

Reconstructing the Brick Chapel of 1667

Honoring the Legacy

Reconstruction of the 1667 Brick Chapel is an essential step in telling the story of one of Maryland's greatest contributions to American values.

The chapel was reconstructed over its original foundation, within which archaeologists discovered three extremely rare lead coffins containing members of the Calvert family. The reconstructed chapel is an interpretive exhibit for all visitors, not a consecrated place of worship.



The Birthplace of Religious Freedom

History was made in Maryland in 1634. The nearly 150 English settlers who arrived at what is now St. Mary's City aboard the Ark and the Dove established far more than simply the fourth permanent English colony in North America. They forged what would become known as the birthplace of religious freedom in America. From its beginning Maryland practiced a very liberal policy concerning religious activities. Taxes did not support an established church and all Trinitarian Christians were allowed to practice their faiths. Among the settlers were several Jesuit priests including Father Andrew White. The Jesuits acquired a parcel they named "the Chapel Land" and built a wooden chapel there. This building was the founding place of the Roman Catholic Church in English America. After an attack on St. Mary's City by forces hostile to Lord Baltimore in 1645, this chapel was burned and a long period of turmoil ensued. With the restoration of King Charles II in 1660, the Calvert family again took charge of Maryland, and in 1667 a new Roman Catholic chapel was built in the chapel field.

The impressive brick structure served as the focal point of the Catholic faith in Maryland until 1704, when the royal governor ordered the building locked and never again used for religious purposes. The Jesuits dismantled the building and used its bricks to construct a new manor house at the St. Ingoes mission. In 1753, the Jesuits sold the land to William Hicks, who converted the former church site and cemetery into agricultural fields

Rediscovering the Brick Chapel

While most above-ground traces of the buildings that had stood there were obliterated by the plow, they were never forgotten. Local lore continued to identify the field as the place where the Catholic

chapel stood. In 1938, architectural historian H. Chandlee Forman tested the site and found that the chapel's floor plan was in the shape of a Latin cross. After his work, the remains of the building were reburied and its exact location again forgotten. The chapel land remained in private ownership until 1981, when it was purchased by the State of Maryland for the Historic St. Mary's City museum.

As soon as the museum acquired the property, there was intense interest in exploring the site. Local citizens, led by Fred and Beth McCoy, raised funds to allow an archaeological survey of the chapel field. Historic St. Mary's City staff succeeded in relocating the brick chapel along with several other colonial buildings. As part of the celebration of the 350th anniversary of Maryland's founding in 1984, the foundations of the 1667 chapel were partially demarcated and signs installed for visitors. A major research program was designed and excavations began in 1988. The purpose of the excavations was to retrieve essential information about the original chapel so it could be accurately recreated. This effort was aided by a grant from the National Endowment for the Humanities in 1990 to allow several years of intensive investigation at this unique site.



Rebuilding the Brick Chapel

In 1997, the Historic St. Mary's City Foundation initiated the Chapel Campaign with a goal of raising funds to rebuild the 1667 Brick Chapel. The Chapel Campaign was led by private citizens who serve on the board of the Historic St. Mary's City Foundation. In 2003 and 2004, contributions from the public were supplemented by almost \$500,000 in grant funds from Save America's Treasures.

The brick chapel at St. Mary's City is a powerful reminder of faith, perseverance, and enduring American values. Many early English settlers fled religious persecution. Liberty of conscience and separation of church and state were mandated in colonial Maryland, far in advance of the laws and practices in other New World colonies. Though the brick chapel was in active use for only about thirty years, its legacy of religious freedom remains vitally important in our own lifetime.

Evidence of the Brick Chapel

The first step in reconstructing the chapel is finding out what it looked like in the 1670s. Because the building was intentionally demolished and its parts reused, there was less evidence at the site than archaeologists would normally find. This made every fragment important.



This archaeological evidence was acquired at the site over several years and subsequently analyzed with painstaking thoroughness. Archaeologists have discovered that the chapel had massive brick foundations three feet thick which extend into the ground a full five feet. By 17th-century standards, it was a monumental structure, measuring 54 feet long and 57 feet across the arms of the cross. The chapel walls were nearly 25 feet high. Specially molded bricks were made to fit elaborate windows. The building was covered with roofing tiles and its walls were plastered.

Imported sandstone paved the floor. In a colony where most people lived in 15 by 20-foot wooden buildings, the brick chapel at St. Mary's was indeed an impressive structure.

A few historical references to this building exist. Actions by a vandal in 1669 left behind evidence of glass windows. From burial expense lists, we know the building was paved with flooring stones. Finally, Royal Governor Francis Nicholson, who moved the capital from St. Mary's City to Annapolis, referred to the structure as "A Good Brick Chappell" in 1697. Aside from these clues, no historical evidence about the building survives.

Clues from the Past

Archaeologists found a few traces of plaster that had been attached to wood lathe suggesting the ceiling was timber clad.

Fragments of window glass found at the site had been cut at different angles. These angles tell us the shape of the chapel windows.

Special mullion bricks were part of these windows. They were coated with a stucco-like material, which made them appear to be carved stone.

Flat roof tiles tell us that the roof had to be a steep angle or it would leak. Research has determined this angle is about 48°.

The width and depth of the foundation and comparisons with similar buildings suggest the chapel was about 25 feet tall.



Planning and Design

In July of 1996, the architectural firm of Mesick-Cohen-Wilson-Baker Architects of Albany, New York, was hired to help prepare a design for the recreation of the original chapel, prepare cost estimates, and produce schematic drawings. In summer 2001, the firm was retained as the official chapel architect. They have extensive experience with restoration and reconstruction projects, including Monticello and Poplar Forest. The unique nature of the chapel assignment warranted that the architects provide much more than typical design and engineering services. Their research incorporated the work of archaeologists and historians, consultation with experts in Jesuit history and liturgical form, study of construction technology available in tidewater Maryland and Virginia at the end of the third decade of English settlement, and study of contemporary English buildings. The firm also participated in specifying materials, identification of quality craftsmen and contractors, the bidding process, certifying progress, and more.

Bricks and Mortar

Mortar, plaster, and bricks comprised the bulk of materials needed to reconstruct the chapel. Production of material and construction had to flow with the seasons because the manufacture and application of some materials is weather dependent. The chapel included materials as faithful to the 17th-century originals as possible. These materials were modeled after artifacts found on site.



About the Bricks

The contract for the exterior brick and roofing tile was awarded in the summer of 2001. Henry Cersely, who specializes in historic projects, used his practical experience and experimentation to reproduce the recipe for these materials working closely with the Research Department. The molded brick was made from St. Mary's City clay and wood-fired in a special kiln. Previous research had identified a site where brick similar to the Chapel brick had been made in the area across Route 5 from the Chapel. Ongoing chemical analysis by Dr. Ruth Ann Armitage, previously a professor of chemistry at St. Mary's College of Maryland, but was now on the faculty of Eastern Michigan University, detailed the chemical makeup of the brick and correlated it with known clay sources. This work, coordinated by Curator Silas Hurry, was done with neutron activation analysis. Not only bricks from the Chapel, but specimens from other St. Mary's City sites were analyzed as part of this effort. Chief Archaeologist Tim Riordan, along with other members of the Research and Collections staff, examined several clay sources and in March 2002, several tons of clay were excavated from an artifact-free zone near the chapel site. The first load of 10,000 wood-fired bricks was delivered in spring 2003.

About the Mortar

Artifacts found during excavations at the site proved that the mortar and plaster used was a type common in 17th-century tidewater Maryland. The mortar is similar to that used in Rome centuries ago. It takes days to set and stays flexible, which is one reason why Roman ruins still stand. In this region, the main ingredient, lime, was derived from oyster shells. Ironically, locating the quantity needed to rebuild the chapel was a challenge as law returns most shells from the Maryland harvest to the water.



Steering Committee member Bernie Goldsborough served as liaison to a source in the Northern Neck of Virginia and over one thousand bushels of shells were delivered. Jimmy Price, of Virginia Lime Works, perfected the formula for the mortar. Mr. Price's experience with duplicating historical materials includes producing the lime needed for work at Thomas Jefferson's Poplar Forest and Monticello from local limestone. The process of obtaining lime from oyster shells involves burning, then slaking or curing the shells in a pit for a minimum of 12 months. Curing allows the particles to break down smaller and smaller, and ultimately enhances binding properties of the mortar. Sixteen tons of mortar were needed to complete the project. A test firing conducted in October 2001 took less time than anticipated and produced high-quality material.

GPR Survey

In order to mark and protect the graves of Maryland's founders that are located in Chapel Field, the area around the chapel site was surveyed using remote sensing technology. Ground penetrating radar (GPR) was used to determine where the graves are located, and a soil resistivity survey was conducted to corroborate the GPR data.

"Ground truthing," or archaeology studies, were also conducted to confirm the GPR. Over 500 of Maryland's founders are buried around the chapel.



Construction!

Once structural engineers determined that the original foundation was sound and the surrounding soil stable, the decision was made to re-build directly on the 335-year-old foundation.

On September 24, 2002, renowned restoration mason Jimmy Price laid the first brick and the reconstruction began! Four masons worked until the first freeze. As oyster shell mortar will not set properly in cold weather, building ceased until warmer weather returned in the spring.

The second season of construction was formally opened on Maryland Day 2003. Mason Jimmy Price supervised as Governor Robert Ehrlich, Congressman Steny Hoyer, HSMCC Chairman Ben Bradlee, and the Flag Ceremony representative from St. Mary's County, Tyrone Allen, labored at the site. An abundance of inclement weather during the 2003 season slowed the pace, but by end of the season the walls of the chapel were about 10 feet tall, over a third of their final height. The cruciform shape and dimensions were clear and window and door locations evident. The piscina was the first full feature of the chapel to be completed.

The third season of construction ran from April through mid-October 2004. The front façade of the chapel reached just over 22 feet tall when the building season ended. As walls rise, the exquisite shapes and ornamentation that adorns the front entry, windows, and columns emerged.

Through winter 2004/2005, chapel masons and carpenters readied for work in the spring. Wooden forms were built as patterns and support for the tops of window arches. In a warm and dry workshop masons carved bricks to fit the forms and carefully recorded where each fits in the plan. Installing the form, then following the pattern, makes the masonry for the window openings quick work! By the end of June 2005, brickwork around the north windows was completed and the wooden forms were removed. Masons then fine-tuned the bricks and joints that form the windows openings.

The front entablature, the section of the facade that rests on the columns, was completed in summer 2005. The entablature is about 4.5 feet in height. This area is a showcase for the masons' brick carving skills. The gracefully shaped bricks that comprise the entablature and highlight other architectural features lend elegance to the simple form of the chapel.



Most of the bricks for the entablature were carved over the winter of 2004-2005 and transported to the site. A few courses of carved brick top the side and back walls. Carved and coated kneelers, decorative corner elements that mark the beginnings of the gables, are in place on the north, west, and east walls. The front pediment of the church and the gables rise another 15 feet from this point.

By the time the 2005 season ended in October, a large arch towered over the east wall. The feature puzzled observers who did not remember seeing it in plans. The arch was actually an interior detail, a niche that frames the altar, not visible when the exterior gable wall is complete.

The 2006 construction season began in May. Before bricklaying began, another level of scaffolding was added. Work during May and June focused on the façade and was marked by regular emergence of new decorative elements. Masons carved bricks for these features over the winter, which greatly increased the speed of assembling these features on site.

End pedestals were laid and the pyramids that punctuate the frontispiece were installed. Tuscan columns are being created on the upper section and work on the niche is underway. The curved wing walls that span the space between are being laid.

Summer 2006 saw completion of the front façade and the three gables that top the walls. The façade is rich in details that showcase the red mason's art—including a niche, curved wind walls, and an elegant raked cornice that outlines the pediment. At the beginning of the last week of September 2006, the last brick was mortared into the north gable and the chapel walls were complete.

During the winter, timber roof elements, the principal rafters that will support the roof and form the vaulted ceiling, are being assembled by Blue Ridge Timber Frame in Swannanoa, North Carolina.

In March 2007, carpenters began installation of the rugged truss system that also supports the barrel vault. Each 15-piece truss interlocks to form the pitch of the roof and the curve of the vaulted ceiling without outward splay.

When the components were delivered to HSMC, 699 pieces of southern yellow pine were assembled on the ground in a day. The seven main trusses were then flown into place using a crane. Trusses for the transept followed. Roof construction will continue into the summer with the addition of 1 x 6 pine roofing boards, a leak membrane, and battens, which will ultimately be used to secure clay tiles.

Over the summer, roofing boards, a leak-proof membrane, and battens to secure the clay tiles were applied. Carpenters began to affix the clay roofing tiles in September. Berkley Taylor affixed the final tile on November 12.

"Decorating the cake" sums up the work that is took place throughout 2008. With the final structure complete, work focused on refinement, finishing, tracery—the elegant details that set the building apart.

Complex, carved mullion bricks were assembled in the windows, then finished with plaster rendering. An initial rough coat of render was applied to help the final coat adhere. The final coat is carefully applied, smoothed with a template to achieve the final shape, then fine-tuned by hand.

The facade and decorative elements of the chapel were finished with a thick mortar, or rendering, and faux joints scribed and painted. This technique lends brick the appearance of stone -- the most prestigious building material. Rendering was widely used for important buildings in the 16th and 17th centuries. The sides and back of the chapel is being finished with a red color wash and faux mortar joints are being penciled (painted) in.

Coatings serve both decorative and protective purposes. Protected places on colonial buildings show that masons covered walls of unevenly fired brick with a solution that made all the brick a uniform red. Penciling in white joints added to the appearance of precision. The wash also protected the bricks and the mortar joints from weathering.

The ox-eye window on the facade was the first window to be installed. It was set on June 24, 2008.

As the 2008 season wound down, the interior received two coats of plaster. The masons are applying a rough coat and a final coat. Up top, carpenters finished the wooden barrel ceiling, affixing yellow pine boards to the vault formed by trusses with reproduction nails. Curved trim pieces finish the vault.

The Spring 2009 season opened with leaded glass panels being installed in the windows. Installation of doors, and hardware took place through Summer 2009. Upon completion of the altar floor, the Chapel will be architecturally complete. Construction of a pulpit and tabernacle, the simple furnishings that would be historically accurate, will take place as funding allows.

A World Class Advisor

Among the people assisting with the chapel project is Gerard Lynch, an internationally acclaimed expert on brick masonry. Lynch is a master bricklayer with a specialty in historic buildings in the United Kingdom, Ireland, and Europe. Among his many publications is the impressive two volume *Brickwork: History, Technology and Practice*. He conducts work for English Heritage, regularly teaches master classes on historic brickwork at the Weald and Downland Open Air Museum, and is an instructor for the Scottish Lime Centre Trust. Lynch has visited the Chapel site and reviewed the archaeological evidence with the St. Mary's City staff. He is advising the Chapel architects John Mesick and Jeffrey Baker about details ranging from the shape of the gables and window construction to the type of joint the bricklayer would have "struck" in the wet mortar. Perhaps the most surprising recommendation is based upon a new discovery about 16th- and 17th-century brickwork. It seems that on virtually all of the better buildings of that era, the masons laid the bricks and then "color washed" the outside walls with a reddish mixture to create a uniform color. Next, the masons would "pencil" the groove in the mortar joint by applying a mixture of lime and glue to it with a thin brush. This produced thin white lines between the bricks and gave a very regular, precise appearance to the wall, even though it was made of crude, handmade brick. Our researchers must now determine how likely it was that this technique was used on the Maryland frontier.



Pictured (l.t.r): Jimmy Price, architect John Messick, Henry Miller, architect Jeff Baker, Gerald Lynch

Lynch has been a consultant regarding the use of cut and rubbed decorative brick work on the Chapel, and in the historical use of color wash techniques on brick. Due to the thorough salvage of the above ground portions of the Chapel in the early 18th century, most of the decorative bricks were removed from the site. But their prevalence in the English masonry, the nature of the Chapel building, and the small amount of remaining archaeological evidence strongly suggests that such cut and rubbed brick were used in the structure. Lynch has recently provided guidance regarding the brick niche that provides the architectural focus of the upper Chapel façade. Building this niche was challenging due to the complexity of its curved surfaces. Lynch and the master brick mason, Jimmy Price, combined their knowledge and skills to reach a solution. The finished niche is artistically stunning with its subtle geometric lines and intricate cut brick shapes. The involvement of an internationally recognized expert such as Lynch provides essential guidance to insure that HSMC's Chapel reconstruction is conducted in an accurate and historically justifiable manner.

Evolution of a Plan

Plans for the chapel have evolved since the project was initiated. Through continued research, discussion, consolidation of ideas, and application of building techniques, various elements of several designs have been rejected and accepted. Thus, the building being erected is a scholarly best-guess as



to the likely appearance of the structure that stood here three centuries ago, taking into account the political, cultural, and economic realities in the colony and the backgrounds of the people who designed and built it.

In March 2004, historians, architects, builders, and archaeologists decided on a final plan for the exterior of the chapel. Thus, the building being erected is a scholarly best-guess as to the likely appearance of the structure that stood here three centuries ago, taking into account the political, cultural, and economic realities in the colony and the backgrounds of the people who designed and constructed the building.



The plan calls for the front or main façade of the chapel to have a Jesuit- inspired appearance, since they were the most likely designers. Four pilasters of the Tuscan order emphasize the façade and are capped by a shaped entablature. A pediment hugs the roofline. A window and very small Jesuit seal occur over the door. Brick pyramids emphasize the corners of the building. All these design features were commonly used on Jesuit churches of the period, churches that were often also decorated with carvings, religious statues and other elements. Given the sensitive political setting of early Maryland, however, use of such elaborate decorations on the outside of the building

would have been unwise. Therefore, efforts are being made to keep the classical influence while minimizing the decorative details.

The sides and back of the building will probably be finished with a red ochre color wash, a technique recent research reveals was widely used in the 17th century. Mortar seams will be penciled, or painted in, using a white lime mix. This technique added a look of precision and regularity to rough, handmade materials used in the 17th century.

The front, or west façade will be coated with a grey/white lime; a technique called rendering that was commonly used to give the illusion of stone construction. This rendering also will be applied around the windows to simulate stone, a treatment indicated for the chapel by the finding of specially molded window bricks.

The appearance of the inside of the chapel has remained constant. Decisions for the wooden, barrel vaulted ceiling have been made and a builder hired. Historic craftsman and housewright John O'Rourke, who is currently rebuilding structures at Mount Vernon, will guide the woodworking.

Reaching the Top

In September, the rising walls of the chapel began sprouting log appendages, the start of a pole scaffold that will surround and line the structure allowing workmen to reach roof and ceiling heights. The basic design of timber poles lashed together with ropes is derived from historical artwork. This type of scaffold was ubiquitous between 1200 and 1700 and is still used in some parts of the world today. It is almost certainly how the masons constructed the original chapel. Despite this important history, the



scaffolding is also being reinforced to meet OSHA standards for safety. Structural engineers have examined the scaffold plan and verified its strength.

Three levels of scaffolding allowed masons and carpenters to reach the highest points of the structure.

After five years, the age of the components and indications of deterioration inspired a decision to replace the traditional scaffolding with a modern version, which can be assembled and removed rapidly and that will insure the safety of the workers. The exterior timber scaffold was dismantled before work began in Spring 2008. The traditional scaffolding on the interior, which has been protected from the elements, remained in place until brick laying was complete later in the 2008 season.



Piscina Revealed

The first feature to emerge from the rising walls was the piscina. During excavations of the chapel foundation, archaeologists were puzzled by the discovery of a hollow space in the transept wall. Research suggests this was the location of a piscina, a common feature in medieval and later churches. The opening served as a drain that was covered with a stone or metal basin or sink. It allowed water used to wash the priest's hands during mass and in cleaning of the ritual vessels and materials to be disposed of in sanctified ground.

Brick Shaping

Shaped bricks used to construct windowsills, pilasters, the piscina, and other features are formed using techniques of 17th-century red (brick) masons. Restoration mason Jimmy Price learned traditional methods from master masons in the U.S. and Scotland and is in turn passing these skills on to a new generation of masons. Brick forming is a process of hand cutting and rubbing bricks to conform to a template.



Rough shaping...



...truing...



...checking for a true plane...



...and finished!

Holes in walls and what's with those windows?

Have you noticed places in the wall where a brick seems to be missing? These putlog holes will hold the ends of timbers needed to support the scaffolding. Spaces in the window frames have been left for the insertion of metal rods, which will help support the heavy glass and lead windows.



The flared frames of the chapels windows aren't a mistake! That splay is intentional. This design, seen in many historical structures, channels more light inside.

The Tabernacle



The tabernacle is the only intact interior piece of the chapel believed to exist today. Descendants of the Carroll family donated the wooden altarpiece to the Sisters of Mercy in Baltimore in 1859. Legend held that the Calvert family brought the tabernacle to St. Mary's City and it is likely the piece mentioned in Charles Carroll's 1720-estate inventory.

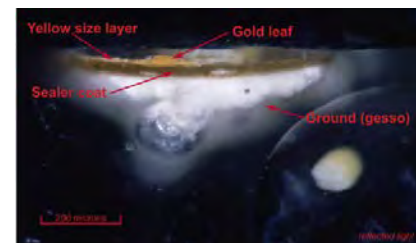
Director of Research Dr. Henry Miller has been leading reconstruction efforts. The Sisters of Mercy have graciously permitted researchers to measure and photograph the tabernacle. Dr. Miller has completed scale drawings of the tabernacle and will soon begin modifying those to incorporate current research describing what the piece may have looked like in the 17th century.

A request for proposals to reconstruct the tabernacle for the Chapel drew a good bit of interest from cabinetmakers. The contract has been awarded to Featherbed Lane Craftsmen of Elkton, Maryland.

Tabernacle Materials

Dr. Harry Alden, of the Smithsonian Institution, was allowed to take samples of wood from the tabernacle. Alden has since determined the body of the piece is juniper, the elaborately carved trim is true mahogany, and the backboards, which are probably replacements, are magnolia.

Dr. Melvin Wachowiak analyzed the surface treatment and found an early coating of red paint, a later finish of white paint, and evidence of recent restoration. The carvings (top right) were also analyzed. A micrograph of a cross section of the carving (below) showed this element was treated with gesso, sealer, sizing, and gold leaf.



Finishing Things Up

A demonstration wall has been built to show the various surface treatments that would have been used on the original chapel and to allow researchers to collect data about the various treatments weather over the winter.

One area will be coated with lime mortar, or rendered. Penciled, or painted, joints simulate the look of stone. The front façade of the chapel will be rendered. In the early years of the colony, good building stone was only available as an import. This technique imparted the formality of stone without the expense.

A second area will be color washed, with penciled joints, a technique used to give the impression of regular bricks and even joints, an effect that craftsmen were unable to attain with handmade brick available at the time.

The east side of the experimental wall will be coated with lime plaster, to demonstrate the finish that will be used on the interior walls of the chapel.

Mystery of the Altar Stone



A rare object that might have been used in the 17th-century brick chapel at St. Mary's City is being examined by HSMC researchers. In September 2004, Father Damian Shadwell, the pastor of St. Cecilia's Church in St. Mary's City, received a package from WMCRP Architects of Landover, MD, the firm that designed the church over 30 years ago. While cleaning out a closet, a WMCRP employee found an envelope containing a flat marble stone. The envelope displayed various names and the words "Altar Stone, St. Cecilia's Church, St. Mary's City". The St. Cecilia's stone measures precisely 7 ½ inches by 10 inches and is slightly over 5/8ths of an inch thick. Its upper surface has a small Greek cross carved near each corner and another cross in the center. Near one edge is a small niche covered with black slate. This niche contains the relic of an unknown saint. Faint writing on the back of the stone and the envelope provided vital clues, which eventually led to an account of the dedication of St. Cecilia's in 1974, "... the altar stone believed to have been used in the St. Inigoes Manor House chapel and...possibly used in the [1667 brick] chapel at St. Mary's City...was presented..." Altar stones are tablets that are consecrated by a bishop and typically contain the relic of a saint. They are set into wooden altars in churches but also serve as portable altars for missionaries or traveling priests. The form and decoration of the stone dates back centuries and the St. Cecilia's specimen is very similar to other venerable altar stones curated in the archives of Georgetown University. While we cannot prove that this was the actual stone used in the Brick Chapel, one very similar to it was unquestionably in the original altar. After 350 years, a Jesuit legend that this object was the centerpiece of the St. Mary's altar is the strongest evidence we can hope to find.



Going Under Cover

In March 2007, the roof for the chapel began with the installation of a rugged truss system that also supports the barrel vault. Blue Ridge Timber Frame of Swannanoa, N.C. designed and built the roof system. Each 15-piece truss interlocks to form the pitch of the roof and the curve of the vaulted ceiling without outward splay. When the components were delivered to HSMC, 699 pieces of southern yellow pine were assembled on the ground in a day. The seven main trusses were then flown into place using a

crane. Trusses for the transept followed. Roof construction will continue into the summer with the addition of 1 x 6 pine roofing boards, a leak membrane, and battens, which will ultimately be used to secure clay tiles. At the beginning of September, carpenters began to affix the clay roofing tiles. The last tile was placed mid-November, 2007.



A Fine Finish

A few pages ago, in "Finishing Up," we looked at a test wall used to sample various brick finishes. In Fall 2007, the chapel walls were ready to receive finishes!

The facade and decorative elements of the chapel are being finished with a white rendering. The brick sides and back will be coated with a red color wash.

Coatings serve both decorative and protective purposes. Covering brick surfaces with a thick mortar, or rendering, then scribing and painting faux joints gives the building the appearance of stone -- the most prestigious building material. This technique was widely used for important buildings in the 16th and 17th centuries.

Painting a color wash on a brick building was another treatment little known until recently. Protected places on colonial buildings show that masons covered these walls of unevenly fired brick with a solution that made all the brick a uniform red. Penciling (painting) in white joints added to the appearance of precision. The wash also protected the bricks and the mortar joints from weathering.