DESIGN GUIDELINES
and
Preservation Manual

For the

BEAVER HISTORIC DISTRICT

Draft Guidelines - August 29, 2018

Board of Historical Architectural Review
DRAFT
Notes & Acknowledgements

These design guidelines were prepared by Frens and Frens, LLC, in association with RGA, Inc., for the State Historic Preservation Office, Pennsylvania Historical and Museum Commission, for adoption by the Borough Council of Beaver, Pennsylvania.

Thanks go to the following individuals and organizations who helped make these Design Guidelines possible:

Mayor
Dan Madgar

Borough Council
Alexander Andres
Michael Deelo
Chris King
Margaret McKean
James Perini
Adam Rathbun
Alex Sebastian
Sean Snowden
Jarrod Thomas

Board of Historical Architectural Review
Robert Rice
Chuck Copeland
Joseph Rubino
Valentine Brkich
Ed Hancock
Elaine Savoldi
Lisa Sattler

Beaver Preservation Plan Steering Committee
Michael Deelo
Brian Hankinson
Margaret McKean
Richard Sprecker

These Design Guidelines were funded by the State Historic Preservation Office, Pennsylvania Historical and Museum Commission. Special thanks are due to Saurabh Shah, Project Manager; Elizabeth Rairigh, Division Chief, Preservation Services; and William Callahan, Community Preservation Coordinator, Western Region.
# Table of Contents

**Title Page**

**Acknowledgements**

1. Introduction ................................................................................................................................................... 1  
   1.1 Introduction to the Beaver Historic District ................................................................. 1  
   1.2 Intent of Design Guidelines ............................................................................................... 1  

2. Historical Overview ................................................................................................................................. 3  
   2.1 Historical Overview of the Beaver Historic District .......................................................... 3  
   2.2 Historical Styles in the Beaver Historic District .............................................................. 6  

3. Qualities of Historic Architecture ........................................................................................................ 11  
   3.1 Introduction ........................................................................................................................... 11  
   3.2 Building Materials .................................................................................................................. 11  
   3.3 Massing ................................................................................................................................. 11  
   3.4 Order ........................................................................................................................................ 12  
   3.5 Proportion .................................................................................................................................. 12  
   3.6 Rhythm ....................................................................................................................................... 14  
   3.7 Scale .......................................................................................................................................... 14  

4. Guidelines for Preserving Historic Buildings ..................................................................................... 15  
   4.1 General Guidelines for Preserving Historic Buildings ...................................................... 15  
      4.1.1 Building Changes ........................................................................................................... 15  
      4.1.2 Deteriorated and Missing Components ..................................................................... 15  
      4.1.3 Immediate Neighborhood ......................................................................................... 15  
      4.1.4 Primary Façades ........................................................................................................ 15  
      4.1.5 Preserving Architectural Character ......................................................................... 15  
      4.1.6 Reversibility ............................................................................................................... 17  
      4.1.7 Repair and Restoration Versus Replacement .......................................................... 17  
   4.2 Specific Guidelines for the Preserving Historic Buildings ..................................................... 17  
      4.2.1 Anchoring Devices ...................................................................................................... 17  
      4.2.2 Awnings .................................................................................................................... 18  
      4.2.3 Doors and Door Hardware, Historic ..................................................................... 18  
      4.2.4 Doors, Storms and Screens ..................................................................................... 18  
      4.2.5 Equipment, Banking and Vending Machines .......................................................... 19  
      4.2.6 Lighting, Exterior ...................................................................................................... 19  
      4.2.7 Masonry- Cleaning ................................................................................................. 20  
      4.2.8 Masonry– Paint Removal ....................................................................................... 20  
      4.2.9 Masonry Repointing .............................................................................................. 20  
      4.2.10 Mechanical, Electrical and Communications Equipment .................................... 21  
      4.2.11 Openings (new) in Existing Walls ....................................................................... 21  
      4.2.12 Porches .................................................................................................................. 22  
      4.2.13 Paint Colors and Color Schemes ........................................................................... 22  
      4.2.14 Roofing - General Historic .................................................................................. 23  
      4.2.15 Roof Features - Historic Chimneys ................................................................... 23  
      4.2.16 Roof Features - Historic Cornices ................................................................... 24  
      4.2.17 Roof Features - Historic Dormers and Cupolas ................................................ 24  
      4.2.18 Roofing - Asphalt Shingles ................................................................................. 24
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2.19 Roofing - Decorative Patterned Roofs</td>
<td>25</td>
</tr>
<tr>
<td>4.2.20 Roofing - Historic Gutters and Downspouts</td>
<td>25</td>
</tr>
<tr>
<td>4.2.21 Roofing - Historic Slate Shingles</td>
<td>25</td>
</tr>
<tr>
<td>4.2.22 Roofing - Substitute Materials</td>
<td>26</td>
</tr>
<tr>
<td>4.2.23 Shutters and Blinds</td>
<td>26</td>
</tr>
<tr>
<td>4.2.24 Skylights in Historic Roofs</td>
<td>26</td>
</tr>
<tr>
<td>4.2.25 Storefronts - Historic</td>
<td>26</td>
</tr>
<tr>
<td>4.2.26 Stucco - Historic</td>
<td>27</td>
</tr>
<tr>
<td>4.2.27 Windows - Preservation of Historic</td>
<td>27</td>
</tr>
<tr>
<td>4.2.28 Windows - Replacement</td>
<td>27</td>
</tr>
<tr>
<td>4.2.29 Windows - Storm Windows</td>
<td>28</td>
</tr>
<tr>
<td>4.2.30 Woodwork - Cleaning</td>
<td>29</td>
</tr>
<tr>
<td>4.2.31 Wood Siding and Trim</td>
<td>29</td>
</tr>
<tr>
<td>5.2.10 Roof Materials - Additions</td>
<td>36</td>
</tr>
<tr>
<td>5.2.12 Skylights</td>
<td>36</td>
</tr>
<tr>
<td>5.2.17 Windows and Doors - Additions</td>
<td>37</td>
</tr>
<tr>
<td>6.1  General Guidelines for Sustainability</td>
<td>39</td>
</tr>
<tr>
<td>6.2 Daylighting</td>
<td>39</td>
</tr>
<tr>
<td>6.2.1 Coatings for New and Existing Glass</td>
<td>40</td>
</tr>
<tr>
<td>6.2.2 Awnings</td>
<td>40</td>
</tr>
<tr>
<td>6.2.3 Skylights</td>
<td>40</td>
</tr>
<tr>
<td>6.3 Durable Materials</td>
<td>40</td>
</tr>
<tr>
<td>6.4 Geo-Thermal Heating and Air Conditioning</td>
<td>41</td>
</tr>
<tr>
<td>6.5 Green Roofs</td>
<td>41</td>
</tr>
<tr>
<td>6.6 Passive Ventilation Systems</td>
<td>42</td>
</tr>
</tbody>
</table>

**Design Guidelines**
6.7 Rainwater Collection Systems ................................................................. 42
6.8 Solar Panels .......................................................................................... 43
6.9 Window Upgrades .................................................................................. 44
7. Guidelines for Protecting Historic Streetscapes and Landscapes ............... 45
  7.1 General Guidelines for Protecting Historic Streetscapes and Landscapes .... 45
  7.1.1 General ......................................................................................... 45
  7.1.2 Residential Streetscapes ................................................................. 45
  7.1.3 Commercial Streetscapes ............................................................... 51
  7.2 Specific Guidelines for Protecting Historic Streetscapes and Landscapes ...... 53
  7.2.1 Accessibility ................................................................................. 53
  7.2.2 Driveways and Off-Street Parking .................................................. 54
  7.2.3 Fences ......................................................................................... 54
  7.2.4 Retaining Walls ............................................................................. 54
  7.2.5 Sidewalks ..................................................................................... 54
  7.2.6 Signage ......................................................................................... 55
  7.2.7 Street and Yard Lighting ............................................................... 56
8. Appendices ............................................................................................... 57
  A. Glossary of Common Architectural Terms ............................................... 57
  B. Secretary of the Interior’s Standards for the Rehabilitation ....................... 59
1.1 INTRODUCTION TO THE BEAVER HISTORIC DISTRICT

The Beaver Historic District provides the Borough of Beaver with a sense of stability and a tangible connection to its past. Materials, forms and architectural styles employed in buildings tell a great deal about material availability, community economics, and connections to the outside world. This heritage, experienced by residents and daily users within the district, is worthy of preservation. These guidelines are designed to help residents and property owners preserve the heritage and character of this historic district, while ensuring that the district continues to meet the needs of residents, property owners and visitors. Activity in the historic district is a sign of vitality. New construction, rehabilitation, restoration and maintenance can be guided to preserve the historic district and its streetscapes, and the local heritage while encouraging a vibrant economy. These guidelines create a path for change that will strengthen and protect the district.

To preserve and protect Beaver’s historical and architectural resources, Borough Council created the Beaver Historic District through the 2011 enactment of Chapter 11: Historic Preservation, of the Zoning Ordinance, pursuant to state enabling legislation. The Ordinance contains provisions for regulating the demolition of buildings within the District. The Ordinance establishes the Board of Historical Architectural Review (HARB), which reviews demolition applications within the Historic District, and makes recommendations to Borough Council for the issuance of a Certificate of Appropriateness for each application.

1.2 INTENT OF THE DESIGN GUIDELINES

These Design Guidelines are a component of a Preservation Plan for Beaver that includes four primary goals:
1. Preserve and Protect the Historic Character of the Borough.
2. Increase Public Awareness of Beaver's History
and Historic Resources.
4. Identify funding Needs and Sources.

Each of these goals has several objectives. The creation of these Design Guidelines specifically achieves the first objective of Goal 1, to provide tools for design review.

The Design Guidelines for the Beaver Historic District are intended to assist property owners and HARB members to protect the historical character of the District in an informed, cooperative effort. The guidelines provide an analysis of what is special about the Historic District, and offer specific direction for preserving those qualities. Although design review is limited to the review of demolition applications, the Design Guidelines are advisory to all proposed changes in the Historic District, and represent best practice in historic preservation. The Design Guidelines may also be used as a technical resource for property owners outside of the Historic District.

This document is not meant to be used as a strict and rigid rule book. Chapter 11 of the Zoning Code will continue to be the legal basis for review within the Historic District. Pursuant to Section 11-107.1.H of the Zoning Code, the HARB may “promote public interest in ...historic preservation by carrying on education and public relations programs including, but not limited to, activities related to new construction or renovation of historic resources within the Historic District.”

The Design Guidelines are a flexible tool for ensuring the thoughtful preservation of the Beaver Historic District. As such, they advocate two primary goals for every proposed change:

- To minimize harm to historic fabric, and
- To enhance the historic character of the district

To achieve these goals, the guidelines strive to meet the following objectives:

- To provide best-practice advice to property owners in planning for the acquisition of property, alterations to historic structures, and design of new buildings and additions in the historic district.

- To provide best-practice advice to property owners and their architects and builders regarding the criteria that should be used design in the historic district.

- To augment the Secretary of the Interior’s Standards for the Rehabilitation.

The guidelines highlight the unique character of the district and provide best-practice advice regarding a process for accommodating change over time in a manner that enhances the district, encourages pride, fosters stewardship, increases property values, supports local businesses, and generally improves the quality of life in the community.

<<c.1930 or 1968 map of Beaver>>

Sanborn Map of Beaver, 19__.
2.1 HISTORICAL OVERVIEW OF THE BEAVER HISTORIC DISTRICT

Brief History of the Borough of Beaver

Perched on a plateau overlooking the Ohio River, the Borough of Beaver is located in one of the great industrial centers of the United States. It is a beautiful riverfront town with fine houses, lovely parks and squares, and a forested escarpment in view beyond the river. Beaver’s wide tree-lined streets and stately homes, and its many green spaces and thriving downtown, seem removed from the industrial landscape that immediately surrounds it. Freight trains continually pass by on tracks along the Ohio, as do barges on the river itself. The scenic Beaver Bridge (1910), carries additional freight over tracks adjacent to the former Pittsburgh and Erie Railroad stations at the east end of town. Along the Beaver River, from which the town takes its name, is the Beaver Canal, which begins just east of town in Bridgewater. Immediately west of Beaver, in Vanport, is the former Curtiss Wright plant, an aircraft propeller plant built during World War II. This industrial history continues: the Shell “cracker” plant rises at the time of this writing just across the Ohio River.

While no great factory was located within the Borough, Beaver was and is the product of industrial development. Pittsburgh area company executives and managers – the professionals of the day - found Beaver a refuge. As a result, the community is enriched with fine buildings, including residential, government, religious, and commercial. In the late twentieth century, when so many of the surrounding industries closed, Beaver’s by-then well-established “sense of place” as well as its own “industry,” Beaver County government, did not feel the sting of mass layoffs or the stigma of massive hulk of former mills long abandoned. Today, Beaver continues to attract people looking for an environment that is clean, safe and convenient. This did not occur by happenstance. Many things – but mainly its geography and location

– influenced decisions that ultimately created what we now know as Beaver.

The following brief history of the Borough of Beaver is mainly derived from the Beaver Historic District National Register of Historic Places nomination, completed in 1996 by Taylor & Taylor Associates, Inc.

Fort McIntosh and the American Revolution

Permanent settlement in this area occurred in the last quarter of the eighteenth century. The Tuscarawas Trail, a Native American trail that extended to central Ohio, began in what is now Beaver. In the mid-eighteenth century English and French traders passed through this way and established a small village in the area. The end of the French and Indian War in 1763 also brought an end to French involvement, but the Native Americans remained. Fearing attacks during the American Revolution, the Continental Army in 1778 constructed a fort at the present location of River Road and Insurance Street. Named after its commanding officer, Lachlan McIntosh, Fort McIntosh marked the first permanent settlement of European Americans in Beaver. Commanding a strategic location high above Ohio River near its confluence with the Beaver River, the fort set the stage for Beaver’s eventual development.
A Planned Community

Changes occurred rapidly after the Revolution, and attracted people to both Western Pennsylvania and Beaver. In 1783, with the war over, the Pennsylvania state legislature assigned lands to veterans as payment for their service. Two years later, the state signed the Treaty of Fort McIntosh with the remaining Native Americans, essentially opening much of western Pennsylvania to settlement as the Native Americans began moving west. In his “History of Beaver County, Pennsylvania, and its Centennial Celebration,” author Joseph Bausman states that the Native Americans ceded all of this land for a sum of just $2,000. Peace was not yet at hand, however, until General Anthony Wayne defeated the Native Americans in 1794, and signed a peace treaty the following year.

The state legislature continued to look west. An act by the Pennsylvania General Assembly in 1791 authorized the establishment of the community of Beaver. The following year Deputy Surveyor Daniel Leet completed a survey of the area, specifying a grid of streets at the confluence of the Beaver and Ohio Rivers. The plan included 8 “public” spaces (including four in the heart of the community), major streets having 100 foot rights of way and minor streets having 25 foot rights of way, and development lots. Though public, Beaver Borough purchased the last of these lands in 1834. In the ensuing years Beaver would expand only slightly beyond its original layout.

Fort McIntosh, meanwhile, was deactivated in 1791 and abandoned. Between 1784 and 1785, Fort McIntosh had been home to the First American Regiment, making it the first permanent peacetime home of the U.S. Army, except for two small detachments at Fort Pitt and West Point. This unit continues today as the Presidential Honor Guard, also known as “The Old Guard”, part of the 3rd Infantry Regiment. Remnants of the log fort can be seen along River Road, overlooking the Ohio River; several of its log and timber framing were reused in the construction of some of Beaver’s early houses.

The County Seat

Beaver became the county seat in 1800 when the County of Beaver was formed out of Allegheny and Washington Counties, and was incorporated as a Borough two years later. Court was first held here that year, in the house/tavern of Abner Lacock, who was also judge and later a U.S. Senator. The first court house was built in 1804, on one of the public lots laid out by Daniel Leet. A large Second Empire style courthouse opened in 1877, although it was destroyed by fire as the result of a painter’s torch igniting a bird nest in 1932. The current Art Deco style building was constructed in 1933. In 1912, just a few blocks east of the courthouse on Third Street, the borough constructed the Neo-Classical Revival style Beaver Borough Hall. By then Third Street had emerged as the major thoroughfare and center of commerce in the community.

The Community Grows

Beaver grew slowly but steadily through the nineteenth century. From a few hundred residents in 1820, the population reached 2,350 by 1900 and by 1950 the population reached its zenith at 6,360. The greatest growth occurred between 1880 and 1930;
development of several commercial buildings, often built in the Italianate style, between Beaver and Insurance Streets. This compact area became Beaver’s “downtown.” Though altered significantly over the years, Beaver’s “main street” conveys its commercial significance and to some degree its historic appearance. Downtown Beaver thrives, offering a variety of offerings the residents of Beaver, and elsewhere.

The Squares

In 1792, Daniel Leet laid out Beaver as a rectangular grid having a central square with four additional squares near the corners of the rectangle, following the precedents of Philadelphia and Savannah. Beaver’s public squares are named after some of Beaver’s most important residents or other influential people. The squares (some of which are called parks) have served as locations for the county seat, a cemetery, and a jail. However, until 1903, when local attorney and business leader, John M. Buchanan, suggested naming the squares after significant individuals.

The large square in the center of town, at the intersection of Market and Third Streets, is actually four squares. At the northwest quadrant of the intersection is Agnew Square, named for Pennsylvania Supreme Court Chief Justice Daniel Agnew, whose home once faced the square. The courthouse complex occupies the northern part of this square. Quay Square occupies the northeast quadrant, and is named for U.S. Senator Matthew Stanley Quay. He was a Medal of Honor recipient for actions today the population is estimated to be just under 4,400. To be sure, a county seat often contains an abundance of jobs and professions most other towns don’t offer, such as in the legal field. Unlike so many river towns in the Pittsburgh metropolitan area however, it was not job opportunities that drew and continue to draw people to Beaver. Beaver offered something different.

In 1870, the Pittsburgh and Erie Railroad opened a passenger station on the east side of town. Beaver’s residents could now commute daily to jobs in Pittsburgh. Moreover, Beaver’s location allowed the prevailing winds to keep the severe smog associated with the region in the late 1800s and much of the 1900s away from town. As the area’s industrial base grew during this time, requiring thousands of workers, Beaver offered an alternative location for its managers and executives to locate. It offered clean air, efficient transportation, and safe, quiet streets. Beaver was also convenient to other towns via a trolley and later the automobile. While freight or passenger service is no longer available at the former Pittsburgh and Erie line in Beaver, the former station buildings have been beautifully restored for use as a museum, events space, and local historic and genealogy research center.

Beaver’s architecture reflects its transition from a small county seat to a bedroom community. Large and architecturally significant houses were built mainly in the eastern end of town, however fine residences and large, architecturally significant churches can be found throughout the borough. The majority of the churches were constructed between 1890 and 1930, the period of rapid growth in the borough. Meanwhile, Third Street experienced the
during the Battle of Fredericksburg in the Civil War and a major figure in Pennsylvania and U.S. politics. (Quay’s last residence at the corner of College Avenue and Second Street was declared a National Historic Landmark in 1976). Irvine Square, which occupies the southeast quadrant, is named for General William Irvine. The final quadrant, the southwest square, is named for General Lachlan McIntosh. Both Generals Irvine and McIntosh were associated with Fort McIntosh.

Clark Square is named for George Rogers Clark, who was a United States Commissioner at the time of the 1785 Treaty of Fort McIntosh. Bouquet Square honors Colonel Henry bouquet, who led a 1763-1764 expedition against the Ohio Indians and traversed the area which later became Beaver. Wayne Square is named for General Anthony Wayne, whose forces were located nearby in the winter of 1792-3. Finally, in 1908, Linn Square was named for Robert P. Linn in 1980, who served as Beaver’s mayor for than 50 years.

The Twenty-first Century – the Ideal Continues

Beaver today is considered a “built-out” community, meaning that virtually all of its developable land has been built upon. Over time, the “in-lots” Daniel Leeks created between his grid street pattern were subdivided and developed as the larger lots envisioned (partly for agricultural needs) were no longer needed. With modern transportation systems expanding in the area in the early 1900s, and the use of automobiles grew, there was a lesser need for company executives and managers to locate here. Beaver, however, remained a place where people of all walks of life wanted to live. These factors in part led to the development of smaller houses and smaller lots. Prevailing architectural styles such as the Craftsman style enabled this to occur throughout the borough, but with little disruption to the overall small town community feel. This may have been in part due to the restrictions placed upon builders by the developers and later on, through borough ordinances. While Beaver does have several apartment complexes that were built in the latter part of the twentieth century, the majority of the housing here is single family. Beaver’s grid street pattern, building restrictions including front-yard setbacks, and the mainly single-family residential make-up have helped preserve Beaver’s “small town” feeling. Beaver’s compact business district plus its many squares and parks have greatly augmented and contributed to this character.

2.2 Architectural Styles in the Historic District

The Beaver Historic District is comprised of linear core of commercial and institutional buildings in a setting of green squares, flanked to the north and south by cohesive residential neighborhoods, all laid out on a rectangular grid. The cohesiveness of the residential streets is attributed to the consistency of house size, form, style, and materials, and to the repeated setting of tree-lined streets. Architecturally, some 85% of Beaver’s historic resources date from the period 1850-1946, with late Victorian and early 20th century revival styles dominating the architecture of the historic district. Only 2% of surviving historic resources date from the first half of the 19th century. Numerous architectural styles are represented in the historic district, as follows.
**FEDERAL STYLE (nationally 1780-1820, vernacular examples to mid-century)**

The Federal style became popular after the American Revolution, and the style is found in abundance in communities that developed during the first half of the nineteenth century. Federal style buildings are relatively plain, rectilinear and box-like. They are generally oriented with side-gables, with their ridge lines parallel to the street. Windows, aligned vertically and horizontally, are double-hung, typically with six-over-six pane sashes. In Federal style buildings, cornices generally have a modest projection, and the principal ornamentation is lavished on the door surround, which often features pilasters, full classical entablature, and transom window.

**GREEK REVIVAL (nationally 1818-1860)**

The Greek Revival Style came into fashion in 1818, with the Second Bank of the United States in Philadelphia. Modeled after the ancient Greek temple and introduced from Great Britain, the most distinguishing feature of the Greek Revival in America was the temple form with its pedimented (triangular) gable front, 30-degree pitch roof, and large classical columns supporting a portico roof. When applied on a residential scale, the Greek Revival was often manifest as distinctive door surrounds, pedimented porches or front gables, and trim profiles.

**ITALIANATE STYLE (nationally 1837-1890)**

The Italianate style appeared in America circa 1837 as a residential style. Although high-style examples of Italianate “villas” are uncommon, the vocabulary of the Italianate is everywhere in American cities, towns, and villages from the second half of the nineteenth century. In Beaver, Italianate Style houses are built in wood frame with clapboard siding and brick with wood trim. Commercial buildings were often designed as simple brick boxes with Italianate-style cornice and storefront. Italianate exterior woodwork was also applied to earlier buildings at times, and was blended with other styles on a single building.

**GOTHIC REVIVAL (nationally 1800-1880)**

Park Presbyterian Church, Commerce Street. An example of Gothic Revival, built of brownstone masonry.
The Gothic Revival style was a favored style for religious buildings. Residentially, the Gothic Revival style featured steeply pitched roofs with deep overhangs, centered or paired cross gables, decorated barge boards and ornamental trusses at the gables, and elaborate one-story porches.

**Romanesque Revival (Nationally 1850-1890)**

![First Presbyterian Church, 1890, College Avenue, a monumental example of the Romanesque Revival Style.](image)

Romanesque Revival architecture is identified by its use of the semi-circular arch for window and door openings. Walls are typically masonry and façades are often flanked by square or polygonal towers of different heights. Examples are often ecclesiastical buildings, as seen in Beaver at the First Presbyterian Church on College Avenue.

**French Second Empire (Nationally 1865-1890)**

![404 Bank Street, an example of the Queen Anne Revival Style.](image)

The French Second Empire emulated forms developed during Napoleon III’s reign (1852-1879). The primary feature of American versions of this robust style was the “Mansard” roof which makes full use of the attic space. It does this by wrapping the attic floor height with a short, steep, vertical or curved, hip roof, capped by a flat or near-flat central roof. Sizable window dormers open the attic for air and light. French Second Empire structures sometimes shared the general proportions of the century, into larger, richly textured, highly decorated houses of complex shapes. The American examples were perhaps less literal and more fluid, but used

**Queen Anne Revival (Nationally 1875-1890)**

![653 2nd Street. A textbook example of the French Second Empire Style.](image)

Italianate style and the use of the larger window panes available after the Civil War, notably 1-over-1, double-hung sash. Buildings were often decorated with brackets and other ornamental forms cut out of flat wood. A textbook example of the French Second Empire style is 653 2nd Street.

The Queen Anne Revival started in England as a highly imaginative adaption of the late seventeenth
similar methods to achieve the overall picturesque effect. There are numerous Queen Anne Revival Style houses in Beaver, most evident by their wrapping porches and corner turrets.

**Colonial Revival Style (Nationally 1880-1955, Arguably to the Present)**

The Colonial Revival Style grew out of the Centennial Exhibition of 1876, and flourished for numerous building types in the first half of the twentieth century. The style was based on colonial building forms, but elements were enlarged, accentuated, and combined in new ways. In Beaver, Colonial Revival forms include side-gabled houses, hipped-roof houses, and gambrel-roofed houses.

**American Four-Square (Nationally 1880-1930)**

The American Four-Square Plan, which was a two-story plan featuring four rooms per floor, is plentiful in Beaver. Characteristic of the style is a pronounced pyramidal (hipped) roof, dormers, tall chimneys, and a front porch. Several are best described as Colonial Revival Style houses with an American Four-Square Plan.

**Dutch Colonial Revival Style (Nationally 1900-1930)**

A variant of the Colonial Revival Style, the Dutch Colonial Revival Style is recognized by its gambrel roof form, shed dormers, and typically modest size.

**Tudor Revival (1890-1940)**

The Tudor revival style was largely a residential
style. It employed steeply pitched roofs, and prominent end gables, and often featured cross gables. Exterior walls were sometimes decorated with applied half-timbering, and windows were typically casement (and often steel), sometimes with leaded glass panels. The style also features prominent chimneys and rustic board doors with wrought iron hardware.

**Bungalow (1905-1930)**

The bungalow style, also called the craftsman style, was exclusively a residential design. Characterized by a low-pitched, gable roof with deep overhangs and ornamental projecting eave brackets or rafter extensions, bungalows typically featured deep porches with heavy columns.

**20th Century Commercial (1900-1940)**

Generally following the eclectic designs of large office and other commercial buildings from the first half of the twentieth century, this style features large metal-and-glass storefront windows and wide office windows above.

**Minimal Traditional (nationally 1935-1950)**

The most common Minimal Traditional Style houses are Cape Cods, usually simple one- or one-and-one-half story side-gabled house, sometimes with a small cross gable entrance vestibule.

*Third Street contains a mix of late 19th century styles such as Italianate, Early 20th Century Commercial Style, late 20th century highway commercial, and contemporary commercial.*
3.1 INTRODUCTION

Architectural styles contribute to the richness and understanding of Beaver’s historic district. While the uniform size, spacing, setbacks, and materials of houses are the primary character-defining qualities of the borough, architectural style and house form go hand-in-hand in Beaver. A two-story brick house with a hipped roof and front porch takes its form from the American Four-Square Plan Style. One-and-a-half story gambrel-roof houses are consistently Dutch Colonial Revival Style. One-and-a-half story houses with a low-pitched roof, deep eaves parallel to the street, and a deep porch supported by heavy columns occur only in the Bungalow Style, and so forth. And so, unlike rowhouse communities and communities from the first half of the nineteenth century, in which stylistic elements were added to masonry or wood frame “building blocks,” house form and architectural style are integral in Beaver. In contrast to the residential architecture, pre-1950 commercial buildings along 3rd Street typically follow the norm of masonry blocks with applied stylistic ornamentation, although sometimes with great flourish.

To preserve an individual building, the architectural character and stylistic elements of the building must be identified and either maintained or restored. To preserve a historic district, the architectural character of each proposed new structure and addition must be compatible with neighboring historic buildings. The architectural character of a building refers to the qualities of massing, scale, proportion, order, rhythm, and materials. These qualities are related first to the architectural form of the building and secondly to the stylistic elements of buildings. Each application for a change to an existing building or for a new building should be evaluated using these qualities, which are defined in this chapter.

3.2 BUILDING MATERIALS

The historic buildings of Beaver Historic District were constructed of traditional building materials, including wood, brick, and stone. Larger buildings, including churches, schools, government buildings, and commercial buildings, were stone and brick, while dwellings were wood frame and clapboard, brick-faced, and for a small number, stucco and half-timbered finishes.

Ironspot brick is one of the most distinctive materials in the historic district. At 951 4th Street, custom brick shapes and bonding patterns are used to highly decorative effect.

3.3 MASSING

Massing, also referred to as architectural form, is the overall volumetric shape of a building. The massing of a building may be described as large or small, simple or complex. The massing of a building is defined by the volume formed by the exterior walls, roof shape, and appendages such as porches, projecting bays, towers, dormers, and cupolas. In a historic district, massing is the single most important
characteristic to consider in the evaluation of proposed additions and new construction. A large new building set in a context of uniform-size, smaller, historic building blocks is visually disruptive because the continuity of the historical pattern is broken. Roof forms in a residential streetscape are highly visible and contribute significantly to the shape of a building.

3.4 ORDER

Order in architecture is the arrangement and relationship of parts of a building. A symmetrical building façade — one where a center door is flanked by an equal number of windows on each side of the door — is highly ordered. The front façade of 476 Beaver Street is symmetrical and clearly ordered. Windows that align vertically are ordered; their placement is based on a rational structural and visual order. An asymmetrical façade is less formal than a symmetrical façade.

The roof form contributes to the volumetric shape of a building. All of these roof shapes may be found in Beaver.
The Golden Section formed by arcing the diagonal of half a square, creates a ratio of about 5:8. This shape recurs in western art and architecture.

The center-hall plan house, with its symmetrical façade, is highly ordered. The side-hall plan house, although lacking a symmetrical façade, is also a formal, ordered plan-type in which the doors and windows of the front façade are uniformly spaced and directly related to the floor plan inside the building.

3.5 PROPORTION

Proportion in architecture is the relationship among the dimensions of the various building elements and the individual features to each other. Architectural harmony is achieved in a building façade when façade elements are proportional to each other and to the overall façade. “The purpose of proportion is to establish harmony throughout the structure - a harmony which is made comprehensible either by the conspicuous use of one or more of the [classical] orders as dominant components or else simply by the use of dimensions involving the repetition of simple ratios.” (John Summerson, The Classical Language of Architecture, Cambridge, MA: MIT Press, 1963, page 8.)

One of the oldest systems of proportion was the Golden Section, which was devised in ancient Greece. The Golden Section is a rectangle with a width to length ratio of about 5:8, proportions that are an ideal ratio in western art and architecture.
The spacing of window and wall on a façade creates a rhythm that repeats itself from building to building. The spacing of buildings along a street also creates a rhythm.

In architecture, the use of repeated proportions creates a harmony in a building façade. The overall proportions of the façade are repeated in façade elements such as doors and windows.

### 3.6 RHYTHM

Rhythm in architecture is the pattern and spacing of repeating elements such as windows, columns, arches, and other façade elements. Almost all buildings are made of elements that repeat themselves — alternating vertical bands of brick wall and windows, alternating horizontal bands of brick wall and windows, for example. The spacing of buildings in a historic streetscape also creates a rhythm.

### 3.7 SCALE

Scale in architecture is a measure of the relative size of a building or building component in relation to a known unit of measure or customary size for such a component. A person evaluates how large a building or building component is in relation to the human body size and his or her memory of the expected size for such a component. For example, a sense of the size of a wood-frame building can be established because of the width of a clapboard, which is usually about 5 inches. Doors and windows are scale-giving features on all buildings. Residential doors are typically slightly higher than the height of a tall person, or roughly seven feet high. Double-hung sash windows in historic buildings are typically five or six feet tall, the height of an average size person. If the size or shape of a familiar building component diverges from the expected, it may be said to be “out of scale.”

The principle of scale applies both to individual buildings and to streetscapes. In a village setting, where each building forms part of a larger streetscape, building scale is of paramount importance. In the hierarchy of social order in a community, prominent buildings such as churches, civic buildings, and any “mansions” differentiate themselves by contrasting with the predominating building form. The perceived scale of any proposed building or addition is a function of 1) the overall size of the proposed new construction relative to existing building sizes, and 2) the visual relationship of building façade elements in the new construction relative to the visual relationship of building façade elements in existing buildings.

Outdoor spaces — formed by the buildings, fences, fields, and vegetation that surround them — also have scale.
4.1 GENERAL GUIDELINES FOR PRESERVING HISTORIC BUILDINGS

The following guidelines are applicable to all contributing historic buildings within the Beaver Historic District, including outbuildings such as carriage houses and garages.

4.1.1 BUILDING CHANGES

Significant changes to a historic building take place over time and are evidence of its history. Significant changes are defined as those that took place within the period of significance of the historic district. Such changes reflect the evolution of the building to accommodate evolving owner needs and changes in lifestyle or technology. Historically significant changes should be preserved.

4.1.2 DETERIORATED AND MISSING COMPONENTS

Deteriorated or missing significant architectural components should be replaced or recreated with materials that replicate the historic design, color, texture, and other visual qualities of the components. Replicate components should generally be fabricated from traditional materials. However, for painted woodwork, substitute materials that are field-painted, such as plastic composites and solid PVC, may be employed. For missing components, efforts should be made to determine the original design of the component through physical evidence or historic pictorial evidence of the building. If the original design is unknown, a component that is appropriate to the type and style of the building’s architecture should be used.

4.1.3 IMMEDIATE NEIGHBORHOOD

In planning for an alteration, addition, or new building, the immediate neighborhood of the property should be considered the context for the design. The immediate neighborhood is defined as the buildings flanking the subject property (building) and the three buildings across the street.

4.1.4 PRIMARY FAÇADES

In planning for an alteration, addition, or new building, primary facades, which are most visible, to the public should receive the highest level of design treatment and detail. A primary façade includes the front and highly visible side façade of a building. A secondary façade includes a rear façade and nominally visible side façade.

4.1.5 PRESERVING ARCHITECTURAL CHARACTER

The historic architectural character of structures should be maintained or restored. Proposed repairs and changes to historic structures should not reduce the integrity of a structure nor result in the loss of repairable historic building fabric.
Façades that face or are visible from a main street are considered principal (indicated with a solid line) while façades that face the interior of lots and alleys are considered secondary (indicated with a dashed line).

Diagram of “immediate neighborhood” for a mid-block and a corner location.
**4.1.6 REVERSIBILITY**

Proposed changes to historic buildings should be reversible whenever possible. Applying stucco over stone masonry is not recommended for several reasons, including the fact that the removal of stucco is extremely difficult if not irreversible. For severely deteriorated windows, it is recommended to replace only the sashes while restoring the frames in place because the retained frames allow a future property owner to reconstruct the original appearance of the windows.

**4.1.7 REPAIR AND RESTORATION VERSUS REPLACEMENT**

It is recommended that existing original materials and significant components be retained wherever possible by stabilizing, repairing, or matching them with compatible new materials rather than by replacing them. If, due to severe deterioration or loss, historic components must be replaced, new components should replicate the profiles, dimensions, and material of the original components. The historic architectural character of structures should be maintained or restored. Proposed repairs and changes to historic structures should not reduce the integrity of a structure nor result in the loss of repairable historic building fabric.

---

**4.2 SPECIFIC GUIDELINES FOR PRESERVING HISTORIC BUILDINGS**

The following guidelines apply to major maintenance, repairs, and restoration of existing, contributing buildings in the Beaver Historic District, and are based on the Secretary of the Interior’s Standards for Rehabilitation (see Appendix). The following specific guidelines are listed in alphabetical order.

**4.2.1 ANCHORING DEVICES**

When attaching new items such as signs, sign brackets, light fixtures, door bells, security equipment, building identification numerals, awnings, flagpole brackets, and other devices to existing historic building materials, care should be taken to minimize permanent damage to the historic building materials. Attachment to plain wood surfaces is preferable to attachment to masonry, because at a future date when the item is no longer required, the anchor or fastener can be removed and the resultant hole patched and repainted without harm. When attachment to brick or stone masonry walls is necessary, anchors should be embedded in mortar joints wherever the joint width accepts the anchor without damaging the edges of the masonry unit. When existing mortar joints are less than 3/8 inch wide, anchors should be embedded in the stone or brick unit at least 1 inch away from the mortar joint to prevent damaging two stones or bricks at each anchor.

Sequence of restoration of a severely deteriorated cornice return. The crown molding was custom-cut for the project, a procedure that requires scheduling but does not add significantly to the repair cost.

Anchoring devices for the support of signs and other wall-mounted items should be anchored with minimal damage to historic wall materials. In masonry walls, small anchors should be inserted in the mortar joints, while large anchors should be held back from the mortar joint, not overlapping the joint.
**4.2.2 AWNINGS**

Awnings should be appropriate to the design of the storefront or building façade. Awnings traditionally provided protection from the weather and shaded porches and windows from direct sunlight. New awnings should be designed to relate to the architecture of the storefront or building façade. Building features such as arched transom windows should not be obscured by the awning design. Awnings should be constructed of suitable fabrics supported by metal frames. Fabric design should be striped or solid color, using colors appropriate to the period of the building, and should avoid non-traditional effects. Awnings should not be internally illuminated.

**184 Taylor Avenue. Canvas awnings for porches and windows were a common site before the era of air conditioning.**

**4.2.3 DOORS AND DOOR HARDWARE, HISTORIC**

Historic doors should be preserved by means of repair and restoration. Unique features such as leaded glass, fanlights, and sidelights should also be preserved. Where the severity of door deterioration dictates replacement, new units should match the historic units in design, dimensions, and pane configurations.

Replacement doors with multiple panes should have either true divided lights (muntins that penetrate the glass) or simulated divided lights (permanently affixed muntins applied to both the exterior and interior sealed insulating-glass unit). Removable or snap-in muntins on glass panes or muntin grids that are sandwiched between layers of glass are not recommended. Replacement of missing doors should be substantiated by physical, documentary, or pictorial evidence. Because of the unique sizes of historic doors, replacement exterior doors typically require custom fabrication. Reducing the size of an existing door opening to accommodate a standard-size new door is not recommended. Insulated steel replacement doors are also not recommended.

Visible door hardware should be compatible with the architectural character of the building. The preservation and repair of historic door hardware is encouraged. Buzzers, intercoms, and mailboxes should be selected and located to have minimum visual impact on building entrances.

**4.2.4 DOORS, STORM AND SCREEN**

The paneled front door was a symbol of hospitality and security. When a storm door is required to further protect the front door opening, the storm door design should be simple and should allow the historic door to be visible. While wood storm and screen doors are preferred, simple aluminum doors that are finished with a baked enamel finish matching the historic wood door paint color are also acceptable. Scalloped edges and cross-buck patterns on aluminum storm doors are not appropriate.
4.2.5 EQUIPMENT, BANKING AND VENDING MACHINES

Automatic teller machines (ATMs) mounted on primary façades of buildings within the historic district are not recommended. Efforts should be taken to mount ATM machines on secondary façades whenever possible. The machine should be mounted to cause the least amount of destruction to original building materials. Where possible, the ATM machine may be mounted in a panel that fills a first floor window opening or is integrated into the storefront window pattern.

The machines should be lit using the least obtrusive light fixtures possible while still ensuring customer safety.

Vending machines installed in the public view are not recommended in the historic district.

Wood storm doors that allow a view of the historic paneled wood door(s) are most compatible with a historic house. Note also a rare example of paneled shutters on the first floor louvers on the second.

ATM machines should be installed in existing masonry openings so that the installation is reversible.

4.2.6 LIGHTING, EXTERIOR

Where historic light fixtures survive, they should be preserved. Reproduction exterior light fixtures on historic structures should be documented as compatible with the historic period of the structure and in scale with the building. Polished brass, “colonial style,” and other overly ornamental light fixtures are not recommended for the primary façades of historic buildings. For historic periods before electric lighting (pre-1879), a concealed electric light source, or a very simple, clearly modern fixture is encouraged. A reproduction fixture from the wrong period is not recommended. If exposed conduit cannot be avoided, it should be painted to match the background material on which it is mounted. In addition to these guidelines, all new lighting is required to comply with the Beaver lighting ordinance. Exterior floodlights and spotlights should be avoided on principal façades. Lighting for signage on historic buildings should be inconspicuous and should be restricted to reasonably low light levels. Yard lighting and parking lot lighting should be post-mounted on maximum 12-foot high posts, or mounted on a secondary façade. High efficiency light fixtures that produce yellowish or pinkish light are not appropriate at highly visible locations.
Cleaning of historic brick, stone, and terra cotta masonry should be done using the gentlest methods possible. Destructive techniques such as sandblasting, harsh chemical cleaning, and high-pressure water washing are not recommended. Water washing, with or without mild detergent cleaners, is generally effective and safe for historic masonry surfaces. Water pressure should be limited to 600 pounds per square inch (PSI), using a 15 degree spray tip held 6 inches from the masonry surface. Specialty cleaners may be required for the most tenacious stains, but are only recommended for application by highly-skilled historic masonry cleaning contractors. Muriatic acid is never appropriate for cleaning historic masonry.

4.2.8 Masonry - Paint Removal

Generally, the complete removal of paint from historic masonry is not appropriate. Historically, masonry buildings were painted only if the exposed masonry units could not withstand exposure to the weather and were deteriorating. If, during a restoration project, an owner desires to remove paint from stone or brick walls, a test panel must be conducted to assess the condition of the original stone or brick below and to confirm that the masonry below will not be damaged by the paint removal process. If the building has been painted for several decades, an owner may elect to repaint the structure. Dry-grit blast cleaning (sandblasting) is never recommended, because it causes irreversible damage to historic masonry surfaces. Paint removal should be accomplished using an environmentally-friendly paint stripper. If the paint coating is pre-1972, it should be removed using a chemical system in which the applied paint stripper is covered with a laminated paper sheet and the stripper and sheeting are removed together.

4.2.9 Masonry Repointing

Historic masonry requires maintenance to be preserved. Natural stone and brick vary in hardness and durability, but generally have a long service life, while mortar joints deteriorate and require periodic renewal. Where repointing is required, care should be taken to ensure that the stone or brick is not damaged in the process of removing deteriorated pointing. For wall areas to be 100% repointed, the new mortar should match the color, texture, and tooling of the original mortar, not the appearance of the surface dirt on weathered pointing. For spot pointing, new mortar should match the darkened color of surrounding mortar. For brickwork, the new pointing should be slightly recessed; struck flat, joint profile 3, unless there is evidence for an original recessed or grapevine joint profile. For stonework, the profile of new pointing should match the profile of original pointing. Deeply struck (recessed) and concave joint profiles are generally not appropriate, except where replicating twentieth-century pointing. For brickwork, the slight recess is important, however, to prevent the mortar from smearing onto the face of the bricks, resulting in an enlarged joint width that is both

New mortar joint profiles should match the pattern of original pointing. Brick joint profiles shown are 1) flush, 2) concave, 3) slightly recessed – struck flat, and 4) scribed. Stone joint profiles shown are 5) shallow raised ridge, 6) parge pointing (appropriate only where matching existing parge pointing), 7) slightly recessed – struck flat, and 8) raised ribbon.
4.2.10 MECHANICAL, ELECTRICAL, AND COMMUNICATIONS EQUIPMENT

The mounting of ventilation louvers, registers, exhaust fans, alarm devices, cable boxes, utility meters, satellite dishes, security cameras, and other mechanical, electronic, and electrical devices is not recommended on primary façades. To minimize their visual impact, devices mounted on secondary façades should either be painted to match the color of the material on which they are mounted or screened by landscaping. Rooftop mechanical equipment should not be visible from a public way. If this is not possible, equipment should be screened with wood lattice, louvers or vertical-board screening. Electrical, cable and telephone services should be placed underground whenever possible. Window-mounted air conditioning units are not recommended on a primary façade. If unavoidable, they should be removed during off-season or installed only on secondary façade. Air conditioning condenser units should be screened from public view.

4.2.11 OPENINGS (NEW) IN EXISTING WALLS

Creating new openings in a principal façade is not recommended. Proposed new openings in walls should be compatible with the historic character of the building, and should follow the existing rhythm, proportions, and scale of the façade.
Porches are important design elements on historic houses in Beaver. Not only do they reinforce a sense of hospitality and community by creating semi-private outdoor space on the front of each property, they also break down the bulk of the 2-1/2 story Colonial Revival and American Four-Square Plan houses by placing an open one-story “step” on the front of each house. Composite decking with spaces between boards is not recommended.

### 4.2.12 PORCHES

Historic porches are important character-defining features of the Historic District. On primary façades, the original materials, configurations, details, and dimensions of a historic porch or stoop should be preserved or restored. Where components are severely deteriorated and require replacement, new components should be similar to the original in dimensions, design, and painted finish. High-quality PVC railing systems with a satin gloss finish may be appropriate, but standard vinyl railing systems and railings fabricated from unpainted pressure-treated wood are not recommended. Flooring of porches and stoops may be tongue-and-groove wood, composite wood/plastic, or solid PVC. The open area between a porch deck and the ground is referred to as the skirting. Typically, skirting is a lattice of thin wood strips set in a wood frame and fitted between masonry porch piers. Existing wood skirting should be repaired or replicated. Where missing, new skirting should be fabricated in a square or diagonal pattern from painted wood. Plastic lattice panels are not recommended.

### 4.2.13 PAINT COLORS AND COLOR SCHEMES

Exterior colors and color schemes should be consistent with the architectural style and period of the building.

When a historic building is repainted, the removal of all paint layers to bare wood is not generally recommended. Except for heavily weathered paint, scraping off loose material in preparation for new coats of paint is sufficient. Unpainted masonry surfaces generally should not be painted. Painted masonry surfaces generally should remain painted. (See 4.2.8 Masonry - Paint Removal).

On commercial buildings, the paint scheme for the entire building should be coordinated, including building cornice, upper-floor windows and shutters, storefront, and doors. Storefronts should not be repainted without taking into account the color scheme and condition of paint on the entire façade.
4.2.14 ROOFING - GENERAL, HISTORIC

Significant historic roofing materials and features that are visible from the public way should be preserved. Efforts should be made to retain and repair original roofing that is visible from the street. Where the material is too deteriorated and replacement is necessary, best practice encourages that new roofing materials should replicate the original roofing material used on the historic building. Building owners are encouraged to conduct an investigation to determine the original roofing materials, either by means of looking at historical photographs or by physical examination of the roof sheathing by a knowledgeable roofer. Typical historic roofing materials used on sloping roofs in Beaver were slate shingles and standing-seam metal, although most original roofing has been replaced with asphalt shingle roofing.

4.2.15 ROOF FEATURES - HISTORIC CHIMNEYS

Historic chimneys are significant components of a building’s architectural character and should be preserved. A replacement chimney should be an accurate reproduction of an original chimney and should be based on physical or pictorial evidence. Although historic chimneys were frequently finished with stucco as a maintenance measure, the treatment is not recommended. Where an interior chimney is removed as part of a proposed alteration, best practice recommends that the exterior portion of the chimney should be preserved or reconstructed to retain the historical appearance of the structure.
4.2.16 ROOF FEATURES - HISTORIC CORNICES

Historic cornices are significant components of a building’s architectural character and should be preserved. A replacement cornice should be an accurate reproduction of an original cornice and should be based on physical or pictorial evidence.

4.2.17 ROOF FEATURES - HISTORIC DORMERS AND CUPOLAS

Historic dormers and cupolas should be preserved. If physical and pictorial evidence proves that either dormers or cupolas originally existed on a building, the reconstruction of the original feature is recommended.

The construction of new dormers or a cupola on any principal façade of an existing building is not recommended, except where historic dormers already exist in the immediate neighborhood. An application for new dormers should include photos of neighborhood buildings to support the placement, spacing, rhythm, size and type of new dormers.

Prefabricated ventilators or cupolas are not recommended within the historic district where visible from a public way.

4.2.18 ROOFING - ASPHALT SHINGLES

The prominence of the roof and the height and angle of the roof as seen by a pedestrian or from a passing automobile make the roofing material more important on some buildings than on others. The roofing

Types of dormer forms, from left to right: shed dormer, gabled dormer, hipped dormer, and segmental-arched dormer.
material used on a sloping porch roof or storefront cornice that is near to the viewer is visually very important. In contrast, a shallow pitch (i.e. 3-in-12 or less slope) gable roof on a three-story building may not be visible from a public way and therefore is not visually important. If asphalt shingles are proposed, it is recommended that the shingles be heavyweight, dimensional shingles that resemble the color of the historic roofing material they are replacing.

For buildings constructed before asphalt shingles were manufactured, but currently have asphalt shingles, owners are encouraged to research their properties, determine the historic roofing materials, and replace the existing asphalt shingles with the appropriate historic material.

4.2.19 ROOFING - DECORATIVE PATTERNED ROOFS

Decorative patterned roofs should be maintained and restored whenever possible. When replacing severely deteriorated decoratively patterned roofs, the new material should match the pattern, color, and texture of the historic roof.

4.2.20 ROOFING - HISTORIC GUTTERS AND DOWNSPOUTS

Historic buildings with substantial cornices often featured built-in gutters that are not visible from the ground. The maintenance and restoration of built-in gutters is highly encouraged, but is not subject to HARB review. A more modest type of built-in gutter, the water diverter (also called a “pole gutter” because of the wood board used in its construction), is visible from the ground. The maintenance and restoration of water diverters is also encouraged, but may be replaced with “hung” gutters, so-named because they are hung from the roof deck by metal brackets.

When hung gutters and downspouts are replaced, the use of half-round gutters and smooth round downspouts is historically appropriate and thus recommended. New copper and lead-coated copper gutters and downspouts may be allowed to weather naturally, but galvanized steel gutters and downspouts should be painted to blend in with the color of the building to reduce their visibility. Factory-painted, half-round aluminum gutters and smooth round downspouts are also available.

Aluminum “K” gutters and corrugated rectangular aluminum downspouts, finished with baked enamel paint, are not recommended. Vinyl and PVC gutters and downspouts are not recommended because of their awkward fittings and non-traditional shapes.

4.2.21 ROOFING - HISTORIC SLATE SHINGLES

Slate shingle roofing replaced wood shingle roofing in large cities because slate was fireproof. In fashionable residential areas, slate shingle roofing was also desired because it was noncombustible and durable, and in the late nineteenth century was preferred for its decorative qualities.

A number of houses in Beaver retain their decorative slate roofs, including this roof at 201 Otter Lane. Note also the decorative brickwork at the chimneys and upper wall frieze.

300 River Road, designed by John H. Craner in the Tudor Revival Style. The ragged-butt style slate roofing and dormer wall siding along with the clinker bricks used in the brick walls reinforce the image of the rustic cottage.
The continued maintenance of existing slate roofing is highly encouraged and less expensive than replacement with a substitute material. The replacement of severely deteriorated historic slate roofing with new natural or synthetic slate roofing is also strongly encouraged. On buildings with gabled, hipped, or Mansard roofs that are highly visible from the ground, replacement of slate with asphalt shingles is not recommended.

### 4.2.22 ROOFING - SUBSTITUTE MATERIALS

Substitute materials that closely replicate historic roofing are recommended. For example, recycled rubber/polymer shingles or fiber-reinforced cement shingles that resemble slate cost less than a natural slate roof but visually simulate slate. Care should be exercised in the selection of substitute roofing materials because their service life is often unproven.

### 4.2.23 SHUTTERS AND BLINDS

Historic shutters (solid panels) and blinds (louvered panels) should be preserved. Historically, shutters and blinds were employed to provide night security and shading from the sun. Paneled shutters were generally used on the ground floor and louvered blinds were used on upper floors. Where historic exterior shutters and blinds survive, they should be carefully preserved and repaired. If no shutters or blinds are present but there is evidence that they once existed (as evidenced in either historic photographs or surviving pintle hinges), their replacement as part of any proposed rehabilitation project is encouraged. If no vestige of shutters or blinds exists, they should not be added to a building.

Replacement shutters and blinds should be fabricated from painted wood or factory-painted, solid, synthetic wood that are properly sized, and appear operable. Hollow plastic and metal shutters are not recommended. Shutters should measure one half the width of the historic sash, and match the height of the opening.

### 4.2.24 SKYLIGHTS IN HISTORIC ROOFS

Skylights may be installed on secondary façades (see 4.1.4 for definition of primary and secondary façades), but are not recommended for primary façades. For more information on the placement of skylights on secondary façades refer to 5.2.11 Roof—Skylights in Specific Guidelines for New Buildings and Additions.

Historic shutters were mounted using traditional shutter hardware, including hinges or pintles, shutter dogs (hold-opens), and shutter bolts.

Replacement shutters and blinds should be painted wood or solid composite material, properly sized to sash opening, and appear operable.

Storefronts provide a visual link between building interiors and the public realm of the sidewalk. Storefronts are vital to the visual character of 3rd Street and provide an understanding of the extent of commercial activity in the historic district. The scale and architectural detailing of historic storefronts create a richness and sense of visual satisfaction that is lacking in automobile-oriented retail settings.

Early shop windows were essentially large house windows, with sashes fabricated from many small
panes of glass. The development of plate glass in the 1850s coincided with changes in retailing brought about by the industrial revolution. As more manufactured goods became available, competition for customers led merchants to increase their storefront display area. Existing buildings were altered to make the ground floor as transparent as possible, and new buildings were constructed with iron beams that supported the upper-floor masonry walls without reducing the storefront.

Existing historic storefront windows and doors should be preserved, even when the use of the first floor space is not retail.

4.2.26 STUCCO-HISTORIC

The removal of stucco (traditionally a blend of lime and sand, more recently lime, cement, and sand) to expose original historic masonry is sometimes desirable; however, many masonry structures were originally roughly laid and covered with a lime plaster. In this case, the lime plaster should not be removed, but rather preserved or replaced.

Brick walls were rarely built with the intent of applying a stucco finish. Existing stucco finishes were typically applied as a maintenance finish, to treat deteriorated brickwork and deteriorated mortar joints, or to cover alterations to the wall. Prior to attempting to remove a stucco finish and expose the underlying brick masonry, a test panel should be undertaken to determine the technical feasibility (and cost) of removal and the condition of the original brickwork. If stucco removal is feasible and the original brickwork is in good condition, stucco removal is encouraged.

When restoring historic stucco finishes, the new stucco should be applied using traditional methods, and finished to match surviving historic stucco. On masonry walls, the stucco should be applied directly to the masonry substrate, not to metal lath. Synthetic stucco finishes and factory-mixed stucco finish coats are not recommended.

4.2.27 WINDOWS - PRESERVATION OF HISTORIC

Historic windows are important character-defining elements of historic buildings and should be preserved through maintenance and restoration. Historic multi-light wood windows are highly-refined woodworking assemblies that were fabricated from old growth timbers and wood species that are more resistant to rot than currently-available woods. Numerous materials and repair methods are available for extending the service life of historic wood windows.

4.2.28 WINDOWS - REPLACEMENT

Where the severity of window deterioration dictates replacement, new units should match the historic units in design, dimensions, and pane configurations. Replacement windows should be considered only as an option to replacing severely deteriorated or missing historic wood sashes. Replacement windows are not a panacea to avoid future painting and maintenance of exterior woodwork. Replacement windows are not the recommended means of improving the thermal performance of windows. Storm windows are recommended for achieving that goal.

Replacement windows should have either true divided lights (muntins that penetrate the glass) or simulated divided lights (permanently affixed muntins applied to both the exterior and interior sealed insulating glass unit). Removable or snap-in muntins on glass panes and muntin grids that are sandwiched between layers of glass are not recommended. The restoration of missing, obscured, or modified original window openings is recommended. Replacement of missing windows should be substantiated by physical or pictorial evidence. Replacement vinyl windows are not recommended on primary façades. Composite
wood and metal-clad wood windows may also be appropriate, provided that the dimensions of sashes are similar to historic wood windows, and the glass area of the replacement window is not significantly reduced. To be appropriate, replacement windows should be carefully sized to the opening width and height of original sashes. Replacement windows should not include a system of panning the original window frames, which should be preserved.

Glass used in new windows should be clear. Tinted glass, reflective glass, opaque glass, and other non-traditional glass types are not recommended in the historic district.

“Replacement windows” usually refer to new windows that mount within the frame of the existing wood window. They are typically made without a structural frame; instead, they rely on the strength of the original window frame for support. Wood replacement windows are offered in a range of qualities, design features, and costs. The better ones may be ordered custom-sized to the sash opening of the original window. The sashes may be ordered with genuine muntins or with muntin grids that are applied to the interior and exterior face of a single panel of sealed insulating glass. This type is marketed as a “simulated divided light” window. Replacement vinyl windows with applied muntin grids are not recommended in the historic district.

Any proposed replacement window should be custom-sized to the original sash opening. The application of filler strips around the perimeter of a replacement window reduces the size of the glass area, makes the frame members awkwardly wide, and is not recommended in the Historic District.

For original sashes with multiple panes, the replacement window should match the existing pane configuration. True or simulated divided lights are recommended in the proposed replacement window. Snap-in grids, whether interior or exterior, are not appropriate. Muntin grids applied only between layers of sealed insulating glass are also not recommended.

4.2.29 WINDOWS-STORM WINDOWS

Owners of historic buildings often desire to improve the thermal performance of historic wood windows. The specific solution to each thermal upgrade problem depends on numerous factors, and no single approach is applicable to all conditions. Traditionally, storm windows were constructed of wood and glass. Many house owners owned two sets of removable panels: wood-and-glass storm windows for the winter season, and wood-and-screen panels for the summer season. Cleaning and changing the screen and storm panels were spring and fall rituals. Few houses retain their wood screens and storm windows, and fewer still are changed seasonally. Surviving, historic wood storm windows and screens should be retained. Many residences are now equipped with three-track storm windows that allow for a complete layer of glass over the entire original window or an insect-screen panel over half of the window.

Three-track storm windows

For buildings with double-hung-sash wood windows, aluminum three-track storm windows with a factory color-coat matching the window trim are appropriate. While at first thought this may be surprising, the metal storm window preserves the original wood sashes, improves the window thermally, and is entirely reversible.

Mill-finish aluminum is not an appropriate storm window finish. The storm panels should be glazed with clear glass, and the horizontal rails of the storm window should align with the meeting rails of the original window. Storm windows should be sized
exactly to the historic wood window. For buildings with casement-sash wood windows, aluminum storm panels that clip directly to the wood sashes are recommended.

**Interior storm windows**
Interior storm windows, usually fabricated with a narrow white (or custom color) aluminum frame and clear glass glazing and mounted on magnetic strips, are suitable for double-hung window applications. Interior storm windows are especially desirable for buildings with multi-pane sashes, because the pattern of broken light on multi-pane sashes is an important visual feature that is lost when covered with exterior three-track storm windows.

### 4.2.30 WOODWORK - CLEANING

Cleaning of historic exterior woodwork should be done in the gentlest way possible. In general, scrubbing woodwork with a diluted solution of household detergent or chlorine bleach is an effective cleaning method, followed by a water rinse using a garden hose and spray nozzle. Pressurized water washing using up to 400 pounds per square inch pressure is also acceptable, provided there are no open joints and cracks in the woodwork that would allow water to penetrate into the wall cavity. Cleaning exterior woodwork is an essential preparation step for repainting, and is also useful for extending the service life of a paint coating.

### 4.2.31 WOOD SIDING AND TRIM

In the Historic District, wood siding on houses is typically horizontal clapboarding or painted wood shingles. The visual character created by the texture and pattern of historic siding should not be altered by its replacement with different siding profiles or non-historic siding materials. Traditional painted wood siding and fiber-cement siding, particularly in 5/8-inch thickness, are recommended replacement materials for severely deteriorated clapboard siding.

The removal of existing aluminum and vinyl siding and its replacement with historically appropriate siding is recommended. Wood trim elements such as corner boards, window and door surrounds, brackets, moldings, and other decorative features should also be repaired or replaced to match their historic appearance. New painted woodwork may be fabricated from rot-resistant natural wood, solid PVC, or other paintable, shapeable synthetic wood products.

The cladding (wrapping) of exterior woodwork such as cornices, corner boards, fascias, projecting bays, brackets, window and door frames, porch framing and trim, and other exterior woodwork with sheet aluminum or vinyl is also not recommended. Not only does the cladding cover historic wood moldings and architectural detail, but it also causes the covered woodwork to deteriorate due to moisture that becomes entrapped under the sheet material.
DRAFT
Guidelines for New Buildings and Additions

5.1 GENERAL GUIDELINES FOR NEW BUILDINGS AND ADDITIONS

The following guidelines pertain to new construction in the Beaver Historic District. New construction includes additions to historic buildings, new structures along primary streets, and secondary structures such as garages, sheds, outbuildings, or workshops. In general, new construction should enhance, not detract from, the historic character of the district. New construction should be compatible with neighboring structures on adjacent lots and across the street.

5.1.1 BUILDING HEIGHT AND FORM - ADDITIONS

The cornice line on the principal façade of an addition should be no higher than the cornice line on the principal façade of the historic structure. Likewise, the ridge line of an addition should be no higher than the ridge line of the historic structure. The form of new buildings should be compatible with the form of adjacent historic structures.

5.1.2 BUILDING HEIGHT AND FORM - NEW BUILDINGS

The eave line and ridge line of a proposed new structure should not exceed the height of the eave line and ridge line of flanking historic structures. The height and overall size of any proposed new addition should not exceed the height and overall size of the principal historic structure.

5.1.3 BUILDING PLACEMENT AND SETBACKS - ADDITIONS

Proposed additions should follow the pattern of setbacks of adjacent historic buildings and their additions in order to blend into the development pattern of the immediate neighborhood. For example, historically, most additions to buildings in a village or town context were built at the building rear because there was no available building lot area on the sides of the building. These additions had minimal visual impact on the appearance of the village from the street, and new additions placed in the same manner will also have minimal impact.

For houses in a more suburban setting, options for placement of additions are greater. Rear additions are often the most convenient in terms of the floor plan, and are generally the most compatible with a historic setting. Side additions may also be appropriate, especially when the massing of the existing residence is complex (see also 4.3 - Massing).

5.1.4 BUILDING PLACEMENT AND SETBACKS - NEW BUILDINGS

Setbacks for new construction must comply with the zoning ordinance. Historically, the building type and landscape setting dictated the structure’s setback from the street. For buildings in a town setting,
commercial buildings such as offices, retail shops, and stores fronted directly onto the street or walk. New construction in the district should follow the precedent of adjacent lots.

5.1.5 BUILDING PLACEMENT AND SETBACKS - SECONDARY STRUCTURES

Outbuildings play an important role in the significance of the Historic District. Outbuildings reached by driveways between houses historically provided support functions to the dwelling, including the functions of carriage house, garden outbuilding and, later, automobile garage. Garages, sheds, workshops, and other new outbuildings should either be placed behind, and remain visually secondary to, the principal building on the lot, or follow the pattern of adjacent historic properties. Side and rear setbacks should follow the general pattern of the placement of outbuildings in the immediate neighborhood.

5.1.6 RELATIONSHIP OF ADDITIONS TO HISTORIC BUILDINGS

A proposed addition to a building in the Historic District should be subordinate to the principal façade and mass of the historic building. The subordinate appearance of an addition can be achieved through its setback massing, width, and detail. Generally, the width of an addition should not exceed two-thirds the width of the principal historic structure.

Though not a replica of a historic structure, this new building exhibits a false historical character. This approach to contemporary design is not encouraged.

5.1.7 RELATIONSHIP OF THE FAÇADE PARTS TO THE WHOLE

All parts of a new building façade should be visually integrated as a composition, which should relate to adjacent buildings. The size, spacing, arrangement, and proportions of façade elements such as doors, windows, cornices, and water tables should create a harmonious composition.

5.1.8 REPLICATING HISTORIC BUILDINGS

The design of a new building should not be an exact replica of any existing historic building within the district. Copies of historic buildings among original ones look awkward and present a false historic context. However, a new structure’s design may be inspired by historic building designs and features, and may be traditional in form and detailing.

5.1.9 THE ROLE OF MODERN DESIGN

The most successful new buildings in historic districts are ones that are clearly modern in design but compatible with and sensitive to the massing, rhythm and character of the Historic District. The experience of the Historic District is enriched by new buildings that have merit on their own and are sensitive to their setting in a Historic District.
The modern addition to this vibrant Queen Anne Revival house, now a funeral home, is incompatible in several ways. Although the bland stucco, total lack of detail, flat roof, and characterless punched windows all are negative factors, the greatest single problem is the one story mass that makes no effort to relate to the complex massing of the historic resource.

5.1.10 SCALE AND MASSING OF NEW BUILDINGS

Large buildings should be designed as a series of masses or building elements compatible with the immediate streetscape. The massing or volumetric shape of a building greatly affects the scale of a building and underlies all other architectural features. Where a large building in the Historic District is unavoidable, the mass of the proposed structure can be broken down into traditional building blocks that relate to the scale. (See 4.7 Scale) of the streetscape, thereby blending into its context.

5.1.11 VISUAL RELATIONSHIP BETWEEN THE OLD AND THE NEW

A new building or addition should relate visually to neighboring contributing historic buildings. Proposals for new designs within the Historic District should consider their specific location and immediate neighborhood. For a typical building, neighboring historic structures include those to each side of the structure and those directly across the street from the structure. For a new building located at a corner, the neighboring historic structures include all buildings at the intersection in addition to those immediately adjacent. Where a building falls near the edge of the Historic District, historic buildings located near but outside of the district should also be taken into account during the design process.

The basic building form - the massing and scale - of a new building should be compatible with the general forms of neighboring structures. Specific massing considerations include:

- overall size
- complexity of volumetric form
- combinations of solids and voids in the overall shape
- Incorporating neighborhood “building blocks” into the massing of the proposed building.
- roof configuration

5.1.12 WIDTH AND RHYTHM

Historically, the spacing of buildings along the road or village street create a rhythm of solids and voids. Additions should not fill in the spaces between buildings (unless the addition is recessed), and new buildings should not disrupt the existing rhythm of the street.

The architectural features of the façades of historic buildings within a district have a discernable rhythm. The design of new buildings is encouraged to have a rhythm that is similar, but not identical, to the rhythm of the adjacent buildings. New buildings and
5.2 SPECIFIC GUIDELINES FOR NEW BUILDINGS AND ADDITIONS

The following guidelines pertain to new construction for additions and new buildings in the Historic District, and are based on the Secretary of the Interior’s Standards for Rehabilitation. The following elements are listed in alphabetical order.

5.2.1 DECKS

Wood decks that are visible from a public way are not recommended. They are permitted when carefully designed to be integral to the overall design of the residence. Deck floor elevations should be no higher than the first floor elevation. The total deck area should not exceed 25% of the livable area of the first floor of the proposed residence. Railings should be a simple picket design, fabricated from painted wood. Privacy screens are not recommended. Arbors of a simple design, constructed of wood, may be appropriate, subject to specific design. The exposed structure under the deck should be screened by landscape plantings or by wood lattice.

5.2.2 EQUIPMENT, BANKING AND VENDING MACHINES

Automatic teller machines (ATM) mounted on primary façades of buildings within the historic district are not recommended. Efforts should be taken to mount ATM machines on secondary façades whenever possible. The placement and layout of the ATM machine should be incorporated into the design of the ground floor. The machines should be lit using the least obtrusive light fixtures possible while still ensuring customer safety.

Vending machines installed in the public view are not recommended in the historic district.

5.2.3 LIGHTING

Exterior lighting of additions and new buildings should be simple and in scale with the building. New fixtures should be simple, unobtrusive, and mounted in a traditional manner. Exterior recessed downlights, if proposed, should be placed to avoid dramatic light patterns on the proposed building façade. Exterior floodlights and spotlights should be avoided on principal façades. Lighting for signage should be inconspicuous and should be restricted to reasonably low light levels. Yard lighting and parking lot lighting should be post-mounted on maximum 12-foot high posts, or mounted on a secondary façade. High efficiency light fixtures at highly visible locations that produce yellowish or pinkish light are not appropriate.

5.2.4 MECHANICAL, ELECTRICAL AND COMMUNICATIONS EQUIPMENT

The mounting of louvers, registers, exhaust fans, alarm devices, satellite dishes, cable boxes, utility meters, communications equipment, and other mechanical and/or electrical devices should be
avoided on principal façades. To minimize their visual impact, devices mounted on secondary façades should either be painted to match the color of the material on which they are mounted or screened by landscaping features. Air conditioning condenser units should be screened from public view.

5.2.8 ROOFS - DORMERS AND CUPOLAS

Dormer design, proportions, and placement on additions and new buildings should be compatible in size, scale, proportion, placement, and detail with the historic dormers found in the Historic District. Shed dormers on principal façades are strongly discouraged except where they exist in the immediate neighborhood. The overall width of a dormer should be no wider than one-half the overall roof width.

On secondary façades new dormers should be compatible in size, scale, and proportion with the original façade, and their placement should relate vertically to the building’s fenestration. The overall width of dormers should be no wider than one-half the overall roof width.

Prefabricated ventilators or cupolas are not recommended within the historic district where visible from a public way.

5.2.9 ROOFS - FORM

To be compatible, additions and new buildings should match the form of the dominate roof form in the historic district. Generally, on historic buildings, the roof form of an addition placed on the side of a building facing a street followed the form of the principal building. Continuing the historical precedent, additions to gable roof structures that face a street should also have a gable roof. Additions on a secondary façade, can have a different roof form from the original structure. In the design of new buildings, the use of one of the historic roof forms found in the district is recommended. Roof forms not prevalent in the historic district are not recommended.

5.2.5 OUTBUILDINGS - NEW CONSTRUCTION

New outbuildings should visually relate to their historic context. Outbuildings should be simple in design, and should relate to the period of construction of the principal building on the lot. The design of outbuildings should not be overly elaborate. Depending on the placement of the building lot on the street, a proposed outbuilding will be treated as either a primary or secondary façade.

5.2.6 PAINT COLORS AND SCHEMES

Paint colors used on additions should follow the color scheme of the original building. For new buildings, paint colors should be compatible with color schemes in the historic district. For new buildings constructed with traditional forms and details, exterior colors may follow Guideline 5.2.13 – Paint Colors and Color Schemes for existing buildings.

5.2.7 PORCHES AND STOOPS

New porches and stoops are encouraged on streets where porches and stoops are common. On additions, porches or stoops should be simple in design and visually relate to the existing building. On new structures, porches or stoops should visually relate to the proposed building in a manner similar to the relationship of historic porches to existing historic buildings in the district.

Dormers should be carefully sized and placed to create a harmonious composition.
The overall width of a proposed shed dormer should not exceed one-half of the roof width.

5.2.10 ROOF MATERIALS - ADDITIONS

The roofing material on an addition should match the original structure or be visually similar to the existing roofing. For example, a large addition to a building with a slate roof should have a roof that is slate, a synthetic slate, or a material that appears similar in color and dimension to slate. The roofing material of a one-story shed addition to a two-story slate-roof house, however, could be another historically appropriate material such as painted metal.

5.2.11 ROOF MATERIALS - NEW BUILDINGS

The use of traditional roofing materials such as slate and standing-seam metal is recommended on new buildings. Synthetic slates, including composite rubber, concrete, and clay types, are also recommended. Pre-formed, pre-painted standing-seam metal roofs may be appropriate, depending on the complexity of the roof. If asphalt shingles are proposed, they should be heavy weight, dimensional shingles in a color similar to aged traditional shingles in the historic district.

5.2.12 ROOF - SKYLIGHTS

Careful consideration should be given to the placement of skylights.

Skylights with a low profile may be installed on secondary façades (see 5.1.3 for definition of primary and secondary façades), but are not recommended for primary façades. When proposed for use on secondary façades, skylights should be low-profile, flat-glazed construction, and mounted close to the roof. Skylights should relate vertically to the overall fenestration of the façade. The use of dormers and skylights on the same roof plane (i.e., next to each other) is not recommended.

5.2.13 SHUTTERS AND BLINDS

Shutters and blinds are generally discouraged on additions and on new buildings. If shutter or blinds are proposed, they should follow the historical precedent of historical shutters and blinds in the historic district. New shutters and blinds should be properly sized to fit the opening, and should appear operable by being mounted on proper shutter hardware. Hollow plastic or metal shutters and blinds are not recommended. New shutters and blinds

While skylights are not recommended on primary façades, they may be added to secondary façades if they are incorporated into the overall pattern of doors and windows. Skylights should align vertically with windows in the wall below.
should be fitted with traditional shutter hardware and should not be surface-mounted directly onto an exterior wall surface. See 5.2.35 for more information.

5.2.14 STOREFRONTS

New storefronts in new buildings and additions should be designed following the proportions, rhythm, and scale of historic storefronts in the historic district. New storefronts should repeat the components of historic storefronts, such as the frieze board, pilasters, display windows, and cornices, but may be simplified in detailing. While painted wood is generally the preferred construction of new storefronts, they may also be constructed of narrow-profile, factory-painted aluminum, especially where there are other historic metal storefronts in the historic district.

5.2.15 WALL MATERIALS—ADDITIONS

An addition should either replicate the existing exterior wall material in type, color, and texture or be constructed of a historic exterior wall material found in the district. If wood siding is proposed for an addition, the width and type of the new siding should complement the proportions and scale of the existing building siding. Other possible new materials that would complement existing historic wood siding include cement/fiber synthetic clapboard siding that is manufactured with a smooth surface and field painted. The wall materials of an addition should be compatible with the wall materials of the existing building. Vinyl and aluminum siding are not recommended for primary façades in the historic district. Likewise, vinyl and aluminum facings and fabricated plastic or composite wood/plastic building components are not appropriate on primary façades.

5.2.16 WALL MATERIALS—NEW BUILDINGS

The use of historic exterior wall materials such as brick, stone, or wood siding and their related details are recommended for new construction. Recommendations for wall materials for additions also apply to new buildings (see 6.2.15). Composite wall panels, glass-fiber-reinforced concrete panels and cornices, and other contemporary wall systems may be appropriate, subject to their specific application. The principles of scale and proportion will still apply, but there are opportunities for the compatible use of new materials within the context of the historic district.

5.2.17 WINDOWS AND DOORS—ADDITIONS

It is recommended that the material of windows and doors in additions match the material of the window and doors in the historic structure. The proportions of windows and doors in an addition should be similar to the proportions of original openings in the existing building, or multiples of the size of original openings. Depending on the size and design of the addition, replicating the sash configuration of the original building may be recommended. For all additions, it is recommended that all openings follow the proportions of original openings or be based on clear multiples of original openings. Snap-in muntins in new windows are not recommended. Sliding glass doors are not recommended on the primary façade of an addition. (See also 5.2.34)

5.2.18 WINDOWS AND DOORS—NEW BUILDINGS

Windows in new buildings in the historic district should relate to the placement and proportions of window openings in the neighborhood of the proposed new building. In a primarily residential neighborhood, windows in a new building should be of sizes and proportions similar to existing residential windows in the neighborhood. For such buildings, the total area of windows should be no more than one-third of the total wall area of primary façades. In commercial districts containing twentieth century commercial buildings, however, existing windows may be much larger. Proposed buildings in this setting should be of sizes and proportions similar to existing commercial buildings.
Guidelines for Sustainability

6.1 GENERAL GUIDELINES FOR SUSTAINABILITY

By virtue of their embodied energy, historic buildings are inherently sustainable. Recycling entire buildings and entire neighborhoods maximizes the reuse of existing materials, minimizes waste, minimizes the loss of shade cover in a neighborhood, and reuses existing utility and transportation infrastructure. Because they were built when central heating and especially mechanical air conditioning either did not exist or were very primitive, historic buildings incorporate numerous climate-mitigating, sustainable features. These include porches, operable shutters, shared party walls, massive masonry walls, passive ventilation systems, natural daylighting, and other passive energy-saving devices.

As part of an overall national strategy to make all buildings more energy efficient and more environmentally friendly, energy standards and code requirements are applied to all building construction projects, including new buildings and the rehabilitation of existing buildings. While this environmental ethic is good, energy codes are based on simplistic models utilizing modern wall and fenestration systems, and often fail to recognize and account for the more complex energy conservation features built into historic buildings, such as thermal mass. In historic districts, a balance must be struck between maximizing energy conservation and preserving the historic character of individual building components, buildings, and streetscapes.

Changing Technologies

These guidelines address the challenges of incorporating sustainable features into historic buildings and historic districts. Beyond any specific guideline, the most important general guideline is Standard No. 10 of the Secretary of the Interior’s Standards for Rehabilitation, “New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.” Consistent with this principle, a historic district’s requirements for the placement of solar collectors is far less important than its requirements for replacement windows because of the principle of reversibility: The solar collector can be removed in the future and the historic property will return to its previous appearance, while replacement windows result in the permanent loss of the original window sashes. An array of solar collectors in a backyard may be perceived as an eyesore, but when the collectors are removed, the site can return to its previous state.

Abandoned shutter dogs or awning hardware on a historic building are a testament to changing technology and reversibility. Fabric awnings were often added to existing windows and porches to reduce solar gain, but were later removed, leaving behind only their mounting hardware. Sustainable technology will continue to evolve, with new hardware and new technology becoming less expensive and more widespread, and older systems abandoned. In more recent times, the trombe wall was retrofitted to numerous existing buildings but receives little attention in the literature today. Abandoned solar water heaters may be seen on many public buildings and private residences because of the problems inherent in piping water from rooftops to interior plumbing systems as well as advances in competing photo-voltaic collectors. In conclusion, because technology changes so rapidly, no sustainable feature should be added to a historic building or site that cannot later be undone without harm to the resource.

6.2 DAYLIGHTING

Daylighting, defined by the Whole Building Design Guide (WBDG) as the controlled admission of natural light - direct sunlight and diffuse skylight – into a building to reduce electric lighting and to save energy, was an important aspect of building design prior to the invention of electric lighting.
has been rediscovered for both energy-saving reasons and for reasons of increased worker productivity and human comfort. Daylighting is particularly applicable to loft building conversions, and through the innovative use of skylights and light tubes, may be utilized in residential buildings. Daylighting solutions in loft buildings should be interior, and for residential buildings, guidelines for skylights apply (See 7.2.3).

6.2.1 COATINGS FOR NEW AND EXISTING GLASS

Daylighting is reliant on windows in walls and roofs. One means of controlling light emitted through windows is coatings on glass. Reflective and tinted coatings are not recommended for new and existing window glass in the historic district. Such coatings change the relationship of the building interior to the street, analogous to a person wearing sunglasses indoors. Coatings also change the scale of window openings in a wall, making the overall wall appear more monolithic and lacking in human scale. There are, however, sophisticated coatings that significantly reduce solar heat gain and glare while retaining the visual properties of clear glass. Such coatings, when used on new buildings, have no impact on the historic district.

6.2.2 AWNINGS

Awnings are used to shade windows from direct sunlight, reducing glare and solar heat gain. Although once a common residential element, most awnings today are used to shade storefront windows. See 5.2.2 for a discussion of commercial awnings. Residential awnings remain an appropriate method of shading windows, provided they are simple in design, and are striped or solid color, using colors appropriate to the period of the building.

6.2.3 SKYLIGHTS

Skylights, light monitors, light tubes, and other forms of overhead natural lighting can provide natural lighting to areas of buildings that are remote from perimeter walls. In former industrial buildings, light monitors are important architectural features that should be preserved. For skylights proposed for existing sloped roofs, see 5.2.28. For skylights proposed for roofs in new buildings and additions, see 6.2.12. Skylights proposed for flat roofs, where not visible from the ground, have no impact on the historic district.

6.3 DURABLE MATERIALS

Material durability is an important principle of sustainability. The wood species selected for exterior woodwork should be rot-resistant and hold paint well. Historic wood window sashes and shutters were
6.5 GREEN ROOFS

Green roofs, defined as roofs vegetated with densely-spaced plants that shade the roof deck, reduce heat islands on a neighborhood level, reduce cooling loads for a building, and reduce storm water runoff. They are largely limited to flat roofs, and typically are not visible from the street. Existing roof framing often requires reinforcement to support the additional load of the plantings and retained water, and roof membranes and roof assemblies must be carefully selected to withstand constant wet conditions. Although there are historic examples of vegetated sloping roofs in North America, they are rare and all rural. Except for historic districts that contain historic

despite inconsistent paint maintenance, the durable, old-growth heart pine used in the 200-year old moldings of this dormer are repairable, accept paint readily, and offer a more reliable service life than new woodwork. Left: Following paint removal and prior to woodwork restoration; right: completed dormer.

constructed with old growth softwood lumber that is no longer available. Because of the durability of this original wood, repaired sashes and shutters generally outlast new sashes and shutters. Finding suitable porch flooring is also problematic. Porch flooring, fabricated from solid polyvinylchloride or composite wood/plastic resin and formed in traditional tongue-and-groove profiles, may be an appropriate substitute material for painted wood. Likewise, smooth, field-painted polyvinyl chloride (PVC) trim may be an appropriate substitute material for painted exterior woodwork.

6.4 GEO-THERMAL HEATING AND AIR CONDITIONING

Ground-source heat pumps, commonly referred to as geo-thermal heating and air conditioning, are applicable to historic structures under certain circumstances. For historic structures with a ducted, all-air, heating system, the change-over to geothermal will have minimal impact on the structure. The change-over will improve the exterior appearance of the site because geo-thermal heating and cooling eliminates the need for outdoor condensing units. However, to drill wells for ground-source heat pumps, the site must be large enough and accessible enough to accommodate a large drilling rig. Most urban sites cannot accommodate such a large truck, so opportunities for geo-thermal systems are largely limited to structures in lower-density neighborhoods. (See 5.2.11 for a general discussion of mechanical, electrical, and communications equipment.)

to drill wells for ground-source heat pumps, the site must be large enough to accommodate a large drilling rig.
examples of vegetated sloping roofs, sloping roofs should not be vegetated. Vegetated flat roofs have no visual impact on the historic district unless the roof has no parapets or the vegetation is taller than the parapet. Visible vegetation on existing flat roofs is generally not recommended, but may be appropriate for new buildings and additions.

6.6 PASSIVE VENTILATION SYSTEMS

Prior to the advent of mechanical ventilation, passive ventilation systems were employed in all types of occupied buildings. Operable windows, sometimes equipped with insect screens, provided passive ventilation for many historic buildings. Buildings were sometimes built with passive ventilation systems that included wall registers and brick air ducts that discharged through the roof in what appear to be chimneys. Attic spaces were ventilated by means of gable end louvers or sheet metal gravity ventilators. Passive ventilation remains a viable means of conserving energy and is a component of sustainable new design. It is recommended that operable windows and historic roof ventilators be retained. However, modern turbine ventilators and power roof vents are not recommended for roof slopes on primary facades. Continuous soffit vents fabricated from perforated aluminum or vinyl are not recommended where visible.

Ornamental sheet copper gravity ventilators were commonly employed on institutional buildings prior to mechanical air conditioning. Often still functional for attic ventilation, they should be preserved.

6.7 RAINWATER COLLECTION SYSTEMS

Collecting rainwater on-site for use in garden irrigation reduces storm water runoff and conserves water. Rain barrels placed at the bottoms of downspouts do little to reduce storm water runoff, but may be a plant-watering convenience. However, rain barrels placed on the sidewalk in front of row houses or commercial buildings are not recommended. Underground rain water collection systems can be built large enough to make an impact on stormwater. Roof water piped to a large tank buried in the ground has no visual impact following construction, but has the potential to disturb archaeological resources. Like geo-thermal heating and air conditioning systems, the site must be large enough for a water tank and accessible enough to accommodate excavating equipment required for installation.

Although invisible after installation, an underground rainwater collection tank requires a property of adequate size and accessibility.
6.8 SOLAR PANELS

Solar panels first appeared in the 1970s in the form of solar water heaters. Solar water heaters decreased in popularity because of the problems inherent in piping water from rooftops to interior plumbing systems as well as advances in competing photo-voltaic collectors. Wind power, hydro, and solar photovoltaics are the three principal renewable energy sources in the world. Solar panels are built as modular units that are grouped together to form an array. A solar array may be ground-mounted on an open metal framework that secures the panels at an angle best suited to maximize solar collection, or the array may be mounted on the roof of a new or existing building. The National Park Service and the National Trust for Historic Preservation have developed guidelines for solar panels, as follows:

a. **Locate solar panels on the site of a historic resource** [rather than on the roof of the resource]. This guideline is only achievable in low-density neighborhoods and rural areas, and the visual impact of a ground-mounted array must be considered. Installing an array in the front yard of a historic property is not recommended.

b. **Locate solar panels on new construction**. If mounting an array on the ground is not feasible and if the planned project includes new construction, placing the array on the roof of the new construction is preferable to the existing historic building.

c. **Locate solar panels on non-historic buildings and additions**. If the historic property has outbuildings or a historic building has non-historic additions, placing the array on one of the non-historic roofs is preferable to the historic building.

d. **Place solar panels in areas that minimize their visibility from a public thoroughfare**. The roof of the primary façade is the least-preferred location for a solar array (see 5.1.5 for a description of primary and secondary facades). Where possible, solar panels should be placed on the roofs of secondary facades and on flat roofs where their visible impact will be less. For all sloping roofs, the solar panels should be low-profile, flat panels that are mounted parallel to the roof plane and held back not less than 18 inches from any roof ridge, hip, penetration (such as a chimney or dormer) or eave. Arrays should be laid out as simple rectangles where feasible. “H,” “L,” “T,” and “U” configurations are not recommended.

e. **Avoid installations that would result in the permanent loss of significant, character-defining features of historic resources**. Solar panel installations should be reversible. Technical obsolescence for any solar panel is assured, so any installation should be built in a manner that it can be entirely removed and replaced with the newest technology without harm to the character-defining features of the historic building.

a. On flat roofs, set solar panels back from the edge. Because the solar panels on a flat roof must be mounted on a metal frame to maximize the capture of solar energy, the height of the frame is important. A solar array installed on a flat roof is very similar to rooftop mechanical equipment, and its visibility from the street should be minimized. The array should be held back approximately 8 feet from the primary façade of the building, depending on the height of the building.

6.9 WINDOW UPGRADES

Windows have become the central focus of energy inefficiency in existing buildings. Despite empirical evidence to the contrary, the popular press overwhelmingly singles out historic wood and steel windows as the greatest energy loss problem in existing buildings. The same press encourages replacement windows as the preferred option for upgrading historic windows. Historic windows are portrayed as drafty, poorly-fitting, in need of paint, and single-glazed. The recommended solution is always replacement windows, a solution that the replacement window industry invented and the green building community supports because the outcome is measurable.

While replacement windows are an appropriate solution for severely deteriorated historic windows, the vast majority of existing historic windows can achieve equal performance levels through a combination of repairs, weatherstripping, and storm windows. For guidelines relating to windows, see 4.2.27 through 4.2.31.
**Guidelines for Preserving Historic Streetscapes**

7.1 **GENERAL GUIDELINES FOR PROTECTING HISTORIC STREETSCAPES**

7.1.1 **GENERAL**

A primary purpose of the Historic Preservation Ordinance and these Design Guidelines is to preserve the historical character of landscapes, and streetscapes within the historic district. Streetscapes are the public spaces formed by buildings along streets in an city, town, or village setting. These outdoor, linear rooms have buildings as walls, street and sidewalk paving as flooring, the sky as a ceiling, lighting provided by the sun by day and street lights by night, and furnishings consisting of vegetation, planters, building stoops and steps, benches, trash receptors, automobile signage, and other accessory items. Streetscapes are dynamic and change with the weather, time of day, and season. The public perception of a neighborhood or historic district is formed by the quality of the streetscapes. The quality of a streetscape is formed by both the character of the buildings that define the street space and/or the character of the outdoor ground surfaces, vegetation, walls, fences, and furnishings that enrich the space.

7.1.2 **RESIDENTIAL STREETSCAPES**

The residential streetscape of uniformly spaced houses on a tree-lined street is the single most character-defining feature of the Beaver Borough. There are several variations of the residential streetscape, including the following:

- Blocks with deep setbacks and flat front yards, on wide streets.

*This block of 3rd Street follows the residential streetscape pattern of block with moderate setbacks, set on a terrace above the sidewalk.*
Blocks with moderate setbacks, set on a terrace above the sidewalk, on wide and narrow streets.
Blocks with moderate setbacks and flat front yards, on wide and narrow streets.
Blocks with minimal setbacks on narrow streets, creating the most intimate streetscapes.
Blocks with the houses or porches built on the sidewalk line.

The setback of houses and character of original blocks is dependent on topography and the 1792 layout of the Borough. Blocks with deep setbacks occur on streets with original 100-foot wide right-of-ways, such as 2nd and 4th Streets, Beaver Street, and College Avenue. Blocks with moderate or shallow setbacks occur on the later or 25-foot wide right-of-way streets, such as Taylor Avenue, Wayne Street, and Bank Street.

It is recommended that above all else, new buildings follow the streetscape form of the block on which the property is located. This form includes two critical elements: setback and building mass.
This block of 4th Street follows the residential streetscape pattern of blocks with moderate setbacks, set on a terrace above the sidewalk on a wide street. Because of the street width, each side of the street forms its own one-sided residential streetscape.

This block of Bank Street, running south from Wayne Street, follows the residential streetscape pattern of blocks with minimal setbacks on narrow streets, creating the most intimate streetscapes in the historic district.

This block of 5th Street, although entirely suburban in character, follows the pattern of blocks with moderate setbacks and flat front yards on wide streets.
New houses and garages along Bank Street. Despite the attractive street trees, the placement of the garage alongside of or in front of the new dwellings is incompatible with the residential streetscape pattern of the historic district.

This block of College Avenue follows the patterns of blocks with deep setbacks and flat front yards on wide streets.
One of the more urban blocks in Beaver, this block of Wayne Street follows the pattern of blocks with minimal setbacks on narrow streets.

This block of Beaver Street follows the pattern of blocks with moderate setbacks and flat from yards on a wide street.
This block of College Avenue opposite College Square Elementary School, which might be described as "mansion row", has some of the deepest front yards in the Borough.

This block of Beaver Street, looking north from 2nd Street, follows the pattern of blocks with deep setbacks and flat front yards on wide streets.
The commercial streetscape of 3rd Street is most intact in the three blocks between Beaver Street and Insurance Street, where it is comprised of densely packed 2- and 3-story buildings with retail on the ground floor and office or residential use above. To the east and west of the core, 3rd Street transitions to highway commercial, with several vestiges of earlier streetscapes. Because of the width of 3rd Street, within the core each side of the street creates its own commercial environment, tied together by the uniform street lighting and street trees on both sides, views of churches on both sides, and a good system of crosswalks.

It is recommended that new buildings proposed both in the 3-block commercial core and beyond both ends but within the historic district, adhere to the urban form of the 3-block core and not allow suburban development to expand. This urban form is created by contiguous brick buildings, 2- or 3-stories high, built on the sidewalk line.

North side of 3rd Street at Wayne Street. Although the recent corner building lacks architectural character, because of the pattern of storefronts, doors and windows, it succeeds at the most basic level by being a two-story brick box that is built on the property’s lot lines.
Quay Square and Irvine Park are the west gateway to the 3rd Street Commercial core. (Source: Google maps)

3rd Street commercial core, looking south. (Source: Google maps)
7.2 SPECIFIC GUIDELINES FOR PROTECTING HISTORIC STREETSCAPES AND LANDSCAPES

7.2.1 ACCESSIBILITY

These guidelines pertain to the addition of exterior elements required to provide accessibility to historic buildings in the Historic District, and are based on the Americans with Disabilities Act (ADA) and accessibility provisions of International Building Code. Building accessibility for individuals with disabilities should be achieved without compromise to historic materials or to character-defining features of a historic building or site. A ramp or vertical access lift should not be placed on a primary façade of a historic building where it can be avoided.

If the only feasible placement of a ramp or lift is on a primary façade, efforts should be made to minimize its visual impact on the façade, and the building owner should work with the HARB and the Code Enforcement Officer to achieve accessibility without visual intrusion. Sometimes accessibility devices can be concealed effectively within a traditional building element. For example, a vertical platform lift could be built within what appears to be a traditional porch, or a ramp can be integrated into an entrance terrace. Pressure treated wood railings and exposed structures are not recommended.

Where possible, a building addition to a public building should be designed to include features that
make up for any accessibility deficiencies of the original building. This approach can eliminate the need for intrusive alterations to the original building.

All new buildings except private homes and churches are required by law to be accessible to persons with disabilities. New buildings in the Historic District should be designed with integral accessibility features, so that changes in level are accommodated within the new building, not at the building exterior.

7.2.4 RETAINING WALLS

Existing historic retaining walls should be preserved or restored. New retaining walls that are visible from a public way should be built with materials traditional to the Historic District. Railroad ties, pressure-treated lumber, and decorative concrete units are not recommended retaining wall materials.

7.2.5 SIDEWALKS

Surviving historic brick sidewalks should be preserved. New walks should be constructed from materials traditional to the historic district.

### 7.2.2 DRIVEWAYS AND OFF-STREET PARKING

Off-street parking areas should be carefully planned to protect the historic character of the district. The removal of mature landscaping and trees to provide parking areas is discouraged. If a new parking area or driveway is required at a location that is currently vegetation, grass-block pavers, clay brick, Belgian blocks, or crushed stone are encouraged.

### 7.2.3 FENCES

Wood picket, vertical board, wood stockade, and ornamental iron fences are found in the Historic District. Chain-link fences and plastic fences are not recommended in the Historic District except on rear areas of lots. In general, new fences should be compatible with the specific streetscape and comply with the zoning ordinance. New fences along street fronts should be designed to allow views of the yard and building. New fences for rear and side yards may be more opaque. Gates should be designed to swing into the private walkway or driveway, not onto the public sidewalk. Fences along side and rear lot lines may be constructed of rough board, plank, or welded wire fabric, but fences near dwellings should be more refined or ornamental.

A rare surviving example of brick street paving, sidewalk and edging (Canal Street). Note the varying brick bond patterns: Running bond for the street; herringbone for the sidewalk.

A dry-laid stone wall and painted wood-picket fencing are important visual elements of the streetscape.

### 7.2.4 RETAINING WALLS

Existing historic retaining walls should be preserved or restored. New retaining walls that are visible from a public way should be built with materials traditional to the Historic District. Railroad ties, pressure-treated lumber, and decorative concrete units are not recommended retaining wall materials.

### 7.2.5 SIDEWALKS

Surviving historic brick sidewalks should be preserved. New walks should be constructed from materials traditional to the historic district.

Brick street and sidewalk paving at the corner of Bank and Wayne Streets. Preservation of surviving historic brick paving is a Borough policy.
Signs should be compatible with the scale, proportion, form, and architectural detailing of the building to which they are applied. The Borough signage ordinance dictates requirements for signage. Projecting signs (hung perpendicular to the wall on a decorative bracket) and wall-mounted signs that are rectangular, square, or oval are appropriate to the majority of historic buildings. Free-standing signs are appropriate for buildings that are set back from the front lot line and fronted by landscaping. A traditional sign type such as wood with either carved or painted lettering is highly encouraged. Signs should not obscure any architectural detail. Appropriate colors for signs were traditionally intense versions of building colors—high-gloss bottle greens, olives, golds, and burgundies on a neutral background. On commercial buildings with a storefront, signs should be placed in the signboard area (frieze) located above the storefront windows and below the upper-story windows.

Corporate logos and standard corporate lettering styles that are non-traditional should be deemphasized in the signage design for a historic building. Creative graphic solutions, in which the corporate logo or corporate lettering style is a secondary element, are recommended.

Where signage lighting is required, gooseneck or hidden lights are recommended. Internally illuminated signs are generally not recommended, except back-lit individual pin-mounted letters.

Street address numerals should be simple in style, with characters not more than 4 inches high. Script styles and the spelling-out of the address are not recommended.
7.2.7 STREET AND YARD LIGHTING

Site lighting should be compatible with the Historic District, and may include either traditional (period) lighting fixtures, as employed on 3rd Street, or simple modern fixtures. Yard lighting and parking lot lighting should be post-mounted on maximum 12-foot high posts. High-efficiency fixtures such as mercury vapor or low-pressure sodium are not recommended because of their light color.