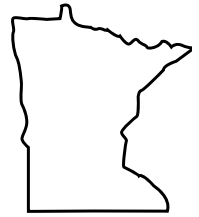




MINNESOTA
HISTORICAL
SOCIETY

TECH TALK

Minnesota's Architecture • Part I



Early Architecture of Minnesota by Charles Nelson

With this issue we begin a series of five Tech Talk articles that will span the main architectural styles in Minnesota's history. The goal of this series is to create an awareness of our precious architectural heritage and provide counsel on its care. Two styles are discussed in this article: Greek Revival and Gothic Revival. In the next installment, the popular architectural styles of the post-Civil War era will be considered.



Over the last 150 years, Minnesota's built environment has undergone a number of changes. In many developing communities, several generations of buildings have come and gone. Early pioneer buildings have made way for more substantial structures, testifying to the commitment to stability and permanence of communities that grew from them. The historical development of communities is evident in architecture, and a timeline of popular styles is often the best testimony of their vitality. The timeline attests to progress, continuing growth, and prosperity as evidenced by popular styles over a long period in the community's history, for it offers evidence of continuing growth and prosperity over a long period in a community's history.

mid-20th century did there appear to be a blatant disregard for the work of previous generations. This disregard was brought on by several factors, not the least of which was the abundance of mass-produced building products and the pressure for developable land in desirable localities.

The old styles found they could not compete with the economic formulae of progress, and the image of older, growing communities changed, literally, overnight. Attitudes, however, also change, as evidenced by a new appreciation for old buildings. Preservation sensitivity, along with economic reality, has renewed the value of architecture in our history. Products for the restoration of older buildings are now commonplace in the building trade. In a typical rehabilitation project, scarcity of older-quality materials encourages retention of practically everything for which a use might be found. Today the owners of Greek Revival Style houses, for example, lovingly care for these venerable ancestors with hopes of passing them on to the next generation of stewards.

The Vernacular

Before we consider the early styles, it is important to realize that there are categories of buildings for which no academic designation of a style can be assigned. These buildings, often referred to as "vernacular," include subsistence dwellings as well as in industrial structures. Most of these buildings were modest and constructed of readily available local materials. Log buildings were common in forested areas. Stone buildings could be found along rivers with limestone and sandstone ledges. Sod houses were



The John H. Stevens House (1849) was built on a simple broadside plan; it is now located in Minnehaha Park in Minneapolis. Note the eave-returns on the gables, the simple pilasters at the corners, and the six-over-six windows, which are characteristic of this style.

It is common for a number of styles, representing different points on the timeline, to coexist side-by-side. Over time, earlier styles tended to blend with later styles to create the "harmonious individualism" that gives character to older communities. Only in the

Continued on p. 4

Editor's note:

TECH TALK is a bimonthly column offering technical assistance on management, preservation and conservation matters that affect historical societies and museums of all sizes and interests. Comments and suggestions for future topics are welcome.



constructed on the prairie. Brick structures were erected in areas near clay pits where brick yards flourished. With the advent of the railroad, materials could be more easily transported to remote areas, away from the local sources. The first construction to dot the landscape was of this nature. It signified the first phase of settlement. Many of these buildings exist today as the cores of older buildings or as utilitarian outbuildings.

Greek Revival

The first true architectural style to achieve popularity in Minnesota was Greek Revival. The earliest of these buildings date from ca. 1845, and the style remained popular through the Civil War. Its prominence was made possible by the production of lumber in standard sizes,



MHS file photo

The Dodge County Courthouse in Mantorville has a Classic Greek Style portico with complete pediments in the gables. The domed cupola designates this as a public building.

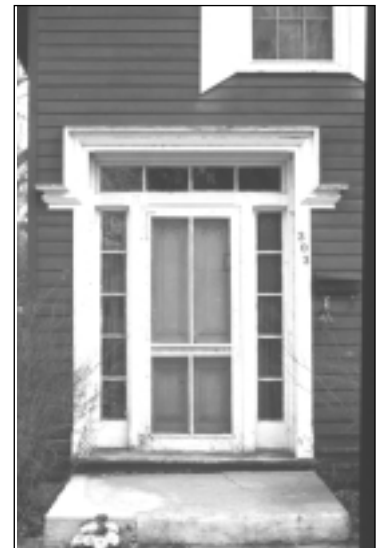
MHS file photo



The Harrington House, an example of a "L" plan Greek Revival Style house. Note the 1 1/2 story kitchen at left. Built ca. 1860, it was moved to Irvine Park in St. Paul from Lake Elmo in Washington County.

e.g., two-by-fours, two-by-sixes, etc. The lumber was produced in commercial sawmills that first sprang up along the Saint Croix River and at the Falls of Saint Anthony. Early sawmills were water-powered, but the invention of the steam-powered mill made it possible to erect mills closer to the timber resources. Although the style was popular for all types of buildings—public, commercial and residential—the majority of surviving Greek Revival buildings are residences. They are found mainly in the Saint Croix, Mississippi and Minnesota river areas, and throughout southeastern Minnesota.

Greek Revival buildings are found in three basic shapes: the broadside, the gable-end, and the "L." The broadside plan is distinguished by a prominent central entry flanked by windows in a symmetrical pattern. The gable-end plan is recognized by an entry at one side, an odd number of bays, and a prominent gable facing the principle approach to the building. The "L" plan is created simply by the addition of a wing at right angles to the main body of the house; the wing often has a lower profile than the main section. The roofs of Greek Revival buildings are low-pitched gables without dormers, and chimneys are slender, signifying that the primary heating sources were stoves rather than fireplaces. For the most part, Greek Revival residences are constructed of wood with clapboard siding, and, in Minnesota are painted white.



MHS file photo

Note the transom and side lights in this Greek Revival Style door, in the Sherman Hale House, ca. 1860. (Cannon Falls, Goodhue County)

General characteristics of Greek Revival Style include corners defined by pilaster strips, which are



corner boards in the shape of half-columns (often of the Greek Doric pattern); heavy friezeboards, trim boards under the eaves at the cornice level; full triangular pedimented gables similar to Greek temple triangles, principal entries with sidelights and transoms; and six-over-six pane double-hung windows with thin muntin divisions. Where a porch is present, the posts supporting the porch roofs are often in the form of classical columns. Clearly, Greek Revival houses are known for their simple refinement rather than for a profusion of ornament.

In a restoration project, the “stylistic refinement” or “simple elegance” of Greek Revival is of utmost importance in setting the quality control in the scope of work. The restorationist must consider the profile of the clapboard siding (siding with one board overlapping the other to shield the rain); the dimensions of the muntins in the windows; and the depth of the frieze or extension of the corner pilasters. Inappropriate siding, new windows without true-divided panes, or metal combination storm/screen units can be disastrous to the aesthetic of the Greek Revival house. Removal of or “colonializing” the signature entrance entablature (the door surround or portal), is definitely to be avoided. Addition of details that have no relevance to the style, or ornamentation from a

phase, often referred to as Carpenter Gothic, coincided with the last decade of the period dominated by Greek Revival, roughly 1850-65. Like Greek Revival, Carpenter Gothic was promoted



MHS file photo

This Winona farmhouse (ca. 1860, recently demolished) was built in the Carpenter Gothic style, with elaborate bargeboards and pointed arch windows in the gables.

The Good Shepherd Church (ca. 1872), in Blue Earth, Faribault County, is an Early Gothic, or Carpenter Gothic, style, with board and batten siding, a steeply pitched gable roof and pointed arch windows.



MHS file photo

later architectural period should also be avoided. (For guidance, consult the *Secretary of the Interior's Standards for Rehabilitation*; copies are available from the State Historic Preservation Office.)

Gothic Revival

Where Greek Revival was known for its relative simplicity, the Gothic Revival Style was profusely ornamented and complex. In Minnesota, Gothic Revival experienced three distinct phases, its popularity lasting well into the 20th century. The first

through books. Among the noted proponents of Gothic Revival was Andrew Jackson Downing, a horticulturist from New York, who expounded on the merits of the style and its affinity with nature in his book *Country Houses*. Downing produced a number of designs in his book, which reached readers and builders throughout Minnesota. Although not overly popular for residences, the style became

synonymous with church architecture. It owed much of its popularity to the availability of dimension lumber produced in bulk, called “production lumber,” and the invention of the scroll saw for cutting decorative wood trim.

The stylistic characteristics of Early Gothic Revival, or Carpenter Gothic, include an irregular plan and one-to-three stories, sometimes with a tower. Facades emphasize verticality: Roofs are steeply pitched gables, often ornamented with “gingerbread” barge boards, finials and pendants. Both frame and masonry construction were prevalent; sides of the frame buildings were made with board and batten

Partial Glossary

- Chamfered:* When a corner is cut away at an angle (e.g. 45°) to the edges.
- Finial:* A formal ornament at the top of a gable or canopy.
- Pilaster:* A shallow column that projects slightly from a wall.



siding, and the masonry buildings used a combination of smooth and rusticated blocks. Ornamental treatments include bay windows, dominant multi-flue chimneys pointed or flat arches over door and window openings, squared or chamfered columns on porches, a monochromatic color scheme, and the ever-present gingerbread.

During the 1870s and early 1880s, Gothic Revival experienced a resurgence known as Victorian Gothic.

The Winona Hotel (ca. 1889) is a typical Victorian Gothic Style building, with its polychromatic facade, an elaborate carved stone ornament and pointed arch windows.



MHS file photo

The source of inspiration for this phase seems to have been John Ruskin, an English scholar who wrote extensively about the Gothic buildings of Venice. His books, like Downing's, were profusely illustrated.

The primary emphasis of Victorian Gothic was in commercial and public architecture rather than on residences. These buildings were substantial and often constructed of brick and stone rather than wood. An elaborate mix of materials and ornamentation contributed to its polychromatic, or many-colored, appearance.

Characteristics of Victorian Gothic include an irregular plan and massing, steep roofs, and construction of brick and cut stone in polychromatic patterns. Verticality was emphasized through a profusion of towers, high arches and gables. Ornamental treatment includes stained glass, arcades, flaring cornices and corbels, brackets, spires and finials, and multiple colors. The complexity of the style contributed to its rather short-lived popularity.

The third and last phase of the popularity of Gothic Revival, or Late Gothic, followed the Columbian Exposition of 1893. It was promoted by architect Ralph Adams Cram, who, with partner Bertram Goodhue, produced designs for prominent

clients across the country. Having its roots in the architecture of Medieval Europe and England, it was a formal style taught in the architectural schools of the period. Its popularity continued until the end of World War II. Advanced technology allowed these buildings to achieve immense scale; because of this, it was widely used for churches and college campus buildings (hence a reference to it as "Collegiate Gothic").

Like the two earlier phases, Late Gothic buildings are irregular in plan and often comprise multiple stories. It has steeply pitched gable roofs, often with vaulted interiors. Materials for construction included cut stone, but reinforced concrete also came into wide use in the early 20th century. Its ornamental features include towers or spires, intricate window tracery, pointed arches, and a monochromatic color scheme.

Restoration of Gothic Revival buildings presents a challenge for the craftsman, as many of its distinguishing qualities are inherent in complex detailing and ornamentation. Delicate exterior ornament or curvilinear window tracery has often been lost over the years due to deterioration or insensitive remodeling. Replacement materials are usually not available and often must be painstakingly reproduced by hand. Few intact examples remain to serve as patterns. Consequently, restoration is costly and laborious and will usually take more time than

Right: The House of Hope Presbyterian Church in St. Paul (ca. 1913), a Late Gothic Style building, shows signs of the academic revival of European design and forms. It was influenced by the English parish church, with elaborate stonework, stained glass windows and the towers.



MHS file photo

anticipated. The finished product, however, is a rare valuable testament to Minnesota's rich early architectural heritage.

Charles Nelson, Historical Architect at the Minnesota Historical Society, has been with the Society since 1971. He has traveled throughout the state to work on preservation projects, make presentations and give workshops.