UNIVERSITY CHAPEL HISTORIC STRUCTURES REPORT

FINAL REPORT
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EXECUTIVE SUMMARY

Scope and Purpose

The overall intent is to prepare an illustrated technical report on the history, current conditions, and potential future utilization of this historic structure. This Historic Structures Report (HSR) involves a multi-disciplinary team: architecture and historic architecture, architectural history, structural, mechanical, electrical and fire protection engineering.

This pre-design study documents the history and current conditions of the building. Considerable emphasis is placed on the identification of the conditions and guidelines for appropriate treatments and repairs of the significant architectural features. Building systems including structural, mechanical, electrical and plumbing are considered. A concept for future building systems and modifications is provided in Chapter 6. Detailed engineering design of new systems would occur in a future study. In addition, the HSR documents current and possible use changes to develop a proposed future rehabilitation plan. This concept report would be equivalent to a 10% concept design submission.

The Chapel is a contributing building to the University of Virginia Preservation Zone or Historic District, listed on the National Register of Historic Places in 1970 (11-20-70, File # 104-0042). The Historic District is considered significant in the areas of "architecture" and "education" at the National level. A copy of this nomination is included in Appendix D.

In 2006, the University of Virginia completed a Historic Preservation Framework Plan. The Plan establishes a preservation priority for all buildings and landscapes on campus, identifying each resource's level of importance in terms of the University's historic character . The preservation priority for the University Chapel is "Essential to University history and present character".[1] This is the second highest priority out of six categories, with the highest priority identified as "Fundamental

[1] Historic Preservation Framework Plan, p. 35.
[2] Historic Preservation Framework Plan, p. 35.

to University history and present character, which applies exclusively to the Jefferson buildings and Grounds"[2].

Brief History

The design by Baltimore architect Charles Emmett Cassell dates to 1883. Construction began in October of 1884 funded primarily be private donations and erection of the majority of the stone walls and roof was complete by November of 1885. Work continued at a slow pace until finally carpet and pews were installed by May of 1890. The Chapel was dedicated on June 8, 1890, but was still without and organ. The building was altered slightly to incorporate an organ chamber which was completed by February of 1891.

There was a small fire in the basement of the building on February 10, 1910 which caused minor damage to a portion of the floor and some pews. Other than this event and taken into account normal repairs and very minor alterations over time, the chapel today is much as it was when first dedicated.

Many of the stained glass windows are original to the structure, but there has also been a steady replacement of some windows, with the most recent in 1978. The memorial plaques and monuments have been installed at various times.

Although the building has been continuously used as a place of worship and meetings over the years, it differs greatly from most other historic churches in that there are virtually no historic records or photographs that have come to light for this research project. There is no record of weddings, births or deaths. This may be due to the fact that there was no regular clergy (there was a system of rotating chaplains who were the full time pastors at Charlottesville churches) and during along period from about 1904 through the 1960's the chapel was under the substantial control of the YMCA which was located across the street in the Madison Building. For whatever reasons, virtually no written or photographic records appear to exist for this structure.

Significance of the Property

The following is an excerpt from the "Master Plan for Historic Buildings on Campus" which was one of the preparatory documents for the "2006 University of Virginia Historic Preservation Framework Plan" published by the Office of the Architect in March 2006.

> *University Chapel stands as the first structure built on the grounds exclusively for worship. Designed in the Gothic Revival style, the Chapel is a clear departure from the Jeffersonian inspired architecture found*

elsewhere on campus. The use of natural stone in its construction is in direct contrast to the red brick and white trim found on the academic buildings. Its placement northwest of the Rotunda, outside of the Lawn further distinguishes it from other University buildings.

The University Chapel at the University of Virginia is significant because it throws into relief Jefferson's views on religion in public education. In the creation of the Lawn, Jefferson had deliberately eschewed the typical inclusion of a chapel within the college campus, instead electing to place the Rotunda—the library—at the head of the Lawn grouping. The creation of the University Chapel was something of a correction, if not retaliation, of Jefferson.

The chapel, sited to the northwest of the Rotunda outside the Lawn boundaries and balancing Brooks Hall, is in the Gothic Revival style, a deliberate departure from the Jeffersonian neoclassicism and an appeal to the style's strong ecclesiastical associations.

The popularity of the chapel as a wedding venue for students and alumni makes it a nostalgic site for many people.[3]

The National Register listing of the "University of Virginia Preservation Zone" or Historic District states the areas of significance as architecture and education. Regarding the Chapel, the National Register statement of significance states, "The University Chapel was completed in 1889 with funds from many private sources. The design of this picturesque building was inspired by the Gothic parish churches of England."[4]

Period of Significance

The Chapel has remained virtually intact and unaltered for the last 110 years. Most of what one sees is an original feature from the period of original construction, 1884-1890. Minor changes and additions, such as paint colors and light fixtures, have occurred but these are reversible. Therefore, the primary period of significance is 1884-1890. However, this period does not include other significant features such as the memorial windows and plaques that were installed after the original construction. A secondary period of significance then begins in 1890 and stretches to include the first two decades of the twentieth century as well as additional individually significant features such as

[3] "History," Historic Master Plan, University Chapel Data Sheet, p.2.
[4] "University of Virginia Preservation Zone National Register Nomination", p. 5.

memorial windows and plaques installed after this period.

Summary of Current Conditions

Exterior:

The overall condition of the exterior is good. The roof is relatively new (installed in 1991) and the stonework and mortar are in fair to good condition. With the completion of recent repairs to the Bell Tower, the one area in poor condition has been corrected.

Interior:

The building has been well maintained over the years and is in good condition. There have been a variety of ongoing repairs and improvement undertaken over the last 40 years, but no comprehensive upgrade. There have been isolated water intrusion problems in the roof but these appear to have been addressed with the recent repairs to the Bell tower.

Preservation Treatments

A purpose of this report is to establish the most appropriate approach to repair and upgrade this building in the future while preserving its architectural and historical character. Using standards developed by the National Park Service, it is concluded that the most appropriate overall treatment would be one of "preservation." With this treatment both the original character and the other character-defining elements of the building are preserved and protected. At the same time, improvements and modifications can be selectively carried out. A treatment not selected was one of "restoration." This generally requires selecting a single period of significance and then assuring that any changes to the building are done invisibly so that the original appearance is not changed. Because the chapel has an ongoing place and function at the University, it needs to change and evolve to meet the changing needs of the students and faculty.

An important aspect of this determination was to establish appropriate treatments for all parts of the building, both exterior and interior. To accomplish this, zone diagrams were developed (see attached illustrations ES 1 and ES 2).

Preservation Program

There are no changes planned or proposed regarding the use of the building. The following is a summary of current utilization:

Obviously, the primary function is a place for non-denominational worship. This includes both scheduled services as well as remaining open for daytime meditation. The

sanctuary has pew seating for approximately 270 persons, based on 22" per person (comfortable), and 315 persons, based on 18" per person (code maximum occupancy).

The Chapel is very heavily used for weddings, often there is a backlog of many month's reservations. At the current time, a lottery is held among interested parties for any weddings planned between December and August, 13 months prior to the desired month. Wedding guidelines suggest a maximum seating for 250 persons and restroom facilities are provided at the nearby Rotunda Building.

Memorial and funeral services are held when needed. The carillon bells are often rung as part of these observances.

Student, fraternity and sorority and campus groups can reserve the Chapel for meetings or presentations. These activities are often held at night and the groups can vary in size from 15 to 200 persons.

For any of these activities, no food or drink is allowed in the Chapel.

There are no restrooms in the Chapel currently. It is highly desirable to have fully accessible restrooms serving the Chapel. We have studied the possibility of including restrooms inside the Chapel but there is no feasible location. Therefore those in adjacent buildings need to be clearly identified with signage.

Conceptual Project Description

Although the building is in good condition, there are some deficiencies that need to be addressed and there are potential improvement that should be considered to assure that the building can be preserved into the future. These are divided between short term and long term (commencing within the next 5 year period). Briefly, these efforts include:

Short Term:

Minor repairs and cleaning of the exterior stone work, improved accessibility for the disable dot he and within the building, repairs to the pews and routine cleaning of the interior masonry, plaster and wooden roof trusses. In addition, a fully automatic fire sprinkler system and improvement to the fire alarm and detection systems is proposed.

Long term:

Assuming the short term work is completed, only routine annual

inspection and maintenance would be needed for the exterior of the building. However, on the interior, proposed work includes a comprehensive interior painting and finishing project, replacement of the cork flooring with pine flooring to match the original, a new lighting and electrical system, introduction of an AV equipment system, and upgrade to the heating and cooling equipment.

A preliminary cost estimate was provided to establish a budget for this work. The short term work could range in costs between $475,000 and $550,000 (approximate) while the long term (if completed within five years, would be more than $750,000.

Long Term Preservation

Element / Task	Low Budget	High Budget
Interior Preservation		
1. Cleaning woodwork, masonry, and walls	$245,000	$283,000
2. Flooring replacement	$107,000	$123,000
3. Windows inspection	$25,000	$29,000
Interior Improvements		
1. New lighting and electrical systems.	$100,000	$115,000
2. New audio equipment	$48,000	$56,000
3. Acoustical upgrades	Unknown	Unknown
4. HVAC upgrade	$205,000	$235,000
5. Telephone and data connections	$13,000	$15,000
6. New fire suppression	$113,000	$130,000
7. Organ replacement	Unknown	Unknown
Subtotal	$856,000	$986,000

CHAPTER 1: INTRODUCTION

Report Purpose

The overall intent is to prepare an illustrated technical report on the history, current conditions, and potential future utilization of this historic structure. This Historic Structures Report (HSR) involves a multi-disciplinary team: architecture and historic architecture, architectural history, structural, mechanical, electrical and fire protection engineering.

This pre-design study documents the history and current conditions of the building. Considerable emphasis is placed on the identification of the conditions and guidelines for appropriate treatments and repairs of the significant architectural features. Building systems including structural, mechanical, electrical and plumbing are considered. A concept for future building systems and modifications is provided in Chapter 6. Detailed engineering design of new systems would occur in a future study. In addition, the HSR documents current and possible use changes to develop a proposed future rehabilitation plan. This concept report would be equivalent to a 10% concept design submission.

Project Team

The investigation is undertaken by QUINN EVANS | ARCHITECTS, a firm in Washington, DC that specializes in historic preservation work. Baird M. Smith, AIA, FAPT, lead the investigation team, assisted by Tina Roach, AIA, as lead project architect and Katie Irwin, staff preservation architect.

Robert Silman Associates of Washington, DC is the structural engineer, with John Matteo as the lead investigator. The mechanical, electrical, plumbing, and fire protection investigation is provided by the engineering firm of HC Yu and Associates, Richmond, VA. The estimate of construction costs is prepared by R.W. Brown Associates of Vienna, Va.

The study is being undertaken for the University Facilities Management Department and it is managed by Joseph Dye

Lahendro, AIA. Mark Kutney and Brian Hogg, of the Office of the University Architect, are also participating.

Many thanks go to Garth Anderson and Ruta Vasiukevicius at the University of Virginia Resource Center and Edward Gaynor at the Albert and Shirley Small Special Collections Library, University of Virginia.

Research Techniques / Investigation Methodology

This investigation has three components;

- Documentary Research. This includes review of historic documents available at the University, records of previous projects at the Facilities Management office, and historic documents about the architect available at various resources in Virginia and Maryland.
- Visual Examination of the building and site. This includes preparation of measured drawings, detailed visual analysis, and very selective physical examination of paint finishes and decorative woodwork.
- Evaluation of Data. Conclusions and recommendations are based on a systematic evaluation of the documentary and physical analysis.

Although this investigation is intended to be comprehensive, it is possible that new historical information could come to light which would need to be added to this report. There is also an absence of a photographic record of the interior which is unusual for a church. The HSR should be viewed as a living document and it may be updated or revised in the future should new information come to light.

Historic Status of Building

The Chapel is a contributing building to the University of Virginia Preservation Zone or Historic District, listed on the National Register of Historic Places in 1970 (11-20-70, File # 104-0042). The Historic District is considered significant in the areas of “architecture” and “education” at the National level. A copy of this nomination is included in Appendix D.

The “University of Virginia Historic District” was listed on the Virginia Landmarks Register in 1970 (10-06-70). [QE|A has not yet obtained a copy of this nomination and does not know whether the Chapel is identified as a contributing building to this Historic District.] [copy requested December 27, 2006.]

The “University of Virginia Historic District” is a National Historic Landmark (designated November 11, 1971). [QE|A has not yet obtained a copy of this nomination and does not know whether the Chapel is identified as a contributing building to this NHL.] [copy requested December 27, 2006.]

"Monticello and the University of Virginia in Charlottesville" are on the UNESCO World Heritage List, under criteria (i), (iv), and (vi) (Reference #442; date of inscription 1987). This designation includes only the Jefferson precinct, which excludes the Chapel.

Based on the online National Register databases, it does not appear that the Chapel is individually listed, either on a local, state, or national level.

In 2006, the University of Virginia completed a Historic Preservation Framework Plan. The Plan establishes a preservation priority for all buildings and landscapes on campus, identifying each resource's level of importance in terms of the University's historic character . The preservation priority for the University Chapel is "Essential to University history and present character".[1] This is the second highest priority out of six categories, with the highest priority identified as "Fundamental to University history and present character, which applies exclusively to the Jefferson buildings and Grounds"[2].

Related Investigation

In the Winter and Spring of 2006, this firm participated in a detailed study of the conditions of the exterior masonry in general and the stonework of the bell tower in particular. This resulted in a report entitled "University Chapel Stonework Investigation" dated 21 April 2006. That report was utilized in the preparation of construction drawings and specifications which guided a selected exterior stonework repair project on the bell tower that was completed in the Summer and Fall of 2006.

There has also been some study of the current organ and the audio systems with the early conclusions that a replacement instrument and equipment should be considered. Further study and identification of a new organ or new audio equipment is beyond the scope of this study.

[1] Historic Preservation Framework Plan, p. 35.
[2] Historic Preservation Framework Plan, p. 35.

CHAPTER 2: A BRIEF HISTORY

Designs for the Chapel

Jefferson intentionally designed the ideal public university without a chapel to insure that students would be free from sectarian influence. Initially, religious observances and Sunday School took place in the "Eastern Lecture-room" of the Rotunda. Within a relative short period of time, there grew a need to have a dedicated religious building to fulfill the students and faculty needs as well as to sway the public opinion of the university's morals.

There were at least two other chapel designs that predated the one ultimately implemented in 1884-1890. By 1835, the University faculty had selected the site south of the Rotunda at the end of the Lawn and an architect of "high reputation" to create a Gothic church or chapel to hold 800 people. Other religious buildings were created in the next couple decades including a Temperance Hall and a parsonage.

The second scheme was designed in 1859 by William A. Pratt who designed the Trinity Episcopal Church in Staunton, Virginia (built in 1855). Pratt also designed buildings for the Virginia Theological Seminary in Alexandria, Virginia. Pratt designed and built a Gothic house in 1853-54, commonly referred to as "Chateau Front and Back", located northwest of the current Chapel site. Funds were raised for Pratt's chapel but the Civil War caused investments to fall short.

A more detailed discussion of the earlier chapel designs and the historical role of religion at the University of Virginia can be found in the 1992 Masters thesis by David Dashiell, entitled Between Earthly Wisdom and Heavenly Truth: The Effort to Build a Chapel at the University of Virginia.

The final design by Baltimore architect Charles Emmett Cassell dates to 1883. "The design that was probably directly responsible for the University commission was Charles E. Cassell's chapel for the Virginia Theological Seminary in Alexandria, completed in 1881. … [UVA] Chaplain Glazebrook was an 1869 alumnus of the Seminary, and it seems likely that he found it convenient to patronize an architect whose

work in a similar vein he was familiar with."[1] (Figure 2.1)

Architect: Charles E. Cassell

Charles Emmett Cassell was a prolific architect, practicing in Baltimore from 1868 until 1916. He practiced with his son John (Charles E. Cassell & Son) from 1905 until the latter's death of flu in 1909. He also had a partnership with his nephew, Charles M. Cassell of Norfolk, Virginia (Cassell & Cassell, 1887-1910) and with Henry H. Law (Law & Cassell) in Washington, DC. His name is associated with more than 150 architectural designs. Of these, 36 are religious buildings. Two of his church designs were published in American Architect and Building News in 1878.

Most of Cassell's projects are located in the Baltimore area and in the northern neck of Virginia. A few projects are located in West Virginia and Pennsylvania.

The Baltimore Architecture Foundation has done extensive research on Cassell. The following biography is taken from their website.

> *Charles E. Cassell was born in Portsmouth, Virginia [on April 26, 1838], son of Charles E. and Sarah W. Cassell. He was educated in local schools, and graduated from the University of Virginia at an early age. During the Civil War he served as a captain in the engineers corps, under General Pickett of the Confederate Army. After the war, he traveled to South America and served in the Chilean Navy. He returned to the United States and practiced architecture in St. Louis before coming to Baltimore about 1868. Cassell was a founding member of the Baltimore Chapter of the AIA in 1870 and was raised to Fellowship by 1905. He practiced with his son, John (Charles E. Cassell & Son), from 1905 to the latter's death of flu around 1909. He also sometimes was associated with his nephew, Charles M. Cassell of Norfolk, Virginia (Cassell & Cassell).*
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> *Cassell occupied offices in the Lexington Building at the southwest corner of Charles and Lexington streets from 1868 through 1881, when he moved to 55 North Charles Street (renumbered 301 in 1887), where he remained until 1893. [E. G. Lind had the same address in 1882.] In that year, he moved to the new Law Building at the corner of St. Paul and Lexington streets, which he had designed, and remained there until the 1904 fire destroyed the building. The short-lived partnership of Charles E. Cassell & Son was located at 411 North Charles Street at its formation in 1905, but moved the next year to a suite in the reconstructed Law Building, and occupied those offices until John Cassell's death in 1909.*

[1] Dashiell, 33.

Subsequently, Charles E. Cassell continued to practice in reduced quarters on the eighth floor of the Law Building until his death in 1916.

According to Richard B. Carter, great-grandson of Charles E. Cassell, the family name was originally Casselli, and they emigrated from Genoa, Italy to Norfolk, Virginia in the 1820s. Charles Emmett Cassell was trained as a naval architect, and received a degree in engineering from the University of Virginia at age 15. He designed the naval waterworks at Old Point Comfort, Virginia. Upon secession, he spirited the plans out of his office to keep them from falling into the hands of the Union, and was branded a traitor for this action.

He attained the rank of Captain in the confederate military, and at the end of the Civil War Cassell, then aged about 21 or 22, fled to the South American city of Bogota--then part of Chile--to avoid execution for treason. He became an Admiral in the Chilean navy. He was pardoned for his offense and returned to Virginia, where he married Sally Bowles, daughter of a prominent Episcopal clergyman. The couple moved to Baltimore and took over the residence of Cassell's brother at 1407 Park Avenue. They had three daughters, Mary Virginia, Sally Primrose (Mr. Carter's grandmother, born 1874), and Matty, and a son, John, who became an architect and practiced with his father. Mrs. Cassell died suddenly in a flu epidemic, and several maiden aunts from Norfolk took turns caring for the children, commuting on the Bay Line steamer. Cassell is believed to have invented a system of sidewalk paving incorporating thick glass cylinders to admit light to basements. Among his designs were a country house for Albert Hutzler, work for the Levi family of Independent Beef Company, Friends School near the intersection of North and Park avenues, Jenkins Memorial/Corpus Christi Church (doors and crypts only), church opposite Johns Hopkins University playing fields, and the Greek Orthodox Cathedral of the Incarnation.

He [died and was] buried in his family's lot in Cedar Grove Cemetery, Portsmouth, Virginia [in 1916].”[2]

Additionally, in 1890, Cassell and architect E. Francis Baldwin (known as the “Architect of the B&O Railroad”) proposed the “creation of a

[2] James T. Wollen,, AIA, “Charles E. Cassell Biography,” http://www.baltimorearchitecture.org/bios/cassell_ce.html.
[3], Carlos P. Avery, “E. (Ephraim) Francis Baldwin Biography,” http://www.baltimorearchitecture.org/bios/baldwin_ef.html.

School of Architecture in Baltimore."[3]

The Baltimore Architectural Foundation has compiled a list of projects by Cassell. This is included in Appendix E.

Original Construction: 1884-1890

The original construction drawings for the chapel have not been located, however a written description of them from this period has survived.[4] This article suggests that the building was built largely as designed. Two exceptions are that the bell tower was to be "capped by a low sloping roof" and the interior finishes are simpler than the description.[5] The organ chamber was also not implemented per the original design.[6]

The design is Gothic-inspired, with a cruciform plan and intended to seat 300[7] or 350[8]. A contemporaneous article describing the newly constructed Chapel, referred to the style as "early pointed".[9] The mason of the Chapel was quoted as calling the style "early English" or "lancet."[10] The design includes pointed openings, buttresses, and gargoyles, as well as the mandorla, or almond-shaped, window openings. The stonework is rough-faced, except at the face of the buttresses and heads and jambs of openings, which have honed-finishes.

The building was largely funded by private donations, and later fundraising efforts were spearheaded by the Ladies Chapel Aid Society. A November 1884 news brief in the American Architect and Building News estimated the cost to be $15,000.[11] However, The Virginia University Magazine reported in October 1884 that $15,000 had been pledged and this amount was expected to pay for only the stonework and the roof. [12] It was anticipated that an additional $3,000-5,000 would be required to complete the Chapel.[13] In November 1884, The Virginia University Magazine reported that about $3,000 was lacking to complete the Chapel and if it was not raised, then the height of the tower would be decreased and some of the ornamental work would not be constructed.[14]

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[4] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 104-107.
[5] Dashiell, 34.
[6] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 106.
[7] "Summary of the Week", AABN, 11/15/1884, p. 240.
[8] "The New Chapel," The Virginia University Magazine October 1884 vol. xxiv, no. 1: 53. The current pew configuration seats about 315 people, based on 18" per person. Some pews were removed when the organ console was relocated from the west to east transept.
[9] "Summary of the Week", AABN, 11/15/1884, p. 240.
[10] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 106.
[11] "Summary of the Week", AABN, 11/15/1884, p. 240.
[12] "The New Chapel," The Virginia University Magazine October 1884 vol. xxiv, no. 1: 53.
[13] "The New Chapel," The Virginia University Magazine October 1884 vol. xxiv, no. 1: 53.
[14] The Virginia University Magazine November 1884 vol. xxiv, no. 2: 111.

Completion of the building was impacted by requests for additional payment by the mason and funding shortages.[15] Ultimately, arbitration allowed the mason an additional $1,000.[16] A bank failure caused the loss of a further $5,000.[17] The Ladies Chapel Aid Society held a series of events to raise funds. One event, a "Congress of Nations" held in December 1888, cleared $500 to $600.[18] In March 1889, Professor Francis H. Smith wrote to Board member B. Johnson Barbour that the ladies had raised $4,100 of $4,500 needed to complete the Chapel.[19] In June 1889, enough funds had been raised to let the contract to finish the building, with the exception of organ.[20] Additional funds were raised for the organ, to be discussed later.

February - June 1884 — In February, the site was being selected. Originally, the site opposite the Rotunda (closing the Lawn) was under consideration. This site was reserved for a future academic building. Other sites were considered but the lot northwest of the Rotunda near the pond was approved for the Chapel on June 30, 1884. (Figure 2.2 – 2.6) (Brooks Hall was built northeast of the Rotunda in 1876, opposite of the future Chapel.)

October 1884 — Construction work began. Mr. Blaisdel of Boston laid the foundation.[21]

February 1885 — The Chapel was "in rapid process of construction."[22] (Figure 2.7)

The light grey limestone was donated by alumnus Major Eugene Davis from a quarry on his property.[23] It was noted in The Virginia University Magazine that the stone is somewhat similar in appearance to stone used in the lower part of the [Natural History] Museum.[24]

March 30, 1885 — The cornerstone was laid.[25] Mr. M. Schele De Vere delivered the Address on the laying of the cornerstone. The following is an excerpt from his Address.

Within – the pointed window, the flying buttress, the pointed

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[15] Dashiell David A., Between Earthly Wisdom and Heavenly Truth: The Effort to Build a Chapel at the University of Virginia, Virginia: University of Virginia Masters Thesis, 1992, 36.
[16] Dashiell, 36.
[17] Dashiell, 36. (cites College Topics, 2/26/1890).
[18] Dashiell, 37 (cites The Virginia University Magazine, 12/1888, p. 228).
[19] Dashiell, 38 (cites ALS, Francis H. Smith to B. Johnson Barbour, 3/7/1889).
[20] Dashiell, 39 (cites The Virginia University Magazine, 5-6/1889, p. 659)
[21] "The New Chapel," The Virginia University Magazine October 1884 vol. xxiv, no. 1: 52.
[22] "A Plea for a Ghost," The Virginia University Magazine February 1885 vol. xxiv, no. 5: 279.
[23] "The New Chapel," The Virginia University Magazine October 1884 vol. xxiv, no. 1: 52.
[24] "The New Chapel," The Virginia University Magazine October 1884 vol. xxiv, no. 1: 53. The Natural History Museum, also known as the Brooks Museum and today as Brooks Hall, was built in 1877. It is located northeast of the Rotunda, opposite the Chapel.
[25] The Virginia University Magazine April 1885 vol. xxiv, no. 7: 416.

steeple, all lead the eye upward, and with the eye the heart also is lifted up, aspiring to heaven.

And thus – the work fairly begun, the cost counted and provided for, goodly stones and hewn timber on hand, laborers busy and bustling, skillful, watchful supervision secured – we have assembled here to-day, our hearts overflowing with gratitude, to lay this corner-stone, devoutly trusting that, as we now humbly and reverently dedicate this house to God, He, in His great Mercy, will make the heart of every one of us here present, a temple of the Living God.[26]

At the ceremony of the laying of the cornerstone, Chaplain Glazebrook gave an invocation and the University choir, directed by Mr. C. M. Bradbury and led by Mr. C.C. Cox with his cornet, sung a hymn. The Chairman of the Faculty gave some remarks and introduced the orator of the evening, Professor Schele de Vere. The cornerstone was placed under the supervision of Professor Thornton, Chairman of the Building Committee while the choir sang another hymn. The end of the service concluded with a prayer by the Chaplain.[27]

The cornerstone included "a copy of The Virginia University Magazine, a sample of the "Annals of Mathematics", a catalogue, the circulars issued by the Chapel Committee, a short, written history of the Chapel and some coin."[28] The location of the cornerstone is unknown today.

November 1885 — The Virginia University Magazine reported that the stonework was estimated to be "completed in about twenty days, and the roof finished in half that time."[29] At this time, the tower was about half of its sixty-five foot height and was expected to be covered by a low, sloping roof and decorated with battlements and pairs of gargoyles projecting from each corner at right angles. Additionally, it was expected that the exterior stonework was to be washed with muriatic acid to develop the color of the stone, the pointing mortar to be added, the ceiling treatment completed, and the walls painted or frescoed.[30]

1889-1890 — Pews and carpet were installed.[31] The carpet likely consisted of aisle runners.

By 1890 — The clergy chairs, brass lectern, and oak pews were installed. These

[26] "Address," The Virginia University Magazine April 1885 vol. xxiv, no. 7: 400-401.
[27] The Virginia University Magazine April 1885 vol. xxiv, no. 7: 416.
[28] The Virginia University Magazine April 1885 vol. xxiv, no. 7: 423. Though there are no flying buttresses nor pointed steeple, the sentiment remains the same.
[29] "Our New Chapel," The Virginia University Magazine, November 1885, p. 104.
[30] "Our New Chapel," The Virginia University Magazine, November 1885, p. 105.
[31] Dashiell, 41. (cites College Topics, 5/12/1890).

remain today and appear to be original to the building.[32]

Late May 1890 — The memorial windows were installed.[33]

Sunday, June 8, 1890 — The Chapel was dedicated, although it was still without an organ.[34] (Figures 2.8 and 2.9)

The Organ and Organ Chamber

The organ chamber was omitted from the original construction. "If the plan had been carried out, the organ-room would have balanced the vestry-room," and housed a "grand organ".[35]

Today, the basement room below the organ chamber has two walls that are pointed and dressed as if they were once exterior walls. These are the east and south walls, which corresponds with the historical record that the organ room was not built at the same time as the rest of the Chapel.

May 1890 — The wall to the right (west) of the chancel was "about to be" removed for installation of the delayed organ.[36] The wall may have been the wall between the organ chamber and the chancel, or the wall between the organ chamber and the nave. Both have a pointed arched opening below which non-load-bearing construction could have been easily removed.

Site investigations indicate that the west exterior wall of the organ chamber was relocated. At the basement level, one segment of interior stonework is smooth, indicating where a wall had once been attached. (Figure 2.10) In addition, there is physical evidence that the organ floor was lowered. The existing organ chamber has a ceiling. It is recommended that future researchers look above the ceiling for additional evidence of earlier configurations.

June 1890 — A representative of the Roosevelt Organ Company measured the designated area of the chapel, and "gave a price of $1900, with $120 additional for a motor, on an organ that was guaranteed for five years, '…but really good for 50…'"[37]

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[32] "University Chapel" supporting document for the 2006 University of Virginia Historic Preservation Framework Plan.
[33] Dashiell, 39.
[34] Charlottesville Chronicle, June 13, 1890.
[35] "The New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 106.
[36] Dashiell, 41. (cites College Topics, 5/12/1890).
[37] Dashiell, 42.

Diagram of Organ Chamber as originally configured is shown below.

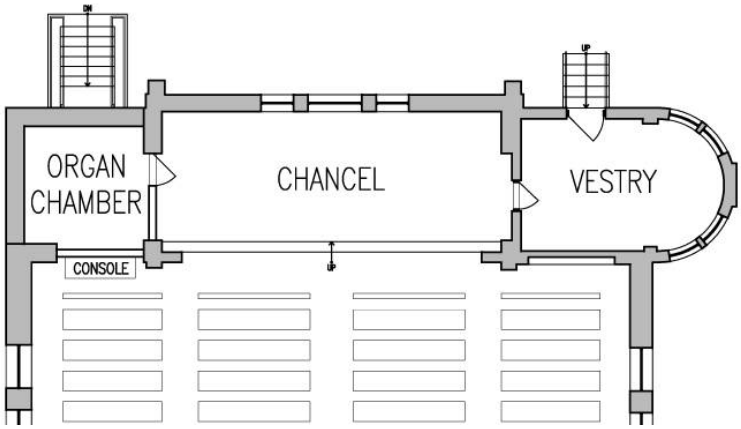
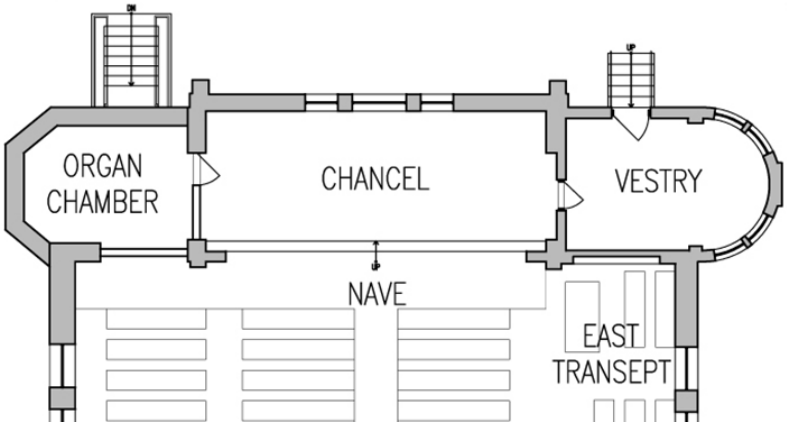


Diagram of Organ Pipe Chamber as enlarged is shown below.



February 27, 1891 — The organ from the Roosevelt Organ company was completed and dedicated.[38] It was a two-manual organ designed by Frank Roosevelt, with seven speaking stops and a total of 18 stops.[39] A review of the dedication concert discussed the organ's qualities. "While the instrument cannot be said to possess that element known as *brilliancy*, still it is a good organ, ripe in its higher treble notes, exceeding mellow-toned, harmonious and rich throughout the bass clef."[40]

[38] Dashiell, 42.
[39] Roosevelt Organ Works August 1892 catalog, p. 43. (in the collection of the Organ Historical Society, New Jersey). The catalog contains a geographically arranged list of organs built by the firm, with opus numbers, dates, and sizes of the instruments. It is likely that the organ motor was not yet electric, although this has not yet been confirmed.
[40] Dashiell, 43 (cites The Virginia University Magazine, 3/1891, p. 395).
[41] Dashiell, 42.
[42] Dashiell, 39 (cites The Virginia University Magazine, 5-6/1889, p. 659).
[43] Dashiell, 42.

The Organ was funded by the ladies of the Chapel Aid Society, the Kentucky alumni, and others.[41] In June 1889, $500 had been raised for the organ.[42] In June 1890, Rev. Glazebrook paid Roosevelt Organ Company a $500 deposit with the promise of additional monies within 30 days.[43]

Building Alterations after 1890

The following discussion includes subsequent modifications to the organ and organ chamber. *Supplemental and contextual information is included in italics.*

After August 1890

The small pond located below and to the north of the Chapel was drained and filled in with earth to the proper grade, due to recommendations from the Committee on Health. This work was approved by the Board of Visitors on August 8, 1890, and was resolved to be completed as soon "as the funds of the University will justify it."[44] Two undated photographs of the pond exist showing the Rotunda Annex in the background[45]. The pond is a man-made feature, installed ca. 1858-59 as part of Charles Ellet's work for UVA.. (Figure 2.3) A composite map prepared by the University Facilities Department shows its approximate location to be at the intersection of University Avenue and McCormick Road today. (Figure 2.11)

Sunday, October 27, 1895

The Rotunda Annex burned down, and the dome and interior of the Rotunda were destroyed. The fire is reported to have started by faulty electrical wiring. It began around 10:15 AM on a Sunday morning. A student named Foshee saw the smoke. "He ran to the bell tower to alert ex-slave 'Uncle' Henry to ring the bell and rouse everyone"[46] (Figure 2.12). Some reports indicate that this was the Rotunda bell, others reference the Chapel bell even though the Chapel bell had not yet been donated to the Chapel..

After 1895 and before 1920

It is highly likely that the Chapel was originally gas lit and heated by a coal-burning furnace. Electric lights were first used at the University in the 1890s.[47] An 1895 campus map shows a gas feed to the east side of the Chapel. (Figure 2.13). An early but undated interior photograph shows an electric light fixture. (Figure 2.14) The 1907 Sanborn map suggests that most campus buildings are heated by steam, while lights are a combination of electric and oil lamps. The 1920 Sanborn map specifically identifies the Chapel as being heated by a furnace and having electric lights.[48] Photographs clearly document a coal chute,

[44] Public Minutes of Board of Visitors Meeting, August 8, 1890.
[45] "prints00082" and "prints00097", UVA Special Collections, UVA Visual History Collection, http://www.lib.virginia.edu/rmds/portfolio/UVA_archive/index.html (Jan 30, 2007).
[46] Stables, Ellie, "Burning Down the House: Recounting the Rotunda Fire", http://www.the-declaration.com/1999/10_21/features/rotunda.shtml (Feb 13, 2007).
[47] "An Overview of Local History for Walking Tour Guides", Albemarle County Historical Society, p. 11.
[48] October 1907 and February 1920 Sanborn Fire Insurance Maps for Charlottesville, VA.

located on the east side of the east transept, between ca. 1889 and 1917. This leads us to conclude that the furnace was likely a coal-burning furnace and the room, now used as an electrical switchgear room, was likely the coal room.

September 1897 — The bell for the chapel was donated by the VVV Dramatic Club and installed in the bell tower.[49] Some sources say that an earlier bell may have been a recasting of the Rotunda bell that cracked in 1886 but this is unlikely as the 1827 Rotunda bell was salvaged and is currently on display.[50]

1897 — $50 worth of repointing was completed.

> *The superintendent of grounds has punctually endeavored to close all leaks – a recent rain gained ingress in 3 places. Until experience shall prove all leaks closed, it appears not desirable to repair the walls. Last fall it appeared that at many places in the masonry there was urgent demand for pointing up to prevent serious damage from frost. The Superintendent said it would cost $50.00 but that he did not have so much to expend. The committee therefore deemed it proper to accept an offer of a gift ... thus enabling him to effect the desired preservation of the building.*[51]

ca. 1906 — Tiffany Studios installed in a memorial window to Eugenie Moore Faulkner in the mandorla (almond-shaped) window of the east transept.[52]

1907 — *1907 Sanborn map shows that University Avenue was a paved road, but the west range (future McCormick Road) was not yet paved.*

1910 — A small fire occurred in the Chapel on February 8, 1910. The fire originated in the furnace and created a hole near a side entrance to the chapel [the location is unclear].[53]

A February 12, 1910 article in The Daily Progress, the Charlottesville newspaper, indicates that pipe organ was damaged; in addition, "a very large portion of the new thousand dollar carpet is totally destroyed."[54]

[49] "University Chapel" supporting document for the 2006 University of Virginia Historic Preservation Framework Plan.
[50] Dashiell, 38.
[51] Dunnington, May 27, 1897.
[52] "University Chapel" supporting document for the 2006 University of Virginia Historic Preservation Framework Plan.
[53] "University Chapel" supporting document for the 2006 University of Virginia Historic Preservation Framework Plan.
[54] "Chapel Loss Uncertain: Real Damage to Pipe Organ Not Yet Estimated", The Daily Progress, Feb. 12, 1910, front page.

The University carried a $5,000 insurance policy on the Chapel: $4,000 covered the building and pews and $1,000 covered the organ and fixtures.[55] Other contemporaneous local and University newspaper articles may provide additional information.

Minutes from the February 16, 1910 Board of Visitors meeting reported briefly on the fire and what insurance covered.

> *University of Virginia, Feb. 16, 1910. Edwin A. Alderman, Pres., University, Virginia.*
> *Dear Sir:-*
> *I have to report that about 12:30 o'clock on the morning of the 8th of February, fire was discovered in the basement of the Chapel.*
>
> *Professors, students, and the Charlottesville Fire Co. succeeded in saving the building with a loss of $2,221.00, which is covered by insurance.*
> *Yours very truly, W. A. Lambeth, Supt.*[56]

The first floor structure remains exposed in the basement today. Fire damaged joists remain in place below the nave. To the south of the fire damaged joists are replacement joists or sistered joists. (Appendix C Structural Report includes a diagram locating the fire damaged, sistered, and replacement joists) "Fireproof" construction is now evident for the Vestry floor, and the Organ Chamber floor has been replaced and lowered. It is unknown if these replacement floors are associated with the fire or other work, such as the 1950's organ replacement. The floor structure of the east transept is obscured by a drywall ceiling that was likely installed when the former coal room was converted to an electric switchgear room.

After 1910 or later

The floor of the study was replaced with reinforced concrete joists infilled with concrete block. Our structural engineering consultants believe that this floor is not original since the bar type is not twisted or smooth, and a cmu block was used. The floor's replacement may not have been directly associated with the recorded fire, but the space may have been fireproofed as a result of the fire.

After the 1895 Rotunda and Rotunda Annex fire, there was a move on campus to use only fireproof construction.[57]

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[55] "Chapel Loss Uncertain: Real Damage to Pipe Organ Not Yet Estimated", The Daily Progress, Feb. 12, 1910, front page.
[56] University of Virginia Board of Visitors Minutes, March 26, 1910, http://www.lib.virginia.edu/digital/collections/text/bov.html (accessed February 7, 2007).
[57] "The Story of the Fire: Corks & Curls", March 27, 1896 http://www.lib.virginia.edu/small/exhibits/rotunda/fire/docs/corks96.html (accessed Feb 13, 2007).

By 1911 through 1920s	Heavy ivy-like vines covered the building, as evident in several historic photographs in the UVA Special Collections. (Figures 2.15 – 2.18)
After 1917	Coal chute at east side of Chapel was removed and filled in. Coal chute was located below the east transept windows.[58]
1920	*1920 Sanborn map shows that McCormick Road has been paved at the west side of the West Range. The road narrows from 35' to 30' wide where it wraps around the Chapel to connect up with Rugby Road.*
1936-1938	*Alderman Library was constructed across McCormick Road from the Chapel. The library resulted in the demolition of two buildings – The Chateau and the Anatomical Theater (see below).*
1937	*The Chateau (Gatekeeper's Cottage or Lodge) was demolished. The cottage was designed by Pratt who designed the second scheme for the Chapel. The Chateau was located west of the Chapel.*
1939	*The Anatomical Theater southwest of the Chapel on the west side of McCormick Road was demolished. The Theater was design by Thomas Jefferson and built in 1826.*
1953	One of the vestibules was reworked, but it is not clear whether east or west. The carillon and Aeolian-Skinner organ Opus 1220 were installed. For the new organ, the console was placed in the east transept, but the decorative pipes that were the screen for the original Roosevelt organ were retained.[59] The organ was a two manual, with 13 stops, 15 ranks, and 880 pipes. This organ remains in place today. The specification of the Aeolian-Skinner organ is included in Appendix H, and it dates the organ to 1950.
1954	The Chapel was entirely rewired and repainted. The interior was reportedly altered from white to a "dark green". The "well-worn [hard wood] floor and ragged carpet" were replaced with a cork tile floor. New lights, probably the gothic revival lights that are currently in the Chapel, were also installed to provide more illumination.[60] (Figure 2.19)

[58] Determined from historic photographs at UVA Online Visual History.
[59] Dashiell, 45.
[60] Cavalier Daily 60, no. 88, 19 March 1954, p. 2) (Historic Master Plan)

1957	The Seven Society Carillon was dedicated. The carillon is electric with speakers located inside the chapel and outside on its tower.[61] Donated by the Seven Society, and containing at least 23 bells, the carillon chimed every hour on the hour. Previously the bell would have been rung manually to signal the change of classes.[62] There were a few traditions associated with the carillon. Whenever a member of the Seven Society passes away, the bells "are tolled in increments of seven for seven minutes on the seventh dissonant chord"[63]
1958	"Stones have been falling intermittently and have caused extensive damage to the steps, stone-work and sidewalk below" caused by the severe winter which caused the mortar to freeze and expand thereby forcing the "limestone blocks from their mountings."[64] By March, vines were growing out of places where the stone had been worked loose.[65] "Large chunks of masonry began to fall from the tower."[66] The Physical Plant Supervisor stated that the "stone work at the top of the 60 foot bell tower is weak and can be corrected only by extensive repairs. Bids for the job are being taken now and work on the tower is to begin soon after a good contractor is obtained."[67]
1969	Heavy staining (possibly efflorescence) is evident on the bell tower. This is the same location on the bell tower that was recently cleaned. (Figure 2.20)
1977	The Chapel walks are altered which included removing the sidewalk to the back of the vestry. Notably, at some point between 1930 and 1940, a walkway had crossed the North Rotunda "lawn" and was directly on axis with the east door to the Chapel, which is marked by the bell tower. This axial arrangement gave prominence to the Chapel from the east side, a prominence that is no longer evident.[68]

[61] Program dated Oct 15, 1957, UVA Special Collections)
[62] Nylen, Leah, "Where the Bell Tolls," The Cavelier Daily, 17 March 2006.
[63] Nylen, Leah, "Where the Bell Tolls," The Cavelier Daily, 17 March 2006.
[64] Taylor Buckley, "Limestone Rains From University Chapel," Cavalier Daily, 6 March 1958.
[65] As noted in the photo caption in the newspaper article reference above.
[66] Taylor Buckley, "Limestone Rains From University Chapel," Cavalier Daily, 6 March 1958. (also referenced in Dashiell, p. 45)
[67]Taylor Buckley, "Limestone Rains From University Chapel," Cavalier Daily, 6 March 1958.
[68] "University Chapel" supporting document for the 2006 University of Virginia Historic Preservation Framework Plan.

Between the 1970s and prior to 1994.	Protective Lexan glazing was installed over windows. Lexan, a high impact "polycarbonate" plastic, was introduced by General Electric in the 1970s.
1982	Proposed plans were developed for a chapel lavatory. These plans were not carried out, and there is no domestic water supply into the chapel to this day.[69]
1983-1984	Architects Johnson, Gibson, and Craven from Charlottesville, Virginia, renovated the Bell Tower. Their work included the following: • Removed existing carillon horns and frame platform for reinstallation after work. Removed existing upper roof (wood roof sheathing and framing). Installed new concrete slab, insulation and roofing and drain. Replaced horn and platform. • Removed existing bell and support beams and roofing below bell (metal roofing, wood roof sheathing and framing). Installed new concrete slab, insulation and roofing, including drainage scupper through stone wall. Installed new bell support beams and reinstalled bell. • Installed a new tower vestibule ceiling (5/8" plywood over 2x8 wood joists at 16" on center with a plaster ceiling). The plaster ceiling was specified as "Imperial Plaster Finish Gypsum Base. Texture was to match existing wall surfaces." (Drawings dated Dec 20, 1983)
1987	Safety rails were installed on the stairs leading down to the basement and up to the vestry/study. These drawings also show an existing-to-remain, site-mounted air conditioning unit, located just north of the chancel.[70]
1989	The University Chapel Structural Inspection was conducted by Nolen, Frisa, Brooks Consulting Engineers. Loose and damaged bricks were found below the base of the tall columns to the right of the chancel. These bricks have since been repaired. By this date, the electric switchgear room was already in place in the basement.

[69] "University Chapel" supporting document for the 2006 University of Virginia Historic Preservation Framework Plan.

[70] "Chapel Safety Rails", University of Virginia Department of Physical Plant, Division of Architectural & Engineering Services (UVA Resources Center no. 00081241) (1 sheet), Revised March 20, 1987.

1991 — Chapel's slate roof replaced.[71]

- Existing slate roof, cast iron gutter, ridge cap and cricket over Vestry remained in place and was not replaced.
- Existing galvanized gutters and downspouts replaced with new copper gutters and downspouts.
- Existing flashing replaced.
- Wood cornice, metal cornice, gutter and downspouts painted to match original color. Original paint samples were to be retained for color matching.
- Some roof decking replaced (1500 SF).
- Work completed by Saunders Roofing Company (Richmond)

Between 1991 and 1994 — A water-damaged vestibule was replastered. Wainscoting was repaired. Interior of chapel was painted.[72]

1994 — The stained glass windows were restored by Beyer Studio of Philadelphia, PA.

- All the glass was restored (i.e. taken out, disassembled in a shallow water tank and put back together with new lead and putty) except for the Tiffany mandorla window of the east transept because restoration was not needed. For the restorations, the glass is all original with new lead and putty (only the purest kind, no dryers, no other ingredients). Any broken glass was repaired with hextal epoxy (2 part with a light coefficient similar to glass and does not yellow, in use for the last 25 years).[73]
- Prior to the restoration, all the windows had Lexan storm glazing which is soft and fogs over time and deteriorates from UV exposure.[74] The Lexan storm glazing was removed.
- Only the windows with vitreous glass painting (finely ground iron oxide mixed with finely ground glass painted onto glass and then fired for facial features, drapery, etc.) received new storm glazing (using laminated safety glass) during the restoration. The rest were determined to be better off without it.[75]
- All rotted or deteriorated wood window trim was to be replaced, existing paint removed, and all wood trim around windows prepared and painted.[76]

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[71] Construction Drawings for the roof dated Feb 13, 1991; Specifications for the roof dated Feb 22, 1991, by University of Virginia Facilities Management, Facilities Planning and Construction Department.
[72] "Chapel's Stained Glass Windows to be Restored". http://www.virginia.edu/insideuva/textonlyarchive/94-03-11/3.txt (Feb 13, 2007).
[73] Telephone conversation between Katie Irwin, QE|A, and Joe Beyer, Beyer Studios, Feb. 21, 2007.
[74] Telephone conversation between Katie Irwin, QE|A, and Joe Beyer, Beyer Studios, Feb. 21, 2007.
[75] Telephone conversation between Katie Irwin, QE|A, and Joe Beyer, Beyer Studios, Feb. 21, 2007.
[76] "Attachment A: Scope of Required Services", Chapel Stained Glass Window Repair and Restoration Project Manual, Nov. 1, 1993, p. A-1.

1990s	Temporary metal ramps installed at front entrance and leading to vestry.
1997	A Chapel Facility Audit conducted a maintenance survey in 1997. The Audit recorded that the air handling unit was at the end of its life, an ADA ramp was needed as were exit lights.
1997	Utility pipes and supports were installed.[77] Asbestos insulation was also removed. The system was designed by PM and Associates (Richmond).
2000	An Inspection of 29 rooms in 17 buildings was conducted in 2000. Plaster damage, some cracks, efflorescence, and water damage were noted at the Chapel.
2001	Chilled water for the Rotunda and Chapel were installed [confirm extent of the work]. The system was designed by RMF Engineering (Baltimore).
2006	Chapel Bell Tower Roofing and Masonry Repair Project • The project scope was to repair the deteriorating mortar on the exterior stone walls of the bell tower and repair the roofing and ventilation. • Construction started in early June and concluded in December 2006. • The University Project Manager was Lynn Rush. • The historic preservation masonry contractor was Houck & Co., Harrisburg, PA. • The architect/engineer was Whitlock, Dalrymple, Poston & Associates, Manassas, VA with preservation consultation from QUINN EVANS | ARCHITECTS, Washington, DC. • Some of the mortar was replaced without removing the stones. • A few stones at the top were removed, numbered, catalogued, stored, and then returned with new mortar. • Mortar matches the existing mortar color and texture. • The current binding in the mortar at the top had lost its binding power as the lime became soluble due to rain exposure. The lime was brought to the surface and then deposited on the outside of the stone which left a white residue. Stones will be cleaned. [78]
2006	Approximately six floor joist ends were reinforced and repaired.
2007	The 2006 Chapel bell restoration is to be completed in spring 2007.

[77] "University Chapel" supporting document for the 2006 University of Virginia Historic Preservation Framework Plan.
[78] Meg Nielsen, "Preparations for Chapel Repairs Begin," The Cavalier Daily 8 February 2006.

Chronology of Memorial Windows

Most of the memorial windows appear to be original to the building. Most of them are by J. & R. Lamb and Sons. One of the memorial windows is by Tiffany Studios. Lamb studios also created (and signed) the bronze memorial plaque to Professor John Patten Emmet in the tower vestibule.[79]

A photograph from the Holsinger Studio Collection gives an idea what a nave window looked like prior to the installation of the memorial windows. (See the geometric window in the location of the current memorial Window 24 in Figure 2.21 and Figure 2.22 for the floor plan with window locations.) The window appears similar in its geometric design to the small windows in the narthex and bell tower that exist today.

The memorial windows include the following:

ca. 1890	Memorial lancet window to Reverend Glazebrook's son Truxtun Richardson Glazebrook (1881-1885) depicting Christ with the children. (Figure 2.22, Window 25)
ca. 1890	Memorial lancet window to John Andrew Gardner Davis (1802-1840) designed by J. & R. Lamb depicting Moses with the Ten Commandments. (Figure 2.22, Window 34)
ca. 1890	Memorial lancet window to John Staige Davis (1824-1885) designed by J. & R. Lamb depicting the angel at Christ's empty tomb. (Figure 2.22, Window 33)
ca. 1890	Memorial windows to Gesner Harrison (1807-1862), a professor at the University, depicting a sower and a reaper in the left and right lancet windows and a crown in the mandorla, designed by J. & R. Lamb. (Figure 2.22, Windows 53 and 54)
ca. 1890	Memorial lancet windows to Dr. James Lawrence Cabell (1813-1889) who was a professor at the University for 52 years, depicting Christ in the Garden of Gethsemene. (Figure 2.22, Windows 46, 47, and 48)
ca. 1905	Memorial mandorla window to Eugenie Moore Faulkner (1881-1906) designed by Tiffany Studios c. 1905, depicting a young girl. (Figure 2.22, Above Windows 33 and 34)
ca. 1917	Memorial lancet window to Mary Stuart Harrison Smith (1834-1917) depicting Christ and two women (Saint Mary and Mary Smith?). (Figure 2.22, Window 3)

[79] "University Chapel" supporting document for the 2006 University of Virginia Historic Preservation Framework Plan.

ca. 1949	Memorial lancet window to John Staige Davis, M.D. (1866-1933) and Volumnia Staples Davis (1867-1949) depicting Saint Luke. (Figure 2.22, Window 24)
ca. 1978	Memorial lancet window to Mary Lou Sprenger Roseberry (1925-1978) depicting Saint Mary [confirm]. (Figure 2.22, Window 4)

Chronology of Memorial Plaques

The memorial plaques include the following:

1890	Memorial plaque to John Patten Emmet MD (1796-1842) and his wife Mary Byrd Tucker Emmet (1804-1860), bronze with red glass, signed by J. R. Lamb and Sons, located on the west wall of the east vestibule in the bell tower. (Figure 2.22, Plaque G)
ca. 1892	Memorial plaque to William Richard Galt (1818-1892), bronze, located on the far east of the north wall of the narthex. (Figure 2.22, Plaque A)
ca. 1912	Memorial plaque to Archer Christian (1891-1909), marble, signed by John Gregory in 1912, located on the north wall of the east transept. (Figure 2.22, Plaque F)
ca. 1917	Memorial plaque to Sgt. Andrew Courtney Campbell Jr. (1891-1917), bronze, located on the far west of the north wall of the narthex. (Figure 2.22, Plaque C)
ca. 1917	Memorial plaque to Sgt. James McConnell (1887-1917), marble, located in the middle of the north wall of the narthex. (Figure 2.22, Plaque B)
ca. 1918	Memorial plaque to several individuals who died in 1918, bronze, located on the west wall of the west transept. (Figure 2.22, Plaque E)
ca. 1957	Memorial plaque to deceased members of the Seven Society, bronze, located on the south wall of the nave. (Figure 2.22, Plaque D)

Historic Use of the Chapel

When the Chapel was built, divine services were performed at the University by a Chaplain appointed from four Christian denominations (Episcopalians, Presbyterians, Methodists and Baptists) and the appointment rotated each year.[80]

The first American college chapter of the Young Men's Christian Association (YMCA) was established at the University of Virginia in 1858.[81] Due to its nondenominational character, the YMCA was

[80] Dashiell, 8-9.
[81] Dashiell, 19.

granted substantial control over religious events and activities, as well as student life.[82] The construction of a headquarters building for the YMCA in 1904-1905 (Madison Hall) created a central location for most non-liturgical Christian activities, and the Chapel settled into a routine of weekly services, which continued at least into the early 1960's.[83]

> *The University Chapel has been used for the regular vesper services which are sponsored by the YMCA. The services are led by a wide variety of faculty members, student chaplains, and student leaders, and the half hour programs are planned one month in advance by the Vespers Committee of the University YMCA.*[84]

The YMCA folded in 1968. Its primary functions had gradually been eroded and fulfilled by the Virginia Union/Student Union (founded ca. 1932) and Newcomb Hall, the student activities building, completed in 1958.[85]

Today the Chapel is a popular location for weddings and memorial services. Various religious groups use it for meetings as well. Individual students also use it as a place for quiet reflection during the day when the doors are kept unlocked.

List of Chaplains

Following is an incomplete list of Chaplains who served the University. Further research into the University Archives on the Chaplains and the YMCA may yield additional information on the Chapel.

1829	First Chaplain, Mr. Smith, was appointed.
1832-33	Methodist William Hammet appointed and chaplaincy became a permanent fixture until 1897.
1835	Mr. Cobbs
1884-85	Rev. Otis B. Glazebrook
1885-87	George B. Taylor, D.D.
1890	Mr. Denny
1897	Chaplaincy system was changed.[86]

[82] http://cti.itc.virginia.edu/~hius316/religionuva/varelig.html (Feb 7, 2007)
[83] Dashiell, 44.
[84] Taylor Buckley, "Limestone Rains From University Chapel," Cavalier Daily, 6 March 1958.
[85] Wilson and Butler, The Campus Guide: The University of Virginia, pp. 68-70.
[86] Dashiell, 8 (cited M. Robert Allen, "A History of the Young Men's Christian Association at the University of Virginia", Unpublished typescript, Alderman Library, pp. 48-49.)

Figure 2.1
Chapel at the Virginia Theological Seminary, designed by Charles E. Cassell in 1881.

Figure 2.2
"Plan of the University Cleared Land,"(commonly known as the "Pratt Map"), 1855, William A. Pratt. (Special Collections, University of Virginia Library)

Arrow indicates approximate location of future Chapel. Note the location of McCormick Road located adjacent to the West Range hotels. McCormick Road was realigned in the 1930s.

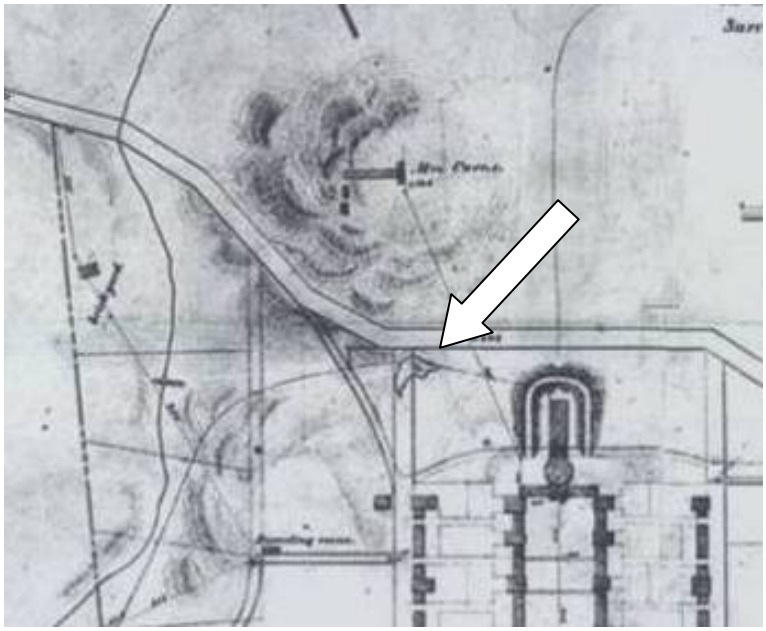


Figure 2.3
Detail of "A Map of the University of Virginia and Its Vicinity," October 1856 by Charles Ellet Jr. (Special Collections, University of Virginia Library)

Arrow indicates the pond just above the current location of the Chapel. (The map was amended after 1856 to reflect the 1858-59 installation of the pond.)

Figure 2.4
An illustration of the University of Virginia, Edward Sachse, ca. 1856. (Special Collections, University of Virginia Library)

The future site of the Chapel is barely visible at the far left of the illustration. Note the Anatomical Theater and the historic location of McCormick road adjacent to the West Range.

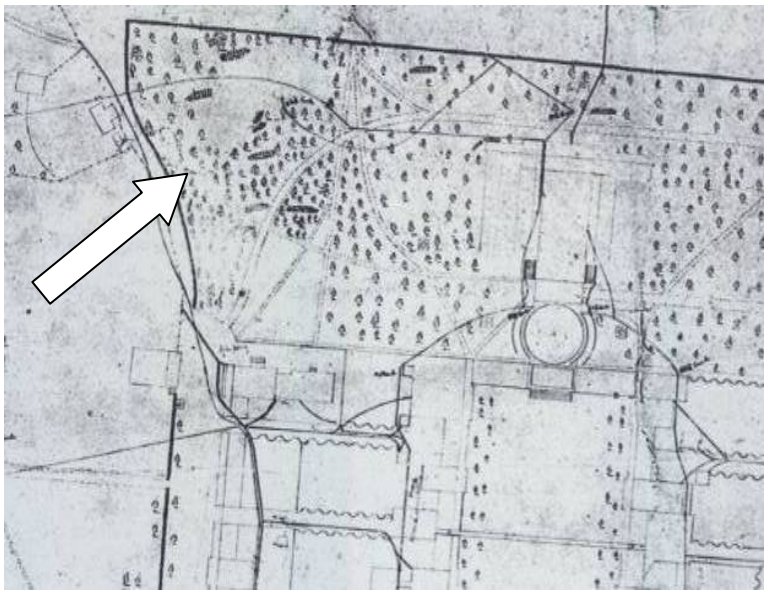


Figure 2.5
Detail of an unnamed and undated map, cartographer unknown, ca. 1870. (Special Collections, University of Virginia Library)

This map shows the sycamore trees that were presumably planted by Pratt in the mid-nineteenth century. [87]

Arrow indicates the pond just above the current location of the Chapel.

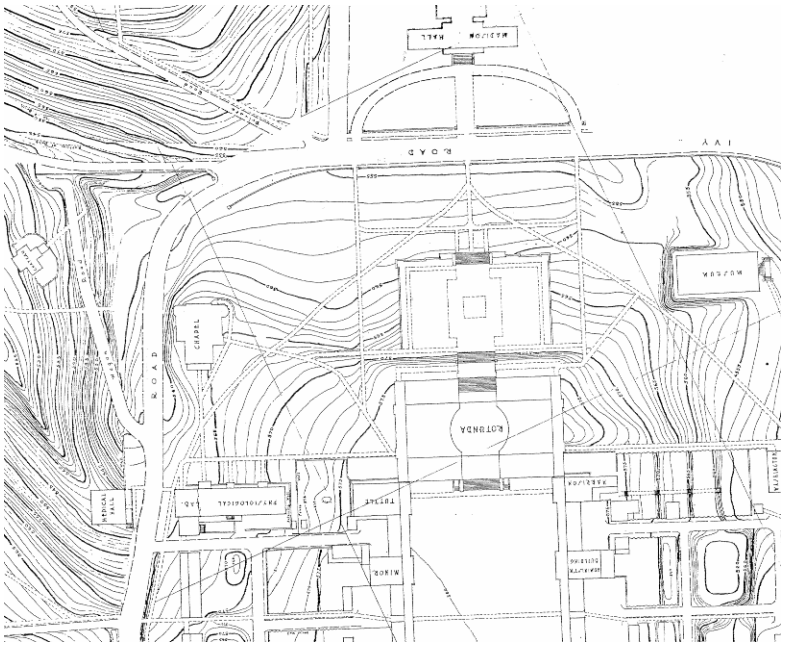


Figure 2.6
Detail of "Map showing topography and detail of the University of Virginia," May 1909, by G.F.R. Jackson and W.J. Laird. (Special Collections, University of Virginia Library)

This map shows the master plan for the university. Some elements are proposed.

Note that the Annex to the Rotunda is no longer there. Note Brooks Hall (labeled as "museum") located directly across the new forecourt of the Rotunda.

[87] Conversation with Garth Anderson.

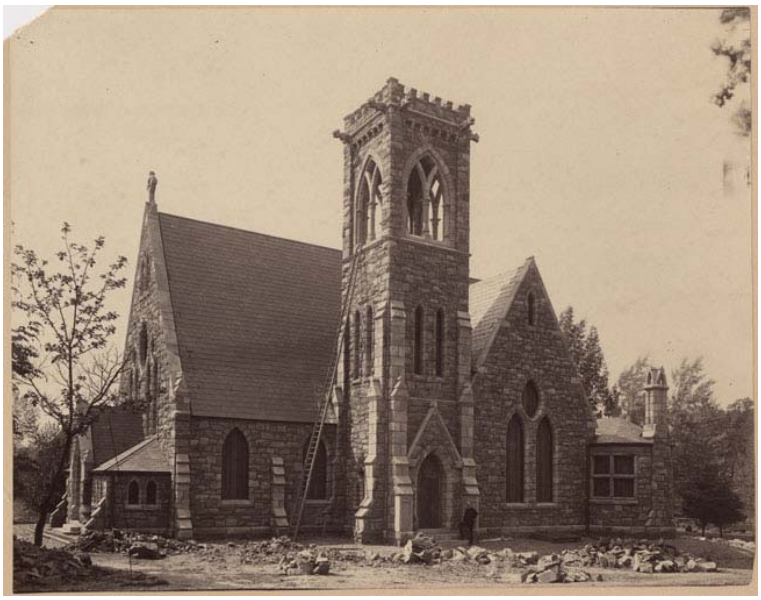


Figure 2.7
University Chapel under construction, ca. 1889, by J.T. Wample. (Special Collections, University of Virginia Library)

Note that the stonework and roof are almost complete, but the windows are not yet in place.

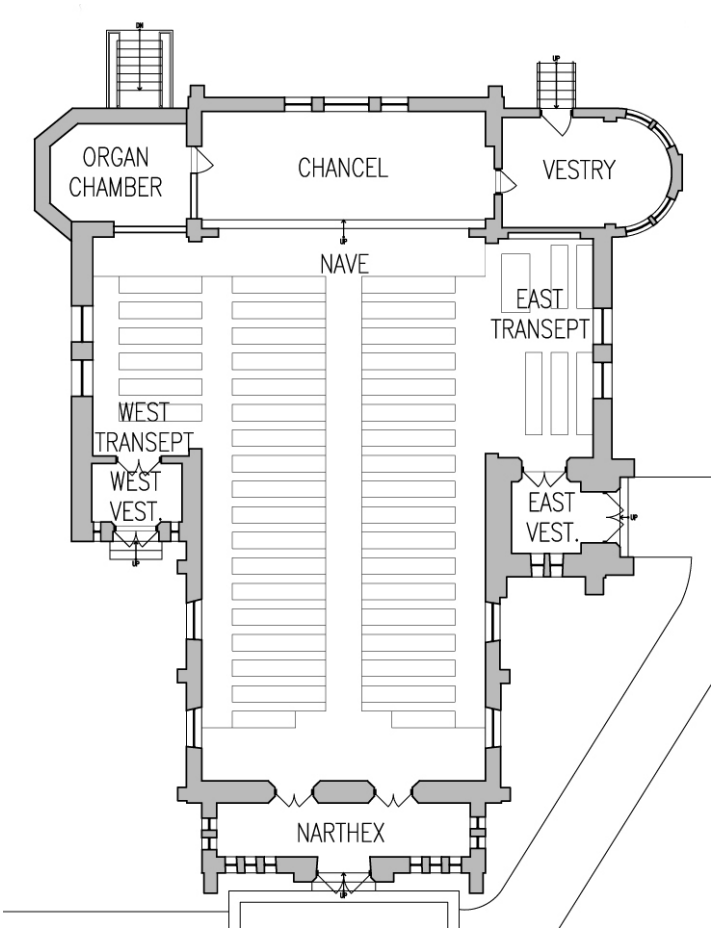


Figure 2.8
First Floor Plan of the Chapel. (QE|A, 2007)

The Chapel plan remains much as it was when first built, except the organ chamber which was expanded in 1890. A coal chute was located directly east of window 34 (see Figure 2.22 for window number).

Figure 2.9
Basement Floor Plan of the Chapel. (QE|A, 2007)

The Electrical Switchgear Room was likely the coal room.

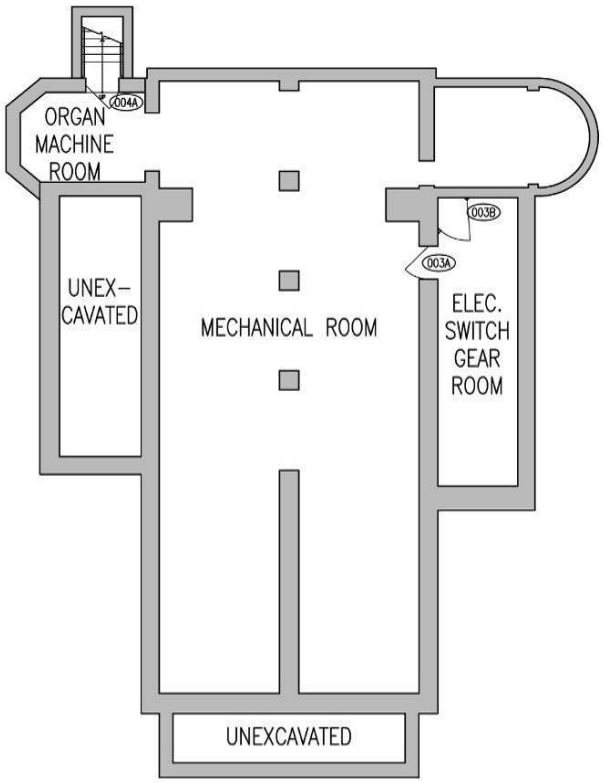
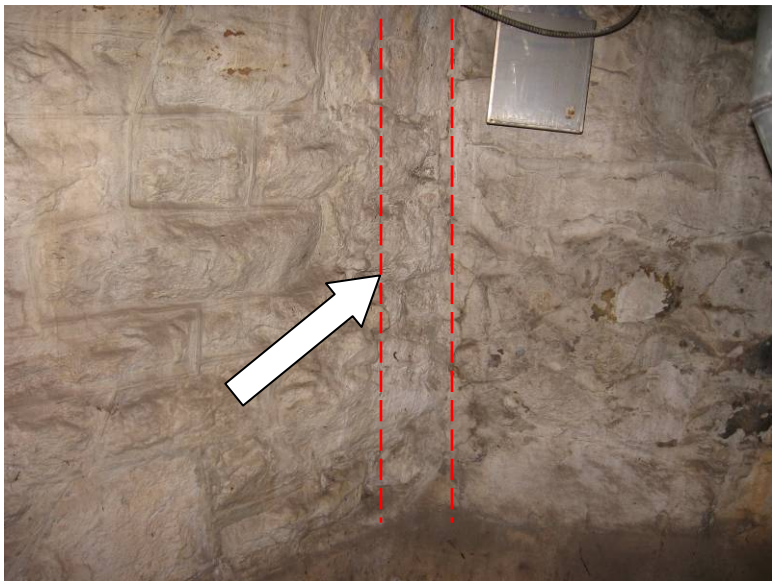


Figure 2.10
Photograph of southwest corner of basement room below organ chamber. (QE|A, 2006)

A vertical swath of stone about 12” to 18” wide depicts a condition where a perpendicular stone wall has been demolished.



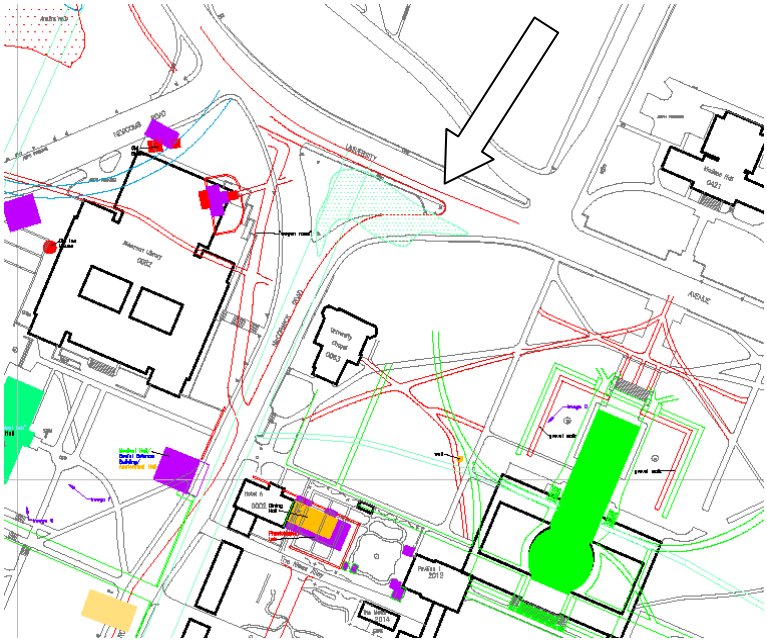


Figure 2.11
Contemporary reconstruction site plan drawing that depicts demolished buildings, roads, and ponds. (UVA Facilities)

Arrow indicates location of former pond.

Figure 2.12
Henry Martin was born a slave at Monticello on the day Thomas Jefferson died. He was known to generations of students as the ringer of the Rotunda bell.[88] He is shown here by the Chapel's former coal chute. He is also recorded as a 50-year janitor, who received retiring allowances from the University at least until 1915.[89] (Special Collections, University of Virginia Library, prints01467)

[88] http://oscar.virginia.edu/x5858.xml (Feb 21, 2007)
[89] Public Minutes for Board of Visitors meeting, April 30, 1915.

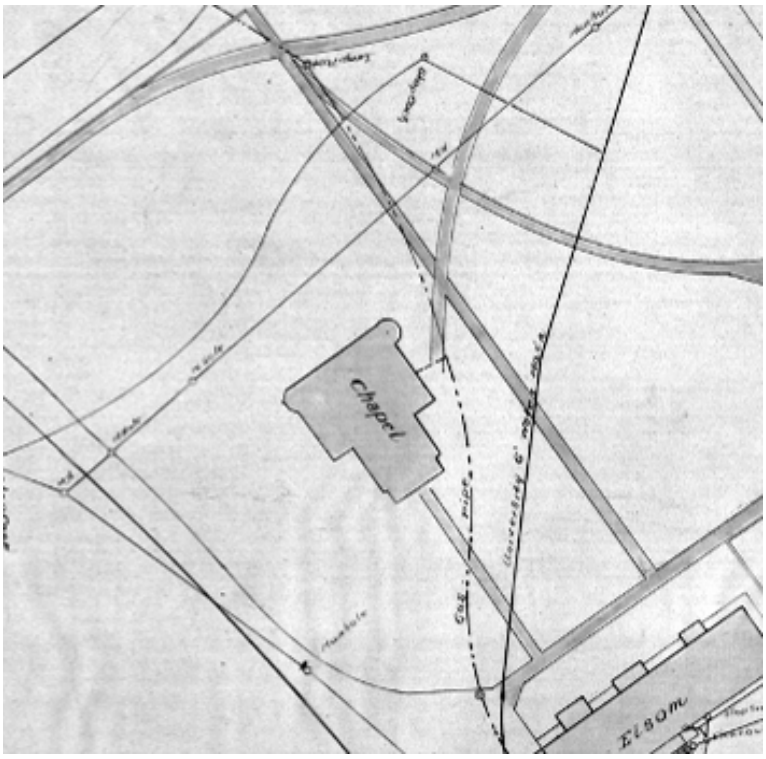


Figure 2.13
Detail of "Map of the University of Virginia Showing Gas, Water and Sewer Systems". The drawing is possibly a student project; it is dated September 1895, by Kaigiro Sugino, a student at the University. (Special Collections, University of Virginia Library)

This map shows a gas pipe going into the Chapel. At the time of the Chapel's construction, gas service was present at the University. Electric lights were first installed at the University in the late 1880s.

Figure 2.14
Historic photo, undated, photographer unknown. (Special Collections, University of Virginia Library)

This is the only known early photograph of the interior.

Note the hanging bulb light fixture, the organ console, the organ façade pipes, the unpatterned walls, the memorial window at the chancel, the clergy chairs, the brass lectern, the oak pews, the front pew screen (now missing). At a larger scale, the vertical beadboard pattern of the wainscot is also apparent (see Figure 3.78).

Figure 2.15
Northeast corner of Chapel, postcard image. Note the door to the space under the organ chamber on the far right, 1911, artist unknown. (Special Collections, University of Virginia Library)

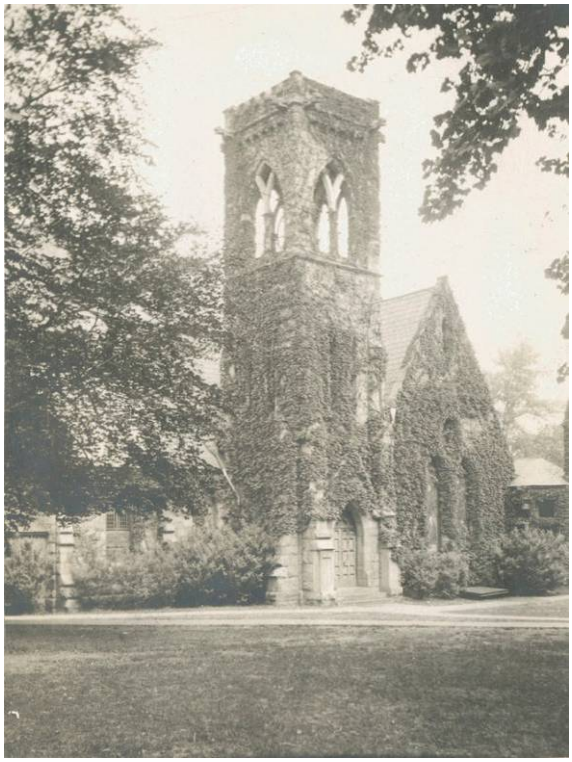


Figure 2.16
Heavy ivy-like vines cover the bell tower and east choir exterior walls, 1915, photographer unknown. (Special Collections, University of Virginia Library)

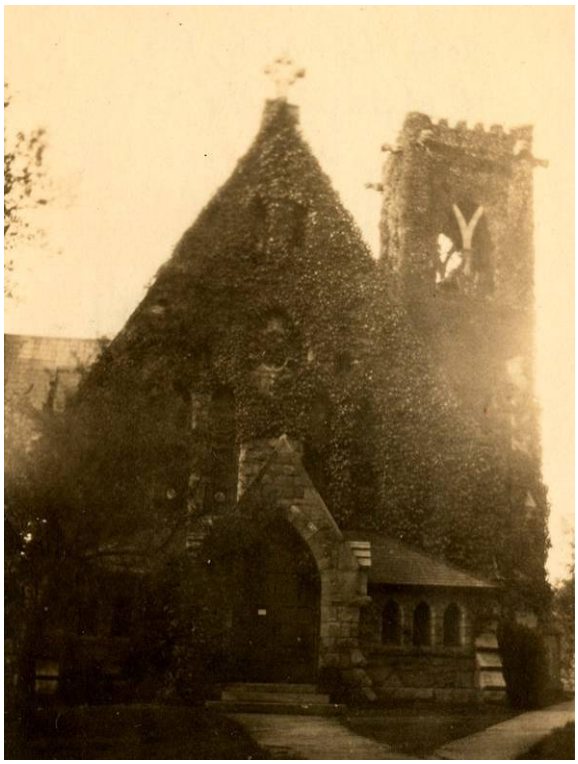


Figure 2.17
Heavy ivy-like vines cover the main (south) façade and the bell tower, ca. 1920-1925, photographer unknown. (Special Collections, University of Virginia Library) (image cropped)

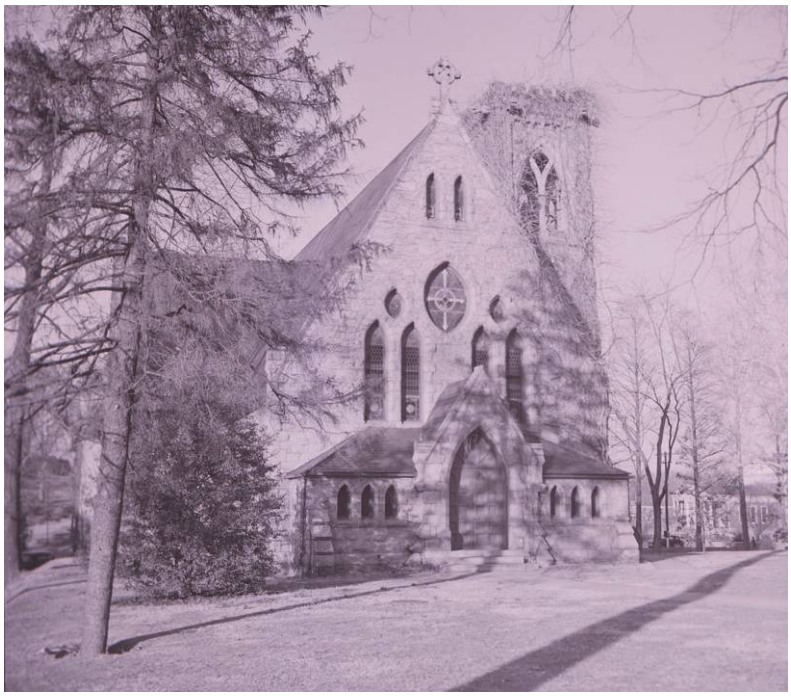


Figure 2.18
Dead vines cover the façade and bell tower, ca. 1940s, Dick Anderson. (Special Collections, University of Virginia Library) (image cropped)

Figure 2.19
Historic photo of nave, undated, photographer unknown. (Special Collections, University of Virginia Library)

President Darden is on the far left; he served from 1947 to 1959. This photograph likely dates to ca. 1953/54.

Note the plaster repairs and light fixtures.

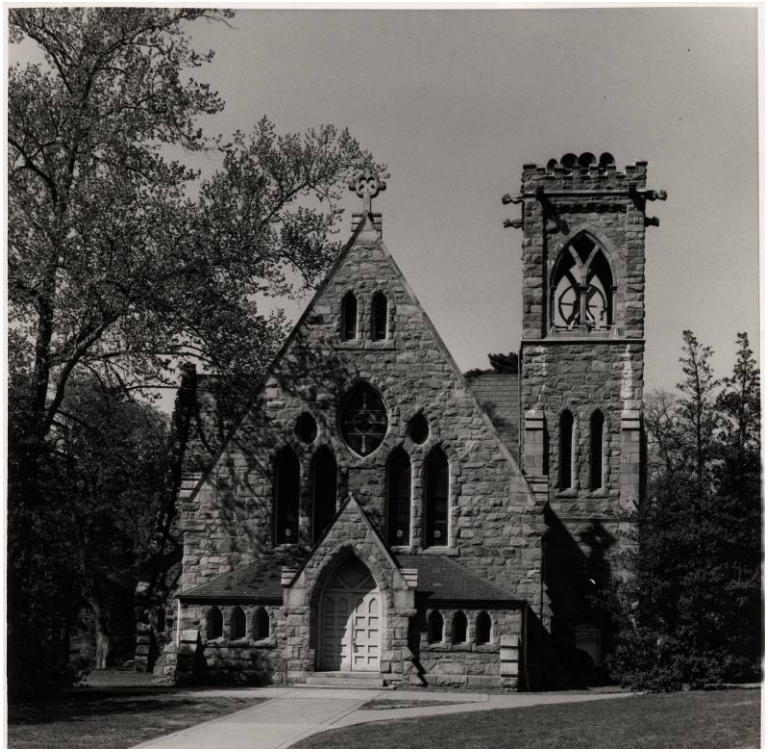


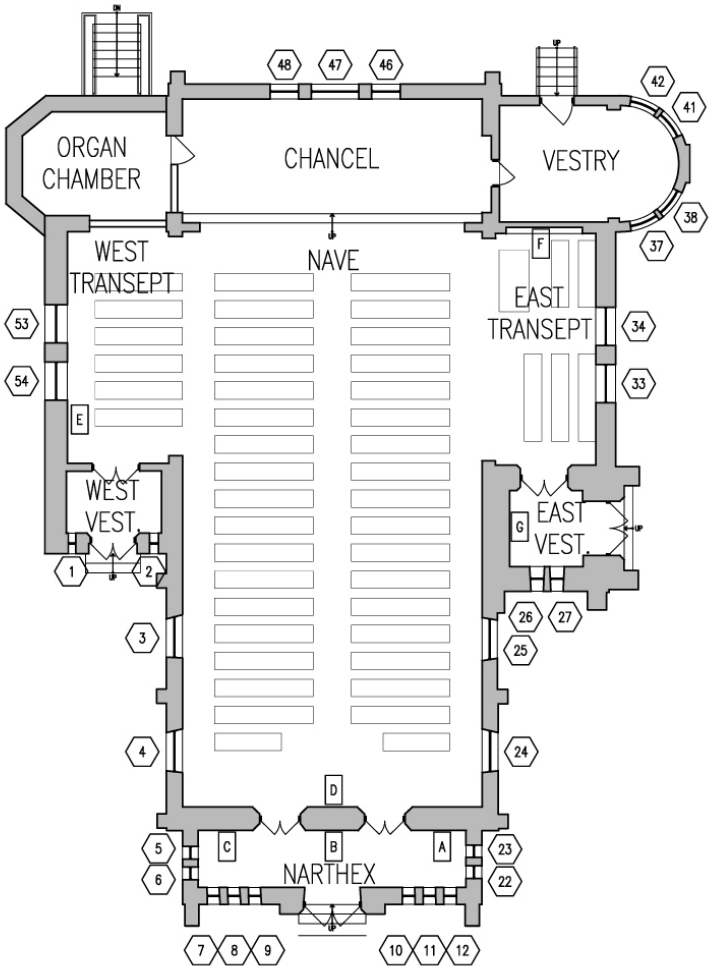
Figure 2.20
South façade, 1969, photographer unknown. (Special Collections, University of Virginia Library) (image cropped)

Note the heavy staining, possibly efflorescence, evident on the bell tower in a similar location to where test cleaning was recently done.

Figure 2.21
Detail of a photograph from the Holsinger Studio Collection, March 16, 1914. (The Holsinger Studio Collection, MSS 9862, Special Collections, University of Virginia Library (/small/holsinger/))

Note the nave window at left, Window 24. This gives an idea what the a nave window looked like prior to the installation of the memorial window. The nave window at right, Window 25, is the Glazebrook memorial window that was presumably installed c. 1890.

Figure 2.22
Floor plan showing window numbers and plaque locations. (QE|A, 2007)



CHAPTER 3: SIGNIFICANCE & FEATURES

Significance of the Property

The following is an excerpt from the "Master Plan for Historic Buildings on Campus" which was one of the preparatory documents for the "2006 University of Virginia Historic Preservation Framework Plan" published by the Office of the Architect in March 2006.

> *University Chapel stands as the first structure built on the grounds exclusively for worship. Designed in the Gothic Revival style, the Chapel is a clear departure from the Jeffersonian inspired architecture found elsewhere on campus. The use of natural stone in its construction is in direct contrast to the red brick and white trim found on the academic buildings. Its placement northwest of the Rotunda, outside of the Lawn further distinguishes it from other University buildings.*
>
> *The University Chapel at the University of Virginia is significant because it throws into relief Jefferson's views on religion in public education. In the creation of the Lawn, Jefferson had deliberately eschewed the typical inclusion of a chapel within the college campus, instead electing to place the Rotunda—the library—at the head of the Lawn grouping. The creation of the University Chapel was something of a correction, if not retaliation, of Jefferson.*
>
> *The chapel, sited to the northwest of the Rotunda outside the Lawn boundaries and balancing Brooks Hall, is in the Gothic Revival style, a deliberate departure from the Jeffersonian neoclassicism and an appeal to the style's strong ecclesiastical associations.*
>
> *The popularity of the chapel as a wedding venue for*

students and alumni makes it a nostalgic site for many people.[1]

The National Register listing of the "University of Virginia Preservation Zone" or Historic District states the areas of significance as architecture and education. Regarding the Chapel, the National Register statement of significance states, "The University Chapel was completed in 1889 with funds from many private sources. The design of this picturesque building was inspired by the Gothic parish churches of England."[2]

Period of Significance

The Chapel has remained virtually intact and unaltered for the last 110 years. Most of what one sees is an original feature from the period of original construction, 1884-1890. Minor changes and additions, such as paint colors and light fixtures, have occurred but these are reversible. Therefore, the primary period of significance is 1884-1890. However, this period does not include other significant features such as the memorial windows and plaques that were installed after the original construction. A secondary period of significance then begins in 1890 and stretches to include the first two decades of the twentieth century as well as additional individually significant features such as memorial windows and plaques installed after this period. This report will also address these features as they are significant for their aesthetic and social history contributions.

Concluding this chapter will be a brief discussion on original features that are absent or obscured followed by a discussion on intrusions that are neither from the period of significance nor appear to be significant in their own right.

It was of the opinion of the author in The Virginia University Magazine article in 1885 that within the Chapel, "art, science, beauty and utility never conflict."[3] This Chapel was expected to "stand for ages, a sweet memorial of happy years gone by. It will be the pride of the University in generations of students to come."[4]

[1] "University Chapel" supporting document for the 2006 University of Virginia Historic Preservation Framework Plan, p. 2.
[2] "University of Virginia Preservation Zone National Register Nomination", p. 5.
[3] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 106.
[4] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 106-107.

Applicable University, Local, and State Preservation Regulations

All General and non-General Fund (University, Gifts and Grants funded or other University generated funds) projects, the Higher Education Capital Outlay Manual (HECOM) 2000 is applicable; it is available from the University of Virginia.

The Higher Education Capital Outlay Manual (HECOM) gives applicable codes and regulations. The current edition is Revision IV to the Second Edition of the HECOM, dated 2006. The 2000 Virginia Uniform Statewide Building Code, an amended version of the International Building Code 2000, is applicable exclusive of Chapter 11 Accessibility. For State projects the revised Americans with Disabilities Act Accessibility Guidelines are applicable to University projects per HECOM GR.2.1.

The HECOM identifies the Office of the Architect for the University as the principal contact for any work that might affect the Academical Village. This office is also the liaison with the **Jeffersonian Restoration Design Committee**, which is the primary review agent and advisor to the President and Board of Visitors for all issues having to do with the care and restoration of the Academical Village (HECOM GR3.9). The Chapel is categorized within the "Academical Village" in HECOM, HP.1, Figure GR-3, and in the 7th edition of the University of Virginia Facilities Design Guidelines (2004).

In accordance with the Governor's Executive Order No. 47, the University must submit all plans for demolition or significant alteration, remodeling, redecoration, restoration, and repairs that may basically alter the appearance of any state-owned registered historic landmark to the **Virginia Department of Historic Resources** for review and comments. (HECOM GR.3.10) The Chapel is a contributing building to the "University of Virginia Historic District".

As a contributing building to the National Register listed "University of Virginia Historic District", the Chapel should follow The Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings.

The Chapel is given the preservation priority of "essential" in the 2006 University of Virginia Historic Preservation Framework Plan. This priority is second only to the Jeffersonian resources on campus. The Framework Plan

provides “Preservation Guidelines” that are to be followed.[5]

Exterior projects at the Chapel may be subject to review by the **Commonwealth of Virginia Art and Architectural Review Board** (AARB). The AARB consists of six members appointed by the Governor, plus a representative of the Department of Historic Resources, to advise him on the "artistic character" of buildings and works of art which are to be paid for by the state, or to be located on or over state property.

Significant Site and Building Features

On the following pages of this section is an inventory of significant features of the Chapel. Both significant features from the primary period of significances as well as those from later periods will be discussed. Evaluation of the current conditions of these features occurs in Chapter 4. This section first describes the exterior significant features and then follows with those on the interior.

Site

The primary significant site feature, if it can be called a feature, is the Chapel’s orientation on the site. It is located along the orthogonal grid of Thomas Jefferson’s Academical Village. Traditional Christian orientation would be along the cardinal axes with the altar facing east and the narthex at the west. The Chapel is located adjacent to the Rotunda, the head of Jefferson’s Academical Village, and the West Range, a prominent location.

There are some site features that are memorial plantings or installations and therefore are significant. The holly tree located southwest of the Chapel was already existing when it was established as a memorial for Holly Smith. The two benches on either side of the main entrance are memorials, one for Holly Smith and the other for Alexandra Shoch.

Some of the vegetation around the Chapel may date to the primary period of significance. These include the large holly trees just north of the Chapel and the sycamore to the west of the Chapel. Further investigation may be needed to determine the approximate age of other vegetation on the site.

The original paving around the Chapel is unknown. The current layout and design of the brick paved walks were revised and extended in 1977.

[5] “Preservation Guidelines”, Historic Preservation Framework Plan, pp. 39-40. The Plan is available in its entirety on the UVA website -- http://www.virginia.edu/architectoffice/current.html .

Exterior

Summary:

The significant features of the exterior are immediate. At first glance, one notices the Gothic Revival style and its elements clearly delineated. In 1885, the master mason was quoted as describing the architecture as stating "the term Early English, or Lancet, is applied to English 13th century architecture, in which style the new Chapel is designed."[6] Early English or Lancet architecture is characterized by a clear massing delineating the cruciform plan, masonry construction, steeply pitched roofs, pointed arches, lancet shaped window heads, punched window openings, and buttresses. All of these features are visible on the exterior of the Chapel. On the interior, which will be discussed in the next section, the style is typified in the Chapel by pointed arches, stained glass, ribbed vaults, and richly carved capitals with undercutting.

All of these features date to the time of the original construction and therefore fall into the period of significance. (Figures 3.1-3.7)

Stonework:

The Chapel utilizes two types of stone, one for the exterior and another for the interior. This section will focus on the exterior stone which is a metamorphic rock called mica-quartz-schist.[7] On the exterior, the stonework is predominantly rough-faced. Honed finishes are found at the face of the buttresses, heads, jambs, and sills of the openings, and decorative elements. The rough-faced stone blocks billow out from the wall, at the sides of the buttresses, and around the windows of the vestry. The water table projects about one inch from the face of the adjacent stone.

Carved stone elements include the stone cross atop the south façade, parts of the buttresses, the upper part of the chimney, and several elements of the bell tower including the tracery, the gargoyles, the brackets, the crenellations, and a belt course molding. The gargoyles project from each corner at right angles to each other. According to a contemporaneous anecdote, the

[6] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 106. On page 105, the mason states that Gothic architecture is often called "Christian Pointed" which may be the reason why a previous article published in 1884 called the Chapel's style "Early Pointed."

[7] As determined by petrographic analysis on a piece of stone collected from the bell tower's exterior. See the masonry evaluation conducted by WDP Consulting Engineers in "Appendix D" of the University Chapel Stonework Investigation by QUINN EVANS | ARCHITECTS dated 21 April 2006.

gargoyles "were after the plan of the Roman rostra."[8] (Figures 3.16) This article goes on to indicate that the carved stone cross atop the front gable is "the most costly thing of the building, for its size, and its finish is the result of consummate skill."[9] (Figures 3.1)

For a more detailed discussion of the stonework, see the University Chapel Stonework Investigation by QUINN EVANS | ARCHITECTS dated 21 April 2006.

Pointing:

There are several pointing types used throughout the stonework. One type in particular covers approximately 75% of the wall surface and was identified as the earliest pointing type. There have been between 5 and 10 different pointing campaigns on the Chapel. The University Chapel Stonework Investigation dated 2005 deemed that the earliest extant pointing is highly likely the original pointing mortar. The original mortar can be distinguished with the following visual characteristics: thin red striping and a beige base mortar with a center raised to receive the red striping. (Figure 3.15)

Steeply pitched roofs:

The current slate roof is a 1991 replacement in-kind of the original slate roof. The steeply pitched roof has a pattern of six rows of rectangular tiles alternating with six rows of scalloped tiles that mimic the original slate roof. (Figures 3.8 - 3.9)

Based upon drawings dated 1991, the roof deck was to be replaced and repaired as needed and the slate tiles were to be salvaged and reused if they were in good condition. Flashing was to be replaced as were most gutters and downspouts. The only roofing to be left in place was the vestry roof. It is assumed that the current vestry roof is part of the original construction. (Figures 3.10)

Wood trim:

There are several different profiles of wood trim cornices located around the edge of the roof. Wood trim was replaced in-kind during the 1991 roof replacement project. Any original wood trim that may have remained would be fairly recognizable

[8] "Our New Chapel," The Virginia University Magazine, November 1885, p. 105.
[9] "Our New Chapel," The Virginia University Magazine, November 1885, p. 105.

as it would have multiple paint layers.

Bell:

The Chapel bell dates to 1897 and has an inscription composed by Archdeacon Frederick Neve. Renovation of the bell, yoke, wheels was completed in 2007. (Figure 3.19)

Windows:

All of the Chapel windows except for the ones in the vestry are stained glass and many are memorial windows. Some were installed during the primary period of significance. Several were installed after the original construction (i.e. from about 1890 to 1978). Due to their aesthetic and social history contributions, they are considered individually significant features after the period of significance. The rest of the non-memorial windows are presumed to have been installed during the original construction. (Figures 3.22 – 3.37) What has become of the windows that were in place before the later memorial windows is unknown. (Figure 3.25).

The stained glass windows fall into three types: the lancet, of which there are many, the mandorla or almond-shaped, and the quatrefoil of which there is only one. Clear glass windows are located in the vestry and are roughly square in elevation but are curved in plan. The non-memorial windows tend to have geometric, non-figural designs of multiple colors. Most of the memorial windows were designed by J. & R. Lamb and Sons. The mandorla window high on the east transept wall is the only one known to have been created by Tiffany Studios. It is unknown who designed the rest of the windows. Many, but not all, of the stained glass windows have an exterior protective storm window that is vented at the top and along the perimeter which were most likely installed in the window restoration project. (Figures 3.23)

The memorial windows include the following:

- Memorial lancet window to John Staige Davis, M.D. (1866-1933) and Volumnia Staples Davis (1867-1949) depicting Saint Luke, located on the east nave wall to the right (closest to the Narthex). This window was most likely installed ca. 1950. (Figure 3.24)

- Memorial lancet window to Reverend Glazebrook's son Truxtun Richardson Glazebrook (1881-1885) depicting

Christ with the children, located on the east nave wall to the left (closest to the Chancel). This window was most likely installed ca.1890 as part of the original construction. (Figure 3.26)

- Memorial lancet window to Mary Lou Sprenger Roseberry (1925-1978) depicting Saint Mary (?), located on the west nave wall to the left (closest to the Narthex). This window was most likely installed ca.1978. (Figure 3.27)

- Memorial lancet window to Mary Stuart Harrison Smith (1834-1917) depicting Christ and two women (presumably Saint Mary and Mary Smith), located on the west nave wall to the right (closest to the Chancel). Signed by Duncan Smith in 1921. This window was most likely installed ca. 1921. (Figure 3.28)

- Memorial lancet window to John Andrew Gardner Davis (1802-1840) designed by J. & R. Lamb depicting Moses with the Ten Commandments, located on the east wall of the East Transept to the left (closest to the Study). This window was most likely installed ca.1890 as part of the original construction. (Figure 3.29)

- Memorial lancet window to John Staige Davis (1824-1885) designed by J. & R. Lamb depicting the angel at Christ's empty tomb, located on the east wall of the East Transept to the right (closest to East Vestibule). This window was most likely installed ca.1890 as part of the original construction. (Figure 3.29)

- Memorial mandorla window to Eugenie Moore Faulkner (1881-1906) designed by Tiffany Studios ca. 1906, depicting a young girl, located on the east wall of the East Transept above the lancet windows. This window was most likely installed ca.1906. (Figure 3.29)

- Memorial windows to Gesner Harrison (1807-1862), a professor at the University, depicting a sower and a reaper in the left and right lancet windows, respectively, and a crown in the mandorla, designed by J. & R. Lamb, located on the west wall of the West Transept. This window was most likely installed ca.1890 as part of the original construction. (Figure 3.30)

- Memorial lancet windows to Dr. James Lawrence

Cabell (1813-1889) who was a professor at the University for 52 years, depicting Christ in the Garden of Gethsemane, located on the north wall of the Chancel. This window was most likely installed ca.1890 as part of the original construction. (Figure 3.31)

Interior

Summary:

On the Chapel interior, the Gothic Revival style is typified by the cruciform plan, pointed arches, stained glass, ribbed vaults, and richly carved capitals with undercutting. Additional significant features within the Chapel include the hammer beam trusses, the bead board ceiling, the plaster walls, wood wainscot, the use of pressed brick, the bead board paneled doors, and select furnishings such as the clergy chairs, pews, and the pipes from the original organ.

Cruciform plan:

The cruciform plan that is clearly evident in the Chapel includes the narthex, nave, east and west transept, and chancel. The east vestibule of the bell tower and the secondary entrance at the west vestibule are situated between the nave and the transept arms. The vestry and the organ room are situated between chancel and the transept arms. (Figures 3.38 – 3.47 for principal views of each space and see Figure 2.8 for the floor plan.)

In November 1885, it was reported that the organ room, which "would have balanced the vestry-room," had not been built as planned with the original construction. This was to come later when the "grand organ" was acquired.[10] In 1890 it was reported that "a wall to the right of the chancel was about to be removed for installation of the delayed organ."[11]

There are two drywall, partial height closets that have been built within the vestry. These are later intrusions.

Flooring:

The original flooring throughout most of the Chapel appears to be southern yellow pine as can be seen in the basement looking at the underside of the chancel flooring. The wood flooring in

[10] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 106.
[11] College Topics 5/21/1890 as quoted in Dashiell thesis.

the organ chamber also appears to be pine. (There is no subfloor which typically would have been laid diagonally across the floor joists and then the finish floor laid perpendicular to the subfloor.) Currently there is cork tile on top of plywood in the nave, transepts, west vestibule which is on top of the wood flooring. The condition of the top surface of the wood floor in the nave and transepts is unknown without destructive testing to the cork and plywood. There is burgundy carpeting in the narthex, parts of the nave and transepts, and chancel (which is most likely on top of cork tile). In addition, there is burgundy nine by nine vinyl asbestos tile flooring on top of green vinyl tile flooring in the vestry. The current finish for the floor is not considered a significant feature.

Plaster walls:

As described in an article in The Virginia University Magazine written before the completion of the interior finishes, the walls were to be either painted or frescoed.[12] Currently the plaster walls are painted with a single beige paint color. (Figure 3.48) Damaged plaster in the narthex and bell tower has revealed at least two shades of green underneath the current paint. The walls in the carillon equipment closet in the vestry are painted a deep teal green. Without a comprehensive paint color analysis, it is unclear as to the original paint scheme and subsequent schemes. Of note, there is only a very thin wood trim around the windows of the nave, chancel, and transept. The splayed door and window plaster jambs have a rounded corner with a small reveal.

Wood Trim:

The approximately 3'-0" tall wainscot consists of a wood beadboard panel, baseboard, and chair rail. In most every location, the chair rail has been painted brown. In the northwest closet in the vestry, the chair rail along the original wall of the vestry is painted on the upper half while the lower half is coated with the same translucent brown as the beadboard panel and baseboard. The paneling and baseboard may have originally been "grained pine" and then given an oil finish (see ceiling discussion below). There appears to be several different layers of translucent brown coatings on the paneling and the baseboard. (Figures 3.49)

One notable example of woodwork is the fireplace mantel in the

[12] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 105.

vestry. The wood appears to be the same as the wainscot though slightly lighter and redder in color. (Figure 3.50) It too appears to have a couple different layers of coatings. The carved detail is typical of the period with decorative reeding. There is a cast iron firebox with a shell motif. The window louvers in the vestry are also the same dark finished wood and are assumed to be original. (Figures 3.61) The louvers can be seen in the undated photograph of Henry Martin. (Figure 2.12) The only other interior wood window trim in the nave and transepts is the brick mold.

Pointed arches and stone columns:

The pointed arches within the Chapel are made of pressed brick of various curved shapes. At the crossing, there are three arches, one between the nave and each of the transepts and a third between the nave and the chancel. (Figure 3.51) All three have stone keystones and spring from red sandstone capitals. There are pointed arches set into the wall along the north and south sides of transepts and chancel with stone keystones and brick quoins.

The brick arches have a red coating, either stain or paint, over both the bricks and the mortar between the bricks. It is unknown at this time if the red coating is the original decorative treatment. This would give the appearance of stonework which was probably the intent.

The pressed brick arches are supported by stone columns. Two pairs of columns support the arch between the chancel and nave while two pairs of considerably shorter columns support each of the arches between the nave and the transepts. The stone columns are made of polished light red and gray speckled granite and darker red sandstone capitals and bases. Historically, the column shafts were described as "Aberdeen granite".[13] Its exact origin and current name are unknown though it is highly likely that the stone is red Aberdeen granite from the Rubislaw quarry in Aberdeen, Scotland.

The bases of the columns sit on either carved red sandstone brackets or on short red sandstone pedestals. The capitals are also carved of the same red sandstone which is most likely red Seneca sandstone from Seneca Creek in Montgomery County, Maryland. The Virginia University Magazine article notes that the capitals are "'genuine early English capitals' and display the

[13] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 105.

finest art in their workmanship."[14] Each pair of column capitals has a different leaf depicted. (Figures 3.53) The surfaces of the brackets and pedestals are striated. Of note, it appears that one edge of the northwest bracket (between the west transept and nave) was never trimmed down and finished.

In the chancel, the windows along the north wall are framed by three pointed pressed brick arches with brick quoins along the two outer edges. The length of wall between the windows and along the edge is recess, almost to the plane of the windows. The arches at the top of the windows are in the plane of the wall. At the junction between the spring point of the arches and the recessed section are triangular brackets. The recessed portion is set back approximately 10" from the face of the wainscot. The columns at the crossing are approximately 4" deep with a base that extends approximately 6". It is conceivable that the original design was to have two columns between the windows and two quarter round columns at the edge of the windows. (Figure 3.41)

Hammer beam trusses:

The exposed wood trusses are made of several components: the truss itself, a stone spring block, and a carved wooden head. (Figure 3.54)

The gentle curve of the wooden truss springs from a stone block that projects from a point halfway up the wall. (Figure 3.48, 3.56) This short section of the truss meets up with a projecting horizontal beam at the top of the wall. From this horizontal component, the truss curves across to the opposite ceiling slope and meets the ceiling approximately four-fifths of the way to the peak. A post extends down from the rib along the peak of the ceiling to the crossing of the two curved sections of the truss. Gothic detailing is added beneath this crossing. See the structural analysis in Appendix C for additional information on the hammer beam trusses.

Carved wooden heads are at the end of each horizontal beam projecting at the top of the wall. The heads appear to be similar to each other and depict an inexpressive female. There are at least two different hairstyles depicted. At the base of each woman's neck is a pipe. This most likely was the gas conduit for the previous light fixture. (Figure 3.55)

[14] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 105.

Ceiling:

The ceilings of all first floor rooms except the east vestibule and the organ room consist of beadboard panels separated by decorative purlins with either rounded or chamfered edges depending on their size and orientation. The purlins spring from small wood brackets in the vestry and in the narthex. The beadboard has a double beaded edge. Described in an article in The Virginia University Magazine written before the completion of the ceiling, the ceiling was to be made of "grained pine" and finished with an oil coating.[15] As yet, there is no evidence to suspect otherwise. There appear to be at least two types of wood crown molding between the wall and ceiling. (Figures 3.57 – 3.59)

Light Fixtures:

There are no light fixtures that appear to date from the original construction. See the section on "Intrusions" for a discussion of the current light fixtures.

There are three small diameter tubes projecting from the wall above the south arch separating the Chancel from the Nave. It is undetermined if there is still a utility running to these pipes that may have been for lighting. (Figure 3.60)

Doors and door hardware:

The doors leading into the Chapel and within it are multi-paneled pointed arch doors with beadboard inset panels on the exterior face. Currently they are painted with two colors on the exterior and have a dark finish on the interior. The interior doors are also multi-paneled pointed arched doors with transom panels. They typically have a dark finish with a transom panel inset with leather that is painted black. The door to the organ room is the exception as it is designed into the panels of the organ casing. (Figures 3.63 – 3.68)

Half of the door hardware appears to be original due to style. They are a dark metal with a geometrically patterned relief and include escutcheons, flush bolts, doorknobs, hinges, pulls, pushplates, and a mail slot. (Figures 3.62, 3.69 – 3.72)

[15] "Our New Chapel," The Virginia University Magazine November 1885 vol. xxv, no. 2: 105.

Furnishings:

The oak pews are most likely original (Figure 3.73). Some of the original pews had been destroyed by the 1910 fire. They can be seen in the historic photograph of the interior. The pews were intended to seat 350.[16] The current legal capacity in the Chapel is 250 (see chapter 6).

The facade pipes enclosing the organ chamber are from the original Roosevelt organ and were kept as a decorative screen after the installation of the current organ in 1953. The pipes are decoratively painted in red, a darker red, and gold. (Figure 3.74)

The organ casing on two sides of the organ chamber are a deep honey-colored oak which is lighter than the wainscot and is similar in color to the pews, altar, and clergy chairs. Incised decoration on trim has been given a different, darker coating. The panel where the original console once was has a differing grain pattern and decorative motifs.

The brass lectern is visible in the historic photo and is considered as an original furnishing. The brass lectern is supported by a post which rests on three legs. Fleur de lis cap the incised posts of the three legs. (Figure 3.80)

There are four Gothic Revival clergy chairs with one being taller and slightly more ornate than the other three. (Figure 3.76 and 3.77) The tall chair and the two of the three shorter chairs are a set. They all have a geometric foliage pinnacle, three quatrefoils across the top of the back, chamfered edges at the sides, and vertical back boards.

These three chairs are presumably the same as the three in the historic interior photo where the tall chair is centered along the north wall of the chancel and is flanked by two others. (Figure 3.78) Therefore, the tall chair and the two matching chairs can be considered as original furnishings.

The fourth chair has a fleur de lis pinnacle, six quatrefoils across the top of the back, turned posts at the sides, and horizontal back boards. The pinnacle matches the ones on the hymn plaques. This chair was probably a later addition along with the hymn plaques (see the section on “Intrusions”).

The Gothic Revival stand in the narthex may have been a choiral

[16] “The New Chapel,” The Virginia University Magazine October 1884 vol. xxiv, no. 1: 53.

stand and positioned in the chancel. It could also have been a registration or guest book stand. The stand matches in style, material; construction of the stand matches that of the fourth clergy chair that is not part of the original set. (Figure 3.79)

The Gothic Revival altar is similar to the clergy chairs and stand but does not have matching details. The interior of the altar is made of plywood and stamped "Weldwood US Plywood" and probably dates to the 1950's. There is no altar in the historic interior photo. (Figure 3.75)

Memorial plaques:

There are seven plaques placed throughout the chapel. Three of them are located in the narthex; one is on the south wall of the nave; one is on the west wall of the west transept; one is on the north wall of the east transept; and one is in the east vestibule. Two of the bronze plaques in the narthex were installed shortly after the construction was completed. A couple of the plaques for notable educators at the University are displayed prominently as you enter the narthex and the east vestibule. The one in the bell tower is signed by J.R. Lamb and Sons (the designers of many of the stained glass windows). The largest of the plaques is the marble plaque in the transept dedicated to a student who died from injuries received while playing football. There are three plaques dedicated to those who died in World War I: the Campbell, McConnell, and the 1918 plaque honoring several individuals. The last plaque dedicates the carillon to deceased members of the Seven Society. A description of the plaques is as follows:

- Memorial plaque to Sgt. Andrew Courtney Campbell Jr. (1891-1917), bronze, located on the far left of the north wall of the narthex. This plaque was most likely installed ca. 1917. (Figure 3.81) (noted as C in plan below)

- Memorial plaque to Sgt. James McConnell (1887-1917), marble, located in the middle of the north wall of the narthex. This plaque was most likely installed ca. 1917. (Figure 3.82) (noted as B in plan below)

- Memorial plaque to William Richard Galt (1818-1892), bronze, located on the far right of the north wall of the narthex. This plaque was most likely installed ca. 1892. (Figure 3.83) (noted as A in plan below)

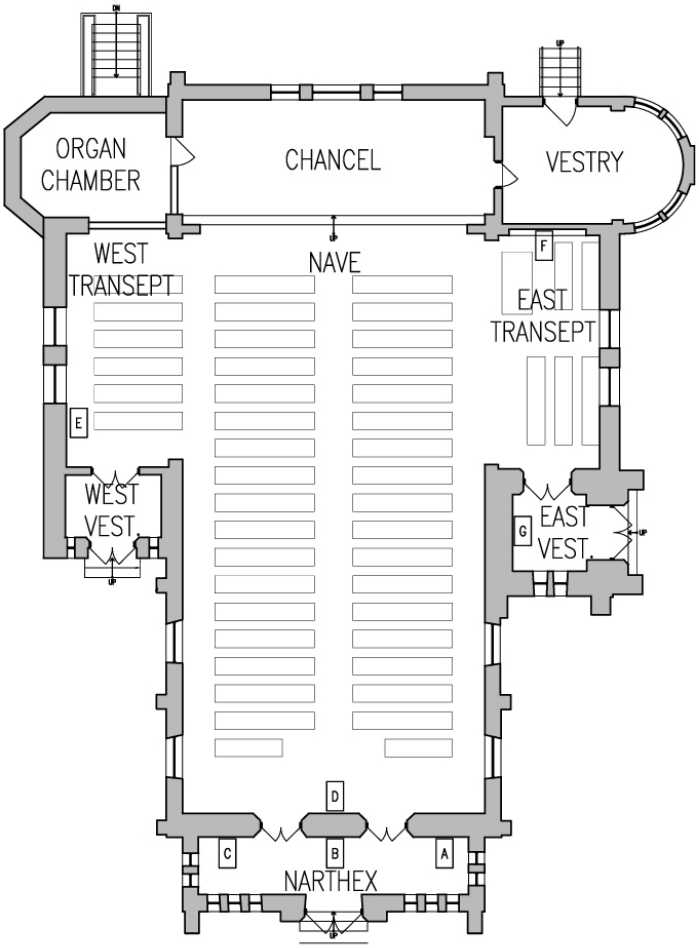
- Memorial plaque to deceased members of the Seven Society, bronze, located on the south wall of the nave. This plaque was most likely installed ca. 1957 when the carillon was installed. (Figure 3.84) (noted as D in plan below)

- Memorial plaque to Archer Christian (1891-1909), marble, signed by John Gregory in 1912, located on the north wall of the east transept. This plaque was most likely installed ca. 1912. (Figure 3.85) (noted as F in plan below)

- Memorial plaque to several individuals who died in 1918, bronze, located on the west wall of the west transept. This plaque was most likely installed ca. 1918. (Figure 3.86) (noted as E in plan below)

- Memorial plaque to John Patten Emmet MD (1796-1842) and his wife Mary Byrd Tucker Emmet (1804-1860), bronze with red glass, signed by J. R. Lamb and Sons, located on the west wall of the east vestibule in the bell tower. This plaque was installed in 1890. (Figure 3.87) (noted as G plan below)

Floor plan showing plaque locations. (QE|A, 2007)



Absent or Obscured Items from the Period of Significance

Over the course of nearly 120 years, some of the Chapel's original features have been removed or obscured. Based upon the one historic interior photograph (Figure 2.14) there are several features that are absent from the Chapel. These features include the two low wooden walls (screens) between the pews and chancel and the Roosevelt organ. Also absent is the first set of original electric light fixtures which hung down from the neck of the carved head of the truss. It is assumed that the original method for illuminating the Chapel was with gas light fixtures that hung from the same location.

An undated photograph of the interior shows a bulb-like electric fixture hanging from the neck of the carved heads at the bases of the trusses. (Figures 2.14 and 3.88) Gas lighting typically pointed up as this was the direction of the flame from the burner. It was not until 1897 that gas mantles were adapted to point downwards. Currently, there is small tube, assumed to be a gas bib, which protrudes at the base of the neck at each truss. In addition, there are three small diameter tubes projecting approximately 4" from the top of the pointed arch facing the chancel. These may also have been part of the original gas lighting scheme. A possible lighting restoration plan and fixtures are included in Chapter 6.

Due to successive coating treatments, the original finish on interior woodwork has been obscured. Subsequent painting has covered up the original paint finish on the plaster walls and on the exterior doors. The original hardwood flooring has been covered by the cork tile and carpeting. The finish on the pressed brick has worn away to an uneven surface so that the original intent of the coating is unknown. The original finish of the walls in the organ chamber is obscured by the plywood sheets that cover the walls and ceiling. The plywood was most likely installed with the 1954 organ.

Though it is highly speculative, it is possible that a pair of columns were originally intended to flank the center memorial window of the chancel. On either side of the window, there are two simple brackets that support the springing of the arched brick window surrounds (Figure 3.41). The window sill is deep enough to receive a column and its base similar in size to the large columns at the intersection between the nave and transepts.

On the exterior of the Chapel, the coal chute outside the east transept has since been removed and filled in.

Intrusions

This section describes briefly the intrusions that are neither from the period of significance nor appear to be significant in their own right.

Site and Exterior

Intrusions to the site and exterior of the Chapel include the pole light fixtures, the wall sconces on the building, the temporary aluminum ramp to vestry, the moveable ramp to main entrance, the site furniture, and the brick paved sidewalks. These intrusions are necessary to accommodate the current functions of the Chapel and its surroundings. The historic photographs from the period of significance and slightly after do not seem to show any exterior light fixtures though it is difficult to tell from them. (Figures 3.89 - 3.93)

Interior

The intrusions to the interior of the Chapel include the addition of two drywall-enclosed closets in the vestry, the interior light fixtures (the gothic revival fixtures and the spotlights in the chancel), the carpet, the cork tile flooring, the brown linoleum in the vestry[17], some of the door hardware (i.e. the lacquered polished brass flush bolts and locksets at door 107a), the 1953 Aeolian-Skinner organ console, the hymn plaques, the phosphorescent exit signs, additional furniture, and possibly two of the clergy chairs. (Figures 3.94 and 3.96)

The current Gothic Revival light fixtures attached to the base of the wood trusses and walls are clearly a later addition, possibly dating to 1954 when the building was rewired. The bronze with translucent white glass fixtures are mounted on blocks of wood painted to match the color of the sandstone spring blocks and the trusses. Their power cords are exposed along the stone block to an outlet on the wall. These light fixtures are visible in an undated historic photograph, which most likely dates to sometime shortly after 1954. (Figure 2.19)

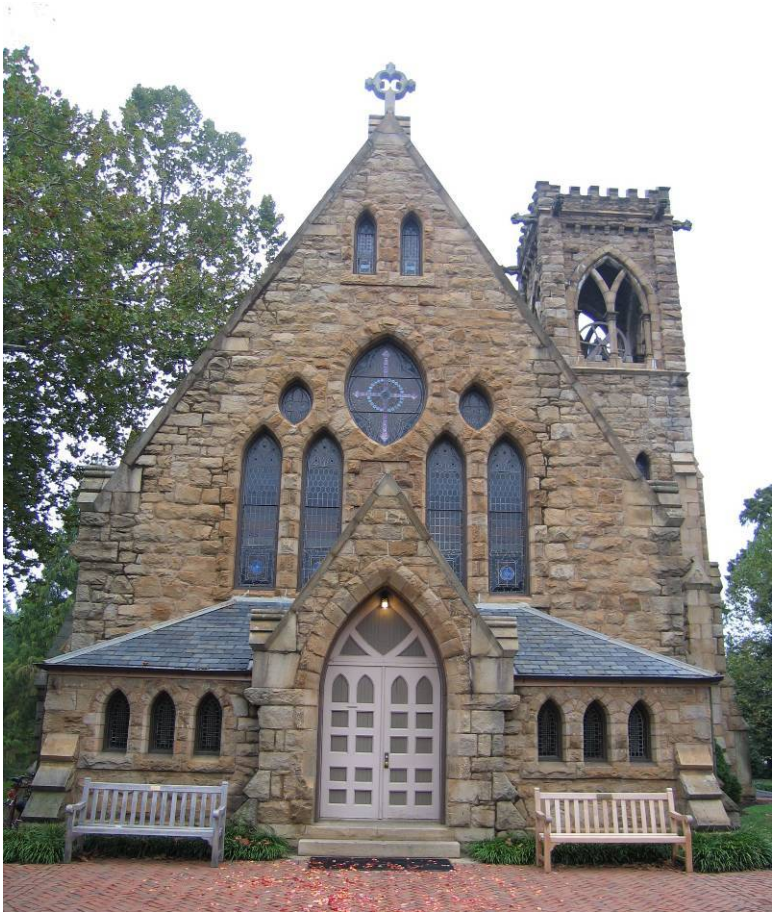
The existing hymn plaque near the west transept is not seen in the earlier undated historic photograph (Figure 2.14). In can be inferred then that the two hymn plaques were not installed during the period of significance. The fleur de lis at the top of the plaque is the same style as that found at the top of one of the clergy chairs, which are also missing from view in the historic photo. It is possible too, that this clergy chair was placed around the same time as the hymn plaques. (Figures 3.95)

[17] The brown linoleum in the Vestry was installed in Spring 2007. It is installed directly onto the concrete substrate.

Photos and Illustrations

Principal exterior views

Figure 3.1
South façade. (QE|A, 2006)



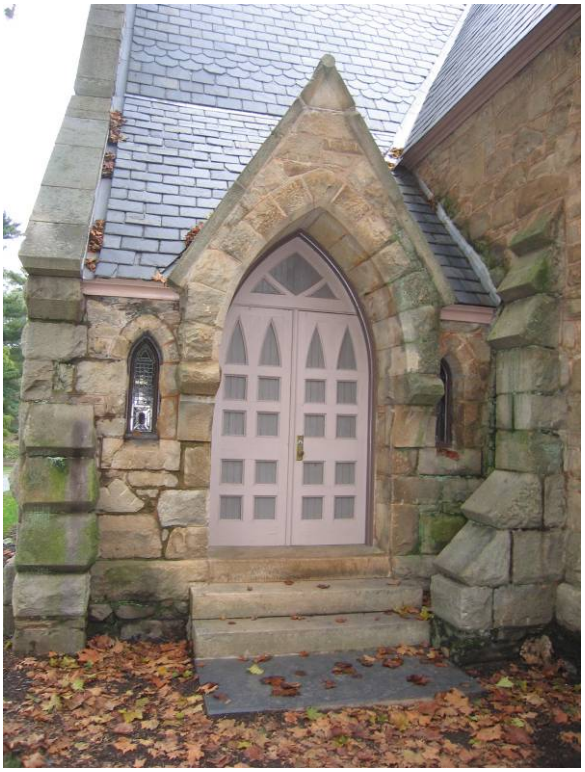


Figure 3.2
Detail of south-facing entrance into west vestibule. (QE|A, 2006)

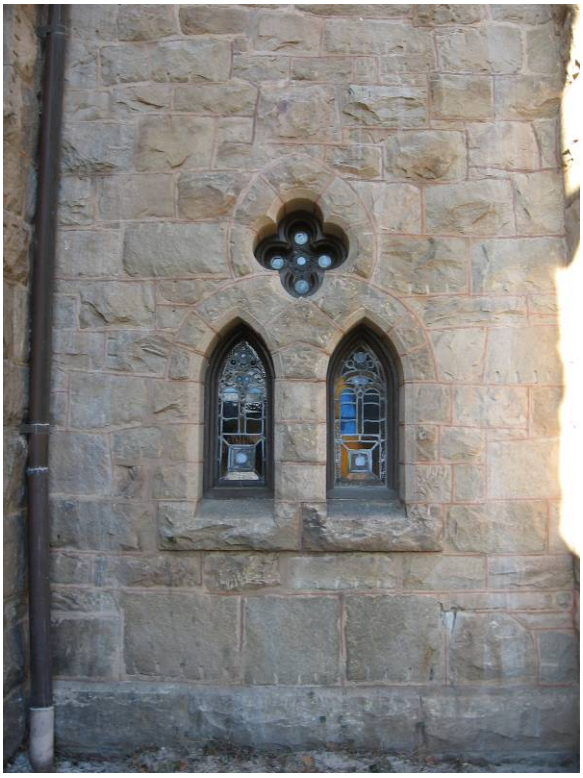


Figure 3.3
Detail of lower south façade of bell tower. (QE|A, 2006)

Figure 3.4
East façade. (QE|A, 2006)

Figure 3.5
East façade of bell tower. (QE|A, 2006)

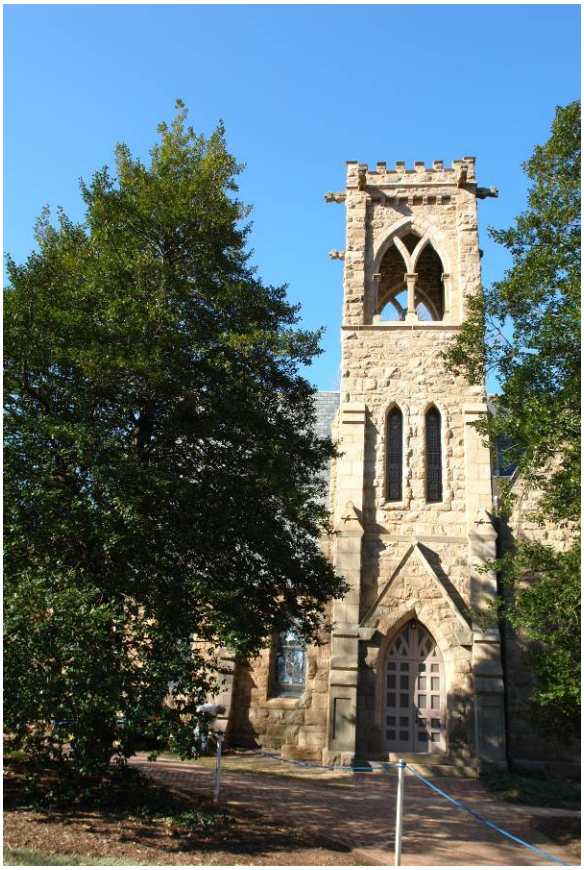


Figure 3.6
North façade. (QE|A, 2006)

Figure 3.7
West façade. (QE|A, 2006)

Significant exterior features

Figure 3.8
Detail of slate roof on east façade. (QE|A, 2006)

Figure 3.9
Detail of historic photo of northeast corner, undated, photographer unknown. (UVA Special Collections)

Other historic photos from 1917 and 1920-25 show a heavy covering of vines on bell tower, east and north facades. This photo probably dates to this time.

Note the pattern of the roof.

Figure 3.10
Detail of copper gutters and flashing at south parapet. (QE|A, 2006)

Figure 3.11
Detail of stone masonry construction on east façade. (QE|A, 2006)

Note the grooves from splitting the rock at the quarry.

Figure 3.12
Masonry at the organ room and east transept. (QE|A, 2006)

Note the use of orange and red stones for the organ room walls which are not present anywhere else.

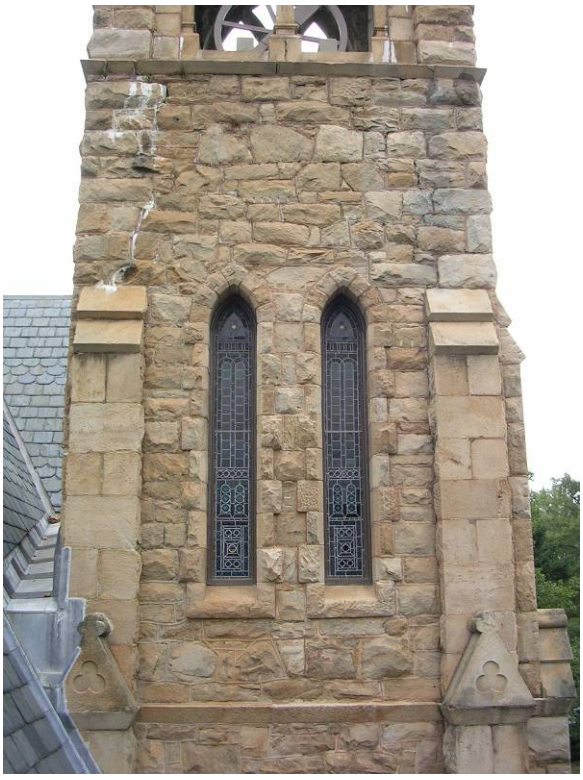


Figure 3.13
South façade, second story of the bell tower. (QE|A, 2005)

Since this photo was taken the bell tower repair project completed the repointing and removal of the efflorescence.

Figure 3.14
Detail of the south façade of the bell tower. (QE|A, 2006)

Note the new repointing completed during the 2006 bell tower repair project.

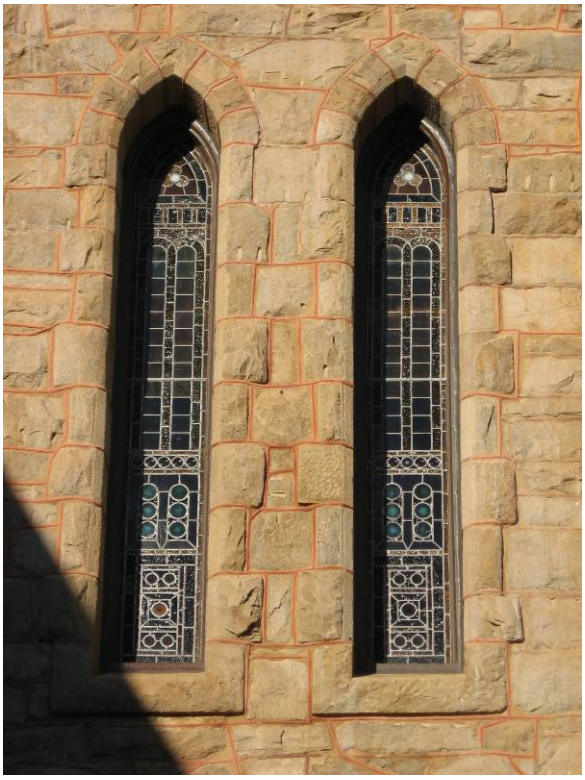


Figure 3.15
Detail of the new repointing. (QE|A, 2007)

Figure 3.16
Detail of the carved elements and open tracery at the bell tower. (QE|A, 2006)

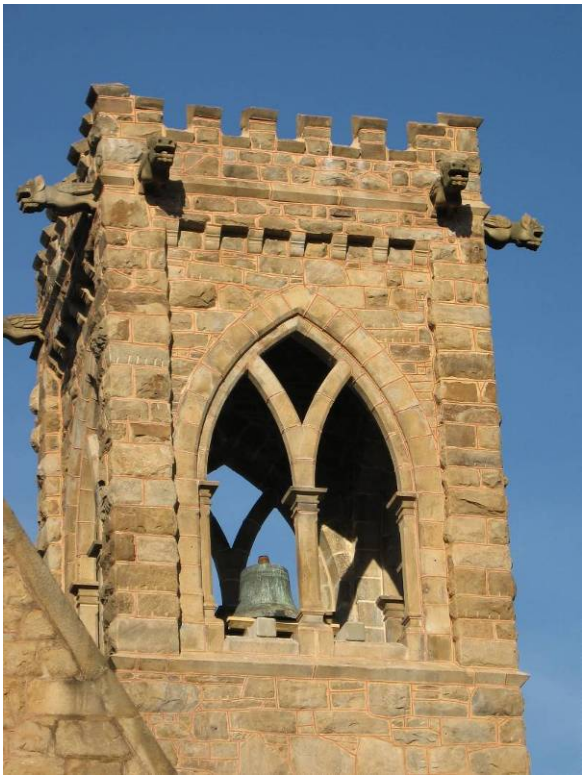


Figure 3.17
Detail of the chimney. (QE|A, 2006)

Figure 3.18
Detail of two different wood molding profiles at the west façade. (QE|A, 2006)

Figure 3.19
Detail of the bell and yoke. (QE|A, 2005)

This photo was taken prior to the tower and ongoing bell restoration.

Doors

Figure 3.20
Detail of the door to the vestry. (QE|A, 2006)

Figure 3.21
Detail of the door hardware for the vestry door. (QE|A, 2006)

Windows

Figure 3.22
Detail of south-facing windows of the vestry. (QE|A, 2006)

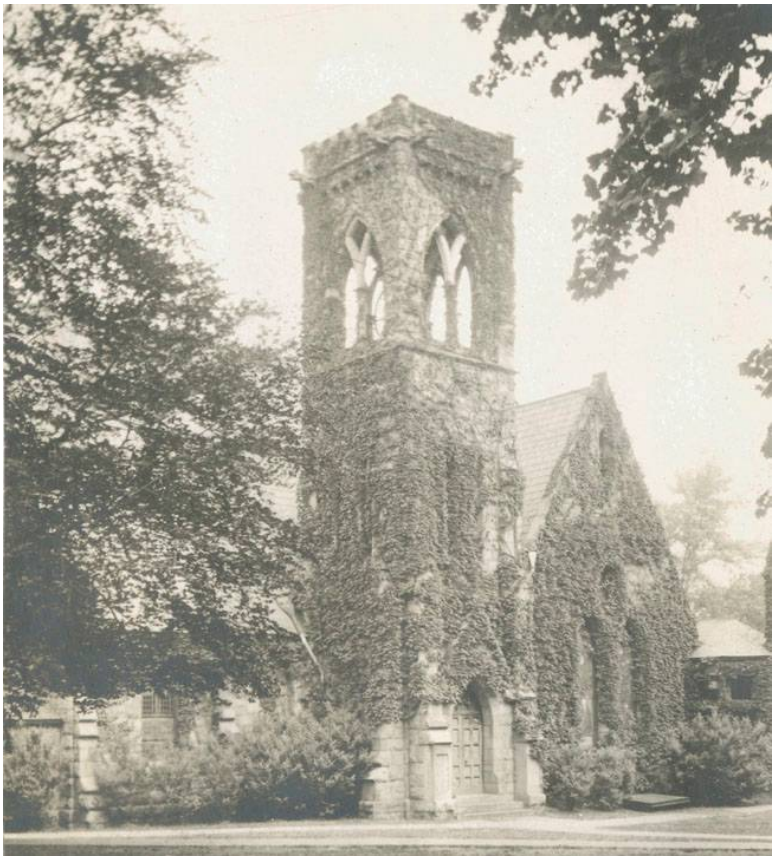
Figure 3.23
Detail of lancet head window to the nave along the west façade. (QE|A, 2006)

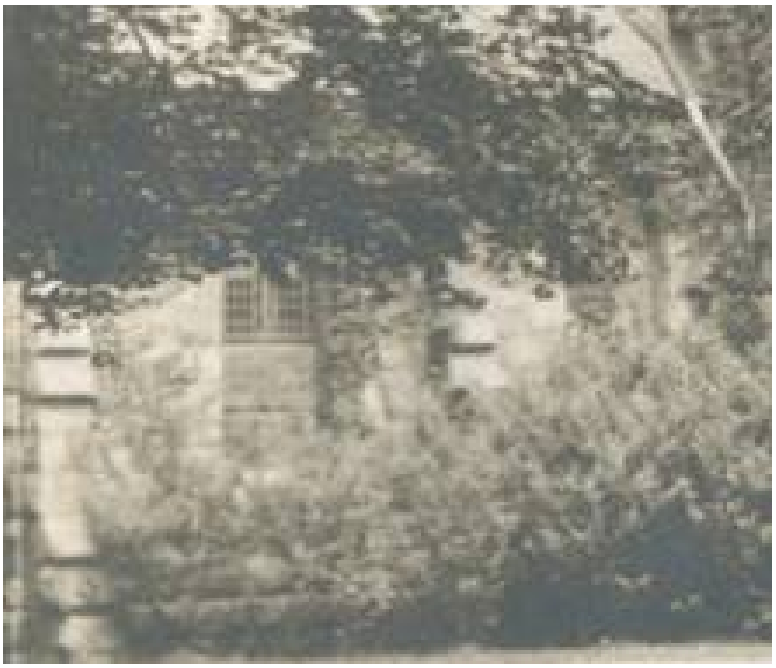
Figure 3.24
Memorial lancet window to John Staige Davis, M.D. (1866-1933) and Volumnia Staples Davis (1867-1949) depicting Saint Luke, located on the east nave wall to the right (closest to the Narthex) . (QE|A, 2006)

This window was most likely installed ca. 1949.

Figure 3.25
Historic photo and photo detail of east façade, 1915, photographer unknown. (Special Collections, University of Virginia Library)

Note that the photo detail shows the previous window where the current memorial window of Saint Luke now is located. (Similar to Figure 2.21)





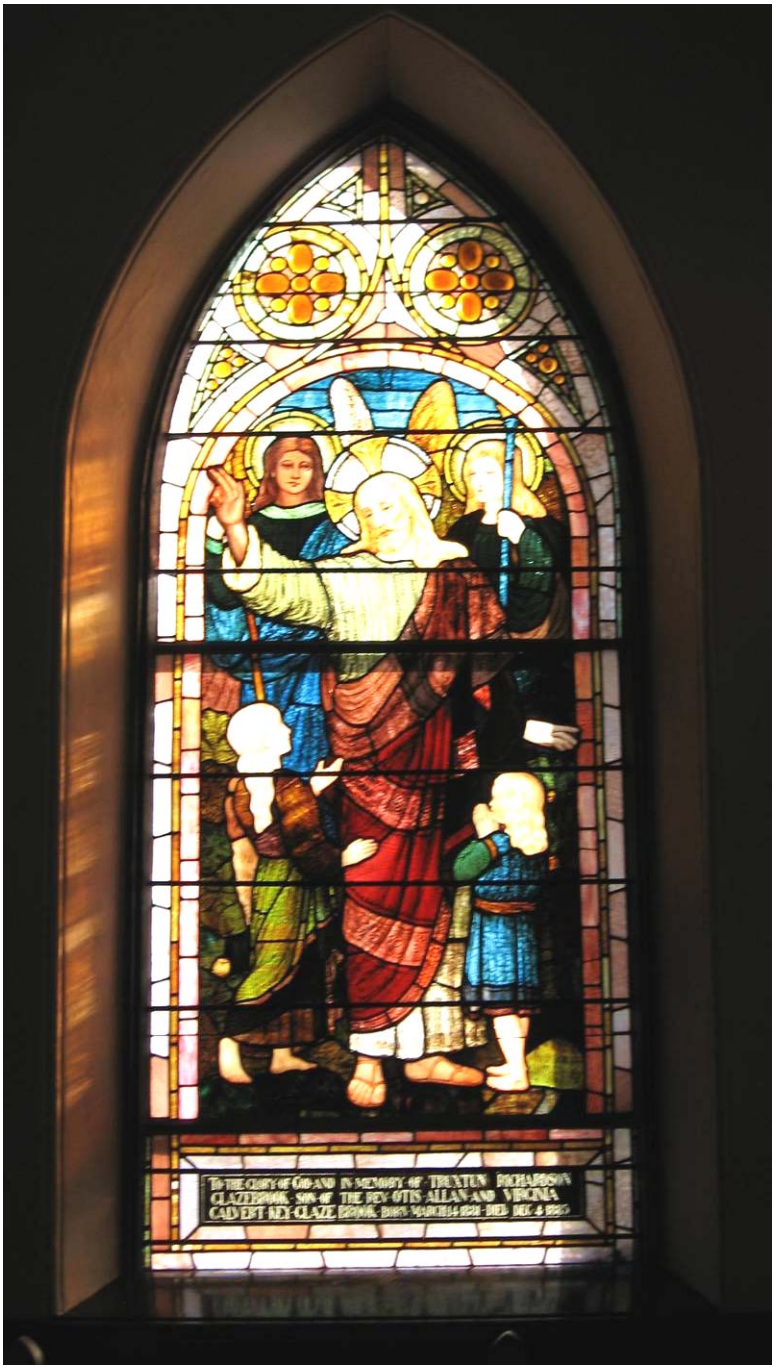


Figure 3.26
Memorial lancet window to Reverend Glazebrook's son Truxtun Richardson Glazebrook (1881-1885) depicting Christ with the children, located on the east nave wall to the left (closest to the Chancel). (QE|A, 2006)

This window was most likely installed ca. 1890 as part of the original construction.

Figure 3.27
Memorial lancet window to Mary Lou Sprenger Roseberry (1925-1978) depicting Saint Mary (?), located on the west nave wall to the left (closest to the Narthex). (QE|A, 2006)

This window was most likely installed ca. 1978.

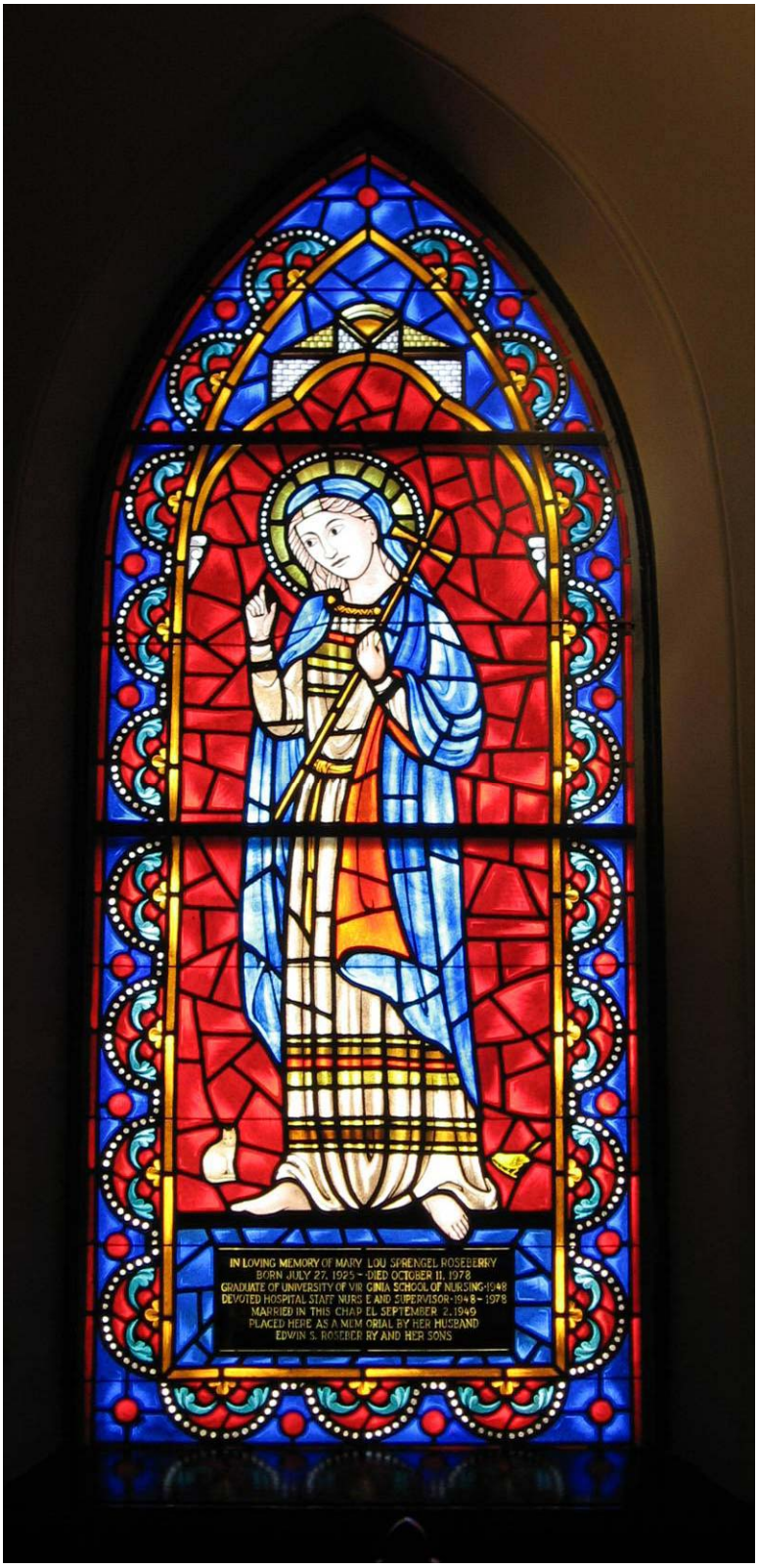
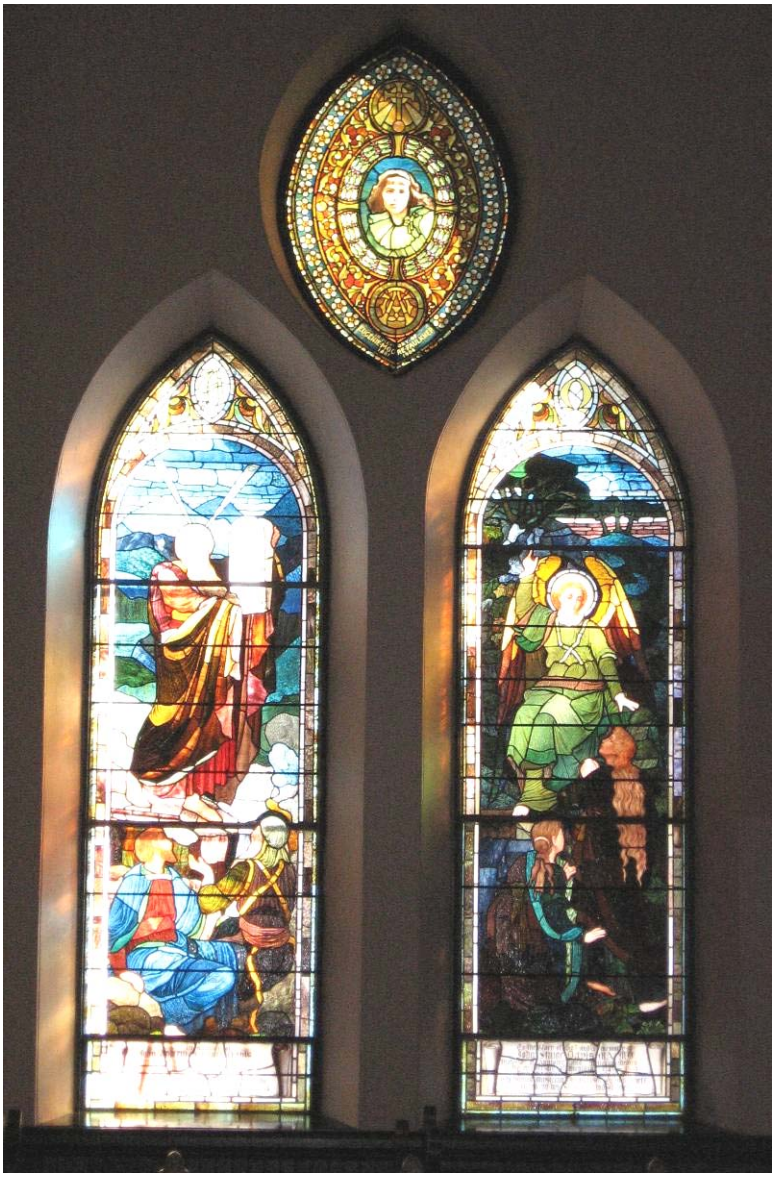


Figure 3.28
Memorial lancet window to Mary Stuart Harrison Smith (1834-1917) depicting Christ and two women (presumably Saint Mary and Mary Smith), located on the west nave wall to the right (closest to the Chancel). (QE|A, 2006). It is signed "Duncan Smith 1921."

This window was most likely installed ca. 1921.

Figure 3.29



Top: Memorial mandorla window to Eugenie Moore Faulkner (1881-1906) designed by Tiffany Studios c. 1906, depicting a young girl, located on the east wall of the East Transept above the lancet windows. (QE|A, 2006)

This window was most likely installed ca. 1906.

Left: Memorial lancet window to John Andrew Gardner Davis (1802-1840) designed by J. & R. Lamb depicting Moses with the Ten Commandments, located on the east wall of the East Transept to the left (closest to the Study), 2006.

This window was most likely installed ca. 1890 as part of the original construction.

Right: Memorial lancet window to John Staige Davis (1824-1885) designed by J. & R. Lamb depicting the angel at Christ's empty tomb, located on the east wall of the East Transept to the right (closest to East Vestibule), 2006.

This window was most likely installed ca. 1890 as part of the original construction.

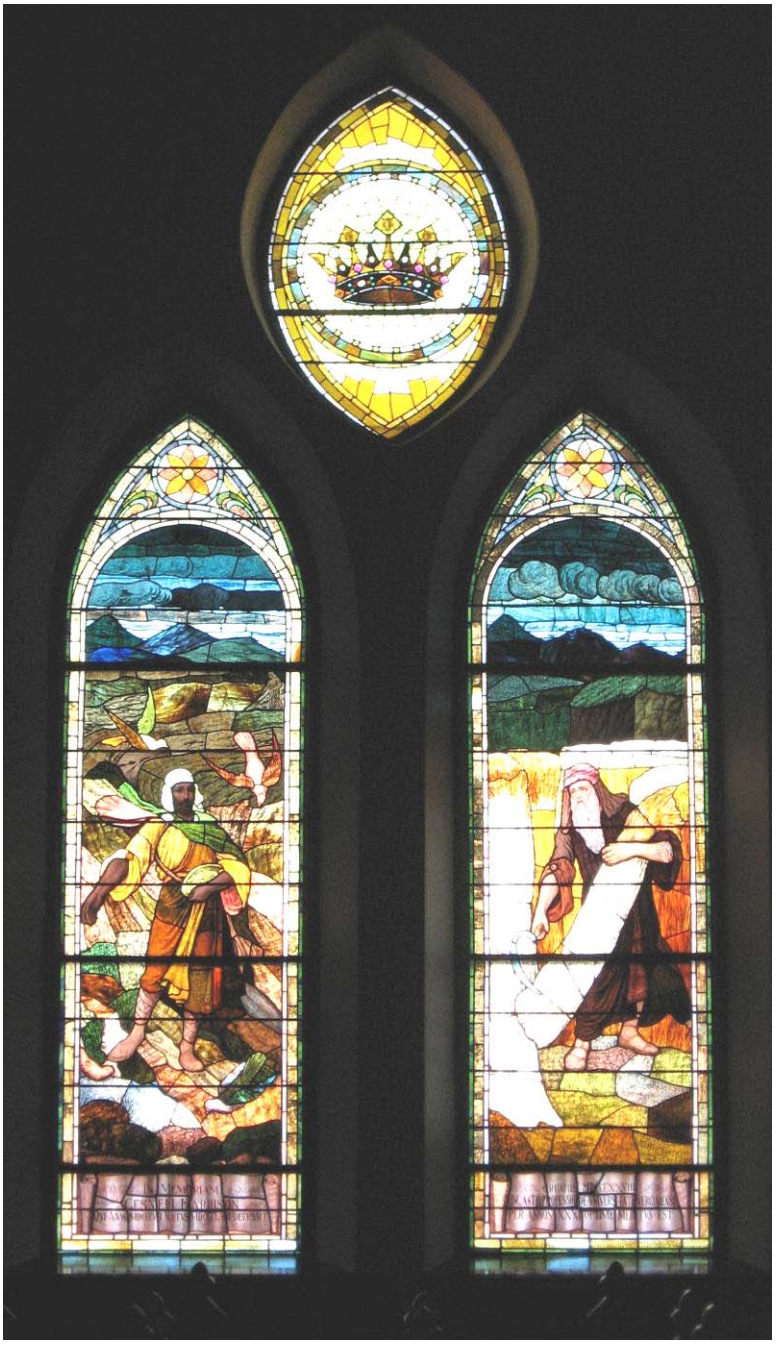


Figure 3.30
Memorial windows to Gesner Harrison (1807-1862), a professor at the University, depicting a sower and a reaper in the left and right lancet windows and a crown in the mandorla, designed by J. & R. Lamb, located on the west wall of the West Transept. (QE|A, 2006)

This window was most likely installed ca. 1890 as part of the original construction.

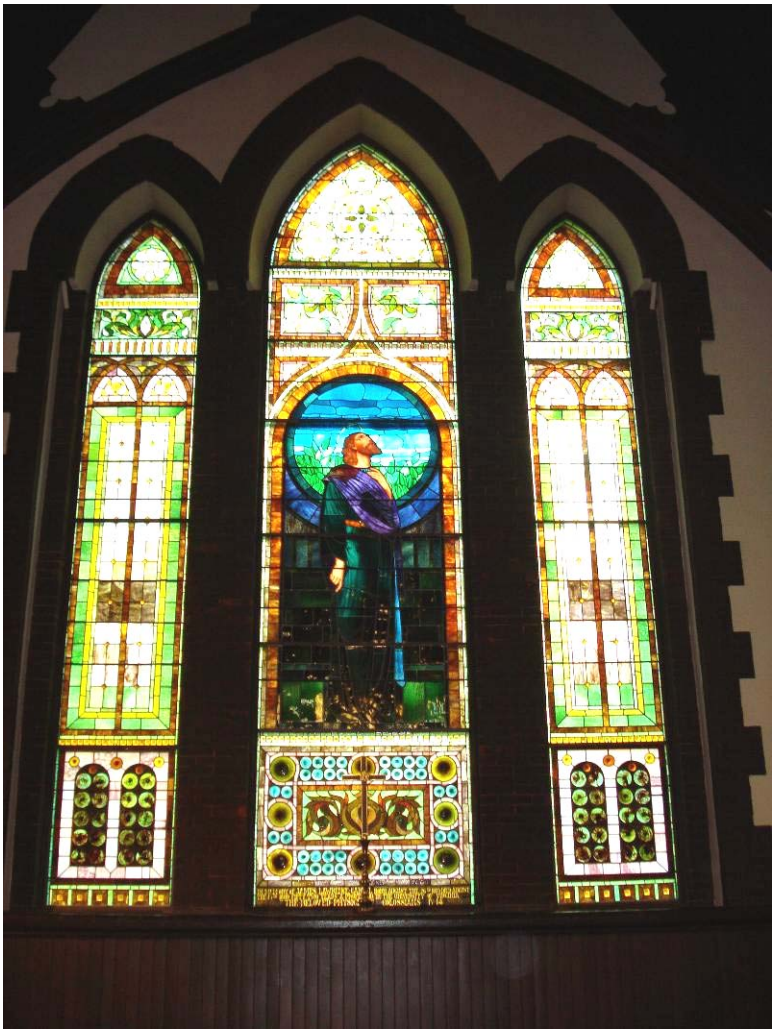


Figure 3.31
Memorial lancet windows to Dr. James Lawrence Cabell (1813-1889) who was a professor at the University for 52 years, depicting Christ in the Garden of Gethsemane, located on the north wall of the Chancel. (QE|A, 2007)

This window was most likely installed ca.1890 as part of the original construction.

Figure 3.32
Lancet windows above chancel memorial windows. (QE|A, 2006)

This window was most likely installed ca.1890 as part of the original construction.

The lancet windows above the east and west transepts are of the same design and were also most likely installed ca.1890.

Figure 3.33
Window along east wall of narthex. (QE|A, 2007)

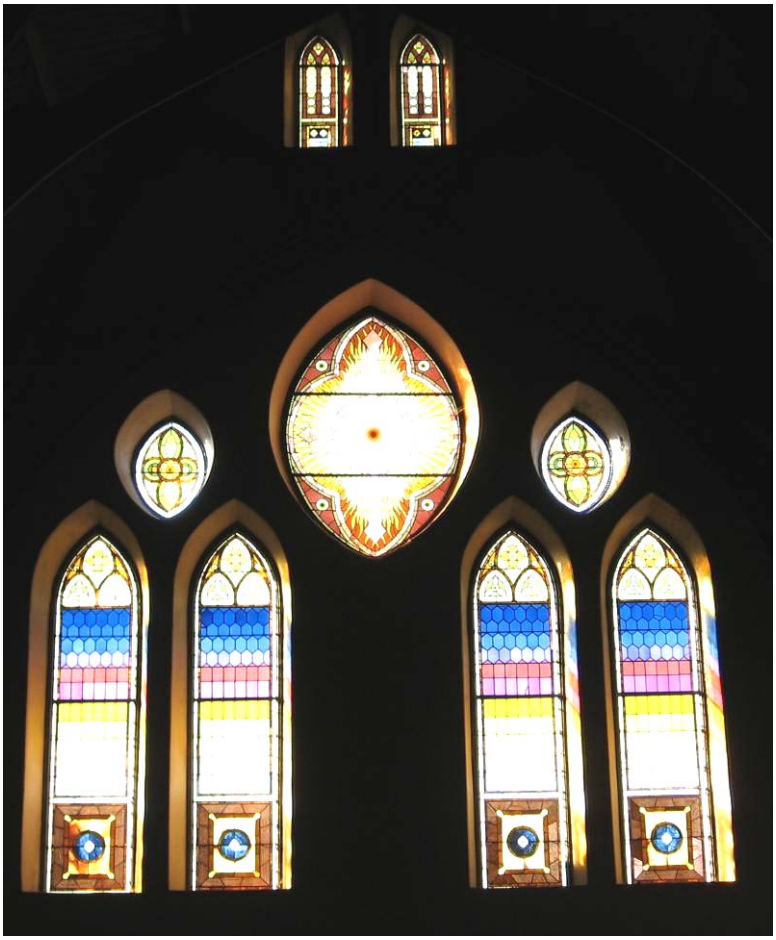
This window was most likely installed ca.1890 as part of the original construction.

Figure 3.34
Window along south wall of west vestibule. (QE|A, 2006)

This window was most likely installed ca.1890 as part of the original construction.

Figure 3.35
South end of Nave windows. (QE|A, 2006)

These windows were most likely installed ca.1890 as part of the original construction.



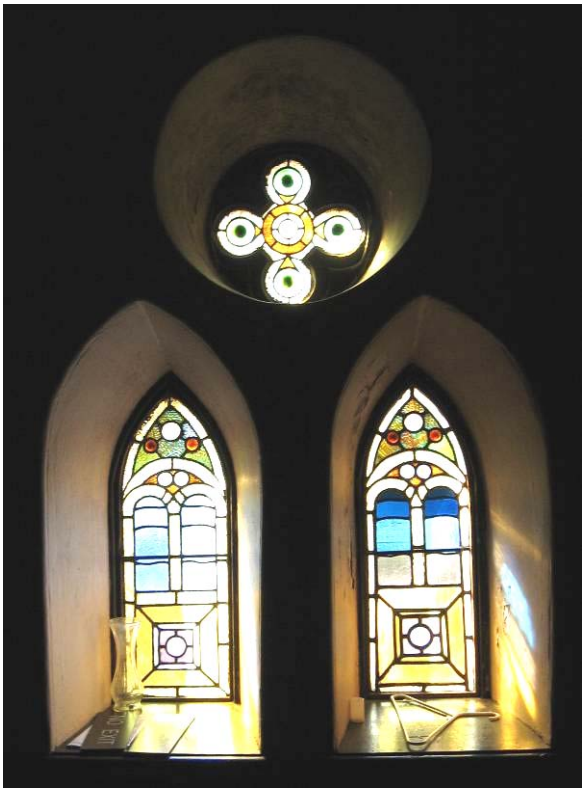


Figure 3.36
Windows in bell tower east vestibule. (QE|A, 2006)

These windows were most likely installed ca. 1890 as part of the original construction.

Figure 3.37
Window at second level of bell tower. (QE|A, 2005)

These windows were most likely installed ca. 1890 as part of the original construction.

Principal views of each space

Figure 3.38
West view of the narthex.
(QE|A, 2006)

Figure 3.39
South view of the nave.
(QE|A, 2007)

Figure 3.40
North view of the chancel.
(QE|A, 2006)

Figure 3.41
Detail of windows on the north wall of the chancel.
(QE|A, 2006)

Note the small brackets at the springing of each arch. It is possible that the original design intent would have been to add columns to support the arches.

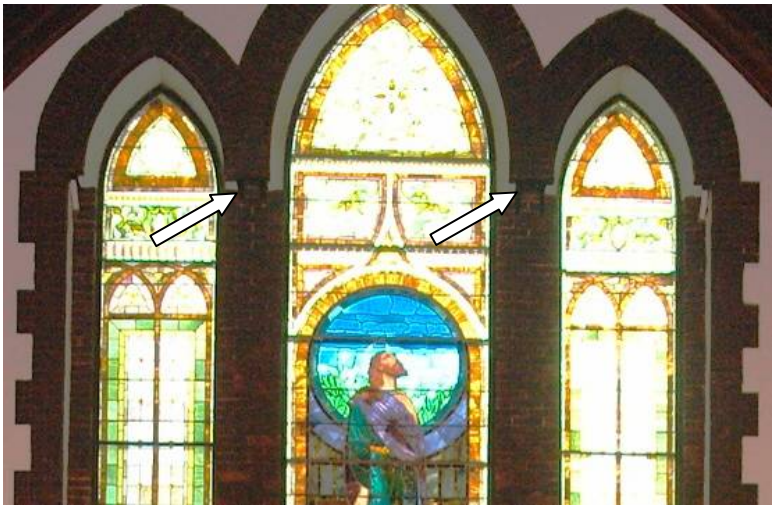


Figure 3.42
East view of the east transept. (QE|A, 2006)

Figure 3.43
North view of the east transept. (QE|A, 2006)

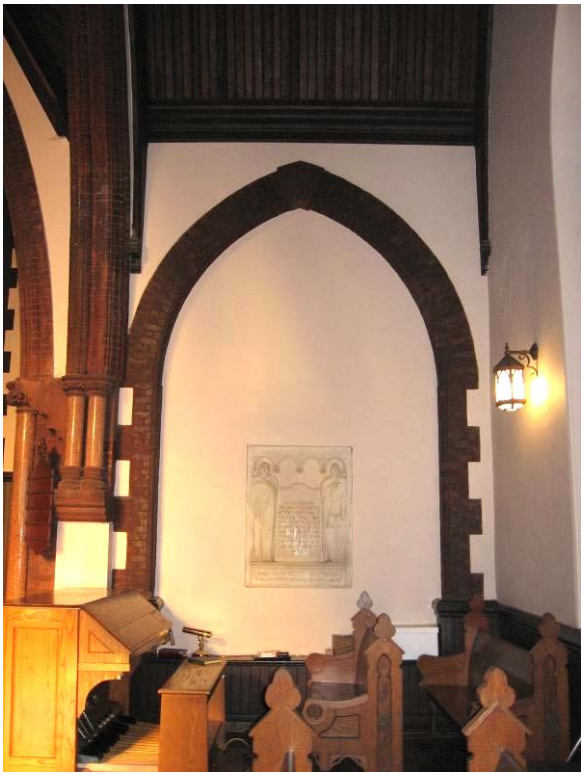


Figure 3.44
West view of the west transept. (QE|A, 2006)

Figure 3.45
North view of the west transept. (QE|A, 2006)

Note the façade pipes from the original organ within the arch.

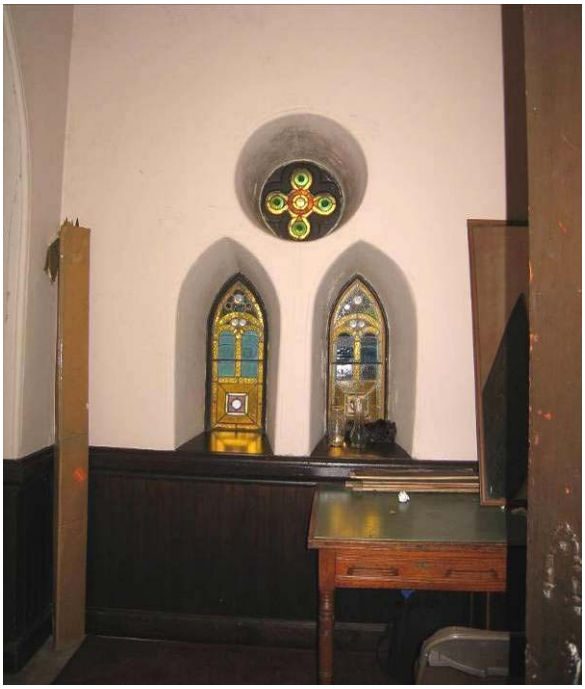


Figure 3.46
South view of the east vestibule in the bell tower. (QE|A, 2006)

Figure 3.47
East view of the vestry.
(QE|A, 2006)

Significant interior features

Figure 3.48
East wall of the nave.
(QE|A, 2006)

Figure 3.49
Detail of wainscot, at the southeast corner of the nave.
(QE|A, 2006)

Figure 3.50
Fireplace in the vestry.
(QE|A, 2006)

Figure 3.51
Detail of the pressed brick arches at the east transept.
(QE|A, 2006)

Figure 3.52
Detail of the granite columns & sandstone capitals and bases at the east transept. (QE|A, 2006)

Figure 3.53
Detail of the shorter granite columns & sandstone capitals and bases at the west transept. (QE|A, 2006)

Note that there are two different styles for the short and tall columns. Note the unfinished end of the red sandstone bracket behind the short columns.

Figure 3.54
Southwest view of the nave. (QE|A, 2006)

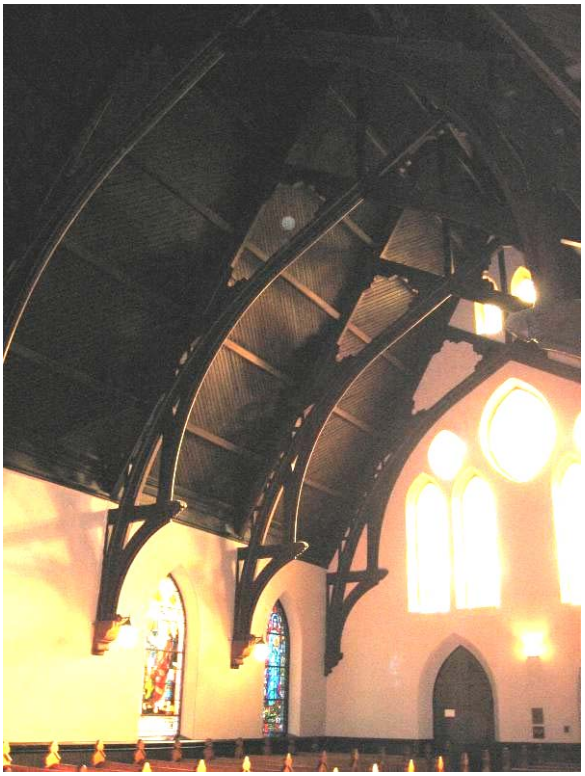


Figure 3.55
Detail of carved head at the truss. (QE|A, 2006)

Note the gas bib beneath the carved head.

Figure 3.56
Detail of spring block in the nave and at the chancel. (QE|A, 2006)

Ceiling

Figure 3.57
Beadboard ceiling at the west wall of the nave. (QE|A, 2006)

Note the crown molding that is different from that in the vestry.

Figure 3.58
Detail of the beadboard ceiling in the west vestibule. (QE|A, 2006)

Note the two different edge treatments on the purlins: rounded and chamfered.

Figure 3.59
Detail of the vestry brackets, crown molding, and beadboard ceiling. (QE|A, 2006)

Note the crown molding that is different from that in the nave.

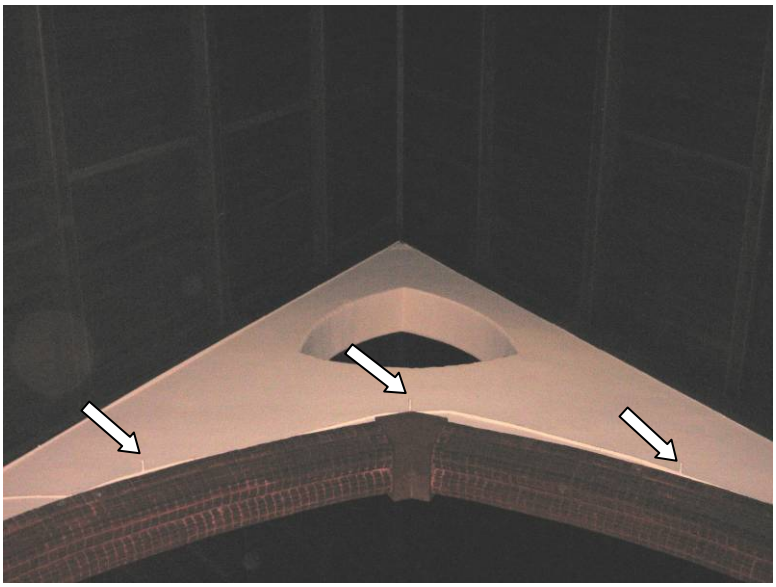


Figure 3.60
Detail of the pipes protruding from the wall over the arch facing the chancel. (QE|A, 2006)

Figure 3.61
Louvers in the vestry.
(QE|A, 2006)

Doors and door hardware

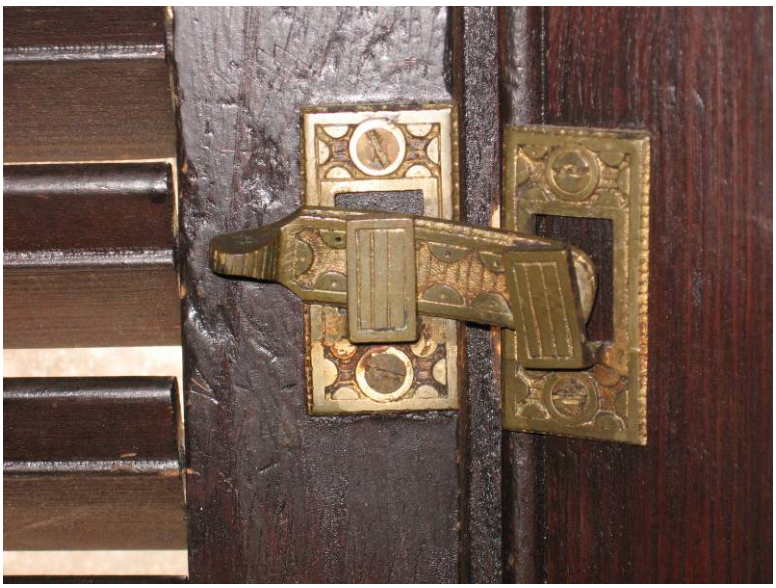


Figure 3.62
Latch on the louvers. (QE|A, 2006)

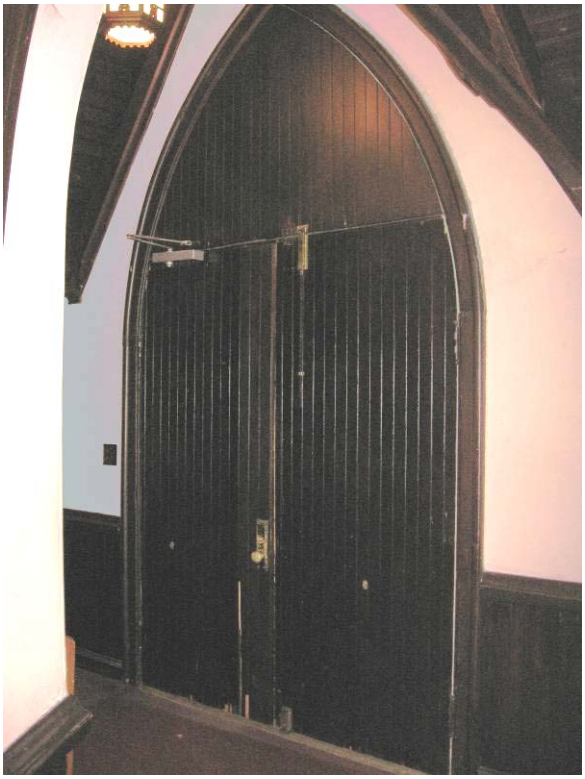


Figure 3.63
Main entrance exterior doors into narthex (door 109a). (QE|A, 2006)

Note the continuous beadboard used for door leaves and transom panel, There is no gothic style paneling on the interior face as there is on the exterior face.

Figure 3.64
Door into the nave, (door 109c, door 109b is similar). (QE|A, 2006)

Note the split transom.

Figure 3.65
Door into the vestry (door 106b). (QE|A, 2006)

This is the only door with gothic style cusps in the upper arched portion of the door. Also, the arched portion is part of the door and not split to create a transom like the other doors (except the one to the organ chamber).

Figure 3.66
Door into the organ chamber (door 105b). (QE|A, 2006)

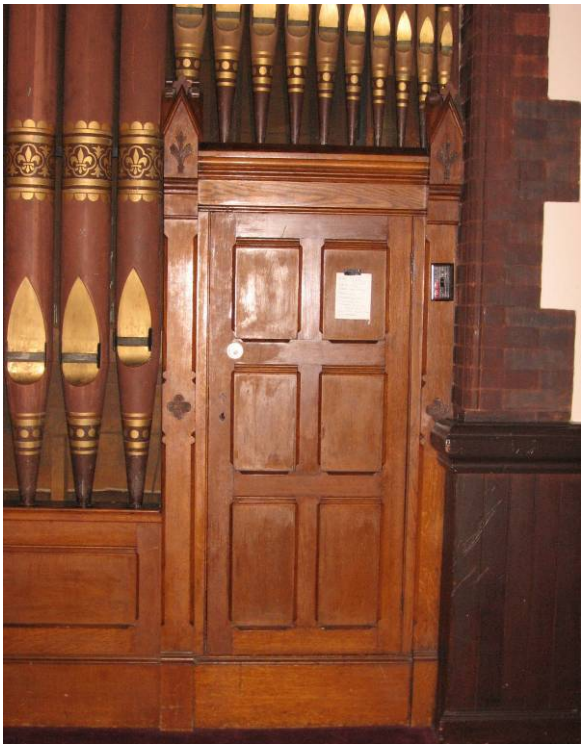


Figure 3.67
Door into the west transept (door 108b). (QE|A, 2006)

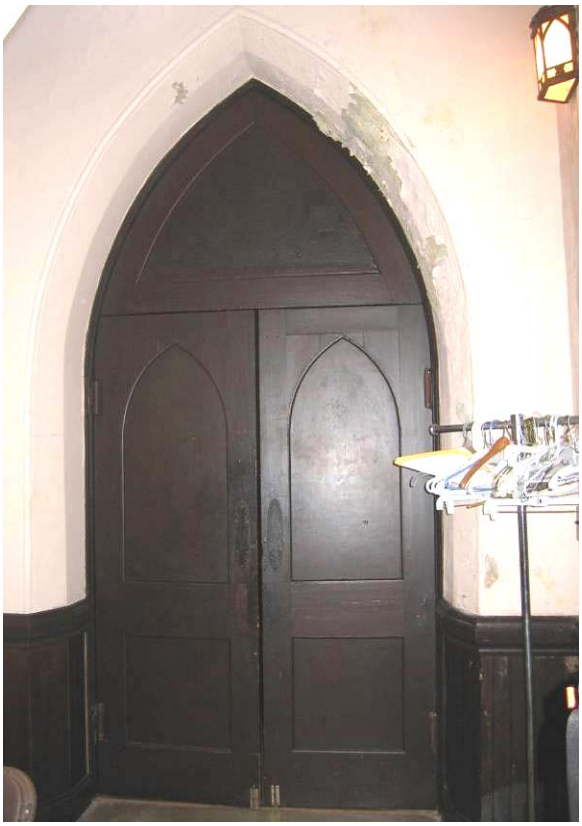


Figure 3.68
East entrance door into the east vestibule of the bell tower (door 108a). (QE|A, 2006)

Figure 3.69
Pushplates to door 109c, similar to 107b and 109b. (QE|A, 2006)

Figure 3.70
Detail of the lower right hinge to door 109c. (QE|A, 2006)

Figure 3.71
Detail of the upper right hinge of door 107b. (QE|A, 2006)

Figure 3.72
Detail of the upper right hinge of door 106b. (QE|A, 2006)

Furnishings

Figure 3.73
Oak pews in east transept. (QE|A, 2006).

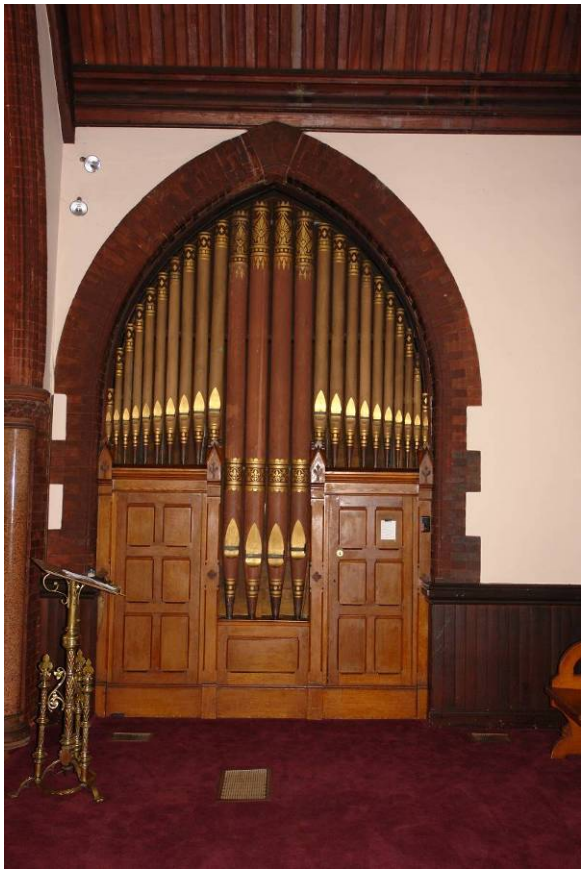


Figure 3.74
Organ façade pipes from the original organ on the west wall of chancel. (QE|A, 2006)

Figure 3.75
Altar in the chancel. (QE|A, 2006)

Figure 3.76
Two of the four clergy chairs. (QE|A, 2006)

Note the two different types of pinnacles and the number of quatrefoils across the back.

Note that the taller chair on the left is visible in the historic interior photo, Figure 3.78.

Figure 3.77
Two of the four clergy chairs. (QE|A, 2006)

Note the pinnacles and the number of quatrefoils across the back match the taller chair in the previous photo.

Note that at least one of these two chairs is visible in the historic interior photo, Figure 3.78.

Figure 3.78
Detail of historic photo of chancel, undated, photographer unknown. (Special Collections, University of Virginia Library)

Note the taller clergy chair (Figure 3.76) in the center flanked by one of the shorter clergy chairs (Figure 3.77) and the brass lectern. Almost visible is the other shorter clergy chair (Figure 3.77) on the far right of the photograph.

Figure 3.79
Stand in the narthex. (QE|A, 2007)

Figure 3.80
Detail of the brass lectern. (QE|A, 2006)

Note that the same lectern is visible in the historic interior photo, Figure 3.78

Memorial plaques

Figure 3.81
Memorial plaque to Sgt. Andrew Courtney Campbell Jr. (1891-1917), located on the far left of the north wall of the Narthex. (QE|A, 2006)

This plaque was most likely installed ca. 1917.

Figure 3.82
Memorial plaque to Sgt. James McConnell (1887-1917), located in the middle of the north wall of the Narthex. (QE|A, 2006)

This plaque was most likely installed ca. 1917.

Figure 3.83
Memorial plaque to William Richard Galt (1818-1892), located on the far right of the north wall of the narthex. (QE|A, 2006)

This plaque was most likely installed ca. 1892.

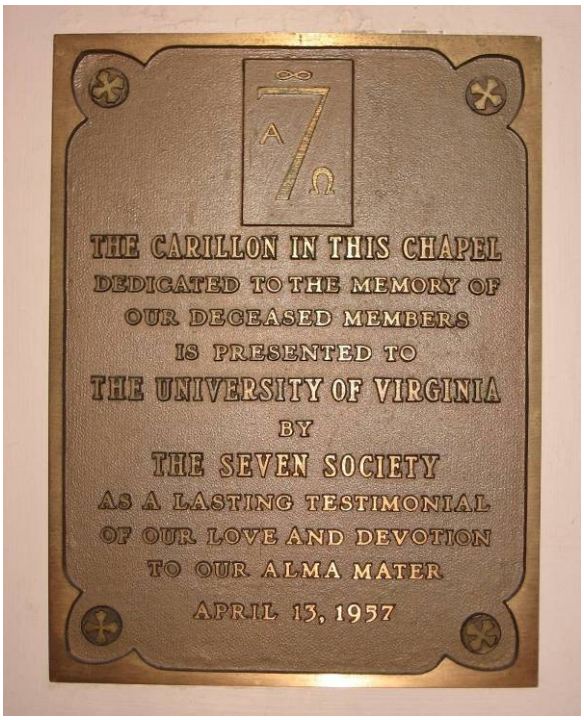


Figure 3.84
Memorial plaque to deceased members of the Seven Society, located on the south wall of the nave. (QE|A, 2006)

This plaque was most likely installed ca. 1957 when the carillon was installed.

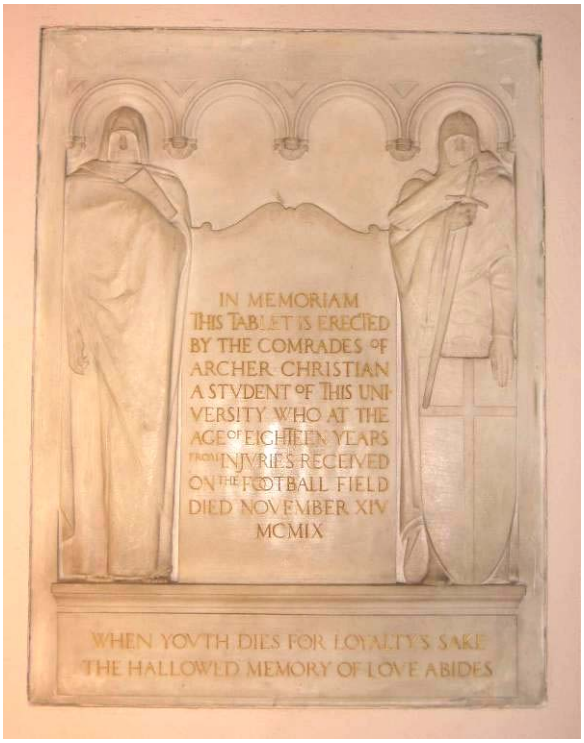


Figure 3.85
Memorial plaque to Archer Christian (1891-1909), signed by John Gregory in 1912, located on the north wall of the east transept. (QE|A, 2006)

This plaque was most likely installed ca. 1912.

Figure 3.86
Memorial plaque to several individuals who died in 1918, located on the west wall of the west transept. (QE|A, 2006)

This plaque was most likely installed ca. 1918.

Figure 3.87
Memorial plaque to John Patten Emmet MD (1796-1842) and his wife Mary Byrd Tucker Emmet (1804-1860), signed by J. R. Lamb and Sons, located on the west wall of the east vestibule in the bell tower. (QE|A, 2006)

This plaque was installed in 1890.

Absent or obscured items

Figure 3.88
Detail of historic photo of transept, undated, photographer unknown. (Special Collections, University of Virginia Library)

Note the bulb-like electric fixture hanging from the neck of the carved head at the truss.

Intrusions

Figure 3.89
Wall sconce fixture at entrance into bell tower. (QE|A, 2006)

Note that a similar light fixture is located above the main entrance.

Figure 3.90
Wall scone fixture at door to vestry. (QE|A, 2006)

Figure 3.91
Wall sconce fixture on the east wall of the nave. (QE|A, 2006)

Note the added mounting block is painted to match the color of the stone. Note also the unconcealed cord and outlet.

The wall sconces in the nave are similar to the ones on the transept walls except that the wiring is concealed in the latter.

The style of the pendant in the narthex matches these wall sconces.

Figure 3.92
Surface mount fixture on the south wall of the nave. (QE|A, 2006)

Figure 3.93
Pendant light fixture in the vestry. (QE|A, 2006)

Figure 3.94
Organ. (QE|A, 2006)

Figure 3.95
West hymn plaques. (QE|A, 2006)

Figure 3.96
Detail of the cork tile flooring and carpeting at the south end of the nave. (QE|A, 2006)

CHAPTER 4: DOCUMENTATION OF CURRENT CONDITIONS

Significant Exterior and Interior Building Features

This chapter will discuss the conditions of building features from the period of significance 1884-1890 as well as those that were installed after 1890. In a few cases, this chapter will review the conditions of intrusions as described in Chapter 3. Overall, conditions range from good to poor.

The following condition assessment criteria will be used for architectural elements: excellent, good, fair, and poor.

- *Excellent* is defined as elements that perform their original function and require no renewal or repair.
- *Good* is defined as elements that perform their original function and require only limited repair or renewal. Generally, this would be applied to new or recently installed materials.
- *Fair* is defined as elements with only minor or limited areas of failure. Elements would require some repair or corrective action.
- *Poor* is defined as elements that only marginally function as originally intended. Deterioration or loss is more significant and significant repair work, partial replacement, or full replacement is required.

Exterior Conditions

Summary:

Overall the conditions of the significant exterior features are good. There is a great deal of biological growth on some of the masonry. There is some missing or loose mortar. There are a few cracks in the stone but no severe structural cracks. Fortunately, the roof is relatively new, nearly all of the stained glass windows were recently restored, and the bell tower was repaired in the last year.

Stonework:

The stonework is in fair condition. There is evidence of biological growth, cracking, spalling, staining, missing or loose mortar, and intentional damage. Much of the biological growth is on the north facade of the Chapel which is very shaded and in close proximity to the several large holly trees. (Figures 4.1) Other concentrations of biological growth primarily occur on the west façade buttresses where the rainwater pours off the roof without the aid of a gutter. (Figures 4.2 and 4.7) Another concentration of biological growth is along the length of the downspout between the vestry and the east transept. Most of the buttresses around the Chapel and projecting surfaces do have some accumulation of biological growth.

There are upward facing cracks on two of the window sills and two of the steps into the Chapel. These cracks have the potential to store water that could freeze and thereby expand the cracks even more. The cracks at the window sills have already traveled down the wall following the path of the mortar joints. These cracks in the stone walls and sills were noted in the 1989 structural inspection and were attributed to settlement.[1] There is also some cracking and deteriorating stone right below the wood trim at the entrance to the west vestibule. At the door jamb of the west vestibule is some actively spalling stone[2], loose and crumbling mortar, disintegrating stone (stone has become fine powder), and staining. (Figure 4.3)

Mortar is missing in several isolated locations: around the chimney (Figure 4.4), some of the upward facing joints of the north and south parapets, and the corners of the watertable around the organ room. The last one is most likely caused by the leaking gutter above that has allowed water to fall directly on the joint.

Stonework inside the bell tower was cleaned of all its biological growth and repointed in 2006.

[1] "University Chapel Structural Inspection," University of Virginia, 1989, p. 7.
[2] Between the December and January site visits, this small area of spalling stone had doubled in size.

Pitched Roofs:

The slate tiles are in good condition. The tiles are fairly new having been installed in 1991 and do not show much wear.[3] (Figure 4.5)

Flashing:

The flashing on the main roof, believed to be lead-coated copper, dating to the 1991 roof replacement, is in good to fair condition. (Figure 4.6) Over the narthex, the slate and flashing may be original. The cast iron ridge cap flashing over the narthex, nave, and vestry show rust stains. These should be repainted. (Figure 4.6) There may still be a potential leak between the tower and the nave roof even though this cricket was presumably replaced in the 1991 roof replacement project.

Gutters and downspouts:

The gutters and downspouts appear to be in good condition. Several were presumably installed during the most recent roofing project. At least one downspout has been painted the same color as the trim. There is a genuine need for gutters and downspouts along the east and west facades of the nave towards the narthex as well over the entrance into the west vestibule. At these locations, rainwater is spilling off the roof, splashing on the buttresses, falling on the ground and splashing back up on the masonry. Coincidentally, there is a downspout boot in the corner between the nave and west vestibule. It is unknown if this boot and the other buried boot by the vestry connect to the University's rainwater drainage system. Additionally, there is no positive drainage (raised grade) around the perimeter of the Chapel to direct rainwater away from the building. (Figures 4.7)

Wood trim:

The wood trim appears to be in good condition. There is no visible peeling paint. On the south façade, the paint appears to be over unsanded alligatored paint. Several window sills were given a penknife test and found to be in good condition.

Bell:

The bell, yoke, wheels, and support is currently undergoing restoration at the time of this report. These features were not observed for this report.

[3] There are quite a few broken slate pieces on the ground outside of the entrance to the west vestibule. It is unclear from where these pieces may have come.

Windows:

All the stained glass windows except for the Tiffany mandorla on the east transept were restored by Beyer Studios in 1993-1994. They can be considered to be in good condition with the minor exception of a couple broken pieces of the stained glass in the narthex. There is one broken pane of clear glass in the vestry.

Interior Conditions

Summary:

Overall the conditions of the significant interior features are fair. There is isolated damage that can be seen on the plaster walls. This has probably been caused by water infiltration and normal wear and tear. Fortunately, it appears that much of the damage is cosmetic or aesthetic. The most noticeable damage is the peeling and flaking paint in the east vestibule in the bell tower.

Flooring:

The original wood flooring of the Chapel is concealed by the cork tile, plywood, and the carpeting in the nave, transepts, chancel, and narthex. Therefore, the condition of the top side of the hardwood flooring is unknown. There is a slight depression along the west wall and at the southeast corner of the west transept where the cork tile has cracked. The wood flooring within the organ chamber is in good/fair condition. It is worn and has a couple small water stains along the west wall of the organ chamber. The steps at the threshold from the chancel to the organ chamber are very worn.

The vestry has at least two layers of nine by nine inch vinyl tile flooring. The original flooring is unknown. The stone tile flooring at the fireplace hearth is probably original. This stone tile is in poor condition with possible adhesive remnants and uneven wearing. (Figures 4.8)

The east vestibule in the bell tower is missing a finish floor on top of the concrete slap as well as any transition from the transept's cork floor to the concrete.

Plaster walls:

The painted plaster walls are in fair condition. At one point, considerable plaster repairs were undertaken throughout the Chapel since the 1989 structural inspection.[4] (Figure 2.19)

[4] "University Chapel Structural Inspection," University of Virginia, 1989, p. 2-6.

There is isolated peeling paint, cracking paint, bubbling paint and exposed plaster. Evidence of this damage is clearly seen around some of the windows in the narthex, nave, west vestibule, and east vestibule. (Figures 4.9-4.10) The most damage is in the east vestibule where about 30% of the wall finish is failing. (Figures 4.11-4.12)

An advantage to all this damage is the revelation of different paint colors, particularly different shades of green as well as lighter colors, under the current beige paint color. (Figures 4.12) The north and west walls inside the northwest closet of the vestry is a deep blue-green color. (Figures 4.13) As will be discussed in Chapter 6 and 7, an in-depth paint investigation and analysis is recommended to fully understand the original paint scheme.

Wood trim:

The wood wainscot is in fair/poor condition. Many areas (typically the beadboard and the baseboard) have been scraped and the finish unevenly worn off. (Figures 4.14 – 4.15) The finish has darkened with age.[5] There is minor water damage in the southwest corner of the west vestibule. The chair rail was probably painted because the finish was in such poor condition that it was easier to paint than to refinish.[6] There is a least one area, in the narthex, where the wainscot is a much lighter color possibly indicative of a previous repair. Part of the chair rail in the vestry along the north wall is missing the top piece of trim. A section of the baseboard at the southeast corner of the chancel has split and the lower half has sunk between the wall and the floor. The wainscot along the west wall of the east vestibule in the bell tower has been repaired since the rotten wood was reported in the 1989 structural inspection.[7]

The wood sills and mullions in the vestry are in fair condition considering the wear they have received from the scraping and striking of the operable louvers. (Figure 4.16) The brick mold wood trim around the windows of the second level of the bell tower are damaged.

The wood fireplace mantel in the vestry appears to be in good condition with just a few scratches and dents. (Figure 4.17)

[5] In historic interior photo, Figure 2.12, a distinctive wood grain at the chancel wainscot is visible, even at the distance the photo was taken.
[6] Interestingly, the top half of the chair rail in the carillon equipment closet is painted while the lower half is stained.
[7] "University Chapel Structural Inspection," University of Virginia, 1989, p. 4.

The ¼" thick wood trim inside the arches of the organ chamber are in fair/poor condition. Towards the top of each arch there appear a couple areas of rotten wood.

The door trim throughout the Chapel is in fair condition. There are multiple layers of paint build-up, chipped paint, and scarring where previous hinges once were located.

Pointed arches and stone columns:

The pressed brick itself is in good condition. The red finish treatment is in poor condition. The finish on all the pressed brick arches is unevenly wearing off and in some cases revealing the white mortar. (Figure 4.18) There is a whitish residue, presumably a water stain, along the left side of the arch over the façade pipes in the west transept. This has been there since the 1989 structural inspection.[8]

The red stone capitals, bases, and other decorative elements are in fair condition, but they are very soiled with dirt, dust, and soot. The polished Aberdeen granite column shafts are in good condition. (Figure 4.19) The bricks under the pedestal of the east columns in the chancel have been repaired since they were noted as loose and damaged in the 1989 structural inspection.[9]

Hammer beam trusses:

The hammer beam wooden trusses are in good to fair condition though the horizontal members are very soiled with dirt, dust, and soot. The condition of the finish of the trusses is difficult to discern though it is presumed to have darkened with age. Refer to the structural assessment at the end of this chapter and to Appendix C for greater detail on the trusses. The carved head on the west side of the nave nearest to the crossing is missing a small decorative piece of wood that has fallen off. There is a great deal of water staining from a previous leak on a single truss at the corner of the nave and bell tower. (Figure 4.20)

Ceiling:

The condition of the wood beadboard ceiling is difficult to determine because it is so dark, probably darker than originally intended due to the aging of the varnish. There is no visible evidence of any considerable damage, except at the intersection of the nave and bell tower, inside the nave, where there is some water damage as well as a few roofing nails protruding through

[8] "University Chapel Structural Inspection," University of Virginia, 1989, p. 5.
[9] "University Chapel Structural Inspection," University of Virginia, 1989, p. 3.

the ceiling. There is a small area of whitish water staining on the west half of the ceiling over the chancel and at the northwest corner of the crossing. [10] The ceiling of the vestry has two eight by twelve inch patches on the north and south sides with a few nails protruding.[11] The main purlin running east to west in the west vestibule has a crack near the center of the purlin. This crack has been there since the 1989 structural inspection.[12] At the east end of this same purlin, a scarf joint has been made. This was not mentioned in the 1989 structural inspection. Overall, the ceilings are in fair condition.

Doors and door hardware:

The doors of the Chapel are in fair condition. The condition of the painted exterior faces is good to fair. There is evidence of paint over non-sanded alligatored paint. The interior faces of the doors are in fair condition. The finish of the exterior door in the east vestibule of the bell tower is in poor condition. The interior passage doors are in fair condition. There are different colors, layers, and wear patterns of the coatings applied to all interior faces. (Figures 4.21) Also, the addition of a couple pieces of new hardware replacing the original hardware have left visible patches and indentations. (Figures 4.22-4.23) The wood stiles and rails are also splitting slightly on the exterior facing doors.

The door hardware is in fair condition. The hardware appeared to operate well. However, the finishes are typically in poor condition. Many hinges are covered in paint or some other coating. A couple of the hinges are missing their caps. Some of the pushplates are also covered in a semi-transparent brown coating or their finish has worn off.

Furnishings:

The oak pews are in poor condition. They have an inherent structural flaw in that too much force is placed on the end standards resulting in cracking and dislocation of the seating boards. Several backs are warped which has caused the end arms to warp as well. Some of the plank seats are splitting and the finish is worn. For most of the pews, the end standard has split in a couple locations due to the stress of the seat planks. There are a number of repairs with wood glue or screws to try to keep the wood from splitting further. At least one pew has a

[10] The water staining in both locations is noted on page 5 of the 1989 "University Chapel Structural Inspection," University of Virginia. It is also noted for having rotted wood at the northwest corner.
[11] There are a handful of recently stained tongue and groove beadboard planks in the vestry. It appears that they were to be used to replace the plywood patches but the planks have only one bead on the edges while the ceiling beadboard has two.
[12] "University Chapel Structural Inspection," University of Virginia, 1989, p. 6.

rosette that is missing one half.

The brass lectern appears to be in good condition. Overall, the wood furniture is in fair condition. The top of the pinnacle on the tallest clergy chair has broken off. The stand in the narthex has very loose joints. The finish of the altar is worn and chipped.

Memorial Plaques:

The memorial plaques are in good condition. (Figures 3.81-3.87)

- The bronze Campbell plaque in the narthex is in fair condition. It shows oxidation and darkening.
- The marble Connell plaque in the narthex is in good to fair condition. It shows some dark staining around screw locations.
- The last plaque in the narthex, the bronze Galt plaque, is in good condition.
- The bronze Emmet plaque in the east vestibule is in poor condition. It shows oxidation and darkening. The incised lines used to be filled with red glass or ceramic of which there is very little left.
- The marble Christian plaque in the east transept is in fair condition. It has soiling at the more raised portions of the bas relief.
- The bronze carillon plaque in the nave is in good condition.
- The bronze 1918 plaque in the west transept is in good to fair condition.

Intrusive Conditions

Light fixtures:

The light fixtures are in good condition although they were probably a poor selection in terms of appropriateness. (Figures 3.91-3.92) There have been no reports of faulty wiring or shorts. There does not seem to be any cracked or missing glass. The finishes appear to be intact. The four spotlights in the southeast and southwest corners of the Chancel are in good condition.

Flooring:

Another later intrusion, the cork tile flooring in the nave and transepts is in poor condition. Many of the tiles are severely scuffed, dented from radiator legs, or are missing. The carpeting is in fair condition. The backing is fraying around the edges. It is cut too short at the southeast corner of the chancel. The carpet in the west vestibule is not tacked down and acts more like a doormat. Cork tile under the carpet does not have a protective

sealant or coating on it.

Major Building Systems

The investigation of the current mechanical, electrical, plumbing, and fire protection systems was conducted by HC Yu and Associates. Their investigations included visual observation, review of existing documentation, and interviews with facilities staff. Expanded details are included in Appendix B, but a brief overview is provided below.

Mechanical

The Chapel is heated and cooled with a fully ducted, forced air system. A single air handling unit is located in the basement. It has been in operation for approximately 10 years, and appears to be in good condition. The air handing unit is served by campus chilled and hot water loops. This system replaced an earlier radiator system. A site-mounted AHU is shown on drawings from 1987.

The source of vibration noticed in the sanctuary floor could only be a few potential sources associated with the AHU-1 in the Chapel's basement mechanical room. The first is a misaligned fan or damaged fan bearing. This vibration would translate through the system ductwork to the floor-mounted supply air diffusers. Secondarily, the flexible duct connection at the AHU-1 SA discharge may have become no longer pliable and in which case would augment effects of any vibration caused in the AHU-1 fan section.

The University has in place a fairly well documented and planned system for routine maintenance on existing mechanical equipment. This system would be more than sufficient for ongoing maintenance.

Electrical

Power:

The Chapel is powered by a 3 phase / 167 kVA transformer located in the Rotunda's lower level. One 200 amp/120/240 volt panel is located in the Chapel basement, and a second 100 amp/120/240 volt panel is located in the Organ Chamber where it is not readily accessible.

The Chapel basement also houses an electrical switchgear room containing six 600 amp high voltage switches that distribute power to Carrs Hill, Alderman, and other campus buildings. This area has a sump pump and evidence of running water on the dirt floor, indicating ground water infiltration.

Existing power distribution wiring is twisted pair fabric-insulated cable that likely dates from the 1954 renovations.

Lighting:

The Chapel is lighted primarily with compact fluorescent lamps, with the exception of the exterior lighting and the Chancel flood lighting. The Sanctuary sconces are individually plugged into dedicated, nongrounded 120v duplex outlets. Light levels in the Sanctuary are below current standards, and there is no emergency lighting. Exit signage is a combination of red backlit on regular power and non-illuminated.

Telephone/ Data:

There are no data ports in the building, but the basement does house three tele/data panels that serve other campus buildings (extent is not known).

Plumbing

The building has no toilet, lavatory, or sink facilities. As previously mentioned, there is a single vertical pump housed in a sump pit in the basement electrical switchgear room. The operational condition of the sump pump appeared to be faulty, as the pump float switch did not start the pump. Operation of this pump is critical given the high voltage electrical switches that occupy this space.

Fire Protection

There is no currently no central fire protection system or alarm in the building to evaluate. There are, however, hand extinguishers present in the office and in the East exit vestibule. Both extinguishers bore current inspection tags.

Structural Analysis

The investigation of the current structural systems was conducted by Robert Silman Associates. Their investigations included visual observation and review of existing documentation. Please refer to Appendix C for their full report. A brief summary is provided below.

General

The Chapel is a load-bearing masonry structure with wood floor and roof framing.

Foundation

The perimeter foundation walls consist of uncoursed stonework that appear to bear on bedrock. The central bearing wall running north-south consists of brick masonry with brick arch openings. Overall, the foundation appears to be in good condition.

Main Floor Framing

Approximately 75% of the nave retains the original timber floor framing. The original nave floor is calculated to have a live load of greater than 100 psf. The center area is fire damaged, and there is evidence of previous termite and moisture damage. Previous repairs include 13 replacement joists and 16 sistered

joists. The replaced framing achieves a live load capacity above 60 psf, which is the code-required capacity for an assembly area with fixed seating. Localized repairs are warranted.

The organ chamber floor appears to consist of approximately half original framing and half replacement framing. This area has a live load capacity of greater than 60 psf.

The vestry floor consists of reinforced concrete joists infilled with concrete block. The floor appears to be in good condition, with isolated locations of exposed reinforcement. Further testing is required to determine the live load capacity, due to limited knowledge of the reinforcement and construction.

Floor structure of the east transept was obscured by a drywall ceiling. Floor structure of the west transept retains its original timber floor framing, similar in size to that of the organ room.

Roof Framing

The slate roof is framed with a system of hammer-beam timber trusses. The exterior masonry buttresses minimize the spreading of the trusses at their lower ends. No deterioration was observed at the bottom of these trusses. Observation of the upper reaches of the trusses were not accessible, but the lack of deterioration at their bearing and the arch-like action of these trusses do not warrant investigation of the upper levels at this time.

Masonry arches support the roof at the three intersections of the Chancel, West Transept and East Transept. The masonry arches appear to be in sound condition with no significant cracking observed.

Timber purlins span between the roof trusses and support the wood roof boards and slate roof. The roof framing appears in good condition and the slate roof was replaced ca. 1991.

Exterior Masonry

The exterior masonry appears to be in good condition, with limited cracking or signs of deterioration.

Photos and Illustrations

Exterior Conditions

Figure 4.1
Biological growth on stonework, north facade. (QE|A, 2006)

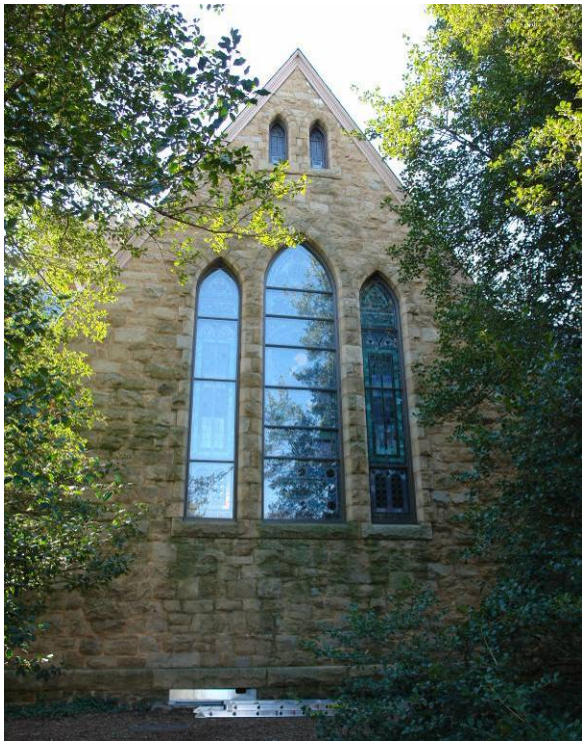
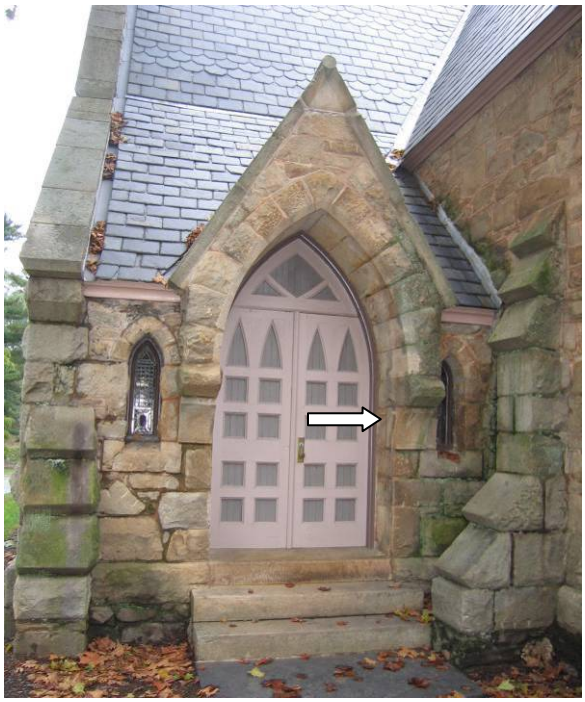


Figure 4.2
Biological growth on stonework at entrance to west vestibule. (QE|A, 2006)

The arrow indicates the spalling location in Figure 4.3.



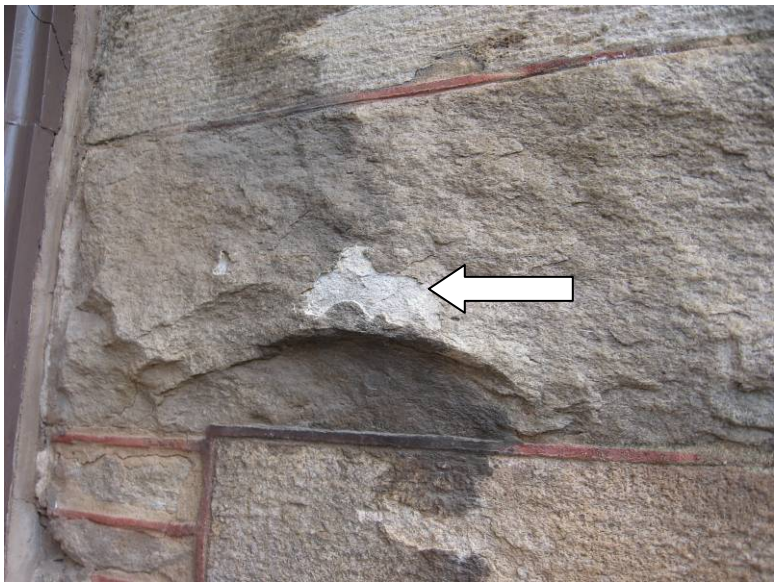


Figure 4.3
Stained and spalling stone on the right door jamb at the entrance into the west vestibule, west façade. (QE|A, 2006)

The lighter color is where the outermost surface of the stone has spalled off.

Figure 4.4
Missing mortar on chimney at west façade. (QE|A, 2006)

Note also the darkness and staining of the stone.

Figure 4.5
Slate roof, west façade. (QE|A, 2006)

Figure 4.6
Rusting rigid cap flashing over narthex, south facade. (QE|A, 2006)

Figure 4.7
Biological growth and damp stone all along the west façade between the buttresses where there is no gutter nor proper grading. (QE|A, 2006)

Interior Conditions

Figure 4.8
Possible adhesive remnants on severely worn tile of fireplace hearth in vestry. (QE|A, 2006)

Figure 4.9
Blistering paint indicating moisture on the right jamb of window #53 in the nave. (QE|A, 2006)

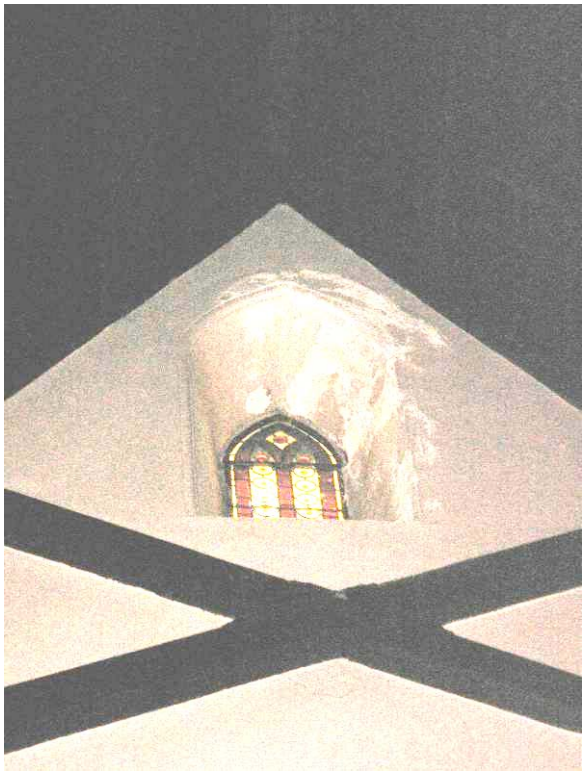


Figure 4.10
Damaged plaster around window #55 in the west transept. (QE|A, 2006)

Figure 4.11
Damaged paint on the north and east walls of the east vestibule of the bell tower. (QE|A, 2006)

Figure 4.12
Damaged plaster and paint at the right jamb of door 108b of the east vestibule of the bell tower. (QE|A, 2006)

Note the different paint colors that are revealed.

Figure 4.13
Damaged green-blue paint along north wall of vestry within closet. (QE|A, 2006)

Figure 4.14
Damaged baseboard with chips in the coating along north wall of chancel. (QE|A, 2006)

Figure 4.15
Damaged wainscot with numerous chips in the coating along north wall of narthex. (QE|A, 2006)

Figure 4.16
Scuffed and removed coating on sill of window mullion between windows #37 along south wall of vestry. (QE|A, 2006)

This is the most severe of all of the scuffed and scraped window sills in the vestry.

Figure 4.17
A few scratches and dents in the fireplace mantel in the vestry. (QE|A, 2006)

Figure 4.18
Red coating wearing off on pressed brick arch and revealing white mortar beneath, column at south end of east transept. (QE|A, 2006)

Note the amount of dirt and dust on top of the capital.

Figure 4.19
Soiled and darkened stone capitals, bases, and brackets at west transept columns. (QE|A, 2006)

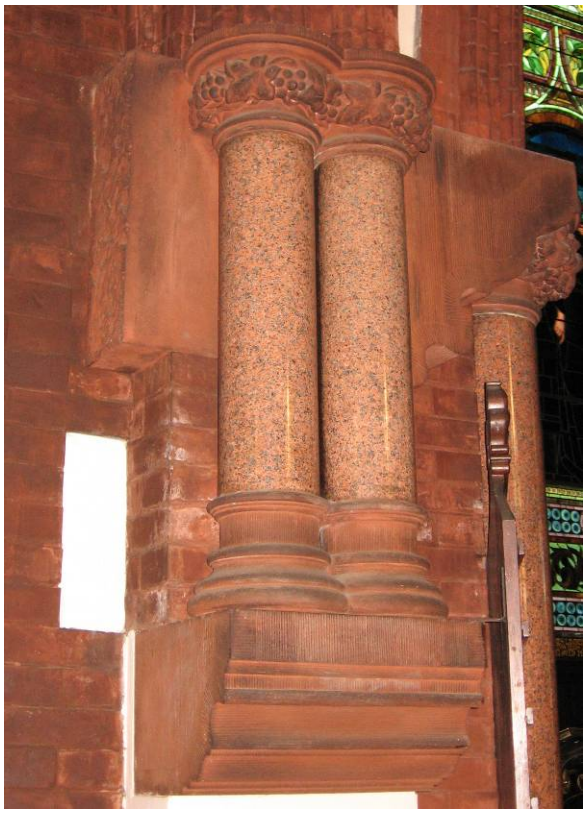


Figure 4.20
Water staining and other damage on the truss from a previous leak at corner of nave and bell tower. (QE|A, 2006)

There are also modest water stains on the plaster wall below this location. Flashing is assumed to have been redone in the 1991 roofing project, but it appears that there is still water entering the roof assembly and down onto the walls.

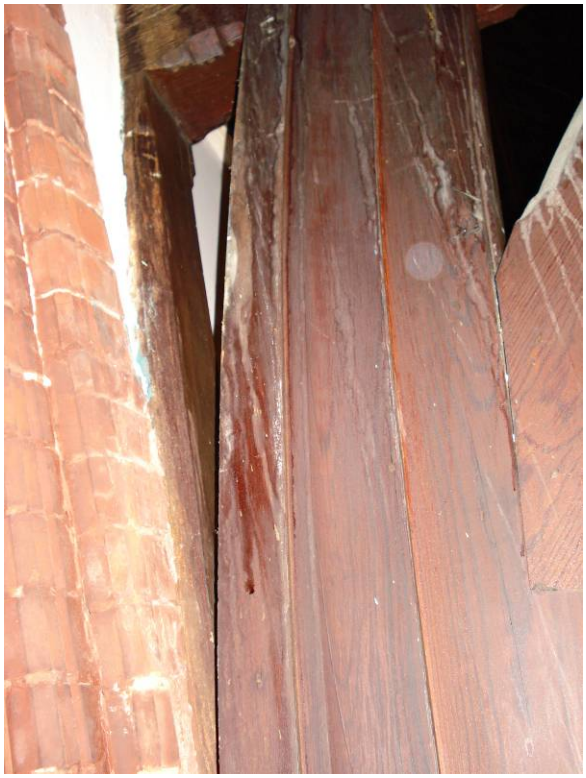


Figure 4.21
Damaged door 109a with three different color coatings, inside face in the narthex. (QE|A, 2006)

Figure 4.22
Chipped paint on lower right hinge to door 109b in the narthex. (QE|A, 2006)

Note at least three different colored coatings on the hinge.

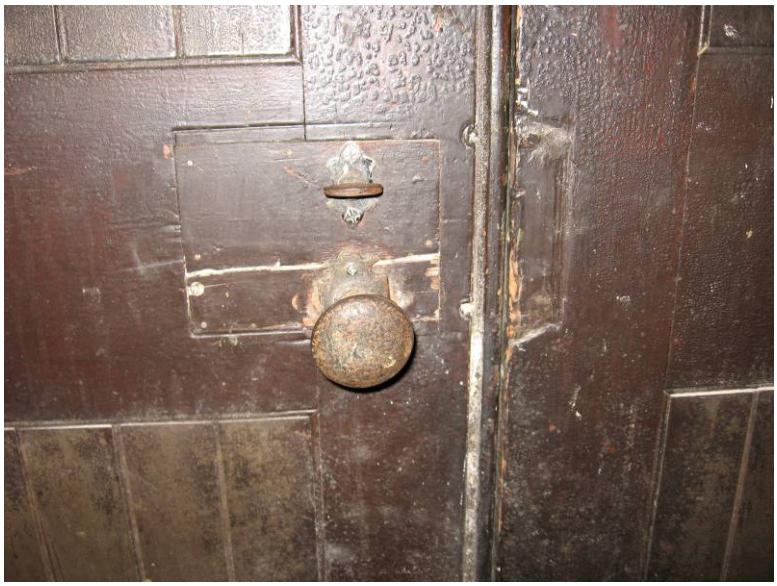


Figure 4.23
Patch in door 108a, interior face. (QE|A, 2006)

The thumb turn, escutcheons, and doorknob are most likely original but the deadbolt (as seen on the exterior face) is a modern addition. Note also the aged varnish.

CHAPTER 5: PRESERVATION TREATMENTS & ZONE DIAGRAMS

Treatments and Guidelines

In the previous chapters, this report has identified the historically and architecturally significant features of the Chapel along with their conditions. This chapter outlines the overarching guidelines and recommendations for the proper treatment of these significant features. Detailed treatment recommendations for each element are provided in Chapter 6.

The National Part Service (NPS) has developed standards and guidelines for approaches to various treatments of historic properties. These are published in The Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings. These standards are very widely utilized and understood by historic preservation professionals, architects, engineers, contractors and craftsman around the country. Three principal treatment options apply to existing buildings: preservation, rehabilitation, restoration. The last, reconstruction, does not apply here.

The most fundamental decision involving the future of an historic building is to choose the appropriate treatment. The NPS indicates the following issues should be addressed in making this choice:

- Relative importance in history
- Physical condition
- Proposed use
- Mandated code requirements.[1]

These issues are each addressed in a comprehensive fashion in this HSR and the recommended treatment choice is described below.

[1] The Secretary of the Interior's Standards, p. 1.

Selecting an Appropriate Treatment

The three principal treatments are defined by the NPS as follows:

Preservation *is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather the extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-related work to make the properties functional is appropriate within a preservation project."*[2] *The treatment emphasizes repair and conservation of significant building features and strives to retain existing materials and features while employing as little new materials as possible.*[3]

Preservation as a Treatment. *When the property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without extensive repair or replacement; when depiction at a particular point of time is not appropriate; and when a continuing or new use does not require additions or extensive alterations, Preservation may be considered as a treatment. Prior to undertaking work, a documentation plan for Preservation should be developed.*[4]

Rehabilitation *is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.*[5]

Rehabilitation as a Treatment. *When repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular time is not appropriate. Prior to undertaking work, a documentation plan for*

[2] Ibid., p. 17.
[3] Ibid., pp. 19-20.
[4] Ibid., p. 21.
[5] Ibid., p. 61.

Rehabilitation should be developed.[6]

Restoration *is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.*[7]

Restoration as a treatment. *When the property's design, architectural, or historical significance during a particular period of time outweighs the potential loss of extant materials, features, spaces, and finishes that characterize other historical periods; when there is substantial physical and documentary evidence for the work; and when contemporary alterations and additions are not planned, Restoration may be considered as a treatment. Prior to undertaking work, a particular period of time, i.e., the restoration period, should be selected and justified, and a documentation plan for Restoration developed.*[8]

In selecting the most appropriate overall treatment for this property based on the NPS guidelines, there are four overriding facts:

- The building is in good condition and has a very high level of architectural and historical integrity.
- The historic use remains unchanged and there is no need for building expansion or significant alteration.
- Although many of the character-defining features are from the original period of construction, there are other elements, including the stained glass windows and memorial plaques, that are significant to the structure and that have been added over a fairly wide timeframe. There is no single restoration period that could be established for this structure.
- Repair and conservation of significant building features is needed, and is in fact, the most appropriate treatment.

With these facts in mind, selecting the NPS treatment of

[6] Ibid., p. 66.
[7] Ibid., p. 117.
[8] Ibid., p. 121.

preservation is the most appropriate course of action for this property.

Treatment: Preservation

Based on the discussion above, the overall treatment of preservation is the most appropriate for the facts and issues of this property. The Secretary of the Interior established eight Standards for Preservation. These are included in Figure 5.1. With these Standards in mind, we suggest several overall guidelines for preservation treatments at the Chapel:

- The period of significance is defined to cover a rather large period from the early construction through the installation of the stained glass windows and the memorial plaques. All character-defining elements from this long timeframe will be repaired, maintained or conserved.
- New mechanical, electrical, plumbing and fire protection systems can be installed, but a philosophy of "concealment" should be observed for these alterations. The goal will be to preserve as much as possible the historic and architectural integrity of the interior of the property.
- Intrusions or other less-than-sensitive building modifications will be identified for removal and replacement with materials more appropriate to the period of significance.
- Restoration (or conservation) of individual elements to their original condition or appearance is appropriate within the overall preservation treatment. For instance, interior paint colors and decorative treatments from the original construction period could be replicated if there is sufficient documentation based on detailed field investigation.

Treatment Zones

Although preservation is the recommended treatment for all significant spaces and features, there are some areas in the building which have less significance, and others with little or no significance (i.e., the basement). With this in mind, the preservation treatments can be recorded on floor plan drawings to establish zone diagrams (Figures 5.2 and 5.3).

An overall approach of preservation shall be observed for the entire exterior of the building including site features, as well as the first floor public spaces. The treatment for the vestry, (commonly called the "study"), can allow a little more freedom since there have been interior modifications there over the years and new closet elements have been introduced into the space. For this reason, we suggest this room could have its own treatment category of rehabilitation. There are historically

significant elements within the space, but there could be some latitude in the future if alterations are needed. The same can be said for the treatment of the organ chamber and the east vestibule. The organ chamber received modifications for the installation of the 1954 organ which have obscured the original wall and ceiling finishes. The east vestibule no longer has its original floor nor ceiling and there is substantial damage to the plaster walls.

In the basement, there is historic fabric in the form of original structure and framing, but otherwise, there is wide latitude to continue the practice of installing new building systems and equipment within the space. Thus, this space has the identified treatment of "free zone." As long as historically significant materials are repaired, virtually any alterations would be permissible.

Figure 5.1
Secretary of the Interior's Standards for Preservation

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.

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

3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

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

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

6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

Figure 5.2
Zone Diagram - First Floor Plan. (QE|A, 2007)

Preservation for the majority of the spaces, except for the Vestry (study) where a rehabilitation treatment is allowed. The entire exterior and site would be a preservation zone as well.

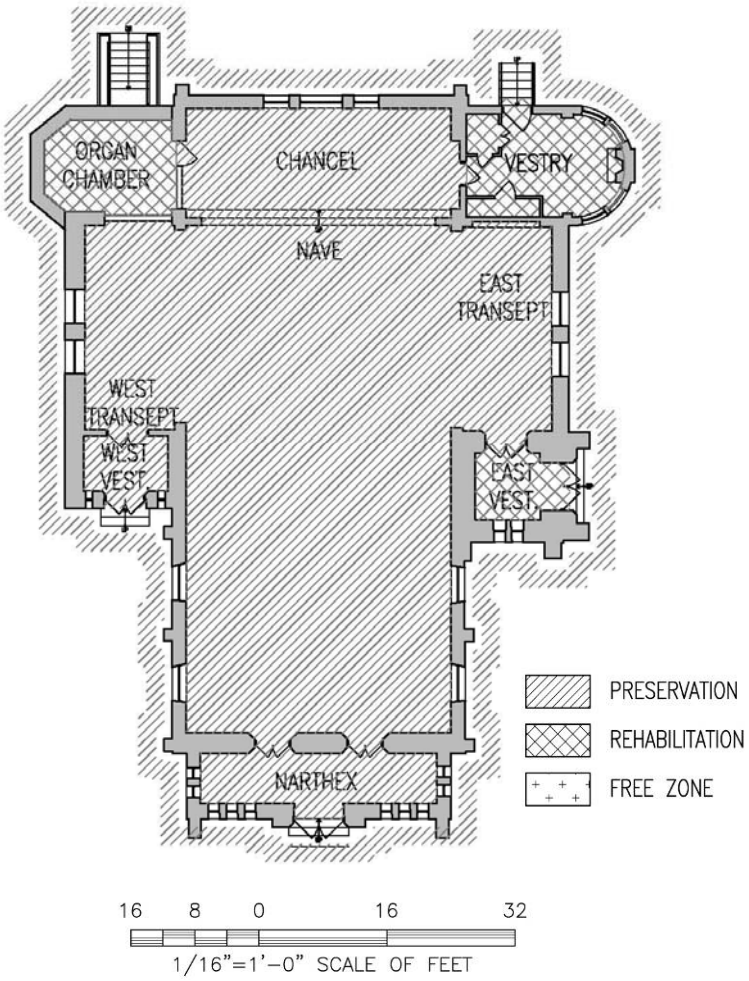
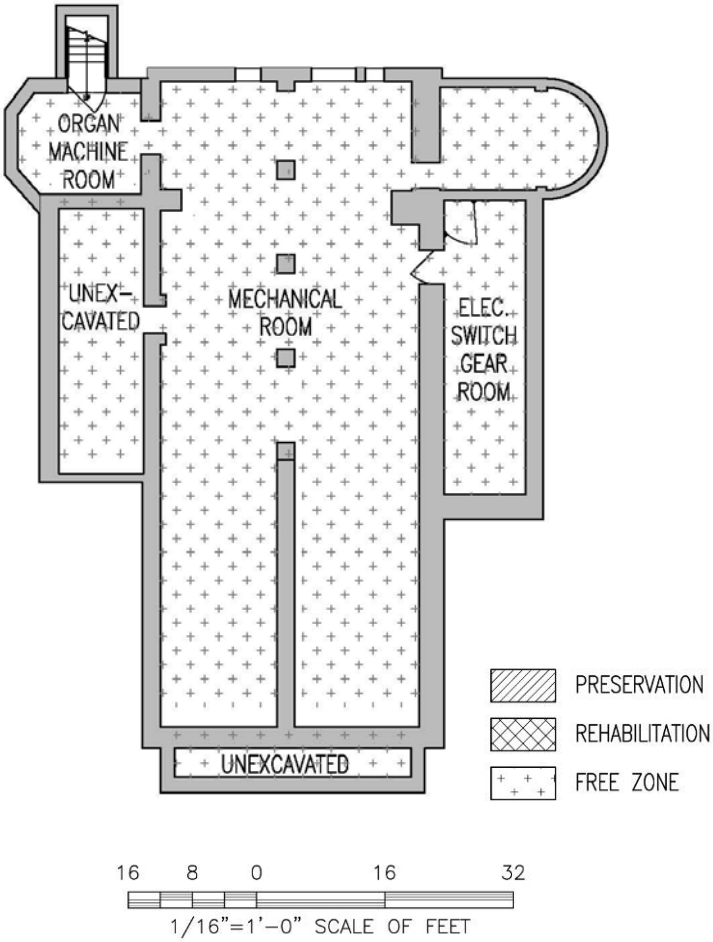


Figure 5.3
Zone Diagram - Basement Plan - "Free Zone." (QE|A, 2007)

Any historic features shall be repaired if needed.



CHAPTER 6: REHABILITATION PROGRAM

Purpose

This part of the report records the design criteria and analysis used to develop a concept for a future preservation and rehabilitation project. These are part of a puzzle. In chapter 7, the pieces are assembled into a potential project(s).

Building Use Program

There is no intent to change the current use of the building as the facility for the University Chapel activities. We record here the understanding of the day to day activities and the identified needs for modest alterations and improvements.

Obviously, the primary function is a place for non-denominational worship. This includes both scheduled services as well as remaining open for daytime meditation. The sanctuary has pew seating for approximately 270 persons, based on 22" per person (comfortable), and 315 persons, based on 18" per person (code maximum occupancy).

The Chapel is very heavily used for weddings, often there is a backlog of many month's reservations. At the current time, a lottery is held among interested parties for any weddings planned between December and August, 13 months prior to the desired month. Wedding guidelines suggest a maximum seating for 250 persons and restroom facilities are provided at the nearby Rotunda Building.

Memorial and funeral services are held when needed. The carillon bells are often rung as part of these observances.

Student, fraternity and sorority and campus groups can reserve the Chapel for meetings or presentations. These activities are often held at night and the groups can vary in size from 15 to 200 persons.

For any of these activities, no food or drink is allowed in the Chapel.

Functional Program:

Nave: a multi-use space that will be used during the day and evening hours by a wide variety of campus groups. These include meetings, ceremonies and musical presentations with seating for approximately 250 persons.

Vestry: There does not appear to be an identified need for this separate office-type space at this time. However, it is used as a bride's room for wedding services.

Restrooms: There are no restrooms in the Chapel currently. It is highly desirable to have fully accessible restrooms serving the Chapel. We have studied the possibility of including restrooms inside the Chapel but there is no feasible location. Therefore those in adjacent buildings need to be clearly identified with signage.

Kitchenette: The policy precludes food or drink in the space so there is not an identified need for a kitchenette or wet bar.

Architectural Criteria

A very important objective of this report is to provide sound guidance for the preservation and repair of the many building and site elements. These have been identified in Chapter 3 and their current condition provided in Chapter 4. To complete this effort, the recommended treatments are provided on a material by materials basis below. The overall approach for treatments follows the course of preservation; the preferred treatment is described in Chapter 5.

Other criteria to be considered in the future are provided below.

Building Code Analysis

This cursory life safety and code analysis utilizes the Virginia Uniform Statewide Building Code (VUSBC), which is the code currently used in the Commonwealth of Virginia. Part I of the current VUSBC is the Virginia Construction Code (2003 edition) that amends the 2003 International Building Code (IBC).

Building Occupancy:
Assembly A-3 Church

Construction Type: VB (combustible, masonry bearing walls, wood framed structure)

Required Fire Resistance Ratings for Assemblies, per IBC Table 601: 0 hours for all wall, floor and roof construction.

Allowable Building Area, per Table 503: 6,000 SF per floor.

Actual area: 3,810 SF First Floor

Allowable Height: 1 story and 40 feet.
Actual Height: 1 story and 31 feet.

Tower Allowable Height is unlimited (noncombustible materials). Tower Actual Height: 56'-9"

Egress:
Occupancy is posted at 250. Minimum required egress width is 50 inches.

Fire Sprinklers: A suppression system does not appear to be required as result of a life safety analysis.

Restrooms: The building has no restrooms, nor janitor closet; in fact, there is no water or plumbing available within the building. Chapel visitors are directed across the street to the Alderman Library where restroom facilities are available. A sign posted on doors to the West Vestibule reads "The Nearest Restrooms Can Be Found Under the South Stair Entrance To The Rotunda."

Site and Building Accessibility

The campus area pathways leading to the Chapel are fully accessible to pedestrians and disabled persons. There does not appear to be an immediately adjacent parking space identified for handicapped users.

The building is accessible to wheelchair users from two directions using temporary metal ramps that have been installed in recent years. At the front or south entrance into the narthex there are two steps (risers) about 13 inches high, so a relatively short ramp is sufficient to overcome the barrier. At the rear of the building, a ramp of over 20 feet in length is needed to allow a wheelchair user access into the rear of the nave through the vestry to the chancel. The basement is not accessible, nor is it easily accessible; approximately seven risers lead from grade to the basement.

On the interior of the building, the chancel is three risers (1'-9") above the level of the nave. At this time, the chancel is accessible by utilizing the exterior metal ramp at the rear door into the vestry.

The door widths and swings also present obstacles to the handicapped user. Americans with Disabilities Act of 1990 Accessibility Guidelines for Buildings and Facilities (ADAAG) requires that doorways have a minimum clear opening of 32 inches (2'-8"). Where a single leaf of a double door creates a

minimum clear opening of less than 32 inches, then the double doors may be retained if both doors are operated simultaneously on a power actuator. Door weights may also be more than allowed by ADAAG. None of the existing doors and door assemblies are wide enough to meet the requirements. See below:

- The main (south) exterior doors consist of two leafs within a 5'-9" opening. Each leaf creates a clear opening of approximately 30.5 inches. These doors also open inwards.
- There are two pairs of door leafs that connect the narthex and the nave. Each of these door openings is 3'-11" wide. These doors also operate with a double-action swing, opening into both the narthex and the nave.
- On the north façade, the exterior door to the vestry is 3'-3" wide. This is the only exterior door that provides sufficient clearance.
- The interior door between the vestry and the chancel is only 2'-6" wide.
- On the east façade, a pair of door leafs opens into the east vestibule of the bell tower. The opening is 5'-4" wide.
- Another pair of door leafs separates the bell tower vestibule from the east transept. The door opening is 4'-8" wide.
- At the west vestibule, a pair of exterior door leafs opens outwards in an opening that is 4'-5" wide.
- A pair of door leafs separates the west vestibule from the west transept in an opening that is 4'-8" wide.

Beyond the basic architectural barrier that stairs, door widths, and door swings represent, there are a variety of other elements of the building that would not meet the guidelines for accessibility, including door weight, door hardware, signage, and seating.

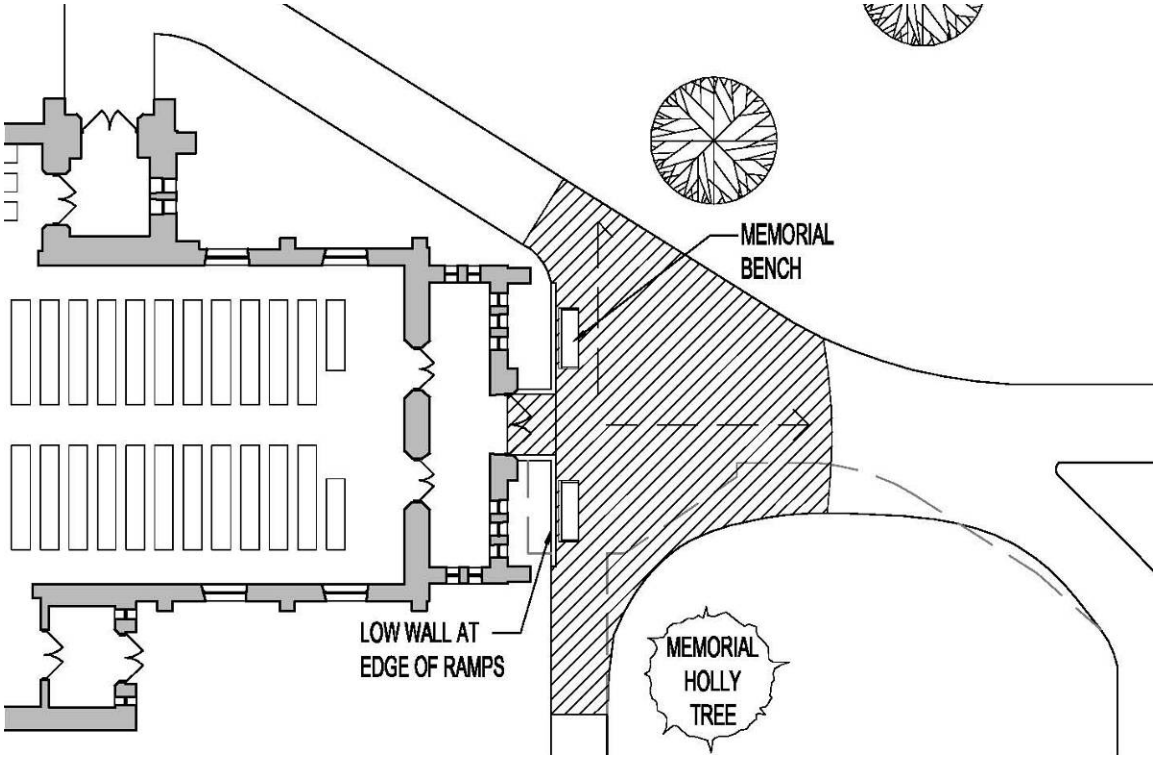
Aisles need to maintain a minimum clear width of 3'-0". Currently, the aisles appear to be 3'-6" in width, so they are satisfactory.

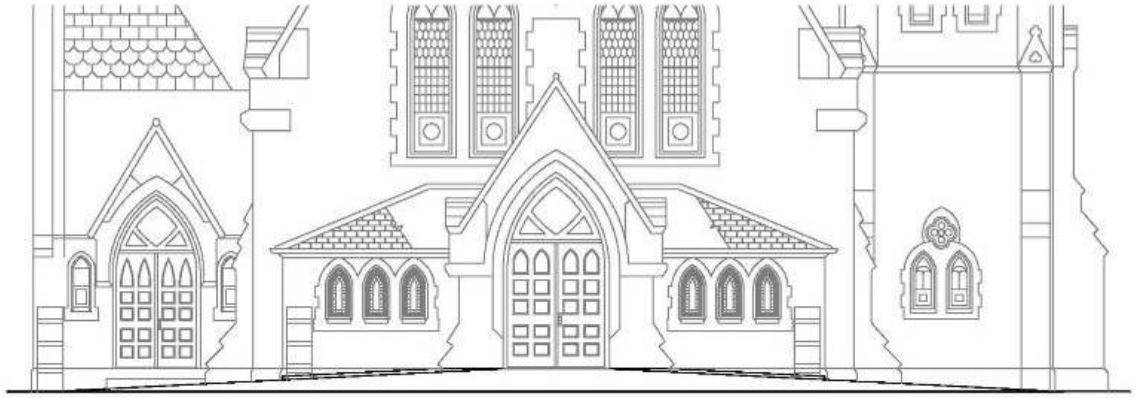
Some pews will need to be removed to provide a location for wheel-chair users to participate in the events. It is normal to include additional chairs in these locations for the companions of the disabled visitor.

The goals of a comprehensive building rehabilitation plan would be to eliminate all architectural barriers and make all parts of the main floor of the building accessible. This goal is impractical for the basement. Of course, accessibility needs to be accomplished while being mindful of the architectural and historical significance of the building.

Accessibility Option for the Front (south) ramp

An accessible option is proposed below for providing a more permanent ramped access to the front (south) doors and therefore the event space. This option re-grades the entry brick pavers to the maximum 1:20 slope so that no handrails are needed. This is the simplest of approaches that were considered in creating this option. See the plan and elevation that follow. Prior to taking this accessible option further, a survey needs to be undertaken to precisely locate the memorial holly tree and any other vegetation and memorial items. As the memorial benches were designated to be placed on either side of the main entrance, these would need to remain and be worked into the design.



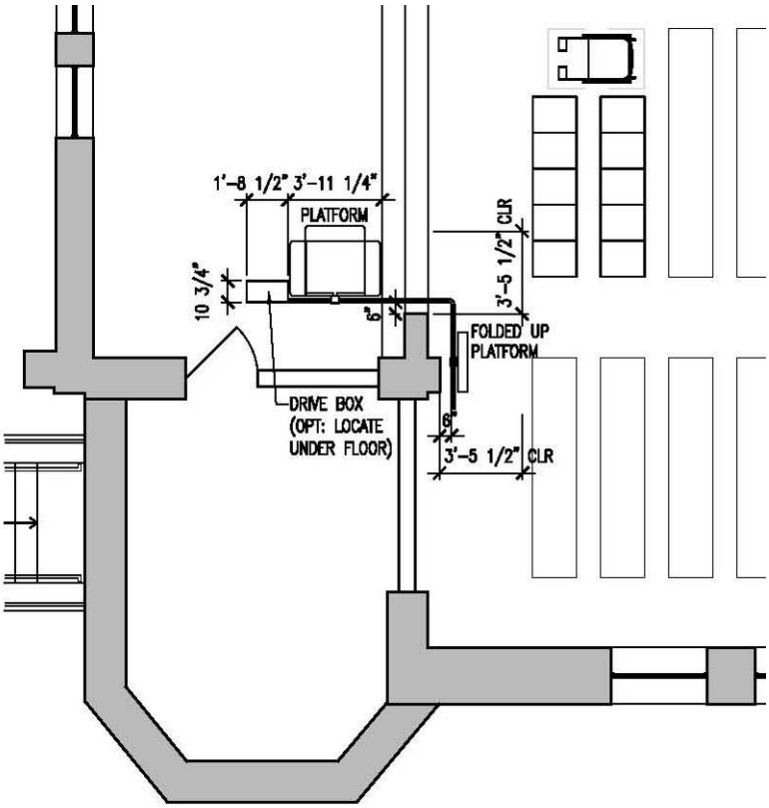


Accessibility Options for Chancel-Nave Access

Access to chancel and vestry can continue to be provided by the existing exterior ramp. Two options are proposed below.

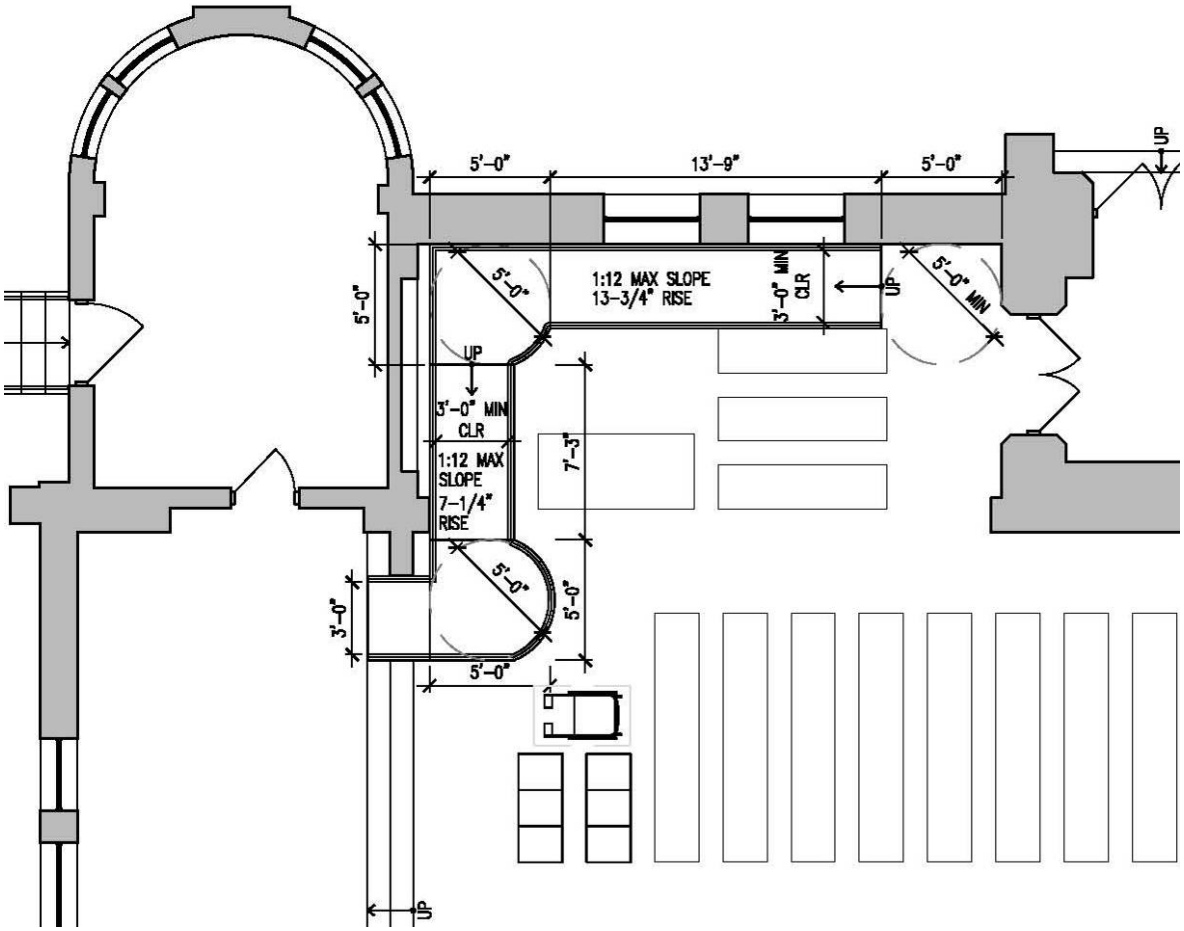
Option 1 – Motorized lift

A preferable solution that provides interior access between the chancel and nave is the installation of a motorized lift to transition the 1'-9" floor elevation difference. Generally, the lift platform would be parked at the lower level. There would always be projecting railings that surround this lift as well as the drive box which, if possible, may be located underneath the chancel. The front pews have also been removed to accommodate a wheelchair user and loose seating. Refer to the plan for below.



Option 2 - Ramp

Another solution for access from the nave to the chancel would be provide a 1:12 ramp along the east transept. This would require handrails and at least two landings in order to be a minimum of 21'-0" in length. Two pews have been removed from the east transept. The front pews in the nave have also been removed to accommodate a wheelchair user and loose seating. The organ would also need to be shifted over to make room for the ramp. Refer to the plan for below.



Restroom Designs

Several locations were studied to locate a unisex toilet room within the Chapel, including the narthex, the west vestibule, and the vestry. Two options are included at the end of the chapter but neither is preferred. (Figures 6.6 and 6.7)

Acoustical Performance

As an assembly space, the quality of music and voice transmission has been identified as a deficiency. This is a product of the inherent acoustical properties of the architectural finishes and the performance, or lack of performance, of the audio-visual equipment used to amplify voice and music presentations.

Should there be a comprehensive preservation and rehabilitation project for this space, it would be prudent to include a thorough analysis of the acoustical properties and acoustical and equipment needs to achieve the identified goals. This should include a clarification of the voice, instrumental and organ music program for this space.

Mechanical, Electrical and Fire Protection Recommendations

The following is a brief summary of the MEP and Fire Protection Recommendations of HC Yu & Associates. Please refer to Appendix B for their detailed recommendations.

General

The Chapel building systems have few immediate repair needs. However, there are opportunities to upgrade or improve the systems for better occupant comfort, preservation of the finishes and furnishings, better usability of the building, and improved life safety.

Mechanical

Repair:

- The supply and return ductwork is in need of limited insulation repair.
- Selected isolation valves on the low and medium hot water system need to be repacked or replaced, to avoid further damage to insulation.

Preservation Treatments:

- A full and thorough cleaning of the air handler is recommended.
- The addition of humidification may help preserve the wood finishes and furnishings during the heating system.
- The University's regular maintenance of the equipment in the Chapel seems very thorough and should continue, with some urgency placed in the short term, upon items outlined in this report.

Improvements:

- While the existing HVAC equipment appears to be in good condition, building users have logged numerous complaints regarding insufficient heating and cooling.
- A new load study/calculation is recommended to confirm the sizing and adequacy of the existing HVAC equipment. This study should include review of existing controls, sequence of operation, and the capability to remotely operate the building systems.
- At the supply and return ductwork, replacement of existing insulation with closed cellular should be considered.
- Floor-mounted supply air devices could be replaced and upgraded to provide better mixing and more even

temperature distribution and control.
- Rebuild, realign and lubricate the supply fan in AHU-1 while confirming that the fan's internal vibration isolation dampers' shipping restraints have been removed.
- Check the flexible duct connection at AHU-1's discharge and replace if at all rigid or damaged.

Electrical

Power:

Repair:
- None recommended.

Preservation Treatments:
- None recommended.

Improvements:
- The electrical panel located in the Organ Chamber should be relocated to an easily accessible location. It has sufficient capacity to accommodate the first floor lighting upgrades suggested below.
- The basement electrical panel is adequate for the existing mechanical equipment loads and can accommodate upgrades.
- The electrical switchgear room may pose a hazard to the building. Given the historic nature of the building, this may be a concern. Future capital projects may wish to consider raising the switchgears further or relocating them out of the building.
- Replace existing 1950's electrical wiring.

Lighting:

Repair:
- None recommended.

Preservation Treatments:
- None recommended.

Improvements:
- Replacement of the entire lighting system is recommended, with lighting upgrades in the basement. The new lighting system would have historical reproduction light fixtures supplemented with modern ambient and accent lighting. (Figures 6.1 – 6.5 for a lighting plan and historic and reproduction light fixtures)
- Addition of emergency lighting is recommended throughout the building.

- A lighting control system to allow for dimming and flexibility of lighting levels is recommended.

Telephone / Data:

Repair:
- None recommended.

Preservation Treatments:
- None recommended.

Improvements:
- It is recommended that telephone / data outlets are added to the vestry to connect the Chapel to the UVA system.

Audio Systems:

Repair:
- None exist, therefore no recommendations.

Preservation Treatments:
- None exist, therefore no recommendations.

Improvements:
- The addition of a basic amplification system would allow better communication when the Chapel experiences maximum occupancy. A wireless microphone technology would limit the number of new penetrations in the floors and walls.

Plumbing

Repair:
- Operation of the sump pump should be confirmed and repaired, if necessary.

Preservation Treatments
- None recommended.

Improvements:
- Should a toilet room and/or wash basin be added, an existing water line and sanitary line located south and east of the Chapel and can be tapped. An electric, instantaneous water heater could provide an efficient source of hot water.

Fire Protection

Repair:
- None recommended.

Preservation Treatments:
- Continue regular inspection and maintenance of hand

extinguishers.

Improvements:

- A fire/smoke detection system and alarm that is integrated with the campus network is recommended.
- Replace egress signage.
- Should a sprinkler system be added to the building, then a dry pipe system may be preferable, given the uninsulated roof and walls.

Structural Recommendations

The following is a brief summary of the Structural Recommendations of Robert Silman Associates. Please refer to Appendix C for their detailed recommendations.

Foundations

Repairs – None are recommended at this time.

Preservation Treatments – None are recommended at this time. However, repointing should be considered as part of the long-term maintenance efforts.

Improvements – None are recommended at this time.

Main Floor Framing

Repairs:

1. Re-evaluation of the existing angle repair is recommended to confirm proper joist bearing. An alternate detail may be preferred.
2. Where new headers have been installed at areas of fire damage, connection reinforcement is recommended. Structural analysis should be performed to confirm the design of headers, trimmers and connectors.

Preservation Treatments – None are recommended at this time. Visual inspection of the floor framing should be considered as part of the long-term maintenance efforts. Any evidence of water penetration around joist bearings should be addressed quickly to avoid deterioration of the embedded wood beam ends.

Improvements – None are recommended at this time.

Roof Framing

Repairs – None are recommended at this time.

Preservation Treatments – None are recommended at this time. Visual inspection of the roof framing should be considered as part of the long-term maintenance efforts. Any evidence of water penetration should be addressed quickly to avoid deterioration of the wood structure.

Improvements – None are recommended at this time.

Exterior Masonry

Repairs – None are recommended at this time.

Preservation Treatments – General repointing should be scheduled and implemented as part of the long-term maintenance efforts. Since the buttresses play a critical role in the truss system, any modification to them or significant excavations adjacent to them should be carefully considered prior to implementation.

Improvements – None are recommended at this time.

Sustainable Design Concepts

The University of Virginia has published "Guidelines for Sustainable Buildings and Environmental Design" in August 2005.[1] These guidelines outline campus-specific strategies for reducing the environmental impact of new construction and rehabilitation projects, while maximizing economic benefit in terms of physical development, operational costs, and procurement, and being considerate of the community social impacts.

The following discussion will use the Guidelines as a framework for understanding the sustainability opportunities at the Chapel.

Energy Use and Conservation

The Chapel includes several items in its design that assist with energy conservation. The existing building has thick masonry walls that help moderate interior temperatures, and the interior plaster walls are furred out from the masonry, providing an air cavity with some measure of thermal insulation value. The narthex, west and east vestibules provide airlocks to reduce heating and cooling gains or losses.

Some aspects of the design are less mindful of energy conservation, while still being significant elements of the building. The roof is a dark slate; its steep pitch does reduce the sun absorption. There is no insulation at the walls or roof. The windows are stained glass, so the natural daylight transmitted is fairly low. The windows are not operable and do not provide the opportunity for natural ventilation.

Within the existing conditions, there are opportunities to improve the energy efficiency and potentially reduce the energy use at the Chapel, as follows.

- The existing mechanical equipment is fairly new (10 years

[1] http://www.virginia.edu/architectoffice/sustainable.html (Feb 14, 2007)

old) and probably has another 15 years in it. Existing mechanical systems should be optimized for energy consumption and performance. Verification of the performance of the existing system and improved controls may go a long way.

- Commissioning of the design and installation of new equipment is recommended at a minimum, to ensure that the design and installation are appropriate and done properly – eliminating errors that prevent systems for operating effectively.
- New light fixtures are recommended. Long life, high efficiency fixtures, such as T5's, compact fluorescents and LED egress lights, are recommended.
- Occupancy sensors and daylight sensors can help ensure that lights and equipment are operating on an as-needed basis.
- If the University is not already using renewable energy sources, this is another sustainable design opportunity. Purchase power that is generated from wind or bio-mass.

Water Resources

All rainwater is currently collected into downspouts and an underground stormwater system, except for part of the Nave roof. It is assumed that the water is being collected and treated per the University's Strategic Plan for Water Resources Management (1999).[2] The only paving around the Chapel are the impervious walks (brick on concrete base). Otherwise, the site is landscaped with lawn, low plantings and trees, allowing for rainwater to seep into the ground to recharge groundwater supplies. Currently the building has no plumbing.

- Should a toilet room be added to the building, low flow fixtures and automatic shut-off controls should be considered. These might include low flow faucets and dual flush toilets.
- Pervious site and paving allows storm run-off to be absorbed into the ground and recharge underground aquifers.
- Consider collecting rainwater for flushing toilets.

Materials and Resource Conservation

Retention of the existing building structure and shell, exterior and interior walls, floors, ceilings and roof is a sustainable action. Modifications under consideration are to improve handicapped access to the building and to add a unisex restroom to the building. The following strategies are recommended:

- Any additions or interior modifications should be designed for ease of retrofit and with materials that have a low life-cycle cost.

[2] http://www.virginia.edu/architectoffice/waterRes.html (Feb. 15, 2007)

- Consider construction assemblies that allow for ease of disassembly and reuse – and reversibility, from a preservation perspective.
- Any demolition should divert construction waste from the landfill, either through recycling, reuse, or other efforts.
- Consider using salvaged or remanufactured products.
- Use recycled-content materials and products (ex. ceramic tiles with recycled glass content and many carpet products).
- Use reusable, recyclable, and biodegradable materials (ex. some carpet products).
- Use materials made from renewable sources (ex. linoleum, cork flooring).
- Use wood from well-managed forests certified in accordance with the rules of the Forest Stewardship Council.

Indoor Environmental Quality

The Chapel has one primary occupied space – the event space that is supplemented by the narthex, the east and west vestibules, the organ chamber, and the vestry. The primary objective is to provide and maintain healthy indoor air – before, during, and after construction – in all occupied spaces. A second objective is to allow building occupants operational control of HVAC and lighting to maintain comfortable temperatures and adequate illumination.

- The air handler unit should be fully and thoroughly cleaned.
- Air filters, if any, should be changed on a regular basis.
- Verify proper functioning of automatic dampers that control outdoor air makeup.
- During the installation of replacement HVAC systems or components, the system should be protected from contaminants until it is fully operational.
- New materials, such as carpet, adhesives, sealants, or paint, should be low to no off-gassing or VOC (Volatile Organic Compound)-emitting products.
- A two-week flush out period is recommended, after major systems replacements and finish repairs.
- Control sources of noise and vibration arising from mechanical, electrical, or plumbing systems and from exterior.
- Continue to reduce and control moisture to prevent microbial growth.
- Cleaning agents, both for preservation treatments and for regular maintenance, should be non-toxic.

Site Planning and Design

The Chapel is well located in the heart of the historic campus, closely located to existing infrastructure and transportation.

Site lighting should seek to avoid up-lighting that adds to night-time light pollution.

Local Climate and Bioclimatic Design

Study of the existing plantings was not part of this effort. Native or adapted plantings are preferred because they create habitats and do not need irrigation. It is unknown at this time whether there are historic landscape features that may include non-native or non-adapted plantings. The cultural history and value of the landscape features need to be assessed and weighed against the environmental factors.

If historic plantings are non-native and need irrigation, the University could look into collecting the rainwater and using it for irrigation. A water balance study would need to be conducted to determine whether there is sufficient rainwater that can be collected and reused.

Historic Preservation as Sustainable Design

The University guidelines identify historic preservation as a key objective: to conserve and reuse existing buildings wherever possible; to retrofit historic buildings with energy efficient and environmental design features as appropriate to the use and the structure; and to conserve and reinvigorate historic landscapes throughout the Grounds.

The Chapel is a significant historic building and its preservation protects the history and culture of the Grounds, retains building materials and their embodied energy. In particular, the stone represents substantial energy already invested for its quarry, transport, shaping, and assembly.

Should any changes to the landscape occur, they should be implemented so as to enhance the historic landscape. This includes efforts to improve accessibility and provide for bicycle parking.

Transportation

The Chapel is well located in the heart of the historic campus. It is close to public transportation, specifically within walking distance of bus routes and densely populated areas.

Provision of bike racks close to the Chapel might improve bicycle access to the building. These might be located in such a way as to not disrupt the main (south) façade and bell tower (east) façade.

The University Landscape Master Plan identifies the walkway that runs diagonally along the front (south) façade and the bell tower (east) façade as a primary pedestrian path on campus. Site lighting and benches enhance the pedestrian experience.

Preservation Treatments by Material or Feature

The following preservation treatments are divided into short term needs and long term preservation. Short term needs include repair and urgent work which can be accomplished in the next one to two years. Long term preservation includes fundamental preservation efforts which can be accomplished later, perhaps within five years. The following treatments pertain to the significant features. These features are described in detail in Chapters 3 and 4.

Exterior

Stonework:

Short term: Except at the bell tower, point approximately 5% of the mortar joints at failed and eroded joints for the remainder of the building. Utilize the same mortar composition and tooling technique that was used for the 2006 bell tower restoration. Gently clean 100% of stone surfaces with low pressure water to remove biological growth using the methods tested and approved in the 2006 project.

Long term: Continue a process of inspections on a five year cycle. Little or no work would be anticipated for several decades.

Pitched roofs and flashing:

Short term: Inspect the roof and replace any missing slate (which appears to be Buckingham blue-black slate).

Long term: Slate roofing will last for decades. The cast iron cap flashing will need cyclical painting on a ten year cycle. Recondition the paint with a rust inhibiting primer and new high-grade exterior acrylic paint.

Gutters and downspouts:

Short term: Inspect gutters and downspouts at least once annually, twice is better, to assure clear flow. Inspect existing downspout boot next to the west vestibule entrance and determine where it drains. Re-introduce lead-coated copper gutters and downspouts on the east and west sides of the nave and over the entrance into the west vestibule. Prepare and paint all lead- coated copper and cast iron gutters and downspouts.

Long term: These systems should last for decades as long as they are kept clear of debris. Consider replacement of the copper downspouts next to the bell tower with lead-coated copper to match the rest of the downspouts.

Woodwork and trim at windows, doors, and cornices:

Short term: Repaint all exposed woodwork and trim including doors and window assemblies using current colors and finishes (original finish and colors is unknown though it is possible that the main doors were originally varnished). Prepare existing by sanding to smooth out any chips or alligatored paint. Prime any bare wood. Paint all features.

Long term: Woodwork will need to be repainted on a five to seven year cycle. Perform an in-depth paint color and finishes analysis and investigations to determine original finish and colors of the woodwork. Refinish or repaint.

Bell:

Short term: As it has recently been reconditioned and re-hung, no work should be necessary for decades.

Long term: None.

Windows (stained glass):

Short term: Replace broken glass in narthex window. All window assemblies except for the Tiffany window were reconditioned in the mid-1990's.

Long term: Since most of the windows were restored in 1993 (except for the Tiffany mandorla on the east transept and all but one of the tower windows), they should be inspected in less than 10 years. The Tiffany window should be inspected before then. Storm windows were installed in 1993 on all the memorial windows to protect the window assemblies, which is especially necessary for those with vitreous paint. As the storm windows provide some protection against damage or vandalism, storm windows should be considered for the remaining windows which have no such protection, such as those in the bell tower.

Interior

Flooring - organ chamber:

Short term: Existing pine flooring (original to the building) is in fair condition, no short term work is needed.

Long term: Refinish wood flooring.

Flooring - nave, transepts, chancel, narthex, and west vestibule:

Short term: In selected areas where the cork tiles have become damaged, consider replacing the tiles if these are found to be a

nuisance.

Long term: The flooring should be restored to its original appearance that of a pine floor. This would entail removing the cork tile and the carpet runners and providing a new southern yellow pine strip wood flooring on top of the existing plywood. (To leave the plywood in place is more economical than removing the plywood and replacing it.) The new pine flooring would be sealed with 3 coats of semi-gloss polyurethane. The new wood flooring is to match the existing wood flooring in size at the chancel. It is approximately 2 inches wide based on the underside of the chancel flooring as seen from the basement. Provide commercial grade carpet on top of new wood flooring along the aisles and in the narthex. Carpet is to match original carpeting if further research discovers the original patterns and material.

Flooring – bell tower:

Short term: Paint the concrete floor or provide some other flooring such as linoleum to match that in the vestry or carpeting.

Long term: Provide wood flooring to match that of the nave and transepts.

Plaster walls and wall paint:

Short term: Remove damaged plaster at locations of water penetration (i.e. around the mandorla window of the west transept, around most of the windows of the south wall of the nave, and in the bell tower) and at minor plaster damage not from water (i.e. at the door surround in the west transept). Provide three-coat patching plaster. Repair or replace wooden lath where necessary. Repaint.

Long term: Perform an in-depth paint color and finishes analysis and investigation to determine original colors and finishes. It is unknown whether there were decorative schemes or stenciling. The goal would be to restore the paint color and potential decorative schemes to the level possible with available funding.

Wood trim - nave, transepts, chancel, vestry and narthex:

Short term: Analyze the best method to gently clean dirt, dust, and soot from the wainscot, door trim, and window trim with light solvents and water. Clean wood trim with the gentlest means possible. Repaint chair rail. Repaint door and window

trim. Replace section of baseboard at southeast corner of chair rail. New baseboard is to match in size, profile, and finish of adjacent baseboard.

Long term: Analyze attachment of wainscot to the wall. Determine if it is necessary to re-install the wainscot per acoustical recommendations. Retain the patina of the existing finish. Perform routine surface cleaning with the gentlest means possible. If desired, perform a finish analysis to determine the original coating of wainscot (baseboard, bead board, and chair rail), door, and window trim.

Pointed arches and stone columns:

Short term: Clean dirt, dust, and soot from red sandstone keystones, capitals, bases, brackets, and pedestals with the gentlest means possible. Clean dirt, dust, and soot from brick arches with the gentlest means possible, probably just warm water and a detergent cleaner.

Long term: Analyze mortar composition. Remove loose mortar. Repoint mortar as necessary with matching mortar. Spot-coat any area of repointing to blend with adjacent areas. Retain the patina of the existing finish on the arches. Perform routine surface cleaning with the gentlest means possible on the arches and stone columns. If desired, perform a finish analysis of the current red finish on the arches and possible original finish.

Hammer beam trusses and beadboard ceiling:

Short term: Clean dirt, dust, and soot from wood surfaces with the gentlest means possible. Repair one damaged carved head. Gently clean water stain at corner between nave and bell tower.

Long term: At the ceiling, replace damaged wooden elements. Retain the patina of the existing finish on the trusses and ceiling. If desired, perform a finish analysis to determine the original coating of trusses and the beadboard.

Doors:

Short term: Prepare surface (sand smooth) and repaint (exterior faces). Replace metal grill to door to basement.

Long term: Undertake detailed paint color and finish investigations and restore original finish and decorative scheme. Retain the patina of the existing finish on the interior paint and repaint the exterior face. Perform routine surface cleaning with

the gentlest means possible. If desired, perform a finish analysis to determine the original coating on both faces of the doors.

Door hardware:

Short term: Remove paint and coatings from hardware (i.e. pushplates and hinges). Refurbish (to proper worker order) and refinish hardware as needed.

Long term: Replace polished brass "modern" hardware with aesthetically matching/historic reproduction hardware (i.e. the lockset to the vestry and east vestibule). Provide the necessary hardware for accessibility.

Furnishings (oak pews, clergy chairs, altar, narthex stand, brass lectern):

Short term: Provide comprehensive repairs and reinforcement for pews and refinish. Pews should be removed and taken to wood craftsman shop for a comprehensive repair and reinforcement of the seats and arms. The clear finishes can be renewed. Repair and refinish the altar and narthex stand. Repair and refresh the finish of the clergy chairs. Prior to any refinishing, perform a finish analysis to determine the original coating. Perform comparison to the finish of the organ enclosure. If desired, restore to original finish.

Long term: None.

Memorial Plaques (bronze and marble):

Short term: None.

Long term: Clean soiling from marble Connell and Christian plaques with the gentlest means possible. Analyze existing red material in Emmet plaque and determine material and installation. Provide missing red glass/ceramic within incised lines on Emmet plaque.

Organ pipe façade:

Short term: Clean dirt, dust, and soot from pipe façade with the gentlest means possible and stabilize surface. Provide in-painting at areas of missing paint.

Long term: None.

Figure 6.1
Proposed lighting plan for historical reproduction light fixtures. Modern ambient and accent lighting is not shown. (QE|A, 2007)

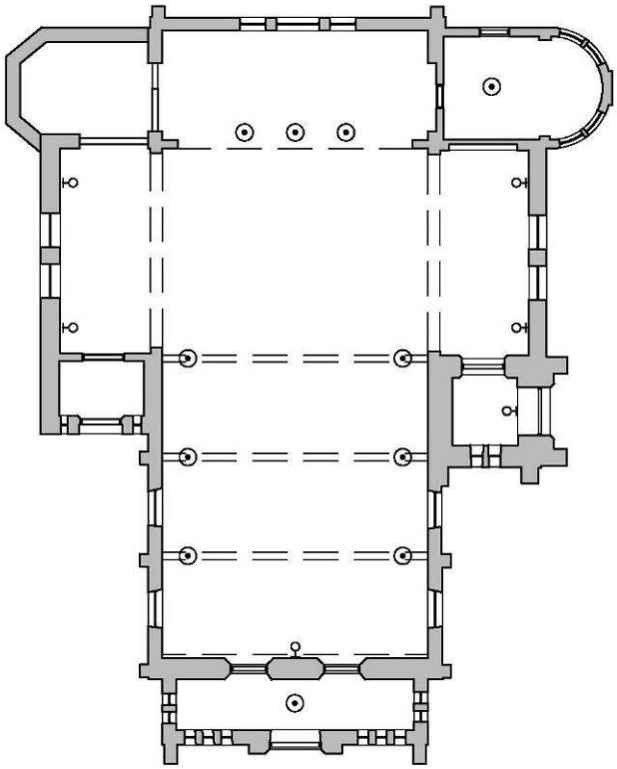


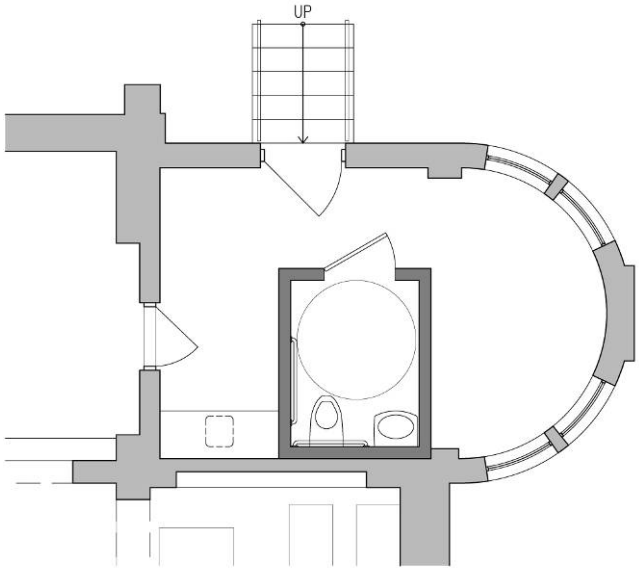
Figure 6.2
Example of a combination gas/electric chandelier.

Figure 6.3
Example of a combination gas/electric chandelier ca. 1910.

Figure 6.4
Example of a reproduction combination gas electric chandelier from Rejuvenation, model "Council Crest."

Figure 6.5
Example of a reproduction combination gas electric wall sconce from Rejuvenation, model "Astoria."

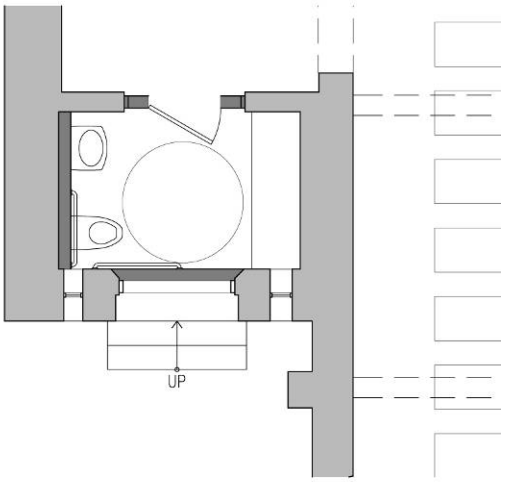
Figure 6.6
Restroom Option 1. (QE|A, 2007)



This option locates an accessible toilet room in the vestry. The existing carillon closet and vestment closet would need to be relocated. Access into the restroom is awkward and may not provide the required turning radius to enter the restroom. This option is not preferred.

A separate wash basin could be provided to support services or other functions. Obviously, this location will need to be accessible to the disabled from the chancel. It could support the use of the vestry as a bride's room, but direct access from the nave is not provided.

Figure 6.7
Restroom Option 2. (QE|A, 2007)



The second option converts the west vestibule into a toilet room. This location is directly accessible from the nave, although there is no sound lock that acoustically separates the two spaces. It requires permanent closure of the west vestibule as an egress path. This option is not preferred.

CHAPTER 7: CONCEPTUAL PROJECT DESCRIPTION

Purpose

The purpose of this chapter is to provide a narrative description of a potential project(s) that could achieve the preservation goals established in the previous chapters. In chapters 3 and 4, information was provided about the original building construction and the current conditions. In chapter 5, a philosophy is described to govern the work. The recommended approach / treatment of "preservation" is repeated below:

> ***Preservation*** *is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather the extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-related work to make the properties functional is appropriate within a preservation project."*[1] *The treatment emphasizes repair and conservation of significant building features and strives to retain existing materials and features while employing as little new materials as possible.*[2]

In chapter 6, the functional requirements for the building and spaces are recorded, as well as an evaluation of the life safety and accessibility issues which face the building. Priorities regarding urgent or long term are also discussed for individual building elements in chapter 6. With the evaluation of the data collected for this study, and applying the treatment philosophy of preservation to project work, it becomes clear that a project here should actually go forward in two steps: a short term project for urgent work, and a long term project, or projects, for fundamental preservation efforts and improvements.

[1] Ibid., p. 17.
[2] Ibid., pp. 19-20.

In the project below, the short term work, and selected long term efforts, are melded into an initial first project. Considerations of construction efficiencies were considered so that this first project would be comprehensive and not necessarily leave work to be repeated in a future project. However, with this said, further evaluation of any of the individual work efforts could establish a differing outcome and work as identified in Chapter 6 could be moved forward into the short term, or backward into the long term project, depending on that evaluation.

At the end of this chapter, a budget cost estimate and implementation schedule is provided for the two sequential work efforts.

This list has been prepared by the entire HSR team, both University participants and consultants.

Initial Project

Based on the examination of the existing conditions of the building and building systems, and being mindful of deficiencies identified in the life safety and accessibility analysis, a grouping of proposed work for an initial project is established below. These are urgent or of very high priority. These address only a portion of the overall preservation needs of this facility and the remainder would be accomplished in a more comprehensive project later.

The efforts listed here vary in complexity. They are split between exterior and interior work, but this is only done as a means of clarifying the work. It does not reflect a priority.

All anticipated work requires architectural/engineering design work in order to implement. Formal construction documents (plans and specifications) would be appropriate. Some of these treatments will require professional expertise in historic preservation and materials conservation and could involve detailed on-site testing and examination, in order to properly approach the work.

Exterior and Site

1. Exterior building stone repairs, stone cleaning and routine painting of window frames and woodwork:

A comprehensive project of stone repairs and cleaning was completed in 2006 for the Bell Tower. For the remainder of the building, pointing of mortar joints is needed on failed and eroded joints, but this is less than 5% of the total area. Sound joints, even if the mortar was poorly done, would remain. 100% of the stone surfaces would be cleaned using the methods tested and

approved in the 2006 project. Additional series of tests may be performed during the design phase to establish the effectiveness of cleaning agents and to confirm the degree of cleaning that is acceptable. This work must be guided by a very strict architectural conservation philosophy which will include detailed testing and analysis to finalize the actual scope of work and approach.

2. Re-introduction of gutters and downspouts on two sides of the nave:

The west and east side of the nave and the south side of the west transept need gutters and downspouts. These should be installed to match the similar copper system on the south side of the building. Technical analysis is needed to determine if this downspout could drop into a new underground drain line (presumably draining to Alderman Road) or if these small collection areas would be directed to empty onto the site.

3. Building accessibility:

Temporary metal ramps now allow access into the building. Attaining a permanent solution is a high priority for this building; hence, this element is included here. One design option was presented in chapter 6 for achieving access for disabled visitors into the front of the Chapel. This requires covering up the two existing stone stairs at the entry and installing a ramped entry. The existing doors would be fitted with automatic operators and ADA hardware to fulfill access requirements. This work provides access to the main seating areas of the nave.

Interior

1. Repair and reinforcement of the wooden pews and furniture restoration:

The historic wooden pews apparently have an inherent structural flaw in that when loaded, too much force is placed on the vertical side elements resulting in cracking and dislocation of the seating boards. There have been a variety of repairs of the years to address this condition. A comprehensive repair methodology needs to be established to reinforce this weak structural connection. It is envisioned this would be accomplished with a project where 4 to 8 pews would be removed and taken to a woodworkers repair shop for the comprehensive

repairs and reinforcement. Temporary pews could be installed while these are removed. Once finished, these would be returned and the next group taken away. This process would be continued over many weeks until all pews are reconditioned. There are 47 pews in total.

The several pieces of historic wooden furniture and the brass lectern should be repaired and restored by a well-qualified furniture restoration craftsman. If desired, a finish analysis could be performed to determine the original finish.

Any repair methodology and design for the furnishings should be reviewed by or coordinated with the University's conservator.

2. Installation of new fire alarm, emergency lighting and smoke detection systems.

The building has no detection systems now and limited alarms, so this important effort is included as a short term project. In order to fulfill the preservation objectives for this space, any new systems such as these must be installed with great care and when completed must be as invisible as possible. With fire alarm and detection systems this is always a challenge because by definition these elements are exposed to view when in operation. However, systems have been developed in the last few years where the operable parts are actually concealed when not needed and rotate into view when an alarm sounds. As this space is an important historic space for the University, the highest standards for execution of this work must be employed. The completed system should be integrated with the University central monitoring and control station.

3. Localized plaster repairs and painting:

Areas of damaged plaster would be repaired and the walls painted in the repair zone. Plaster work requires 30 to 40 days to cure prior to painting, so the plaster work will extend the duration of these repairs. All plaster walls would receive a fresh coat of paint.

4. Minor localized structural repairs to the wood flooring:

The structural survey has identified a handful of locations where reinforcement of existing wooden connection of the floor joists are warranted. These may

be in the form of additional steel joist hangers and or sistering of wooden beams to support and existing joist. These are routine carpentry efforts.

5. Routine cleaning and servicing of the mechanical equipment.

We are not certain of the duration now employed between cycles of routine HVAC servicing, but since the equipment is about 10 years old now, this may be an appropriate time for comprehensive servicing and adjustments.

6. Providing accessibility to the chancel platform.

Two design options were described in Chapter 6. The preferred option is to install a motorized lift at one side of the platform. The second option would be to install a permanent wooden ramp from the nave level. One or the other option should be seriously considered.

Long Term Preservation

Exterior and Site

With this study, only minor issues were identified for the exterior of the building, and these are addressed above with the short term efforts. Over the long term, it is prudent to inspect a building on a three to five year cycle to examine roofing, flashing, gutters and downspouts, and mortar joints. Generally routine maintenance repairs should be expected, but these may be minor.

Interior

The following work is comprehensive and includes two categories of work: 1) preservation treatments and, 2) improvements. Because of the nature of the work, it is assumed the Chapel would be closed for the period of time while the construction is underway. We estimate this could range from 6 to 10 months duration, depending on the actual scope of work that is adopted.

A summary description is provided here. More detailed discussion for each of work elements is provided in Chapter 6.

Interior Preservation

Preservation and restoration treatments to the interior (assuming the short term measures have been completed):

1. Cleaning and refreshing of the woodwork, masonry, and walls

The first part entails thorough cleaning of interior

ceiling woodwork and trusses, and exposed masonry. The word thorough does not mean abrasive or harsh, rather, it means strong and gentle cleaning of the thick layers of dirt, dust and soot from the interior finishes. Light solvents and water, along with vacuuming with a soft rubber or bristle tool will be sufficient to remove these dirt layers. This work most be guided by a very strict architectural conservation philosophy which will include detailed testing and analysis to finalize the actual scope of work and approach. A conservator must determine the proper approach for each material. This work can be done in localized areas and it will require the erection of scaffold to establish a firm work platform. Work areas could be limited to one side of the nave, between two trusses. The pew seating in the work area could not be utilized.

For the wooden ceiling and decorative woodwork, including the trusses, a carefully planned conservation effort to refresh the existing clear and painted finishes throughout is planned. This would be based on a comprehensive investigation and testing protocol determined by a conservator. Replacement of damaged ceiling wood elements is anticipated.

Renovation of the interior painting for the walls and refinishing for the wainscot and door and window assemblies is proposed. Where there is damage to the wooden wainscot or the door and window assemblies, these would be repaired. Detailed finish and plaster investigations are needed to establish the original finish scheme and to determine if any patterned or stenciled decoration was employed for the walls. Once this information is determined, a decision can be made on the level of restoration to be attempted. Any degree of restoration that is possible or achievable within the funding limitations should be the goal of the project. For the purposes of this study, a comprehensive repainting of all painted elements is assumed.

2. Flooring replacement

Work would include restoration of the pine flooring in the nave and narthex. New carpet runners for the aisles would also be included.

3. Inspect stained glass windows

   Inspect all windows, including the Tiffany window, to evaluate condition and identify repairs, if any.

Interior Improvements

These proposed work efforts bring the building into compliance with life safety and accessibility codes and provide additional functionality.

1. Install new lighting and electrical systems.

   All wiring circuits and panel boxes would be replaced. All such wiring and devices would be installed in a manner of concealment to the greatest extent possible. A new lighting design would be prepared that would include replication of combination gas/electric light fixtures which would then be supplemented with "modern" lighting (probably concealed) to provide additional ambient light. Accent lighting could be added for the chancel. Additional convenience outlets would be added around the facility.

2. Audio equipment

   Install audio enhancement system, including microphones, speakers and amplifiers with recording capability.

3. Acoustical improvements

   The nature of this work is unknown at this time and would be the product of a technical analysis of the existing acoustical properties of the room and the program for future needs. The goals for the acoustical performance of the room need to be established. Wall, wainscot and/or flooring treatments could be involved.

4. Mechanical and HVAC ductwork modifications

   The basic system and equipment are in serviceable condition, but there have been complaints of the noise given off by the machines. Work is needed to introduce sound isolation fittings into the entire system to reduce the equipment sound transmission. In addition to this work, it has been suggested that the system be upgraded so that humidity is introduced into the building in the dry winter months. Also, a new controls system is needed so that this equipment can be incorporated into the campus-wide system.

5. Telephone and data connections.

   Connections for telephone and data are needed if this building is to be brought into the campus-wide system.

6. Fire Suppression

   Although fire sprinklers may not be needed from a strict review of the fire code, they would be strongly recommended for this historic building so that both life safety and long term preservation of the building can be assured.

7. Organ

   This study does not address the replacement of the organ, but we understand replacement is planned. The historic pipe façade must be retained, but changes to the organ chamber and console could be appropriate.

Project Budget

Based on the description above of proposed initial and long term work elements, an estimate of the funds needed to accomplish each task is provided. These values include the estimated architectural and engineering fees as well as the anticipated construction costs.

A range of low and high costs (high has a 15% premium) are noted for each component. This covers the increased cost that may occur if only a single element is undertaken at a time. There is an economy of scale so that if multiple elements are included in the same project, there can be cost savings. If this were the case, then the lower values could be used for budgeting a project. However, if many of these were identified as stand alone efforts, then the higher values should be assumed.

The budget assumes the long term efforts would occur in approximately 5 years, thus, a 5% per annum escalation factor has been included.

ESTIMATE OF DESIGN AND CONSTRUCTION COSTS

Initial Project

Element / Task	Low Budget	High Budget
Exterior and Site		
1. Stone work and painting	$87,000	$101,000
2. Add gutters & DS	$8,000	$9,000
3. Bldg. accessibility	$116,000	$134,000
Interior		
1. Pew repairs	$72,000	$83,000
2. Fire alarms and devices	$98,000	$112,000
3. Plaster repairs	$21,000	$24,000
4. Localized structural repairs	$6,000	$7,000
5 Clean mechanical units	$28,000	$32,000
6. Chancel accessibility (motorized lift option)	$40,000	$46,000
Subtotal	$476,000	$548,000

Long Term Preservation

Element / Task	Low Budget	High Budget
Interior Preservation		
1. Cleaning woodwork, masonry, and walls	$245,000	$283,000
2. Flooring replacement	$107,000	$123,000
3. Windows inspection	$25,000	$29,000
Interior Improvements		
1. New lighting and electrical systems.	$100,000	$115,000
2. New audio equipment	$48,000	$56,000
3. Acoustical upgrades	Unknown	Unknown
4. HVAC upgrade	$205,000	$235,000
5. Telephone and data connections	$13,000	$15,000
6. New fire suppression	$113,000	$130,000
7. Organ replacement	Unknown	Unknown
Subtotal	$856,000	$986,000

Project Implementation

At this writing, it is assumed that the short term work could be implemented within the next 18 month period.

Presuming the long term project would need more time to secure funding, it was assumed in the estimate that this work would occur in about 5 years.

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- The Holsinger Studio Collection (UVA Special Collections) http://www.lib.virginia.edu/small/collections/holsinger/
- The University of Virginia Facilities Resource Center (Garth Anderson and Ruta Vasiukevicius, Resource Center Archivists)

Drawings and Specifications.

The following collections were researched for drawings and specifications pertinent to the University Chapel.

- American Institute of Architects Library / Archive (none located)
- Baltimore Architecture Foundation (none located)
- The University of Virginia Facilities Resource Center (Garth Anderson and Ruta Vasiukevicius, Resource Center Archivist)

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