cases lasting longer than modern buildings.

THE DETAILS OF A YORK STREETSCAPE



Safety First

Maintaining and rehabilitating buildings can be enjoyable and rewarding. But safety precautions should always be taken with all tools, materials and processes used. It is always wise to carefully read all manufacturers' directions and to consult a professional on work that is unfamiliar. In addition, work on old buildings can bring asbestos and lead to the surface. Because these materials can cause health problems, it is a good idea to be familiar with them before beginning your maintenance or rehabilitation projects.

<u>For More Information on Asbestos</u>

Call 800-368-5888

<u>For More Information on Lead</u>

Call the National Lead Information Center Clearinghouse 800-424-LEAD
or
The City of York Health Bureau 717-849-2252
or
Call your doctor

<u>For More Information on Radon</u>

Call 1-800-23-RADON

Preventive Maintenance

The key to the survival of any building - old or new - is PERIODIC INSPECTION followed by REGULAR MAINTENANCE.

Many property owners perform maintenance only after something fails. This approach offers little protection for the building. Periodic inspection is designed to identify problems before they cause significant damage. This is followed by scheduled regular maintenance that will stop minor deterioration that has already begun and, in the long run, will provide the easiest and least expensive way to maintain the appearance and overall physical condition of your building.

The checklist in this section can help record the condition of your building and keep track of maintenance tasks as they are performed. This checklist is only meant as an example - you may develop one more appropriate for your property.

It is best to perform your inspection during a moderate rainfall; this allows for the best assessment of your roof and overall drainage systems. Binoculars can assist in evaluating parts of your house that are out of reach. A thorough inspection of the interior is also recommended. This is particularly true of the roof, where a leak identified in the attic can help pinpoint the location of failing exterior roof materials. Throughout your house, visible damage in one area can be caused by a problem originating somewhere else, so look carefully.

Remember: Although repairing problems yourself may be less expensive, it is usually best to seek professional assistance for major maintenance and rehabilitation work.

Maintenance Codes and Demolition by Neglect

Sometimes a property owner abandons a building, or allows a building to be occupied but without the benefit of maintenance. This deliberate lack of maintenance, which leads to the eventual destruction of the building, is called demolition by neglect. Demolition by neglect is not only wasteful; it is in violation of City law. The City of York adopted a property maintenance code to protect the public health, safety and welfare by regulating the maintenance of buildings and exterior properties in the City. For more information on the Property Maintenance Code, contact the Bureau of Permits, Planning and Zoning at the City of York.

Remember: There are NO miracle treatments or products that will ensure the preservation of a structure - new or old - without maintenance and repair.

Maintaining Your Building

The City of York's Property Maintenance Code regulates the condition and maintenance of these lot features:

- grading and drainage
- sidewalks and driveways
- weeds

- exhaust vents
- accessory structures
- motor vehicle parking and repair

The Code also addresses:

- sanitation and health
- rodents and insect infestations

The Code requires that the exteriors of buildings be kept sound and sanitary.

It regulates:

- protective treatments
- address numerals
- structural members
- foundation walls
- exterior walls
- roofs and drainage
- decorative features
- overhang extensions
- chimneys and towers
- handrails and guardrails
- windows, doors, frames
- insect screens and doors
- basement hatchways
- window guards
- outside lighting
- exterior stairs
- fire escapes
- building security

PREVENTIVE AND CYCLICAL MAINTENANCE CHECKLIST

Perform this maintenance check once each year, preferably during a moderate rainfall. The primary objective of building maintenance is the elimination of openings that allow water to penetrate the building. Proper ventilation is also required.

What to Look for:

ROOF

Materials: Warping, severe wear, cracking, lumps, curling, decay, splitting, rusting, loose pieces, missing pieces, broken pieces, thin material.

- Metal roofing: repair and paint every 5-10 years; others: 20-50 years.
- Re-secure, reattach and replace loose or missing pieces.

Structure: Is the roof level or does it sag?

- Check rafters for deterioration, moisture penetration.
- A dry, properly maintained roof structure should last indefinitely.

Roof flashing, gutters, and downspouts: Rusting, paint loss, sagging, missing or torn pieces, blockages, poor drainage.

- Re-nail and/or add gutter hangers as necessary.
- Clean gutters in the spring and fall.
- Check elbows for packed material. Caulk cracks. Remove rust and repaint. Repair holes with roofing cement, solder, caulk, etc.

Decorative elements (finials, cresting, etc.): Loose pieces, rust, missing pieces, deteriorated cornice.

- Repair and repaint elements every 5-10 years.
- Check for moisture infiltration.

Chimney and parapet: Is the chimney sagging, leaning or bowing? Are the mortar joints tight? Is the chimney cap rusting or missing? Are bricks loose or missing?

- Pointing should last 50 years or more.
- Re-pointing required periodically in limited areas.

EXTERIOR WALLS

Structure: Are the walls leaning, bowing or bulging? Are cracks evident? Are the door and window openings square?

- Dry, properly maintained wall structure should last indefinitely.
- Check foundation for settling.

Materials: Is the surface of masonry or stucco flaking or crumbling, or are units missing?

- Masonry units can last for centuries with proper maintenance.
- Address moisture problems promptly.

Is the mortar loose, crumbling?

- Pointing should last 50 years or more.
- Masonry may require periodic re-pointing in limited areas.
- Check for moisture infiltration.

Is the wood siding cracked, loose, rotted or split? Do courses of siding appear straight or wavy?

- Replace clapboards every 150 years.
- May require periodic reattachment, partial replacement.
- Work to limit moisture infiltration.

Is cast iron or pressed metal rusting, pitted or missing?

- Painted surfaces may require repainting every 5-10 years.

Are the walls stained?

- Clean masonry only when necessary as part of stabilization work.

Is paint peeling, cracking, blistering or chalking?

- Paint previously painted masonry surfaces approximately every 10 years.
- Repaint wood surfaces every 5-8 years.

Porch floors: Cracks, splits, loose boards, missing boards, rot.

- Wood floorboards should last 50 years or more.

Decorative elements: Peeling paint, cracks and loose pieces.

- Paint every 5-8 years.

WINDOWS AND DOORS

Operation: Do windows and doors open and close smoothly?

- Windows should last 100 years or more.
- Doors, properly treated, should last indefinitely.
- Check for settlement.
- Repaint every 5-8 years, as necessary depending on weathering.
- Excessive paint buildup can cause windows and doors to "stick."

Glass: Is the glass broken? Is the glazing secure? Do the glass panes fit securely? Are the stops and putty secure?

- Window glass should last indefinitely.
- Repair broken glass immediately to guard against water infiltration.
- Check for water infiltration.

Frames, etc.: Do the frame, muntins, sash and door show signs of rust, rot or insect damage?

Is the threshold rotted?

Are there open joints around the frames/trim?

- Paint every 5-8 years, depending on weathering.
- Perform periodic repairs and limited parts replacement as required.
- The sill/threshold may require repair/replacement before other frame members.
- Check for water penetration.
- Check for settlement.
- Caulk as necessary.

Hardware: Is the hardware operational and in good repair?

- Hardware, properly treated, should last indefinitely.
- Sash cords may require replacement.

Weatherization: Is the weather stripping in good repair? Do storm windows fit tightly? Are the screens damaged?

- Putty should last 10-15 years.
- Caulking should last 15-20 years.
- Periodic repairs to weather stripping, caulking and putty may be necessary.
- Clean and mend screens and storm windows annually

EXTERIOR FEATURES

Exterior Elements: Are porches, stairs, railings, cornices, brackets and other exterior features in good repair? Are elements missing?

- Guard against water infiltration.

Paint: Is the paint cracked, faded or peeling?

- Repaint every 5-10 years, depending on surface and conditions.

FOUNDATION

Masonry: Does water drain away from the foundation? Is masonry flaking, crumbling, spalling or cracking?

Is masonry loose or missing? Is the mortar secure?

- Properly maintained masonry should last indefinitely.
- Guard against water infiltration.
- Pointing should last 50 years or more.

Structure: Is the wall bulging or bowing?

- Check for settlement.

Vegetation: Are algae, moss, vines growing on the foundation?

- Remove vegetation and sources of excess moisture as required.

Water Control: Do downspouts have splash blocks?

- Check for movement; replace as necessary.
- Check that drainage is away from building.

WATER AND YOUR BUILDING

How Insulation Can Add Moisture to Your Building:

- In cold weather, the air inside your home is warm and moist. It tends to travel through the exterior walls of your house to the cold outside. As it travels to the cold air, it turns to water in the form of condensation.
- When insulation is installed without a barrier, condensation remains in the cavity of the wall where it can deteriorate cellulose insulation, wall structure and wall coverings, including exterior siding and paint, and interior paint and plaster.
- If you install insulation, you can prevent condensation and deterioration by installing a vapor barrier. Install the vapor barrier on the exterior side of the inside (heated) wall.
- The same principle holds true for the floors of unheated attics, where the vapor barrier should be placed down (closest to the heated ceiling below).
- The same holds true for unheated basement or crawl space ceilings, where the vapor barrier should be placed up (closest to the heated floor above).

REMEMBER: THE MOST POWERFUL FORCE OF DETERIORATION AGAINST YOUR BUILDING IS WATER.

Water can cause wood to rot, bricks and stones to crumble and fall, and paint to blister and peel. The information below can help identify some of the causes of moisture problems in buildings, which is the first step to reducing moisture-related damage (see the Wood Walls, Masonry Walls, and Exterior Color and Paint chapters for more information).

You Probably Have a Moisture Problem if You See:

- Bricks or stones with surface layers falling off.
- Bricks or stones falling from the wall.
- A masonry wall that is covered with plant growth.
- A spotty white haze on brick or stone (efflorescence).
- A painted surface that is peeling down to bare wood.
- Paint that is blistering.
- Paint that is covered with mildew.
- Damage to interior floors, plaster, drywall or paint.
- Increased interior relative humidity.
- Moss or plant growth on shingle roofs.

Where Does Excess Moisture Come From?

- Leaking or inadequate gutters, downspouts, flashing.
- Missing or damaged shingles or other roof materials.
- Defective caulking, sealants and/or expansion joints.
- Damaged masonry; for example, from sandblasting.
- Missing or damaged wall material (like cracks in siding).
- Inadequately treated walls (like unpainted siding).
- Faulty mortar joints.
- The growth of ivy or other vegetation.
- Poor drainage at the foundation.
- Rising damp (suction pulls groundwater up through a masonry wall).
- Insufficient ventilation of interior moisture.

Possible Treatments to Guard against Moisture:

- Treat new and replacement wood with a preservative that kills fungi before painting.
- Use marine epoxy products for minor deterioration. They saturate the wood, arrest the rot and fill all damaged areas.
- Consider damp proof courses and below grade waterproofing with the assistance of a professional.

For Additional Ways to Reduce Moisture:

- See the information on excess moisture in the Exterior Color and Paint section of this guide.

EXTERIOR MASONRY WALLS

Principle: Identifying, retaining and preserving masonry features that are important in identifying the overall historic character of the building such as walls, brackets, railings, cornices, window architraves, door pediments, steps and columns; and details such as tooling, bonding patterns, coatings and color.

Introduction

Brick is the most common type of masonry in York. Stone has also been used, and it is primarily found in foundations. The color and texture of individual bricks and stones, the pattern in which the units are laid, and the consistency, color, size and shape of the mortar joints between the units all give character to masonry. Ornament and detailing in masonry contribute greatly to the character of a building. Although masonry is typically viewed as a very strong building material, excess water can literally turn it to dust. Other major causes of masonry deterioration include general neglect, improper maintenance, inappropriate repair and harsh cleaning methods. The most common problems with masonry include the crumbling and flaking of individual bricks and the loss or loosening of individual bricks. This type of deterioration is typically caused by excess moisture penetrating the masonry wall - a problem that has been made worse because many buildings were sandblasted 20 to 30 years ago. This removed the protective coating on the brick, exposing the softer interior and leading to more rapid deterioration.

MASONRY DETERIORATION: What to do about loose or missing masonry units.

ALWAYS remedy the cause of excess moisture in the wall before proceeding with repair or replacement of individual masonry units. See the information on spalling and dusting in this chapter.

OPTIONS

1st CHOICE: If original masonry units that have become loose are sound, repair the damaged wall by securing the loose units and reattaching the separated units (see the information on mortar later in this chapter).

2nd CHOICE: Use as much original material as possible to repair the damaged wall. For units that cannot be reused, replace with new units of the same material, color, size and texture, using the same bonding pattern.

3rd CHOICE: For significant stonework, consider hiring a professional experienced in the repair of historic masonry to pursue mechanical repair or composite patching.

CONSIDER:

- Using recycled brick, but use only hard brick intended for the exterior of a building, ensuring that the face of the brick intended for the exterior will face the outside.
- If work is being done in a less visible area of the building, consider relocating masonry from the less visible area to the more prominent area.

NEVER:

- Remove masonry units without installing replacements.
- Install replacements that don't match the original in size, shape, color, profile and bond.

CRUMBLING AND FLAKING MASONRY

If the following conditions exist, identify and fix the source of the problem, then replace your bricks or stones. Spalling can have two effects on masonry, both caused by excess moisture. First, water with its dissolved impurities is absorbed into a wall, and collects inside individual bricks and stones, or behind them. When caught inside, the impurities crystallize then create pressure that causes the outside layer of the masonry to fall off. When water collects behind the bricks or stones, freezing and thawing of the wall causes them to contract and expand. They actually move, and this can break the bond between the unit and the surrounding mortar. When this happens, individual bricks or stones actually separate from the wall.

Dusting is a condition that occurs after the surface of the masonry has fallen off, and the softer, inner core of the masonry is being rubbed away. Dusting occurs after sandblasting or extensive spalling, or because of the use of soft bricks that were never intended for the exterior of a building.

HOW TO CLEAN MASONRY

Masonry walls can become dirty or stained for many reasons. Metals or industrial products, moisture-related problems and unwanted paint commonly affect brick and stone walls. Dirt accumulates on buildings over time, and dirty areas remain wet longer, which invites deterioration. Cleaning can improve a building by restoring the crispness to detail and by reducing the amount of moisture absorbed into the building materials. But the normal aging and weathering of a building can form a natural coating on the building surface. This coating need not be removed if it is not contributing to, or concealing, deterioration.

DOES YOUR BUILDING NEED TO BE CLEANED?

These Conditions Mean That Your Building May Need to Be Cleaned:

- Graffiti marks your building.
- Significant detailing is obscured by heavy soiling.
- A spotty white haze appears in a horizontal pattern on the brick (this may be efflorescence).
- Biological growth is present.
- Heavy soiling is contributing to the deterioration and decay of the building.

CLEAN PART OR ALL OF THE BUILDING?

Although each stain should be treated individually, and although cleaning an entire building just to clean it is not recommended, be aware that spot cleaning of stains may result in a wall that looks spotty.

STEPS TO CLEANING A BUILDING

1. Determine if the building really needs to be cleaned. Refer to "Does your building need to be cleaned?" above in this chapter.

2. Identify the type of masonry, the source and type of the stain, and the possible cleaning methods (see the Masonry Cleaning Methods section later in this chapter).

3. Determine and evaluate the effect of each possible method on the masonry by conducting test patches. Water cleaning methods are the safest, cheapest and simplest methods for cleaning masonry.

4. Prepare the masonry surface. Complete all necessary re-pointing before cleaning to discourage excessive water infiltration. Cleaning may disturb some mortar, requiring additional re-pointing after cleaning (see the information on mortar later in this chapter).

5. For all methods, perform test patches to determine the effects of the method over time. Be aware that some effects may not be visible until several months have passed and all weathering possibilities have occurred.

6. Proceed with the gentlest cleaning method. If the desired cleanliness cannot be achieved, test the next strongest option that provides the desired result without damaging the masonry.

GUIDELINES FOR CLEANING

1. Clean only to halt deterioration or remove heavy soiling.

2. Aim to reduce water infiltration into the building.

3. Treat stains individually.

4. NEVER proceed with a wet cleaning operation in cold weather. Chemicals will work differently, and frost can severely damage a thoroughly wet building.

For more information, see these sections in this guide:

- "Water and Your Building" in the Maintenance chapter.
- Exterior Color and Paint chapter.

The Dangers of Abrasive Cleaning

Abrasive cleaning methods, tools and equipment are never an option for cleaning historic buildings. This includes all:

- sandblasting
- wire and metal brushes

- rotary wheels
- power sanding disks
- belt sanders
- similar tools

These methods are very difficult to control and typically do irreversible damage to historic building materials.

Abrasive cleaning methods:

- Remove the outer surface of the masonry.
- Damage detailing.
- Allow increased water penetration and increased deterioration.

If your building was previously cleaned by an abrasive method, it may require painting for protection.

MASONRY CLEANING METHODS

Always begin with the gentlest cleaning method available.

1st CHOICE METHODS: WATER WASHING

Water washing is the gentlest, easiest, most economical cleaning method. Begin with option #1. If the desired cleanliness cannot be achieved, move to option #2, then option #3, then #4 as necessary.

Option 1: Hand Scrubbing

- For dirt, grime, metallic stains, biological growth and related stains, soot and efflorescence.
- For calcium-based masonry like limestone, marble and brick.
- Be careful not to use too much water. Excess water increases the drying time required and can lead to deterioration.
- Use a garden hose, a bucket, possibly a non-ionic detergent (like dishwashing liquid) and a bristle (never metal) brush.

Option 2: Spraying

- For heavy dirt and grime, soot, metallic stains, biological growth and related stains, and efflorescence.
- For calcium-based masonry like limestone, marble and brick.
- Be careful not to use too much water. Excess water increases the drying time required and can lead to deterioration.
- Involves the use of a hose with regular pressure applying a fine mist of water to the masonry surface for a number of hours. May be combined with hand scrubbing.

Option 3: Low Pressure Washing

- For heavy dirt and grime, soot, metallic stains, biological growth and related stains, and efflorescence.
- For calcium-based masonry like limestone, marble and brick.
- High pressure can damage brick so perform test patches. Start with very low pressure and increase gradually until reaching desired cleanliness.
- Involves the use of low pressure mechanical water jet with less than 350 psi. Can be combined with chemicals.

Option 4: Steaming

- For heavy dirt and grime, soot, metallic stains, biological growth and related stains, and efflorescence.
- For calcium-based masonry like limestone, marble and brick.
- Refer to the following chemical cleaning section.
- Involves steam generated at masonry surface at low pressure, possibly in combination with detergents or chemicals.

2nd CHOICE METHODS: CHEMICAL CLEANING

If water washing cannot produce the desired result, proceed with chemical washing under the guidance of an experienced professional. Choose chemicals based on the nature of the building materials and the nature of the stain. Use the weakest possible solution and neutralize afterwards. Be sure to follow manufacturer's directions, particularly regarding the range of appropriate temperatures for working with chemicals, and the potential hazards.

Option 5a: Alkaline Chemicals

- For paint and metallic stains.
- For masonry that is sensitive to acids like limestone, marble, calcium based sandstone, polished granite, glazed brick and terra cotta.
- Chemicals are potentially dangerous to people, the environment and the building if not used cautiously.
- Consult a professional experienced with historic buildings before beginning a chemical cleaning project.

Option 5b: Acidic Chemicals

- For paint and metallic stains.
- These chemicals are typically used on slate, granite, unglazed bricks, concrete and non-calcium based stones.
- Chemicals are potentially dangerous to people, the environment and the building if not used cautiously.

- Consult a professional experienced with historic buildings before beginning a chemical cleaning project.

Option 5c: Poultices

- For industrial product stains, graffiti and metallic stains.
- Poultices can be created for most types of building materials.
- Chemicals are potentially dangerous to people, the environment and the building if not used cautiously.
- Consult a professional experienced with historic buildings before beginning a chemical cleaning project.

OTHER DAMAGING CONDITIONS FOR MASONRY

Efflorescence: Efflorescence is a spotty white haze appearing in a horizontal pattern in brick. It is created by salts that are deposited after water evaporates inside the wall and means there is excess moisture present. The moisture enters through a defect, or by rising damp, and then evaporates at the interior or exterior.

Rising Damp: Rising damp is the condition that exists when suction pulls groundwater into a masonry wall from the bottom up. Rising damp can result in spalling, efflorescence and other deterioration.

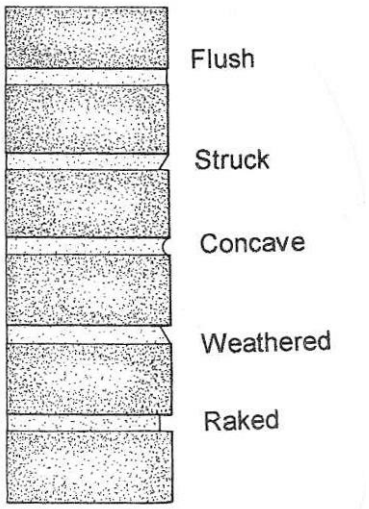
Biological Growth: Mold, algae, fungus and vegetation can grow on a masonry wall when excess moisture is present. The moisture may be a result of faulty caulking or mortar; cracks created by building settlement; faulty gutters, downspouts and flashing; improperly ventilated interior spaces; or excessive shade. This growth encourages moisture to remain in the masonry, thus making it more susceptible to deterioration.

Priorities

- Always determine the appropriate mortar formula for historic masonry. Always test the existing mortar to determine its composition then base the new mortar composition on the old.
- Keep historically painted masonry surfaces painted; avoid painting surfaces that weren't painted historically.
- Avoid using abrasive methods to clean masonry surfaces.

DO THIS: Check the credentials of any contractor you may consider for working on the masonry and mortar of your historic building. Choose a contractor who is experienced in properly re-pointing historic masonry walls. If your contractor insists on widening the mortar joints, choose someone else.

Mortar Joint Profiles



MORTAR

Mortar is composed of sand, water and lime or Portland cement. Historic mortar may also contain ash, horse hair, oyster shells or other additives. The process of using mortar to bond masonry units - brick or stone - to form a wall is called POINTING. RE-POINTING is the process of removing deteriorated mortar and applying new mortar to restore the strength and appearance of the wall.

WHAT YOU SEE: Crumbling, loose and/or missing mortar.

THE PROBLEM: Building movement, extreme weathering or excess moisture.

OPTIONS

1st CHOICE: If the pointing is firm, intact and not eroded more than 1/3 inch, do not re-point. Inspect the mortar and the entire building regularly for further deterioration.

2nd CHOICE: If the joints have eroded more than 1/3 inch, or if mortar has fallen out, or if cracks have formed in the mortar, or if mortar has separated from the masonry units, or if mortar sits loosely in the joint, proceed with re-pointing only the damaged area, following the guidelines in this manual.

3rd CHOICE: If you think the entire wall needs re-pointing, seek professional assistance.

ALWAYS:

- Repair the cause of the problem before treating the symptoms. If building movement is ongoing, contact a professional engineer.
- Seek professional assistance for determining appropriate mortar consistency.

NEVER:

- Use a synthetic caulking compound.

- Use a mortar mixture with Portland cement content higher than 20% of the total volume of lime and cement combined.
- Use a mortar that is harder than the surrounding masonry.

Guidelines for Re-pointing

1. New mortar must match the strength of the historic mortar, and must be softer than the surrounding masonry.

2. Mortar to be used for re-pointing should match the original mortar in color, texture and composition.

3. Sand color is critical to determining mortar color.

4. Although it will be time and labor intensive, use only hand tools for removing old mortar. Using power tools will damage the edges of the stone or brick. Remove mortar to a depth of 3/4 inch or deeper to reach sound mortar.

5. When flushing the joints after removing mortar, use as little water as possible in a gentle stream.

6. Copy the tooling method and detailing of the historic joints. Be aware that these details may change on different portions of the building. Check for joint profile on protected areas of the building, like under eaves, because weathering may alter the profile.

7. Avoid removing sound mortar to achieve a uniform appearance. Achieve a uniform appearance by properly analyzing the existing mortar and matching it to the original recipe in only the damaged area. New mortar of the historic recipe should weather to the color of the original.

Why Fuss Over Lime or Portland Cement?

- Lime mortar and Portland cement mortar are significantly different.
- Although it may at first seem that a harder mortar is better, this is rarely true for historic brick. Bricks made today are considerably harder than the bricks used in older buildings. Although the hardness of Portland cement mortars works well with today's modern bricks, they will destroy older masonry in a relatively short period of time.
- Lime mortar is relatively soft and porous. Portland cement mortar is hard and nonporous.
- Lime mortar is softer than the surrounding historic brick, which allows the brick to expand and contract as it should. Hot bricks expand, forcing the mortar joint to contract. Cold bricks contract, requiring the mortar to expand.
- In masonry walls with joints of lime mortar, water can drain and escape through the mortar joints. In masonry walls with joints of Portland cement mortar, water stays in the brick or in the old lime mortar that lies behind the new Portland cement mortar. This causes the brick to expand. Because the Portland cement is too strong to move, the brick moves instead, resulting in the cracking, spalling, dusting and loss of the brick as well as the deterioration of the remaining lime mortar.

Is There Lime or Portland Cement in Your Mortar?

Remove a loose piece of mortar from an inconspicuous location. Soak the mortar in water. If it softens and crumbles under pressure, it has a lime base. If it softens but won't crack, it has Portland cement. Keep in mind that your building may have been re-pointed a number of times, and possibly with the wrong type of mortar, so you should carefully inspect your building. You may need to collect and test a number of samples.

Historic Mortar Recipes

The following recipe is a starting point for a mortar suitable to historic masonry:

1 part hydrated lime
+
2 parts by volume sand of historic color
+
Enough water for a workable mix

This recipe can be modified with some white Portland cement to improve workability and drying, but Portland content should never exceed 20% of the total volume of lime and cement combined. Portland cement should be white - never gray or light gray. You could begin by testing one of these recipes that include Portland cement:

1 part white Portland cement
+
2 or 3 parts hydrated lime
+
6 parts sand of historic color

OR

1 part white Portland cement
+
4 parts hydrated lime
+
10 parts sand of historic color

Some mortar mixes are commercially available in prepackaged form. Most applications to historic buildings would involve mortar mixes known as Type O and Type N. Type O would be appropriate for fairly soft and moderately durable brick as well as stone like limestone in exterior walls (see above for content). Type N (1 part white Portland cement to 1 part hydrated lime to 5 parts sand of historic color) would be more appropriate for very hard brick such as Roman brick, on brick in very exposed locations like a chimney, or stone like granite. Commercial mortar mixes may have to be colored slightly to blend in with the existing mortar.

What are the Exact Components of Your Mortar?

A trained professional can determine the exact components of your mortar in a laboratory, but you can conduct a relatively simple experiment yourself. Follow these steps:

1. Collect three or four mortar samples from different locations on your building. Don't take the samples from the surface because surface mortar has weathered and will be darker than the original color. Multiple samples are required because your building may have been re-pointed several times. Set one sample aside for comparison.

2. Keeping each sample separate, break the samples apart with a wooden mallet or dissolve them in muriatic acid (available from masonry suppliers).

3. When the sample has completely broken down, remove it from the liquid, wash the remaining components in water, and allow the sample to dry. Blow away any powdery material, which is lime or cement.

4. Inspect the remaining material with a magnifying glass to determine the size and color of the components of the mortar. For your new mortar, be sure to choose sand that matches the color of the sand in your sample. Sand color is critical to determining final mortar color. Sands of different colors are available from masonry suppliers. Use a pigment to obtain the correct color as a last resort.
5. Other materials in your sample - like shells, hair or ash - may be harder to obtain. Consult your masonry supplier for suggestions.

6. Once you have assembled the appropriate components, try varying recipes. Allow them to dry in an oven, and then compare them to the historic sample you set aside in Step 1.

EXTERIOR WOOD WALLS

Principle: Identifying, retaining and preserving wood features that are important in defining the overall historic character of the building such as siding, cornices, window architraves and doorway pediments; and their paints, finishes, and colors.

Introduction

Wood is a surprisingly durable material. Properly maintained, it can last centuries. But it does have enemies: water, fungus and insects can dramatically shorten the life of wood.

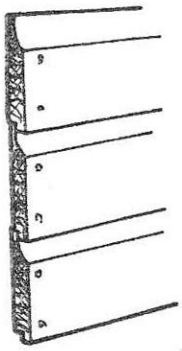
Wood is used in many forms on the exterior of buildings - in clapboards, shingles, ornament and trim, and these elements contribute significantly to the building's character. They also protect the frame of the structure from the weather, which extends the life of the building. Consequently, these elements should be protected so that they may continue to contribute to the beauty and integrity of the building for generations to come.

One of the most common projects encountered in historic building rehabilitation is the maintenance and repair of wooden siding. Options for dealing with these projects are outlined on the following pages.

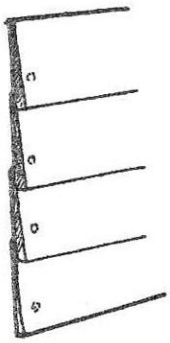
TYPES OF WOOD SIDING

Two of the most common types of wood siding are drop siding and clapboard.

Drop siding, also called German siding, is composed of interlocking horizontal panels. Each panel has a flat surface with a rounded channel at the top.



Clapboard, also called bevel siding, lap siding and weatherboard, is composed of single boards, tapered from the top to the bottom, and nailed in overlapping fashion. Boards are typically about 4" wide and the overlap produces a distinctive shadow effect that has not been successfully reproduced by artificial siding.



TREATING WOOD DETERIORATION

Water infiltration, poor maintenance and the lack or improper use of paint can lead to decaying wood and loose, cracked and missing siding and other wooden elements.

The options listed below pertain to all wooden siding, shingles, ornament and trim.

1ST CHOICE: Repair damaged wooden siding by reinforcing, patching or piecing. Repair simple cracks and splits with strong exterior wood glue. Warping may be repaired by careful, slow and well-placed nailing or drilling.

2ND CHOICE: Repair the pieces of wood that can be repaired; replace the pieces that are too deteriorated for repair with new wood of the same size, profile and character as that of the historic wood. Putty or wood filler should be used to smooth out the seams between old and new wood.

3RD CHOICE: When deterioration is too severe or extensive, replace all deteriorated wood with new wood of the same size, profile and character as that of the historic wood. Take a sample of your siding or other wooden element to the lumberyard to get a close match.

NOTE: Occasionally, the installation of new wooden siding is not feasible. In such special instances, a compatible artificial siding that conveys the same visual appearance as the historic siding should be chosen (more information on this subject follows later in this section).

PRIORITIES FOR WOOD

- Retain, to the greatest extent possible, remaining wooden clapboards, shingles and other historic wooden materials.
- Maintain wooden exterior elements with hand scraping, hand sanding and repainting.
- Conduct regular inspections on wooden exterior elements.
- Paint wooden elements that were historically painted. Don't leave these surfaces unpainted; don't treat with a "natural" finish. Treated wood should be painted following the required period of weathering.

DEALING WITH ROTTEN WOOD

Most wood deterioration is caused by fungi that thrive if given enough water and suitable temperatures. The prevention of wood decay begins with the elimination of excessive moisture, and the use of wood preservatives that act to poison the "food" needed by the fungi to survive.

The Ice Pick Test

To determine if your wood really is rotted, perform this test:

1. With gentle hand pressure, push an ice pick into the surface of the wood that you think may be rotted. If easy hand pressure pushes the pick into the wood to a depth of about 1/2 inch, your wood is likely rotted.

2. Lift a small section of the wood with the tip of the ice pick. If the wood has rotted, it will lift in small sections across the grain. Healthy wood will typically lift in long splinters.

NEVER:

Paint or otherwise cover a deteriorated wooden surface without repairing the source of the deterioration.

Types of Wood Rot

Soft Rot is a slow decay that appears as a cracked surface and is caused by extended saturation or alternating wet-dry cycles.

Brown Rot is a serious form of rot resulting from excess moisture and fast-moving inner deterioration of the wood. The result is a crumbly surface that turns wood a brown color. Cracks are visible across the grain of the wood, and they permit greater amounts of water to penetrate, which results in greater deterioration.

Dry Rot is the most serious type of rot. It is a fungal infestation caused by excessive moisture. Infested wood crumbles to the touch and is easily and deeply penetrated by a penknife. This rot conducts water deep into the wood, and may leave white strands or tendrils that eventually form into sheets.

ARTIFICIAL COVERING OF WOODEN WALLS

Mass-produced siding was intended to imitate traditional building materials, but the imitation is rarely convincing. Aluminum and vinyl siding are extruded pieces of metal and plastic, respectively, and are much thinner and lighter in weight than their wood counterparts. Vinyl siding is susceptible to bending and denting, and its method of attachment leaves unsightly joints. Both of these conditions give vinyl siding an appearance that is uncharacteristic of wood siding.

It is the policy of the HARB that highly visible walls of buildings in the historic district should remain covered with wood siding and not be covered by inappropriate materials.

A Siding Quiz

True or False? Artificial siding is maintenance free.

FALSE

- Artificial siding can cause and increase maintenance problems by hiding structural defects, water damage and insect damage, and by allowing such damage to progress unnoticed.
- Aluminum siding is easily dented, and its painted surface is easily scratched. Panels can fade in the sun, bleed in the rain, and need to be painted with special procedures and products to renew their appearance.
- Vinyl siding is prone to cracking in cold weather, and it is difficult to match replacement pieces for both aluminum and vinyl.

- Although much vinyl siding comes with a lifetime warranty, because it is a relatively new building material, it is difficult to predict how long it really will last. Other vinyl products, such as windows, appear to have life spans that are considerably shorter than expected.
- In recent years, many homeowners have turned to painting their aluminum and vinyl siding, becoming tired of the color, or realizing that these materials were really not "maintenance free." Once painted, the artificial siding will need to be painted as often as wood.

Why Not to Use Artificial Siding on Your Historic House

DESTROYS APPEARANCE: The installation of synthetic siding often results in the visual and physical loss of significant historic building material and distinctive detailing that defines and characterizes a home. This diminishes the historic character of your building.

INCREASES DETERIORATION: Covering the original siding can lead to deterioration (from moisture infiltration) and damage (from fasteners), and the installation of new siding makes monitoring the condition of your house difficult.

REDUCES VALUE: By removing the unique detail and character of your home and covering it with a mass-produced product, your house looks mundane - more like all the others. It loses its distinctive qualities that can mean a higher value in the marketplace. Also, many potential home buyers purchase historic houses specifically for their special character - a character that is destroyed by installing artificial siding.

When NOT to Use Artificial Siding

- Over brick, stone or other masonry.
- Over unusual examples of historic siding.
- When wooden siding is still functional.
- When paint on wood siding has failed simply due to poor preparation, incompatible paints or lack of maintenance.
- To achieve a "maintenance-free" house.

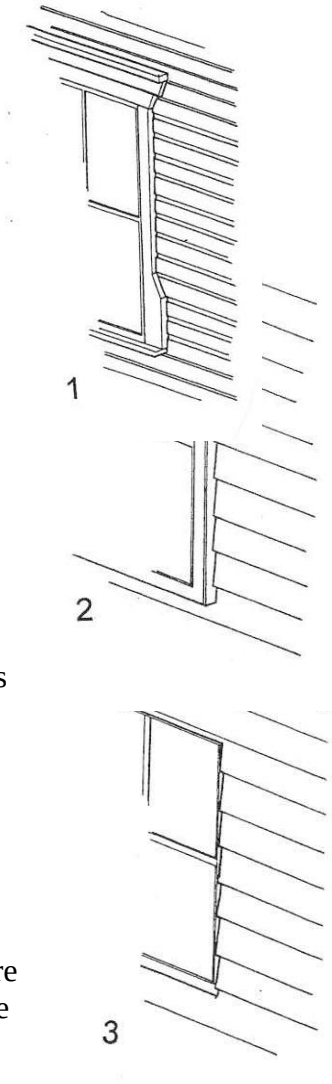
Potential Problems with Concealing Wood Siding

Concealing wooden siding with other materials can lead to a variety of problems. One of the worst problems occurs when artificial siding reduces the ability of your building to "breathe." Artificial sidings create a sealed barrier between the original siding and the new siding. In cold weather, moist air from inside the house tries to escape to the exterior. When it reaches the synthetic siding, it cannot escape, and so it remains, resulting in the deterioration of the wood siding and underlying structural elements. Moisture penetrating the historic siding from other sources results in the same type of deterioration.

Cold outside air turns moist inside air to condensation between the wood siding and the artificial siding. In time, the condensation rots the wood, fasteners release and weather infiltrates.

ALSO:

- Curved areas cannot be duplicated in artificial siding.
- Improper installation of artificial siding is the major cause of problems.
- It is difficult to change the color of your house once artificial siding has been installed.



New Siding and Old Windows & Doors

Many historic windows and doors have significant frames, molding and trim (fig.1). A typical problem with artificial siding on historic buildings is the damage, removal or covering of these elements. Some installers cut down these elements, which permanently damages them (fig. 2). Some install vinyl channels at the edges of the frame. Others remove the elements, which gives the building a barren, characterless look. Still others wrap the elements in vinyl or aluminum, which hides the historic features and increases deterioration.

The addition of artificial siding over existing materials results in a greater wall thickness, which gives frames and trim the appearance of being set back from the wall, rather than projecting from it (fig. 3). This is a significant visual change that diminishes the character of the building.

To avoid these problems, be sure your contractor will retain windows, doors and all related elements. Don't allow them to be cut down or covered. Older materials may need to be removed to maintain the appropriate depth, or spacers may need to be installed, which will require meticulous work by experienced professionals. If trim elements must be removed due to deterioration, replace them with new elements of the same material and detailing.

Replacement Materials

Over the years, a wide variety of materials has been used by property owners to cover wood siding in an attempt to gain relief from maintenance and repair. This practice significantly changes the appearance of historic features, and shows that such materials are generally not maintenance free.

Potential Problems with Vinyl and Aluminum Siding

Vinyl and aluminum siding, like other substitute materials, have characteristics that easily identify them as substitutes, and qualities that are not usually advertised by the manufacturer or installer.

TRY THIS: Consider Removing Your Artificial Siding and Restoring Your Wood Clapboards.

- This will allow your building to function as originally designed and will expose problems that may have developed since the artificial siding was installed.
- Expect to replace about 20% of the wooden clapboards.
- Expect surprises. Trim and detailing may have been removed.
- Removed siding may be recycled.

Guidelines for Artificial Siding

When deteriorated, damaged or lost features of a historic building need repair or replacement, it is almost always best to use historic materials. The inappropriate choice or improper installation of substitute materials can cause a radical change in a building's appearance and can cause extensive physical damage over time. Consequently, the use of substitute materials should be limited since their use may jeopardize the integrity of the historic building. Every means of repairing deteriorated historic materials should be examined **before** turning to substitute materials.

In some **limited** circumstances, substitute materials that imitate historic materials may be used if the appearance and properties of the historic materials can be matched closely, and if no damage to the remaining historic fabric will result. However, substitute materials, including artificial sidings, should be used only after **all** other options for repair and replacement **in kind** have been ruled out.

The information on the following page outlines the special circumstances under which artificial siding may be considered, and the guidelines for the installation of artificial siding under those circumstances.

These guidelines are based on information found in Preservation Brief #16: The Use of Substitute Materials on Historic Building Exteriors, which may be consulted for additional information (see Additional Information section for information on obtaining Preservation Briefs).

When a building is in need of maintenance, some owners consider installing artificial siding. This results in a loss of historic character and features.

Remember: Artificial siding is supposed to be imitating wood, and it should act accordingly.

- Repair all underlying problems before applying new siding.
- Carefully compare your cost figures. Quality materials and installation may cost more than repair.
- Use the best materials and contractors available. Proper installation of quality materials is the best way to avoid additional problems.
- Only use a contractor who is willing to retain your historic trim.
- Maintain the same spacing between horizontal lines as in the original siding.

- Place the new siding in the same direction as the historic siding. Vertical siding is rarely appropriate.

When to Consider Using Artificial Siding on a Historic Building

Because the use of substitute materials can damage or destroy the character of a historic building, all preservation options should be explored thoroughly before substitute materials are used. In general, four circumstances warrant the consideration of substitute materials, and three basic criteria must be met before substitute materials are considered. These circumstances and criteria should be closely examined for each potential siding project.

Circumstances that Warrant the Consideration of Substitute Materials

1. The unavailability of historic materials.
2. The unavailability of skilled craftsmen.
3. Inherent flaws in the original materials.
4. Code-required changes.

Criteria for Considering Substitute Materials

1. Substitute materials must be compatible with the historic materials in appearance.
2. The physical properties of substitute materials must be similar to those of the historic materials, or the substitute materials must be installed in a manner that tolerates differences in physical properties.
3. Substitute materials must meet basic performance expectations over time. This begins with the selection of qualified, experienced fabricators and installers who are willing to preserve historic features.

Guidelines for Installing Artificial Siding

If, after thorough consideration of all options, it is determined that artificial siding is required, these guidelines must be followed:

1. The artificial siding should match the historic siding in size, profile, proportion and general appearance.
2. "Wood" graining is never evident on properly treated wood siding, so it should not be visible on new artificial siding.

3. Place the new siding so that historic wood trim (corner boards, cornices, window and door trim, crowns and lintels) and decorative elements (brackets, architraves) remain fully visible. If the elements must be replaced, replace them with elements that match the original in material, size, profile, proportion and general appearance.

4. Artificial siding should be installed so that it can be removed in the future with minimal damage to the historic materials of the building.

5. Allow the original siding to remain beneath the artificial siding. Provisions must be made to assure adequate ventilation for the preservation of the historic siding and underlying structure. This will maintain the future possibility of returning the building to its historic appearance.

6. The color of the artificial siding must be appropriate to the age and style of your building (see the chapter on Exterior Color in this manual).

New Alternate Materials

New materials are always being introduced to the market that are promoted as an alternate to traditional building materials. The HARB will consider these requests and will approve uses of some of these new materials in certain situations.

Cement Fiberboard (i.e., Hardiplank) is often proposed as an alternative to wood. Its largest criticism is its lack of show and depth as compared to traditional wooden clapboard. The boards can take on a wavy appearance and the product is difficult to install, requiring special cutting tools.

Use of Cement Fiberboard

- Its use is not allowed on primary facades of historic buildings.
- It may be allowed in less visible locations, rear elevations and garages.
- It will be allowed on new construction.

Guidelines for Installing Cement Fiberboard

- Use only as a primary siding. It may not be installed over any other siding material.
- All fiberboard used must have a smooth finish. No pre-finished or wood grain finishes will be allowed. The exposed face of the fiberboard lap siding may not exceed six inches in width (height when installed).
- All trim elements to be used in conjunction with cement fiberboard must be wood (i.e., door trim, window trim, cornice, fascia, etc.).
- When used on an addition to a historic building, the cement fiberboard must match the existing siding or shingles in size, exposed face profile, scale, finish and articulation.

Liquid Vinyl Siding is a new product that is promoted as being maintenance free. It is a thin ceramic-based coating that is applied in a three-coat process, each of which is sprayed on. The product claims to have superior insulating ability although much research indicates that this claim is false.

Liquid Siding will not be allowed on historic buildings within the HARB district.

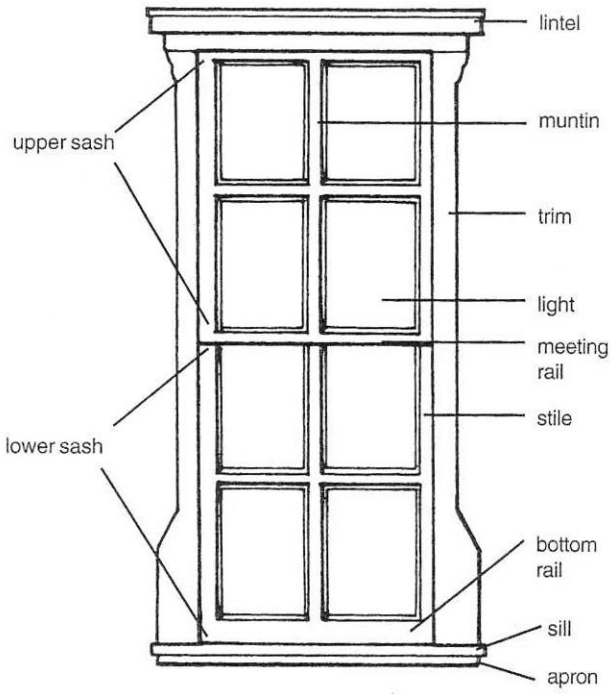
It is a nonreversible treatment and cannot be removed without damaging the historic fabric. Its installation requires sandblasting of the original surface for adhesion of the product. Sandblasting is not an acceptable treatment for historic building materials.

WINDOWS AND DOORS

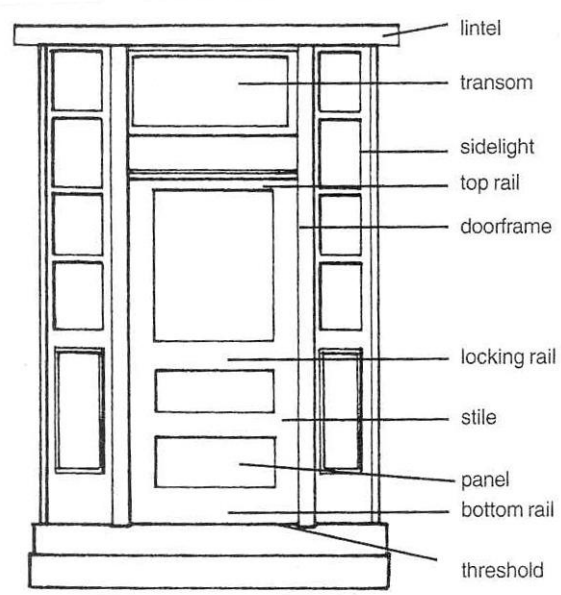
Principle: Identifying, retaining and preserving windows and doors – and their functional and decorative features – that are important in defining the overall historic character of the building. Such features can include frames, sash, muntins, glazing, sills, heads, hoods, paneled or decorative jambs and moldings, exterior shutters, doors, fanlights and sidelights. In addition, new windows should be in character with the historic building, especially on primary facades.

Parts of Windows and Doors

Windows are typically composed of sash in a frame with surrounding trim.



Doors are typically composed of panels and rails that are placed in frames. Doors are often combined with transoms and sidelights to create a more elaborate doorway.



The Significance of Windows and Doors

Windows and doors are among the most prominent features of buildings.

Windows typically comprise about 20-30% of a historic building's surface area, and they act as both interior and exterior elements. Historic doors often used size and detailing to draw attention to the entrance.

Significant parts of windows and doors include their materials and shape, panel and pane arrangement, moldings, hoods, fanlights and sidelights.

Windows and doors receive consistently hard use, but they are so thoroughly integrated into the structure of a house that complete replacement is rarely advisable. Repair and weatherization are often more practical and economical than most property owners realize.

Windows and doors are significant and should be retained if they:

- Are original.
- Reflect the original design intent for the building.
- Reflect period or regional styles or building practices.
- Reflect changes to the building from major events.
- Are examples of exceptional craftsmanship or design.

Many buildings in York feature oriel windows (bay windows above the first story). Because of their detailing and craftsmanship, these windows are significant.

Windows are typically composed of sash in a frame with surrounding trim.

Doors are typically composed of panels and rails that are placed in frames. Doors are often combined with transoms and sidelights to create a more elaborate doorway.

Shutters were used historically for insulation. They closed over window and door openings to keep the wind and sun out. Shutters are rarely used for this purpose today, but on a historic building they should still appear functional.

When are Shutters Appropriate?

Shutters were not installed on all buildings, and should only be added to those historic buildings that did have them. Shutters were used on most Federal style buildings, and were less frequently used on Greek Revival, Italianate and Queen Anne buildings. Look for holes near the top and bottom of your window frames, or faded silhouettes of shutters on your exterior walls, or shutter anchors on the wall near your windows. If this evidence exists, shutters may be appropriate for your building.

Shutter Guidelines

- Shutters should be attached to the face of the window frame with hinges – not to the wall.
- Many buildings were fitted with paneled shutters on the first story and louvered shutters on the upper stories. Replacement shutters should duplicate this pattern.
- Retain ornamental anchors.
- Horizontal divisions of shutters should match those of the sash.
- New shutters should be made of wood.
- Shutters should be installed only if they were used historically.

Inappropriate Shutter Use

- Shutters are not appropriate for bay windows, most dormers, and most other ornamental windows.
- Shutter height should match sash height.
- Shutter shape should match window shape.
- Shutters should be louvered or paneled.
- Each shutter should cover half the entire window opening.
- Shutters are not appropriate for bands of adjacent windows.
- Shutters should lie flat without overlapping when open.

Awnings

In the first half of the 20th century, canvas awnings were often installed on new homes and added to older residences. Awnings can enhance the appearance of a building and can be up to seven times more effective than draperies in controlling heat gain.

Guidelines for Awnings

- The top of the awning should conform to the shape of the window or door opening.
- The awning should be contained within the opening.
- Awnings and their associated hardware should not damage or hide existing historic materials or features.
- Canvas or other flexible, natural materials are preferred. Rigid awnings should not be installed.

NOTE: For information on awnings and commercial buildings, see the chapter on commercial buildings later in this manual.

Window and Door Repair

The options for repairing, rehabilitating and replacing historic wooden windows and doors directly relate to the degree of deterioration present.

1st CHOICE: Undertake routine maintenance on windows and doors. This may include replacement of broken panes, repair of sash cords, removal and reapplication of caulking, putty and weather stripping, and scraping, sanding, priming and repainting.

2nd CHOICE: Repair decayed parts in place. If wood is badly rotted, treat with fungicide, saturate with linseed oil, fill cracks and holes with putty, consolidate with epoxy or patching compound, sand, prime and paint.

3rd CHOICE: Without replacing the entire unit, replace parts of the frame and sash or door by patching, splicing and piecing in. Using surviving parts as models choose replacement parts that match the original in size, shape, material and all detailing. If a majority of a member is deteriorated, replace the entire member using the old one as a pattern for the new.

4th CHOICE: If a majority of the components of the window sash and frame, or door and door frame, require replacement, consider replacing the entire unit using the guidelines.

When to Replace Windows and Doors

Wooden windows and doors are subject to deterioration from years of use, water accumulation and insects. But deteriorated wooden windows and doors may look worse than they are. The most commonly affected areas, the sill and the lower rail, often can be restored without replacing the entire unit. In most cases, even if individual units are severely deteriorated, replacement of all the windows and doors in an historic building is seldom necessary and should be avoided. Four out of five times, the verdict to replace an entire window is due only to a rotted sill.

Signs that a Window or Door Needs Maintenance or Repair

- broken sash cords
- broken glass
- peeling paint
- loose putty
- air infiltration
- stuck sash

These conditions alone do not warrant replacement.

Signs that a Window Should be Replaced

- The existing window cannot be made to fit tightly in the wall because of settlement or deterioration in the outside wall.
- Materials or skills required to repair the window are not available.
- Substantial parts of the window are missing or are so severely damaged that they must be replaced.

Caution: Removing window or door units for repair increases the likelihood of damage. Attempt to repair windows and doors in place.

When are Windows and Doors Deteriorated Beyond Repair?

The ICE PICK TEST can help you determine the extent of deterioration in wood windows and doors.

- If an ice pick inserted into a wood member penetrates the wood less than 1/8 inch, then the wood is solid and the unit does not need to be replaced.
- If the ice pick penetrates 1/2 inch or more, the wood may have dry rot.

What to Do

- If the condition has affected only a portion of a component, repair the damaged member.
- If the condition has affected a majority of a component, replace the infected member.
- If the condition has affected a majority of the components of the unit, consider replacement of the unit.

Wooden windows and doors can be considered beyond repair when a majority of the component parts require replacement to make the unit weathertight and serviceable.

Replacement Guidelines

- When a replacement is needed and work is being undertaken in other parts of the building, consider moving a historic window or door from an inconspicuous location to a more visible wall.
- When original windows are missing, replacements should be chosen based on historical, pictorial or physical documentation. Avoid creating a false historic appearance due to insufficient documentation.
- Check salvage yards, antique stores, demolition companies and custom manufacturing companies for replacements. Be sure to reuse all serviceable historic hardware.
- For multi-pane replacement windows, replacements that have panes of glass divided by muntins (strips of wood) are the best choice. Snap-in muntins, surface applied muntins and muntins between panes of glass should be avoided. They are not convincing because they don't have enough depth to provide a shadow.
- Picture windows, bay windows and casement windows should be chosen as replacements only when these types are original to the building.
- Steel-covered hollow core doors have a poor finished appearance and often do not come in sizes and styles that are appropriate for historic buildings.

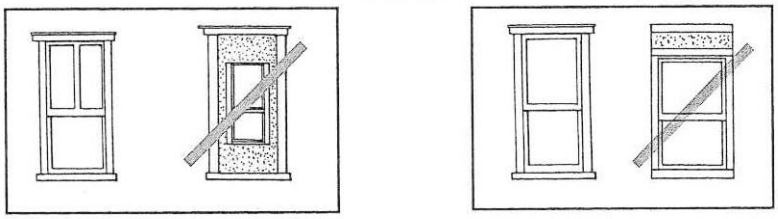
Choosing Replacements

Once it has been determined that a window or door is beyond repair and must be replaced, the type of replacement unit must be chosen.

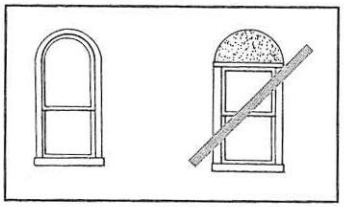
1st CHOICE: Choose replacement windows and doors that fit the original opening exactly and match the original units in material type, glass color and reflectivity, overall size, number and arrangement of panes, shape, type of operation, decorative details and component size (frames, muntins, mullions, etc.).

2nd CHOICE: Choose windows and doors of a comparable material that match all other design details of the original.

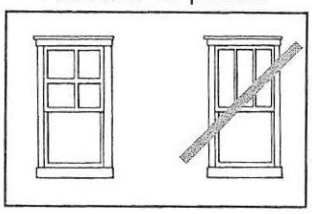
Overall Size



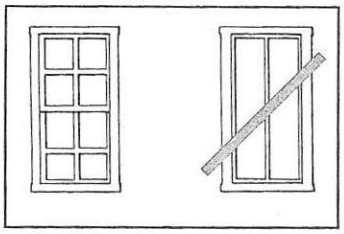
Shape



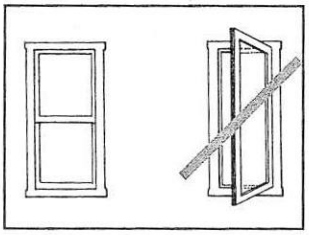
Number of panes

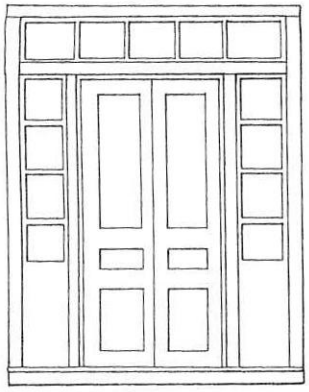


Arrangement of panes

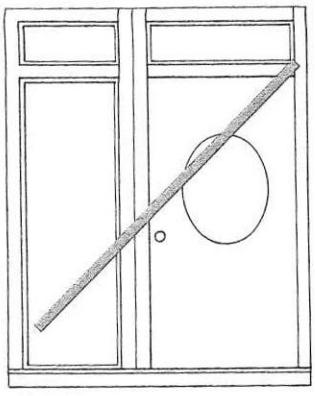


Type of operation

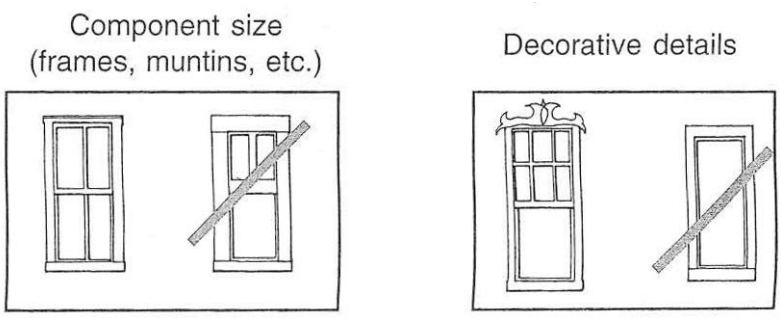




A historic entrance.



An incompatible modern entrance.



The Size of Window and Door Openings

Maintaining the original size of window and door openings is important because the size contributes to the overall design and visual balance of the building. When replacing historic windows and doors, follow the guidelines below.

Guidelines for Window and Door Size

- Maintain the shape of window and door openings.
- Install window air conditioners on side or rear elevations.
- If a ceiling must be lowered in the interior, provide a setback or slope to allow the full height of the window to remain open.
- Maintain divisions created by sidelights and transoms in entryways.
- Avoid decreasing the size of window or door openings by partially filling them, especially to allow for stock size replacements.
- Avoid enlarging window or door openings to allow for picture windows, bay windows, casements or other windows not original to the building.

Making New Window and Door Openings

New window and door openings tend to destroy the rhythm and balance of historic buildings and their historic materials. For these reasons, creating a new opening is a last resort alteration, and new openings should never be added to the walls of buildings that are visible from the street.

1st CHOICE: Locate the new opening in a wall that is not visible from a public street or alley.

2nd CHOICE: Locate the new opening in a side or rear elevation shielded from public view.

ALWAYS:

- Create new openings only in locations that will minimize the loss of historic materials and features.
- Create new openings that are compatible in size, scale, shape, proportions and massing to the wall and the overall building.

- Document the original condition of the building and save removed historic materials for later use.

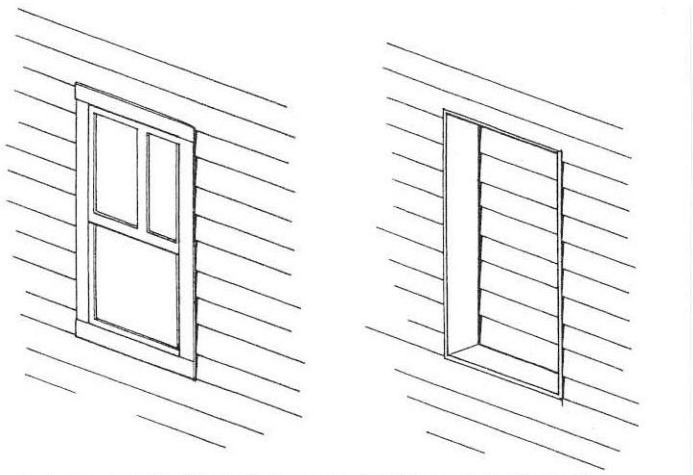
Closing Window and Door Openings

Filling in historic window and door openings destroys the rhythm and balance of a building and destroys historic materials. This type of alteration is rarely appropriate.

1st CHOICE: Retain the historic window or door in place with all its associated features. Add materials or treatments on the interior to make the units inaccessible and non-serviceable while maintaining the external appearance. Painting glass black on the inside or adding other similar materials to achieve the same effect may be considered. Also consider installing shutters over windows and sealing doors.

2nd CHOICE: If window or door units are missing or must be removed due to extensive deterioration, install new units of compatible design, and continue with Option #1.

3rd CHOICE: Fill the opening with a material that is compatible in appearance to the exterior wall surface. Maintain the original size and shape of the opening, and recess the infill about an inch. Retain in place as much detailing and ornamentation as possible. Save any removed historic materials for later use.



A window opening filled with the material of the surrounding wall.

Increasing Energy Efficiency in Windows

Old windows should never be replaced solely for the purpose of improving energy efficiency. An old window that has been properly repaired and provided with a well-fitted storm sash will be as efficient as a new, double-glazed unit.

1st CHOICE: Remove and reapply caulking, putty and weather stripping. Tighten the interior lock on the meeting rail of double-hung windows to fit the window tightly against the frame and to decrease air infiltration. See the next page for additional information on caulking and weather stripping.

2nd CHOICE: Install properly designed and fitted storm units following the guidelines on page 13.

3rd CHOICE: Retrofit existing windows with additional glass. Retrofitting can be difficult and must be carried out with great care because it alters the historic window fabric. For all windows, the sash frame needs to be in relatively good condition and of sufficient size to handle the additional glass weight. Mechanical routing of the frame is usually required to accommodate the additional glass. The extra weight may require additions to the sash weights, for which there must be sufficient room in the weight pockets. For multi-pane sash, the muntins must also be both wide enough and strong enough to accept the additional glass.

Modern Treatments for Windows

Common triple track aluminum storm sash is acceptable. Some modern treatments for increasing the energy efficiency of windows, like "low-E" glass and the use of argon and krypton gas, may be appropriate for historic buildings. They are appropriate when they do not alter the character of the glass or the overall window from its historic appearance.

Weather Stripping and Caulking

Air can leak between a window's sash and frame, between window and door frames and the adjacent wall surface, and where sash rails meet. Weather stripping fills cracks around doors and windows to provide a tight seal and to eliminate drafts. Caulking seals gaps between building materials to prevent air and water infiltration.

Potential Areas for Weather Stripping and Caulking

- Behind the track of window sash.
- Between the joining rails of the upper and lower sash.
- Along the bottom of sliding sash units.
- Around door frames.
- Around the inside perimeter of double-hung windows.
- At the meeting rails of double-hung sash.
- On the frame and along the full width of the door sill.
- Between corner boards and siding.
- Between the sill plate and foundation.
- Any joints between masonry and wood.

HINTS:

- Correct installation of weather stripping and caulk is essential. Follow the manufacturer's directions.
- Regularly inspect for and replace bent, torn or loose weather stripping.
- Joints larger than 1/2 inch deep and 1/2 inch wide should receive a foam backer before caulking.

NOTE: Storm windows are much more effective than storm doors. Storm doors and entrance vestibules are typically not cost effective. A properly weather stripped door can outperform a door/storm door combination.

Guidelines for Storm Windows and Doors

- Wood storm frames are preferred. They can be fabricated to fit any opening and are much more energy efficient than aluminum or vinyl because wood conducts heat more slowly than those materials. Well-maintained wooden storms can last over 100 years - much longer than aluminum.
- Storm units should completely fill the opening. Any divisions should match existing divisions in the primary unit. Aim to reveal as much of the original unit as possible.
- Storm units should match the shape of the window or door opening. If the opening is arched, the storm unit should be arched.
- Install storm units without damaging the original building fabric. Install caulking to ensure that moisture does not collect between the storm and the primary unit.
- Avoid storms with a natural aluminum finish. They should be painted to match window trim.

ROOFS

Principle: Identifying, retaining and preserving roofs – and their functional and decorative features – that are important in defining the overall historic character of the building. This includes the roof's shape (gable, hipped, mansard), decorative features (cupolas, chimneys) and roofing materials (slate, wood, clay tile, metal) as well as its size, color and patterning. The character of a historic roof should be preserved wherever feasible.

Introduction

Roofs are important because they offer shelter to the activities in the building below. Roofs are highly vulnerable to the damaging effects of wind, rain, snow and heat from the sun, and a weather-tight roof is a necessity for the preservation of any building – new or old. Problems inherent in the design of a historic roof can be controlled through the use of good materials and regular maintenance.

Although the functional requirements of a roof are important, roof design often goes beyond the merely functional and contributes considerably to the character of the building. The shape, size, color, pattern and detailing of a roof are important elements that help define the building's character and add interest to the streetscape.

Significance of Form

Roofs, even those of simple form, help to determine the character of a building. The combination of the size, shape and slope of a roof create a unique silhouette. Typical roof shapes include gable, gambrel, hip, mansard, shed and flat.

Builders were guided by practical considerations in their selection of roof shapes. Often builders chose steeper slopes to shed snow and rain. Sometimes the need for attic space prompted the construction of a gambrel or mansard roof, which provided more space than a flat or gabled roof would. Ease of construction prompted other builders to choose a simple gable over a more complex mansard.

Despite the importance of such practical considerations, certain roof shapes became associated with specific architectural styles.

- Neoclassical houses typically had low pitched gabled roofs, which reflected the pediments of the classical buildings that inspired the style.
- Gothic Revival buildings used steeper slopes and complex silhouettes to reflect the more picturesque feel of medieval buildings.
- Second Empire buildings, the style most reliant on roof shape for identification, all used the French-inspired mansard roof.
- Queen Anne buildings typically used complex rooflines to achieve picturesqueness.
- Colonial Revival buildings, to better imitate their earlier Colonial counterparts, reverted to the simpler gable and hipped forms.

This combination of practicality and stylistic influence created buildings that relied heavily on the shape of the roof for character definition. Because roof shape is so important to the character of the building, the guidelines contained in this chapter should be followed when undertaking roof repairs and any alterations to its structure.

The Significance of Roofing Material Appearance

Like the shape and slope of the roof, roofing materials are also chosen for practical and aesthetic reasons. The choice of materials depended upon a number of factors including availability of materials,

availability of skilled artisans, roof pitch and weather conditions. Steep roofs require materials such as shingles, slate or tile to shed water. A flat roof calls for an unbroken surface. Moderately sloped roofs can be covered with metal or asphalt shingles.

In addition to providing a weather-tight surface, roof covering materials can add color, texture and pattern to the roof. Shingles can be found in a variety of shapes and colors. Wood, slate and metal offer variety in texture. The seams of metal roofs and the ways in which shingles are laid can create patterns of great visual interest. This combination of practical and aesthetic considerations has produced roofs that contribute to the overall architectural character of York.

General Guidelines for Roof Alterations

- The form and pitch of historic roofs should be maintained on all sides visible from public streets and alleys.
- Original roofs should not be raised to accommodate additional stories.
- Elements should not be added to historic roofs if they will change the overall silhouette as seen from public streets and alleys.

Determining Original Materials

If you are unsure of the material originally used on your roof, check to see if there are other materials under the current roofing materials. These may be the original roof covering. Also check historic photographs, ask neighbors and look for similar buildings in your neighborhood.

Guidelines for Roof Material Details

- If new roofing details will be readily visible, their appearance should be based on architectural evidence or on historic prototypes.
- The spacing of the seams on a standing seam metal roof will affect the building's overall scale and should therefore match the original dimensions of the seams.

Guidelines for Determining if Roof Materials Should Be Replaced:

- Calculate the amount of damaged and missing material. If the amount is less than 20% and the roof is in generally good condition, the material should be repaired. If the amount is over 20%, consider replacement. If the amount is near 20%, consider the age and condition of the roof in relation to its expected serviceable life. Remember, the older the roof gets, the more repair it will need.
- Don't replace an entire roof if only one slope is deteriorated. If one slope has weathered more heavily than the other slopes, consider replacing it and repairing the others if allowed by code.
- Check for the source of any active leaks. Gutters, valleys and flashing are at fault more often than roof covering materials. Don't replace materials if other features are the source of leaks.

- Check the roof rafters and sheathing for moisture stains and rot. Deteriorating materials can hold moisture that will cause adjacent wood to rot. Replace wood and structural members as necessary. If only underlying roof elements are deteriorated, attempt to carefully remove and then reuse the historic roof covering materials once the underlying trouble is resolved.
- Check to see if the fasteners are corroding, loose or missing. Replace the fasteners and reuse the materials.
- Consider the availability of appropriate replacement materials.

Deterioration and Replacement of Roof Materials

The most commonly used roofing materials in York are slate, metal and asphalt shingles. Each of these materials is described below. Information is also provided on typical patterns of deterioration and replacement options.

SLATE

Slate began to be used during the Colonial period, but its initial use was limited because of cost. In the mid-19th century, canals and railroads made slate more accessible and economical, and it became more widely used. The color and texture of slate varies according to its place of origin. Gray, blue and green shades are available. In York, gray and blue-gray slates are common. The remaining slate roofs in York are a significant historic resource; their preservation should be a priority.

Deterioration: The most typical problem with slate is with the nails used to install it. Iron nails usually fail before the slate does. If this happens, reattach the historic slates with copper nails and copper flashing. Another problem with slate is delamination. As slate weathers, its surface is slowly chipped away. The slate scales and thin layers flake off.

The slate eventually becomes soft and spongy and the inner layers begin to fall apart. In this condition, slate will hold moisture and can cause adjacent wood to deteriorate. Slate in this condition should be replaced. Missing slates or slates with visible holes, cracks or breaks should also be replaced. Slates that have slipped should be reattached. A simple method to determine the condition of slate is to press firmly on the slate with your hand. Sound slates will be unaffected. Deteriorated slates will feel brittle and crack.

Replacement Materials: A number of manufacturers continue to offer new natural slate in a variety of shades. Salvaged slate is also available from a number of suppliers. If you choose to use natural slate, find a supply that matches your roof and get enough for current needs and for future repairs. A variety of synthetic slate look-alike products are also available in today's market. These products have a ceramic, concrete, fiber-cement or mineral-polymer base. Appearance varies among the types and manufacturers. Review as many samples as possible before choosing one.

Caution: Beware of roofers who insist that slate roofs cannot be repaired. Be sure to hire a roofer who specializes in slate. Note: Clay tile roofs are similar to slate roofs in most respects. Slate, asbestos and clay tiles are fragile - don't walk on them.

METAL

Metal roofing, including lead, copper, tin-plated iron and terne plate, began to be used in the 19th century. After about 1850, when manufacturing facilities for these products were established in the United States, sheet metals became more popular. To cover roofs of low or moderate pitch, individual sheets are joined by upright (standing) or flat seams.

Deterioration: Metal roofing should last as long as it is painted. Historically, tin plating or galvanizing took care of this, but plating can wear, and once worn, iron will rust. Metal roofing can also deteriorate from chemical action caused by pollution and acid rain, which cause pitting and streaking. Because metal expands and contracts with changes in temperature, metal roofs are subject to thermal movement, buckling and warping. These problems can lead to cracks in joints and open seams. Metal roofs are also subject to corrosion that occurs when incompatible materials, such as copper sheets and iron nails, are in direct contact. If metal roofing is severely rusted, if it contains numerous holes and splits, if several sheets have buckled or warped, if edges and joints are disfigured, or if there are large areas of thin or worn material, consider replacing the material in kind. If only a few spots have rusted or if a few holes exist, proceed with repair rather than replacement. If a single sheet has slipped, repair.

Replacement Materials: Sheet aluminum, copper, lead-coated copper, galvanized metal, painted steel, terne plate and zinc are all available today, as are a variety of metal coatings. Metal shingles, to match those used historically, are available, but no closely matching substitutes are available for sheet metal. Fix all structural problems before reroofing. Ensure that gutters, downspouts and flashing operate properly.

ASPHALT SHINGLES

Asphalt shingle roofs were introduced to the building market around 1890 and gained wide popularity by about 1910. Asphalt shingles are made of asphalt-saturated felt or fiberglass, embedded with mineral granules to reflect the heat and ultraviolet rays of the sun. They were considered a good roofing material because of their relatively inexpensive cost and their fireproof quality. If your building was constructed before 1890 and it currently has asphalt shingles, the roof was probably originally covered with slate, wood or metal.

Deterioration: Asphalt shingles can deteriorate due to improper installation. Wind can lift and dislodge them. Over time, shingles may curl and lose their mineral covering. If more than 20% of asphalt shingles have curled or warped, if the mineral granule surface has been abraded, if they are cracked or dried out, if the overall surface is lumpy, if moss covering is pervasive, or if the surface has been repeatedly patched, consider replacement. Remember that trees may stain light colored shingles.

Replacement Materials: Most asphalt shingles available today are reinforced with fiberglass. These are an acceptable replacement for the earlier felt-based shingles. Manufacturers are now producing thicker asphalt-based shingles to suggest the appearance of natural materials like slate and wood. These are not appropriate for 20th-century houses that were originally roofed with asphalt shingles. For all buildings, beware of dramatic colors on the roof; they may make it more difficult to choose compatible colors for your building later.

WOOD SHINGLES

Wood shingles of white pine, oak, elm, cypress, redwood and red cedar were used for roofing throughout American architectural history. Because they are a fire hazard, wood shingles were typically replaced as other more fire resistant materials became available. In the second half of the 19th century, this typically meant metal sheeting. As the Shingle Style emerged at the turn of the 20th century, wood shingles again gained popularity.

Deterioration: Wood shingles are subject to all the typical sources of wooden wall deterioration (see Exterior Wood Walls chapter). If wood shingles appear thinned, eroded, cracked, cupped, split, spongy or warped, the shingles are probably no longer providing sufficient weather protection. If only a few shingles are missing or damaged, replace them individually. Splits or holes in wood shingles can be treated with a piece of aluminum or galvanized steel under the shingle and roofing cement in the hole or crack. Moss and fungi on wood shingles hold moisture that can speed deterioration. Attempt to dry the roof by trimming trees that block the sun, and consider fungicide treatments. If a significant amount of water damage is visible in the attic, consider shingle replacement.

Replacement Materials: Southern pine, white pine, white oak, red cedar and white cedar shingles are available today for replacement roofing. Fiber-cement shingles intended to match the appearance of wood shingles and wood shakes are also available.

Choosing Replacement Materials

When choosing replacement materials, cost and the life of the material are important factors. For example, slate and tile will last about three times longer than asphalt shingles. Additional factors for consideration include the fact that asphalt shingles will increase in price each time they are purchased, and if scaffolding is required, it will be required two additional times as well.

Replacing historic roofing materials in kind is preferred. Most historic materials continue to be available today. In addition, new technologies are making possible the fabrication of a number of substitute materials that more closely duplicate the appearance of historic materials. As these technologies continue to improve, the HARB is open to considering them as replacements for materials that are beyond repair when economic factors are a consideration. Samples of these materials should be obtained for review. Remember, although most paint color is not reviewed by the HARB, the color of roofing materials is reviewed.

Guideline for Choosing Replacement Materials

If the roof is readily visible, the alternative material should match as closely as possible the scale, texture and coloration of the historic roofing material.

Guidelines for Replacement Roof Materials

1. If the roof is weather-tight, do not replace materials.

2. Before replacing a roof, identify the historic material, configuration, detailing and installation.

3. Fix all structural problems before reroofing. Ensure that gutters, downspouts and flashing are secured and operate properly.

4. Replace old shingles with new shingles in the original material. For example, replace slate shingles with slate shingles.

5. If replacing an entire roof, replace with the same type of material. For example, don't replace shingles with sheet metal roofing.

6. Attempt to duplicate the variety of colors, textures and patterns of the original roof.

7. Avoid roofing over an existing roof. Check building codes for prohibited installations.

8. Roofing projects pose significant dangers to personal safety. Be sure to take all necessary precautions, or hire a qualified professional to undertake the work.

9. Reuse intact roofing material like slate or tile when only the substrate requires replacement. Verify permissible reuse with your building inspector.

Flashing

Flashing is the thin metal material used to prevent water penetration into areas of your roof that are difficult or impossible to protect with the roof covering alone. Most roof leaks are caused by deteriorated flashing. Leaks don't necessarily mean that the roof material (such as slate) is deteriorated and must be replaced. Flashing is typically installed around chimneys, dormer windows, vents and at the intersections of additions, porches, bay windows and parapet walls. Copper, terne, aluminum, steel and lead are all used for flashing. Copper has the longest life. Steel has a shorter life span than copper. Aluminum has a shorter life than steel and easily tears, twists and punctures.

Check the condition of the flashing whenever you are making roof repairs. If a new roof is being installed, install new flashing if the existing material is not expected to last as long as the new roof.

Guidelines for Rooftop Features

Some buildings include decorative and functional elements that are attached or built into the roof and that can be significant in defining the character of the building. Typical rooftop features are cresting, finials, weathervanes, cupolas, dormers and chimneys.

The guidelines below should be followed when treating any features of this type.

- Repair rooftop features before replacing them.
- If deterioration demands replacement, replace rooftop features with features based on the original design in the original material.
- Avoid removing a rooftop feature without replacing it.

- If matching the design of the historic feature is not feasible, create a simplified design based on its size, scale, massing and appearance.
- Avoid adding features that will change the roof configuration. If elements must be added, place them on slopes of the roof not visible from the street.
- Avoid adding new rooftop features that create a false historical appearance based on insufficient documentation.
- New features should be compatible in size, scale, material, color and detailing to the historic building.

OPTIONS FOR ROOFING

1st CHOICE: Clean and maintain gutters, downspouts and flashing. Reattach loose shingles. Ensure that nails and other fasteners are secure and without corrosion. Fill small cracks in sheet metal with appropriate materials - a temporary repair.

2nd CHOICE: If less than 20% of the slate or wood shingles on one slope are damaged, replace the damaged or missing shingles with new shingles that match the original in material, size, shape, color and other visual characteristics.

3rd CHOICE: Replace damaged or missing roofing material with new material that matches the original on the prominent portions of the roof. Replace with a compatible substitute material in less prominent areas. If the roofing substrate will be replaced, be sure to reuse original undamaged materials when reroofing.

4th CHOICE: If new shingles in the original material cannot be obtained, replace missing shingles with new shingles in a substitute material that conveys the same visual appearance as the original shingles. If the original shingles were varied in color, attempt to reproduce this historic color variety. If the original type of sheet metal cannot be obtained, replace the original with new sheet metal in a substitute material that conveys the same visual characteristics as that of the original.

Rooftop Features

Chimneys: One of the main elements in the visual profile of a house is its chimney, and many chimneys were originally built to match the architectural style of the house. For these reasons, the character of a chimney should be retained when improvements are being made. Because of their exposed position, chimneys are particularly susceptible to the effects of wind, rain and frost. Brick and stone chimneys are subject to the same problems as brick and stone walls (see Exterior Masonry Walls chapter). Deteriorating flashing can also be a problem (see the information on flashing earlier in this chapter). Even if chimneys are no longer in use, they should not be removed or replaced.

Dormers: Avoid adding dormer windows to prominent slopes of the roof. If they are added on other slopes, they should be in proportion to the building. New dormers should have roof forms that match those of existing dormers, or if historic dormers are not present, the dormer roof should match the house roof or should be compatible with it. See the Windows and Doors chapter for more information on windows.

Snow Guards: Snow guards, also called snowbirds, are often found on York's roofs. They were traditionally installed to avoid dangerous snow slides and to protect gutters, eaves and cornices from snow and ice damage. Some early builders installed them to increase the insulating effect of snow on the roof. Many of these elements were decoratively designed. They are often found near the eaves at the lower edge of slate and metal roofs in staggered rows, or on steeper roofs in greater quantities. The number of snow guards used depended on the slope of the roof. Typically, iron or copper wire was used.

Skylights: Skylights were often used historically to bring light into a windowless area such as a stairwell. They were always installed into a flat roof and were never visible from the street. If new skylights are added, they should be added only to roof areas that are not visible from public streets and alleys. They should be flat and their placement should be compatible with the other windows of the building. Installation should not damage historic materials.

Chimney Styles

Many buildings were designed with chimneys that matched the style of the building. Such chimneys are character-defining features and should be retained.

Chimneys on Federal style buildings were typically tall, plain shafts, occasionally with molded caps. Sometimes two chimneys were joined to form the letter H in gable end walls. These designs were copied in the 19th and 20th centuries for buildings designed in the Colonial Revival style.

Gothic Revival chimneys were often divided into a base, middle and cap. They often had round or octagonal shafts, and were treated with patterns of brickwork. Multiple stacks might be grouped together on a platform.

Queen Anne chimneys used unusual shapes, fanciful embellishments, modeled brickwork, protruding shelves, variegated patterns, pilasters and stringcourses. This degree of detail added to the visual complexity of the designs of this time period.

Gutters and Downspouts

Gutters and downspouts have been used for decades to carry water off the roof and away from the building. Some early-19th-century houses were equipped with built-in gutters. If your house has them, they are the best option for removing water from your building. Make every effort to maintain and retain the system in operating condition.

Gutters and downspouts have been made of wood, copper, galvanized steel, aluminum and vinyl. Historic wood and copper gutters and downspouts are relatively rare and should be preserved. Copper gutters are durable, they don't need painting, and they take on a natural patina that protects them from deterioration. Galvanized steel with soldered joints is more economical than copper. Aluminum is less durable than steel and dents easily. Vinyl gutters expand and contract dramatically, become brittle with age, and may fracture in cold temperatures.

Gutters with a half-round profile are more appropriate for historic structures than the K-style profile. Plain round or rectangular downspouts are more appropriate for historic buildings than corrugated ones.

Regularly cleaning gutters and downspouts, patching holes, and mending broken or loose elements will protect the roof and associated features. If additional gutters and downspouts are required, they should be installed on walls that are not readily visible from public streets and alleys. If they must be installed on main building walls, painting them the color of adjacent building materials will help hide them. Some crown moldings may also disguise them.

Where the Roof Meets the Wall

The part of a building where the roof meets the wall is often treated with ornamental elements. A decorative projection in this location is known as a cornice, which may be elaborately detailed or simple and refined. Cornices contribute significantly to the character and style of a building. They may include simple boards, moldings, panels, brackets, medallions and ornamental brickwork. While most of these decorative cornices are found on the fronts of buildings, the top of a side wall may also be embellished with windows and related trim, vents, shingles and/or siding, stickwork, bargeboards, finials and other ornamental details.

All of these elements are subject to weather damage, especially from water entering at the joint between the wall and the cornice or molding materials. Due to the distance from the ground to these elements, this damage often goes undetected. See Exterior Masonry Walls, Exterior Wood Walls, and Windows and Doors chapters for additional information on deterioration and treatment.

Don't remove these elements simply because pieces are missing or damaged. Instead, look for replacement pieces or stock elements that could be used as substitutes. Never cover these elements with aluminum, vinyl or other materials. This hides the important architectural elements and increases deterioration.

PORCHES

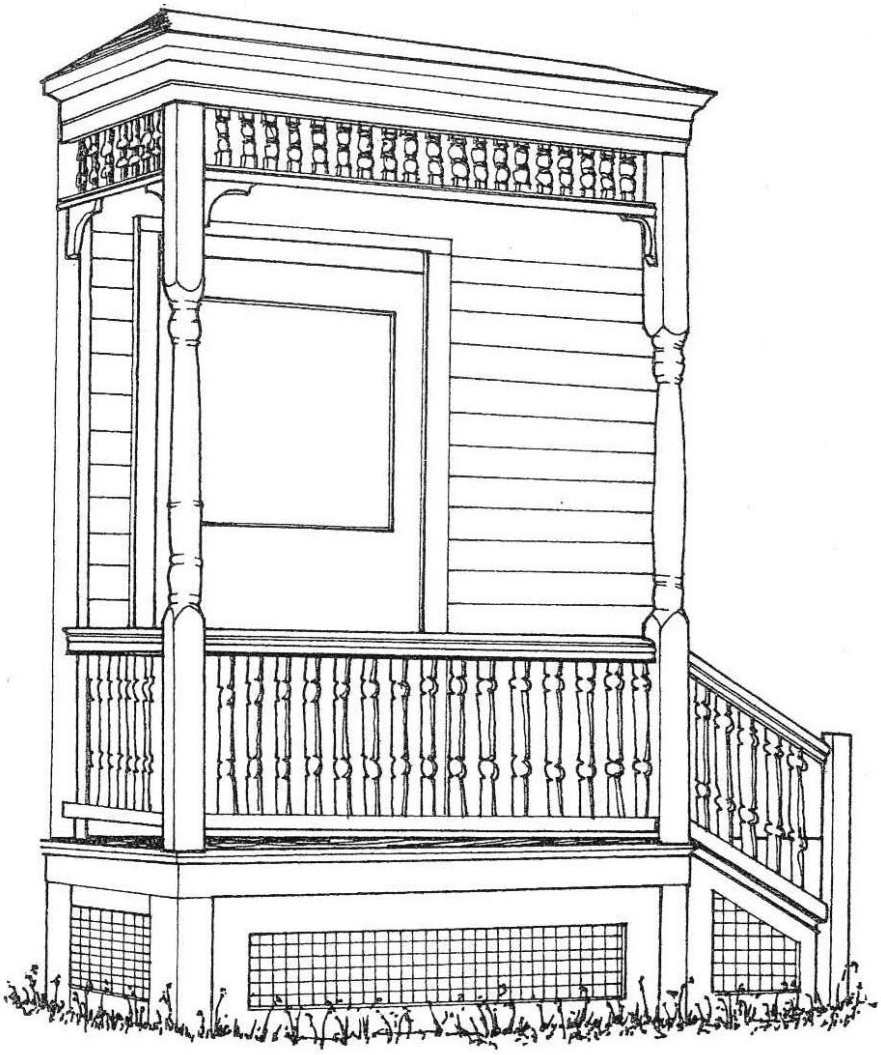
Principle: Identifying, retaining and preserving entrances and porches – and their functional and decorative features – that are important in defining the overall historic character of the building, such as columns, pilasters, balustrades and stairs. Where a porch has been a primary character-defining feature of a front facade, this should continue. In addition, a replacement porch should be in character with the historic building in terms of scale, materials and detailing.

Introduction

Porches are among the most visible features of older houses. They are also some of the most frequently altered features.

Porches take a variety of forms. Common forms include single-story porches that extend across the full width of the building's front wall, and much shorter porches that shelter only the building's main entrance. Two-story porches, porches on side and rear walls, and porches that wrap around the corners of buildings are also found.

Another common porch type features columns or pilasters (columns set against the wall) at either side of the doorway with ornamental moldings or a pediment (a triangular element with moldings) above. A modestly designed pediment-like hood projecting from the wall above the entrance is also considered to be a simple version of a porch.



Regardless of the size or scale of the porch, the component elements – floors, stairs, balustrades, posts, columns, pilasters, entablatures, pediments, ceilings, roofs, trim and other ornamentation – are essential to the distinctive character of the building

Many porch elements are protected from the weather by the porch roof. Other porch elements, like stairs and railings, receive hard use and exposure to weather throughout the years. Consequently, porches require careful maintenance to retain their unique character.

The Repair of Porches

- Carefully inspect deteriorated porch elements. Replace only those parts that cannot be repaired. For example, the bases of porch columns are often a major site of extensive deterioration. But a deteriorated column base does not necessarily require the replacement of the entire column.
- Avoid introducing new materials that were not historically a part of the porch. For example, don't replace wooden posts with brick, metal or vinyl posts, or with other synthetic materials.

Guidelines for Porch Repairs

OPTIONS

1st CHOICE: Using standard maintenance techniques, repair the damaged elements of the porch in place and reuse the original parts of the porch, including moldings and three-dimensional turned balusters, to restore the porch to its historic appearance.

2nd CHOICE: If individual porch elements are beyond repair, replace only those elements with new elements of the same material and visual characteristics.

3rd CHOICE: If a major portion of the porch has deteriorated beyond repair and the original design cannot be replicated, use stock lumber and moldings to create a simplified design that conveys the same visual characteristics as the original porch. Duplicate the dimensions and materials without the extensive detailing.

Enclosing Porches

Most porches were meant to be open exterior spaces. Enclosing an open porch is a radical change on any side of a building, and should never occur on the front of a building. If a porch must be enclosed on a side or rear wall, the options and guidelines listed below should be considered.

OPTIONS

1st CHOICE: Enclose a porch on a side or rear elevation using temporary elements, such as screens that can be removed at the end of the summer or windows that can be removed at the end of the winter.

2nd CHOICE: Enclose a porch that is on a side or rear elevation using recessed translucent materials with compatible framing. See the guidelines below.

Guidelines for Enclosing Porches

- Any changes or additions to historic porches should be reversible without damaging historic materials.
- The enclosure should be constructed primarily of translucent materials, such as clear glass or screen.

- Recess added materials behind the existing porch structure to assist in maintaining the open character of the historic porch.
- All added material should have minimal vertical and horizontal framing elements. Framing elements that are present in the added material should match the locations of existing horizontal and vertical porch elements.
- Screen framing members should be painted to blend with the screen rather than the porch framing.
- Retain all salvageable elements, ornamentation and detailing in place.
- Ensure that the closed porch still appears to be a porch, not a closed room.

Remember: A replacement porch of similar visual character is better than no porch at all.

STEPS

Steps need maintenance because they receive heavy use, are constantly exposed to the weather, and are in close contact with the ground. If your steps are deteriorated beyond repair and must be replaced, follow these guidelines:

Rebuilt steps should continue the materials of the porch.

- Wooden stairs for frame houses are historically correct. They should not be replaced with concrete.
- Brick steps are typically appropriate only for porches with brick posts and foundations.
- Stone steps are typically appropriate only for porches with stone posts and foundations.
- Concrete steps are rarely appropriate for older historic buildings. They may be appropriate for some early-to-mid-20th-century buildings.

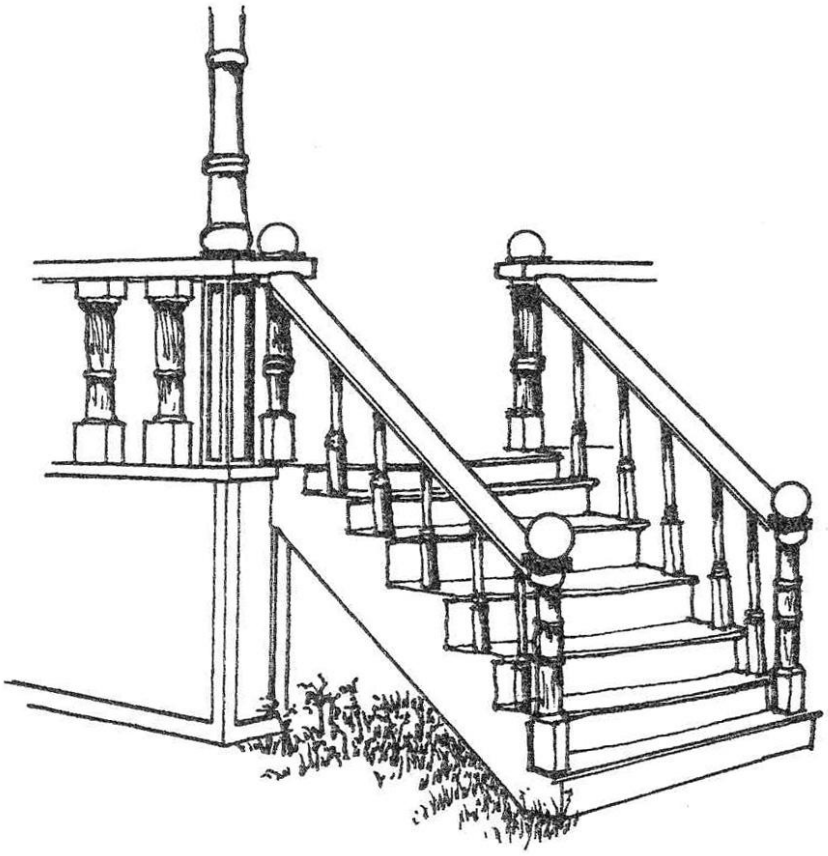
Rebuilt steps should maintain the historic orientation.

- Steps were typically, but not always, positioned in line with the front entrance.

Replacement step railings should match the balustrade of the historic porch in material and detailing.

- Wrought iron or aluminum railings and columns are not good substitutes for wooden elements. Their lightweight appearance is inappropriate.
- Most Victorian-era porches had step balustrades that ended in a newel post similar to the porch columns.

Note: Historic wooden steps and stair railings composed of turned balusters and molded handrails should not be replaced with concrete steps and "ranch style" railings. The latter design appears insubstantial and out of character with the historic building.



BALUSTRADES

Options for Replacement Balustrades

- Turned balusters to match the original.
- Stock lumber and moldings.
- Plain lumber of same proportions and spacing as the original.

Not Recommended

- Wrought iron post and railing
- A wooden porch balustrade and an iron stair railing.

Replacement balustrades should maintain the overall character of the historic balustrade.

- Don't replace a turned balustrade with latticework.
- Don't replace a turned balustrade with solid panels.
- Millwork to replace turned balustrades can be made.

ADDING A NEW PORCH

When is a New Porch Appropriate?

- When it can be documented by historical, pictorial and physical evidence that a porch of the type to be erected once existed on the building.
- When it can be determined that buildings of similar type, style and date of construction were originally built with porches of the type to be erected.

Determining if a Porch Existed

- Railings, floors and roofs may have left shadows on walls or trim. Check beneath newer siding.
- Historic maps and photos may show earlier porches or steps.
- Look for similar buildings in your neighborhood and compare porches. But remember that all porches are not necessarily original or historic.
- Check basements, attics and other storage areas for original pieces.
- Ask your neighbors.

Guidelines for Adding New Porches

- Thoroughly consider the factors of size, shape, scale, profile, massing, materials, color and texture in the design.
- Avoid hiding, damaging, destroying or otherwise negatively affecting existing historic materials and features of the original building.
- Build a wooden porch if the building has wood siding or wood shingles. For a masonry building, the porch may be wood or masonry. Check style guides and similar buildings to determine which is more appropriate.

Priorities for Porches

- Ensure that porches are never left unpainted and are not treated with a "natural" finish. Treated wood should be painted following its initial period of weathering.
- If a porch must be enclosed, ensure that the enclosure does not appear solid.
- Avoid constructing entrance porches or door hoods where they never existed. Such additions give buildings a false appearance and diminish the importance of the buildings that do possess those elements.
- If a new porch must be added, build it on a side or rear wall that is not visible from a public street or alley.

Door Hoods

Many buildings have hoods over the entrance door rather than full porches. These door hoods may be simple or highly ornamented. They may be rounded or triangular in shape. Such hoods offer a degree of shelter, and add detail and interest to the entrance and the overall building. Remaining door hoods should be retained.

COMMERCIAL BUILDINGS AND SIGNS

Principle: Identifying, retaining and preserving storefronts – and their functional and decorative features – that are important in defining the overall historic character of the building, such as display windows, doors, transoms, kick plates, corner posts, entablatures and signs.

YORK'S COMMERCIAL BUILDINGS

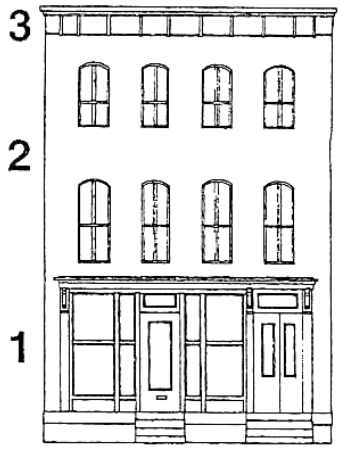
The commercial district of York today is composed of buildings that were originally constructed for commercial purposes, or for a combination of commercial and residential uses, as well as buildings that were originally constructed as residences but were later converted to commercial use. Because these buildings have different origins, they may require varying treatments. However, careful coordination of all these buildings can enhance the appearance of the business district, draw customers to the area, and make York a better place for residents and visitors to live, work and shop.

Because many of the commercial buildings are so closely spaced along the street, the facades - or front walls - of the buildings are particularly important. Alterations to the facades must be carefully considered to ensure that the special character of the building is maintained.

Typical Design

York's commercial buildings are typically three stories in height and are divided horizontally into three parts:

1. A storefront at the bottom
2. A middle section comprised mainly of windows
3. A decorative cornice at the top



Although these three parts are usually distinct, the building typically displays a single, harmonious design. This harmony is often achieved through the consistent placement of windows one above the other. Materials and details may increase this coordinated appearance. Retaining this three-part division and the characteristic elements of each part is important for maintaining the character of both the building and the overall district.

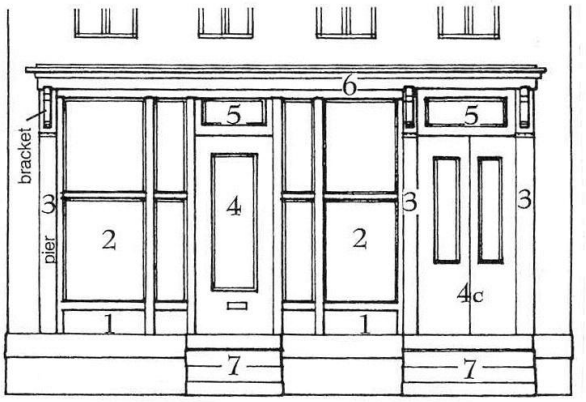
1. The Bottom of a Commercial Building – the Storefront

The lowest part of a commercial building includes the entrance to the business, large windows to display merchandise, and associated structural and ornamental features. Some converted residential buildings might only have enlarged windows, but many such buildings in York have had storefronts installed. The storefront is often the most significant feature of a commercial building. For this reason, it should be carefully maintained. For the same reason, it has historically been a prime target for alterations. Because storefronts are highly visible, sensitive design and rehabilitation can help draw customers into a

business establishment. Such rehab is also a clear sign that the downtown is an active place and this, too, will encourage consumers to shop downtown.

The storefront is the most common form for the combination of entrance and display elements in buildings. Its primary characteristic is its open quality; a storefront typically has more glass than solid materials. Historic storefronts may be constructed of wood, metal (cast iron, bronze, copper, tin, galvanized sheet iron, cast zinc, stainless steel), masonry or pigmented structural glass. Later alterations may have added plastic, imitation brick or stone, wood products or new glass to the storefront.

PARTS OF A STOREFRONT



1. Bulkheads: Bulkheads provide a base for the glass of the display windows. They are typically of frame construction, and often have raised panels.

2. Display windows: Extensive window displays were considered advertisements in themselves and visibility of merchandise was a priority for most shop owners. Large display windows typically flank the entrance in a storefront.

3. Structural supports: Constructed of wood, masonry or cast iron, these supports are necessary to carry the weight of the structure above and to allow the use of large display windows. These supports are typically located on both sides of the windows and entrance doors.

4. Entrance: Storefront entrances are either set flush with the windows and wall, or are recessed to provide more display area. Sometimes a secondary entrance that leads to the upper stories is incorporated into the storefront design. Remaining historic wooden doors are important and should be retained.

5. Transoms: Transoms are windows typically located above the entrance and the display windows. They are often of multi-pane design, or fitted with stained, leaded or textured glass. Sometimes they incorporate lettering or ornamental designs.

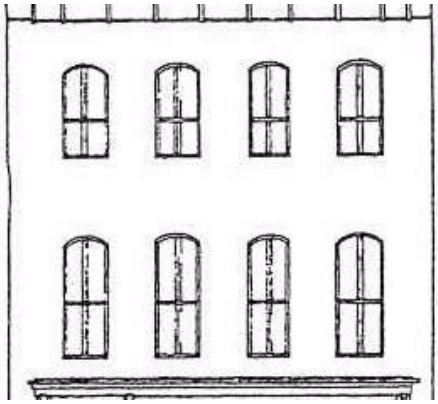
6. Storefront Cornice: A cornice (a simple or elaborate series of moldings) usually caps the storefront composition. It may include brackets, panels and other ornamental details.

7. Other Elements: Storefronts also typically include signs and awnings, and may incorporate steps and ramps into their designs.

2. The Middle of the Commercial Building

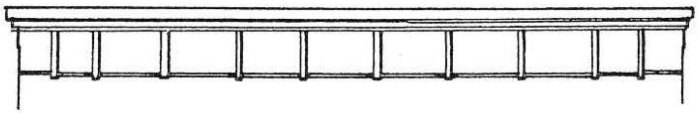
Buildings erected for commercial or business purposes usually have two or three stories that comprise their middle section. A common characteristic of these buildings is the solid quality of this middle section, especially in comparison to the first story; this area usually has more solid wall and less glass than the storefront level below. The primary architectural feature of the middle section is usually a series of regularly spaced windows. The rhythm of this spacing helps create a harmonious design, and it makes the streetscape more interesting. The windows of the midsection may have decorative sills, moldings, hoods and/or shutters, and decorative stringcourses or other ornamentation may be added between stories.

Residential buildings converted to business use may have only one story above the storefront level. In these buildings, the second story has a residential appearance and scale. In some cases, the size of the window openings has been changed and the removal of detailing has destroyed this residential character. If the residential appearance remains, it should be retained.



3. The Upper Part – the Cornice

The top of a commercial building, as viewed from the street below, is usually composed of a cornice. This is an often decorative, projecting element located at the conjunction of the wall and roof. (The actual roof of the building is usually not visible from the street.) The cornice caps the entire building design. Wood, cast iron, sheet metal and corbeled brick (bricks that are stepped progressively forward and combined in a series) are all used to form cornices. Cornices may also incorporate panels, brackets and a variety of ornamentation, and many cornices project a considerable distance out from the wall. Because they are designed as an integral part of the overall building composition, cornices are important defining elements of commercial buildings.



The top portions of residential buildings that have been converted to a business use vary considerably from the standard commercial cornice. Typically, a pitched roof remains visible, and a smaller, simpler wood cornice marks the top edge of the wall, although brackets and other ornamentation can also be found.

Repairing and Rehabilitating Storefronts

The repair and rehabilitation of a storefront can have a dramatic effect on the appearance of a building and on the number of customers who visit the building. The deterioration of individual storefront elements does not necessarily require the replacement of the entire storefront. Follow the options below to determine the appropriate treatment for a deteriorated storefront.

OPTIONS

1st CHOICE**:** If moderate deterioration has occurred, repair damaged portions in place and replace deteriorated parts with matching material.

2nd CHOICE: If a major portion of the storefront has deteriorated to a point beyond repair, salvage individual elements. Reproduce the historic storefront using the salvaged elements and new elements of the same material modeled on those salvaged.

3rd CHOICE: If the storefront is deteriorated beyond repair, and elements cannot be salvaged and/or an accurate restoration in the same materials is not possible, undertake a simplified design that conveys the same visual characteristics as the original. Key elements to duplicate include the overall composition, size, location and spacing of the components, as well as the character of openness achieved from the amount of window glass. Substitute materials that convey the same visual characteristics as the original material may be considered.

4th CHOICE: If no evidence of the historic storefront remains, undertake a contemporary design that retains the commercial character of the building, and is coordinated with the spacing of elements in the wall above. Elaborate recreations should not be undertaken without accurate documentation.

Guidelines for Rehabilitating Existing Storefronts

- Maintain the commercial character of the storefront. Avoid adding elements that appear residential in character.
- Maintain the open character of the storefront that is achieved by using comparatively large amounts of glass. If a smaller window area is desired for a new use, retain the historic windows and install interior blinds, shutters or curtains. Don't add solid materials to display window openings.
- Use materials that were used historically. Because of the high visibility of storefronts, vinyl and aluminum siding, artificial masonry, and mirrored or tinted glass are not appropriate.
- Historically, storefronts were set into the facade, not applied to it. This character should be maintained.

- Maintain the location of the historic storefront entrance. If the entrance was always at the center of the building, avoid moving it to the side.
- Avoid placing air conditioners in storefront transom windows.

Awning Guidelines for Commercial Buildings

- Awnings have a number of advantages for commercial buildings. They help control heat gain in the summer, shelter customers, provide space for a sign, and add visual interest to the building.
- Choose retractable awnings. They can be opened and closed as weather and lighting change.
- Install awnings over entrances, large first-story windows, and possibly over individual windows on upper stories of commercial buildings. On a storefront, they may be installed below the transoms or below the storefront cornice.
- New awnings should be of canvas or natural, flexible fabrics. Plastic, metal and wood awnings reinforce the hard lines of the building, and the rigid character of the material does not allow flexibility in heating and in cooling.
- Install awnings without damaging materials or hiding important features.
- Awnings should have angled profiles unless the opening is arched.
- The awning should not exceed the size required to simply cover the window or protect the entrance. An awning should not span solid wall areas.
- Lettering may appear on the lower flap or on the awning sides. It should be scaled to the size of the awning and should be compatible with other signs on the building.
- For awnings on residential buildings, see the "Windows and Doors" chapter.

Guidelines for Upper Stories and Cornices of Commercial Buildings

- Maintain the rhythm created by upper-story windows. Avoid filling in window openings, adding new openings, or otherwise altering their shape or size.
- Closed window openings should be reopened and treated as original.
- Place air conditioning units on walls that are not visible from the street. Avoid creating openings in the front wall to accommodate through-wall air conditioners.
- Retain and maintain all window moldings and trim, and other elements of the midsection of commercial buildings.
- Retain and maintain all cornices, brackets and other related features and details.
  If a historic cornice must be removed because it is too severely deteriorated, replace it with a new cornice. The new cornice may be of a simplified design, but it should convey the same character as the historic cornice. Never remove a cornice without replacing it.

Determining the Historic Appearance of Your Commercial Building

- Later storefronts often hide rather than remove original elements and details. If you are seriously considering restoration, consider carefully removing select non-historic materials. This may assist in revealing the historic character of the storefront. If historic elements are revealed, they should be retained and incorporated into restored storefronts.
- Look for old photographs.

- Look for old materials stored in the basement or attic.
- Ask your neighbors.

Guidelines for Replacement Storefronts

- Maintain the cornice height of the historic storefront and the location of the storefront and secondary entrances when designing new storefronts.
- Use materials that were used for historic storefronts, including wood, cast iron and transparent glass. Create a design of scale, massing and size appropriate to the overall building and the surrounding streetscape.
- Simplify graphics, awnings and detailing to contribute to streetscape compatibility.

Priorities for York

- Remaining historic storefronts should be maintained and repaired, not replaced.
- Storefronts that have been altered or replaced should be restored to their historic appearance.
- Retain original designs and dimensions of recessed entrances.
- Maintain the historic size and shape of window openings in the upper stories of commercial buildings. Reopen window and door openings that have been filled, and install appropriate doors and windows.
- Maintain all historic storefront cornices.

Guidelines for Residential Buildings Converted to Commercial Use

- Maintain the residential character of the building, particularly above the first story, by maintaining the historic size and shape of window openings, and the shape and character of the roof.
- If the first story of the building remains residential in character, continue to maintain and retain that character.
- If the first story has been altered to incorporate a storefront, that storefront may now be historic and significant. Maintain and retain such elements.
- If unsympathetic alterations were made to incorporate a storefront at the first story, consider other options for making the building compatible with other buildings on the street; for example, through the use of appropriate awnings and signs.

SIGNS

Signs are important parts of commercial buildings, both from a visual and a financial perspective. A clever, carefully designed sign can make a good first impression and can attract customers. A confusing, ordinary sign can detract from the appearance of a building and can turn customers away.

Signs were attached to and erected near buildings in York from the earliest periods of the city's settlement. Old photos show that sign shape, lettering and location were some of the primary elements

used to identify businesses and to attract customers. New signs advertising today's modern businesses can use these same elements to create contemporary signs that both enhance the character of the historic building and convey necessary information to the public.

The guidelines presented in this section are meant to help property owners design and select new signs that are compatible with their historic buildings and York's historic commercial area, while meeting the needs of modern business. For additional information with regard to signs, contact the City's Zoning Officer.

Guidelines for Historic Signs

- If a historic sign cannot be retained in its original location, consider moving it to a different exterior location (ensuring that the sign and the building are not damaged), or move the sign inside where the public can see it.
- If a historic sign cannot be retained, consider donating it to a museum, preservation group or salvage yard.
- Coordinate new signs with existing historic signs by using compatible sizes, shapes, colors, lettering and location.
- Make provisions for the protection of historic signs when the building is undergoing maintenance.

Historic signs are particularly important if

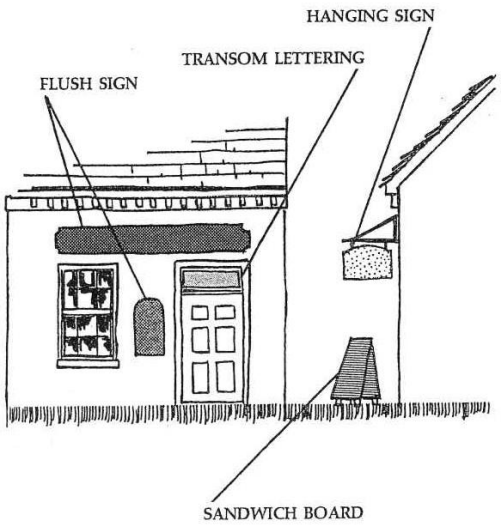
- They are associated with historical figures, events or places.
- They identify the history of the product, business or service associated with the building, district or area.
- They reflect the history or development of the building or the district.
- They are good examples or are characteristic of period signs or sign craftsmanship (i.e., gold leaf, neon, etc.).
- They are integral to the fabric of the building (i.e., structural glass, carved stone, tile floor, etc.).
- They are local landmarks.

Sign Position

The diagrams on the next page identify the various appropriate locations for signs. Locations are identified for buildings that were originally built as houses but are now used for commercial purposes, and for buildings that were originally erected for a commercial use. Not every type of sign pictured below may be appropriate for your building. The allowable sizes and number of signs are determined by the York Zoning Ordinance.

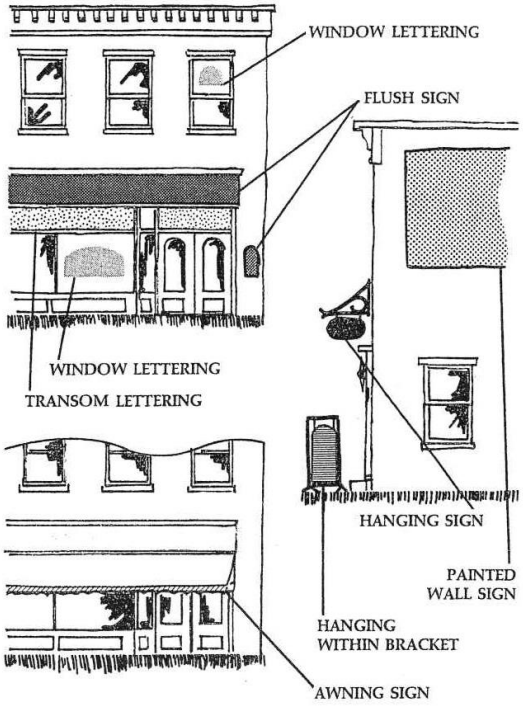
Signs for Residential Buildings

1. Hanging from a bracket perpendicular to the front wall.
2. Attached flush (parallel) to the building.
3. On the lower flap of a fabric awning.
4. Paint, vinyl or etching on window(s).
5. Temporary, movable, freestanding sidewalk or ground signs.



Signs for Commercial Buildings

1. Hanging from a bracket perpendicular to the front wall, below second-story sill level.
2. Under the storefront cornice.
3. Attached flush (parallel) to the building.
4. On the lower flap of a fabric awning.
5. Paint, vinyl or etching on window(s).
6. Temporary, movable, freestanding sidewalk or ground signs.
7. Painted on upper portions of masonry walls.



Sign Types

Hanging Signs: Hanging signs are usually hung from an iron bracket perpendicular to the wall of a building, but parallel hanging signs may also be appropriate.

Flush-Mounted Wall Signs: Flush-mounted wall signs include all signs that are more or less flat and attached parallel to, and directly against, the face of the building.

Awning and Canopy Signs: Awnings and canopies can include lettering and graphics on the lower flap or valance. Letters and ornamental elements can be painted, screened or sewn on the fabric.

Window Signs: Window signs include all signs that are attached in any way to a window. Painted signs, vinyl signs and etched signs are the most typical types of window signs found in downtown York.

Freestanding Signs: A freestanding sign is typically hung from a horizontal rail that is attached to a vertical freestanding post.

Ground Signs: Ground signs are not attached to a building or other object. They usually take the shape of rectangles and are located on lots with open land.

Sandwich Boards: Sandwich boards are two-sided, movable signs that are triangular in form. They may advertise information that changes regularly (such as menu items), but the temporary nature of the information does not mean that this type of sign should be considered makeshift. Sandwich boards should be designed as carefully as all other business signs.

Painted Wall Signs: This type of sign, which is painted directly onto the surface of the masonry wall, was frequently used historically, and is appropriate today in limited cases.

Guidelines for Attaching a Sign to a Building

The method of attaching signs to buildings must be carefully considered to minimize damage to historic materials.

- Choose methods that allow holes to be appropriately patched if the sign is removed. When possible, mount signs into mortar joints, not into masonry, so the holes can be patched if the sign is removed.
- If holes or hardware remain in the building from previous signs, attempt to place the new sign in the same location. Place signs so that significant architectural details and features, including transom glass, remain visible.

Multiple Signs

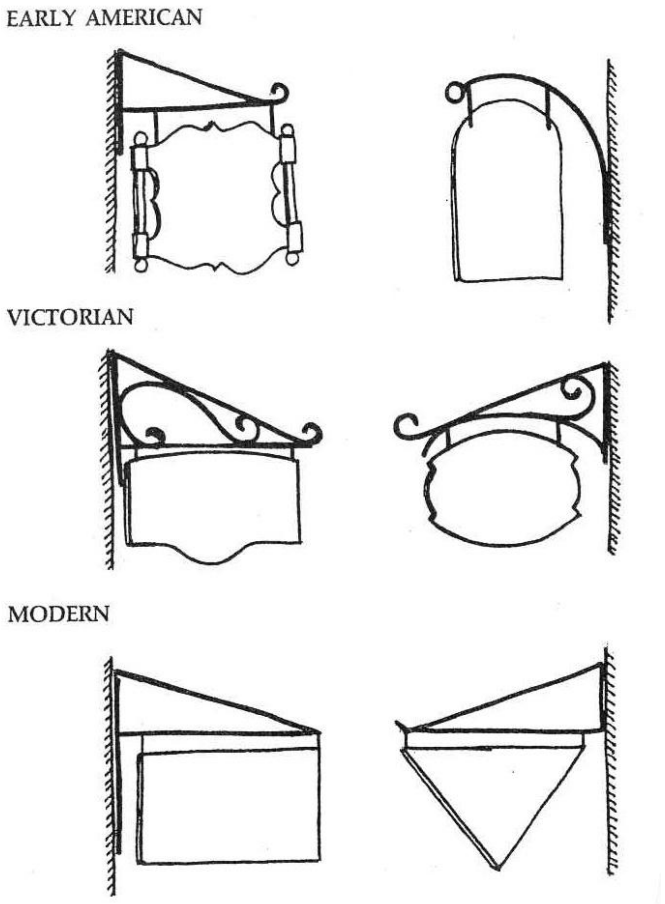
A single building may accommodate more than one type of sign, but all signs on a single building should work together in a coordinated design.

Sign Shape

Simple geometric shapes are appropriate for most signs, buildings and locations. They are recommended for signs that use large amounts of lettering.

It is best to use a fairly simple shape for small flush-mounted signs. Signs resembling shields with scrolled tops and shaped corners were common in York before 1860 and may be appropriate for your building today. For larger flush-mounted signs, simple rectangles are best. Shaped corners and ends may also be appropriate. Shapes that represent the type of business are encouraged for all sign types.

More ornamental shapes may be appropriate for hanging and freestanding signs that do not include a large amount of lettering. Window signs can use simple designs with horizontal lettering, or lettering can be set along simple curves. These signs can also incorporate graphics and logos of any shape. Because ground signs are often larger in scale, simple shapes, generally rectangles, best convey their messages.



Sign Size

Sign size is regulated by York's Zoning Ordinance. Signs should not appear to be out of scale with the building to which they are attached. They should not overpower adjacent buildings or monopolize the streetscape. Because travel through York's commercial areas is by foot or slow-moving vehicle, signs need not be large to convey their message.

Letter Treatment

- Regardless of the style of lettering used, the letters of a sign can be treated in a number of ways.
- They can be individually shaped and attached to the sign, resulting in raised lettering, which adds texture and shadow to the sign. Individually carved or shaped letters were more common on signs that were created prior to 1860.

- The letters can also be carved into the sign, resulting in recessed lettering, which also adds texture and shadow. Carved letters were used for signs throughout York's history.
- Letters can also be painted on the surface of the sign. Sign painters can use varying colors to suggest the shadows created by light shining on raised or recessed letters. Painted signs were used throughout history.

Logos

If your business has a logo or a symbol that represents the type of business conducted within, try to incorporate it into your sign. This can increase the recognition of your business and help make your sign unique.

Lettering

The style of lettering used on a sign is important to overall design and clarity. The three main styles of lettering – Serif, Sans Serif and Script – are illustrated below. Within these styles, numerous typefaces are available. "Short and sweet" works best as excessive lettering can confuse and overwhelm the reader.

Serif letters have cross strokes – or feet -- at the tops, bottoms and arms.
These are Serif letters: abcdefghijklmnopqrstuvwxyz

Sans Serif letters (also called block letters) have no added strokes.
This is an example of Sans Serif lettering: abcdefghijklmnopqrstuvwxyz

Script lettering resembles handwritten letters.
This is an example of Script lettering: *abcdefghijklmnopqrstuvwxyz*

Different styles of letters were used during different time periods. If you are attempting to accurately reflect the time period of your building, you may want to follow these guidelines:

SERIF letters have been used throughout American history and were most commonly used for signs erected until the early 20th century. Generally, simple Serif styles were used for signs created before 1860, and more elaborate Serif lettering was used for signs created after 1860. These later Victorian period signs often incorporated a number of letter styles into a single design.

SANS SERIF letters were not used until around 1920. At that time, designers considered the geometric shapes of this letter style more modern than the Serif style.

SCRIPT letters were not used as frequently as the other styles. Script lettering is more difficult to read and was used sparingly. If used for new signs, it should continue to be used sparingly. It is often successfully used for small, less important words such as *of, at* and *in*.

Material

Historically, signs were most often made of wood and were hung from wrought iron brackets. Brass plaques were also made and attached directly to the building. In the late 19th century, tin, cast iron and steel became available for signs. After 1920, steel, aluminum and plastic became popular. Leaded glass signs also became popular at this time. Business names and other designs were incorporated into leaded and stained glass transoms that were installed above doors and display windows. Tile signs gained popularity in the 1930s. Names and designs were created in tile on the floor of an entrance to a commercial building or under the display windows.

Today, signs can be made from all of these materials. Real wood can be used, but redwood, which is the preferred species, is limited and therefore expensive. Wood look-alikes include urethane board and MDO board. Urethane board is compressed and hardened foam that can be finished by any real-wood method, including painting, carving and routing. MDO board is similar to plywood and is made specifically for signs. It is composed of six layers, with the grain running in opposite directions in consecutive layers, which guards against warping. (Regular plywood is prone to warping.) MDO board has an approximate life span of seven years. Like urethane board, it can be painted, carved and routed, but it is heavier and thinner. Note: New sign materials are being developed all the time, and some may be appropriate.

Vinyl is used for signs to produce letters and graphics that are applied to windows, boards, or other surfaces. Vinyl lasts longer than paint and is easier to change. A special frosted vinyl is available; on glass, it gives the appearance of etching. Vinyl with the appearance of gold leaf is also available.

Plastic signs are widely used for commercial advertisement, but they are generally not appropriate for historic areas. Corrugated plastic, acrylic and Plexiglas are also inappropriate.

Aluminum with a baked enamel finish can also be used for signs. White is the most common color, but others are available. Vinyl or painted graphics are typically added to the surface.

Brass or other metals are sometimes used for small identification signs, markers and plaques.

Cast iron is typically used for brackets and other hardware required to hang signs. Standard scroll brackets are available, but custom designs can be created. Steel is also sometimes used for hanging hardware. When it is used, it should be finished with a dark color to resemble cast iron.

Gold leaf is a historically appropriate finish for signs. It gives letters and graphics a sophisticated, polished appearance.

Sandblasting, which is inappropriate for use on the historic buildings themselves, can be used on new signs to create special textures.

Color

The contrast between the background of a sign and the lettering of the sign is the most significant factor in legibility. Simple designs with simple color schemes are most effective. Few signs require more than three colors to convey their message clearly. Bright or bold colors detract from the historical character

of the building and overwhelm the reader. The colors of a sign do not need to match those of the building exactly, but they should complement it. If gold leaf will be used for lettering or graphics, a darker background works best. Consider dark blue, black, dark green or maroon. Providing a thin band of contrasting color at the border of the sign also helps define the sign.

Illumination

If a sign requires illumination, the lighting should be indirect, small in scale and, if possible, hidden from view. Strategically placed spot lights, halo lighting and in-ground lights are the most common forms of sign illumination in York. Internally, or directly, illuminated signs are not appropriate for historic areas and are not allowed.

Neon signs, which were made of slender glass tubes illuminated by electrified gas beginning in the 1920s, may be appropriate for a limited number of buildings. Existing neon signs can still be repaired and refurbished today.

Note: Always make sure that the sign's source of illumination does not shine into the windows of nearby residences or into motorists' eyes. Check with the City's Zoning Officer for more information on this subject.

EXTERIOR COLOR AND PAINT

Principle: Proper surface preparation, elimination of moisture problems and appropriate paint systems are essential for effective protection of exterior surfaces.

HARB Approval

Perhaps no other historic district issue is more controversial than that of COLOR. Color preference is a personal matter, and most property owners don't want to be told what color to paint their homes.

In York, approvals are **NOT** required for the selection of paint color because paint color is not permanent.

Approvals **ARE** required for:

- The selection of color when the color is permanent to the material being applied to a building
- The application of paint to previously unpainted brick, stone or masonry buildings.

For example: HARB approval is not required for the selection of a color to paint your wood porch, but HARB approval is required for the selection of the color of shingles for your roof or artificial siding for your walls.

Color Choice and Placement

When it comes time to paint, you can determine exactly which colors were applied to your building in the past and recreate them, or you can create new color schemes for your building. Included in this section is information on colors that are appropriate for the various historic styles that are found in York and suggestions on appropriate painting techniques.

METHODS FOR CHOOSING COLORS

- If you want to exactly reproduce the colors used on your building in the past, you may wish to have an expert analyze chips of paint.
- Alternatively, you could choose colors for your building from the range of colors that were used during the time period in which your building was constructed.

The table at the end of the chapter outlines the colors that were typically used for buildings of the different architectural styles and periods. This information can be used to:

- Choose colors for materials or elements to be added to your building, such as roof shingles, artificial siding or shutters.
- Select historically appropriate paint colors for your building, and to determine where to place those colors.

General Guidelines for Color

- Color can emphasize or de-emphasize architectural elements: darker colors recede and make your building look smaller, while brighter and lighter colors stand out and make your building look larger.
- Color can be used to tie all the parts of a building together.

- Many buildings require only two colors of paint; buildings with more detail may require three colors. Few buildings are ornate enough to require more than three colors.
- Appreciate the natural color of unpainted masonry.
- Pick your colors in daylight.
- Building style, period of construction, materials and setting contribute to the appropriate choice of paint color. Consult the table for basic color guidelines.

Repainting Your Historic House

OPTIONS

1st CHOICE: Sometimes the appropriate procedure is no treatment at all. Don't repaint if cleaning is all that is required.

2nd CHOICE: Paint only those portions of the building that have deteriorated. For example, repaint only the deteriorated trim if the walls are in good shape. Or paint only the deteriorated south wall if the other walls are in good shape.

3rd CHOICE: Proceed with removing deteriorated paint to the next sound layer by hand scraping and hand sanding, and repaint following the guidelines in this manual.

4th CHOICE: Strip all layers of paint down to bare wood. Before removing all the paint, conduct a paint analysis to obtain all historical information from the building before obliterating evidence of the historical paints and their sequence. Remove paint using chemical strippers or electric heat plates only as necessary to remove failed paint layers.

Deciding When to Paint

You DON'T Need to Paint if:

- There is no peeling, blistering, flaking or chipping.
- The building is only dirty.
- The color is only fading.
- A color change is all that is wanted. Excessive layering is a primary cause of failure.
- Your stone, brick or stucco building has never been painted. Painting can damage these buildings.

You DO Need to Paint if:

- There is excessive peeling or other paint failure (but consider touch-up if failure is contained in a small area). If the paint is thicker than 1/16 of an inch (approximately 16-30 layers), the paint should be removed down to the bare wood.
- If wood is bare. Exposed wood should never be left unpainted.

Did You Know?

Many old masonry buildings in York are made of soft bricks that were meant to be painted. Some were painted to hide poor quality brick or stone. Removing the paint from these buildings would drastically change their character and cause the bricks to erode. If you are unsure whether or not your building should be painted, call Historic York, Inc. for help.

Remember: Paint only the parts of the building that need to be painted. Don't paint if the existing paint is in good condition. If the trim is the only part showing signs of wear, paint only the trim.

Why Your Building Won't "Hold Paint"

If you find yourself repainting your building more frequently than every 5 to 8 years, one of the following reasons may be to blame:

- There is too much moisture present.
- Your paint was applied under adverse conditions.
- Your paint was applied with inadequate surface preparation.
- There may be latex paint over oil base paints.
- Substandard materials were used in the past.

Excess Moisture

Beginning in the 1940s and '50s, new construction materials, moisture-generating appliances, improperly installed insulation, and the restrictions on using lead-based paint made it more difficult to achieve a long-lasting paint job on wood siding. Periods of minimal maintenance compound the problem. Check the locations of your paint failure against the list below, and consider making the appropriate repairs to eliminate excessive moisture.

IF FAILING PAINT IS LOCATED NEAR THE ROOF LINE

- Maintain all roof covering materials, gutters and flashing.
- Cap unused chimneys.

IF FAILING PAINT IS LOCATED BELOW WINDOWS

- Clear weep holes of storm windows. Maintain sills and caulking.
- Position window air conditioners so that water does not stream down the side of the building.

IF FAILING PAINT IS LOCATED OUTSIDE OF BATHROOMS, KITCHENS OR LAUNDRY ROOMS

- Keep relative humidity below 40% inside your home. Consider installing a dehumidifier if necessary.
- Ventilate bathrooms, kitchens, and laundry rooms and clothes dryers to the exterior of the house.

IF FAILING PAINT IS LOCATED NEAR THE GROUND

- Move shrubbery that is too close to the house.
- Be sure that wood does not come in contact with the soil.
- Be sure that all ground and walkways are sloped away from your building. Be sure that downspouts and splash blocks are positioned to carry water **AWAY** from the building.
- Consider damp proof courses and below grade waterproofing with the assistance of a trained professional.

IF FAILING PAINT IS NOT CONCENTRATED IN ANY SINGLE LOCATION

- Properly treat all wood or masonry.
- Maintain all surface coatings on wood elements.
- Regularly inspect and maintain all mortar joints.
- Keep relative humidity below 40% inside your home. Consider installing a dehumidifier if necessary.
- Avoid making your house completely airtight.
- If walls or attics have been insulated, check to be sure that an effective vapor barrier was properly installed.

Proper Conditions for Painting

TEMPERATURE AND WEATHER

Weather conditions can dramatically affect your paint job. Paint should be applied when the temperature is between 50 and 90 degrees, and at relative humidity levels below 60%. Painting in direct sunlight can also ruin a paint job; it is best to paint in the shade. Always paint strictly according to the manufacturer's directions.

SURFACE PREPARATION

If excess moisture or weather conditions are not causing your paint to fail, your surface may not have been properly prepared. The surface must be clean and free of loose paint. Harsh or abrasive methods should never be used to clean the surface or to remove the paint. Such methods involve considerable risk because they can remove the outermost surface of the material, speeding future deterioration, and they can destroy delicate detailing.

Avoid Using These Abrasive Methods

- sandblasting
- pressure washers
- chemical stripping
- rotary grinders
- open flame torches

Use These Methods Instead

- hand scraping
- hand cleaning
- light hand sanding

Tips for Preparing a Surface for Paint

- Only paint a clean surface. Use household detergent, water and a natural bristle brush.
- After cleaning, always dry, treat and prime all surfaces before repainting.
- Wood that is very dry may not accept paint well. An application of boiled linseed oil, cut 50% with paint thinner or turpentine, can condition the surface for painting with an oil-base primer.
- New cedar clapboards may require a light sanding prior to painting.
- If preparation involves lead-based paint, call the National Lead Information Clearinghouse at 800-424-LEAD.

Before You Repaint, Look at Your Paint and Ask These Questions

- What kind of paint failure is evident? Is it peeling, blistering or chipping?
- Where is the paint failure? Is it under the roofline, or is it outside the bathroom?
- How has paint been applied in the past? Infrequently, with poor quality products, or on the hottest day of the year?

Answers to these questions can help you determine the cause of paint failure and help your next paint job last longer.

Remember: Only after thoroughly inspecting all the painted exterior elements of your building, and identifying each paint surface condition and cause of deterioration, can an appropriate program be developed to remedy exterior paint problems.

When Should ALL Layers of Paint be Removed from Wood?

- When painted exterior wood surfaces display continuous patterns of deep cracks.
- When extensive blistering and peeling reveal bare wood.
- When windows, shutters or doors have been painted shut.

- When new wood is being pieced in and a smooth transition is required.

When Should ALL Layers of Paint be Removed from Masonry?

- If a masonry building was not painted historically, **and** if the paint is damaging the building.

Guideline: Remove paint from historically painted surfaces only to prevent deterioration.

Remember: Remove deteriorated paint to the next sound layer using the gentlest means possible.

Warning: Any method that can remove paint can harm you and your building if not used properly.

Oil or Latex – What's the Difference?

Oil paints have a linseed oil base that penetrates the surface of wood and seals it against moisture. Modern oil-based paints generally have a much lower linseed oil content than historic paints. Alkyd resins have replaced the oil in these cases. Preservative, penetration, adherence and durability qualities are generally better with oil paints, but they are harder to clean up than latex. Oil paint is the type found on most historic houses; until about 1970 it was the only paint used.

Latex is a modern paint that is water-based. It is less durable, easier to apply and easier to clean up than oil. Recent manufacturing techniques are improving these paints. Latex breathes more than oil and allows moisture in masonry to escape; however, it exerts more tension on the underlying surface and can pull underlying layers of oil paint away from the wood.

Which Should I Use?

- Oil over latex can lead to serious problems. Opt for oil over oil and latex over latex; however, environmental regulations may complicate this rule. If changing from oil to latex becomes necessary, see below.
- If you paint latex over oil, completely prime the old surface with an oil primer that is compatible with your top coat of latex. The oil primer will bond to the old surface and provide a new, flat surface for your latex. If you must use a latex primer over the oil, be certain that all dirt, chalk and gloss are removed from the old surface before beginning.
- Once you use latex, you can't go back to oil without removing all layers of paint down to the bare wood.
- Oil paints are good for hard-use items like doors and windows.

Clear Finishes and Stains

Clear finishes and stains are not appropriate for wood surfaces that were historically painted. New wooden elements added to historic buildings, such as replacement porches, should always be painted. Shingles that were historically stained, such as those on upper stories of bungalows, should not be

painted. Pressure-treated lumber should be painted after weathering approximately one year. Avoid using sealers or waterproof coatings on masonry walls; they have been found to speed masonry deterioration and increase moisture problems. If paint must be used to protect damaged masonry (for example, brick damaged by abrasive cleaning), use only vapor permeable (breathable) masonry paints.

Refer to these charts at the end of this chapter

- Typical Color Combinations for Historic Buildings
- Typical Paint Problems and Possible Causes

For more information, see these chapters

- Exterior Masonry Walls
- Exterior Wood Walls
- Maintaining Your Building

TYPICAL COLOR COMBINATIONS FOR HISTORIC BUILDINGS

Although approvals are not required from the HARB for paint colors, the following information is for those property owners who want to choose colors that were used during the period their building was constructed. See "Additional Information and Resources " for more sources of information on choosing paint colors.

COLORS

BODY AND TRIM COLOR	EXAMPLES	STYLE (Period): Color Range for Body
BODY: Shades of white, pale blue, yellow, gray, buff (to imitate marble prototypes). **TRIM**: Dark green, red, brown, black, off-white. Door dark green, medium blue, black, white, dark red. Porch color similar to body.	White or yellow body, white, trim, dark green shutters, gold door.	**COLONIAL PERIOD** (1780 - 1860): Neutral, muted body colors. (Colors were limited by technology.)
BODY: Colors lighter than Colonial shades: blue, beige, light yellow, pale green. **TRIM**: Dark green, red, brown, black, off-white. Door dark green, medium blue, black, white, red. Porch color similar to body.	Beige body, white trim, black shutters.	**FEDERAL** (1780 - 1840): Neutral, muted body colors.
BODY: Shades of white, pale pink, yellow, blue, gray. **TRIM:** White trim with white siding; for non-white siding: gray/ blue, olive green, buff, dark green, medium blue, black, natural. Porch color similar to body.	White or yellow body, white trim, dark green shutters	**GREEK REVIVAL** (1820 - 1860) Light colors or white for the body, to imitate the marble of Greek templates.
BODY: Colors of stone, moss and grass like pale gray, olive, mossy greens, tan, ocher, fawn, straw, mustard. **TRIM:** Same color as body but in a contrasting shade, darker than base color when light, lighter than base color when dark, or in dark gray, dark green/ brown, creamy off-white. Shutters in a deeper shade. Door in natural wood. Porch a shade lighter or darker than body.	Light gray body, dark gray trim, grained door.	**GOTHIC REVIVAL** (1830 - 1880): Body colors in earth tones to blend with landscape, in stark contrast to the white of the Greek Revival.
BODY: Medium colors: Light stone or earth shades; pale or deep gray, mossy greens, tan, ocher, sand, buff. **TRIM**: Contrasting shade of body color; creamy off-white, sand, brown, olive, gray, green, gold; shutters in brown, red, black; sash in red-brown; doors in black, natural, burgundy. Porch a shade lighter or darker than body.	Pale beige body, darker beige trim, black door. Golden sand body, lighter sand trim, natural door.	**ITALIANATE AND SECOND EMPIRE** (1840 - 1855): Earth tones for body color on early houses, more vibrant colors and greater contrast later.
BODY: Medium colors, warm earth tones; dark green, brown, red, gold, gray, maroon, ocher, olive, pumpkin, rose, taupe. **TRIM:** Dark body with light trim or light body with dark trim of same color. Trim darker shade than porch, in maroon, brown, gray, green, yellow; shutters in green, red blue; door varnished or grained. Porch in harmonious, darker shade than body.	Light olive body, dark olive trim, red accent. Deep rose body, olive trim, deep olive accent.	**QUEEN ANNE** (1870 - 1910): Deeper colors emphasize mass and variety for the body. Many more colors available at this time.
BODY: Shades of white, pale blue, yellow, gray , cream, tan. **TRIM:** Lighter than body: White and off- white trim, ivory, cream: door varnished or grained. White porch.	White body, dark green trim & shutters. Tan body, white trim.	**COLONIAL REVIVAL** (after 1880): Light colors for the body.
BODY: Stained shingles. **TRIM:** Shades of white, gray.	Silver- gray stained shingles, gray-white trim, green shutters.	**SHINGLE** (1890 - 1910): Muted natural tones, gray shades for the body.
BODY: Olive, rust, brown, gray, gray-blue. **TRIM:** Lighter than body; White, pale gray, ivory. Porch color similar to body.	Olive body, olive gray trim, natural door.	**AMERICAN FOURSQUARE** (after 1900): Natural colors for the body.
BODY: Brown, green, gold; stained shingles. **TRIM:** Contrasting to body: Dark reds, browns; or light yellow, gray, green or white; door varnished. Porch color similar to body.	Brown body, pale yellow trim, natural door.	**BUNGALOW** (after 1900): Dark, natural shades for the body.

TYPICAL PAINT PROBLEMS AND POSSIBLE CAUSES

Note: A single building may have a variety of problems; consequently, different problems will require different treatments.

CLASS 1: MINOR CONDITIONS THAT GENERALLY DO NOT REQUIRE PAINT REMOVAL

SYMPTOM	POSSIBLE CAUSE	WHAT TO DO
Dirt	Environmental grime and organic matter accumulates over time and is not washed away by rain and sunlight.	Be careful not to use too much water. Excess water increases the drying time required and can lead to deterioration.
Mildew	Mildew is caused by fungi that live on nutrients in the paint or on dirt adhering to the wall. It thrives in areas where excess moisture is present. If you are uncertain whether you have mildew or dirt, use this test: a drop of bleach will turn mildew white and will have little effect on dirt.	Eliminate source of moisture: Prune and trim vegetation, check drainage at base of building and at sills. Remove mildew with a mixture of one gallon warm water, one cup non-ammonia detergent, one quart household bleach. Apply. After five minutes, rinse with clean water, allow wood to dry before repainting. Repaint with "mildew resistant" products.
Excessive Chalking	Chalking is a powdering of the paint surface that allows the paint to be rubbed off like powder. It is caused by the natural aging of the paint. As the paint ages the resin in the paint film gradually deteriorates. It can also be caused by inadequate priming or poor quality paint. Moderate chalking is not a problem because it assists in removing dirt from the surface.	The chalk should be cleaned off the surface with a solution of one-half cup household detergent and one gallon water with a medium soft bristle brush. The surface should then be rinsed with clear water, allowed to dry, and re-painted before chalking reoccurs.

CLASS 2: CONDITIONS THAT INCLUDE FAILURE OF THE TOP LAYER(S) OF PAINT & MAY REQUIRE LIMITED PAINT REMOVAL

SYMPTOM	POSSIBLE CAUSE	WHAT TO DO
Crazing	These fine, jagged interconnected breaks or cracks in the top layer of paint result when paint that is several layers thick becomes excessively hard and brittle with age and can't expand and contract in response to changing weather conditions. conditions. Once crazing has occurred, water enters the surface and creates more problems, like deep cracking and alligatoring.	Sand the surface by hand or gently with a mechanical sander. Then repaint.

TYPICAL PAINT PROBLEMS AND POSSIBLE CAUSES

CLASS 2: (continued)

SYMPTOM	POSSIBLE CAUSE	WHAT TO DO
Intercoat Peeling	Intercoat peeling may be caused by improper surface preparation, including failure to remove salt from the surface, or by incompatibility of paint types.	In cases of improper surface preparation where impurities have caused the peeling, scrape the area, then wash it thoroughly and wipe it dry. Then sand and repaint. In cases where incompatible paints were used, sand the topcoat, apply an appropriate primer, and repaint with an appropriate paint.
Solvent Blistering	Solvent blistering is caused by the action of ambient heat on components of the paint. If solvent rich paint is applied in direct sunlight, the top surface can dry too quickly, and then solvents become trapped and eventually vaporize, forcing through the paint film and leaving surface blisters behind. Verify solvent blistering by cutting open a blister and finding a painted surface beneath.	Scrape the affected area, sand to the next sound layer and repaint. Do not paint in direct sunlight.
Moisture Blistering and Wrinkling 1	Moisture blistering and wrinkling occurs when the top layer of paint dries before the undercoat dries. This condition can be caused by applying paint too thickly, or by applying paint at a temperature not recommended by the manufacturer, or by insufficient brushing out.	Remove the wrinkled layer by scraping and sanding to an even surface, then repaint following the instructions of the manufacturer. Don't apply paint too thickly. Allow plenty of drying time between coats. Adequately brush out each coat. Don't paint in temperature higher then those recommended by the manufacturer.
Moisture Blistering and Wrinkling 2	Moisture blistering may also be caused by outside moisture that has infiltrated under the paint layer. Rising damp (moisture penetrating up the wall from the basement) or excessive interior humidity may move through the siding and damage the paint coating.	Seek professional assistance to repair and seal basement walls, or to ventilate the space between the interior and exterior walls.

TYPICAL PAINT PROBLEMS AND POSSIBLE CAUSES

When the majority of the paint will be removed from a building, it is suggested that a small area of the paint be left intact and not painted over. Identify the area in some way. This will enable future investigators to have a record of the building's paint history.

CLASS 3: CONDITIONS THAT INCLUDE SUBSTANTIAL FAILURE OR MULTIPLE-LAYERS AND GENERALLY REQUIRE TOTAL PAINT REMOVAL

SYMPTOM	POSSIBLE CAUSE	WHAT TO DO
Peeling	Peeling to bare wood is typically caused by excess moisture collecting behind the paint film. Peeling often begins as blisters and/or cracks, and occurs as the wood swells due to the moisture. Peeling combined with brown stains near the roof may indicate ice damming. Peeling around porches might mean that gutters are not working properly.	Locate and repair the source or sources of moisture. Repair leaky gutters, downspouts, and flashing, defective roof shingles, cracks and holes in siding and trim, deteriorated caulking; trim or relocate vegetation growing too close to painted wood; ventilate high humidity areas (kitchens, bathrooms and laundry rooms) by adding vents and exhaust fans. After repairs, allow the wood to dry completely, then scrape, sand, and repaint.
Cracking & Alligatoring 1	Cracking and alligatoring are advanced stages of crazing, caused by poor adhesion of the paint to the underlying surface. Once intercoat paint failure has occurred, moisture penetrates the surface cracks, the wood swells, and cracks become deeper. Eventually the cracks extend to an overall pattern of horizontal and vertical breaks, resembling reptile skin.	If the condition has not progressed to bare wood, scrape and sand to the next sound layer. If the condition has progressed to bare wood and the paint has begun to flake, the entire paint surface must be removed. Scrape, sand, prime and repaint.
Cracking & Alligatoring 2	Excessive layers of paint may also lead to cracking and alligatoring. Excessively thick paint is too brittle to recover from shrinkage or pull of an additional coat as it dries and is less able to tolerate thermal stresses. Thick paint will fail at the layer next to the wood.	All around failure, leaving wood bare, may mean that your entire house needs better ventilation.

OUTBUILDINGS, SITE AND LANDSCAPING

Principle: Identifying, retaining and preserving buildings and their features as well as features of the site that are important in defining its overall historic character. Site features may include walks, paths, vegetation, lights, fences, benches, fountains and archaeological features.

Introduction

Although most of a property owner's attention is typically focused on the residence or other main building on a site, secondary buildings as well as site amenities often stand as part of a coordinated design that includes the entire building lot. The elements that surround a building are often essential to the character of the site and the neighborhood.

Secondary buildings, or outbuildings, on a property may include barns, carriage houses, garages, summer kitchens and sheds. Site amenities typically found on a historic property include fences and gates, driveways, walkways, landscaping and retaining walls. Some-times these elements are combined specifically to achieve a certain orientation or to maintain an important view. Retaining and maintaining these elements enhance a property's historic character.

OUTBUILDINGS

Outbuildings are Significant if:

- The outbuilding dates to the original construction of the property.
- The outbuilding was constructed after the main building on the site, but was erected to house a function important to the use of the overall property, or it illustrates an event or personage important to the overall property.
- The outbuilding is a good example of an architectural style or method of construction, or it incorporates distinctive characteristics of form, style or detailing.
- The outbuilding possesses a strong relationship in form, style, detailing, use or association with other buildings or uses of the site.
- The outbuilding represents a type important to the overall historic character of the district.

Outbuildings that remain in York contribute to our understanding of the city's history and character. Many outbuildings reflect the style of the main building on the property. Well into the first half of the 20th century, many garages were built with detailing to match the residence. Siding, brackets, ornamentation, rooftop structures, or even the overall shape of the building were duplicated to strengthen the relationship between the main building and the secondary building.

Outbuildings that date to the construction of the original property reflect an important part of the overall design concept for that property and should be retained. As some properties evolved over time, outbuildings were constructed to accommodate new uses. This practice illustrates the evolution of the property and such buildings may also be significant.

Guidelines for Maintaining Outbuildings

- Significant outbuildings should be treated as carefully as the main buildings they were meant to serve.
- All maintenance and repair issues that pertain to the main building on the site also apply to outbuildings.

- Significant details of outbuildings should not be overlooked. These details include foundations, masonry walls, wood siding, multi-pane windows, louvers, doors (pedestrian doors, overhead doors, sliding doors, etc.), slate roofs and rooftop elements (cupolas, weather vanes, cresting, etc.).

Removing Outbuildings

Because outbuildings are often important components of the overall property, removing them from the site should be avoided. Property owners should consider the relationship between the outbuilding and other buildings and site elements, the view that will result from the removal of the building, and the overall condition of the outbuilding. If the out-building is a significant part of the property (see the previous page), demolition should only be considered if at least half of its structure is beyond repair.

OPTIONS

1st CHOICE: If the outbuilding is significant to the historic character of the property, it should be reinforced, repaired and retained. Stabilization of the building for potential use by later owners should be considered.

2nd CHOICE: If more than half of the structure is too deteriorated to repair, including exterior siding, windows, doors and roofing material, and if it poses a threat to safety, these guidelines should be followed:

Guidelines for Removing Outbuildings

- The building should be documented with photographs and drawings before demolition. The construction methods, materials and details of the building, as well as the relation-ship between the outbuilding and other elements of the site, should all be included in the documentation.
- Steps should be taken to ensure that the demolition process will not damage other historic buildings or features that remain on the site.
- Consideration should be given to reusing the disassembled materials for other appropriate construction projects (possibly for repairing parts of other buildings on the site, if constructed of the same material), or to disposing of the materials at an architectural salvage yard.

Guidelines for New Outbuildings

- Because outbuildings were constructed to accommodate new uses as the main building and site evolved over time, new outbuildings for historic properties will be considered by HARB.
- Historically, outbuildings were located at the rear of the main property, away from the main entrance and the important elevations of the main building. This practice should be continued for new outbuildings.
  Historically, outbuildings were designed to coordinate with the main building and other buildings on the site. This practice should continue for new outbuildings. New outbuildings

should be simple in design and should coordinate with the main buildings through the use of compatible building form, roof form, historic materials and detailing.
- The construction of new outbuildings should be undertaken so that no damage is caused to other site elements.

SITE

Fences

Fences were first built for security. A securely built fence protected people and their possessions from predators - both animal and human. When security issues grew less demanding, fences were erected to mark property lines. They have been used traditionally as a barrier between the yard and the sidewalk, between the yard and the street, or between adjacent yards.

Early fences were usually rough vertical boards or post and rail, particularly along side and rear yards, or where a large part of the property bordered a road. By the mid-19th century, some properties used a more finished wooden fence that incorporated pickets. Such fences gradually became more regular in construction and eventually incorporated pickets and gates of sawn designs. These fences continued to be used for years.

Wire fences with wooden posts also came about in the mid-19th century. Wire allowed a certain level of ornamental design at a much more affordable cost, and was appropriate for more modest properties. Cast iron fences became popular in the late 19th century. The nature of the material allowed extravagant, ornate designs.

Wood, wire and cast iron fences are still available today; their use is encouraged for historic properties. More recent fence materials, including chain link and vinyl, are not appropriate for historic properties because they have no historic character.

Guidelines for Fences on Historic Properties

- If historic fences remain on the property, they should be maintained and retained so that they may continue to enhance the historic character of the overall property.
- If portions of historic fencing are missing or beyond repair, new pieces that match the historic material and design should be installed.
- If an entire historic fence is beyond repair and must be replaced, the new fence should match the historic fence in material and detailing, although a new simplified design based on the historic design is acceptable.
- If a new fence is to be installed where one currently does not exist, the design of the new fence should be based on photographic documentation of a previously existing fence.
- If a new fence is to be installed where none currently exists and no historic documentation exists, the new fence design should be simple and should follow the guidelines below.
- Fences and grocers' alley gates should be retained and maintained.

Guidelines for New Fences

- Simple designs are encouraged for new fences on historic properties.
- Generally, most historic fences were low and transparent. These characteristics should be duplicated in new fences visible from public streets and alleys.
- All fences should be of an appropriate scale in relation to the house.
- Simple wooden fences with vertical picket designs are preferred for properties with main buildings dating after 1850. Horizontal boards and split rails are generally not appropriate for the fronts of historic properties.
- Iron fences may be used for properties with post-1850 main buildings.
- Elaborate fences should not be installed without clear photographic evidence that they existed previously.
- Chain link is not appropriate for historic properties. It should not be used along streets, sidewalks or property lines visible to the public. It may be acceptable at the rear of a property or at sides of a property not visible from the public way. In these cases, the use of ivy, vines or other foliage to cover or screen the chain link is encouraged.

Driveways, Walkways, Paving

Some historic properties include driveways, walkways, paths and parking areas that were part of the overall design concept for the property. Most residential properties include a simple walkway to the front entrance and a driveway from the street to the side of the house or to a garage at the rear. In some cases, alleys give access to rear yards, and parking areas and driveways are not visible from the front yard. In urban areas where houses are closely built, small side alleys between houses, known as grocers' alleys, provide a service entrance to the rear of the property. Because these pathways are typically less heavily used than most other routes, there is a greater chance that original paving materials such as brick may still remain.

Guidelines for Existing Driveways, Walkways and Paving

- Existing driveways, walkways, paving and related features that date to the original construction of the property or to later significant alterations should be retained and maintained.
- Existing driveway configurations should be maintained unless historic documentation indicates that a different configuration is more appropriate.
- If historic paving materials remain, they should continue to be retained and maintained. Consideration should be given to restoring the entire pathway to its original condition.
- Grocers' alleys should be maintained with their historic character. They should not be filled or blocked in any manner.

Parking Area Placement

The placement of new parking areas should be compatible with the predominant placement on the block. Parking lots should maintain the setback and use plantings to soften their appearance and increase compatibility.

Guidelines for Existing Parking Areas

- Existing parking areas should not be enlarged.
- If existing parking areas are placed in prominent locations on historic properties, they should be shielded from view with appropriate plantings.

Guidelines for New Parking Areas

The guidelines below can help make new parking areas more compatible with the city's historic district. All new parking areas must also conform to the requirements of York's Zoning Ordinance.

If an additional parking area is required to accommodate a new use of a historic building, HARB will consider the addition of a parking area according to the following guidelines:

- Parking lots should maintain the predominant setback on the street.
- Parking areas should not be constructed between the street and primary facades of buildings.
- Parking areas should be located on a portion of the site that is not readily visible from the public way or from important spaces within the building.
- The placement of parking areas should maintain important views to or from the site or the building.
- Parking areas should be located so that no significant site or landscaping features are destroyed, damaged or otherwise negatively affected, and so that the historic relationships among elements on the site are not destroyed.
- Plantings, including trees and hedges, can be used to make parking areas more compatible with historic surroundings. Consider plantings along the edges of parking areas to shield them from view and to maintain setback lines. Also consider plantings on islands within larger parking areas.

Siting, Orientation and Views

Buildings, old and new, are typically located on a site with a specific orientation. Most buildings in York are oriented so that the front entrance faces the main street. Other buildings are situated so that a specific view may be seen from a particular window, so that prevailing winds are blocked by trees, or so that the sun will warm a particular room. When orientation and siting were part of the original design concept for a building, these elements should be maintained. As alterations, additions and construction projects are considered, the guidelines below should be followed.

Guidelines for Siting, Orientation and Views

- Preserve the main entrance to a building if a new entrance must be added for a new use. Avoid removing doors and stairs, and avoid filling in the opening with new materials.
- New buildings should reflect the orientation of buildings in the neighborhood. For example, if all buildings on the street have main entrances in the front wall and automobile access from the alley, avoid constructing a new building with a driveway from the street leading to a side entrance.

- Alterations and additions should maintain the siting of the historic structure. For example, avoid constructing an addition that gives a building the appearance of being set at an angle to the street if all other buildings are set parallel to the street.
- When making alterations or building additions, maintain important views to and from the site.
- Alterations and additions should maintain an accurate sense of historical development for each individual property. Avoid adding elements that suggest that the property is older than it is. Avoid adding elements that are out of scale
- or otherwise inappropriate to the setting.

Siting and Orientation of New Buildings

New buildings should reflect the predominant orientation of buildings in the neighborhood. Unusual orientations create a dramatic break in the historic streetscape.

The proper placement of entrances and driveways can increase the compatibility between new buildings and existing buildings. Placing entrances and driveways in locations not represented on the street breaks the continuity of the streetscape.

LANDSCAPING

The Landscape Around Your Building

Make sure the ground slopes down and away from your foundation to ensure that water flows away from your building, not into it. Avoid placing landscape elements too close to the foundation. They can encourage water retention, water damage and plant growth on the building.

Landscaping features, including trees, shrubs, gardens, plantings, fields and terracing, can contribute significantly to the overall appearance of a property. Some properties were landscaped at the time the buildings on the site were constructed. If historic landscaping materials are present, they should be retained (see below). If other prominent landscape elements are present, they should also be retained. These may include large trees, extensive plantings and any other highly visible elements that have become recognized features in the streetscape or landscape. York's HARB does not regulate landscaping, but the Zoning Ordinance does regulate retaining walls.

To Determine if Historic Landscaping Materials are Present:

- Look for unusual changes in texture or color of plant materials.
- Look for trees in rows or clumps.
- Look for exotic plants in unexpected locations, which may identify the location of an earlier planting bed.
- Check historic photographs.

Guidelines for Existing Landscape Elements

- If historic landscape materials are present, retain and maintain them. Replace them in kind when necessary.
- Maintain existing trees whenever possible. Plant new trees to replace lost trees.
- Avoid removing landscape features without replacing them.
- Avoid relocating historic landscape features.

Guidelines for New Landscape Elements

- Avoid radically changing the grade level of a site, especially when site drainage will be adversely affected.
- Place landscaping elements a sufficient distance from the foundation to avoid potential water damage.
- Water should be made to flow down and away from the building foundation.
- New landscape elements should not hide the walls of historic buildings or important architectural details.
- New retaining walls should be built with traditional masonry materials. Railroad ties and pressure-treated lumber are not appropriate if visible from a public street or alley.
- Plantings should be maintained regularly. Uncontrolled growth can damage historic materials.

UTILITIES AND ACCESSIBILITY

Principle: Identifying the historic building's character-defining spaces, features and finishes so code-required accessibility work will not result in their damage or loss. Designing new or additional means of access that are compatible with the historic building and its setting.

Introduction

As time goes by, modern improvements, contemporary conveniences and enlightened thought enhance our quality of life. They also affect our historic buildings.

Improvements in telecommunications, electric, gas and water service and in heating and air conditioning have made living spaces much more comfortable year-round. However, these conveniences visually and physically alter buildings and streetscapes with wiring and equipment.

Better and more widely distributed information has made us aware of the needs and requirements of persons with disabilities, and of their right to participate more fully in the experience of historic buildings. This enlightenment presents us with the challenge of making our historic resources accessible without destroying the character that makes them special.

UTILITIES

Because utility meter boxes, air handling units and other service equipment are so common, the appropriate placement of these objects on historic buildings is often overlooked. Historically, service equipment was placed near the service entrance, which was located at the rear or side of the building. This placement on unobtrusive walls of buildings should be continued. There are three options for the placement of service equipment:

1. Attached to a wall.
2. Placed on a roof.
3. Located on the ground.

Appropriate placement depends to a great extent on the type of equipment being installed; however, in all locations, the key to compatibility with historic resources is concealment.

Methods of Concealment

- Locate equipment on rear or inconspicuous side walls.
- Plant vegetation to hide equipment on the ground or on the wall. Coordinate new vegetation with old.
- Erect appropriate fencing to shield equipment on the ground. Coordinate all fencing on the property.
- Paint wall-mounted equipment to blend with the wall.
- Set rooftop equipment back from the edge of the roof to reduce visibility from the street.

Additional guidelines for service equipment are listed below and on the following page.

Meter Boxes

Utility meters, wires, piping, boxes and related equipment should be installed in unobtrusive locations on rear or secondary walls.

Mechanical Equipment (including air handling units, vent stacks, chillers, condensing units, elevator equipment, rooftop access equipment, etc.)

- Grade-mounted mechanical equipment should be restricted to rear yards and inconspicuous side yards, and should be shielded with plantings or appropriate fencing.
- Keep what cannot be concealed at the rear of the house.
- Equipment should not be placed on residential roofs. On other buildings, all rooftop equipment should be recessed from the edges of the roof to minimize visibility from the street.
- If additional mechanical equipment is required in the interior, avoid dropping ceilings across window openings to accommodate it.
- Do not overload the building structure with the weight of new equipment, particularly on the roof and in the attic.

Satellite Dishes and Antennas

- Satellite dishes should be minimal in size.
- Satellite dishes should be attached to rear or inconspicuous side walls of buildings. Locations that are not visible from the street are preferred.
- Satellite dishes should be attached to buildings using methods that do not cause damage to building materials or to historic features.
- Antennas that are no longer functional should be removed.

Note: An April 2006 ordinance regulates the installation of satellite dishes, antennas and other similar items in the City's historic districts. Check with the Bureau of Permits, Planning and Zoning to make sure your installation complies with this ordinance.

Window Air Conditioners

- Window air conditioners should be installed on rear or secondary walls, rather than primary walls.
- The use of window air conditioners should not result in the removal or replacement of window sash, or in the alteration or damage of any window materials.
- Through-wall air conditioners are inappropriate for historic buildings. Avoid cutting through walls or removing other historic materials to add mechanical equipment.

Priorities for Service Equipment

- Relocate all overhead wiring underground, possibly in conduits.

- Relocate meter boxes and related equipment to unobtrusive locations.
- Increase landscaping to hide mechanical equipment throughout the city.
- Use shutters, operable windows, porches, curtains, awnings, shade trees and other historically appropriate non-mechanical features to reduce heating and cooling needs.

What to do with Dumpsters

- Dumpsters should be located at the rear of the building or on inconspicuous sides of the building.
- Dumpsters should not hide or damage significant historic features of the building, site or landscape.
- Dumpsters should be placed in locations that are easily accessible to all users, including trucks, so that potential damage to the building is minimized.
- Landscaping and wooden fences can be used to hide dumpsters.

ACCESSIBILITY

Historically, buildings and landscapes were not designed to be readily accessible for people with disabilities. With the passage of the Americans with Disabilities Act in 1990, access to properties open to the public is now a civil right. The goal is to provide barrier- free access that promotes independence for disabled persons to the highest degree practicable, while preserving significant features of the historic resource. Building accessibility for individuals with disabilities should be achieved without compromise to historic materials or to character-defining elements of historic buildings and sites. Each case is individual, but the guidelines below should be followed.

Process for Implementing Accessibility Modifications

1. Review the historical significance of the property and identify character-defining features. Alteration of these features should be avoided when making changes or additions for accessibility.

2. Assess the existing and required levels of accessibility. Identify all barriers in the building and on the site. Review all local codes as well as state and federal laws.

3. Evaluate accessibility options within a preservation context. The goal is to provide a high level of accessibility with minimal impact on the historic property.

Note: Seek the assistance of preservation professionals, code officials and persons with disabilities. The expertise of each will be critical in determining the full range of options for accessibility.

Guidelines for Accessibility Modifications

- Seek to provide barrier-free access that promotes independence for disabled persons to the highest degree practicable while preserving historic features.

- The design of new ramps should be compatible with the original building and the overall site.
- Compatibility can be achieved through appropriate location. Ramps and elevators should be located on rear or secondary walls.
- Increase the compatibility of new ramps by constructing them of materials equal to or similar to the materials of adjacent stairs and walks.
- Consider providing barrier-free access through removable or portable ramps if installing permanent ramps would damage distinctive historic features.
- Utilize landscaping elements to shield ramps and elevators.

Note: For more information on accessibility, see the Additional Information and Resources chapter.

NEW CONSTRUCTION, ADDITIONS AND DEMOLITION

Principle: Constructing a new building that can be differentiated from the old and is compatible in massing, size, scale, style and setback. Constructing a new addition so that there is the least possible loss of historic materials and so that character-defining features are not obscured, damaged or destroyed. Designing a new addition in a manner that makes clear what is historic and what is new.

Introduction

New construction is a sign of economic health and community vitality. But it leaves an indelible mark on our communities. New buildings and additions can dramatically change the appearance of a neighborhood. For this reason, new construction and additions should be compatible with historic buildings. They should not pretend to be historic or duplicate historic buildings, lest they diminish the importance of the historic buildings. New construction and additions should achieve compatibility through appropriate massing, shape, size, materials, etc.

City Regulations

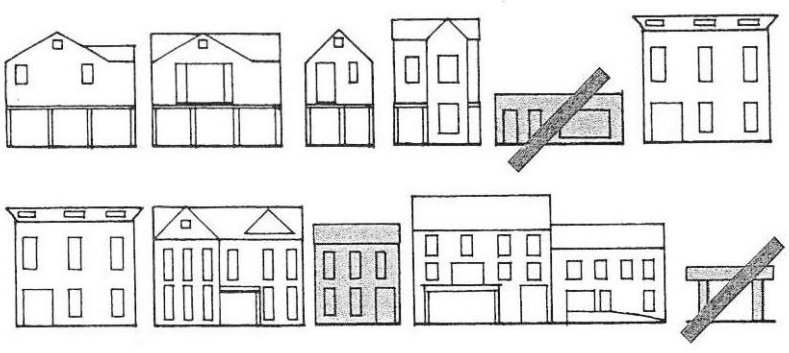
In addition to the review provided by HARB for new construction and additions in the historic district, there are other regulatory considerations to be taken into account for such projects. The city's building codes and zoning regulations must also be met. For more information on these requirements, contact the Bureau of Permits, Planning and Zoning.

NEW CONSTRUCTION

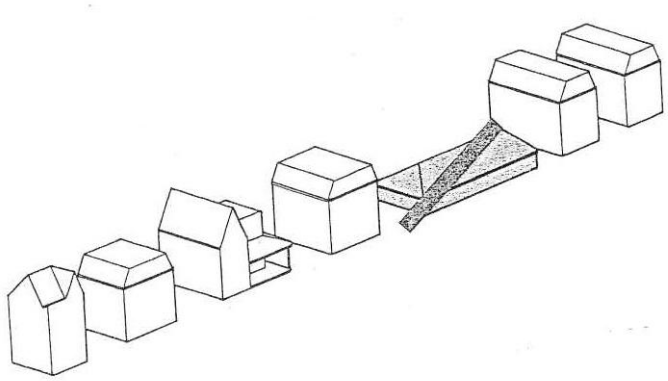
Guidelines for New Construction

- New construction should be compatible with historic buildings while maintaining a contemporary appearance.
- New buildings should not visually overpower surrounding buildings.
- New buildings should not duplicate the design of nearby historic buildings.

Size, Scale and Proportion - New construction should relate to the dominant size, scale and proportions of buildings in the district. New construction should not exceed the height of buildings in the district by more than ten percent. Long, low buildings are inappropriate amid taller buildings.

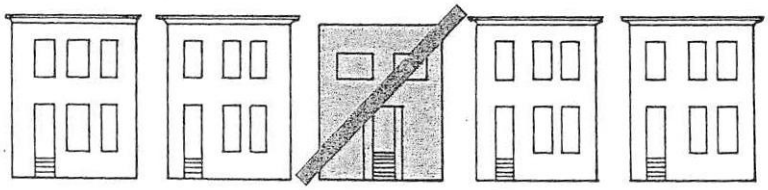


Shape and Massing - New construction should incorporate massing, building shapes and roof shapes that are present in surrounding buildings.

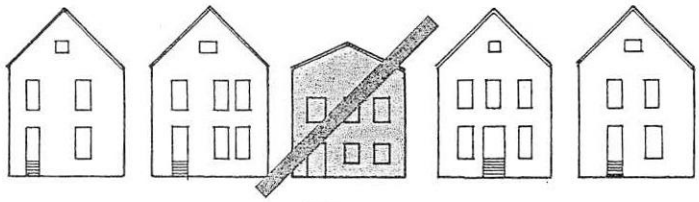


Materials - Building materials should be compatible with those of the surrounding buildings. Traditional materials that are common in the district, such as wood, brick and stone, are preferred.

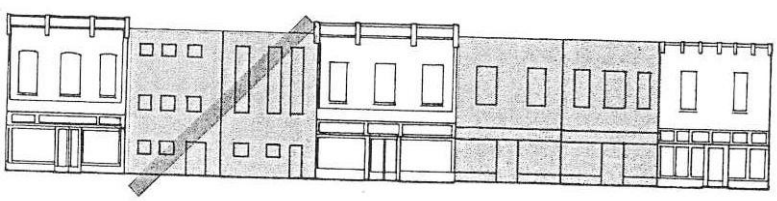
Patterns and Rhythm - The rhythm of facades along the street and components thereof should be maintained. Large buildings can be divided into bays to reflect neighboring rhythms.



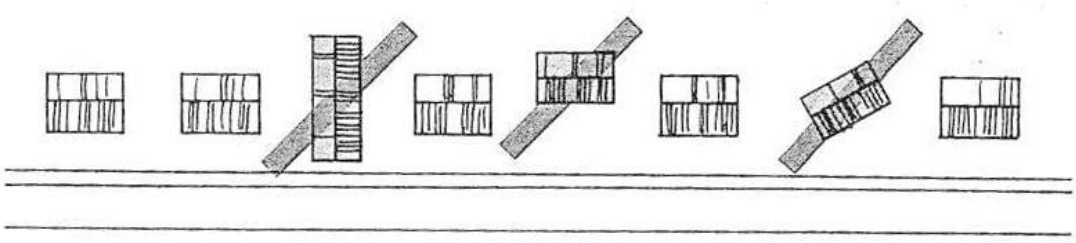
Cornice and Floor-to-Floor Heights - New construction should continue the floor-to-floor and cornice heights of historic buildings in the district, or should incorporate detailing that suggests those heights.



Windows and Doors - New construction should use window and door openings of design and size typical of those of historic buildings in the immediate neighborhood.



Orientation and Location - Principal facades of new construction should face the same direction as the rest of the buildings on the street. The prevailing setback line at the street should be preserved.



Excavation and Archaeological Resources

- If your building project will involve substantial excavation under or adjacent to an existing building, or to a previously undisturbed area, there may be potential to discover archaeologically important resources. Potential for this is greater on sites that were previously occupied by cemeteries. For further information, contact Historic York, Inc.

ADDITIONS

Location

- Additions should maintain the proportions and profile of the original building. Position additions at the rear or on view-obstructed sides of buildings.
- Set additions back from the front wall of the existing building.
- Construct additions so that important details and materials of the historic building are not hidden, damaged or destroyed.

Guidelines for Additions

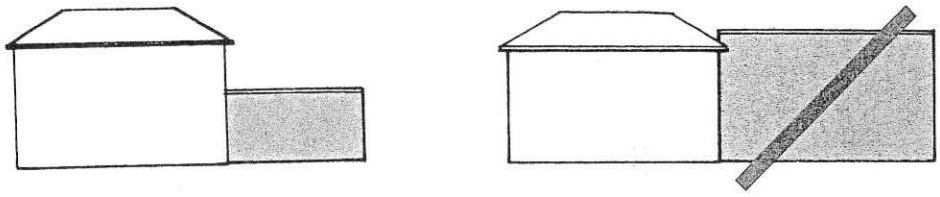
- Construct additions to minimize the loss of historic material.
- Place additions so that they are inconspicuous to the public eye. Use rear or side walls whenever possible.
- When adding stories to a building, set them back from the front wall to differentiate them and make them less conspicuous from the street.
- Design additions so that it is clear what is historic and what is not. Contemporary designs for additions are not discouraged when compatible with the character of the building.
- Additions to non-historic buildings should not clash with or visually overwhelm nearby historic buildings.
- Additions should be constructed so that their removal will not harm the historic form or integrity of the building.

- Build additions so that walls of historic buildings that face the street are not hidden, damaged or destroyed.
- Avoid duplicating the appearance of the original building.
- Avoid using materials or details that draw attention away from the historic building.

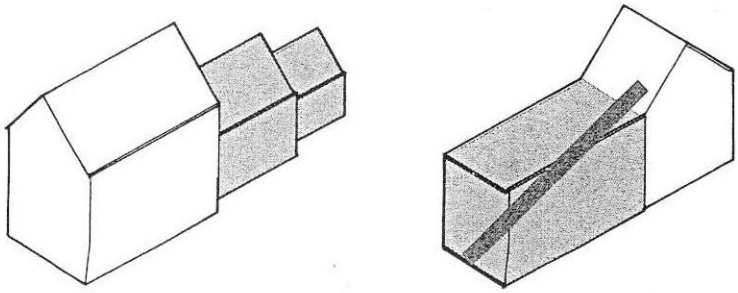
Compatibility Issues

An addition to a building in the historic district should relate closely to the existing building while maintaining the visual prominence of the historic building. In the following diagrams, shaded buildings represent additions.

Size, Scale and Proportion - The height and width of an addition should not exceed that of the historic building.

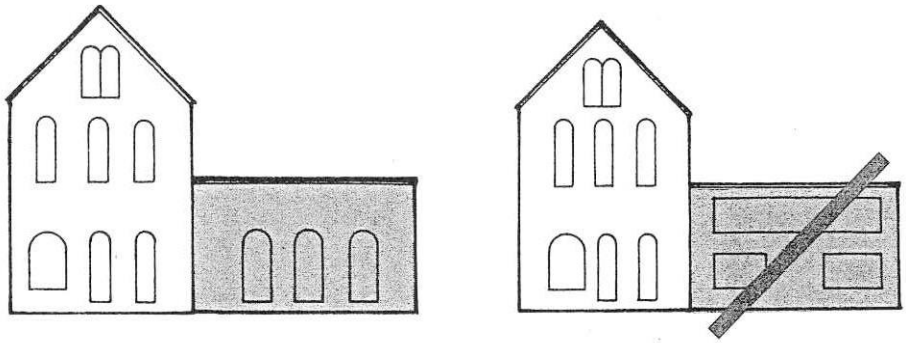


Shape and Massing - Additions should incorporate massing techniques used by the historic building. Using the dominant roof shape and pitch of the historic building will increase compatibility.

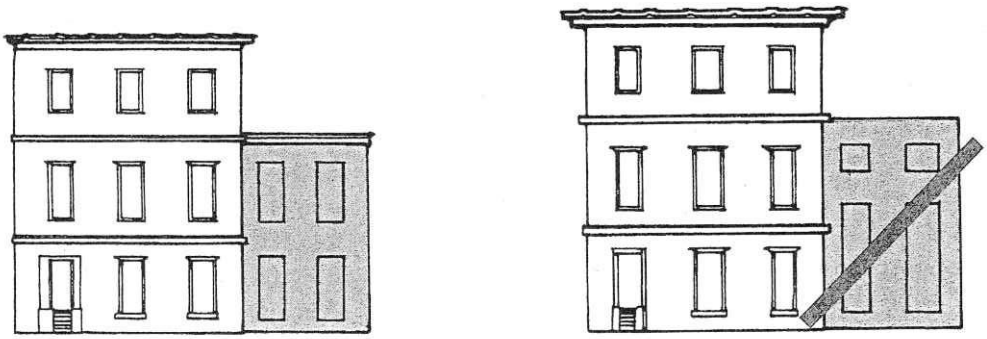


Materials - Building materials should be compatible with those of the historic building. Traditional materials are preferred.

Windows and Doors - Windows and doors in an addition to a historic building should relate in size, shape, scale and proportion to original openings in the existing building.



Floor-to-Floor Heights - Additions should conform to the floor-to-floor heights of the historic building, or should incorporate detailing that suggests consistent floor-to-floor heights.



OPTIONS

1st CHOICE: Accommodate the new use proposed for the addition in an existing area of the historic building rather than construct an addition.

2nd CHOICE: Locate the addition on the rear wall of the building, following the guidelines on the preceding pages, if that wall is not readily visible from a public street or alley, and if no historic materials or features will be damaged or destroyed.

3rd CHOICE: Locate the addition on a side wall that is shielded from public view, following the guidelines on the preceding pages, if no historic materials or features will be negatively affected.

DEMOLITION

The demolition of a historic building is irreversible and its negative impact is far-reaching. Demolition is not an appropriate treatment for historic buildings because:

- The demolition of a building can have great negative social and psychological effects on the residents of a neighborhood. The loss of familiar and meaningful landmarks is disturbing, upsets the established sense of community, and decreases livability.

- Demolition also has a negative effect on the environment and the economy. It adds materials to our already overcrowded landfills, and it necessitates the use of money, energy and materials to rebuild, with the energy and materials coming from already depleted natural resources.

- A demolished historic building is a lost educational resource. It can no longer illustrate the accomplishments of historical figures, the occurrence of historical events, or the construction techniques of the past.

- The demolition of a historic building creates a great physical loss in the street-scape. The loss is particularly harsh in a historic area that derives its character from the consistent appearance of more or less equally spaced buildings on the street.

Demolished buildings cannot be recreated. Because demolition can have such severe, long-term impact, it is considered appropriate in very few cases.

When Demolition may be Appropriate

- When the public safety and welfare requires the removal of the building.
- When the structural instability of the building has been amply demonstrated by the report of an engineer or architect, and after sufficient documentation.
- When the building does not contribute to the historic district.
- When economic hardship requirements have been met.

Demolition of Parts of Buildings

Demolition of any part of a building in the historic district requires a permit and, because all parts of a building contribute to the overall character of the building, demolition in part is rarely advisable. This type of demolition may be appropriate when the building element:

- Is deteriorated beyond repair.
- Is in danger of collapse.
- Cannot be stabilized.

and

- Only after it has been thoroughly documented. Removal of building elements is not acceptable if an appropriate replacement will not be constructed. If any building elements are removed, they should be recorded in photos prior to removal and should be stored for future use.

Guidelines for Demolition of Historic Buildings

- Document the building with photographs and/or drawings before demolition.

- Ensure that demolition will not damage other historic buildings.
- Consider donating salvageable materials such as windows, doors, bricks, siding, etc. to an architectural warehouse, so that they may be reused in other projects.

ADDITIONAL INFORMATION AND RESOURCES

Listed on the following pages are a variety of resources – organizations and publications – that can be consulted for additional help and information in maintaining and rehabilitating historic buildings. Sources on general maintenance and rehabilitation are listed, as are sources for each of the broad topics covered in this manual.

LOCAL ORGANIZATIONS

Historic York, Inc. and the Architectural Warehouse
25 North Duke Street
Suite 102
PO Box 2312
York, PA 17405
717-843-0320

York County Heritage Trust
250 East Market Street
York, PA 17403
717-848-1587

STATE AND REGIONAL ORGANIZATIONS

Bureau for Historic Preservation
Pennsylvania Historical and Museum Commission
PO Box 1026
Harrisburg, PA 17108-1026
717-783-8946

Preservation Pennsylvania
257 North Street
Harrisburg, PA 17101
717-234-2310

NATIONAL ORGANIZATIONS

The Association for Preservation Technology International
4513 Lincoln Avenue, Suite 213
Lisle, IL 60532-1290
630-968-6400

National Park Service
National Center for Preservation Technology and Training
645 College Avenue
Natchitoches, LA 71457
318-356-7444

National Trust for Historic Preservation
Northeast Field Office
6401 Germantown Avenue
Philadelphia, PA 19144
215-848-8033

DICTIONARIES

Bucher, Ward (ed.) *Dictionary of Building Preservation*. New York: John Wiley & Sons, 1996.

Harris, Cyril M. (ed.). *A Dictionary of Architecture and Construction*. McGraw Hill, Inc., 1975.

Philbin, Tom. *The Illustrated Dictionary of Building Terms*. New York: McGraw-Hill, 1997.

Phillips, Steven J. *Old House Dictionary: An Illustrated Guide to American Domestic Architecture 1600-1940*. Washington, DC: The Preservation Press, 1992.

ARCHITECTURAL STYLE GUIDES

Blumenson, J.G. *Identifying American Architecture: A Pictorial Guide to Styles and Terms*, 1600-1945. Revised Edition. New York: W.W. Norton, 1981.

McAlester, Virginia and Lee. *A Field Guide to American Houses*. New York: Alfred A. Knopf, 1984.

Poppeliers, John, et al. *What Style is it? A Guide to American Architecture*. Revised Edition. Washington, DC: Preservation Press, 1983.

Rifkind, Carole. *A Field Guide to American Architecture*. New York: New American Library, 1980.

PERIODICALS

APT Bulletin. Association for Preservation Technology, PO Box 8178, Fredericksburg, VA 22404 (713-373-1621/1622).

Historic Preservation and Preservation News. Published by the Preservation Press. National Trust for Historic Preservation, 1785 Massachusetts Avenue, NW, Washington, DC 20036 (202-673-4070).

Old-House Journal. 435 Ninth Street, Brooklyn, NY 11215 (718-788-1700).

Preservation Forum. National Trust for Historic Preservation, 1785 Massachusetts Avenue, NW, Washington, DC 20036 (202-673-4037).

Traditional Building: The Professional Source for Historical Products. 69A Seventh Avenue, Brooklyn, NY 11217.

PRESERVATION BRIEFS

Preservation Briefs are produced by the National Park Service and may be ordered by contacting: The Superintendent of Documents, Government Printing Office, Washington, DC, 20402-9325 (202-512-1800). They are also available online at the following address:

www.cr.nps.gov/hps/TPS/briefs/presbhom.htm

1: The Cleaning and Waterproof Coating of Masonry Buildings
2: Repointing Mortar Joints in Historic Brick Buildings
3: Conserving Energy in Historic Buildings
4: Roofing for Historic Buildings
5: The Preservation of Historic Adobe Buildings
6: Dangers of Abrasive Cleaning to Historic Buildings
7: The Preservation of Historic Glazed Architectural Terra Cotta
8: Aluminum or Vinyl Siding on Historic Buildings: The Appropriateness of Substitute Materials for Resurfacing Historic Wood Frame Buildings
9: The Repair of Historic Wooden Windows
10: Exterior Paint Problems on Historic Woodwork
11: Rehabilitating Historic Storefronts.
12: The Preservation of Pigmented Structural Glass (Vitrolite and Carrara Glass)
13: The Repair and Thermal Upgrading of Historic Steel Windows
14: New Exterior Additions to Historic Buildings
15: Preservation of Historic Concrete: Problems and General Approaches
16: The Use of Substitute Materials on Historic Building Exteriors
17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character
18: Rehabilitating Interiors in Historic Buildings
19: Repair and Replacement of Historic Wooden Shingle Roofs
20: The Preservation of Historic Barns
21: Repairing Historic Flat Plaster: Walls and Ceilings
22: The Preservation and Repair of Historic Stucco
23: Preserving Historic Ornamental Plaster
24: Heating, Ventilating and Cooling Historic Buildings: Problems and Recommended Approaches
25: The Preservation of Historic Signs
26: The Preservation and Repair of Historic Log Buildings
27: The Maintenance and Repair of Architectural Cast Iron
28: Painting Historic Interiors
29: The Repair, Replacement and Maintenance of Historic Slate Roofs
30: The Preservation and Repair of Historic Clay Tile Roofs
31: Mothballing Historic Buildings
32: Making Historic Properties Accessible
33: Preservation and Repair of Historic Stained and Leaded Glass
34: Applied Decoration for Historic Interiors: Preserving Composition Ornamental
35: Understanding Old Buildings: The Process of Architectural Investigation
36: Preserving Cultural Landscapes: Planning Treatments and Management of Historic Landscapes
37: Appropriate Methods for Reducing Lead-paint Hazards in Historic Housing
38: Removing Graffiti from Historic Masonry
39: Holding the Line: Controlling Unwanted Moisture in Historic Buildings.
40: Preserving Historic Ceramic Tile Floors
41: The Seismic Retrofit of Historic Buildings: Keeping Preservation in the Forefront
42: The Maintenance, Repair and Replacement of Historic Cast Stone
43: The Preparation and Use of Historic Structure Reports
44: The Use of Awnings on Historic Buildings: Repair, Replacement, and New Design

BOOKS AND OTHER PUBLICATIONS

Maintenance

Becher, Norman. *Complete Book of Home Inspection*. New York: McGraw Hill, 1980.

Chambers, J. Henry, AIA. *Cyclical Maintenance for Historic Buildings*. Washington, DC: National Park Service, 1976.

Depew, Ned. *House Inspection: A Homebuyer's/Homeowner's Guide*. Spencertown, NY: Golden Hill Press, 1992.

Old-House Journal "Getting Rid of Lead," July/Aug. 1992; "Keeping Radon Out of Old Houses," Mar/Apr, 1995.

Pennsylvania Department of Environmental Protection. *Pennsylvania's Home Buyer's and Seller's Guide to Radon* and *Pennsylvania's Consumer's Guide to Radon Reduction*.

Reynolds, Judith. "Appraising Historic Properties." *Preservation Information Series*. National Trust for Historic Preservation.

Seaquist, Edgard O., Jr. *Diagnosing and Repairing House Structure Problems*. New York: McGraw Hill, Inc., 1980.

United States Environmental Protection Agency. *Reducing Lead Hazards When Remodeling Your Home*. April, 1994. *Protect Your Family From Lead in Your Home*. May, 1995.

Wagner, John D. and Marylee MacDonald. "Keeping Radon Out of Old Houses." Old-House Journal. March/Apr., 1995. pp. 58-61.

Weeks, Kay D. and Anne E. Grimmer. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. Washington, DC: National Park Service, 1995.

General Rehabilitation

Bernhard, Sandy and Tom Ela. *The House Journal: A Resource to Evaluate and Document the History, Alterations, and Records of Your House and Property*. Washington, DC: The Preservation Press, 1993.

Groenendall, Denson, The Pennsylvania State University, and the Bureau for Historic Preservation, Pennsylvania Historical and Museum Commission. *Repair and Preservation Maintenance for Historic and Older Homes*. University Park and Harrisburg, PA, 1982.

Hanson, Shirley and Nancy Hubby. *Preserving and Maintaining the Older Home.* New York: McGraw-Hill Book Company, 1983.

Hotton, Peter. *So You Want to Fix Up an Old House*. Boston: Little, Brown, 1979.

Jackson, Albert and David Day. *The Complete Home Restoration Manual*. New York: Simon & Schuster, 1992.

Johnson, Allen F. *How to Care for Your Old House: An Owner's Manual*. New Haven: Connecticut Trust for Historic Preservation, 1987.

Kass, Stephen L., Judith M. LaBelle, and David A. Hansell. *Rehabilitating Older and Historic Buildings: Law, Taxation, Strategies*. Second Edition. New York: John Wiley & Sons, Inc., 1993.

Kitchen, Judith L. *Caring for Your Old House: A Guide for Owners and Residents*. Washington, DC: The Preservation Press, 1991.

McGowan, John and Roger DuBern. *The Book of Home Restoration*. New York: Gallery Books, 1985.

National Park Service. *Maintaining Historic Buildings* (An NPS Reading List). Washington, DC: National Park Service, 1990.

National Park Service. *Respectful Rehabilitation: Answers to Your Questions about Old Buildings*. Washington, DC: Preservation Press, 1982.

National Trust for Historic Preservation. "Safety, Building Codes and Historic Buildings." (*Preservation Information Series*, No. 57, 1992.)

National Trust for Historic Preservation. "Basic Preservation Procedures." (*Preservation Information Series*, No. 48, 1991.)

Poore, Patricia (ed.). *The Old-House Journal: Guide to Restoration*. New York: Dutton, 1992.

Santucci, Robert M., Brooke C. Stoddard and Peter Werwath. *A Consumer's Guide to Home Improvement, Renovation and Repair*. Revised Edition. New York: John Wiley & Sons, Inc., 1995.

Simonson, Kaye Ellen. *Maintaining Historic Buildings: An Annotated Bibliography*. Washington, DC: National Park Service, 1990.

Smith, Gretchen (ed.). *Respectful Rehabilitation*. Washington, DC: The Preservation Press, 1982.

Stahl, Frederick A. *A Guide to the Maintenance, Repair, and Alteration of Historic Buildings*. New York: Van Nostrand Reinhold Company, 1984.

Stephen, George. *Remodeling Old Houses Without Destroying Their Character*. New York: Alfred A. Knopf, 1972.

Masonry

Aldrich, Dr. Harl, Jr. "Preserving the Foundations of Older Buildings: The Importance of Groundwater Levels." *Technology & Conservation*. Summer, 1979. pp. 32-37.

Bryant, Terry. "Protecting Exterior Masonry from Water Damage: Moisture Control Procedures & Products." *Technology & Conservation*. Spring, 1978. pp. 38-42.

Grimmer, Anne E. *A Glossary of Historic Masonry Deterioration Problems and Preservation Treatments*. Washington, DC: National Park Service, 1984.

Grimmer, Anne E. *Keeping it Clean: Removing Exterior Dirt, Paint Stains and Graffiti from Historic Masonry Buildings*. Washington, DC: National Park Service.

Hutchins, Nigel. *Restoring Houses of Brick and Stone*. New York: Van Nostrand Reinhold, 1982.

London, Mark. *Masonry: How to Care for Old and Historic Brick and Stone*. Washington, DC: The Preservation Press, 1988.

McKee, Harley J. *Introduction to Early American Masonry: Stone, Brick, Mortar and Plaster*. Washington, DC: The Preservation Press, 1973.

Smith, Baird W. *Moisture Problems in Historic Masonry Walls: Diagnosing and Treatment*, 1984.

Weiss, Norman R. "Cleaning of Building Exteriors: Problems and Procedures of Dirt Removal." *Technology & Conservation*. Fall, 1976. pp. 8-11.

Wood

Johnson, Ed. *Old-House Woodwork Restoration*. Prentice Hall, 1983.

O'Bright, Alan. *Paint Removal from Wood Siding*. (Preservation Tech Notes, Number 2.) National Park Service, Preservation Assistance Division.

Park, Sharon C. *Exterior Woodwork*. (Preservation Tech Notes, Number 1.) National Park Service, Preservation Assistance Division.

Sheetz, Ron and Charles Fisher. *Exterior Woodwork*. (Preservation Tech Notes, Number 4.) National Park Service, Preservation Assistance Division.

Shivers, Natalie. *Walls and Molding: How to Care for Old and Historic Wood and Plaster*. Washington, DC: The Preservation Press, 1990.

Windows and Doors

Old-House Journal. "Back on Track: Getting the Kinks out of Pocket Doors." Nov/Dec, 1994. "Brilliant Cut Glass." Nov/Dec, 1992. "Curing Ailing Sills." Mar/Apr, 1994. "A

Homeowner's Guide to Stained Glass." Jan/Feb, 1994. "Sash Window Work-shop. " Sep/Oct, 1991. "Shopping for Special Door Hinges." Nov/Dec, 1992.
"A Window on Sash Repair." May/June, 1995.

Historic Preservation Education Foundation. *The Window Handbook: Successful Strategies for Rehabilitating Windows in Historic Buildings*. Historic Preservation Education Foundation, 1990.

National Park Service. *Window Rehabilitation Guide for Historic Buildings*. National Park Service and the Historic Preservation Education Foundation, 1997.

New York Landmarks Conservancy. *Repairing Old and Historic Windows: A Manual for Architects and Homeowners*. Washington, DC: The Preservation Press, 1992.

Prueher, Brooks (compiler). *Window Directory for Historic Buildings*. Washington, DC: National Park Service, 1996.

Roofs

Old-House Journal: "The Chimney Detective: Tracking Moisture at the Stack." Nov/Dec, 1995; "Flashing Points: A Primer on Protecting Roof Junctures." Nov/Dec, 1995; "Frost in the Rafters, Ice on the Eaves." Nov/Dec, 1993; "Half-Round Metal Gutters." July/Aug, 1992; "Laying a Standing Seam Metal Roof." Sep/Oct,
1994; "Making Sense of Metal Roofs." July/Aug, 1992; "Picturesque Slate: Understanding the Architecture of Rustic Roofs." Sep/Oct, 1995; "Rock 'n Roll Roofing." July/Aug, 1995; "Roofing Over the Roof." Sep/Oct, 1988; "Slate & Shingle Look-alikes." Sep/Oct, 1994; "Wood Shingle Report." Sep/Oct, 1994.

Porches

Kahn, Renee and Ellen Meagher. *Preserving Porches*. New York: Henry Holt and Company, 1990.

Old-House Journal: "Hitting on Porch Decks." July/Aug, 1993; "Sleeping Porches" July/Aug, 1995.

Commercial Buildings and Signs

Marinelli, Janet. "Architectural Glass and the Evolution of the Storefront." *Old-House Journal*. July/Aug, 1988. pp. 34-43.

Marinelli, Janet and Gordon Bock. "Streetscapes." *Old-House Journal*. July/Aug, 1988. pp. 46-55.

Exterior Color

Moss, Roger A. *Century of Color: Exterior Decoration for American Buildings, 1820-1920*. American Life Foundation, 1980.

Moss, Roger W. and Gail Caskey Winkler. *Victorian Exterior Decoration*. New York: Herny Holt and Co., 1987.

Old-House Journal. "The Case Against Removing Paint from Brick Masonry," Feb 1975; "Checklist for Painting," May, 1986; "Exterior Painting," April, 1981; "Prior to Paint," July/Aug, 1994; "Restoring a Frame House Exterior, "Sep, 1974; "Stripping Paint from Exterior Wood, " Dec, 1985; "Stripping Exterior Masonry," Jan/Feb, 1985.

"Painting the House." *Consumer Reports*. September, 1995. pp. 610-615.

Schwin, Lawrence III. *Old House Colors: An Expert's Guide to Painting Your Old (Or Not So Old) House*. New York: Sterling Publishing Co., 1990.

Weeks, Kay D. and David W. Look. "Paint on Exterior Historic Woodwork: Identification & Treatment of Surface Condition Problems." *Technology and Conservation*. Summer, 1982. pp. 34-46.

Outbuildings and Sitework

Gayle, Margot, et al. *Metals in America's Historic Buildings: Uses and Preservation Treatments*. Washington, DC: National Park Service, 1980.

Geist, Kevin. *How to Build Wooden Gates and Picket Fences: 100 Classic Designs*. Mechanicsburg, PA: Stackpole Books, 1994.

Magaziner, Henry J. "The Art of Ironwork." *Old-House Journal*. May/June, 1997. pp. 33-39.

Prowell, Charles. "One Barn's Return: Three Fixes for Bulging Outbuildings." *Old-House Journal*. July/Aug, 1995. pp. 44-47.

Southworth, Susan and Michael. *Ornamental Ironwork: An Illustrated Guide to Its Design History and Use in American Architecture*. Boston: David R. Godine, 1978.

Utilities and Accessibility

Jester, Thomas C. *Preserving the Past and Making it Accessible for People with Disabilities*. Washington, DC: National Park Service, 1992.

National Trust for Historic Preservation. "The Impact of the Americans With Disabilities Act on Historic Structures." (*Preservation Information Series*, No. 55, 1991.)

Preservation Standards for Accessible Design: ADA Accessibility Guidelines (ADAAG). Washington, DC: U.S. Department of Justice, 1991.

Additions, New Construction, Demolition

Old-House Journal. "Making Sense of Sensitive Additions: Ways to Get a Handle on Enlarging Old Houses." May/June, 1995; "The Old Way of Seeing Additions." May/June, 1995.

GLOSSARY

air infiltration - the flow of air into a building from the outside through cracks or holes in the exterior surfaces of the building

alligatoring - the splitting of a film of paint in a pattern resembling an alligator's skin

alteration - any physical change to an existing building

apron - the facing panel, sometimes ornamented, below the floor of a porch, or the panel below a windowsill

architrave - the lowest group of moldings on an entablature, also the ornamental moldings around door and window openings

artificial - (see synthetic)

awning - a roof-like covering placed over a door or window to provide shelter from the elements, historically constructed of fabric, but also made of metal and plastic in modern times

baluster - a small, column-like element that supports a handrail in a balustrade, may be simple or decorative

balustrade - a railing on a stair, porch or other structure, composed of upper and lower rails and a series of balusters in between

bargeboard or vergeboard - a decorative board, typically one of a pair, placed at the verge of a gable's eaves to conceal the rafter tails

bay window - a window unit that projects outward from the wall of a building and usually has a foundation of its own

blocking in - the process by which one of a variety of materials is added to a window or door opening to decrease the size of the opening, or to close the opening completely

board and batten - a type of wooden siding composed of vertical boards that are covered at the joints with narrow boards (called battens)

bond or bonding pattern - the pattern in which bricks or stones are arranged in the formation of a wall

bracket - a projecting support unit found under eaves or other overhangs, may be plain or decorative

bulkhead - the panel at the base of a storefront's display windows

casement - a window sash that opens by swinging in or out to one side

caulking - a flexible material used to seal cracks and fill joints between materials, intended to prevent leakage and/or to provide waterproofing

Certificate of Appropriateness - the approval statement, recommended by the Historical Architectural Review Board and approved by City Council, that certifies the appropriateness of a particular request for the alteration, construction, reconstruction, repair, restoration, demolition or razing of all or part of any building within the historic district, following a determination of suitability according to applicable criteria, and that authorizes the issuance of a building permit for such request

chalking - a powdering of the surface of paint caused by natural aging

character - the combination of distinguishing attributes belonging to a building

character-defining feature - any architectural element or characteristic that identifies a building or other resource, assists in classifying it as a particular type, style, form, etc., and distinguishes it from other resources

chimney - a structure that encloses one or more flues for the conveyance of smoke to the outside of a building, especially the part of the structure that rises above the roof, but also the part that may rise along the side wall of a building

clapboard - an exterior horizontal wood siding applied so that the thicker edge of each board overlaps the thinner edge of the board below

classical - relating to the style of ancient Greek or Roman art or architecture, or of derivatives of those styles

column - a vertical architectural element intended to support a load and usually composed of a base, shaft and capital, often reflecting classical detailing

compatible - describing an alteration that maintains or restores the historical and significant features and appearance of a building, and does not detract from surrounding resources, thereby maintaining a sense of visual harmony in the building, and between the building and neighboring buildings

compatible substitute - a new material used to replace an old material, the new material being similar to the old in all aspects of appearance and agreeable to the existing materials in physical and chemical properties

conical - shaped like a cone, usually referring to a roof

corner board - a narrow, vertical board installed at the corner of a wood frame building, against which the horizontal siding abuts

cornice - a molded projection crowning an architectural element such as a window, door, wall or entablature, especially at the conjunction of an exterior wall and roof, or interior wall and ceiling, may be plain or decorative

crazing - a condition of fine, jagged interconnected breaks or cracks in the top layer of paint, caused when thick paint becomes excessively hard and cannot respond to changing weather conditions

crest or cresting - an ornamental element forming the top of a wall or roof, especially the ridge of a roof, often as a series of perforated, arrow-like elements

cross gable - a type of roof composed of two gables that intersect at right angles

crown - a decorative molding at the top of a window, door or other element

cupola - a small structure projecting from a roof, originally intended to provide light, ventilation or view, but may be strictly decorative

cyclical maintenance - the regular upkeep of all elements of a building or property

delamination - the separation of layers of a material

demolition - the intentional destruction of all or part of a building or structure

demolition by neglect - the destruction of a building or structure caused by the failure to perform maintenance over a period of time

dentil - one of a series of small, toothlike projections that alternate with blank spaces, used for decorative effect in cornices and other moldings

deterioration - the loss of the original sound condition of a material, structure, etc., typically due to weathering, the lack of maintenance, and/or human activity

dormer - a window that projects from a sloping roof

downspout - a vertical pipe-like element that conducts water away from a roof, typically connected to a gutter

dusting - the condition that occurs in masonry when the outer layer of the masonry has fallen off, and the softer, inner core is being rubbed away

eaves - the underside of the portion of a roof that extends beyond the face of the wall

efflorescence - a spotty white haze appearing in a horizontal pattern on brick, created by salts that are deposited after water that has been absorbed into the wall evaporates

elevation - one of the walls of a building

energy efficient - describing a building or an element of a building that provides resistance to the flow of heat, or that requires little energy to operate

entablature - the long horizontal structure above the capital of a column, consisting of a cornice, a frieze and an architrave; or a similar grouping used in other locations, as above a door or window

facade - the front wall of a building, or any decorated wall of a building

facing - a non-structural material that is applied to a surface of a building for protection or ornament

fanlight - an arched window above a door, usually the main entrance

feature - a single, distinguishable part of a greater whole, as a single architectural element of a building

finial - a slender, vertical ornament usually positioned at the top of a roof or a gable

finish - the texture, color, smoothness, reflectivity and other visual properties of a surface

fishscale shingles - shingles with rounded ends

flashing - sheet metal placed over the joints in a roof to prevent water leakage

form - the shape of a building or object, which contributes to character and appearance

foundation - the masonry base of a building that rests directly on the earth and supports the structure above

frame - the woodwork surrounding a door or window in a wall, to which the door or window is attached

frieze - the flat, middle portion of the entablature, or any similar decorative, horizontal element on a building

gable - the triangular top of an exterior wall in a building with a double-sloping roof, extending from the eaves up to the ridge

gable end - a wall of a gable-roofed building that includes the triangular gable

gable-fronted or front-gabled - a building with the main entrance in the gable end

gable roof - a simple pitched roof with two slopes inclined at the same angle, meeting at a peak in the center

galvanized - describing a material that is protected from rust with a coating of zinc

gambrel roof - a roof composed of two slopes on each side

glazing pattern - the arrangement of glass panes in a window or door

grade - the height of the surface of the ground

gutter - a channel attached to the eaves of a building's roof to carry away rainwater, typically attached to a downspout

head - the top horizontal member of a window or door frame

hipped roof - a roof that slopes inward from all exterior walls

historic preservation - a broad range of activities intended to stabilize and conserve the built environment

historic rehabilitation - the process of returning a historic building and/or 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 building and/or property that are significant to its historic, architectural and cultural values

ice dam - a buildup of snow and ice at the eaves of a sloping roof

insulation - a material used to reduce the transmission of sound or heat

lattice or latticework - open screening formed by interlacing thin strips of wood

lintel - a horizontal structural element spanning a window or door opening

louver - a series of angled slats in a framework, incorporating spaces to admit air, often used to fill window openings

maintenance - the routine upkeep of a building or property, generally performed to combat the effects of weathering and age

mansard roof - a roof composed of two slopes on each side, the lower slope being nearly vertical and the upper slope nearly flat

masonry - any of a variety of materials including brick, stone, mortar, terra cotta, stucco and concrete, used for building construction

massing - the overall composition, including the size expanse, shape and bulk, of the major volumes of a building, that contribute to the building's appearance, especially when the building has major and minor elements

molding - a long decorative trim of any of a variety of profiles, used to ornament buildings and building elements

mortar - a composition of sand, water, lime and/or Portland cement, and possibly other materials, used to bond masonry units together

mullion - the vertical member that separates windows or doors set in a series within a single opening

multi-pane or multi-light - describing a window with sash that are composed of more than one pane of glass

muntin - the small element that separates the individual panes of glass in a multi-pane sash

newel or newel post - the post, often ornamental, that supports the handrail at the top and bottom of a stairway

ordinance - a municipally adopted law or regulation outlining specific rules regarding a variety of issues, but often pertaining to the use of land, property, buildings, etc.

oriel - a bay window above the first-story level

orientation - the placement of elements on a building or the placement of a building on a site, taking into consideration size, distance, setback, alignment of features, the location of the street, and the situation of other nearby buildings

outbuilding - a building separate from and secondary to the main building on a property including but not limited to garages, carriage houses, summer kitchens, ice houses, sheds and barns

panel - a flat surface surrounded by moldings or recessed from the adjacent surface and sometimes ornamented

parapet - a wall that projects above a roof

pediment - a gable located above a cornice in classical architecture; a similar feature above doors and windows

physical evidence - remaining historic fabric and/or features of a building that should be used as the basis for designing or recreating new building elements

photographic evidence - historic photographs or illustrations that provide information about the historic appearance of a building, and that can be used as the basis for designing or recreating new building elements appropriate to its historic character

picturesque - describing architecture that is characterized by irregularity, variety and roughness

pilaster - a flat architectural element resembling a column attached to a wall

pitch - the slope of a roof or other element

pointing - the process of finishing mortar joints to an acceptable surface condition

porch - an exterior structure attached to a building, with its own roof and a floor, and open on all sides, may be large or small, plain or decorative

portico - a covered porch or walkway supported by columns, typically located at the entrance to a building

poultice - any of a variety of compositions applied to masonry surfaces to assist in the removal of stains

preservation - the stabilization of a building or a material to protect it from deterioration

primary elevation or primary facade - an exterior wall of a building that receives special architectural treatment or ornamentation, often the wall that contains the entrance or any wall facing a major street

primer - a specially formulated coating that creates a protective film on a surface to allow good adhesion of the topcoat of paint

priming - preparing a surface, or applying a first coat of paint before the finish coat(s)

proportion - the relationship of the size, shape and location of one part of a building to another part, or of one part of a building to the whole building, or of one building to a group of buildings

protect - to safeguard the condition and character of a building or a property and its component parts, typically achieved through consistent maintenance

protective surface coating - a layer of material applied to a surface specifically for the purpose of shielding the surface from the elements or other potential factors of deterioration

public street, alley or way - any thoroughfare for travel that is open to the public, either by foot or by vehicle, typically considered in relation to the buildings or parts of buildings that can be seen from it

rafter - one of a series of roof beams that supports the roof sheathing

rail - a horizontal framing member of a door or window

railing - a barrier and/or hand support typically consisting of vertical members supporting a horizontal member

reconstruction - the process of duplicating the original materials, form and appearance of a vanished building or structure that was present at a particular historical moment based on historical research

rehabilitation - the process of returning a building to a state of utility through repair or alteration

reinforce - to strengthen an architectural element by adding material and/or supporting elements in an attempt to save as much historic material as possible, as opposed to replacement

renovation - the process of repairing and changing an existing building for modern use, so that it is functionally equal to a new building

repair - to fix a deteriorated building element or material to make it functional

replace - to remove a building element, material or feature and install a different element in its place, thereby removing historic fabric from a building

re-point - the process of replacing and refinishing deteriorated mortar to restore the strength and appearance of a masonry wall

resin - a solid or semisolid organic material that provides paint with its film-forming character

restoration - the process of returning a building and/or property as nearly as possible to its condition at a specific period of time in its history using the same construction materials and methods as the original

retain - to keep a historic building element in place and/or in use, as opposed to removing the element and replacing it with a new element

reversible - describing an alteration or restoration technique that can be removed or otherwise undone in the future without damaging the original historic fabric of the resource

rhythm - an ordered repetition of elements composing the exterior walls of a building and giving the building its character, or the repetition of buildings or building elements on a street

ridge - the upper edge of two sloping roof surfaces

rising damp - the condition that exists when suction pulls groundwater into a masonry wall from the bottom up

roof material pattern - primarily the shape and configuration, but also the color, texture and other visual properties of shingles, tiles or other materials used to cover a roof

roof shape - the overall form of the structure that covers a building, typically identified by the placement, number, form, size and angle of the component slopes of that structure, and by the method by which the slopes are joined

sandblasting - the use of sand propelled by a blast of air or steam, to remove dirt, paint or other materials from a wall surface, typically harmful to historic materials due to the loss of parts of the historic material along with the dirt or paint

sash - the unit that holds the window glass

scale - the perceived size of a building or building element relative to the forms and elements around it

setback - the distance required between a building and the property line

sheathing - the covering placed over the rafters as a base for the shingles or other finishing material

shed roof - a roof with a single slope

shingle - a type of roof covering consisting of small units produced in standard sizes and a variety of materials and shapes to convey a variety of appearances, laid in overlapping courses to prevent water infiltration

shutter - one of a pair of small, hinged doors that covers a window or other opening, may be louvered (fitted with a series of slats) or solid (fitted with raised or recessed panels)

side gable - a gable-roofed building with the main entrance on a wall that is below one of the sloping sides of the roof, not below the gable

sidelight - a slender, vertical window adjacent to a door or larger window, often divided into multiple panes and typically used in pairs, separated by the door or larger window

siding - the nonstructural exterior wall covering of a frame building

significant - describing a building feature that contributes to the overall design, appearance and importance of a building, and is essential to maintaining the historic integrity of the building and/or the historic district

significant detail or element or feature - a detail, element or feature that is essential to an understanding of the value and character of a historic building or property

significance of later changes - over time, some changes to historic buildings may achieve significance in their own right, displaying features or characteristics of styles or types that are later than that of the original building, but which have recognized value of their own

sill - the horizontal element at the base of a door or window opening, or at the bottom of a timber-framed wall

slope - an inclined surface

solid to void ratio - the relationship in size between the solid parts of a wall, and the openings in the wall including door and window openings

spalling - the flaking of brickwork or stone due to the freezing and thawing of a wall, chemical action, or building movement

spindle - a wooden element that has been turned on a lathe, typically used in railings and decorative elements

spindlework - a series of spindles

storefront - the street-level front of a store including windows to display merchandise, an entrance or entrances, signs, etc.

streetscape - the overall view of a street and its component elements including the street, sidewalk, buildings, signs, traffic lights, street furniture, landscaping, etc., and also including less tangible factors such as rhythm, solid-to-void ratio, changes or consistency in building height, changes or consistency in setback, etc.

stringcourse or belt course - a horizontal band of decorative, projecting masonry, typically used to separate parts of a wall surface

substrate - a material on top of which other material is installed

swag - an ornamental element composed of draped foliage

synthetic - referring to a manufactured material introduced in modern times, not available historically, and used as a replacement for a historic material, also called artificial

terne - a corrosion resistant combination of lead and tin

texture - the visual and tactile qualities of a surface

tooling pattern - the shape and profile of a mortar joint

topcoat - a coating of paint composed of a formula that is weaker than primer, but which contains more pigment

transom - a window located above a door, a storefront window or another window, sometimes operable

trusswork - an ornamental treatment, typically used in gables, resembling the structure of wooden trusses

turned - describing an element that has a circular cross section produced by turning on a lathe

valley - the angle formed where two downward sloping roof surfaces adjoin

ventilation - the process of supplying fresh air to interior spaces while expelling undesirable air to the exterior

vernacular - representing popular local building practices

water blasting - the use of propelled water to remove dirt, paint or other materials from a wall surface, usually harmful to historic materials if applied at too strong a pressure due to the loss of parts of the historic material along with the dirt or paint

weather stripping - a continuous material applied to an exterior door or window to seal the joint between it and the surrounding frame, used to decrease air and water infiltration

weep hole - an opening that allows moisture to drain to the outside of a building, typically used in storm windows