

National Park Service
U.S. Department of the Interior

Christiansted National Historic Site
St. Croix, U.S. Virgin Islands



Historic Structure Report
The Steeple Building
Christiansted National Historic Site
Final

Cultural Resources, Partnerships, and Science Division
Interior Region 2: South Atlantic-Gulf

Christiansted National Historic Site

The Steeple Building

Historic Structure Report

May 2024

Quinn Evans and VHB

National Park Service

Interior Region 2: South Atlantic-Gulf

Cultural Resources, Partnerships & Science



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Cover Image: Photograph of the Steeple Building in 1956. Historic American Buildings Survey

Christiansted National Historic Site

The Steeple Building

Historic Structure Report

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Foreword

We are pleased to make available this Historic Structures Report for the Steeple Building at Christiansted National Historic Site, part of the ongoing effort to provide comprehensive documentation for the landscapes and historic structures of the National Park Service. The success of this project is due in large part to the staff of the Christiansted National Historic Site; the park has long sought to protect and interpret this important resource. Evan Gwilliam, Supervisory Resource Management Specialist, has been instrumental in providing support for this project.

We would like to thank the following for their thorough research, rigorous existing conditions documentation, and carefully considered recommendations: Project Lead Erin Leatherbee and Architectural Historian Derek Anderson of VHB; Project Manager John N. Whitaker, Historians Patti Kuhn Babin and S. Michael Mitchell, Preservation Specialist Charles Thompson, and Editor Rebecca Huffman of Quinn Evans; and Nathan Hicks, structural engineer from Silman. The Park would also like to thank Interior Region 2 Historical Architect Megan Jenkins for her work as COR and as the primary NPS regional liaison on this project.

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Introduction

Management Summary

Quinn Evans and VHB were selected to complete a new Historic Structure Report (HSR) that will update, revise, and continue the existing 1956 Preliminary Survey Report for the Steeple Building, located within Christiansted National Historic Site, St. Croix, U.S. Virgin Islands. The Steeple Building was constructed in 1753 as a Lutheran church and was transitioned to secular functions beginning in the 1830s. The scope of investigation includes the Steeple Building and adjacent retaining walls and fencing on the property. The report documents the general historical context and the structure's chronology of development and use. The HSR serves to provide park management with an assessment of the historic structure's character-defining features and offers specific treatment recommendations to guide appropriate stewardship of this significant resource.



FIGURE 1-1. Photograph of the Steeple Building in 1956. Source: Historic American Buildings Survey, HABS No. VI-1, 1956.

Historical Data¹

Indigenous habitation of the Virgin Islands began around 1500 BCE with Archaic Age hunter-gatherer-fishing populations and continued for thousands of years. Christopher Columbus arrived in Salt River Bay, St. Croix, in 1493, and although Spain claimed St. Croix and the Virgin Islands, there were no known attempts at colonization. English, Dutch, and French colonization of St. Croix occurred beginning in the mid-seventeenth century, and the project of developing colonies was largely fulfilled through the forced labor of enslaved persons from Africa. Denmark acquired St. Croix from France in 1733.

With European colonization came European religion, and the Danes worked to establish Lutheranism in St. Croix. To meet this need, what is now known as the Steeple Building was constructed as a Lutheran church in 1753. Minor repairs and alterations were made to the building over the next three decades. In 1793, a significant building campaign was undertaken, resulting in the addition of a steeple to the north end of the church. Another major repair and rehabilitation project occurred in 1818–19, at which time repairs were made to the steeple, walls were repaired due to a sinking foundation, and the roof was partially or completely resingled. The walls of the building continued to deteriorate, but, due to a lack of available funds, they were buttressed rather than replaced.

The building continued to deteriorate in the 1820s. Lacking the necessary funding to repair the building, the Lutheran congregation moved to a new building in the early 1830s. The former church building was deconsecrated, and the interior furnishings, including the altar, floor tiles, bell, organ, and pews, were removed and transferred to the new building. The title of the building was transferred to the Danish government.

¹ This section summarizes text presented more fully in the Developmental History. For more detail and source citations, see that section.

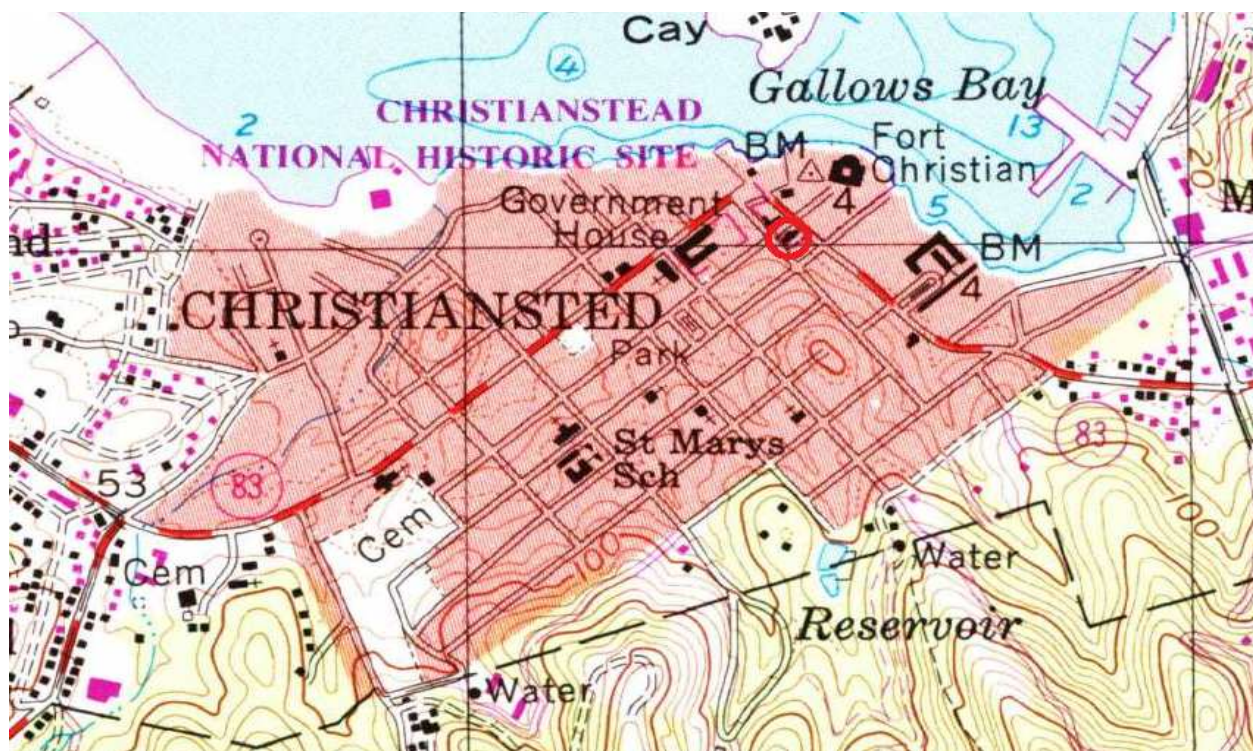


FIGURE 1-2. Map depicting the location of the Steeple Building (circled in red) (USGS Topographic Map).



FIGURE 1-3. Aerial map showing location of the Steeple Building, which is circled in red (Google Maps).

At some point after transitioning to secular use, the former Lutheran church became known as the Steeple Building. It served a number of functions through the rest of its history. From 1841 to 1901, the building was bisected, and the east side housed a military bakery and the west side served as a storehouse. A dividing wall was constructed between the two sections. At this time, the entire roof was removed and replaced with two separate but conjoined roofs. Repairs to the building continued through the rest of the century. From 1909 to 1916, the Steeple Building became a Lutheran Sunday school and town hall. At this time, the dividing wall was removed and the roofs were rebuilt as a single roof. Extensive repairs were undertaken again in 1911, but records are not specific enough to determine the nature of those repairs.

From 1916 to 1925, the Steeple Building functioned as a hospital ward. Although the Danish government had started the conversion, the US government completed the building's transformation into a hospital ward after it acquired the Virgin Islands in 1917. The hospital ward was removed from the building in 1925, and the building became subject to an ownership disagreement between the United States government and the Lutheran Church of Christiansted. During this dispute, roughly 1929 to 1931, several families were allowed to live in the building. In 1932, the Steeple Building was repurposed for use as a grade school. The interior was partitioned into three classrooms with connecting doors on the north side of the building. The building continued in this function until 1954.

In 1952, the National Park Service of the U.S. Department of the Interior (NPS) assumed administration and stewardship of the building after the establishment of the Christiansted National Historic Site. In 1953, architect Frederik C. Gjessing conducted observations of the Steeple Building and determined the condition of the building was fair to poor, as walls were deteriorated, the stucco was scaled, and other wall material was exposed. The interior timber construction of the steeple was in poor condition, including rot and termite damage, resulting in the failure of several support posts. Further investigation into the condition of the building through the 1950s and 1960s resulted in a series of studies. In 1956, the Government of the Virgin

Islands, in cooperation with the NPS, allowed the St. Croix Museum, Inc., a nonprofit educational institution, to use the Steeple Building as a public museum. Between 1961 and 1963, NPS oversaw rehabilitation work on the exterior shell of the Steeple Building as well as new walls, interior structural slabs, repair of existing walls, exterior and interior masonry finish, interior finished pavement, door and window framing, roof framing and roofing, electrical and plumbing work, and glazing. The Steeple Building opened to the public in April 1964 as a museum.

Routine maintenance was made to the building in the 1970s and early 1980s. A major reconstruction project on the building's cupola occurred in the mid-1980s. From the 1980s into the twenty-first century, hurricanes and severe storms on St. Croix brought significant challenges in caring for the Steeple Building, a challenge that will only increase due to climate change and a worsening Atlantic hurricane season.

The Steeple Building was administratively listed in the National Register of Historic Places in 1966 as a contributing resource within the Christiansted National Historic Site. Because administrative listings did not originally include documentation, a National Register of Historic Places nomination was prepared for the Christiansted National Historic Site in 1976.

Treatment and Use

The Steeple Building is a significant, contributing resource of the Christiansted National Historic Site, which was documented and entered into the National Register of Historic Places in 1966 (NR66000077). The Christiansted National Historic Site is nationally significant under National Register Criteria A and C for its association with the Danish colonization of the West Indies and its representative eighteenth-century Danish colonial architectural style.

The Steeple Building is approximately 88 feet by 28 feet, and the tower is approximately 18 feet by 15 feet and 77 feet high. The administratively determined Management Category is "Must Be Preserved and Maintained" and the Ultimate Treatment is "Restoration," as characterized in the Secretary of the Interior's *Standards for Treatment of Historic Properties*. Specifically, Restoration as it applies to stabilization of existing structures. While

other treatments may be discussed in the Part 2 Treatment section, the lead section is Restoration treatments, with other treatments grouped separately under Preservation and Rehabilitation based on needs defined in discussions with park staff. Further information can be found in the *Treatment and Use* chapter.

Administrative Data

Locational Data

Building Name:	Steeple Building
Location:	Christiansted National Historic Site
	1 Company St, Christiansted, St. Croix, U.S. Virgin Islands
UTM Coordinates:	20N 319488E 1962921N
Latitude/Longitude Coordinates:	17.7472430069441N -64.7025141472852W
CRIS Number:	000187
National Register of Historic Places Status:	Entered- Documented
Date of NR Listing:	October 15, 1966
NR Information System No.:	NR66000077
Significance Level:	Contributing to a nationally significant historic district
Period of Significance	1753–ca. 1800

Related Studies

Gjessing, F. C. *Preliminary Survey Report (Architectural Data) Restoration of the Steeple Building, Christiansted, St. Croix, U. S. Virgin Islands* (1956).

Gjessing, F. C. *Historic Building Report (Architectural Data – Part II) Preliminary to the Restoration of the Steeple Building* (1960).

Gjessing, F. C. National Register Nomination Form. “Christiansted National Historic Site,”

1976 (NR66000077). <https://catalog.archives.gov/id/131518860>.

Olsen, Herbert. *Historic Structures Report, Administrative Data and Historical Data, Steeple Building* (1959).

Project Scope and Methodology

Purpose

This HSR documents the historical development, present condition, and significance/integrity of the Steeple Building and provides information to assist the NPS in planning for its preservation and maintenance that preserves and interprets its historical significance. The NPS’s Director’s Order 28 states that “In no case should restoration, reconstruction, or extensive rehabilitation of any structure be undertaken without an approved HSR, Parts 1 and 2.” The purpose of this HSR is to provide a basis of information, including historical research, documentation of existing conditions, and treatment recommendations, that will guide the long-term stewardship of Steeple Building.

Part 1: Developmental History, which includes the Historical Background and Context and the Chronology of Use and Development, documents the evolution of the building and its current condition. The narrative is based on documentary research and physical examination.

Part 2: Treatment and Use presents and evaluates alternative uses and treatments for the building based on needs defined by NPS. The emphasis is on preserving extant historic material and resolving conflicts that might result from a structure’s “ultimate treatment.” Part 2 concludes by recommending a treatment and use, responding to objectives identified by park management, including implementation projects.

The contents, format, and objectives of Volume I follow the guidelines for preparing Part I of a Historic Structure Report as set forth by the National Park Service in two publications: *NPS-28: Cultural Resource Management Guideline* (specifically Chapter 8: Management of Historic and Prehistoric Structures) and *Preservation Brief 43: The Preparation and Use of Historic Structure Reports*.

Historical Research

The statement of work for the HSR required a “thorough” level of research focused on readily available sources of documentation in the Park archives and the NPS’s eTIC (Electronic Technical Information Center) database. The statement of work also specified the use of the existing 1956 Preliminary Survey Report for the Steeple Building as the basis for historical documentation from the 1730s to the 1950s.

Park archives and NPS eTIC database research was supplemented by interviews with NPS staff and others to develop the Historic Background and Context as well as Chronology of Development and Use. Interviews were conducted with the following individuals: Dr. Meredith Hardy, NPS, Archeologist and Cultural Resource Specialist; Evan Gwilliam, NPS, Chief of Resource Management at CHRI; James Riddick, NPS, Maintenance Manager at CHRI; Daniel Ritter, NPS, Historic Preservation Training Center; George Tyson, Historian, U.S. Virgin Islands SHPO; and David Hayes, Archeologist.

Condition Assessment

Physical investigation, including condition assessment, was conducted concurrently with historic research. Disciplines represented on the site survey team were architectural and structural. Investigation techniques were visual survey only and included a structural assessment. Observations were documented with field notes, digital photographs, and annotation of sketch drawings prepared prior to field work. The condition assessment included the exterior, interior spaces, structure, materials, and elements of the site relevant to building conditions. Field notes and measurements were taken to further develop measured drawings.

Development of History, Chronology of Construction, and Evaluation of Significance

The contextual history and chronology of development and use were developed from historical documentation and physical evidence gathered during the research and survey phase. The evaluation of significance and integrity was prepared in accordance with the statements of significance established in the 1966 National Register of Historic Places nomination.

Contextual History, Chronology of Development, and Evaluation of Significance

The combined information from documentary research and physical investigations was analyzed, and a narrative context history and building-specific chronology of development and use were written. The narrative physical description was prepared, containing a systematic accounting of exterior and interior spaces, features, materials, and condition assessment. All narratives are supplemented by numerous photographs and drawings.

An evaluation of significance was prepared in accordance with the guidelines in the *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*.² The seven aspects of historic integrity were assessed using the same guidelines. These evaluations of history, condition, significance, and integrity provided the basis for the development of recommended treatment alternatives.

Treatment Recommendations

The Secretary of the Interior’s *Standards for the Treatment of Historic Properties* guided the development of treatment recommendations for the significant exterior and interior features of the building. Following the overall treatment approach of Preservation, specific recommendations were developed to address the observed existing conditions as well as long-term preservation objectives.³

Preparation of Historic Structure Report

Following completion of research, site work, and analysis, this report was prepared summarizing the results of the research and inspection and presenting the recommendations for treatment and future actions. It was compiled following the organizational guidelines of the NPS *Preservation Brief 43: The Preparation and Use of Historic*

² *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* (Washington, DC: National Park Service, National Register of Historic Places, 1990, revised 1997).

³ Anne E. Grimmer, *The Secretary of the Interior’s Standards for Treatment of Historic Properties, with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (Washington, DC: National Park Service, Technical Preservation Services, rev. 2017).

Structure Reports and the NPS Scope of Work for this project.⁴

Summary of Findings

Condition Summary

A summary of conditions of the Steeple Building is provided below; see Chapter 3 for details.

Exterior: Overall, the exterior of the building is in fair condition. The primary issues found on the exterior of the Steeple Building are caused by water infiltration and/or differential settlement. The bulging, staining, plaster damage, and majority of cracks found around the main block and tower are more than likely caused by water infiltration.

Interior: Interior conditions range from poor to good condition. Issues can be broadly grouped into three categories: plaster deterioration, cracks, and staining.

Structure: Several inches of soil subsidence or erosion are creating a negative drainage effect at the building footing. Cracking patterns indicate that the middle portions of the longitudinal walls on the north and south elevations are settling downward. The exterior load-bearing masonry walls have active cracking, staining, and moisture infiltration issues. The floor and roof framing appear to be in good condition. The steeple is in fair condition and has a slight lean due to past settlement or significant loading events.

Treatment Summary

Treatment recommendations for the Steeple Building are in accordance with the NPS's preliminary assignment of Ultimate Treatment and Use as Preservation. A summary of treatment recommendations for the Steeple Building is provided below; see Chapter 5 for details.

Site

The front paved areas on the north and the rear yard on the south side should be regularly maintained to ensure water runoff is not directed toward the building itself. The steps leading up to

Doors B and C should be cleared of vegetation and have dutchman repairs for the broken elements. Drainage also needs to be further studied all around the property.

Foundation

A comprehensive survey should be done of the foundation, including a geotechnical report describing the soil conditions of the site.

Exterior

The primary issues found on the exterior of the Steeple Building are caused by one of two reasons: water infiltration or differential settlement. The bulging, staining, plaster damage, and majority of cracks found around the building and tower are more than likely caused by water infiltration. As water enters the building (from pooling on the top of the wall, through openings such as windows and doors, etc.), it naturally travels down taking the path of least resistance. In wall assemblies such as in the Steeple Building, with masonry covered in plaster and paint on either side, this often results in delamination of the plaster from the masonry and causes bulging or cracks. Differential settlement is likely responsible for the larger cracks that go through the wall assembly. If different parts of the building settle at different rates, then internal stresses on the construction assemblies will cause separations and cracks. These cracks are typically deeper and are often associated with structural issues that need remediation.

Continued periodic maintenance of the building's exterior is recommended to prolong the life of the materials and assemblies. The extent of work should be thoroughly documented so that a record of damage can be kept over time, as well as a record of what repairs were performed. Cracking in plaster can also often be caused by the application of inappropriate materials. If a plaster with the incorrect water content is applied, evaporation can cause shrinkage and result in cracking.

Cracks in exterior walls should be routinely monitored. If only surface level, the area around the cracked plaster should be removed and replaced by an appropriate and homogeneous mix to the surrounding existing material. In general, any damaged plaster should be removed and treated in the same manner. This includes bulging and flaking around the windows and doors. Cracks that are

⁴ Deborah Slaton, *Preservation Brief 43: The Preparation and Use of Historic Structure Reports* (Washington, DC: National Park Service, Technical Preservation Services, 2005).

deeper than the plaster layer should be inspected further. The plaster should be cleared away and the damage to the masonry should be repaired. Any deteriorated mortar or masonry units should be removed and replaced in kind.

Routine monitoring should also occur for the presence of rising damp. If found, mitigation measures should be implemented.

Openings

Windows and doors should be maintained. This includes paint finishes, transoms, shutters, hardware, and glazing. Missing and damaged pieces should be replaced.

Roof

As of the second site visit, the roof appeared to be in good working condition. No visible signs of leaking were found in the attic or in the interior ceiling. Replace missing shingles, maintain flashing, and clear out blocked gutters. In multiple locations plants were visibly growing in the gutters and rain leaders. These should be removed to allow proper water flow.

Interior

Damaged plaster should be removed and replaced by an appropriate and homogeneous mix to the surrounding existing material. Plaster damage appeared to be located primarily around openings and along the southwest wall and west half of the northwest wall.

For cracks in the interior walls, if only in the surface level, the area around the cracked plaster should be removed and replaced. If cracks are deeper than the plaster layer, they should be inspected further. The plaster should be cleared away and the damage to the masonry should be repaired. Any deteriorated mortar or masonry units should be removed and replaced in kind.

Staining and biological growth should be cleaned from the surface of the wall using non-abrasive techniques. Paint that matches the existing surface texture and color should be applied.

Cracked marble floor tiles should be replaced in kind, taking special care to keep the alternating black and white checkered pattern intact. Currently, there are several uneven areas across the

flooring surface. While on the second site visit, a floor tile was lifted up to reveal a sand setting bed underneath. A setting bed of 1–2 inches is typical in these conditions. Further investigation should be done to determine the proper subfloor structure.

For the tower, the same plaster and masonry repairs apply to tiers 1–3. The interstitial level where the base of the wood cupola meets with the masonry tower appears to be in good condition on the interior. Periodic inspection should occur to ensure no leaks or cracks develop.

Other Observations

In the interior of the main building, plaster damage appears to be most significant along the southwest wall and west half of the northwest wall. According to the 1960s drawings, these walls also appear to be original. The rest of the building was rebuilt from concrete masonry unit (CMU) with air space in between. It is possible that the more extensive plaster damage could be a result of the original rubble-filled masonry walls holding in more moisture. It is recommended that a survey be taken using either an infrared thermal imaging camera or a moisture reading from inside the walls to determine if this is, in fact, the case. If so, further water mitigation measures such as the installation of a weep hole or damp proof course should be considered.

Structural

Structural recommendations include drainage mitigation to move water away from the building, such as regrading, redirecting, and improving the roof drainage system. Recommendations related to cracking include the removal of plaster and deep repointing of the wall mortar, stitching together cracks with stainless steel dowels prior to replastering, and visually checking cracks on a regular basis using a tell-tale monitor. Recommended retrofits to the steeple include horizontal dowels/sock anchors added at the two lower masonry tier levels; the reinforcement of the piers for tensile stresses by adding vertically cored (from the top down) sock anchors to provide vertical reinforcement and strengthen the masonry portions of the steeple; and the reinforcement of the top wood-framed portions to resist code-level forces.

Recommendations for Further Study

Recommendations for further study include:

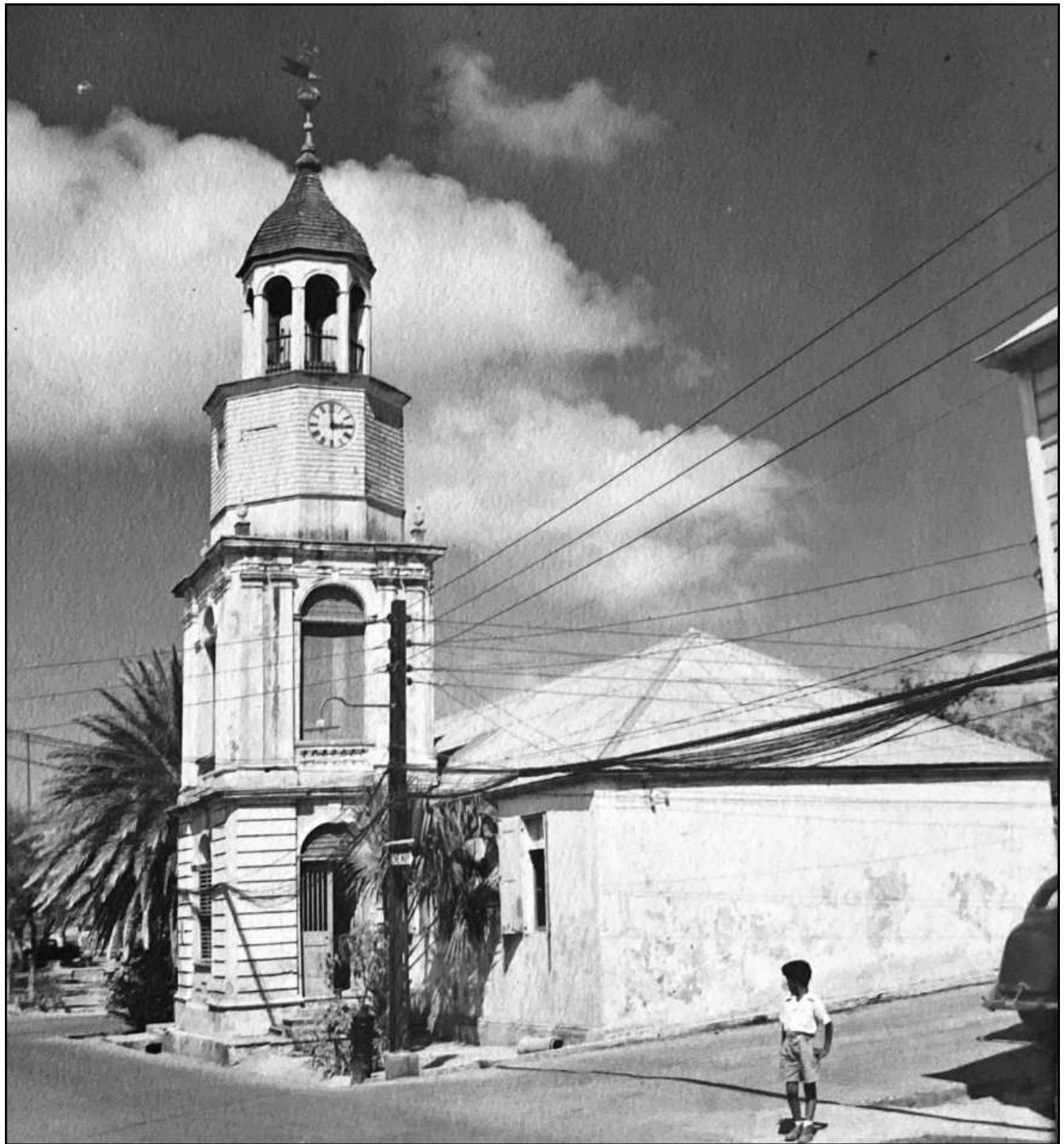
- A Cultural Landscape Inventory (CLI) was completed for the Christiansted National Historic Site in 2021. The CLI includes baseline documentation on the Steeple Building's cultural landscape and identified landscape characteristics associated with the historic property. The preparation of a Cultural Landscape Report (CLR) is recommended to further identify contributing and non-contributing historic landscape features, site conditions, and Restoration treatment recommendations for the Steeple Building. The completion of a CLR is important before any alterations are made to the landscape.
- The 1960s restoration of the Steeple Building brought the structure back to its configuration during the determined period of significance. According to the information available, the building footprint, number, and size of openings, finish colors and textures, and level of ornament and fenestration all closely match what existed 1758 to circa 1800. Areas for further study to incorporate more historic features include investigation into the original chandeliers and examination of the current furniture layout.
- A full soil analysis and geotechnical report to determine soil conditions around the Steeple Building and settlement mitigation strategies.
- Small probes in the wall assembly, located primarily in areas that best represent the cracking and bulging problems.
- Infrared or moisture meter analysis on the original remaining walls to see if they retain more water.
- Further investigation into the interior floor assembly; localized removal of floor tiles to investigate the cause of cracking and confirm the presence of a slab on grade.
- Flat jack test of the original masonry to confirm assumed values used in the lateral analysis, specifically for the masonry at the steeple.
- Material compatibility testing of original masonry to determine injection repair material.
- Wood species identification of the timber framing within the steeple to help refine the lateral analysis for the upper tiers of the steeple.

Recommendations for further research include:

- The Steeple Building is a materialization of the labor of enslaved and free Africans and their descendants, Europeans, and Euro-Americans. While the names of some designers and craftspeople who contributed to the Steeple Building are noted in historic records, the stories of these persons as well as unnamed laborers and the building traditions that guided their efforts remain to be investigated. Future studies should include the development of a history of building techniques and construction methods, including the synthesis of the building techniques of the different cultures, which was inherent to the building's presence in the New World. Additionally, to account more fully for the labor embedded in the building, the methods involved in the procurement and use of construction materials in the original construction and subsequent work, such as the quarrying of stone for masonry units, lumber, and iron, would benefit from exploration. This especially relevant in light of the many stabilization campaigns the building has experienced over the centuries.
- The congregants of the Lutheran Church and the membership of the successor institutions that occupied the Steeple Building comprise a history of associations between the building and the St. Croix population. Development of a history of associations between the building and the St. Croix population, taking into community groups and individuals with historic ties to the building, would provide a fuller understanding of the Steeple Building. This would not be limited to investigation of church connections through membership and various rites of passage (marriage, baptism, and funeral), but also consider successor institutions (such as a military bakery and warehouse, community hall, hospital, elementary school, and museum), and the subsequent uses of the building and the associated people.

- The Steeple Building developed in the context of a society dominated by slavery and colonialism, which had race, gender, and class dimensions. Throughout its existence, the building served a diverse population and range of needs, and further investigation is required to understand how people experienced and interacted with the structure based on their various statuses in the society. Research on this topic should include examination of how the building's design, spatial organization, and use helped to reinforce and/or diminish status differences during the time it served as a Lutheran Church.

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PART I: DEVELOPMENTAL HISTORY

HISTORICAL BACKGROUND AND CONTEXT

CHRONOLOGY OF DEVELOPMENT AND USE

PHYSICAL DESCRIPTION AND CONDITION ASSESSMENT

SIGNIFICANCE AND INTEGRITY

Historical Background and Context

Early Human Settlement and European Colonization of the Virgin Islands and St. Croix

Human settlement of the Virgin Islands, which are part of the Caribbean region historically referred to as the West Indies, began around 1,500 BCE with Archaic Age hunter-gatherer-fishing populations. This was followed by nearly 1,000 years of occupation by inhabitants with cultural roots in South America. In the fifteenth century, the inhabitants of the Virgin Islands experienced intermittent raiding by the Island-Caribs of Kalinga, who inhabited the Lesser Antilles, or potentially the Taíno of Puerto Rico. Thousands of years of occupation, trade, warfare, and migration resulted in an Indigenous population with cultural ties to other communities throughout the Caribbean.¹

On his second voyage, Christopher Columbus landed on what is now Salt River Bay, St. Croix on November 14, 1493, and made contact with Indigenous populations. He named this island Santa Cruz (St. Croix) and then continued sailing north, where he encountered several smaller islands that he named “Las Once Mil Virgines,” or the Virgin Islands.² Though Spain claimed St. Croix and the Virgin Islands, there is no known evidence that the Spaniards attempted to colonize the

islands at the time.³ Instead, Spain focused on their colonization of the larger islands in the area.⁴

It was not until the mid-seventeenth century that Europeans began colonizing St. Croix with a method of colonization based in the system of mercantilism supported by the transatlantic slave trade. Under this system, a strong centralized state government (in these cases European Crowns) directed the development of the economy so that the industry and commerce produced everything needed by its people. These products were then exported for sale or trade. St. Croix and its neighboring islands were desirable as European colonies due to their tropical climates, which were ideal for producing crops such as sugarcane, molasses, coffee, and cocoa. These colonies, and in particular the plantations established there, required a substantial number of laborers, so hundreds of thousands of enslaved persons from Africa were trafficked to undertake this work.⁵ This reliance on enslaved laborers made these colonies highly profitable.

The Dutch and the English each arrived on St. Croix in 1642 and attempted to settle a joint colony. After a few years and a series of small skirmishes, the English forcibly evicted the Dutch from the island. Their success was short lived, however, as Spain eventually forced the English off the island in 1650. Spanish control lasted only a few months, at which point the French supplanted the Spaniards and colonized the island for themselves in 1651. The principal French settlement was located at Salt River; however, a small port settlement known as Bassin was located at what is now Christiansted.

1 University of Alabama, Office of Archaeological Research, and the Virgin Islands State Historic Preservation Office. *The U.S. Virgin Islands Statewide Historic Preservation Plan, Historic Preservation in the U.S. Virgin Islands: Preserving our Past for our Future, For 2016-2021* (Washington, DC: US Department of the Interior, National Park Service, 2016), 9-12.

2 Frederik C. Gjessing, “National Register of Historic Places Inventory Nomination Form for Federal Properties, Christiansted National Historic Site” (Atlanta, GA: National Park Service, Southeast Region, 1976), sec. 8, p. 6, <https://npgallery.nps.gov/NRHP/AssetDetail/d87e3666-1caf-46c8-8d10-ee0cdc26d511>.

3 Herbert Olsen, *Historic Structures Report, Part I, Historical Data Addenda and Corrections, Steeple Building, Christiansted, St. Croix, U.S. Virgin Islands* (United States Department of the Interior, National Park Service, Virgin Islands National Historic Site, 1960), 6-7.

4 Gjessing, “National Register Nomination Form,” sec. 8, p. 6.

5 National Park Service, “Topical Essays by Park Historian” (St. Croix, U.S. Virgin Islands: Christiansted National Historic Site, 1994).

A small fortification was located on the site of the present Fort Christiansvaern and a small church was located southwest of the fort.⁶ The French settlement held a population of about 1,300 people at its peak, including indentured servants and enslaved Africans.⁷ The French occupied St. Croix until 1696, when the French Crown determined that the colony was no longer profitable, and the entire settlement was moved to Saint-Domingue (present-day Haiti).⁸

Danish West India and Guinea Company in the Virgin Islands

Denmark was drawn to the West Indies generally for their trade possibilities and St. Thomas, in particular, for its excellent deep-water harbor. In 1665, the Danish Crown established a colony on St. Thomas led by a commandant, which was the highest official appointed by the Danish government in the West Indies during their colonization.⁹ The colony was abandoned after nineteen months due to sickness, pirate attacks, severe weather, and inadequate assistance from the home government.¹⁰

In 1671, the Royal Chartered Danish West India Company was founded in Copenhagen. Chartered to establish colonies for the Danish Crown in the West Indies, the company was one of the most famous of the royally chartered companies established by Denmark to participate in the African slave trade. In 1674, the company took over the Danish settlements on the Gold Coast of Africa and became the Danish West India and Guinea Company (the company). Its role was to manage

the colonies in the West Indies and West Africa on behalf of the Danish king.¹¹ Danish slave ships chartered by the company secured their human cargo at Danish slave-trading forts in Guinea (now Ghana) and then sailed across the Atlantic to their destinations in the West Indies.¹²

By 1672, buoyed by the success they had experienced in St. Thomas, the company sought to expand elsewhere in the archipelago due to a need for increasing profits and St. Thomas's limited agricultural potential. In November 1674, a royal charter gave the company complete control of the Danish–Guinean slave traffic, and, as a result, the company looked to expand its slave trade into other markets. By 1718, the company had established a successful settlement on nearby St. John.¹³

When St. Thomas and St. John experienced an economic depression in the 1720s, the company considered purchasing the nearby island of St. Croix from the French, which remained uncolonized following the departure of the French to Saint-Domingue. The company saw the benefit of St. Croix with its fertile land and moderate climate as well as its size and terrain, all of which made it ideal for sugar production. Consequently, on June 15, 1733, the Danish West India and Guinea Company officially purchased St. Croix from France for 750,000 French livres with the stipulation that they could not sell the island to a foreign power without French approval. The colonization of the island was delayed due to an insurrection by enslaved persons on St. John, and it was not until September 1, 1734, that Frederik Moth, who previously served as the company governor of St. Thomas and St. John, lead a group of settlers from St. Thomas to St. Croix. They settled in the location of the former French settlement of Bassin, establishing present-day Christiansted. Moth served as the first Danish governor of St. Croix from 1734 until 1736, appointed by the company on behalf of the Danish king.¹⁴

6 Olsen, *Historic Structures Report Administrative Data and Historical Data*, pp. 6-7.

7 University of Alabama, *The U.S. Virgin Islands Statewide Historic Preservation Plan*, 14.

8 Gjessing, "National Register Nomination Form," sec. 8, p. 7.

9 The title of the highest official in the Danish West Indies changed throughout the Danish occupation of the islands and included commandant, governor, and governor-general. Only governors and governors-general served on the island of St. Croix. Records conflict over official titles for individuals; therefore, for the purposes of this document the titles are considered interchangeable.

10 Gjessing, "National Register Nomination Form," sec. 8, p. 7.

11 "Commandants and Governors," Danish National Archives (Rigsarkivet), accessed April 27, 2022. <https://www.virgin-islands-history.org/en/history/colonial-power/commandants-and-governors/>.

12 National Park Service, "Topical Essays."

13 Gjessing, "National Register Nomination Form," sec. 8, p. 7.

14 Gjessing, "National Register Nomination Form," sec. 7, p. 5; and "Commandants and Governors," Danish National Archives.

Founding of Christiansted

When the Danish arrived at what would become Christiansted, they found remnants of structures from the earlier French settlement including earthworks of a fortification and a former church; most other structures, homes, and agricultural fields had been burned or otherwise destroyed by the French prior to their departure. Under the leadership of Governor Frederik Moth, the Danish settlers immediately constructed a temporary redoubt with simple dwellings on the site of the earlier French fortification (Figure 2–1). The Danish West India and Guinea Company prioritized the rapid development and settlement of St. Croix. Between 1735 and 1754, the company surveyed the island and established plantation sites. Meanwhile, work began on a permanent fortification, and by the end of 1749, much of Christiansvaern had been completed. The fort was built by enslaved laborers, and the colonists named it Christiansvaern (“Christian’s Defense”) in honor of King Christian VI of Denmark-Norway.¹⁵ Christiansted was further developed by the company, and by 1749, they constructed a warehouse, offices, and quarters.

By the time the fort was complete, most of the flat land in St. Croix was under cultivation. According to the 1751 census, the island contained 120 sugar estates and 122 cotton estates worked by 1,900 enslaved people.¹⁶ At the peak of the plantation economy in the Danish West Indies, the enslaved population of Saint Croix numbered between 18,000 and 20,000. In contrast, the island’s White population ranged between 1,500 and 2,000.¹⁷ Since the eighteenth century, the majority of St. Croix’s population has been people from Africa or African descent.

During the next several decades, St. Croix experienced the growth of plantation society due to the highly successful production of sugarcane

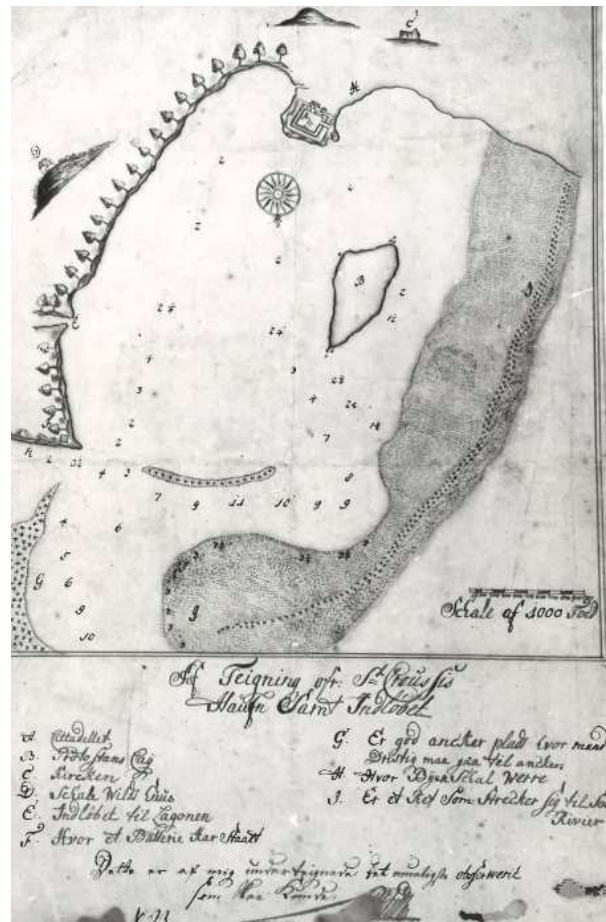


FIGURE 2–1. Map of the harbor and town of Christiansted by Lieutenant Peter Lorentzen Stibolt in 1735. The sketch shows an earthwork under construction by the Danes marked “A” (upper center) on the site of an earlier French earthwork, and the former French church at “C” (upper right). Source: From the original in the Rigsarkivet in Copenhagen, Denmark. From Herbert Olsen, *Historic Structures Report*, 1959, fig. 1.

and the institution of enslaved labor. While the Danish West India and Guinea Company enjoyed the benefit of a royally chartered slave-trading monopoly, over time it burdened plantation owners and merchants with excessive taxation on imports and exports, along with the requirement that all trade be transacted in Danish vessels. As result, in 1753, the plantation owner and merchants sent a representative to Denmark to petition the king to take over rule of St. Croix, lift restrictions on shipping, and end the company monopoly on sugar refining. The economy had stagnated and the company was almost bankrupt, with the result that its shareholders were only too glad to sell. In 1755, the Danish Crown purchased the company’s stocks and made the West Indies a crown colony, in which the Danish Crown had direct authority over the colony via a royally appointed governor-general. The newly appointed governor-general, Christian Lebrecht von Prock, took up residence

15 Denmark and Norway formed a union in the sixteenth century and were governed as a single state until 1814.

16 Gjessing, “National Register Nomination Form,” sec. 8, p. 8.

17 Kristin Loftsdóttir and Gísli Pálsson, “Black on White: Danish Colonialism, Iceland and the Caribbean,” in Magdalena Naum and Jonas M. Nordin (eds), *Scandinavian Colonialism and the Rise of Modernity: Small Time Agents in a Global Arena, Contributions To Global Historical Archaeology Volume, 37* (New York: Springer, 2013), 41.



FIGURE 2-2. Plan of Christiansted, St. Croix, by Julius von Rohr, a surveyor and chief building inspector for the Danish West India and Guinea Company c. 1760s. The Lutheran Church (marked "b") is visible to the west of the fort, lined up with the warehouse ("c") on the opposite side of Company Street. Source: From the original in the Rigsarkivet in Copenhagen, Denmark. From Herbert Olsen, *Historic Structures Report*, 1959, fig. 5.

in Christiansted, and it was designated the capital city of the Danish West Indies. A local government was also set up with a city bailiff handling the local administration in the major cities on St. Croix.¹⁸ Figure 2-2 shows a circa 1760s plan of Christiansted in which the city's rapid development is evident with its ordered streets and dense rectangular lots.

What followed is known as the Golden Age of St. Croix (1760–1820). The island saw major profits from trade in sugar, rum, molasses, and cotton. At the same time, the population of St. Croix increased dramatically, and the island flourished

and became a significant center of international trade. A circa 1815 sketch by Henrik Gottfred Beenfeldt, a lieutenant in the Danish West Indian Army on St. Croix, depicts a prosperous Christiansted with a busy harbor and a notable military presence (Figure 2-3). By the mid-nineteenth century, however, the growing sugar-beet industry in Europe reduced the demand for West Indian sugarcane, which decreased in price as a result. These market conditions, the emancipation of enslaved persons after they rebelled in 1848, and a series of damaging hurricanes triggered an irreversible economic decline. With the waning of its economic power, Christiansted's status as capital of the Danish West Indies ended in 1871.¹⁹

¹⁸ Gjessing, "National Register Nomination Form," sec. 8, p. 9; and "The dissolution of the Danish West India and Guinea Company," Danish National Archives (Rigsarkivet), accessed April 27, 2022. <https://www.virgin-islands-history.org/en/timeline/the-dissolution-of-the-danish-west-india-and-guinea-company/>.

¹⁹ Gjessing, "National Register Nomination Form," sec. 8, p. 10.

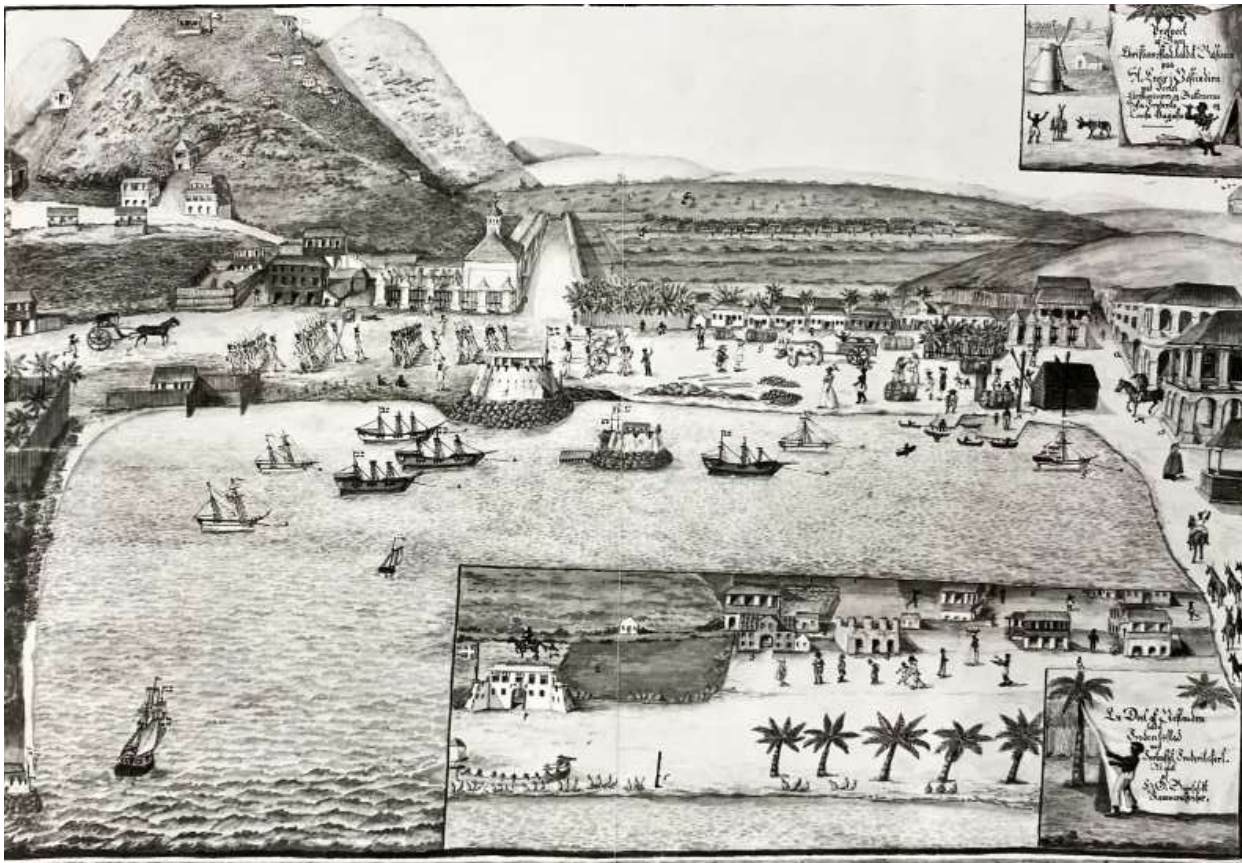


FIGURE 2–3. Sketch of Christiansted, St. Croix, by Henrik Gottfred Beenfeldt c. 1815 that depicts a busy harbor, military presence (center left), and the Lutheran Church with a cupola tower (background center) Source: From the original-colored drawing in the Rigsarkivet in Copenhagen, Denmark. From Herbert Olsen, *Historic Structures Report*, 1959, fig. 11.

Though enslaved people had gained their freedom through emancipation in 1848, most of their living conditions were not much improved. Formerly enslaved people were often employed on the same plantations they had worked before abolition, with little improvements to accommodations, healthcare, education, or income. The day wage of these laborers was so low that they could rarely support themselves or their families and paying for healthcare was nearly impossible. The battle for reasonable working conditions continued under Danish rule until the United States purchased the West Indies in 1917.²⁰

When the Danish colonists settled in St. Croix in 1734, they brought with them the Lutheran faith. Lutheranism is a branch of Protestantism that was the official religion of Denmark at the time. In 1753, the Lutherans established their church in the building that is now known as the Steeple Building

and named it Lord God of Sabaoth (also spelled Zebaoth), a title found in the Old Testament. The building lacked exterior ornamentation and had an unusual floor plan compared to what was typical for a church at this time: the altar was centered on the long south wall. This was designed to reflect a Protestant appearance and simplicity. The congregation of the Lutheran Church on St. Croix was made up of both White and Black (free and enslaved) worshippers. In fact, throughout the eighteenth and nineteenth centuries, the Lutherans held two regular services: one for Danish speakers and another in English for the Creole and Black congregation.²¹

During the rule by the Danish West India and Guinea Company, rigid restrictions were placed on denominations other than Lutheran. When Denmark purchased St. Croix from France in 1733, the French included a stipulation that the island could only be settled by Danes in order to exclude France's traditional rivals England and the Netherlands. Denmark was unable to encourage

20 "Fireburn: The Uprising of 1878," National Museum of Denmark, accessed April 28, 2022. <https://en.natmus.dk/historical-knowledge/historical-themes/danish-colonies/the-danish-west-indies/fireburn/>.

21 National Park Service, "Topical Essays."



FIGURE 2-4. Lord God of Sabaoth Church (former Dutch Reformed Church) on King Street, Christiansted, St. Croix. Photo: National Register of Historic Places Nomination Form for Christiansted National Historic Site, 1976.

enough of its subjects to migrate to St. Croix and establish plantations; therefore, the company turned a blind eye to the Dutch and English settlers who were arriving from other West Indian islands. In 1755, when the island became a crown colony, the Danish Crown understood that it was in their best interest to keep the influential non-Danish plantation owners and merchants content and productive. This led to a degree of religious tolerance for denominations such as the Dutch Reformed Church and the Church of England, both of which were allowed to worship according to their own customs.²²

The Dutch Reformed Church constructed their own house of worship prior to 1742 on King Street and served a sizeable congregation of Dutch plantation owners and merchants who had migrated from settlements in St. Eustatius and St. Maartens. However, their numbers diminished by the end of the eighteenth century as a consequence of decreasing Dutch immigration to St. Croix as

well as a dilution of the previously strong Dutch cultural identity through marriage with Britons. By 1820, the church had shut its doors, and its records were transferred to the Dutch Reformed congregation in St. Thomas. The Lutherans on St. Croix acquired the building in 1831 and relocated from the Steeple Building, which was in need of substantial and costly repairs. The Lutherans refurbished the former Dutch Reformed Church and reconsecrated it in 1834 as the Lord God of Sabaoth Church (see Figure 2-4). The building retains its Flemish gables on either side of the bell tower as well as the side entrances. This design, characteristically Dutch and Northern German, continues to express the building's national and cultural origins.²³

After the Lutheran congregation moved from the Steeple Building, it was no longer used as a church. The building served a number of different secular functions through the rest its history, including a military bakery and a storehouse (1841–1901) and a Lutheran Sunday school (1909–1916) (see Chronology and Development and Use below).

United States Purchases the Danish West Indies

Seeing the strategic military value of the West Indies, the United States (US) made two unsuccessful attempts to acquire them from the Danish: first; one in 1867 for \$7.5 million and a second in 1902 for \$5 million. During World War I, in order to secure the strategic St. Thomas harbor, the United States made a third offer, this time for \$25 million in gold, which proved successful. A Treaty of Cession between the King of Denmark and the United States was agreed upon on August 4, 1916, with ratification by the Senate on September 7, 1916. A treaty of purchase was finally ratified in Washington on January 17, 1917, with formal transfer occurring on March 31, 1917. The United States renamed the islands the Virgin Islands.²⁴

From 1917 to 1931, the United States Navy administered these new American territories with admirals and captains serving as territorial

23 National Park Service, "Topical Essays."

24 Gjessing, "National Register Nomination Form," sec. 8, p. 12.

22 National Park Service, "Topical Essays."

governors. The first naval governor was Rear Admiral James H. Oliver, appointed by President Woodrow Wilson. Under the US administration, the government took on a substantial improvement campaign to improve issues with public health, water supplies, and public education systems on the islands. During the first year of administration, the US government successfully implemented major reforms in hospitals and the overall medical system. This effort included the conversion of the Steeple Building from a school and town hall into a hospital ward. Efforts were turned next to the public water supply, where the US Navy cleaned and improved existing cisterns and added new cisterns to increase the available water supply during the dry season. By the mid-1920s, a large reservoir had been constructed at the Creque Dam on St. Croix to improve the situation further. Improvements to the public school system and maintenance of the existing roads throughout the islands were another focus of the US government during the early twentieth century.²⁵

Though improvements were made to social services on the islands in the form of improved public health, expanded water supply, the public education system, and the roadways, the economic conditions of St. Croix and the rest of the Virgin Islands were in decline. The agricultural production of sugar and cotton decreased, and the prohibition of alcohol in 1921 in the United States resulted in the cessation of rum production and exportation. Beginning in 1929, the worldwide Great Depression caused the economy to plummet further. In 1931, administration of the U.S. Virgin Islands was transferred from the military to the US Department of the Interior to support a civilian governance, with governors then being appointed by the US president.²⁶

Establishment of a National Historic Site

In the 1950s, civic-minded citizens of St. Croix recognized the cultural value of the historic buildings of Christiansted. They petitioned the US government to protect Fort Christiansvaern and other buildings associated with the island's

Danish heritage. As a result, on February 11, 1952, a Memorandum of Agreement (agreement) between the US Department of the Interior and the Municipality of St. Croix was signed to commit the National Park Service (NPS) to preserving these resources.²⁷ An order by Secretary of the Interior Oscar L. Chapman that established the Virgin Islands National Historic Site followed shortly after on March 4, 1952. In order to bring about the designation of the historic structures, objects, and grounds as a National Historic Site and to preserve them for public use, the NPS and the government of the U.S. Virgin Islands pledged to “cooperate in preserving the integrity...and grounds...to assist in furthering their interpretation to all American people as a great National Heritage.”²⁸ The initial agreement established a cooperative spirit between the NPS and the government of the U.S. Virgin Islands. In this agreement, the NPS would install museum facilities and interpret Fort Christiansvaern and the Steeple Building, and the government of the U.S. Virgin Islands would maintain the municipality owned structures and grounds within the Christiansted site while providing the NPS full access. The government of the U.S. Virgin Islands would discontinue use of the Steeple Building as a school, maintain and enforce zoning to ensure historic integrity, and permit NPS archeological investigations on site.²⁹

Subsequent Memoranda of Agreement confirmed and clarified the cooperative agreement. An agreement on December 24, 1960, further clarified the earlier 1952 agreement, making NPS responsible for preservation of the Steeple Building along with other historic structures within Christiansted including the Government House, the Customs House, and Fort Christiansvaern.³⁰

27 Department of the Interior and the Municipality of St. Croix, “Memorandum of Agreement of February 11, 1952, Between the Department of the Interior and the Municipality of St. Croix Relating to the Virgin Islands National Historic Site at Christiansted, St. Croix, Virgin Islands” (1952).

28 Department of the Interior and the Municipality of St. Croix, “Memorandum of Agreement of February 11, 1952.”

29 Department of the Interior and the Municipality of St. Croix, “Memorandum of Agreement of February 11, 1952.”

30 National Park Service and Office of Territories, “Memorandum of Agreement of December 24, 1960, Between the National Park Service and the Office of Territories Relating to the Christiansted National Historic Site at Christiansted, St. Croix, Virgin Islands.” (1960).

25 Gjessing, “National Register Nomination Form,” sec. 8, p. 15-16.

26 Gjessing, “National Register Nomination Form,” sec. 8, p. 16-17.

This agreement also renamed the site to Christiansted National Historic Site (also referred to as the park) to avoid confusion with the recently established Virgin Islands National Park on the nearby island of St. John. The establishing legislation, along with associated agreements, recognized the significance of Christiansted as “an excellent example of the Danish economy and way of life in the Virgin Islands.”³¹

On February 22, 1972, a subsequent Memorandum of Agreement determined that the NPS would manage Fort Christiansted and the Steeple Building while the U.S. Virgin Islands government would control the other historic structures within the park boundaries including the Government House, the Scale House, and the Old Customs House. The NPS would provide technical assistance for restoration, modification, and maintenance of these buildings. The U.S. Virgin Islands government agreed to assist in the restoration of a compatible historic scene by removing parking and vehicular traffic from within the boundaries of the historic site and preventing construction of a roadway or other intrusive devices on the harbor side of the site.³² A February 22, 1977, Agreement Addendum stipulated that following removal of parking from park grounds, the NPS was to restore the grounds to historic park definitions.³³

Hurricanes and Severe Storms on St. Croix

Historically, the US Caribbean region has had relatively stable seasonal rainfall patterns, moderate temperature fluctuations, and a variety of extreme weather events such as hurricanes,

tropical storms, and droughts. As a coastal community within this region, Christiansted is highly vulnerable to these severe weather events. It is increasingly vulnerable to climate change, sea-level rise, and increased severe storm events. According to the National Climate Assessment, over 50 extreme weather events resulting in declared emergencies related to tropical storms, hurricanes, floods, and droughts have occurred in the US Caribbean region since the mid-1990s.³⁴ Since 2001, these emergency declarations have occurred on a near yearly basis.

Of all the possible extreme weather events that affect the Caribbean Islands, hurricanes and tropical storms typically caused the most severe disruption and economic damage. Throughout the recorded history of St. Croix, hurricanes are often cited as the impetus for reconstruction or repair of buildings. Records of severe storm events and hurricanes are sparse before the mid-nineteenth century; however, early records of the Danish colony discuss damage caused by hurricanes in 1738, 1825, 1827, 1899, and 1916.³⁵ Starting in the twentieth century, records of hurricanes and severe storms are more reliable. Every few years, a hurricane is noted as passing through or nearby St. Croix, with varying degrees of impact on Christiansted. In recent decades, major hurricanes have hit the island, causing damage. These include Hurricane Hugo in 1989, Hurricanes Luis and Marilyn in 1995, Hurricane Georges in 1998, Hurricane Lenny in 1999, and Hurricane Omar in 2008. Major Hurricanes Irma and Maria hit the island in September 2017, causing damage that the NPS continues to grapple with today. These hurricanes, and their effects to the Steeple Building in particular, are discussed throughout this report as applicable.

As with many coastal communities in the Caribbean and along the Atlantic coast, the U.S.

31 National Park Service, *Foundation Document, Christiansted National Historic Site, U.S. Virgin Islands* (US Department of the Interior, National Park Service, Southeast Regional Office, 2015), 7.

32 Government of the Virgin Islands and the National Park Service. “Memorandum of Agreement Between the Government of the Virgin Islands and the National Park Service of the Department of the Interior Relating to the Christiansted National Historic Site at Christiansted, St. Croix, Virgin Islands” (February 22, 1972).

33 National Park Service and the Government of the Virgin Islands, “Addendum Number Two to Memorandum of Agreement Between the National Park Service of the United States Department of the Interior and the Government of the Virgin Islands” (February 22, 1977).

34 US Global Change Research Program, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II*, eds. D.R. Reidmiller, C. W. Avery, D. R. Easterling, K. E. Kunkel, K. L. M. Lewis, T. K. Maycock, and B. C. Stewart (Washington, DC: US Government Publishing Office, doi:10.7930/NCA4.2018, 2018).

35 Herbert Olsen, *Historic Structures Report, Part I, Historical Data Addenda and Corrections, Steeple Building, Christiansted, St. Croix, U.S. Virgin Islands*. (United States Department of the Interior, National Park Service, Virgin Islands National Historic Site, 1960), 2-7; and Olsen, *Historic Structures Report Administrative Data and Historical Data*, p. 15.

Virgin Islands are expected to deal with an increase in average annual temperature and extreme weather events resulting from climate change and sea level rise. The annual average temperature in the US Caribbean has increased by about 1.5 degrees Fahrenheit since 1950, and this trend is expected to continue. Climate change projections suggest that warming will result in an increase in the frequency of Category 4 and Category 5 storms in the Caribbean region.³⁶ Although the NPS on St. Croix maintains an emergency management plan, park resources face multiple challenges from outdated drainage and storm water infiltration of foundations to the potential for storm surges and significant water damage during increased storm events. The projected change in climate could accelerate weathering of the Steeple Building. Sea level on St. Croix is projected to rise 0.95 to 2.03 feet by 2060 and 1.77 to 4.99 feet by 2100.³⁷ This, combined with a projected increase in storm intensity, could accelerate weathering of the structure and put it at greater risk of damage due to storms.

36 US Global Change Research Program, *Fourth National Climate Assessment*.

37 "Sea Level Rise Viewer," National Oceanic and Atmospheric Administration, updated 2022, <https://coast.noaa.gov/slr/>.

Chronology of Development and Use

The Church of the Lord Sabaoth (1735–1831)

Early Worship (1735–1748)

When the Danish West India and Guinea Company was establishing their colony on St. Croix, high priority was given to defensive needs, primarily the construction of Fort Christiansvaern, to the exclusion of the construction of other permanent buildings. As a result, the Danish Lutheran congregation initially worshiped within the fort itself. In 1735, Governor Frederik Moth spearheaded a proposal to rehabilitate the former church constructed by the earlier French colonists into a Lutheran church for use by the congregation. Rehabilitation commenced by mid-August 1736, led by an English immigrant who was contracted to “lay a shingled roof on the structure, erect a spire, and make other repairs to the building for the sum of 400 rigsdalers.”³⁸ The Danish West India and Guinea Company directors, as administrators of the colony, were asked to send 1,200 floor tiles and a painting for the altar to complete the rehabilitation. The church was reported to be 20 feet wide inside and have a floor-to-ceiling height of 14 to 15 feet.³⁹ The church was completed in early 1737; however, the congregation worshipped in the church for only a short time, as the building was destroyed by the hurricane of August 29–30, 1738. Consequently, the congregation was forced to revert to worshipping in the fort.⁴⁰

By 1741, Pastor Hans Jacob Ottesen Stoud, the Lutheran pastor in the St. Croix colony from 1740–1749, complained to the company directors about the lack of a dedicated Lutheran church and parsonage. He pressed for the construction

of a Lutheran church, but the company instead prioritized construction of a warehouse, weighing house, and residences for company officials. When the fort became overcrowded around 1749, the congregation was moved to an old warehouse for worship services.⁴¹

In 1747, Pastor Stoud, with the support of Governor Jens Hansen and approval from the privy council (a body of advisors to the Danish Crown) of St. Croix, started raising funds for a new church through subscriptions from the townspeople. By September 1748, the subscription funds had raised 4,000 rigsdalers for construction of the church.⁴² While the designer of the church is not officially documented, research strongly indicates that it was Johan Vilhelm Schopen. Schopen was a company official and chief surveyor in St. Croix in 1743, in charge of the construction of fortifications in 1744, and later in charge of the construction of the Danish West India & Guinea Company Warehouse. In September 1748, the governor and the privy council of St. Croix promised to submit a plan of the proposed church to the company directors “if Mr. Schopen could be prevailed upon to prepare it.”⁴³

Construction of the Church (1749–1753)

Though Pastor Stoud spearheaded the efforts to get a Lutheran church built for his congregation, construction of the church did not begin until summer or fall of 1750, meaning that his untimely death on April 9, 1749, prevented him from seeing his efforts realized. Construction of the exterior was underway by February 1751, evidenced by the purchase of lumber for scaffolding. The walls, constructed of local limestone set in lime mortar, were completed by the end of June 1751. The roof was framed and shingled between July and October 1751, and carpenter Peder Seebesens

38 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 2.

39 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 2.

40 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 2.

41 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 8.

42 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 3.

43 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 3.

began construction of the doors and windows for the church immediately afterward. The church structure was mostly complete by the end of 1751, as described in an inventory dated December 29, 1751:

The Lutheran church, masonry from the ground up and 75 feet long by 26 feet wide, is standing under construction (as previously announced). The masonry work is finished, with the roof, windows and doors, except for the wall cornice and steps and plastering, and interior carpentry and masonry work and decoration. Assessed in the present condition. . . Rdl\$ 3000.⁴⁴

The exterior walls of the church were constructed of local limestone set in lime mortar with a plaster finish. The front façade of the church faced northwest toward Company Street with the short side elevations facing northeast and southwest. The southeast elevation faced a rear churchyard. Many sources of documentation for this building simplify the directional descriptions to identify the front and rear (long sides) of the church as facing north and south, respectively, while the short sides face east (toward Fort Christiansvaern) and west (toward Church Street). Early documents report the roof was framed and shingled, but there is no available information on the original height or pitch of the roof.⁴⁵ Yellow bricks known as Flensborgsten were imported from Denmark for use in some masonry elements of the walls, fence posts, and pavements of the church; these bricks varied in color from a greenish yellow to a pale yellow to a light orange yellow.⁴⁶ The original window sills are believed to have been approximately 2 inches above the floor.⁴⁷

Interior finishing of the church was implemented in 1752, with windows and doors hung in March

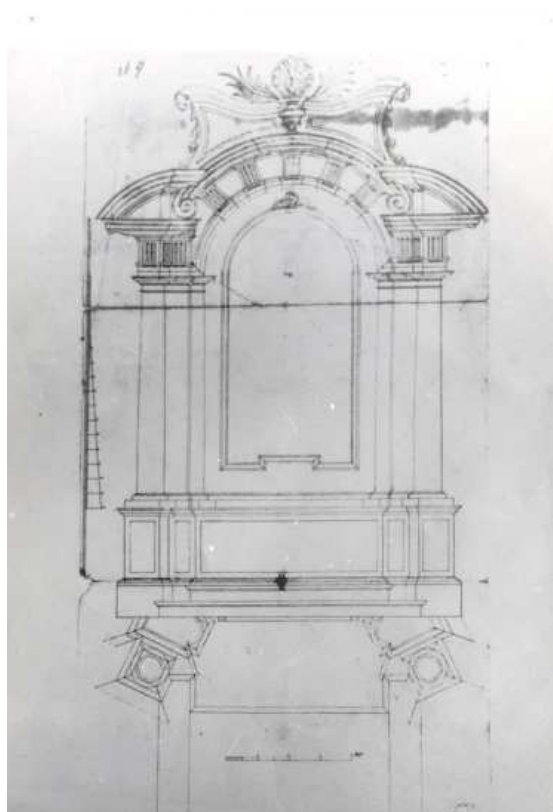


FIGURE 2-5. Drawing of the altar for the Church of the Lord of Sabaoth by Johan Vilhelm Schopan, 1752. Drawing: From the original in the Rigsarkivet in Copenhagen, Denmark. From Herbert Olsen, *Historic Structures Report*, 1959, fig. 3.

and April of that year. Around the same time, installation of the wooden ribbing for the ceiling was undertaken by Christopher Pannett, and the ceiling itself was installed in July and August. A brick floor was laid during this time, and work began on construction of interior furnishings, including an altar of baroque design that was virtually identical to the altar in the chapel of Frederiksberg Castle in Copenhagen, Denmark (Figure 2-5).⁴⁸ Paints and a large amount of lime were purchased in August and September 1752, respectively, indicating the construction was sufficiently finished to begin painting the woodwork and plastering and limewashing the masonry elements. Records indicate that the latter was completed by mason Thomas Stridiron.⁴⁹

Although no plan drawing of the church at the time of construction is known, the church's interior plan can be conjectured from historic records that were researched and compiled into the 1959

44 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 9.

45 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 23-24.

46 Frederik C. Gjessing, letter to Robert L. Merwin & Co., Inc. of Frederiksted, St. Croix. December 17, 1962, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

47 Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data), Restoration of the Steeple Building, Christiansted, St. Croix, U.S. Virgin Islands* (United States Department of the Interior, National Park Service, Eastern Office, Division of Design and Construction, 1956).

48 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 98.

49 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 10.

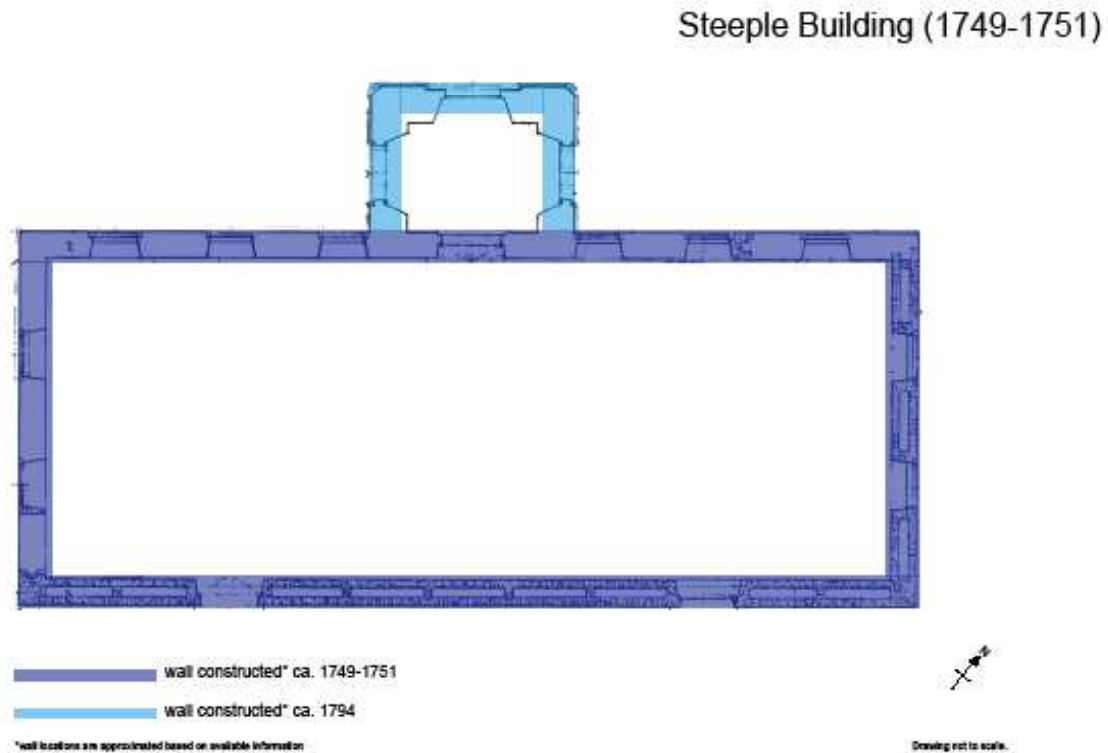


FIGURE 2-6. Floor plan of the Steeple Building showing conditions in 1749–1751. Drawing: Quinn Evans, 2022.

Historic Structures Report Administrative Data and Historical Data, Steeple Building, Christiansted, St. Croix, U.S. Virgin Islands, by historian Herbert Olsen (Figure 2-6). Olsen reports that the church was an example of a distinct Protestant church type in which the altar and pulpit are centered on one of the long walls, opposite the main entrance, rather than on one of the short ends of the church. As such, it can be conjectured that the altar would have been centered against the south wall opposite the entrance, which was centered on the north wall. Church accounts indicate that there were initially 20 wooden pews with hinged doors equipped with locks. The pews for the congregation would have then been oriented in rows on each side of the main entrance with a central aisle leading from the entrance to the altar. Separate pews were constructed for the minister and the governor, each with locks and keys for the doors; from the records it can be conjectured that these pews were likely located on the east side of the church. The church had no gallery when it was first constructed, and three pews were located along the west side of the church. The original pulpit was made of wood mounted on a post with

red velvet lining. Other details of the pulpit are limited, but it was likely mounted to the west of the altar.⁵⁰

The church was constructed as a simple, symmetrical structure that was well proportioned but held little architectural adornment outside of a cornice. It followed the restrained formality of the eighteenth-century Nordic architectural traditions inspired by earlier Baroque architecture.⁵¹ The interior followed a typical Protestant church arrangement that was common through north Europe in the eighteenth century, including in Copenhagen, Denmark.⁵²

The Church in Service (1753–1792)

The church was completed in 1753; however, it should be noted that it did not have a steeple tower at the time of completion. On May 27, 1753,

50 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 50-59.

51 Gjessing, "National Register Nomination Form," sec. 7, p. 3.

52 Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data)*, 59.

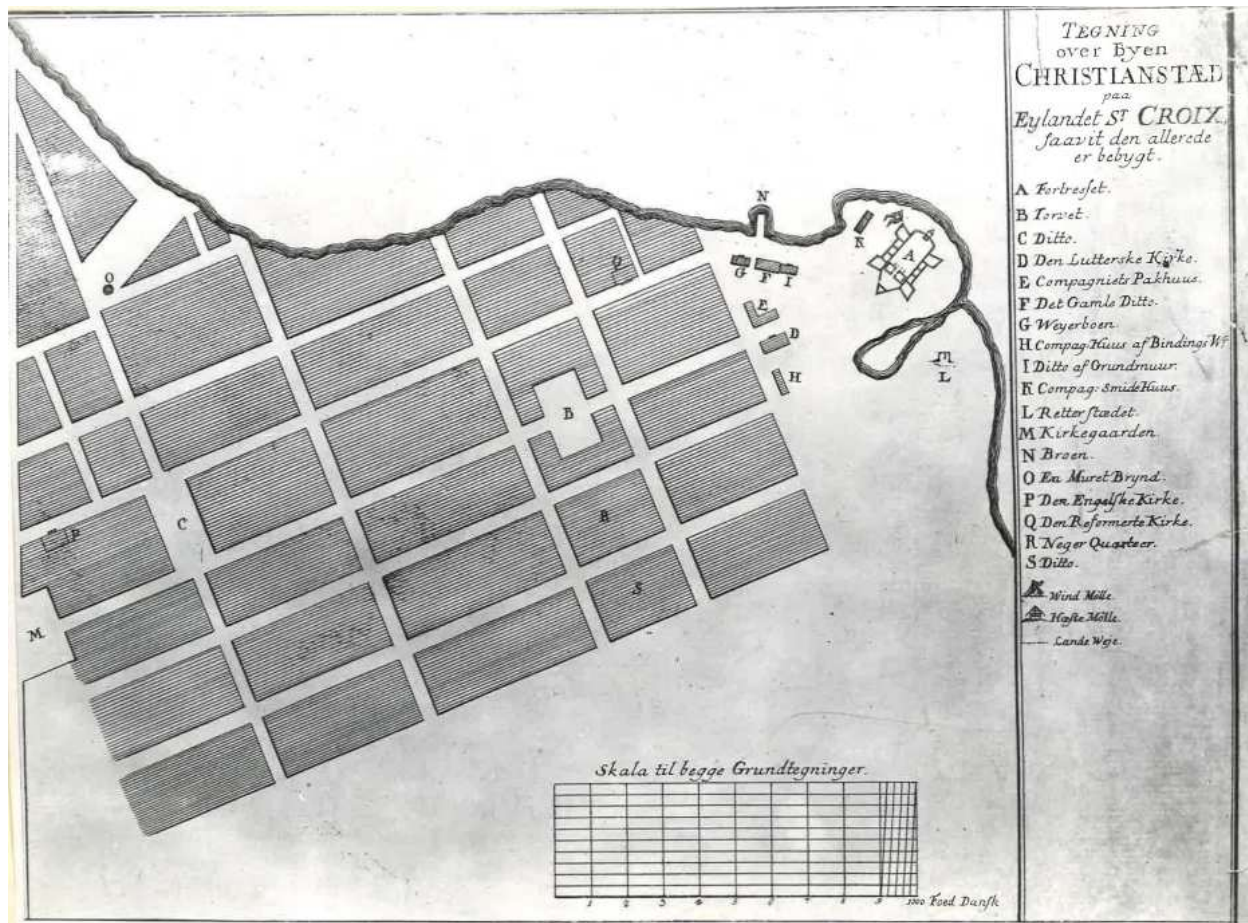


FIGURE 2-7. Earliest known map of Christiansted, with the Lutheran Church identified as "D;" inset on a map of St. Croix by I.M. Beck c. 1752. Source: From a copy in the Map Collection, Library of Congress, Washington, DC. From Herbert Olsen, *Historic Structures Report*, 1959, fig. 4.

Pastor Rudolf B. Frick of St. Thomas officially consecrated the building as the Church of the Lord Sabaoth.⁵³ Records are unclear whether Pastor Frick remained on St. Croix as the pastor of the Church of the Lord Sabaoth after the event. Interior finishes were still being completed at the time of the consecration, and records show that 690 marble floor tiles from St. Eustatius were received just two days before. Subsequently, the 4,000 bricks that had been laid in the chancel were removed and replaced by these tiles. The interior furnishings were completed by July 1753, including final touches such as a painting for the altar, a carved and gilded organ made in Copenhagen by a man referred to in the records only as "Mr. Ortmann," green silk curtains for the governor's pews, a chasuble and altar cloths, and red velvet to cover the pulpit.⁵⁴ While the total

cost of constructing and furnishing the church cannot be accurately determined from the available accounts, an inventory dated October 8, 1755, valued the building and its ornaments at 9,000 rigsdalers.⁵⁵

The church's location was first documented on a map of Christiansted drawn by I. M. Beck around 1752 and published as an inset to a map of St. Croix that was printed in 1754 (Figure 2-7).⁵⁶ On the map, the church is described in the legend as "The Lutheran Church" (translated from Danish) and is approximately 70 feet by 30 feet. The scale of the church as well as its location on the map is consistent with its documented original size (approximately 75 feet by 26 feet) and current location immediately southeast of the Guinea Company Warehouse (shown as "E" on the map).

⁵³ Olsen, *Historic Structures Report Administrative Data and Historical Data*, 10.

⁵⁴ Olsen, *Historic Structures Report Administrative Data and Historical Data*, 10.

⁵⁵ Olsen, *Historic Structures Report Administrative Data and Historical Data*, 11.

⁵⁶ Olsen, *Historic Structures Report Administrative Data and Historical Data*, 11.

Very little is known about the church or its condition until the 1770s, when records document the completion of maintenance and repair work to the building. In 1771, the floor of the church was re-laid, followed by minor shingling of the roof two years later. A wooden picket fence was built to enclose the churchyard in 1774, and the roof was completely reshingled in 1776 by carpenter N. Jensen. In 1776, 11 window sashes were fabricated, as noted by a bill from December 1776 documenting a payment of 264 rigsdalers to Thomas Bogle of the firm Bogle & Hendersen. The following year, the same firm was paid 27 rigsdalers for “making a Sash for the Danish Church at the Window of the General Seat.”⁵⁷ These bills indicate that the church had 12 windows in the 1770s.

The poverty of the church’s treasury in the late 1770s was noted through a failed effort by the colonial government to enlarge the building, when in 1777, they complained to the home government “that the church has no appearance of a church at all and cannot stand comparison with the meanest village church at home. . . .”⁵⁸ Plans for enlargement were submitted to, and approved by, the home government the following year, and materials were purchased in 1779. However, the plan was reconsidered due to the heavy expenditures required and the lack of funds in the church treasury. The materials that had been purchased were instead sold and the plans for enlargement were abandoned. To provide the church a new source of revenue, a fee of 100 rigsdalers was set by the church council for burials in the churchyard. Burials were generally not permitted inside the church, but in 1784, a floor crypt was prepared for Governor-General Peter Clausen with all the pomp befitting his high office.^{59 60}

Only minor repairs and maintenance were undertaken between 1780–1782; however, the following year, Nicolas Freese made extensive repairs to the wooden picket fence around the

churchyard.⁶¹ In July 1783, the church purchased a new organ that was made in Copenhagen by Hartvig Jochum Müller, an organ builder and sculptor working in Denmark-Norway in the eighteenth century. It was installed in a new gallery at the western end of the church constructed by carpenter Thomas Bogle. Twelve long benches were constructed and placed under the gallery.⁶² In 1786, the wooden picket fence was torn down and replaced with one consisting of 23 brick pillars, erected by mason Thomas Gray, with wooden fencing in between constructed by carpenter Thomas Bogle. That same year, it is documented that Gray made “masonry alterations” to two main doors of the church, but the nature of the alterations is unclear; Bogle supplied three new doors in conjunction with this work, which suggests the size or location of the doors may have been altered.⁶³ After the repairs and alterations to the fence and doors, work on the church was confined to only minor repairs and maintenance until 1793.

The Steeple is Constructed (1793–1810)

In 1793, a significant rehabilitation program commenced, including the construction of a steeple on the north side of the church facing Company Street. Construction of the steeple began in late October 1793, with exterior work completed by the end of December 1794; interior details were not completed until early 1796. The early appearance of the steeple is known only by the limited description provided in accounts of its construction, where the steeple is described as a tower constructed of both masonry and wood. According to a report by architect Gjessing in 1960, the number of bricks purchased in 1794 corresponds almost exactly to the masonry contents of the two lowest tiers of the existing steeple, suggesting the lower two tiers had not been substantially changed since their original construction.⁶⁴ Bills for carpentry work at the time of the steeple’s construction indicate that two wooden tiers were constructed on top of the masonry tiers set back from a masonry ledge

57 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 4.

58 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 4.

59 Clausen is referred to as both General and Governor-General in records. The titles appear to be functionally interchangeable in the records; as such, this document will refer to Clausen as the Governor-General for consistency.

60 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 12.

61 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 12.

62 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 56.

63 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 12.

64 Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data)*.



FIGURE 2–8. Sketch of Christiansted, St. Croix, by Th. Christian Sabroe c. 1835 with the Steeple Building depicted in center. The Lutheran Church is depicted prominently (though not to scale) in the center with a multi-tier tower topped with a cupola and weathervane. Source: Historic American Buildings Survey No. VI-1.

on the second tier. The first wooden tier held a clock and was clad in clapboard siding; the upper wooden tier consisted of “a pavilion having eight Doncanisch pilasters supporting a cupola.”⁶⁵ The cupola was topped with a wrought iron spire and weathervane, and a connecting dormer was constructed between the steeple and the roof of the main body of the building.⁶⁶

The major construction of the steeple was undertaken by mason James Entsell and carpenter James Collett, while Heinrich Schultz completed most of the interior carpentry. The wrought iron spire and weathervane were made by blacksmith James Rodgers, and the copperwork of the ball and ornamental finial was done by Christian Gortz.⁶⁷ The steeple’s designer and original appearance are unknown; however, there is no indication that it differed noticeably from how it appears

today (Figure 2–8). The only exception is that eight copper-clad wooden balls were made for the steeple, but they are no longer extant today.⁶⁸ In the spring of 1784, a large bell was donated to the church by Denmark, but rather than being mounted within the steeple, it was mounted on a large scaffold in the yard. Two years later, in 1796, a clock was received and installed in the steeple.

During construction of the steeple, rehabilitation was undertaken on the main body of the church as well. This work included the replacement of some roof timbers and a partial reshingling of the roof; installation of new window and door frames, along with the installation of new hardware; and the construction of several pillars for a fence and entrance gates on the east and west ends of the church, completed by mason James Entsell.

Following the completion of the rehabilitation work and construction of the steeple in 1796, subsequent work until 1806 again consisted of minor repairs and maintenance. In the latter years of this period, the wooden fence around

65 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 41.

66 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 41.

67 John D. Milner, “Historic American Buildings Survey, Steeple Building – Weathervane, HABS VI-1-A” (Christiansted, St. Croix, Virgin Islands: Field Office, Virgin Islands National Park, <https://www.loc.gov/pictures/item/vi0118/>, September 1967).

68 Olsen, *Historic Structures Report Administrative Data and Historical Data*.

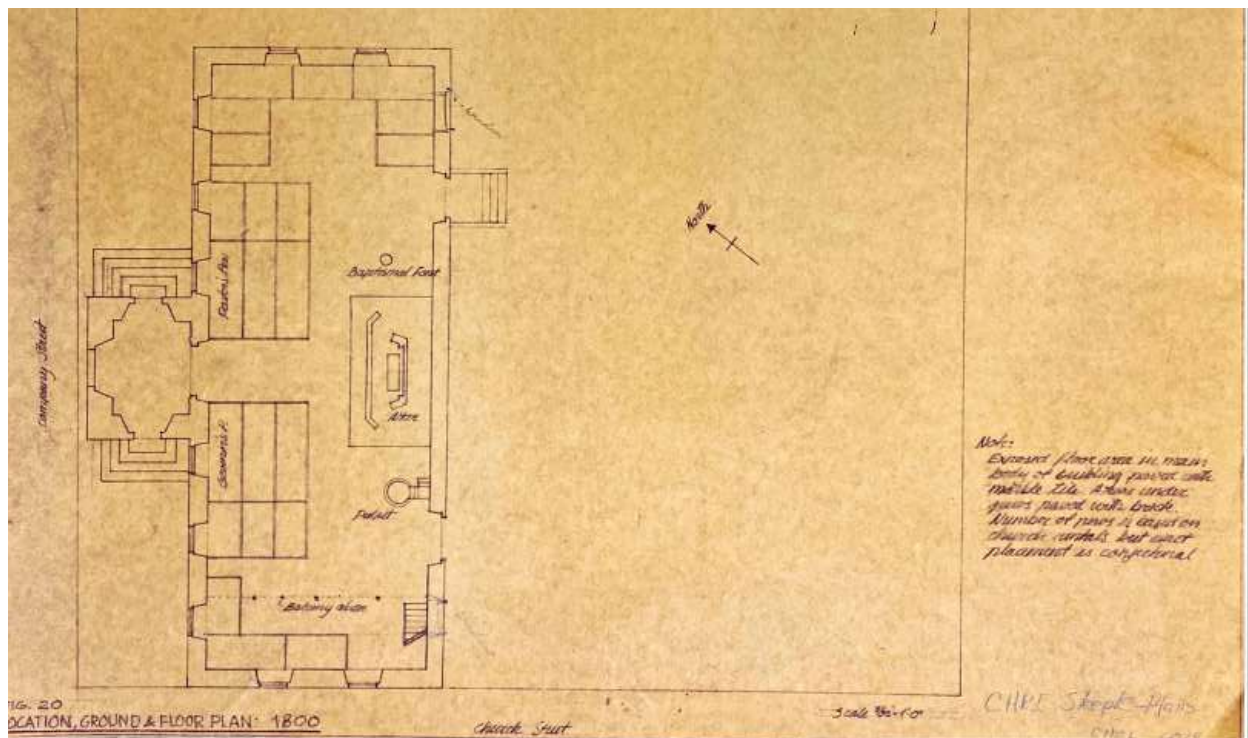


FIGURE 2–9. Sketch of the conjectured layout of the interior of the Lutheran Church circa 1800. Drawing: Christiansted National Historic Site Archives Drawing No. CHRI 0019, from Herbert Olsen, *Historic Structures Report*, 1959, fig. 20.

the churchyard was replaced by a masonry wall.⁶⁹ Minor repairs to the ceiling were done in 1808 and again in 1809; later in 1809, the entire roof was resingled, suggesting that it had been leaking. That same year, minor repairs were made in the steeple, and “the northern entrance was closed with a door and jalousie thereover.”⁷⁰ What “the northern entrance” refers to is unclear from the records, but it is possible that this statement means the interior entrance between the steeple and the main body of the building was previously open and a door with jalousie was added. Figure 2–9 provides a conjecture of the interior layout of the church circa 1800, as documented by historian Herbert Olsen in his 1959 historic structure report for the Steeple Building.⁷¹

Continuing Repairs and Rehabilitation (1818–1829)

Major repair and rehabilitation of the church was necessary in 1818–1819, during which time the Lutheran congregation worshipped in the

Dutch Reformed Church on King Street. Repairs to the steeple included replacement of the main beams supporting the upper tiers; alterations to the cupola may have been done, but the records are incomplete. While repairs and rehabilitation to the main body of the church are not specified in available records, they were likely extensive. The full bill for the work on the church was over 5,000 rigsdalers, of which the work on the steeple was only a little over 2,000 rigsdalers. The repairs likely included patching of the east and south walls of the church, which were badly cracked due to a sinking foundation, as well as a partial or complete resingling of the roof. Replacement or repair of the scaffold for the bell in the churchyard was also likely undertaken at this time because records document that the original was damaged or destroyed in a fire in 1817.⁷²

The church walls’ poor condition was documented in 1821, despite extensive repairs having occurred just three years prior. The building inspector suggested demolishing the east end wall and rebuilding it from the ground up. The congregation could not afford the cost of rebuilding the wall, and so the wall was simply reinforced by

69 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 14.

70 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 14.

71 Olsen, *Historic Structures Report Administrative Data and Historical Data*, fig. 20.

72 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 14.

placing a buttress against it.⁷³ Throughout the 1820s, only minor repairs were conducted due to the increasingly impoverished congregation. Hurricanes on July 26, 1825, and August 17, 1827, caused minor damage to the lightning rod and lead covering on the roof of the octagonal drum of the steeple. Repairs to these elements were completed while major repairs to the east and south walls were required but not undertaken because of the church's lack of funds. The church treasury could not support even routine maintenance such as interior and exterior painting. An annual building inspection in 1829 recommended that two additional masonry buttresses be erected against the east end wall of the church due to its poor condition. Records are inconclusive, but this recommendation was not likely carried out.⁷⁴

Move to the Dutch Reformed Church (1830–1840)

By the late 1820s, the church building was in such poor structural condition that the churchwardens recommended abandonment of the building. The neighboring Dutch Reformed Congregation offered to donate their church on King Street to the Lutherans, and the churchwardens voted to accept this offer. After considerable correspondence with Denmark, the donation was approved and a state loan of 4,000 rigsdalers was sanctioned to help cover the cost of repairing and rehabilitating the Dutch Reformed Congregation's former edifice for Lutheran worship. While the rehabilitation was underway, the Lutheran congregation temporarily held worship services in the nearby St. John's Anglican Church; this arrangement lasted from around 1831 until the rehabilitation work was completed in mid-summer of 1834.⁷⁵

The former church building was deconsecrated, and the interior furnishings were removed and transferred to the new building, including the altar, floor tiles, bell, organ, and the pews. The remains of former Governor-General Peter Clausen were also removed from the floor crypt in 1834 and later

transferred to the new church. The gravestones in the churchyard remained until they were moved to the new church in 1841.⁷⁶ The actual bodily remains within the churchyard were left in place; though they were never formally exhumed, subsequent construction in the yard over the following century (discussed below) would have certainly disturbed the remains.⁷⁷

After the church was deconsecrated, the building was used as a warehouse for the storage of building materials belonging to the colonial government from about 1835 to 1840. The colonial government made extensive repairs to the third and fourth tiers of the steeple in 1837 to retain the clock tower for the benefit of the community. New hardwood beams were installed, and repairs were made to the roof, cornices, moldings, and to the pavilion arches.⁷⁸ On December 26, 1838, the title to the building was transferred to the Danish government by the churchwardens.⁷⁹

Research did not uncover when the building was first referred to as the Steeple Building, but the transition from a house of worship to a secular building seems to be a likely candidate. One could conjecture that the community needed a new way to refer to the building after it was no longer the Lutheran Church, and thus the name "Steeple Building" came into the public vernacular. For the purposes of this document, the building will be referred to as the Steeple Building after it was deconsecrated.

Continued Use as a Secular Building (1841–1954)

Military Bakery and Storehouse (1841–1901)

Several years after the title of the Steeple Building was transferred to the Danish government, the building inspector for the colonial government

73 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 15.

74 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 15; and Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 4.

75 Olsen, *Historic Structures Report Administrative Data and Historical Data*, notes 38-39.

76 Olsen, *Historic Structures Report Administrative Data and Historical Data*, notes 40-42.

77 William F. Cissel, "Steeple Building: Lutheran Sites of Worship at Christiansted Before the Construction of the 'Steeple Building'" (National Park Service, Christiansted National Historic Site, 2002).

78 Olsen, *Historic Structures Report Administrative Data and Historical Data*, note 43.

79 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 16.

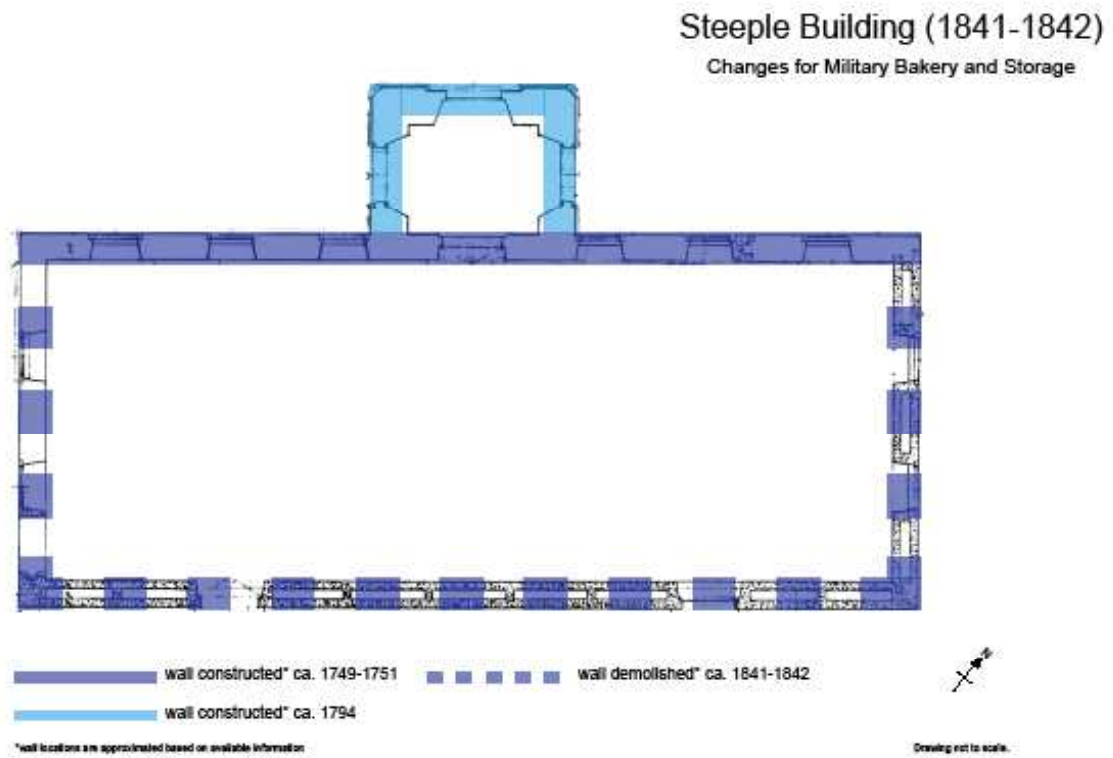


FIGURE 2-10. Floor plan of the Steeple Building showing wall demolished ca. 1841-1842. Drawing: Quinn Evans, 2022.

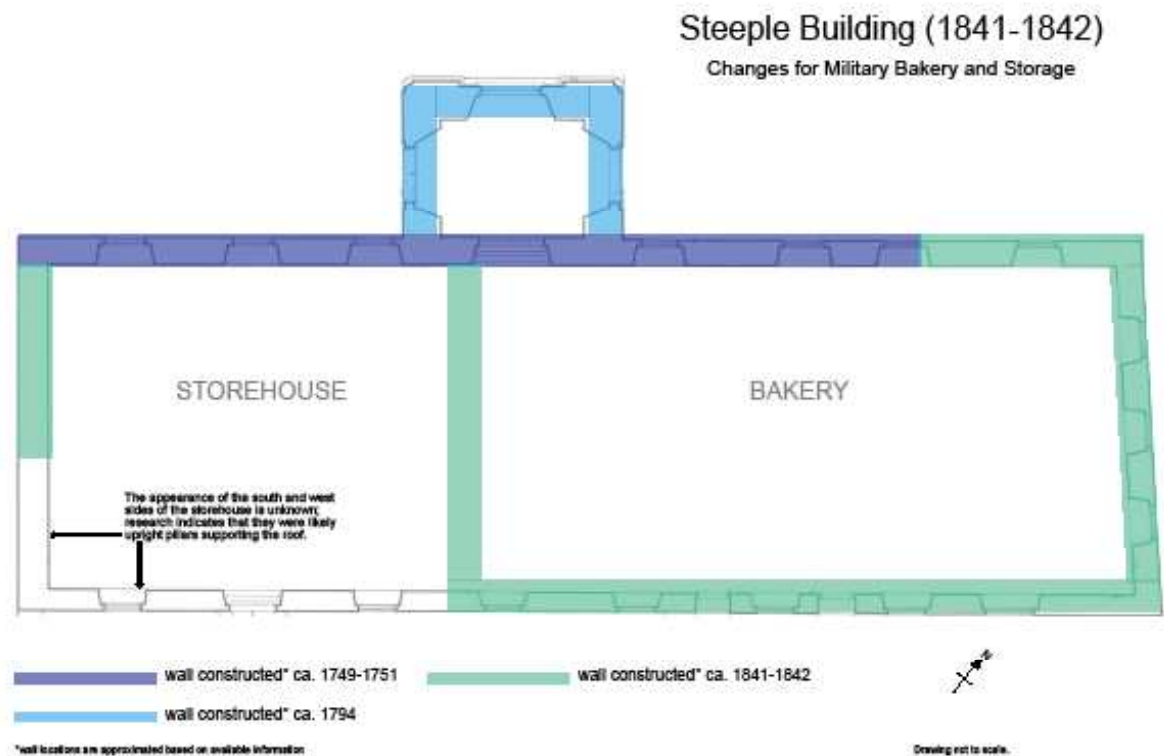


FIGURE 2-11. Floor plan of the Steeple Building showing walls constructed ca. 1841-1842. Drawing: Quinn Evans, 2022.

recommended and submitted a plan for the conversion of the east side of the building into a military bakery and the west side of the building into a storehouse. These plans would effectively cut the building into two separate units with a shared wall between. The entire roof would be removed and replaced with two separate but conjoining roofs. Once approved by the Danish government, extensive repairs and alterations were carried out in 1841–1842 (Figure 2–10 and Figure 2–11).⁸⁰

To begin the alterations, the entire roof was removed and new beams installed to replace the rotted beams. For the bakery that would comprise the eastern portion of the building, the east end wall facing Hospital Street and south wall facing the yard were completely torn down and rebuilt; these exterior walls were reduced to a height of 12 feet (approximately 2 feet lower than the original). The east end wall was rebuilt approximately 11 feet closer to the Hospital Street, which required the removal of the existing masonry wall enclosing the yard. The south wall of the Steeple Building was rebuilt roughly to the point parallel to the main entrance through the steeple. A new wall was erected to form the west end wall of the bakery, dividing the overall Steeple Building into two sections. A new hipped roof was constructed over the bakery section of the building. The interior of the bakery portion was then divided into two sections: the eastern section was furnished with equipment for the preparation of dough while a brick oven was constructed in the western section. The remaining western section of the Steeple Building was converted into a storehouse and wagon shed. The former west end wall facing Church Street was reduced in length to 16 feet, and the former door opening was bricked up. The windows on the north wall facing Company Street were bricked or barred up. The composition of the east and south walls of the storehouse is unknown, but they were likely constructed of upright pillars to support the roof.⁸¹ The exterior walls were also reduced to a height of 12 feet, and a hipped roof was added to match that on the bakery. Repairs to the steeple were completed, including a new hardwood beam in the cupola to which the wrought iron spire was fastened, and the cupola was shingled.

80 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 16, note 45.

81 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 17.

The building's yard was divided into two sections by a plank fence that delineated the bakery yard to the east from the storehouse yard to the west. In the bakery portion of the yard, a stable, carriage house, and woodshed were built. The original wall of the churchyard facing Church Street was rebuilt after being removed for construction of the building's new east end wall.

By 1846, extensive steeple repairs were again necessary. To address the issue of rainwater entering the steeple, the pitch of the roof over the octagonal drum was increased, the lead covering of the roof was replaced with copper, and a new molding was installed around the roof. The sheathing boards on the eight pillars of the cupola pavilion were replaced to bring them out over the new copper roof, and the pillars were fastened to the main beams below with iron clamps and bolts. Inside the drum, three new hardwood beams were installed to support the floor and were fastened in place with iron clamps and bolts. A window with shutters was opened in the drum to provide better ventilation, and new shingles were installed on the exterior of the drum. In the lower tiers of the steeple, a new pitch pine beam with braces was installed in the lowest tier to support the masonry. All masonry elements were repaired, and the exterior woodwork and clock faces were painted. Figure 2–12 depicts Christiansted circa 1845–1851, including the Steeple Building.

In 1851, the opening on the east side of the steeple's second tier was bricked up, as were the openings above the windows in the tower. The clock faces were painted as well. The brick floor of the bakery was re-laid at this time, and all windows, doors, and shutters were repaired and painted. The walls of the bakery and steeple were painted and limewashed on the exterior and interior. In the fall of 1851, a wooden bridge that crossed a drainage gutter at the entrance gate to the bakery yard was replaced with a brick masonry bridge, and the two gate pillars were repaired.⁸²

In the spring of 1853, the bakery oven was relocated from inside the building to the yard. A small wooden building (roughly 22.5 feet by 12 feet) was constructed by carpenter J. G. Meyer on the west side of the bakery yard to the north of the woodshed. A brick oven was built on the north end of this new building, and the old oven

82 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 5, notes 17–18.



FIGURE 2–12. Christiansted, St. Croix, ca. 1845–1851 with Steeple Building visible at left. Note the east window in the second tier of the steeple is open in this painting; it was bricked up in 1851. Source: Lithograph by A. Nay from a painting by W. Melbye. From a copy in the Trade and Shipping Museum at Kronborg Castle, Elsinore, Denmark. From Herbert Olsen, *Historic Structures Report*, 1959, fig. 16.

was demolished and removed from the bakery.⁸³ It is very likely that remaining burials within the churchyard were disturbed by the construction of the ovens in the yard, but no record of encountering remains was uncovered during research.⁸⁴ Once the old oven was removed, the bakery building was used as a warehouse for the storage of flour and other supplies. Minor repairs and renovations were required for this transition. Bricks were laid on the area where the oven had stood, and the interior partition was extended the full length of the bakery rooms. Three new windows were opened on the building, though it is unclear where these windows were located. Carpenter J. G. Meyer also raised the height of the existing wall around the bakery and warehouse yards.⁸⁵

Repairs over the following decades were routine, such as painting and stucco repair, and continued until the building's use as a military bakery and storehouse ceased in 1909. A few notable events regarding the repair and maintenance of the building during this period include the following:⁸⁶

- In 1857, the brick floor in the east room of the warehouse was taken up and replaced with a wood floor.

- In 1859, a new set of pedestals for the vases on the masonry ledge of the steeple was requested by the acting building inspector for St. Croix to the Danish government.⁸⁷ Records do not indicate when or whether these new pedestals were installed.
- In 1865, the copper sheeting on the roof of the octagonal drum was repaired along with the ladders and floors inside the steeple. A new hardwood beam with four corner braces was also installed inside the cupola at this time.
- In May of 1877, the spire at the top of the steeple fell down. Though records do not indicate the cause, it was potentially a result of unremedied damage caused by the hurricane of September 12–13, 1876, which was documented to have caused minor damage to the weathervane.⁸⁸ As a result, a general rehabilitation of the cupola was undertaken that included repair of two of the arches supporting the cupola, resetting the spire, and reshingling the cupola.
- Later in 1877, a section of the wall between the bakery yard and the adjacent property fell down and had to be replaced.
- In 1883, the clock was sent to Denmark for major repairs and was returned and reinstalled in the steeple the following year.
- The hurricane of August 7–8, 1899, severely damaged the roof of the warehouse, which was subsequently replaced.

Sunday School and Town Hall (1909–1916)

The use of the Steeple Building as a military bakery and storehouse ceased in 1909 when it was converted into a Lutheran Sunday school and town hall. The Danish government retained ownership of the building during this time and permitted the use. The change in use and rehabilitation was largely financed by the Danish government. It required the removal of the dividing wall between the former bakery and storehouse, reconstruction

⁸³ Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 6, note 20.

⁸⁴ Cissel, "Steeple Building: Lutheran Sites of Worship at Christiansted."

⁸⁵ Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 6, note 20.

⁸⁶ Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 6–7, notes 23–24.

⁸⁷ Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 6, notes 21–22.

⁸⁸ Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 6.

⁸⁹ Olsen, *Historic Structures Report Administrative Data and Historical Data*, 19.

of the south wall to enclose the building, and reconstruction of the separate roofs as one roof. New doors, windows, jalousies, and shutters were installed along with a new wooden floor and ceiling. In the yard, the bakery building and a portion of the wooden fence were removed. It is worth noting that after this rehabilitation, the only walls original to the Steeple Building construction were the north and west exterior walls (Figure 2–13 and Figure 2–14). Extensive repairs were undertaken again in 1911, as indicated by various bills, vouchers, timesheets, and correspondence related to the Steeple Building; however, records are not specific enough to determine the nature of those repairs.⁹⁰

Hospital Ward (1916–1925)

On October 9, 1916, a hurricane blew through St. Croix and damaged the steeple clock and roof of the cupola, which had to be replaced as a result of the damage. The hurricane also severely damaged the Peter's Farm Hospital, located on the western outskirts of Christiansted. As a result, the colonial government was forced to abandon the hospital and seek alternative locations for hospital wards. The Steeple Building, in addition to several other buildings in Christiansted, was thus converted into a hospital ward beginning in October 1916. Though the conversion was started by the Danish government, it was completed by the US government after the transfer of the islands to the United States on March 31, 1917. During the building's conversion, the stable was removed from the yard and a new ell-shaped wooden building was erected for use as a clinic. A cistern and two latrines were added against the south wall of the building, and two doors were cut to provide entry to the latrines.⁹¹ The clock, located in the steeple, was damaged in the hurricane in 1916, and while it continued working for several years, it was eventually replaced in the 1923 when the US Navy donated an E. Howard & Company Time and Strike Tower Clock Model 0 tower clock to commemorate the purchase of the U.S. Virgin Islands from the Danish government.⁹² Later, some of the hardwood beams supporting the upper tiers

of the steeple were replaced with concrete beams instead of wood.⁹³

Civic Building and School (1925–1954)

By 1925, the repair and rehabilitation of the Peter's Farm Hospital was complete enough for it to again be used as a hospital, and the hospital ward was removed from the Steeple Building. The Steeple Building then remained mostly vacant, used only occasionally for civic meetings. In 1926, funds were made available to convert the building into a high school, but that conversion was blocked by the Lutheran Church of Christiansted, which claimed that the building was the property of the church rather than the government. The confusion appears to have been a result of the use of the building as a Lutheran Sunday school from 1909 to 1916; however, the title to the building was retained by the Danish government, and thus ownership of the building was transferred to the United States when the U.S. Virgin Islands were sold by the Danish government in 1917.⁹⁴ While the controversy over building ownership was ongoing, from about 1929 to 1931, several families were permitted to live in the building. How this arrangement came to be is not evident in the records. On April 6, 1931, the Lutheran Church of Christiansted acknowledged in a petition to the US Secretary of the Interior that it had no legal claim to the building but requested the use of the building. The petition was ultimately denied, though the reasons are not substantiated in available records.⁹⁵ The building was then vacant and unused until it was rehabilitated into a grade school in 1932 (Figure 2–16, Figure 2–16, and Figure 2–18). The interior was partitioned into three classrooms with connecting doors on the north side of the building.⁹⁶ A concrete latrine was constructed in the northern corner of the yard. Reinforced concrete beams were installed in the steeple in the 1930s, though records do not indicate precisely when. These beams were

90 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 7, notes 26–27.

91 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 21, note 56.

92 Brian O'Connor, "Clock Returns to Christiansted Historic Site," *The Virgin Islands Daily News*, August 3, 2016.

93 Olsen, *Historic Structures Report Administrative Data and Historical Data*, 21, note 56.

94 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 19, note 30.

95 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 19, note 30.

96 Government of the Virgin Islands US, Public Works Department, "Plan of the Steeple Building - Christiansted" (National Park Service, Denver Service Center, Drawing No. CHRI 399 9569, 1938).

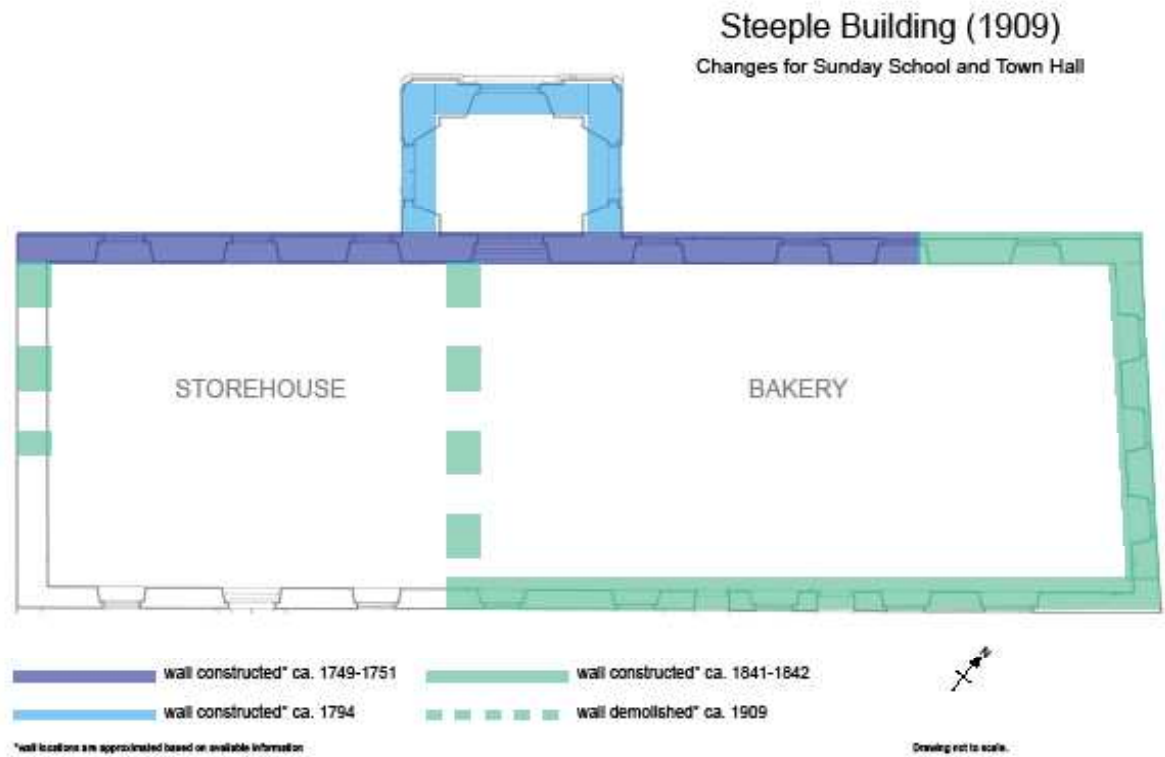


FIGURE 2-13. Floorplan of the Steeple Building showing walls demolished ca. 1909. Drawing: Quinn Evans, 2022.

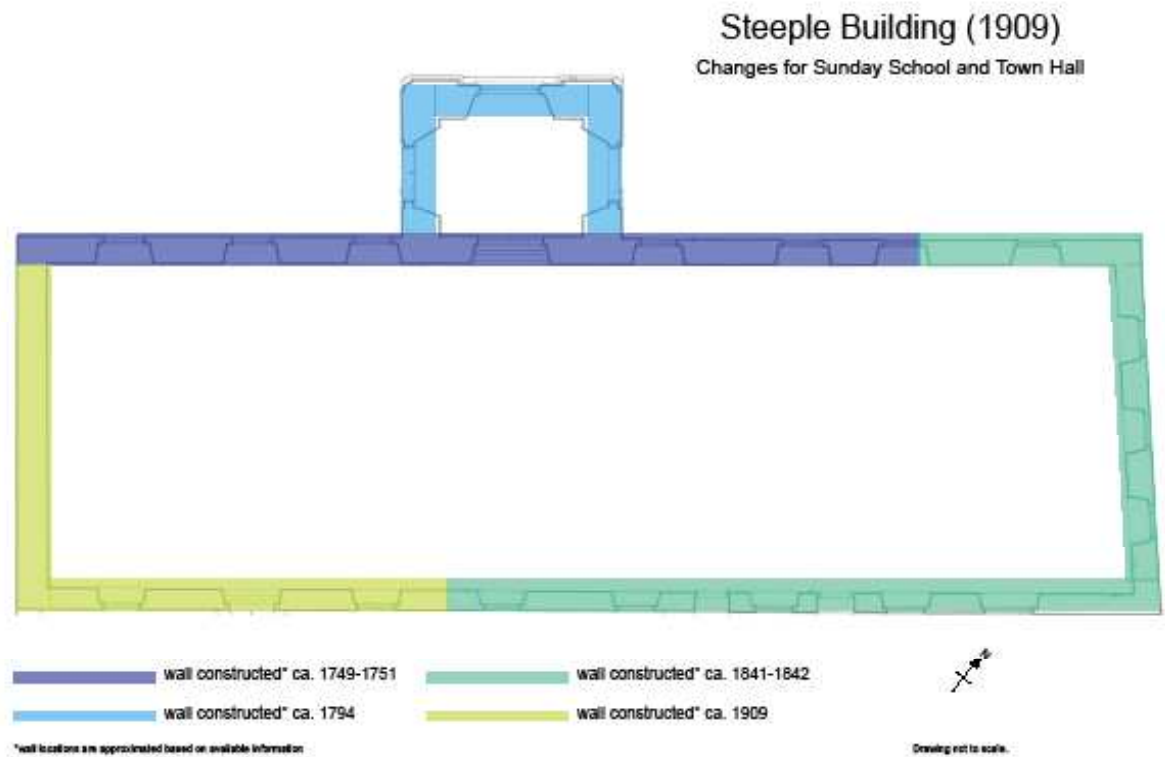


FIGURE 2-14. Floorplan of the Steeple Building showing walls constructed ca. 1909. Drawing: Quinn Evans, 2022.

reported as having been installed “resting directly on the walls and case alongside existing beams.”⁹⁷

National Park Service Takes Over Administration of the Steeple Building (1952–1959)

In 1952, the Steeple Building was put into the administrative hands of the NPS when the Memorandum of Agreement was executed on February 11, 1952, establishing the Virgin Islands National Historic Site and agreeing to discontinue the use of the Steeple Building as a school once alternate facilities were made available.⁹⁸ As part of this administrative change, the NPS assessed the current conditions of the buildings newly under their control. The Steeple Building remained in service as a school for approximately two more years.

In 1953, architect Frederik C. Gjessing conducted observations of the Steeple Building as part of this overall review of the Christiansted site (see Figure 2–15, Figure 2–19).⁹⁹ The existing condition of the Steeple Building was considered fair to poor due to a variety of factors. The north and south walls of the main body of the building were deteriorated, the stucco scaled, and the material of the wall exposed. Water damage appeared to be the cause of this deterioration due to a lack of gutters on these walls. Architect Gjessing recommended chipping and repointing of the walls, particularly the lower part of the south wall. The interior walls of the building were stucco with the exception of the tower, which was painted. Two continuous cracks indicated a failure of masonry. One was in the west gable and the other on the second tier of the tower’s south wall. Considerable surface deterioration was observed on the tower, both inside and out. It was noted that recent repairs were implemented at the east end of the building. The interior pine tongue-and-groove floor boards suffered from termite damage, while the tongue-



FIGURE 2–15. Figure 13. Tower and west corner of the Steeple Building in 1953 with hairline cracks visible in end wall. Photo: Frederik C. Gjessing, *Condition Reports of Historic Buildings*, 1953, photo 1.

and-groove boards of the ceiling showed areas of rot due to roof leaks. Signs of former partitions that had previously been removed were evident on the north side of the building, near the entrance to the steeple (Figure 2–20).¹⁰⁰

Architect Gjessing documented the building as having a roof made of “corrugated galvanized sheets...on sheathing” during his observations; however, records are unclear on when that roof replaced the former shingled roof.¹⁰¹ The Steeple Building used a cistern to collect and store water from the roof. Windows had shutters, jalousies, and glazed transoms, and doors were paneled or of double board construction. The windows and doors were noted to be in poor condition on the south side of the building while the north side windows were determined sound but in need of refinishing.

The interior timber construction of the steeple was in poor condition, including rot and termite damage, resulting in the failure of several support posts. Architect Gjessing noted the reinforced concrete beams that were installed in the 1930s, which were resting directly on the walls and cast alongside existing beams. The superstructure of the tower was sound but in need of refinishing. It

97 Frederik C. Gjessing, *Condition Reports of Historic Buildings, Virgin Islands National Historic Site, Christiansted, St. Croix, Virgin Islands* (National Park Service, Denver Service Center, Technical Information Center No. VIIS 161 D235, 1953), 4.

98 Department of the Interior and the Municipality of St. Croix, “Memorandum of Agreement of February 11, 1952.”

99 Gjessing, *Condition Reports of Historic Buildings*.

100 Gjessing, *Condition Reports of Historic Buildings*, 3.

101 Gjessing, *Condition Reports of Historic Buildings*, 3.

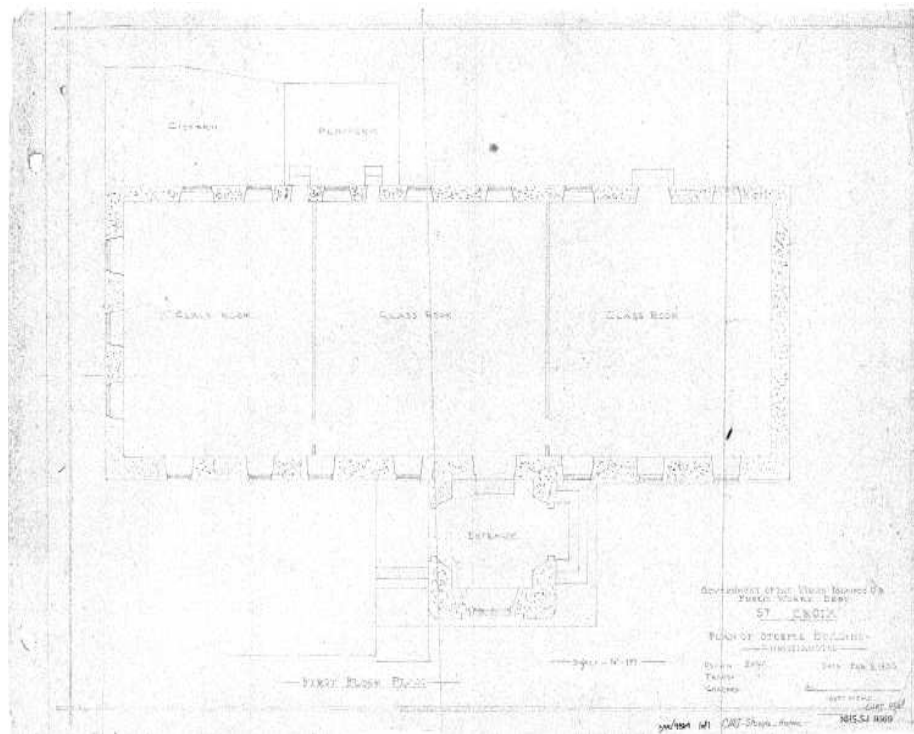


FIGURE 2-16. Floorplan of the Steeple Building in use as a school in 1938, drawn by "J.A.W." of the Government of the Virgin Islands US Public Works Department. Drawing: Denver Service Center, Technical Information Center, Drawing No. CHRI 399 9569.



FIGURE 2-17. Interior of the Steeple Building in 1953 when used as a classroom, looking towards the door between the tower and the main building. Photo: Frederik C. Gjessing, Condition Reports of Historic Buildings, 1953, photo 3.



FIGURE 2-18. Interior of the Steeple Building in 1953 when used as a classroom, looking toward the east end windows. Photo: Frederik C. Gjessing, Condition Reports of Historic Buildings, 1953, photo 4.



FIGURE 2-19. North corner of the Steeple Building and wall around rear yard in 1953. Photo: Frederik C. Gjessing, Condition Reports of Historic Buildings, 1953, photo 2.

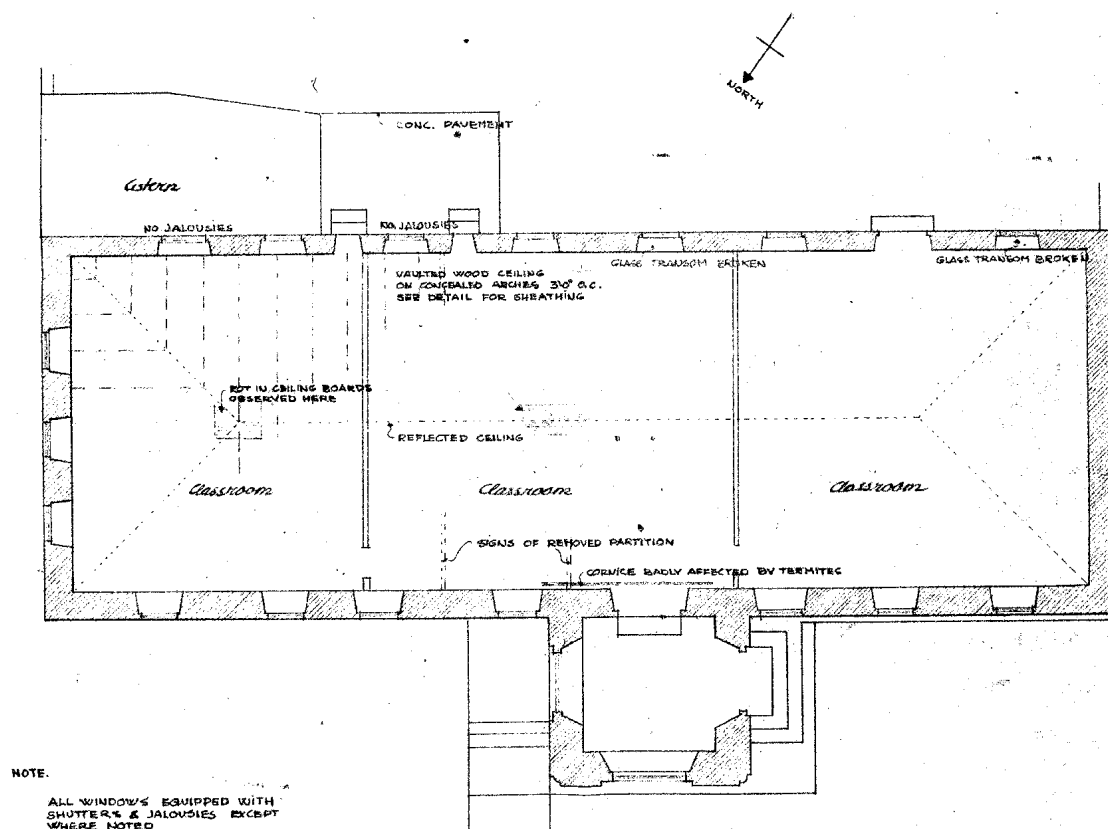


FIGURE 2-20. Plan of Steeple Building with notes on existing conditions as observed by Frederik C. Gjessing in 1953. Frederik C. Gjessing, Condition Reports of Historic Buildings, 1953.

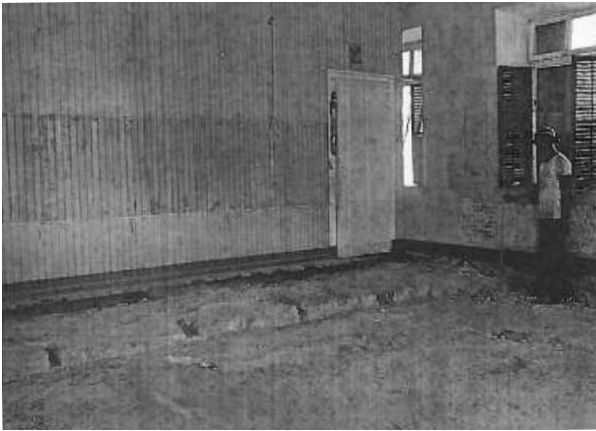


FIGURE 2-21. Interior of the Steeple Building during the 1956 investigations looking northwest toward one of the temporary partition walls. Photo: Frederik C. Gjessing, Preliminary Survey Report, photo 10.

was described as “pine posts and frames with 1” sheathing and copper flashing or shingles.”¹⁰²

Classes continued to be held at the Steeple Building until 1954, when a newly completed school on the western outskirts of Christiansted was opened. Active use of the building ceased after the school moved out, and the NPS continued their substantial research and documentation effort to determine the appropriate administration and use of the Steeple Building. No notable repairs were documented during this time, with the exception of reshingling of the cupola roof in 1954.¹⁰³ Around 1956, the government of the U.S. Virgin Islands in cooperation with the NPS approved the use of the Steeple Building by the St. Croix Museum, Inc., a nonprofit educational institution, for the use of the building as a public museum.¹⁰⁴

Beginning in the fall of 1956 and continuing through the summer of 1957 the NPS conducted an investigation of the Steeple Building’s physical structure, as well as documentary research into its history, to support the restoration and reuse of the building as a museum. A series of reports were completed to fully document the history and present condition of the Steeple Building and provide recommendations for future restoration efforts. The first was the 1956 *Preliminary Survey Report (Architectural Data)*, *Restoration of the Steeple Building*, by Gjessing, which focused on the existing conditions and limited documentary

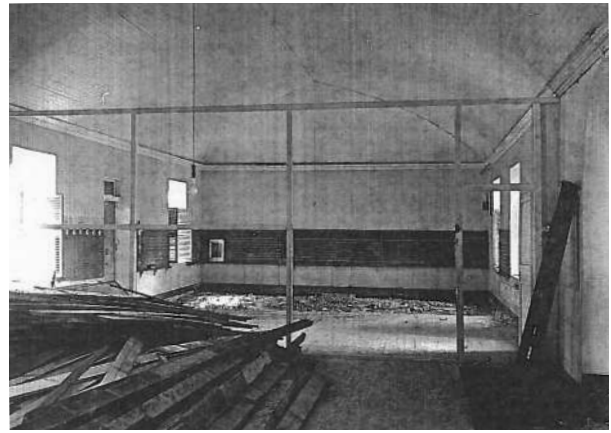


FIGURE 2-22. Interior of the Steeple Building during 1956 investigations looking southwest where one of the temporary partitions was removed. Photo: Frederik C. Gjessing, Preliminary Survey Report, photo 7.

research.¹⁰⁵ The next was the 1959 *Historic Structures Report, Administrative Data and Historical Data, Steeple Building*, by Herbert Olsen, which included extensive documentary research on the history of the building. This was followed up by addenda and revisions by Olsen, which were completed in 1960 as the *Historic Structures Report, Part I, Historical Data Addenda and Corrections, Steeple Building, Christiansted, St. Croix, U.S. Virgin Islands*. The final report was the 1960 *Historic Building Report (Architectural Data – Part II) Preliminary to the Restoration of the Steeple Building*, also by Gjessing, which documented the results of substantial excavation and physical examination of the building to justify the recommendations for restoration. A series of measured drawings was prepared for the Historic American Building Survey (HABS) that documents the appearance of the Steeple Building prior to any investigation or rehabilitation work.¹⁰⁶ A discussion of the findings of these documents is below.

The physical investigation documented in architect Gjessing’s 1956 preliminary survey report required the removal and demolition of some of the existing fabric of the Steeple Building (Figure 2-21, Figure 2-22). The existing wood flooring and interior classroom partitions were removed and horizontal bands were chipped along the walls. Vertical stripes

105 Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data)*.

106 Frederik C. Gjessing, Rudolph B. Frick, Osmund H. Overby, and Craig Morrison, “Historic American Buildings Survey, Steeple Building, Formerly the Lutheran Church of the Lord Zebaoth, HABS VI-1” (Christiansted, St. Croix, Virgin Islands: Field Office, Virgin Islands National Park, <https://www.loc.gov/item/vi0117/>, 1966).

102 Gjessing, *Condition Reports of Historic Buildings*, 4.

103 Olsen, *Historic Structures Report, Part I, Addenda and Corrections*, 22.

104 Olsen, *Historic Structures Report Administrative Data and Historical Data*, A-1.

were cleared of plaster in several locations, as were areas at all window sills and heads. At six windows, the existing sills were removed to determine the original height and depth of the window openings. The plaster was also chipped at these windows to identify the head construction. The concrete floor of the tower was removed and a section of the tray ceiling was opened to allow access to the roof trusses.¹⁰⁷

Based on the physical investigation, the ceiling and roof had two distinct sections: the northern third of the building, which had finished and painted trusses of resinous pine with lapped sheathing, and the south section of the building, where the trusses were unfinished, unpainted, and appeared to be newer. At one time, a saddle ran between the roof of the main body of the building and the steeple, allowing access to the ceiling loft through the steeple; however, no signs of the saddle were indicated on the trusses, suggesting they were replaced after the saddle was removed.¹⁰⁸

In the steeple, the floor uncovered beneath the concrete consisted of oland tile (a hard almost crystalline limestone), which was also used as treads for the steps leading up to the steeple entrance. The steps entering the main body from the steeple were brick covered with concrete. Floor joists were resting on brick set loosely on fill, and the plaster of the walls continued several inches below the floor.¹⁰⁹

Several test pits were dug in the main body of the Steeple Building, and a trench was dug along the north wall. These excavations revealed the bases of former transverse walls constructed of rubble with yellow brick or coral blocks. These walls did not have bonds with the building's exterior walls. Several different layers of fill and flooring materials were also uncovered during investigation. Immediately under the removed wood floor was an approximately 3-inch layer of wood shavings, boards, and organic debris; under that layer was loose sand and brick fragments. The western end of the building was paved with lime packed on crushed rock and coral block with boulders on the east edge. Two pieces of marble tile were found

within the paving. The eastern end was unpaved, consisting of a loose fill of soil and sand on top of a loosely packed mixture of lime and crushed coral. Natural clay lay below that layer. A layer of grapnel shots was located along the west section of the south wall, about 15 inches below the wood floor.¹¹⁰ Based on the investigation's conclusions, the original floor of the building was at least 10 inches lower than the wood floor existing at the time of investigation.¹¹¹

During these investigations, former window openings were identified in the south end wall, which had been closed in with brick; one window on the north wall appears to have been moved. Several of the windows had brick infill where they were previously recessed 1 foot, 5 inches deep from the face of the wall. The original sill heights were approximately 2 inches above the existing floor, and one of the windows was formerly a door. Some of the windows had traces of brick arches. Investigation of the plaster on the walls revealed several layers of lime plaster with layers differing among the walls. The study concluded that the original structure was extended to the north approximately 13 feet, and the south and east walls are not original. This is consistent with the changes documented in accounts researched and reported by Olsen in part I of his 1960 historic structure report, though the exact distance the east end wall was reportedly moved varies from 11 to 13 feet.¹¹²

The 1960 report by Gjessing provides a concise overall description of the building as it existed before the restoration. The description is as follows (note that Gjessing simplified the directional description so the long sides of the building are assumed to face north and south while the short sides face east and west):

The building and its yard occupies half a city block. It is bound by Hospital and Church Streets to the east and west respectively, and faces Company Street to the north. It is a one story rectangular masonry structure, measuring 26 x 88 feet, with a four tiered steeple built against the approximate center of the Company Street

107 Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data)*, 85-86.

108 Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data)*, 87.

109 Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data)*, 87.

110 Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data)*, 88-93.

111 Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data)*, 96.

112 Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data)*, 96.

face of the building. The Steeple measures 15 x 18 at ground level and is 77 feet high.

The body of the building is of rubble masonry construction with brick lining of doors and windows. The walls are plastered. It is roofed with corrugated iron on wood trusses and has a furred wood ceiling. The two lower tiers of the steeple are stuccoed brick masonry. The third tier is an octagonal drum with exterior walls of wood sheathing and shingles on a heavy timber frame and roofed with copper sheets and wood sheathing. The fourth tier is an open octagonal wood pavilion supporting a shingled wood cupola crowned by a wrought iron spire and weathervane.

The yard to the south of the building is fenced by a brick and rubble masonry wall from 7 to 10 feet high. The yard is 66 feet deep and 97 feet wide along its south side. A concrete toilet built in 1933 and a one story L shaped wood building constructed in 1917 are located in the south east and south west corner of the yard respectively.¹¹³

Restoration of the Steeple Building as a Museum (1960–1969)

To support the restoration of the building into a museum, a historic structure report was completed in 1960 by Herbert Olsen (mentioned above). In architect Gjessing's 1960 part II of the historic structure report, he recommended that the building be restored as a church, conforming to its appearance in 1830 or earlier.¹¹⁴ The NPS determined that restoring the building exterior to that of its appearance as a church circa 1800 would balance an ideal period restoration with reasonable

and justifiable costs.¹¹⁵ To achieve this, the exterior walls would be restored to their former size and stabilized, the interior partitions added during previous decades would be removed, windows that were bricked up would be reopened, and the yard would be relandscaped. To better serve the public and the purpose of the NPS, the interior would be furnished with museum exhibits rather than church furnishings. The details of this major restoration effort are described below. Changes to exterior and interior walls are illustrated in Figure 2–23 and Figure 2–24.

The poor condition of the Steeple Building was noted in a memorandum from the Virgin Island National Historic Site Superintendent to the Regional Director of the NPS Region One (undated). The memorandum states:

The existing Steeple Building is in poor condition. The finishes throughout the main body of the building are beyond repair. The west section of the standing south wall is structurally unsound. The roof is badly infested by termites and requires replacement. In the Steeple proper, the structural frame is in fair condition, however, the finishes are in several instances badly dilapidated and four members of the timber frames of the third tier must be replaced. The building cannot be preserved without extensive reconditioning and repairs.¹¹⁶

To commence the restoration project, substantial demolition efforts were begun in 1960. A list of demolition work was reported by architect J. Michael Everett in a letter to the NPS on August 29, 1960, and included the following:¹¹⁷

- Remove roof sheathing from rafters.

¹¹³ Frederik C. Gjessing, *Historic Building Report, Architectural Data - Part II, Preliminary to the Restoration of the Steeple Building (Church of Our Lord of Zebaoth), Christiansted Waterfront, St. Croix, Virgin Islands now part of the Virgin Islands National Historic Site* (US Department of the Interior, National Park Service Eastern Office, Division of Design and Construction, 1960), 1-2.

¹¹⁴ Frederik C. Gjessing, *Historic Building Report, Architectural Data - Part II*, 25.

¹¹⁵ Robert E. Smith, Acting Chief Architect, "Steeple Building Restoration, Memorandum to Regional Director, Region One, May 26, 1960." Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

¹¹⁶ John G. Lewis, Superintendent, Virgin Islands National Historic Site. "Steeple Building Restoration, Memorandum to Regional Director, Region One," n.d., Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

¹¹⁷ J. Michael Everett, Memorandum to Virgin Islands National Historic Site, "Steeple Building Demolition Work" (Department of the Interior, August 29, 1960), Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

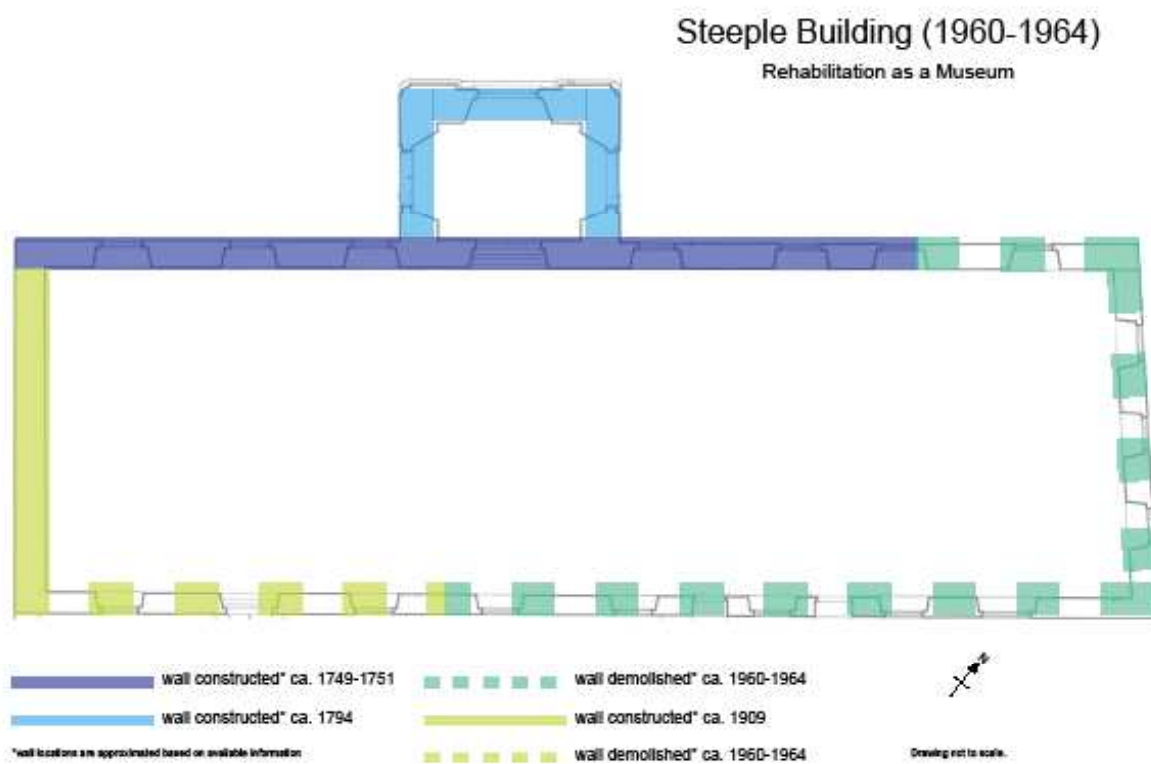


FIGURE 2-23. Floorplan of the Steeple Building showing walls demolished by the NPS between 1960 and 1964. Drawing: Quinn Evans, 2022.

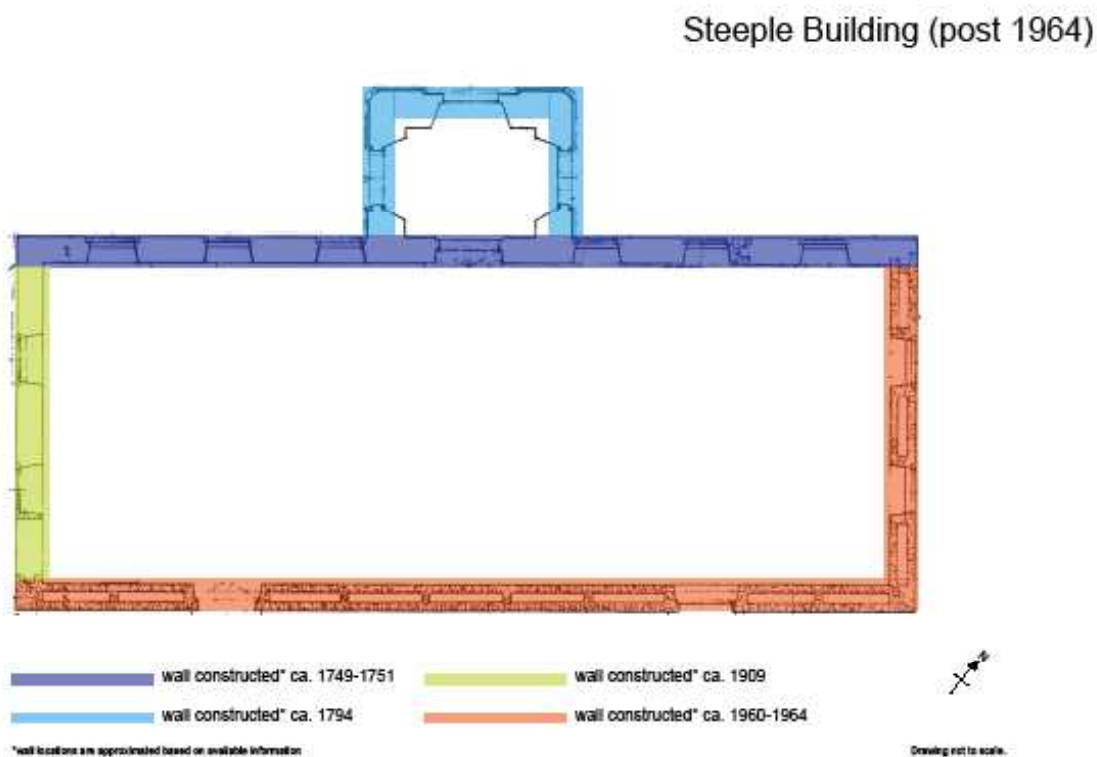


FIGURE 2-24. Floorplan of the Steeple Building showing walls constructed by the NPS between 1960 and 1964. Drawing: Quinn Evans, 2022.



FIGURE 2–25. 1957 photo of the Steeple Building interior at the beginning of the demolition phase of the rehabilitation. Source: Historic American Buildings Survey No. VI-1.

- Remove rafters without damaging the front wall (along Company Street); salvage any beams in good condition.
- Remove the rear wall facing the yard in its entirety down to the foundation; at the cisterns, only remove to the top of the cisterns.
- Remove east end wall (along Hospital Street) down to the level of the sills.
- Take down the interior foundation wall one foot.
- Drop the main door sill down one foot to be level with the Steeple entry.
- Remove all artifacts and store in Fort storage room.
- Remove all window hardware; shore up the window arches.
- Remove all fixtures from restrooms.
- Remove foundation of yard wall under supervision of architect Gjessing.

By 1961, the roof and two walls had been removed, and the restoration project was well underway. The demolition was documented in photographs as part of the HABS documentation (Figure 2–25, Figure 2–26).¹¹⁸ Mully's Pest Control treated the soil and existing walls for termites to



FIGURE 2–26. 1961 photo of the Steeple Building during the demolition phase of the rehabilitation. The roof, east end wall, and south wall had been removed. Note the bricked up window openings on the west end wall at center and a portion of the steeple tower visible at right. Source: Historic American Buildings Survey No. VI-1.

protect the new construction from the pest.¹¹⁹ On November 4, 1961, a contract was awarded to Boyce Construction Company for a lump sum of \$40,809.70 for restoration work on the exterior shell of the Steeple Building.¹²⁰ Their work did not include any restoration of the steeple tower itself or the rear yard. Some of the items contracted to the Boyce company included footings and foundations, new walls, interior structural slabs, repair of existing walls, exterior and interior masonry finish, interior finished pavement, door and window framing, roof framing and roofing, electrical and plumbing work, and glazing.¹²¹ At that time, an air conditioning system was considered for the Steeple Building, though no system was ever installed.¹²²

The construction work required for the steeple tower and the yard was outlined in a series of cost

119 Edgar Mullgrav, Mully's Pest Control, letter to Mr. Fred Gjessing, VI National Historic Site, October 25, 1960, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

120 Charles E. Peterson, Supervising Architect, letter to Chief, EODC, National Park Service, "Steeple Building Restoration," January 12, 1961.

121 National Park Service, "Estimated Lump Sum Contract 14-10-0131-696 for Steeple Building Restoration" (US Department of the Interior, National Park Service, Virgin Islands National Park, 1961), Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

122 Charles E. Peterson letter to Chief EODC, January 12, 1961.

118 Gjessing et al., "Historic American Buildings Survey, Steeple Building."

estimates between April and October 1962.¹²³

For the steeple tower, the workplan included the following:

- Structural woodwork including replacing structural members in the tower's upper tiers as well as resheathing the octagonal drum and replacing its roof.
- Ornamental woodwork including four decorative urns, a wood finial for the spire, and 132 feet of cornice and cover moldings for the drum and pavilion.
- Replacement of two doors, three louvered shutters, and five fanlights
- Metal work including installing copper roofing and flashing, repairing the weathervane and spire, and repairing or replacing hardware.
- Masonry work including repairing exterior steps, replacing damaged floor tiles, patching exterior plaster, and redrawing selected molding and cornices.
- Painting the interior of the building and restored woodwork as well as limewashing the exterior.

For the Steeple Building yard, the work included the following:

- Constructing concrete foundations and masonry pillars for the fencing and constructing a retaining wall with brick facing.
- Carpentry work including construction of 230 feet of wood picket fence and four wood gates and their hardware.
- Landscaping of the yard, paving on the west and north sides of the building walls, and grading of the yard.
- Constructing a small building in the southeast corner of the yard for toilet facilities for

employees, a janitor's closet, and a small storeroom, including plumbing and electricity.

Efforts were made to find the origin of the chandeliers (two crystal and one brass) that hung from the ceiling when the Steeple Building was a Lutheran church. According to research conducted by architect Gjessing, the chandeliers were gifts from the Danes in the 1780s; however, information from the Lord God of Sabaoth Lutheran Church specifies that they were not donated until 1833.¹²⁴ The brass chandelier was converted into a lectern in the relocated Lutheran Church on King Street. According to a letter dated April 27, 1961, architect Gjessing was able to disassemble the lectern and study the former chandelier. Though the initial assumption was that the chandeliers were Danish in origin, after examining the remains of the brass chandelier Dr. Aage Roussell of the National Museum in Copenhagen disagreed and suggested it was of American colonial or English manufacture.¹²⁶ If any conclusive information was found by Gjessing, it was not uncovered during the research for this report. In the cost estimate Gjessing proposed, he noted that reproductions of the brass and crystal chandeliers that originally hung in the Steeple Building were no longer being considered due to the high cost of their creation.¹²⁷

Acquisition of appropriate materials for the restoration of the Steeple Building proved to be a consistent challenge, and materials were often sought from overseas. Between 18,000 and 20,000 bricks were required for the restoration of the Steeple Building for use in the walls, fence posts, and pavements. The original bricks came from Denmark and were a type of yellow brick known as Flensborgsten that varied in color from a greenish

¹²³ Charles E. Peterson, Supervising Architect, letter to Chief, EODC, National Park Service, April 18, 1962, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands; Woodrow W. Wilkins, Architect, Virgin Islands National Park, Memorandum to Chief Architect, EODC, "Estimate for Completion of Steeple Building" (Virgin Islands National Park, April 26, 1962) Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands; and Frederik C. Gjessing, "Cost Estimate, Completion of Steeple Building and Steeple Building Yard," October 4, 1962, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

¹²⁴ Frederik C. Gjessing, letter to Dr. O. Norn, Curator, National Museet II, Kobenhavn, Danmark. April 28, 1961, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

¹²⁵ "Lord God of Sabaoth Lutheran Church, Christiansted, St. Croix," Royal Danish Consulate, United States Virgin Islands, accessed March 24, 2022. <http://www.dkconsulateusvi.com/HDC/stCroix/zebaoth/zebaoth.html>.

¹²⁶ Frederik C. Gjessing, letter to Mrs. C. Louise Avery, Associate Curator, Department of Renaissance and Modern Art, the Metropolitan Museum of Art, New York City, New York, February 24, 1961, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

¹²⁷ Gjessing, "Cost Estimate, Completion of Steeple Building and Steeple Building Yard."

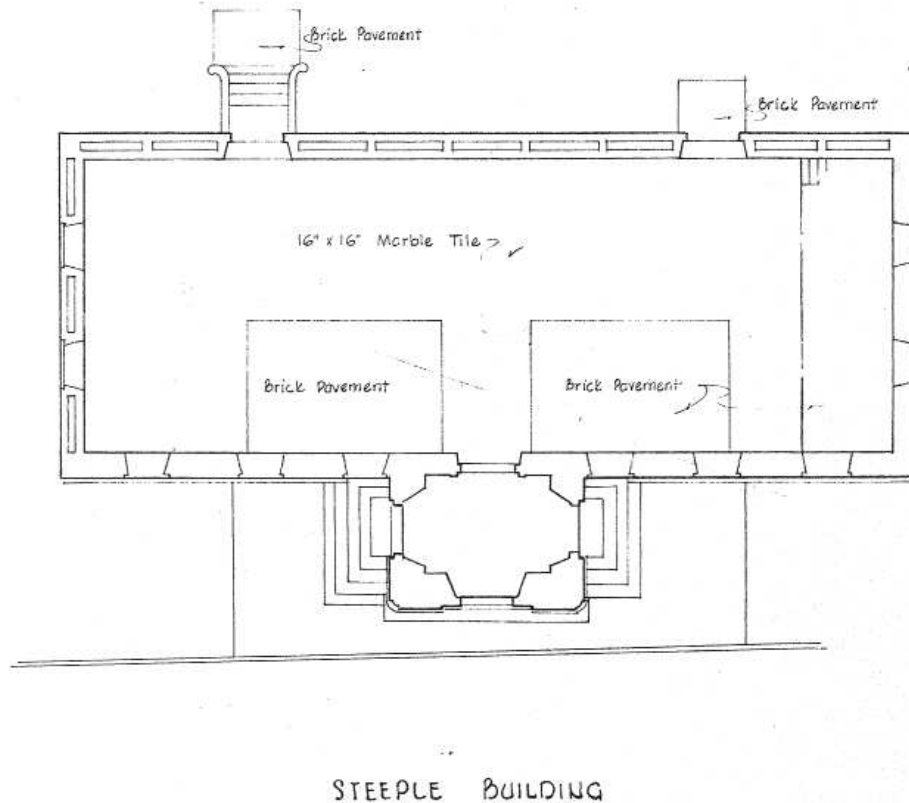


FIGURE 2-27. 1965 floorplan of the Steeple Building noting flooring materials, cropped by the author (Drawing No. NPS-CHRI 399 3004).

yellow to a pale yellow to a light orange yellow.¹²⁸ In a series of correspondence in 1962, it was clear that architect Gjessing was unable to find an adequate substitute for the bricks from a manufacturer in the United States and requested approval to order the bricks from Denmark where they were still produced.¹²⁹ Any follow-up records of brick acquisition were not uncovered during research for this report, but later documentation describes the masonry walls as “a two width thickness of standard hollow core concrete block with an airspace between them.”¹³⁰ This suggests that

acquisition of the bricks from Denmark was either not approved or infeasible for some other reason.

The lumber used for the restoration was Douglas fir and white pine, as requested in an October 15, 1962, letter from Gjessing to Mr. J. R. Venegas of Garcia Commercial in San Juan, Puerto Rico. In 1962, Gjessing requested an estimate for four urns for the top of the second tier of the steeple tower from the Overseas Plastering Company of Christiansted.¹³¹ In March 1963, three clock dials were ordered from a company in San Juan, Puerto Rico, for use in the steeple clock.¹³²

The floors of the main body of the Steeple Building were finished with 16-inch-square marble tiles, with the exception of two sections of brick

128 Gjessing, letter to Robert L. Merwin & Co., Inc.

129 Frederik C. Gjessing, Memorandum to the Administrative Office, EODC, “Purchase of Building Materials of Foreign Manufacture,” October 5, 1962, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands

130 Rene Cote, Historical Architect, “Trip Report, Christiansted National Historic Site (St. Croix), February 3-5, 1986” (National Park Service, Southeast Cultural Resources Preservation Center, 1986), Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

131 Frederik C. Gjessing, letter to Mr. Vito D’Angelico, Manager of Overseas Plastering Co., Christiansted, St. Croix, Virgin Islands, October 16, 1962, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

132 Frederik C. Gjessing, letter to Mr. Jose Puebla, La Tienda de Cristal, Santurce, Puerto Rico, March 11, 1963, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

pavement on the north side of the building (Figure 2–27).¹³³ In 1965, it was noted that the sand bed of the floor was improperly tamped and rolled in two localized areas of the building. As a result, approximately 15 of the marble tiles were cracked. The majority of the cracking occurred when the museum exhibit materials were unloaded into the building. Because the condition was localized, the repair of the sand bed and replacement of tiles was achieved.¹³⁴

By August 1963, the majority of the restoration work was completed on the building itself. In a memorandum dated August 9, 1963, park superintendent Frank R. Givens reported to the regional director of the NPS Southeast Region that the only remaining work on the building was “repairs to the plaster work of the tower, the front step, and the exterior painting.”¹³⁵ On the interior, the ceiling and cornice were given a final coat of flat white paint. Damaged tiles on the tower floor were replaced with available tiles; where possible, less broken tiles were patched with cement grout in a matching color. Brick steps were constructed at the two rear doors entering the yard. The windows and door frames were painted white, and moldings were applied to the interior of the tower.

Work on the Steeple Building yard did not begin in earnest until 1964. A masonry and wood picket fence was constructed, consisting of masonry posts topped with small pyramidal finials as well as cast brass bases and caps. Three gates were planned for the fence but not implemented at this time. A retaining wall was constructed on the side of the yard running along Hospital Street. The cisterns were broken down and removed, as were old plumbing pipes. Existing remains of graves on the northeast side of the building were built up into crypts with rubble fill and faced with brick. Initial plans included a sandstone slab cover on the largest

crypt, but it was not implemented at this time. The former lavatory floor slab along the east wall of the yard was removed.¹³⁶ The existing mature trees were maintained, including two tamarind trees and three mahogany trees. In front of the building to the east and west of the steeple, the existing date palm trees were maintained.

On March 6, 1964, a memorandum was released that instructed all work on this restoration project be stopped. The document was not discovered during archival research for this report, but reference to this memorandum was made in two follow-up memoranda. The first, dated March 13, 1964, was from the park superintendent to the regional director of the NPS Southeast Region, and it noted that all work on the building was stopped with the exception of paving in front of the entrance, which was continued to a point where all hazards for visitors were eliminated.¹³⁷ This memorandum listed the following six items that had yet to be completed for the restoration project: 1) pavements and steps in front of the steeple, 2) three wood picket gates for fence around the yard, 3) placing of stone slab on remains for three burial vaults northeast of the building, 4) acquisition and setting of brass locks and door knobs for exterior doors, 5) landscaping of yard, and 6) construction of toilet and toolshed in yard. The second memorandum, dated April 20, 1964, relayed the same information from the NPS Southeast Regional Office to the director of the NPS. In addition, the regional office made the recommendation that funding for the front pavement and steps as well as for the landscaping be provided at this time, while the remaining work could be programmed for a later date.¹³⁸

Without examination of the March 6, 1964, memorandum, it is unclear why the work was ordered to stop. However, it could be conjectured

133 National Park Service, Southeast Region, “Existing Conditions - Buildings - 1965, Christiansted National Historic Site” (National Park Service, Denver Service Center, Drawing No. CHRI 399 3004, November 1965).

134 Robert J. Carr, Acting Superintendent, Memorandum to Regional Director, Southeast Region, Steeple Building, Christiansted NHS,” February 17, 1965, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

135 Frank R. Givens, Superintendent, Virgin Islands National Park, Memorandum to the Regional Director, Southeast Region, “Dedication Ceremony of the Steeple Building,” August 9, 1963, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

136 Frank R. Givens, Superintendent, Virgin Islands National Park, Memorandum to the Regional Director, Southeast Region, “Dedication Ceremony of the Steeple Building,” August 9, 1963, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

137 Frank R. Givens, Superintendent, Memorandum to Regional Director, Southeast Region, “Steeple Building - Christiansted,” March 13, 1964, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

138 E. M. Lisle, Acting Regional Director, Southeast Region, Memorandum to Director, National Park Service, “Steeple Building - Christiansted,” April 29, 1964, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.



FIGURE 2–28. 1964 Photograph of the Steeple Building ribbon cutting ceremony as reported in the *Virgin Islands Times*. Source: “Ribbon Cutting at Historic Steeple,” *The Virgin Islands Times* (St. Croix), Vol. 1, No. 95. April 14, 1964.

that funding was an issue, as there are several references to changes in plan, staffing shortages, and difficulty finding materials throughout the correspondence record from 1961 to 1964. In a memorandum a year earlier, dated March 5, 1963, architect Gjessing reported to the chief architect of the NPS Eastern Office of Design and Construction that the tower restoration was much costlier and more time consuming than initially planned. He noted that the wood superstructure was found to be in much worse condition than anticipated, that there were numerous delays in delivery of replacement materials, and that recruiting workers was particularly difficult.¹³⁹ In the April 29, 1964, memorandum mentioned above, the acting regional director noted the following: “This project has been subject to several plan changes during its accomplishment as new historical information came to light. As a result of this the costs have greatly exceeded the original estimate.”¹⁴⁰ It would not be surprising if work was ordered to stop until additional funding could be secured.

Though the full restoration plan of for the landscaping, fencing, and yard remained unfulfilled, the Steeple Building was nonetheless opened to the public at an informal ribbon-cutting

ceremony held on April 13, 1964 (Figure 2–28).¹⁴¹ The public was invited to attend and view the exhibits displayed inside the museum, which focused on the history of St. Croix.

By November 1964, the restoration of the Steeple Building was renewed, and work kicked off with the completion of the steps and walks on the north side of the steeple facing Company Street as well as the completion of the gate posts.¹⁴² In February 1965, Gjessing laid out a new plan for the covers of the burial vaults, which would replace the original plan for the sandstone slabs (Figure 2–29). The vaults were built up higher, using more bricks than originally planned, and the larger vault was topped with tiles in the center with gravel as a base.¹⁴³ A landscape plan dated March 11, 1965, indicates that the landscaping of the yard was undertaken next (Figure 2–30).¹⁴⁴ Grass areas were planted in the yard, 38 bird’s nest snake plants were planted around the date palms, and the mature trees throughout the yard were maintained.¹⁴⁵ It appears that the proposed lavatory and storeroom in the rear yard were never constructed.

The HABS documentation was completed and compiled in July 1966 and included a narrative description, measured drawings, and photographs. This documentation was submitted to the Library of Congress.¹⁴⁶ See Appendix A for copies of the documentation, drawings, and photographs.

141 National Park Service, Virgin Islands National Park, Press Release regarding the opening of the Steeple Building (National Park Service, Virgin Islands National Park, April 7, 1964) Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

142 Frederik C. Gjessing, Memorandum to Chief Architect Robert E. Smith, EODC, “Steeple Building Restoration, Christiansted, St. Croix,” November 3, 1964, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

143 Frederik C. Gjessing, letter to Manolin Torres, “Grave Covers and Gates,” February 19, 1965, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

144 Frederik C. Gjessing, “Landscape Plan, Steeple Building, Christiansted, St. Croix, V.I.” (National Park Service, Eastern Office of Design and Construction, Field Office, Virgin Islands National Historic Park, St. Thomas, Drawing No. CHRI 399 3116A, March 11, 1965).

145 M. H. Hilder, letter to Frederik Gjessing, March 16, 1965, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

146 HABS documentation is available through the Library of Congress at <https://www.loc.gov/item/vi0117/>.

139 Frederik C. Gjessing, Memorandum to Chief Architect, EODC, “Steeple Building Restoration and Assignment of Phil Lang,” March 5, 1963, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

140 Lisle, Memorandum to Direct, National Park Service.

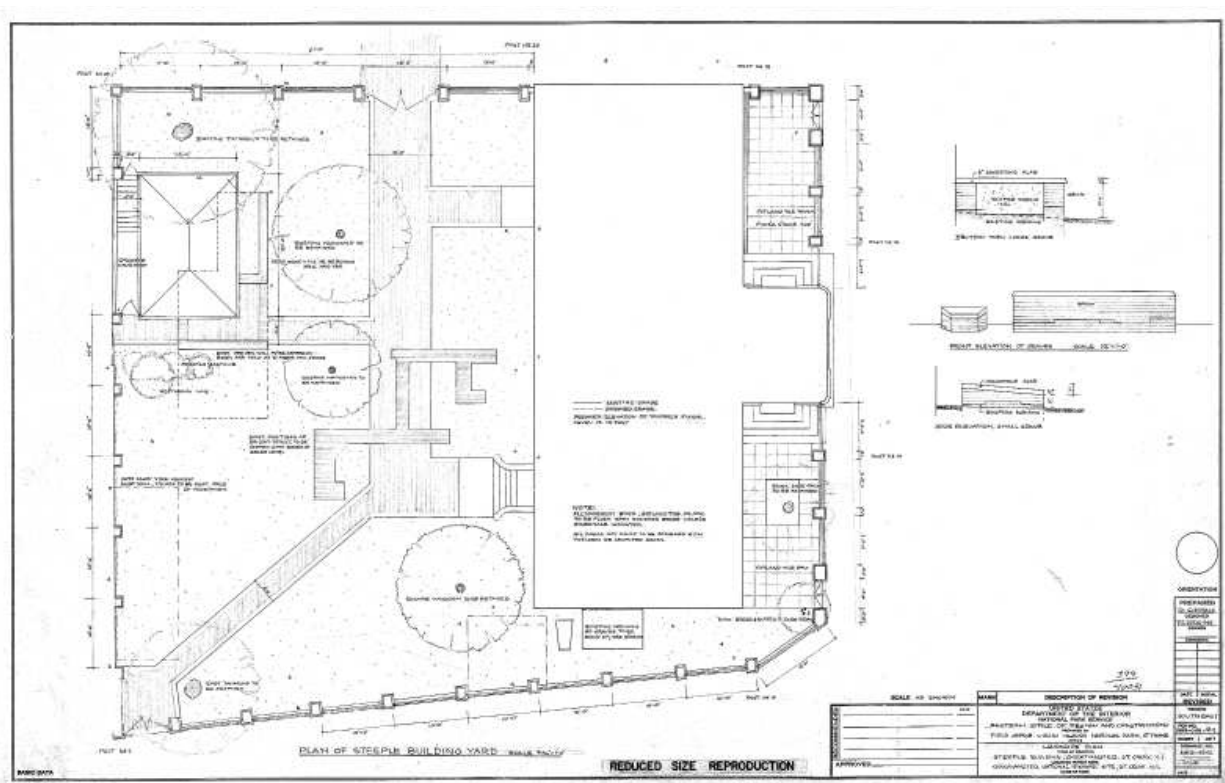


FIGURE 2-29. 1965 Landscape plan of Steeple Building yard with sections and elevations of burial vaults, prepared by Frederik C. Gjessing. Drawing: Denver Service Center, Technical Information Center, Drawing No. CHRI 399 3116.

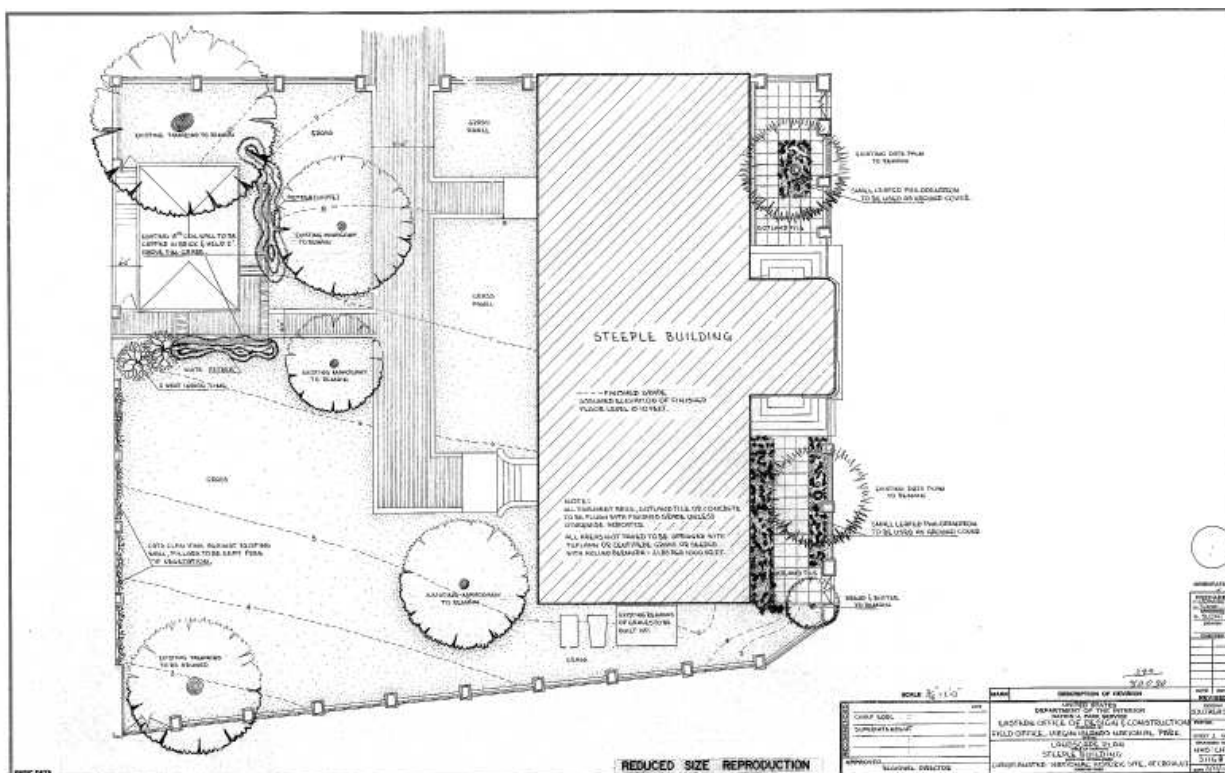


FIGURE 2-30. 1965 Landscape plan of Steeple Building yard, prepared by Frederik C. Gjessing. Drawing: Denver Service Center, Technical Information Center, Drawing No. CHRI 399 3116A.

The Steeple Building was listed in the National Register of Historic Places on October 15, 1966, as a contributing structure within the Christiansted National Historic Site. Additional documentation was submitted via a nomination form written by Gjessing, which was approved on July 30, 1976. See Appendix F for a copy of the nomination form.

Continuing Service as a Museum (1970–1979)

The Steeple Building continued to function in its capacity as a museum during the 1970s and onward; however, important changes to the management and administration of the park occurred during this decade. The original Memorandum of Agreement pertaining to the maintenance and management of the park (signed on February 11, 1952) was modified with an addendum on February 22, 1972.¹⁴⁷ This addendum expanded and transferred responsibility for historic buildings and grounds maintenance to the NPS. Management objectives for the park were revised in July 1975 and had implications for all buildings within the NPS unit.¹⁴⁸ With regard to the Steeple Building, the revised management objectives document states that the building “houses the National Park Service Museum and is in very good physical condition due to its complete reconstruction by the National Park Service which was finished in 1964.”¹⁴⁹ An additional supplemental Memorandum of Agreement Addendum was signed on March 16, 1976, and still another Memorandum of Agreement Addendum was signed on February 22, 1977, but the latter of these dealt primarily with the Scale House, bringing it under NPS jurisdiction.¹⁵⁰ One critical component of these agreement documents is that they put the impetus for funding and repairs to the significant historic building features on



FIGURE 2–31. The northeast corner of the Steeple Building in 1976, as documented for the National Register Nomination Form. Photo: National Register of Historic Places Nomination Form for Christiansted National Historic Site, 1976.

the NPS rather than the government of the U.S. Virgin Islands, helping to clarify some of the aforementioned confusion over designation of responsibilities.

Routine maintenance and repair needs continued to be of concern, as the island’s natural elements took a regular and persistent toll on the Steeple Building and its surrounds. The exterior building envelope, such as the doors, shutters, and roof, appears to have required frequent attention due to deterioration, as did the iconic steeple itself. A contractor’s bid schedule from 1970 illustrates the type of recurring work on the building that was commonplace.¹⁵¹ The document details the plan to replace shutters; replace and refinish exterior doors; repair, caulk, and weatherproof various components of the steeple; and replace and repair components of the gutter system. In another example, a 1971 scope of work for painting of the Steeple Building and Fort Christiansvaern prescribes that the chosen contractor would paint all masonry surfaces of building and fence, paint all interior and exterior wood surfaces, treat

147 Department of the Interior and the Municipality of St. Croix, “Memorandum of Agreement of February 11, 1952”; Government of the Virgin Islands and the National Park Service, “Memorandum of Agreement of February 22, 1972.”

148 Management Objectives: Christiansted National Historic Site, 1975, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands

149 Management Objectives: Christiansted National Historic Site.

150 National Park Service and the Government of the Virgin Islands, “Addendum Number Two to Memorandum of Agreement, 1977.

151 Contract Bid Schedule: Replacement and repair of damaged sash and other woodwork, 1970, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

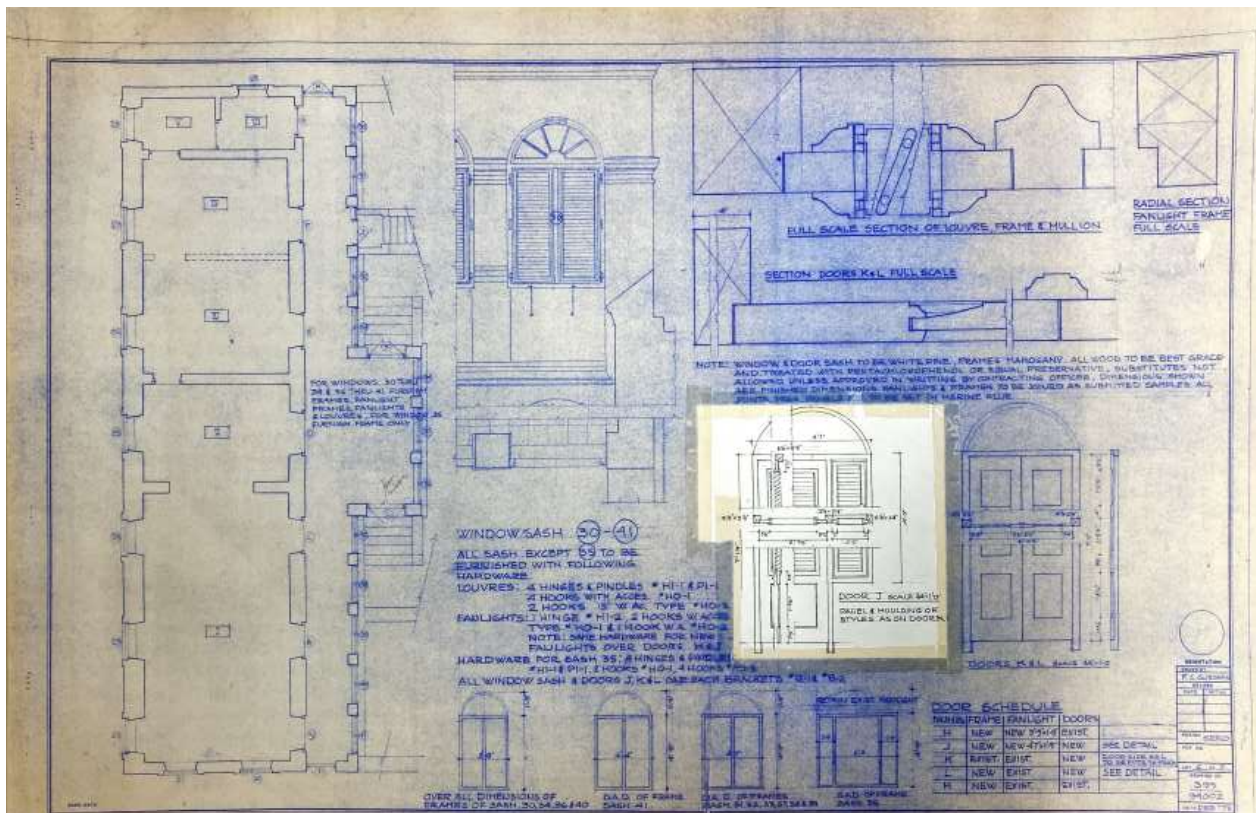


FIGURE 2-32. 1973 drawing by F. Gjessing of Steeple Building doors and windows. Drawing: Christiansted National Historic Site Archives, Drawing No. CHRI 399 94002, Sheet 6.

shingles with wood preservative, and paint the wall facing of Steeple Building yard.¹⁵² In 1973, both a simple floorplan and detail drawings of the doors and windows were created by Gjessing; however, the exact purpose of the drawings from a project perspective is unclear (Figure 2-32). The continuing routine maintenance and repair needs included other elements of the setting during the building's continued use as a public museum space. In one example, signage around the exterior of the Steeple Building and Fort Christiansvaern was replaced in 1973 but then had to be replaced again in 1974, according to memoranda from NPS staff, due to nearly immediate deterioration caused by the elements.¹⁵³

¹⁵² Specifications for Painting of Steeple Building and Fort Christiansvaern, Christiansted National Historic Site, 1971, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

¹⁵³ Memorandum, "Signs, Buck Island," December 6, 1973, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands; and Marvin Madry to Sign Program Coordinator SERO, "Entrance signs for CHRI," December 3, 1974, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

The Steeple Building's iconic circa 1923 E. Howard & Company Time and Strike Tower Clock Model 0 clock has required regular maintenance since its installation in the early twentieth century and this continued during the 1970s. Photographs from July 1970 indicate that NPS staff, likely from the Harpers Ferry Center, visited the Steeple Building to examine the clock and potentially also to perform necessary repairs and maintenance work, but the exact details of this visit were not discovered during research efforts for this project (Figure 2-33).

Two further items were found that provide a glimpse into the status of the park, and more specifically the Steeple Building, during this time period. A February 6, 1979, article in the *St. Croix Avis* mentions portions of the Folmer Andersen collection being displayed in the Steeple Building museum, illustrating its continued use as an important museum for the community.¹⁵⁴ According to the article, the Folmer Andersen Collection was "one of the most remarkable as well as comprehensive collections of artifacts

¹⁵⁴ Arnold Highfield, "The Folmer Andersen Collection," *St. Croix Avis* (February 6, 1979): 9.



FIGURE 2–33. 1970 inspection of Steeple Building clock by National Park Service staff. Photo: Christiansted National Historic Site Archives.

dealing with pre-Columbian man in the West Indies...¹⁵⁵ Beyond this, a document titled “List of Classified Structures” from October 31, 1979, provides a glimpse into the status of the building, listing treatment costs as being \$40,000.¹⁵⁶ While the exact treatment referenced is unclear, all of the park buildings are listed with treatment estimates as well, so it is assumed that this is a general figure speaking to needed maintenance and preservation projects. This document further indicates the ongoing need for preservation and maintenance work on buildings throughout the park unit.

1980s Preservation Work at the Steeple Building and Reconstruction of the Cupola (1980–1989)

Routine maintenance remained the primary focus of preservation efforts for the Steeple Building moving into the 1980s. A series of drawings was completed for the Steeple Building by NPS in April of 1980 and include a site plan, floor plan, and several detail and profile drawings (see Figure

2–34, Figure 2–35, Figure 2–36).¹⁵⁷ Marvin Mabry of the NPS proposed to repaint the interior and exterior of the building around 1980, the plan for which included repair work to wood and masonry, filling cracks and reglazing masonry, and replacing damaged roofing. The assessment of effects document that was prepared specified that “materials, fixtures and colors (of) the work to be performed will be identical to the restoration of the early 1960s established by historical, architectural and archeological resource.”¹⁵⁸ It was determined that this work would have no adverse effect on the property, with concurrence on the matter coming from both the Advisory Council on Historic Preservation and the U.S. Virgin Islands State Historic Preservation Office.¹⁵⁹ The contract negotiations for this work seemed to take several months, including cancellation of a contract for default and also the protest of another contract award; however, the contract to complete the work was ultimately awarded to Singleton Contracting Corporation with a start date of August 17, 1981, and a December 14, 1981, estimated date of completion.¹⁶⁰ A preconstruction conference for this work, completed under Contract No. CX500010561, was held on August 3, 1981, during which a 120-day calendar school was discussed, excepting for any potential contract extensions.¹⁶¹

A major reconstruction project on the building’s iconic cupola occurred in the mid-1980s, with negotiations and planning starting approximately three years earlier. As evidenced in photographs taken in 1981, the upper portion of the cupola suffered from severe deterioration and instability (see Figure 2–37). As a result, the upper portion of the cupola was removed in December 1982, and

157 National Park Service measured drawing CHRI 399 80.007, “Painting & Reroofing of Steeple Building,” April 23, 1980, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

158 Marvin Madry, “Effect of Painting and Refinishing Steeple Building of Christiansted National Historic Site: A National Registry Property,” n.d., Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

159 Advisory Council on History Preservation, “Section 106 Concurrence,” July 24, 1980, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

160 Charles D. Goode, “Notice to Proceed Notice of Beginning Date Contract No. CX 5000 1 0561,” August 19, 1981, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

161 Minutes from Preconstruction Conference, Contract No. CX500010561, 1981, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

155 Arnold Highfield, “The Folmer Andersen Collection,” *St. Croix Avis* (February 6, 1979): 9.

156 National Park Service, “Cultural Resources List of Classified Structures Management Categories,” 1979, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

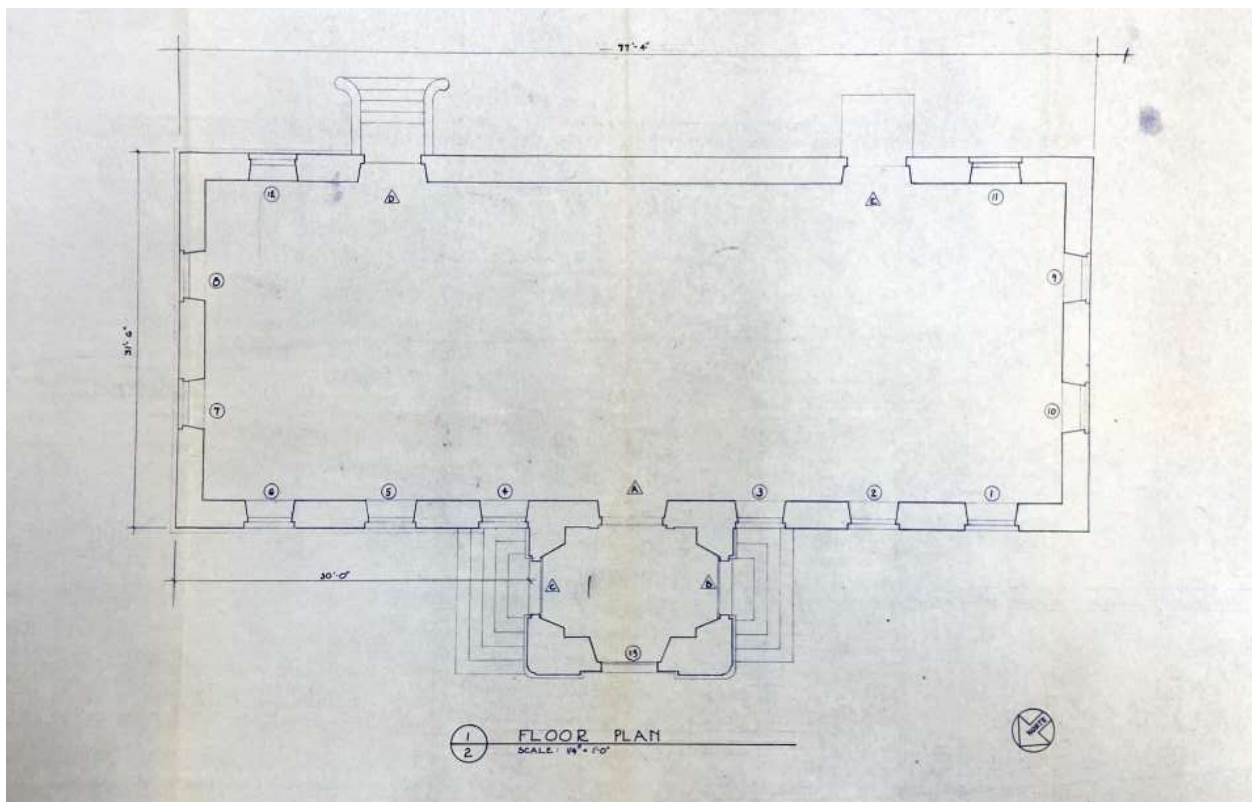


FIGURE 2-34. 1980 floor plan of Steeple Building. Drawing: Denver Service Center, Technical Information Center, Drawing No. CHRI 399 80.007, Sheet 2.

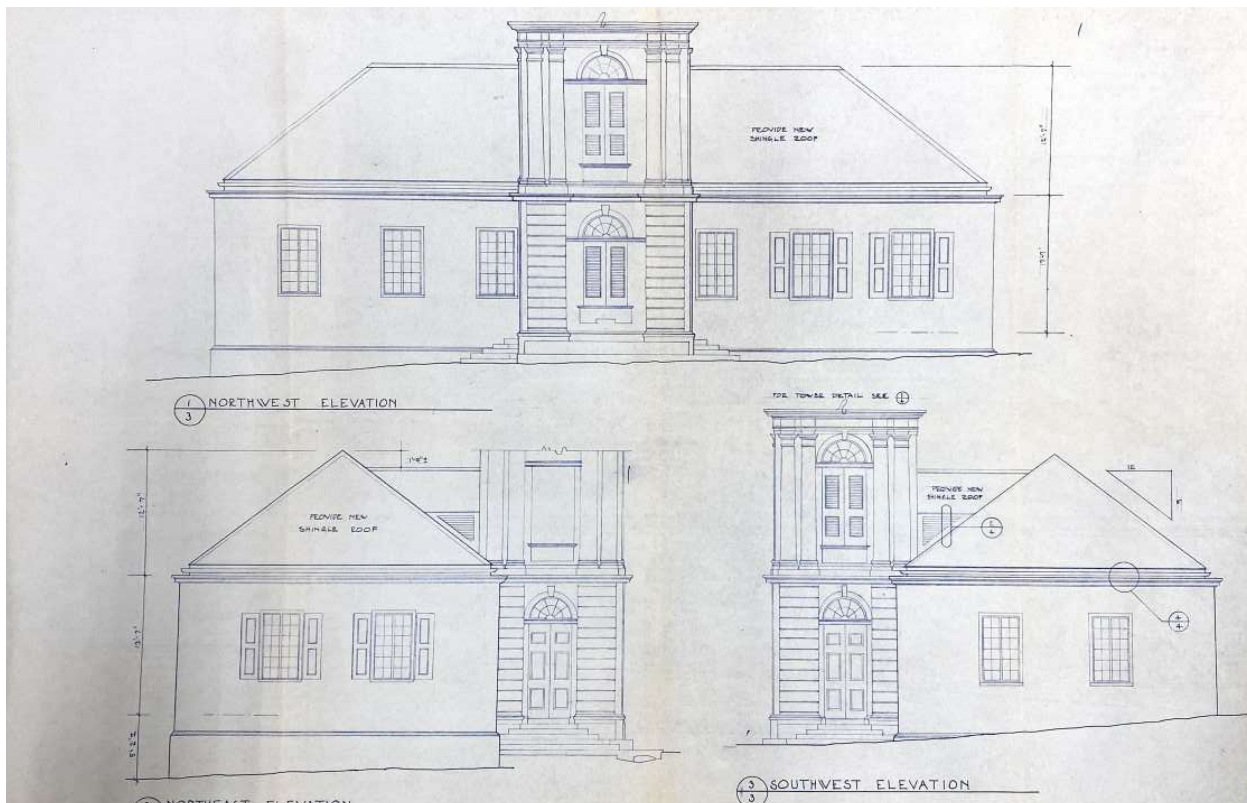


FIGURE 2-35. 1980 profile drawings of Steeple Building. Drawing: Denver Service Center, Technical Information Center, Drawing No. CHRI 399 80.007, Sheet 3.

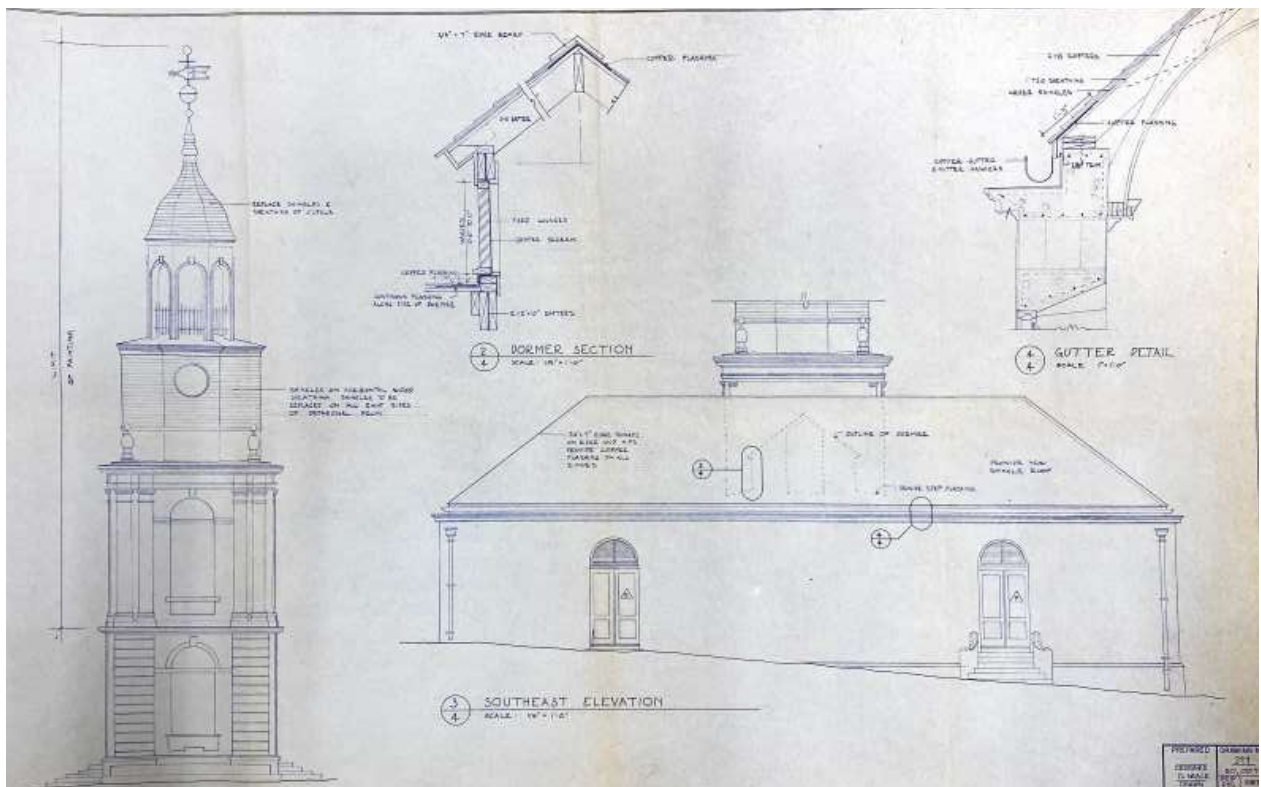


FIGURE 2-36. 1980 detail drawings of Steeple Building. Drawing: Denver Service Center, Technical Information Center, Drawing No. CHRI 399 80.007, Sheet 4.



FIGURE 2-37. 1981 photograph of deteriorated cupola on Steeple Building. Photo: Christiansted National Historic Site Archives.



FIGURE 2-38. 1982 photograph of deteriorated cupola sitting on Company Street, having been removed from Steeple. Photo: Christiansted National Historic Site Archives.



FIGURE 2-39. 1982 photograph of deteriorated cupola loaded on trailer having been removed from Steeple Building. Photo: Christiansted National Historic Site Archives.

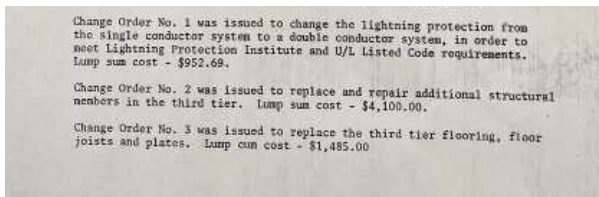


FIGURE 2-40. Excerpt from 1985 cupola project closeout narrative showing various project contract change orders. Source: Ronald W. Bishop and Phil Spring, Contract Completion Report, "Narrative Statement, Reconstruction of the Cupola for the Steeple Building, Christiansted National Historic Site, Contract No. CX 5000-3-1049," 1985, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.



FIGURE 2-41. 1985 photo showing cupola reconstruction project in progress. Photo: Christiansted National Historic Site Archives.

the event was well documented in photographs (Figure 2-38, Figure 2-39). Measured drawings of the cupola were completed in January 1983 to support its reconstruction.¹⁶²

On May 3, 1983, the Advisory Council on Historic Preservation concurred with the finding that the reconstruction of the cupola would have no adverse effect to the building.¹⁶³ A 1983 contract bid schedule for the work put the estimated cost of repairs at \$48,990.60.¹⁶⁴ NPS also produced a set of detailed plans for the reconstruction of the

cupola on May 15, 1983.¹⁶⁵ Logan Construction was awarded the contract to complete the work on the Steeple Building per a Statement and Certificate of Award dated September 12, 1983.¹⁶⁶ Communications regarding this project appear to have been ongoing in 1983 and 1984, per correspondence between Koppers Architectural & Engineered Laminated Products and Logan Construction, Inc., dated February 6, 1984.¹⁶⁷ A notice to proceed with the work was given on May 3, 1984, with a beginning date of May 14, 1984.¹⁶⁸ An October 1, 1985, a report by NPS employees Ronald W. Bishop and Phil Springer summarized the completion of the project, providing valuable details on project specifics.¹⁶⁹ According to this report, the project included a pre-construction conference on site on November 8, 1983; the aforementioned notice to proceed and first day of contract; and three separate change orders due to unforeseen project needs (Figure 2-40). A final inspection was held on March 18, 1985, and the final contract amount including the three change orders was \$55,803.29.

As a part of the cupola reconstruction, the clockworks were removed for safekeeping while work was ongoing and so that the machinery could be restored by Bart Rogers from the NPS Harpers Ferry Center, and they were ultimately reinstalled in the cupola (Figure 2-41).¹⁷⁰ The clock appears to have required multiple trips to ensure its proper function, which was critical

162 National Park Service, Section 106 Assessment of Effects Document, "Assessment of Actions Having an Effect on Cultural Resources," 1983, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

163 National Park Service, Section 106 Assessment of Effects Document, "Assessment of Actions Having an Effect on Cultural Resources," 1983, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

164 National Park Service, "Contract Bid Schedule Reconstruction of the Cupola for the Steeple Building Christiansted National Historic Site St. Croix, U.S. Virgin Islands," 1983, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

165 National Park Service, "The Reconstruction of the Cupola for the Steeple Building," May 15, 1983, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

166 National Park Service, "Statement and Certificate of Award - Change Order No. 4 - Contract No. CX 5000-3-1049," September 12, 1983, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

167 Koppers Architectural & Engineered Laminated Products. "Correspondence Between Koppers Architectural & Engineered Laminated Products and Logan Construction, Inc.," February 6, 1984, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

168 Ronald W. Bishop and Phil Spring, Contract Completion Report, "Narrative Statement, Reconstruction of the Cupola for the Steeple Building, Christiansted National Historic Site, Contract No. CX 5000-3-1049," 1985, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

169 Bishop and Spring, Contract Completion Report.

170 John H. Demer, "Bart Rogers' Trip to Christiansted NHS and San Juan NHS." Harpers Ferry, March 1, 1985, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

considering the importance of the clock to the local Christiansted community. One example of correspondence pertaining to this work detailed how Bart Rogers would travel to Christiansted in March 1985, reinstall the clock in the restored cupola, travel to San Juan, Puerto Rico, to perform some unrelated work at the park, and then travel back to Christiansted during the same trip to ensure the clock was functioning properly before heading home.¹⁷¹

While the cupola reconstruction was ongoing, additional maintenance and repair work on the Steeple Building was undertaken. The following summarizes the notable work that was planned or undertaken as reported in various documents in the park archives. In June and July of 1983, work orders were submitted for the shutters and rear door, along with a work order to undertake fence repairs, which was “completed as much as possible” by July 8, 1983.¹⁷² Additional maintenance notes from this period mentioned a broken gate in front of the building, wood deterioration in and around the windows, and deterioration of the walls and window stops.¹⁷³ Termites were a long-standing maintenance issue at the Steeple Building, and a letter from June 20, 1983, detailed a treatment plan for both subterranean and drywood termites.¹⁷⁴ An assessment of effect document for the installation of electrical wiring in the Steeple Building was submitted to the Advisory Council on Historic Preservation by NPS on March 2, 1984.¹⁷⁵ A leaks assessment for the buildings within the park dated September 19, 1984, noted that for the Steeple Building there was one major area of concern: a damp area showing on the ceiling near the center rosette. However, most leaks would be



FIGURE 2-42. Maintenance supervisor Philbert Baptiste holding custom plane created to replicate original molding Steeple Building. Source: Barta, “Christiansted National Historic Site.”



FIGURE 2-43. Master carpenter Joseph Alexander hand planing shutter frame for Steeple Building. Source: Barta, “Christiansted National Historic Site.”

eliminated with routine gutter maintenance.¹⁷⁶ On August 1, 1984, the work to be undertaken for the remainder of the fiscal year was outlined in a letter to Philbert Baptiste, an NPS employee and carpenter on the island, including the following directions: restore three additional shutters on Company Street, restore the east-facing door on the steeple, secure a carpenter to restore rotted window frames on the second tier of steeple, and continue scraping and caulking as availability

171 Demer, “Bart Rogers’ Trip to Christiansted NHS and San Juan NHS.”

172 National Park Service, “Work Orders,” 1983, Various, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

173 National Park Service, “Work Orders.”

174 HMS, Inc., “Letter Pertaining to Termite Inspection,” June 20, 1983, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

175 Virgin Islands Planning Office, “Letter to Advisory Council on Historic Preservation Pertaining to Assessment of Effects for Electrical Work,” February 28, 1984, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

176 Kenneth F. Barta and William F. Cissel, “Leaks Assessment - Christiansted National Historic Site,” September 19, 1984, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

permits.¹⁷⁷ Another document indicates that ten pairs of shutters were replaced on the Steeple Building, including frames and sash when required, and that mahogany was used “to ensure historic authenticity and maximum longevity.”¹⁷⁸ According to an article in the January 1985 edition of the NPS newsletter *Courier*, much of this work was done by hand, using hand planes designed by Philbert Baptiste (Figure 2–42, Figure 2–43).¹⁷⁹

The restoration of the building during this time was not without controversy, with a major debate arising regarding the paint color of the exterior of the iconic steeple. NPS submitted an application to change the exterior color of the steeple from its long-standing gray to white, which they discovered to be more historically accurate based on paint analysis done by NPS paint expert Benjamin Nistal-Moret.¹⁸⁰ A U.S. Virgin Islands Planning Board meeting was held on April 25, 1985, at which the NPS presented their case; however, the meeting ended contentiously with a denial of the paint-related portions of the NPS’s application. In particular, Gjessing, no longer with the NPS but a current member of the planning board, became upset and protested vehemently that the change in color not be permitted. Park Superintendent Thomas Bradley sent a follow-up letter afterwards expressing his thoughts on the situation and requesting another hearing with the planning board for the purposes of resolving this dispute.¹⁸¹ A second meeting was held on June 25, 1985, and after review of further evidence presented by Benjamin Nistal-Moret, the request was approved to change the color of the building from gray to



FIGURE 2–44. February 1986 photograph of Steeple Building prior to paint color change for steeple. Photo: Christiansted National Historic Site Archives.



FIGURE 2–45. August 1986 photograph of Steeple Building after paint color change for steeple. Photo: Christiansted National Historic Site Archives.

177 National Park Service, “United States Government: Restoration Schedule,” August 1, 1984, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

178 National Park Service, “Repair Shutters, Cost Account No. 5380-1636-301,” 1984, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

179 Kenneth F. Barta, “Christiansted National Historic Site,” *Courier: The National Park Service Newsletter* (January 1985): 7-8.

180 Benjamin Nistal-Moret, “The Exterior Historic Color Finishes of the Steeple Building C. 1800. Historic Paint Color Analysis,” 1985, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

181 Thomas A. Bradley, “Letter to Virgin Islands Planning Board Regarding Steeple Building Paint Color,” April 25, 1985, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

white.¹⁸² On August 9, 1985, the change in paint color was approved by the U.S. Virgin Islands Planning Board. Based on photographic evidence, it appears that the actual painting was done

182 Benjamin Nistal-Moret, “The Exterior Historic Color Finishes of the Steeple Building C. 1800. Historic Paint Color Analysis.”

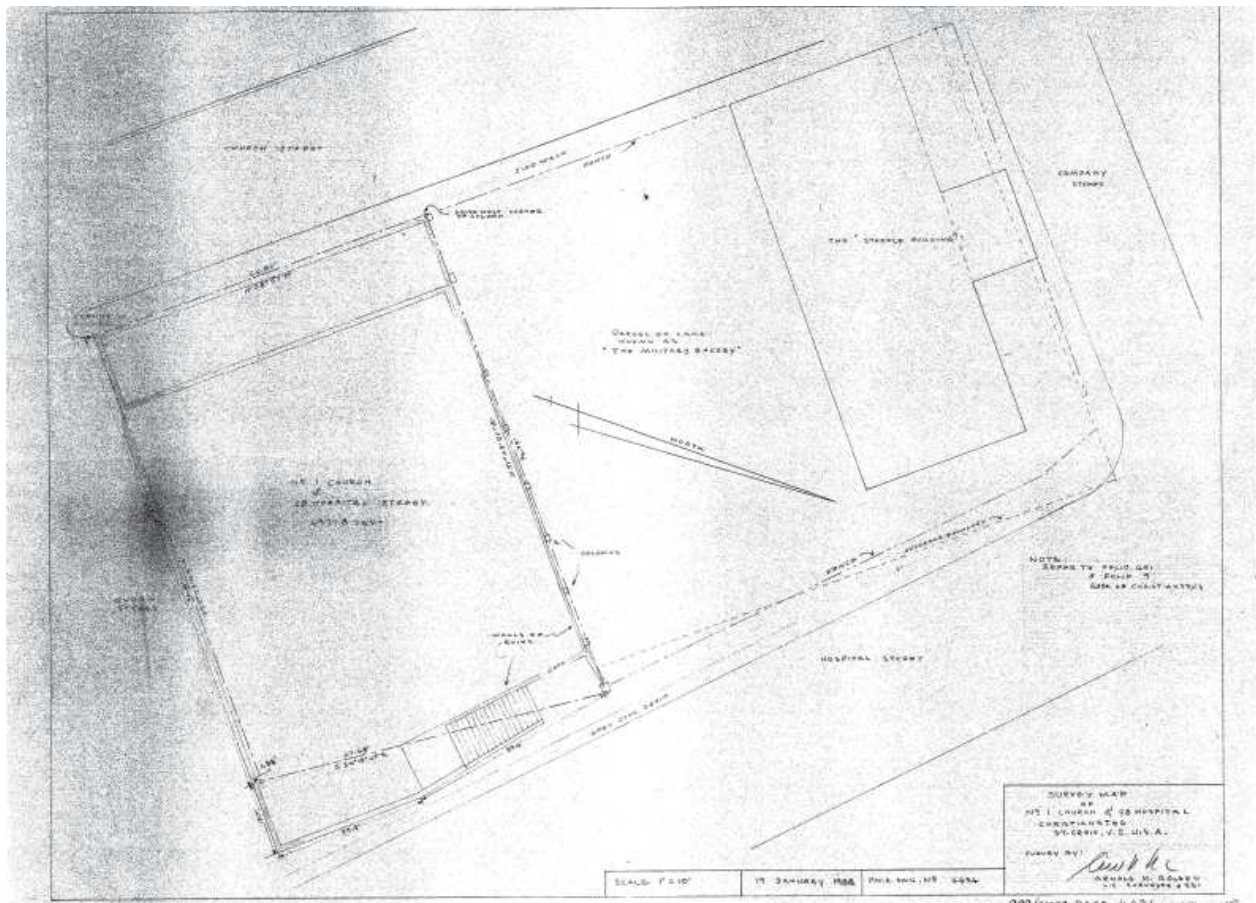


FIGURE 2-46. 1988 land survey map of parcel adjacent to Steeple Building. Drawing: Denver Service Center, Technical Information Center, Drawing No. CHRI 399 127873.

between February and July 1986 (Figure 2-44 and Figure 2-45).

While the Steeple Building was closed for work on the cupola and other components of the building, the museum displays were updated in preparation for reopening to the public. A proposed exhibit update was detailed in a document submitted by Gjessing and William Chapman on behalf of William Chapman and Associates discussing their prescribed programming and exhibit plan for the Steeple Building.¹⁸³ It appears, however, that NPS selected a different contractor for this work, as Presentations South, Inc., submitted an invoice for various museums services on December 23, 1983. NPS then issued a contract to Preservation South, Inc., on February 17, 1984, for the sum of

\$17,770.34 for “Exhibit Rehabilitation of various exhibits at the Steeple Building.”¹⁸⁴

Work also occurred on the grounds and in the building’s vicinity. The government of the U.S. Virgin Islands produced drawings for the repair of roadways and sidewalks along Company Street.¹⁸⁵ In 1985, there was a letter of inquiry from the NPS to the owner of the adjacent property to the southeast who had expressed interest in selling to the NPS.¹⁸⁶ A land survey map from 1988 shows the two properties in relation to each other

¹⁸³ Frederik Gjessing and William Chapman, “The Historic Architecture of the Virgin Islands; Proposed Exhibit for the Christiansted Historic Site, St. Croix, U.S. Virgin Islands,” 1984, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

¹⁸⁴ National Park Service, “Contract Document, Contract No. CX-1100-1-0411,” February 17, 1984, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

¹⁸⁵ C. Mitchell, “Plans for Repairing of Road & Sidewalks of Company Street, Christiansted, St. Croix, United States Virgin Islands, CHRI-0044,” June 4, 1984, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

¹⁸⁶ Thomas R. Beasley, “Letter to Calvin D. Burke Regarding Potential Sale of Adjacent Property,” January 9, 1985, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

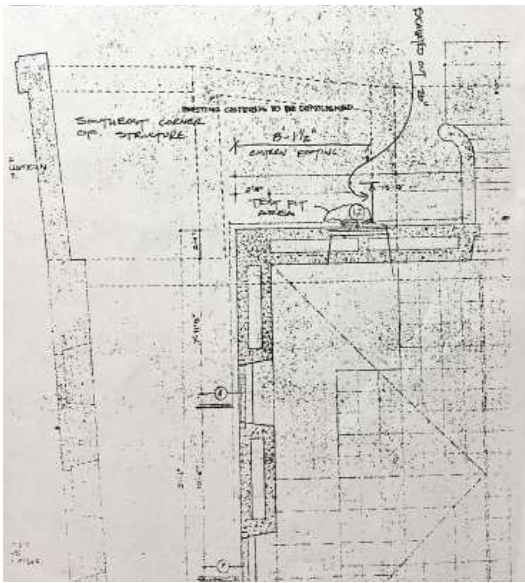


FIGURE 2-47. Diagram of excavation site, taken from 1986 trip report. Source: Cote, "Trip Report, Christiansted National Historic Site."

and illustrates that the boundary fence for the Steeple Building does not follow exactly along the northeast property line (Figure 2-46).¹⁸⁷ Though initial inquiry took place, the NPS did not acquire the adjacent property.

A February 1986 trip report by Rene Cote, NPS Historical Architect, summarized the work observed on the Steeple Building being conducted under Contract No. CX 5000-5-0035. Work consisted of stucco removal, including areas of modern materials that were installed during the 1962 restoration project. While all stucco had been scheduled for removal from the exterior of the building, this was not done due to the potential for damaging the hollow-core concrete blocks that comprised the walls after the reconstruction of the 1960s.¹⁸⁸ Areas of cracking (largely stemming from the 1962 work) were inspected, including the establishment of a test pit at one corner of the building in an area of previously undisturbed soil. The pit would be placed on the exterior of the building "below window number 12, as indicated on the enclosed drawings. The foundation consisted of a concrete wall approximately 12' above grade and 3' 9" below grade to the water

table" (Figure 2-47).¹⁸⁹ The attic and roof systems were also inspected and appeared to be holding up in a good condition: "No displacement of rafters, plates, ties or ceiling joists were observed and all appear[ed] in good condition."¹⁹⁰ The recent cupola reconstruction work was also inspected, revealing various deficiencies in the work, such as improper nailing of finish millwork, poor joinery, unprimed and unpainted structural steel plates, and "fifty percent of the bolt connections... examined were loose and easily removed by hand."¹⁹¹ On October 2, 1986, Zenon Construction Corporation submitted a contracting document for the project, "Preservation of the Steeple Building," outlining work that had been completed, including but not limited to selective demolition, installation of wood fence, gutter repair, reglazing of lights, masonry repair, and painting of various building components.¹⁹²

Damage to the building outside of normal weathering, occurring as a result of both natural and human-caused events, has been a recurring theme throughout the history of the NPS involvement with the Steeple Building. As it sits along Company Street between Hospital Street and Church Street, there have been several instances of vehicles striking the property, which has resulted in the fence around the property needing to be rebuilt on several occasions. On November 9, 1986, a cab driver collided with and damaged the fence and archway at the corner of Company Street and Hospital Street, causing approximately \$3,500 worth of damage.¹⁹³ Zenon Construction, which was already performing additional work on the building, was retained through a contract modification to complete the repair work relating to the crash, including installing protective bollards at certain points around the building in an attempt to prevent future vehicular damage. In a letter

189 Cote, "Trip Report, Christiansted National Historic Site."

190 Cote, "Trip Report, Christiansted National Historic Site."

191 Cote, "Trip Report, Christiansted National Historic Site."

192 National Park Service, "Contracting Document - Preservation of the Steeple Building," October 2, 1986, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

193 Norman P. Jones, "Letter Regarding Taxi Crash into Steeple Building," December 16, 1986, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

187 Arnold M. Goldeu, "Survey Map of No 1 Church & Hospital, Christiansted, St. Croix, V.I. U.S.A.," Denver Service Center, Technical Information Center, Drawing No. CHRI 399 127873, January 19, 1988

188 Cote, "Trip Report, Christiansted National Historic Site."

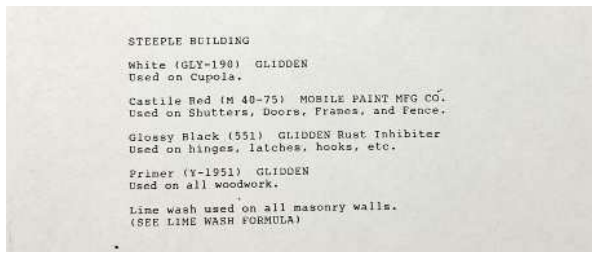


FIGURE 2-48. Details of Steeple Building paint colors. Source: National Park Service, "Section 106 Clearance for the Preservation Maintenance of the Steeple Building, Fort Christiansvaern, Guinea Warehouse and the Scale House."

dated July 28, 1987, the U.S. Virgin Islands State Historic Preservation Office agreed with NPS that the installation of bollards would have no effect on the resource.¹⁹⁴

The brick wall along the south property line was damaged in 1988 due to a fire on the adjacent property that resulted in the deterioration of the wall's mortar and plaster. A Section 106 compliance document was submitted for work to repair the damage on July 27, 1988.¹⁹⁵ Additional Section 106 documentation was processed in April of 1989 for repair and painting of masonry and woodwork throughout the park, including the Steeple Building, Fort Christiansvaern, the Custom House, Post Office, and Scale House, illustrating the nearly constant need for maintenance.¹⁹⁶ Precise paint colors are specified for the Steeple Building in the aforementioned Section 106 documentation (Figure 2-48).

Late Twentieth-Century Repairs (1989–2005)

Hurricanes have always been of concern for the Virgin Islands, although there was something of a respite from major hurricanes between 1960, when Hurricane Donna passed just north of Anegada of the British Virgin Islands, and 1989. Hurricane Hugo passed over the southern portion of St. Croix

between September 17–18, 1989, causing extensive damage to the vast majority of the buildings on the island. The Steeple Building was not spared from this destruction, and as a result, other previously planned work was cancelled due to the massive destruction, shortage of qualified contractors, and prolonged power outages.¹⁹⁷ A Section 106 document from November 15, 1989, details the damage to the Steeple Building, which involved foundation damage to the retaining wall due to the uprooting of a large mahogany tree and damage to two columns from the fence that surrounds the property.¹⁹⁸ In addition, the weathervane that sat atop the cupola was damaged.¹⁹⁹ Repair work in both of these areas was approved but seems to have taken considerable time to complete. An order form to Hutch's Maintenance and Repair Service, Inc., dated September 30, 1991, outlines the steps for removal and repair of the weathervane due to it being damaged during Hurricane Hugo. This document also specified that four clock faces were to be repainted and two damaged lightning rods were to be reattached to their ground cables.²⁰⁰ A progress report from 1992 covering work done June 22 to July 17, 1992, detailed the work done on the reconstruction of the damaged wall. Considerable detail was given regarding the degree to which components had to be demolished and removed, excavated below grade, and which materials could be salvaged for reconstruction.²⁰¹ A completion report for the Steeple Building fence repairs was prepared in 1992 and indicated that "repairs were completed to five masonry columns and three brick retaining walls." Causation for the damage was attributed to Hurricane Hugo,

194 Claudette C. Lewis, "Section 106 for Installation of Bollards Near Steeple Building," July 28, 1987, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

195 Robert L. Greer, "106 Review," July 27, 1988, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

196 National Park Service, "Section 106 Clearance for the Preservation Maintenance of the Steeple Building, Fort Christiansvaern, Guinea Warehouse and the Scale House," April 11, 1989, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

197 JoAnne Finotti, "Christiansted NHS - DI-1 HP-90-027," November 30, 1989, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

198 National Park Service, "Assessment of Actions Having an Effect on Cultural Resources, Reconstruct Fence," 1989, pp. 1-6, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

199 National Park Service, "Assessment of Actions Having an Effect on Cultural Resources, Repair Weathervane," 1989, pp. 11-13, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

200 Delta Roberts, "Order for Supplies or Services, Order No. PX5360-1-0306," September 30, 1991, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

201 National Park Service, "Progress Report for Steeple Building, Christiansted, June 22 thru July 17, 1992," July 31, 1992, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.



Steeple Building Fence showing Hurricane Hugo damage



Steeple Building Fence following repairs by Field Services Unit

FIGURE 2-49. Before and after photographs of damage and repair work on Steeple Building wall. Source: National Park Service, "Completion Report, Christiansted National Historic Site, Steeple Building Fence and Fort Christiansvaern Wingwall Repairs, 1992."

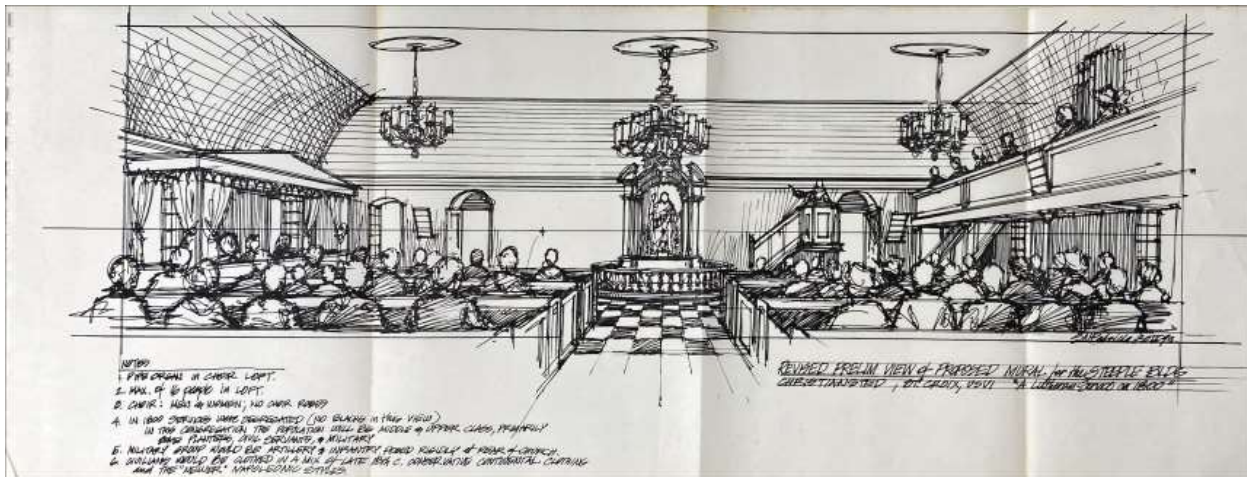


FIGURE 2-50. Preliminary draft mural by Steve Patricia. Source: Copied from Steven N. Patricia, "A Proposed Reconstructive Interior Illustration for the Steeple Building," 1993, p. 11.

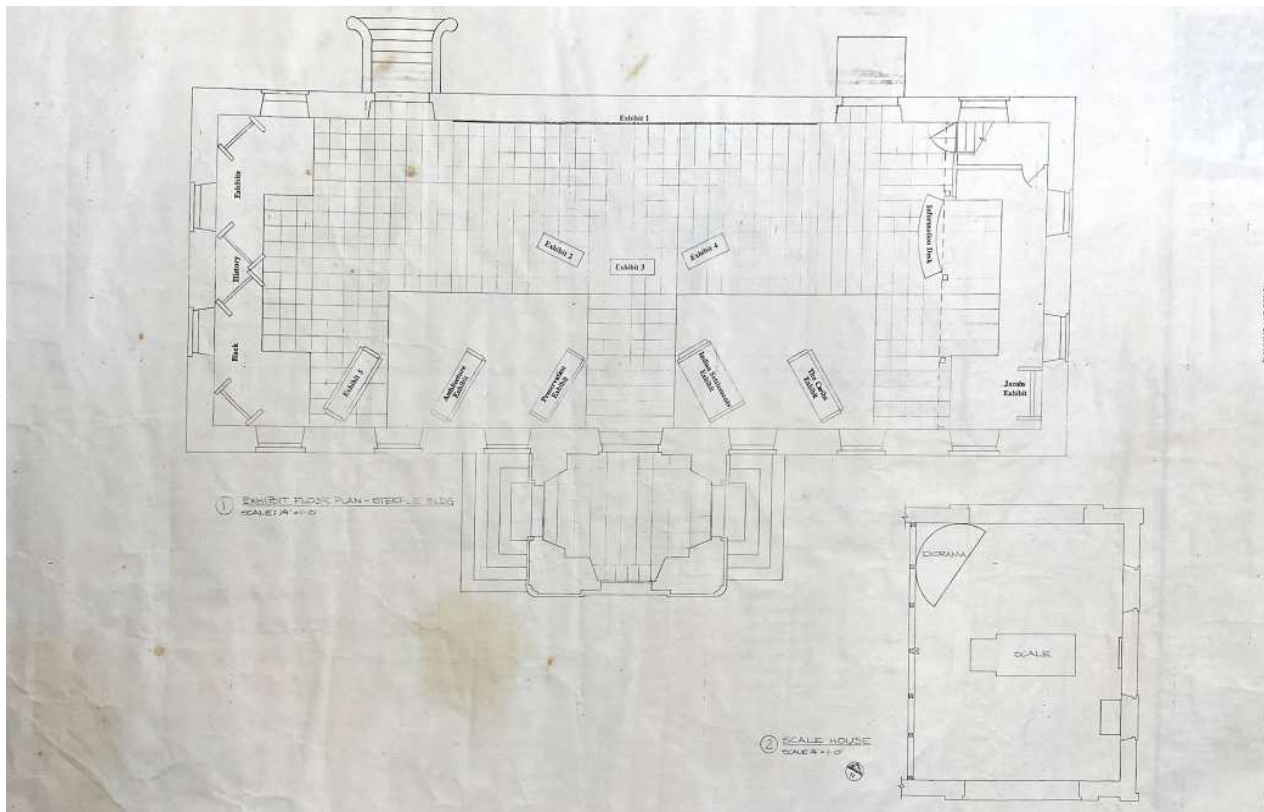


FIGURE 2-51. Floor plan of the proposed interpretative exhibits inside the Steeple Building. Note "Exhibit 1" along the south rear wall appears to consistent with the location of the mural. Drawing: Christiansted National Historic Site Archives, Drawing No. CHRI 399 113244.

with the scope of work including the following recommendations:

1. Dismantle historic brick at damaged areas and clean salvageable brick.
2. Excavate for new concrete footers where needed.
3. Pour new concrete footers.
4. Remove in-tact two columns at East wall, prepare base and reset.
5. Remove in-tact one column at North wall, prepare base and then reset. (Note: columns may be too deteriorated to save in-fact, in which case they would have to be disassembled and rebuilt, and costs adjusted accordingly.)
6. Completely rebuild one column at East Wall.
7. Completely rebuild one column at North Wall.
8. Repair in place one column at East Wall.
9. Relay and repoint brick at damaged areas along walls.

10. Repair and install wood fencing.²⁰²

Photographs were included at the end of the completion report and illustrate the extent of the damage to the retaining wall (Figure 2-49).

In the early 1990s, the NPS commissioned artist Steve Patricia to create a mural illustrating the interior of the Steeple Building as it would have looked during a Lutheran service circa 1800. To develop this mural, Patricia, in coordination with the NPS, compiled historic information available at the park archives, the Steeple Building, and the existing Lutheran Church on King Street to ensure historical accuracy. In 1993 and 1994, Patricia prepared a series of drafts for consultation with the NPS, outlining the details of the illustration and creating a mock-up of the mural (Figure 2-50).²⁰³ The mural depicted a large altar in the center of

²⁰² National Park Service, "Completion Report, Christiansted National Historic Site, Steeple Building Fence and Fort Christiansvaern Wingwall Repairs, 1992," 1992, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

²⁰³ Steven N. Patricia, "A Proposed Reconstructive Interior Illustration for the Steeple Building, Christiansted; St. Croix, U.S.V.I." October 1, 1993, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

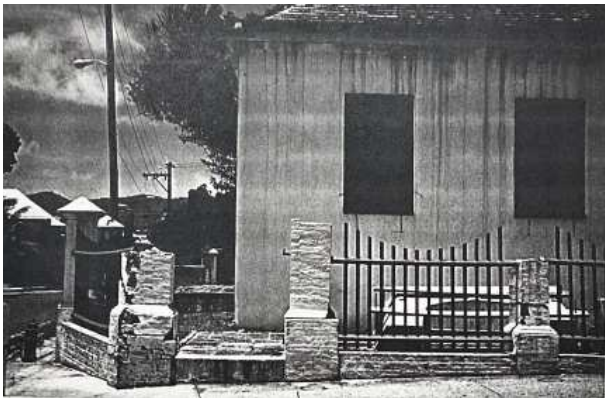


FIGURE 2–52. 1996 damage to Steeple Building arch along Company Street. Photo: Deborah Rehn, from “Arch and Fence Repair Plans & Specs – SOW.”

the south wall with a pulpit to its left where the pastor addressed the congregation. Rows of pews faced the alter with a balcony with organ on the west wall and a governor’s box on the east side. Three chandeliers hung from the ceiling. The mural was later completed and hung on the south wall of the Steeple Building interior, becoming a focal point when a visitor entered the building from the steeple. The mural appears to be part of an overall interpretative exhibit redesign in the 1990s. A drawing from May 1, 1995, shows a planned layout for the interpretive material within the building (Figure 2–51), and a large, linear area on the south wall identified as “Exhibit 1” appears to coincide with the location of the mural.²⁰⁴

On May 29, 1996, the Steeple Building was once again struck by a vehicle at the corner of Hospital Street and Company Street. A tractor trailer failed to make the turn, and the arch was once again hit and damaged.²⁰⁵ Shortly afterwards, on June 12, 1996, Park Superintendent Joel Tutein sent a thank you letter to a citizen for donating bricks to the Steeple Building that would be used in the “long-term preservation and care of the historic buildings and walkways.”²⁰⁶ It is unclear if the bricks were donated in response to the damage or if they were used to repair the arch, but the timing of the

damage and the letter suggest they could be related. NPS put together a scope of work for repairs to the arch on June 16, 1997, which included photographs of the damage (Figure 2–52).²⁰⁷

In September of 1995, Hurricane Luis passed through the Caribbean, affecting the U.S. Virgin Islands. Only a few days later, Hurricane Marilyn passed through causing further damage. Damage to the Steeple Building once again necessitated repairs to the weathervane, repairing damage to the roof and walls, rewashing and repainting the exterior of the building, repairing and reconstructing two masonry fence columns, and repairing damage to wooden components of the fence.²⁰⁸ It is unclear if and when this work was carried out as proposed.

An August 1, 1997, letter from NPS regarding cyclic maintenance repair and rehabilitation priorities for the following fiscal year included several proposed items listed for the Steeple Building. The priorities included termite treatment for both subterranean and drywood termites, new phone systems for the building, a new roof, a central HVAC system, and interior and exterior painting.²⁰⁹ The central HVAC system was never installed.

Hurricane Georges hit the U.S. Virgin Islands in September 1998, and the roof of the Steeple Building was damaged during the storm. Specifically, the “roof sustained damage to the ridge cap along the western side,” and “the shingles along the ridge cap will have to be replaced to prevent damage to the interior of the building.”²¹⁰ A May 1999 scope of work described the proposed work as follows: “Install wood shingle roof and associated copper flashing (does not include

204 Mike Strock and Betsy Ehrlick. “Proposed Interior Exhibit Design, Christiansted, St. Croix, Virgin Islands National Park” (Denver Service Center, Technical Information Center, Drawing No. CHRI 399 113244, 1995).

205 Joel Tutein, “Tractor-trailer Strikes Steeple Building,” June 26, 1996, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

206 Joel A. Tutein, “Donation of Yellow Danish Bricks,” June 12, 1996, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

207 Deborah Rehn, “Arch and Fence Repair Plans & Specs – SOW,” June 16, 1997, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

208 National Park Service, Acting Regional Director, Southeast Region, Memorandum to Superintendent, Virgin Islands National Park, “FY97 Preservation Program Related to Hurricane Marilyn Damage,” United States Department of the Interior, February 5, 1997.

209 Francis A. Peltier, Superintendent, Virgin Islands National Park Group, Memorandum to Stacey Hester, Gulf Coast Cluster Budget, “FY ‘98 Cyclic Maintenance Repair/Rehab Priorities, Equipment Replacement and Update 10-year Cyclic Inventory of Needs,” United States Department of the Interior, August 1, 1997.

210 National Park Service, “Hurricane Georges Damage Assessment, Christiansted National Historic Site and Buck Island Reef National Monument,” United States Department of the Interior, n.d., Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

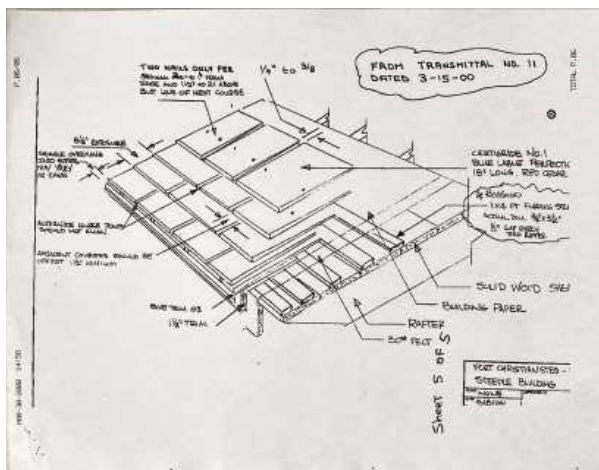


FIGURE 2-53. Diagram of composition of roof decking and shingle system on Steeple Building Drawing: Rooftops Silicone Distributors, Inc., March 29, 2000.

ESTIMATE BREAKDOWN 11-10-10		
I.	Lineweath Steeple Building:	
	Surface Area Summary:	
	-Main Building:	4769 SF
	-Tower:	1766 SF
	-Masonry Fence Piers (21x)	504 SF
	-Masonry Fence Base:	417 SF
	-Entrance Arches (2x)	256 SF
	-Tower Interior (1st Floor)	728 SF
	-Total:	8440 SF
		\$0.20 =
1.	Pressure wash:	8440 SF @ \$1.25 = \$1,688
2.	Lineweath (white):	8440 SF @ \$2.66 = 22,450
	*"Man Lifter" rental (for tower work):	1,800
	Plaster Touch-up due to the above work:	450 SF @ \$5.00 2,250
	TOTAL	\$12,588
2.	Paint Steeple Building Wood Doors, Shutters, French Windows and Wood Fence	
	*Price includes surface preparation, spot priming as needed and one full coat of paint as approved in previous Change Orders and Pre-construction Meeting	
1.	Solid Shutters (12 x 2 leafs)	24 units @ \$125 = \$3,000
	Solid Shutters Wood Frames	12 units @ \$125 = 1,500
	Lower Shutters (3 x 2 leafs)	6 units @ \$163 = 978
	Solid Shutters Wood Frames	3 units @ \$125 = 375
	French Windows (12 x 2 leafs)	24 units @ \$125 = 3,000
	Doors (5 x 2 leafs)	10 units @ \$125 = 1,250
	Door Frames	5 units @ \$125 = 625
5.	Fence Sections:	
	-Long Sections (5'-0" x 10'-0")	16 units @ \$163 = 2,608
	-Short Sections (5'-0" x 7'-0")	8 units @ \$125 = 1,000
	TOTAL	\$14,336
REMARKS:		
The above unit prices has been previously approved by the National Park Service per our Contract Bid Schedule and per Change Order 1a, Item 16.		

FIGURE 2-54. Estimated breakdown of Steeple Building work. Copied from Duran-Duran's Request for Purchase Order No. 3, November 10, 2000.

steeple tower roof), clean/caulk/paint steeple cupola woodwork.”²¹¹ On November 17, 1999, Hurricane Lenny hit the island, bringing with it sustained winds of 130 mph and causing extensive damage. For the Steeple Building, the total estimated damage caused by Hurricane Lenny was \$241,500 and included further damage to the roof, cupola, and weathervane; damage to the clock and clock faces; water damage to the museum exhibit cases; damage to interior and exterior painted

surfaces; and damage to painted surfaces of fence surrounding the property.²¹²

In 2000, while undertaking work to repair damaged shingles and ridge boards, contractors discovered that the cumulative effect of the past several storms had been quite severe, and the entire roof system and interior ceiling were in poor condition due to dry rot and needed to be replaced.²¹³ NPS submitted Section 106 documentation on July 6, 2000, assessing the potential effects of a complete roof replacement on the building, including the replacement of the appended tray ceiling beneath. Due to the lack of existing original historic fabric in these areas of the Steeple Building, a complete replacement was recommended rather than a repair, and the project was determined to not have an adverse effect on the building.²¹⁴ Keystone Restoration, Inc., who had been contracted to complete the preliminary roof repairs along with other work on the building, led the effort to replace the roof. Keystone Restoration, Inc., was working on several buildings within the park at this time. A separate company, Rooftops Silicone Distributors, Inc., was subcontracted to undertake the brunt of the roof replacement project (Figure 2-53).

Several change orders were issued for the existing contract with Keystone Restoration, Inc., during this project due to various unforeseen elements that arose during the planned restoration work. For example, custom pressure-treated underlayment boards had to be milled for the completion of this roof project, as the existing tongue-and-groove boards were dry rotted and in need of replacement.²¹⁵ A purchase order request from Keystone Restoration, Inc., dated November 10, 2000, detailed work to be completed at the Steeple Building and included the following: extensive masonry repairs, limewashing, and painting; pressure washing; construction of replacement shutters, window frames, door

212 National Park Service, Christiansted National Historic Site, "Hurricane Lenny Damage Assessment," US Department of the Interior. December 2, 1999.

213 Joel A. Tutein, Superintendent, "Section 106 Waiver Request," Christiansted: United States Department of the Interior, June 26, 1999.

214 William F. Cissel, "Assessment of Actions Having an Effect on Cultural Resources," United States Department of the Interior, July 5, 2000.

215 Bill Foust, "Fort Christiansted, Steeple Building St. Croix, U.S.V.I., Estimate of Cost to Replace 1 x 10 T & G Roof Sheathing," Rooftops Silicone Distributors, Inc., March 24, 2000.

211 National Park Service, "Contract Documents for the Preservation of Fort Christiansvaern and other Historic Structures, Christiansted National Historic Site, St. Croix, USVI," United States Department of the Interior, June 8, 1999.

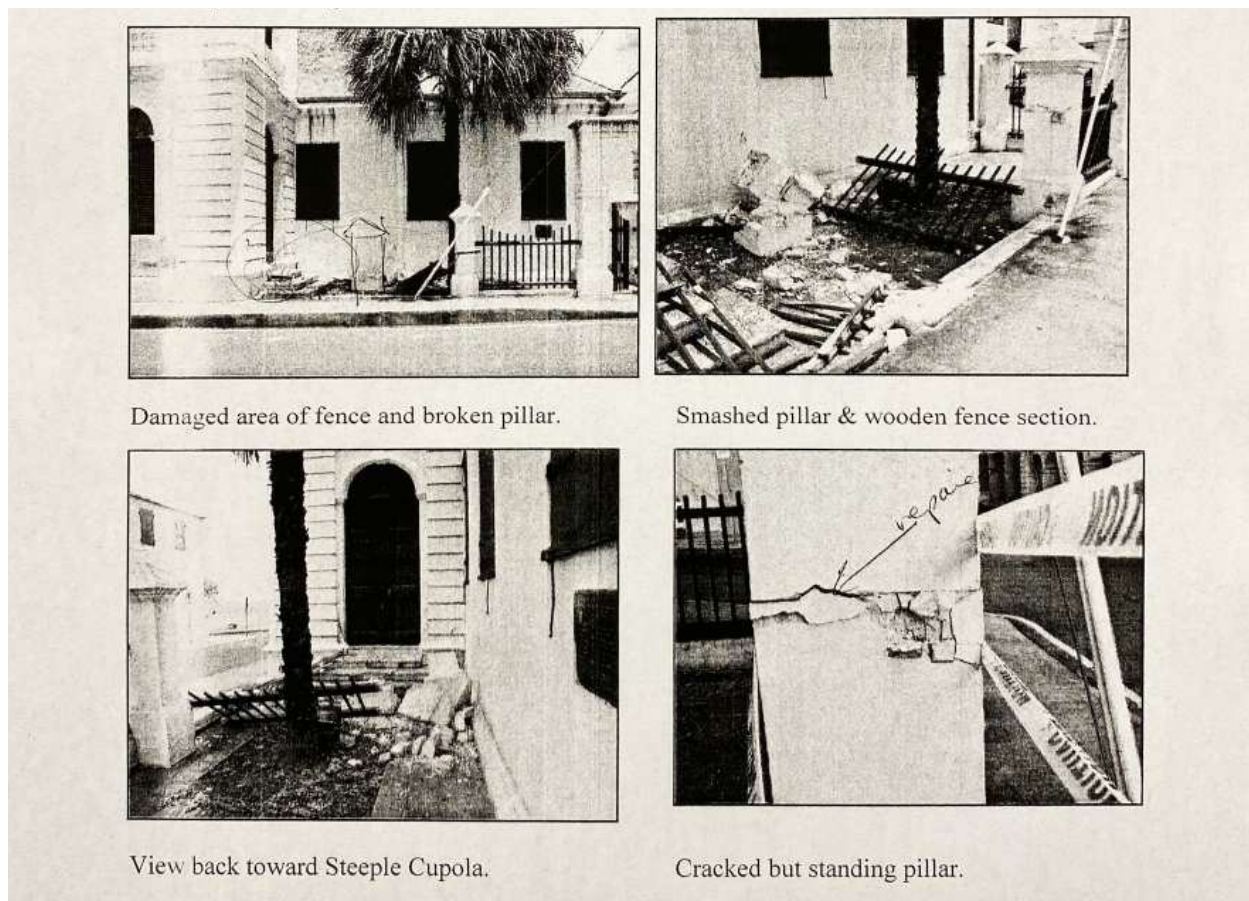


FIGURE 2-55. 2005 vehicular damage to Steeple Building fence. Photos: Joe Hollins, TipTop Construction, from a memorandum to Joel Tutein, Superintendent, May 20, 2005.

repair and/or replacement; painting of wooden building components; upgrades to the electrical system; gutter repair; and repair and replacement of wooden elements on the tower and cupola, including the shingles (Figure 2-54).²¹⁶

Keystone Restoration, Inc., continued their work into 2001, and on February 19, 2001, a cost estimate was prepared for the removal of a non-original wall dating to 1960 that was installed as a part of the interpretation efforts at that time.²¹⁷ The wall was a remnant of a room that had been removed in the 1980s and was obscuring the balcony stairs as well as a rear window. Drawings were included as a part of this proposed project, which would remove the wall and replace it with

a shorter wall beneath the stairs for an estimated cost of \$2,150. According to meeting minutes from March 2001 from Keystone Restoration, Inc., the new wall was “installed on March 15, 2001, and was primed and painted to match the Balcony Structure.”²¹⁸ Keystone Restoration, Inc., also produced a copy of the proposed exhibit floor plan for the interior of the building following the completion of restoration work.²¹⁹

On February 10, 2003, TipTop Construction put together a proposal for the installation of an HVAC system in the building; however, this project never

216 Manuel J. Duran-Duran, “Preservation of Fort Christiansvaern & Other Historic Structures - St. Croix, U.S. Virgin Islands, Request for Purchase Order (R.P.O.) No. 3,” Keystone Restoration, Inc., November 10, 2000.

217 Manuel J. Duran-Duran, “Preservation of Fort Christiansvaern & Other Historic Structures - St. Croix, U.S. Virgin Islands, Request for Purchase Order (R.P.O.) No. 10,” Keystone Restoration, Inc., February 19, 2001.

218 Keystone Restoration, Inc., “Preservation of Fort Christiansvaern and other Historic Structures, Minutes of March 2001,” Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

219 Keystone Restoration, Inc., “Preservation of Fort Christiansvaern and Other Historic Structures, Meeting Minutes of February 2001,” Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

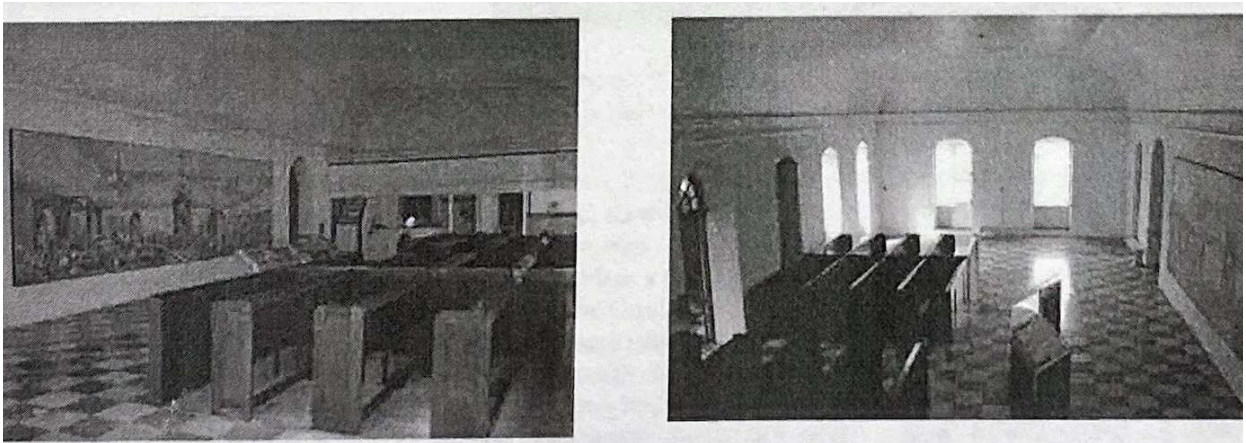


FIGURE 2-56. Interior views of the Steeple Building with the finished mural and replica pews installed. Photos: William Cissel, "Lutheran sites of worship at Christiansted before the construction of the 'Steeple Building,'" 2002, p. 3.

came to fruition.²²⁰ The building is still without a climate control system. In May of 2003, an internal NPS memo was circulated summarizing a recent meeting held on site at the Steeple Building to discuss an ongoing drywood termite infestation that was affecting several of the furnishings within the building, including the museum display cases.²²¹

Vehicular collisions continued to be an issue due to tight constraints on the streets and due to the Steeple Building's prominent location within the community. The southwest portion of the Steeple Building fence was struck by a car in 2004, per internal NPS correspondence.²²² While information on this incident is minimal, the documentation references previous files from similar incidents to develop drawings and a scope of work to complete the repairs. On May 20, 2005, the property was damaged again when a Jeep lost control on Hospital Street and crashed into the Guinea Company Warehouse before bouncing into the fence on the northwest side of the Steeple Building (Figure 2-55).²²³ TipTop Construction was

retained to complete the repairs in 2005, though available documentation indicates that a portion of the fence was repaired by a subcontractor.

Recreating the Interior Furnishings (2002–2010)

The NPS turned its attention to the interior of the Steeple Building in the early 2000s to further recreate the appearance of a Lutheran church circa 1800. In 2002, mahogany pews were constructed and installed that replicated the appearance and location of the pews that were likely inside the church when it was in use (Figure 2-56). Documentary descriptions of the pews, along with thorough inspections of the existing pews at the Lutheran church and Lord God Sabaoth on King Street were used to ensure these were accurate recreations. Two sets of four rows were constructed, with solid dividers running transverse through the center of each row. A paneled wood wall fronted each set of pews. The pews were constructed by Fine Woodworking Shop, Inc., of St. Thomas, as indicated on a set of shop drawings dated September 13, 2002.²²⁴ The pews were installed on sections of brick flooring on the northwest side of the building on either side of where visitors would enter from the steeple.

In 2007, plans were developed to reproduce and install replicas of the historic pulpit, altar, and governor's box within the Steeple Building. These

220 TipTop Construction, "HVAC Installation Steeple Bldg," Christiansted: TipTop Construction, February 10, 2003, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

221 Zandy Hillis-Starr, Memorandum to William Cissel and Steve Luppert, NPS, "Steeple Building dry wood termites and other needs," May 22, 2003, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

222 Zandy Hillis-Starr, email to Allen Bohner and Rene Cote, NPS, "CHRI-Damage to Steeple Building fence and columns," May 6, 2004, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

223 Joe Hollins, Memorandum to Joel Tutein, Superintendent, "CHRI Steeple Building Fence & Pillar Repair," TipTop Construction, May 20, 2005.

224 Fine Woodworking Shop, Inc., "Shop Drawings for Pews/Bench at Steeple Building, St. Croix," September 13, 2002, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.



FIGURE 2-57. Photograph of the finished and installed Governor's Box in 2010. Photo: National Park Service, Christiansted National Historic Site Archives.

furnishings would be placed in the building to further recreate what the historic appearance might have been circa 1800 when it was a Lutheran church. The design, materials, and placement of the replica furnishings were based on the existing furnishings in the Lutheran church on King Street as well as documentary research into the Church of the Lord Sabaoth and other Lutheran churches.²²⁵ In 2010, construction of the governor's box and additional pews was underway. The plans as laid out in the initial drawings in 2007 were implemented with some modifications. The governor's box was initially proposed to be located on the east end of the building, but in 2010 it was installed within the existing pews on the west side of the building. Four pews were removed from this section to fit the governor's box and were relocated to the east side of the building, which allowed for more seating and the best use of materials.²²⁶ Records regarding a reproduction altar were not uncovered during research for this report. There was some discussion about researching the original baptismal font that would have been in the church, but no further study or planning for that reproduction was uncovered in the research.

225 National Park Service, Memorandum regarding "Site Visit with Contractors to The Lutheran Church, Lord God of Our Sabaoth, 51 King Street and NPS Steeple Building Information Exchange and Clarification for Reproduction Exhibits, Pulpit & Governor General's Box," August 13, 2009.

226 Zandy Starr, Memorandum to George Munzar Sr., Fine Woodworking Shop, Alternate Governor Box/Pew configuration to complete project," July 20, 2010, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.



FIGURE 2-58. Photograph of the Dunigan Designs team on the replica pulpit after installation in the Steeple Building on July 30, 2010. Photo: National Park Service, Christiansted National Historic Site Archives.



FIGURE 2-59. Mural of Steeple Building interior by Steve Patricia after it was reduced in size for installation of the pulpit. The pulpit stairs are visible at right, and museum exhibits are visible at left. Photograph by the author.

The governor's box is over 12 feet long and 14 feet high, constructed of solid mahogany by Fine Woodworking Shop, Inc., under the leadership of George Munzar, Sr., who also reproduced the pews in 2002. The finished box was installed in April

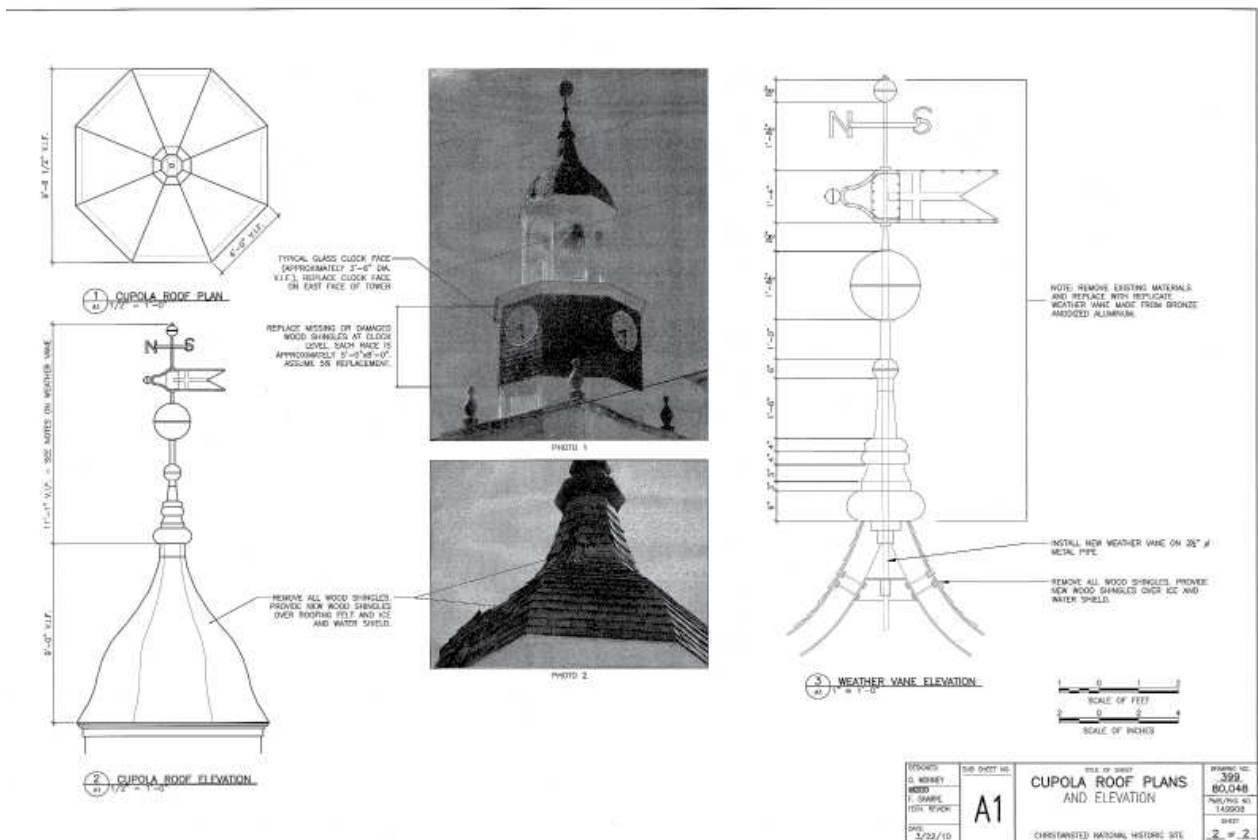


FIGURE 2-60. Plan for cupola and weathervane repair after damage caused by Hurricane Omar in 2008. Drawing: Denver Service Center, Technical Information Center, Drawing No. CHRI 399 80048.

2010 (Figure 2-57).²²⁷ Four new mahogany pews were constructed to fill in the rows next to the governor's box and on the east end of the building, along with a privacy panel. Five mahogany caned chairs were constructed and installed in the governor's box. Brick flooring was added where the pews would sit on the east end of the building, and the brick flooring under the existing pews was cleaned.

Construction of the reproduction pulpit followed shortly after the governor's box. The pulpit was reproduced by Dunigan Designs using local mahogany, with the exception of elements of the stairs, which were pine. Its design and choice of material were based on the original pulpit still in existence at the Lutheran Church on King Street. The pulpit was installed on the rear (south) wall of the church near the western door to the rear yard

on July 30, 2010 (Figure 2-58).²²⁸ This placement would not allow the mural that hung on the south wall to remain due to its large size. To fit the pulpit, the NPS modified the mural by cutting off the non-essential portions on the sides and maintained the central image of the altar (see Figure 2-59).

Continued Repair and Maintenance (2009–2016)

Repair and maintenance of the Steeple Building continued into the second decade of the 2000s. Much of it was routine painting and limewashing, but there were several instances where more substantial repair or restoration was required.

Hurricane Omar hit St. Croix in October 2008. While the Steeple Building was spared major structural damage, the shingle roof, clock face, and weathervane on the steeple were damaged. Around 2009 or 2010, the roof of the cupola was reshingled

²²⁷ Zandy Hillis-Starr, email to Anita Davis, National Park Service, "RE: Final Actions for Novation Agreement and Contract Modification Dunigan Designs 1 of 2," April 8, 2010, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

²²⁸ Dunigan Designs, "Project Status Report (Summary) for Pulpit Project," July 30, 2010, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.



FIGURE 2-61. Newspaper photograph of the Steeple Building under a fumigation tent during treatment for termites in 2010. Photo: Cristian Simescu, "Under the big top," *The Virgin Islands Daily News*, No. 21828, August 3, 2010.

over an ice and water shield base, damaged or missing shingles on the drum portion of the cupola were replaced, the east-facing clock face was replaced, and the weathervane was replaced. According to the construction drawings developed in 2010, the weathervane was replaced with a replica made of bronze anodized aluminum (Figure 2-60).²²⁹ During repair efforts, extensive cracking at the structural bond beam of the steeple tower's second tier was noted, and a structural assessment was needed to determine the condition. Project planning documents from 2014 mention that these assessments were conducted, but research for this report did not uncover detailed results of those assessments.²³⁰

As had been the case since its inception, the Steeple Building, along with the other historic buildings within the park, continued to be vulnerable to recurring termite infestations. In February 2010, an assessment was conducted to determine the appropriate treatment required to address an ongoing termite infestation at the Steeple Building. It was documented during this time that in the 1980s, drywood termites were found in museum exhibits, and they may have spread from there to the rest of the building. The report noted that vulnerable places for infestation are several broken windows, glazing on the ground floor, and the wooden shutters in the cupola. The western rear door into the yard was noted as being badly

damaged with severe rot due to water, causing conditions that attracted termites. On the interior, subterranean termites were found in door frames and panels, the choir balcony, and throughout the steeple tower. Based on this evidence of active infestation and subterranean termites, the best course of treatment was full fumigation of the building. The following August, the Steeple Building was covered in a large canvas tent and fumigated for drywood termites (Figure 2-61). In September, the subterranean termite treatment was conducted, which required minor trenching around the rear and sides of the building as well as reopening six existing holes in the floor tiles at the rear doors.²³¹ The final step was spraying the trees in the yard with termite treatment. Based on email correspondence from Zandy Hillis-Starr, park Chief of Resource Management, to Laurie Chestnut of the NPS Regional Office in Atlanta on October 7, 2010, the treatment was completed successfully in late September 2010.

By 2012, it was evident that the Steeple Building would require another substantial repair and restoration effort. Many of the exterior shutters were permanently closed due to rot or missing hardware, interior glazed windows featured missing or broken glass, extensive cracking around the structure bond beam in the tower's second tier (the area previously assessed after Hurricane Omar) was causing structural issues, and a crack on the south (rear) wall of the building had formed due to a sinking foundation. To address these issues, the NPS employed historic architects from the firm Lord Aeck and Sargent to conduct a preliminary conditions assessment and provide a list of priorities for repair or restoration. Based on their assessment, in 2014 the NPS planned a project to include the following elements:

- Repair structural damage to tower masonry at the mid-elevation.
- Repair structural damage on south elevation of building.
- Recontour and correct foundation erosion near the entrances.
- Reshingle the roof.

229 G. Mohney, and F. Sharpe, "Cupola Roof Plans and Elevation" (Denver Service Center, Technical Information Center, Drawing No. 399 80048, March 22, 2010).

230 National Park Service, "Project Identification - PMIS 165770, Repair, Stabilize, and Restore CHRI Historic Steeple Building," January 22, 2014.

231 Zandy Hillis-Starr, email to Joel Tutein, Superintendent, "CHRI Termite Treatment final actions for Steeple and Trees," September 03, 2010, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

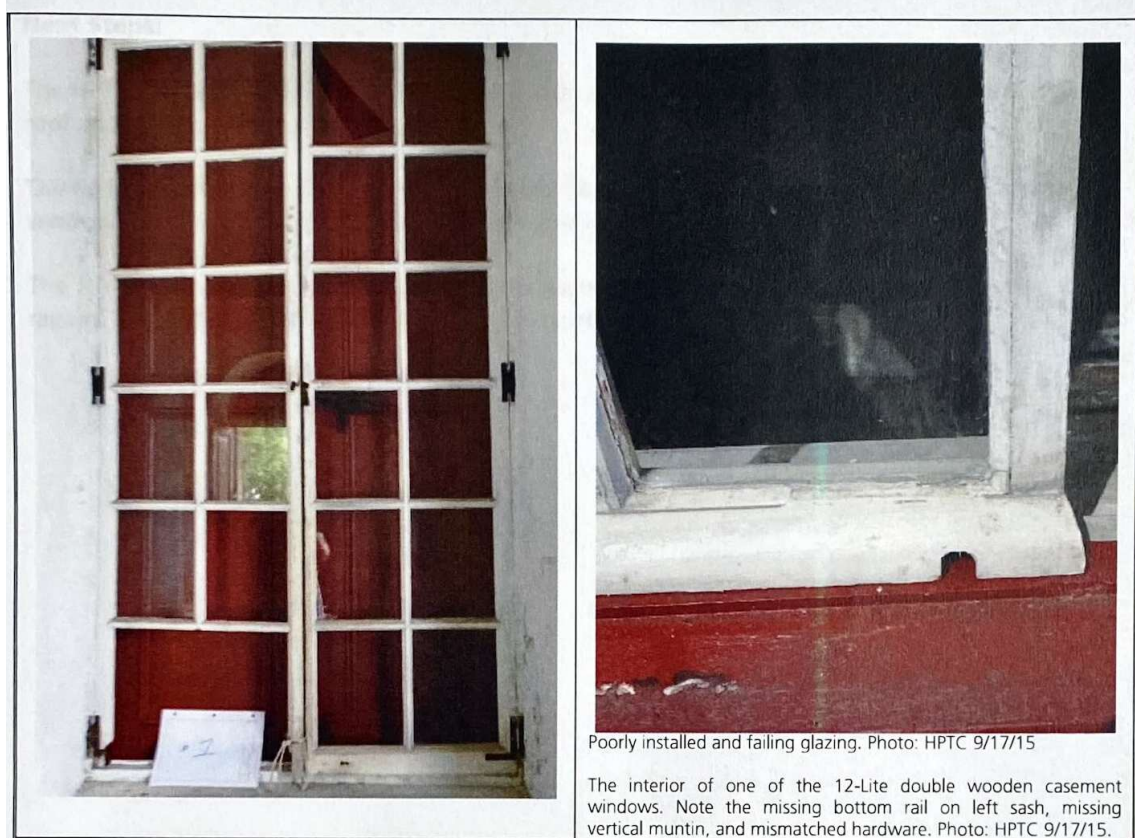


FIGURE 2-62. Examples of damaged windows identified by the HPTC during their site visit in September 2015. Photos: HPTC, Site Visit Trip Report, 2015, p. 19.

- Repair and replaster spalling and cracking exterior masonry.
- Replace mahogany shutters.
- Repair window frames and sills; replace missing or damaged hardware.
- Repair, reglaze, and rehang interior glazed windows.
- Replace one pair of mahogany doors on the north entrance.
- Repair and replace fence gate.
- Replace electrical fixtures to meet code.
- Repaint entire exterior after repairs are complete.²³²

Planning for this restoration and repair project continued into 2015. Notes and documentation from this planning process indicate that the cupola roof was reshingled in 2012; however, no other substantial repair work had been

undertaken in the meantime. Staff from the NPS Historic Preservation Training Center conducted a site visit in 2015 to further investigate the condition of the building and the work that would be required. Areas of critical concern were identified that represented major deficiencies to the exterior envelope of the building. These included installing a new cedar shingle roof, which showed signs of moisture problems and of improper roof decking and flashing installed under the existing shingles; re-grading of the site, which did not properly drain away building foundation; patching of exterior stucco that cracked due to settling of the building; and fabricating and installing new casement sash on the majority of the windows (Figure 2-62).²³³

While the planning process for the restoration and repair of the Steeple Building was ongoing, restoration of the 1923 E Howard & Co. clock in the tower was undertaken. In 2015, the clock was removed from the tower and sent to a historic

²³² National Park Service, "Project Identification - PMIS 165770."

²³³ National Park Service, Historic Preservation Training Center, "Site Visit Trip Report - Various Projects Scoping - SARI and CHRI," November 10, 2015, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.



FIGURE 2-63. Photographs taken in 2017 by the National Park Service staff showing the location of a newly identified leak in the cupola. Source: National Park Service, Christiansted National Archives.

clock restorer, Rick Robinson of Passing Time in Hampton, Virginia, for a full restoration to working order. In August of 2016, the fully restored clock was reinstalled in the tower with new clock faces and dials. An article in the *Virgin Islands Daily News* dated August 3, 2016, reported that the clock's mechanisms were tested the day before.²³⁴ Unfortunately, the clock was never made fully functional again because the project was put on hold due to the Steeple Building's instability, which was slated for larger repair and restoration work.

On November 1, 2016, the NPS announced the closure of the Steeple Building for repairs to and rehabilitation of the exterior stucco, windows, doors, shutters, roof, and electrical system. The initial announcement stated that the building would be reopened to the public on March 1, 2017; however, the building remained closed beyond that date.²³⁵ On March 30, 2017, the NPS released an announcement that the closure would be ongoing until repairs were completed.²³⁶

Because of the substantial amount of work needed for a proper restoration of the building, critical repair items were triaged and a list was formulated of priority items to be completed first. These included drainage mitigation efforts in the rear yard, repairing a leak in the cupola roof and replacing the flashing and gutters, bringing the electrical system up to code, and structural repair to stop water infiltration that was occurring

through the north wall of the building above the governor's box and pews. Other repairs, including structural repairs to the tower, were a second priority and pending additional funding.

The CMGC Building Corp. was contracted to complete the work on the building, which began in November 2016 and included removal of mahogany trees in the yard to mitigate the root system from undermining the foundation. In addition, the tower was repainted, shims were added to the interior of the cupola structure, galvanized steel straps were installed to hold the cupola's wood structure together, gutters were replaced, safety railings were installed within the tower, and the conditions of the wood and masonry components of the tower were further assessed.²³⁷

A Historic Resource Is Shuttered (2017–2022)

As work to repair and restore the Steeple Building occurred, additional structural issues were identified. For example, in 2015, when the clock dials were removed from the tower, previously unknown flexing (i.e., movement) of the dial openings was noticed.²³⁸ In January 2017, a

234 O'Connor, "Clock Returns to Christiansted."

235 National Park Service, "Christiansted National Historic Site News Release, National Park Service - The Steeple Building," November 1, 2016.

236 National Park Service, "Christiansted National Historic Site News Release, Steeple Building Repairs and Restoration Project - Ongoing," March 30, 2017.

237 Zandy Hillis-Starr, letter to Sean Krigger, Acting Director/Deputy, Virgin Islands State Historic Preservation Office, "NPS Christiansted NHS, Repair/ Rehabilitation Steeple Building PMIS 165770," March 7, 2017, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

238 Jim Bailey, NPS Historic Preservation Training Center, email to Zandy Hillis-Starr, "Steeple Building Clock Tower Walls," November 2, 2015, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

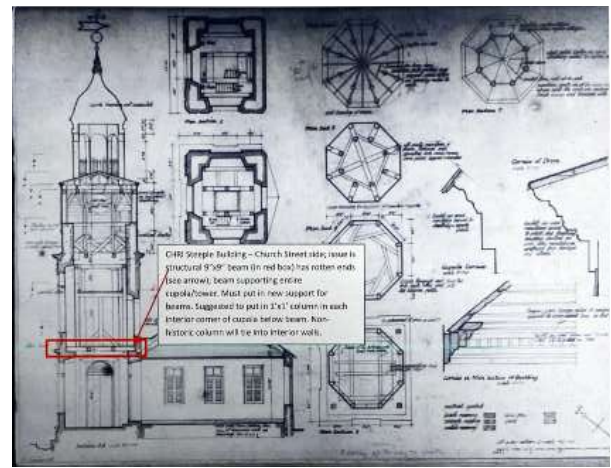
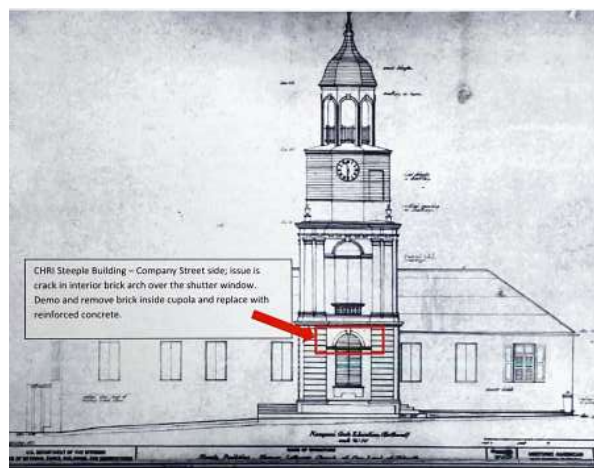


FIGURE 2-64. Front and east side elevations with notes identifying the location of the rotten structural beam. Notes added to copies of HABS plan drawings in 2017 by CMGC Building Corp. Drawings: National Park Service, Christiansted National Historic Site Archives.

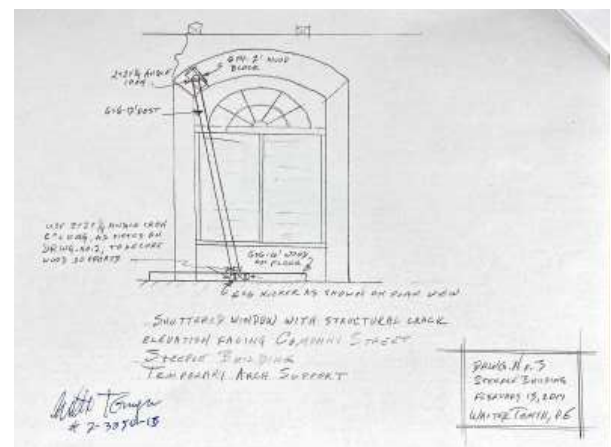
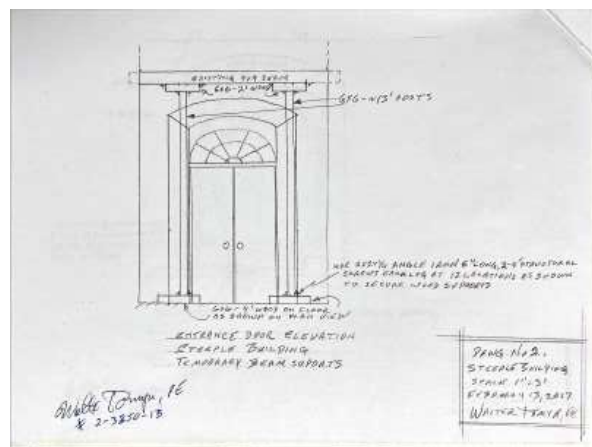


FIGURE 2-65. Drawings of the temporary support beams to be installed at the entrance door and window inside the steeple tower, as proposed by Walter Tomin, PE, on February 13, 2017. Drawings: Walter Tomin, PE, "Temporary Beam and Arch Supports," 2017, Drawings 2 and 3.



FIGURE 2-66. Photographs of temporary support beams installed at the western entrance door and north window in the steeple tower taken February 2022. Photograph by the author.

significant leak was discovered in the steeple tower below the octagonal drum (Figure 2–63).²³⁹ This leak allowed water to infiltrate into the woodwork and masonry of the tower and the main body of the building.

A structural engineer, Walter Tomyn, PE, conducted a preliminary inspection of the condition and formulated treatment recommendations. The most urgent issue identified was a 9-inch-by-9-inch load bearing beam, running parallel to Church Street, which sits under and supports the octagonal drum (see Figure 2–64). The beam suffers from substantial rot with less than one-third of the beam left in its brick socket on one end. The other end of the beam rests over a brick arch above the window on Company Street, which itself was unstable due to a large crack in the arch. These initial investigations determined that an acute structural issue was occurring within the building and the tower was vulnerable to collapse in the right circumstance (such as a hurricane, vibration, or earthquake).²⁴⁰ In light of the newly identified structural issues with the tower, construction work at the Steeple Building was halted and the priority shifted focus to the stabilization of the tower.

In 2017, CMGC Building Corp. and Walter Tomyn planned and installed temporary beam and arch supports on the first floor of the tower (Figure 2–65 and Figure 2–66).²⁴¹ The supports included wood posts at the interior corners of the tower supporting each structural beam; another was angled under the window facing Company Street to support the cracked arch. As of the time this report is being drafted, these wood supports remain in place as they were installed.

In 2017, major Hurricanes Irma and Maria caused substantial damage to St. Croix. During an interview with the authors on January 28, 2022, park maintenance manager James Riddick reported



FIGURE 2–67. Photograph of the rear yard wall with repairs completed, as evident by the new bricks and stucco finish on portions of the wall at left and more weathered portions of the wall at right, taken February 2022. Photograph by the author.

that the hurricanes caused broken windows and shutters, damage to the exterior stucco on the ground floor, damage to the cedar shingle roof and cupola, and damage to the fence and wall around the yard. The palm trees and light posts in the front of the building were also damaged and subsequently removed. Funding was made available for the NPS to repair the hurricane damage. In the subsequent years, the fence and wall around the yard were repaired (Figure 2–67) and the exterior of the main body of the building was stuccoed and limewashed. During a site visit with the author on February 16, 2022, Riddick reported that a temporary ridgecap was placed on the roof and some shingles were replaced as needed; however, no permanent repairs to the roof have been made. Riddick reported that projects to replace the shutters and repair the windows damaged in the hurricanes are upcoming. During the same site visit, Chief of Resources Evan Gwilliam reported to the authors that a new fire and security system was installed in the Steeple Building around 2017, and the park is planning for a project to repair or replace damaged hardware for the windows.

Since the installation of the temporary structural supports and the halting of all other repair and restoration, repair and maintenance has only been conducted on an as-needed basis. In 2018, NPS attempted to commence a full stabilization and restoration project, as evidenced by NPS internal

²³⁹ Zandy Hillis-Starr, email to Dennis McCarthy, NPS, “Unforeseen condition at CHRI 165770 - RO7 & images uploaded to NPS focus,” January 19, 2017, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

²⁴⁰ Zandy Hillis-Starr, email to Ali Miri and Meredith Hardy, NPS, regarding “Structural Repair for CHRI Steeple Building, PMIS 165770, to correct new findings by contractor,” February 22, 2017, Christiansted National Historic Site Archives, St. Croix, U.S. Virgin Islands.

²⁴¹ Hillis-Starr, letter to Sean Krigger, Virgin Islands State Historic Preservation Office.

project information documents.²⁴² These efforts were unsuccessful due to other pressing needs throughout the park including repair to damages caused by Hurricanes Irma and Maria, as reported by Riddick during the 2022 site visit with the authors. As of the writing of this report, the Steeple Building remains closed to the public.

242 National Park Service, "Basic Information Form, CHRI Historic Steeple Building - Stabilization and Repair Cupola & Masonry Walls," April 25, 2018.

Physical Description and Condition Assessment

Introduction

On December 13–15, 2021, a site visit was conducted at the Steeple Building in Christiansted, St. Croix, U.S. Virgin Islands (Figures 3-1 and 3-2). As a part of this visit, an assessment survey of the building was conducted that looked at current architectural and structural existing conditions. The survey focused on surface-level detail only; no probes or other means of destructive testing were conducted. As such, conditions within the walls, floors, or roofs were not observed or tested. All observations were made from either the ground or on ladders provided by National Park Service (NPS). Six months prior to the site visit, staff from the NPS Historic Preservation Treatment

Center (HPTC) performed minor crack repairs and painted over the plaster on the exterior of the building. All observations and photos recorded are from the December site visit.

Overall, the Steeple Building is in fair condition. The building is intact, and there did not appear to be any issues preventing temporary occupation. However, several issues were observed that will require repair and/or treatment. The architectural section of the existing conditions assessment is broken up into two parts: exterior and interior.

The exterior portion begins with the main block and describes the northwest (in two parts as split by the steeple tower), northeast, southeast, and southwest elevations. Then, the condition of the



FIGURE 3-1. Steeple Building from Kirke Gade

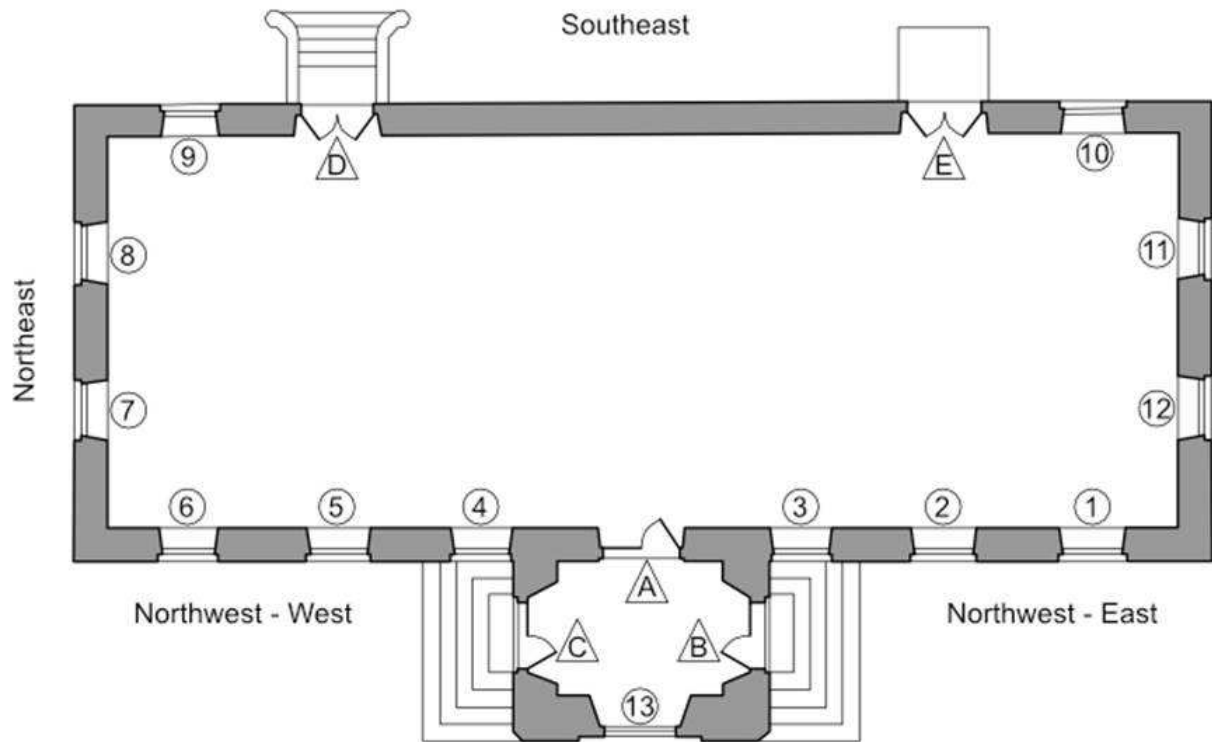


FIGURE 3–2. Key Plan.

steeple tower is described by elevation as observed from the ground, moving up from the ground floor to the cupola. Finally, the condition of the roof is addressed.

The interior portion also begins with the main block, and the narrative proceeds in the same direction as that of the exterior: northwest, northeast, southeast, and southwest. The conditions of the ceiling, floor, and mezzanine are described. The interior of the steeple tower is then described, moving again from the ground level up to the cupola.

Site

The existing site of the Steeple Building includes the building and adjacent yard. The site is relatively flat and situated in a dense urban setting. The building is oriented on a northwest/southeast axis with two main entrances—one facing northeast and the other facing southwest—in the steeple tower of the building.

The yard is immediately southeast of the building. A fence of wood pickets and intermittently placed

masonry posts with pyramidal finials runs along the northwest, northeast, and southwest edges of the site. A brick wall separates the southeast edge of the site and an adjacent site. The same brick posts that support the fence are placed regularly along the brick wall to continue the rhythm of the fence. Arched brick gates interrupt the fence line at the northeast and southwest corners of the lot. Each gate is fitted with a cornice, keystone, impost block, and base.

The section of the fence along Hospital Street rests on a brick retaining wall. The brick wall contains a series of drainage pipes that daylight out to the street. These pipes appear to be broken and not functional.

In the yard, a curved, concrete path leads from a secondary entrance on the southeast elevation of the building to a wood picket door in the fence. A mature tree shades the southwest end of the yard. The grassy condition of the yard continues around the building to front its northeast elevation and the northeast end of its northwest elevation, at which point stone pavers lead from the sidewalk through the northwest gate to the northwest door. The grass terminates at the steeple tower, which directly

abuts the sidewalk to the northwest.

Northeast of the steeple tower, stone pavers cover the ground, fronting the southwestern end of the northwest elevation of the building. An opening in the field of pavers is lined with brick soldier courses and frames a palm tree. A public sidewalk abuts the building on its southwest elevation.

Exterior Description and Condition Assessment

Exterior Description

The Steeple Building consists of two primary structures: a single-story, rectangular main block (with an interior mezzanine) and a four-tiered steeple tower built approximately in the center of the main block's northwest elevation. The main block is approximately 77'-4" x 31'-2" with a median ground-to-roof height of 30'-0". All walls are masonry construction with a whitewashed finish and have a decorative molding around the base and a cornice on the top. The building is sheltered by a hipped roof covered with wood shingles and, according to older drawings, rests on a foundation of alternating layers of limestone and mortar with boulders. Each elevation of the main block is fenestrated with wood in-swing casement windows with shutters on iron strap hinges. Two door openings on the northwest elevation feature double-leaf doors capped by fanlights. On the exterior, the doors do not have any hardware.

The steeple tower is roughly 17'-6" x 12'-5" and stands approximately 76'-9" tall. It adjoins the main block to the southwest. The steeple tower is a brick masonry structure with rectangular massing on the first two tiers, an octagonal drum on the third tier, and a cupola on the fourth tier. The first floor of the steeple tower has decorative quoins around the corners. The second floor has sets of pilasters around each corner. Decorative cornices cap each of the first three tiers. The first tier features a door opening on the southeast and northeast elevations. Each opening has a double-leaf paneled door capped by a fanlight. The doors are accessed by limestone four-riser steps that taper as they ascend to the door. The arched window forms an opening in the northwest elevation of the first tier. Flanking the window and door openings is quoining that terminates at rounded

corners. The second tier includes a window on the southwest and northwest elevations and a blind arch on the northeast elevation. Window openings on the first two tiers are filled with wood louvered shutters and a fanlight. The second tier has a higher level of ornamentation, with the window openings and blind arch fitted with classical curved window moldings and keystones and flanked by paired Doric pilasters. The third tier demonstrates a change in materials and shape.

The octagonal drum is covered in white wood paneling at the bottom and dark wood shingles surround the top. Clock faces are affixed to all four elevations. Finally, the wooden cupola sits atop the steeple tower with a tapered dome roof and cast iron weathervane.

Exterior Condition Assessment

Foundation

The foundations were unable to be seen during this conditions assessment. Based on the previous HABS documentation, the exterior walls extend a few feet below the surface and rest on a foundation of alternating layers of limestone and mortar with boulders.

Main Block – Northwest Elevation – East Half

The eastern half of the northwest façade (facing Company Street) is in an overall good/fair condition. The wall appears to be intact, but instances of damage and deterioration are present. The different types of issues can be broadly grouped into two categories: bulging and staining.

Bulging

Water damage is one of the most prevalent issues noted on site. As the building is coated in plaster on the interior and exterior, bulging was to be expected and was indeed observed. The most severe case of bulging on this elevation is on the right side, between Window 1 and the rain leader (Figure 3–3). This can best be seen by examining the change in plane of the wall at the edge of Window 1.

Staining

By and large, staining was not a regularly observed condition on the building's exterior. This could potentially be contributed to the painting and



FIGURE 3-3. Bulging on northeast wall.



FIGURE 3-4. Staining on northwest wall.

repair work that HPTC performed prior to the site visit. Most of the staining present on this elevation is found near the cornice, where it appears that blockages in the gutter system cause water to overflow onto the wall below (Figure 3-4). This is along the cornice but primarily on the leftmost edge above Window 3.

Other Observations

Plaster damage is present under Window 1 surrounding an NPS plaque (Figure 3-5). In this location, paint is peeling and pieces of plaster are separating and falling off the wall. The plaque is made from bronze and exhibits a typical copper patina. Otherwise, it appears in good condition.

Biological growth is present in many locations around the building, but one of the most serious examples can be seen at the lower edge of the rain leader where the pipe turns. In this location a plant several feet in length is growing directly out of the pipe (Figure 3-6).

Main Block – Northwest Elevation – West

The western half of the northwest façade (facing Company Street) is in fair condition. The wall is intact, but several instances of damage and



FIGURE 3-5. Plaster damage.



FIGURE 3-6. Plant growing from rain leader.

deterioration are present. The different types of damage/deterioration can be broadly grouped into four categories: penetrations, cracks, bulging, and staining.

Penetrations

Based on observations while on site, it appears that the rain leader and fasteners on this façade were either replaced or moved from the original installation locations. There are four locations adjacent to the leader where open holes are present. First, approximately 1'-0" above the ground on the right side of the leader there is an open 1/4"-diameter hole in the wall (figure 3-7).

Second, approximately 4'-7" on the right side of



FIGURE 3-7. Wall penetration.



FIGURE 3-8. Wall penetration.



FIGURE 3-9. Wall penetration.

the leader there is an open 1/4"-diameter hole. There also appears to be a patched hole located at the same height on the left side of the leader (Figure 3-8).

Third, a set of 1/4"-diameter open holes is located on either side of the leader approximately 8'-8"



FIGURE 3-10. Wall penetration.
above ground (Figure 3-9).

Fourth, a larger 1/2"-3/4"-diameter hole is located on the left side of the leader. The exact height of the hole was unable to be measured but appeared 12'-0"-13'-0" above the ground (Figure 3-10).

It is most likely that these are locations of previously installed fasteners that were either never patched or whose patching has failed over time.

Cracks

There are several cracks in the exterior plaster. For the most part, these cracks appear relatively small in width (approximately 1/8"-1/16") and are only present on the surface layer (i.e., not through-wall cracking). These cracks most often appear adjacent to sections of the wall that either exhibit bulging in the plaster or are near recent repairs.

The first series of cracks is located under Window 6 at the lower left edge of the wall (Figure 3-11 and Figure 3-12). These five cracks are adjacent to a previous patching job. The cracks are approximately 1/16" wide and range from about 9" to 1'-2" in length. It is likely that these cracks are connected as a part of a larger system.



FIGURE 3-11. Cracks under window 6.



FIGURE 3-12. Cracks around Window 6.



FIGURE 3-13. Bulging in plaster left of Window 6.



FIGURE 3-14. Cracking between Windows 5 and 6.

However, since the site visit used only surface-level observations, the full extent was unable to be determined due to a previous patch.

The second series of cracks is located slightly higher up the wall in a small location. They are directly below and to the left of Window 6 (figure 3-13). These cracks also appear approximately 1/16" wide and range from about 1'-0" to 3'-0" in



FIGURE 3-15. Cracking under Window 4.



FIGURE 3-16. Bulging in plaster under Window 5.

length.

The third series of cracks is located at the top edge, running between Windows 5-6 (Figure 3-14). At the surface, these cracks also appear approximately 1/16" wide. However, a similar set of cracks is in the same location on the interior. This likely indicates through-wall cracking caused by settlement issues, as will be discussed in the structural section.

The fourth series of cracks is located underneath Window 4 (Figure 3-15). Like the other cracks on this elevation, they appear approximately 1/16" wide and range from about 1'-0" to 3'-0" in length.

Bulging

On this elevation bulging was seen in two primary



FIGURE 3-17. Staining between Windows 4 and 5.



FIGURE 3-18. Remnant of former knee wall.



FIGURE 3-19. Grooves cut by shutter hooks.

locations, first to the left of Window 6 (Figure 3-13). Bulging was also present under Window 5 (Figure 3-16).

Staining

Only one instance of staining was present on this elevation, located between Windows 4 and 5 (Figure 3-17). The stain appears as a straight line running down from the cornice.



FIGURE 3-20. Crack on northeast façade.

Most likely, this stain was caused by a blockage in the gutter system above the wall. Water is likely pooling in this location and running down the wall.

Other Observations

As previously mentioned, repairs were made to the exterior of the building by HPTC before the site visit was conducted. These repairs consisted primarily of crack repair, reapplying plaster, and repainting. However, many iterations of previous repair efforts have also occurred and can still be observed. On the lower right corner of the elevation, there is evidence of the removal of a potential knee wall that sat adjacent to the steps leading up to the Door C (Figure 3-18).

The swinging shutter hooks under both Windows 5 and 6 on this elevation have cut grooves into the plaster (Figure 3-19). Window 4 does not have shutter hooks and, therefore, does not cut grooves into the plaster.

Main Block – Northeast Elevation

Overall, the northeast façade (facing Hospital Street) seems to be in good condition. The most prominent issue found was a large crack on the bottom left section of the wall, roughly 1'-11" from the edge and 4'-7" above the ground (Figure 3-20). This crack measures approximately 1/8" wide and 4'-0" long.

The night before the site visit on December 13, 2021, a heavy rain came down on Christiansted. The morning after, when visiting this location, evidence of water was seen coming out of this crack. The surrounding wall had mostly dried from the rain; however, underneath this crack a



FIGURE 3-21. Small crack near Window 8.



FIGURE 3-22. Grooves cut by shutter hooks.



FIGURE 3-23. Penetration near water spigot on southeast façade.

noticeably damp section could be seen and felt. This seems to indicate water was coming out of the crack from the interior of the wall.

A smaller crack, roughly 6" in length, was also observed adjacent to Window 8 in the bottom right corner (Figure 3-21). This crack appeared to be patched over and was not leaking water in the same manner.

The grooves cut into the plaster by the swinging shutter hooks were also observed under both Window 7 and 8 (Figure 3-22).



FIGURE 3-24. Large crack near Door E.

Main Block – Southeast Elevation

The southeast façade (facing the back yard) is in overall good condition, though with some issues of varying degrees of severity. The different types of issues can be broadly grouped into two primary categories: penetrations and cracks.

Penetrations

Penetration on this elevation is located under Window 10 and is approximately 1/2"–3/4" in diameter. Its origin is not known, but it is in close proximity to the existing water spigot (Figure 3-23).

Cracks

Two cracks are visible on the façade, and several more appear to be covered with a previous patch. The first and most severe crack is located adjacent to Door E on the upper right side (Figure 3-24). This crack is several feet in length and varies in width from approximately 1/8" to 1/4". This appears to be a through-wall crack, as a similar crack is in the same location on the interior. Areas



FIGURE 3-25. Patched crack near Door E.



FIGURE 3-26. Crack in cornice near Door D.



FIGURE 3-27. Patched crack near Door D.



FIGURE 3-28. Patch at lower left side of Door E.



FIGURE 3-29. Series of patches under Window 9.

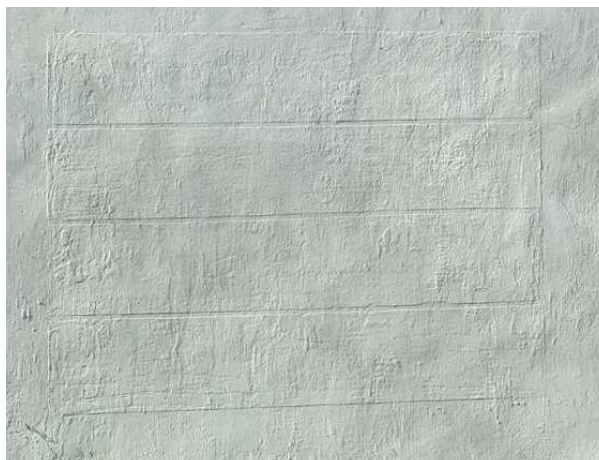


FIGURE 3-30. Series of four rectangles shaped into the plaster.

directly adjacent to this crack also seem to be recently repaired, indicating that it was part of a larger crack system (Figure 3-25). In fact, the other side of Door E also showed signs of a patched crack that matched an interior set. The likely cause of these cracks is also settlement issues, as will be discussed in the structural section.

The second visible crack is in the cornice near Door D (Figure 3-26). At the surface it appears relatively small, 1/8" in width. However, evidence of a connected crack running toward the door opening can be seen in an adjacent patch (Figure 3-27). Settlement is again the likely cause.

Other examples of potentially larger cracks that may have been repaired are found on the lower left side of Door E and a series of patches under Window 9 (Figure 3-28 and Figure 3-29).

Other Observations

The other main noticeable condition found on this elevation is a series of four rectangles shaped



FIGURE 3-31. Crack near the lower left corner of Window 11.



FIGURE 3-32. Staining along the cornice.

into the plaster in the middle of the wall (Figure 3-30). Each rectangle measures approximately 1'-4 1/2" tall by 7'-8 1/2" wide. The reason for these rectangles is unknown, though they could have been training examples during the HPTC efforts.

Main Block – Southwest Elevation

Overall, the southwest façade (facing Church Street) is in good condition. Very few of the issues seen in other parts of the exterior are present here. The only real visible instance of damage is a crack near the lower left corner of Window 11 (Figure 3-31). This crack is approximately 1/8"-1/4" wide and runs roughly 6" in length.

Staining along the cornice, likely caused by water runoff from the gutters, also exists (Figure 3-32).

Steeple Tower – Northwest Elevation

As described previously, the steeple tower is divided into four primary tiers on the exterior. Survey for condition assessment was only conducted on the ground.

The northwest façade of the steeple tower is in good condition. Starting at the first tier, some paint is peeling off the window base and surrounding



FIGURE 3-33. Northwest elevation, first tier.



FIGURE 3-34. Northwest elevation, second tier.

brick (Figure 3-33).

At the second tier, heavy black soiling is at the top of the cornice and parts of the pilasters (Figure 3-34). The staining appears to be gypsum buildup.

The third tier and cupola both appear to be in good condition with no major problems present.

Steeple Tower – Northeast Elevation

The northwest façade of the steeple tower is in overall fair to poor condition. Starting at the first tier, some vegetation is growing in the steps leading up to Door C (Figure 3-35). A crack over 1/2" wide runs directly under Door C. A section of Door



FIGURE 3-35. Steps leading up to Door C with missing section.



FIGURE 3-36. Cracks in cornice of northeast elevation.



FIGURE 3-37. Northeast elevation, second tier.

C is missing from the middle panel of the right northwestern leaf.

At the top left corner, another crack extends through the cornice (Figure 3-36). This crack is over 1/2" at its widest. A smaller crack, about 1/8", runs through the cornice in the center of the elevation and extends up into the second tier.

The second tier has extensive paint and plaster damage (Figure 3-37). Several series of cracks are



FIGURE 3-38. Northeast elevation, third tier.



FIGURE 3-39. Southeast elevation, third tier.

also present throughout both sets of pilasters and in the blind arch.

Approximately half of the wood shingles are missing from both the east and northeast elevations at the third-tier level (Figure 3-38). The cupola appears to be in good condition with no major problems present.

Steeple Tower – Southeast Elevation

The southeast facade of the steeple tower was difficult to assess because there was no roof access during the site visit. Also, only the third tier and cupola are present at this elevation. With that in mind, the third tier appears to be in good to fair condition (Figure 3-39). As was mentioned, the east face is missing roughly half its shingles. The southeast face appears to be missing only a couple of shingles and the west wall seems completely intact.

The cupola appears to be in good condition with no major problems present.

Steeple Tower – Southwest Elevation

The southwest elevation of the steeple tower is in overall good condition. Starting at the first tier, some vegetation is growing in the steps leading up to the building (Figure 3–40).

Plaster damage is located about halfway up the wall southwest of Door B (Figure 3–41).

A section of the door frame appears to be broken at the top of Door B (Figure 3–42).

At the second tier, there appears to be cracks both above Window 15 and in the balustrade beneath it (Figure 3–43).

Plaster damage can also be seen on the southeastern pair of pilasters approximately three quarters up the wall (Figure 3–44). The gypsum soiling can also be seen along the pilasters and at the cornice.



FIGURE 3–40. Steps to Door B on southwest elevation.



FIGURE 3–41. Plaster damage southwest of Door B.

The third tier and cupola both appear to be in good condition with no major problems present.



FIGURE 3–42. Broken door frame, Door B.



FIGURE 3–43. Cracking in balustrade below Window 15.



FIGURE 3–44. Southwest façade, second tier.



FIGURE 3-45. Roof.

Roof

The roof is a wood-framed hipped roof covered in wood shingles. It appears to be in good condition and was replaced in 2017 (Figure 3-45).

Interior Description and Condition Assessment

Interior Description

The interior of the main block is a single open room measuring approximately 72'-10" x 26'-4" with walls plastered and painted white, a vaulted wood ceiling also painted white, and a mix of black and white marble floors as well as paved brick flooring (Figure 3-46). On the southwest wall a wood mezzanine extends the length of the wall and projects roughly 8'-5" into the space. It stands at about 7'-8" above the finished floor. Three free-standing columns and two engaged columns support the protruding southeast end of the mezzanine. Interior ornamentation includes decorative molding around the top of the wall, molding at the interior sill level of the windows, and wood paneling on the mezzanine. A single door opening is centered in the northwest wall, and two door openings are located in the southeast wall. The openings are filled with double-leaf doors on iron strap hinges and crowned by fanlights. Rectangular window openings filled with wood in-swing casement windows are set within deep segmental arched wall recessions. Prominent fixtures in the room include wood pews, a pulpit, and a governor's box. There are no current interior light fixtures.

The interior of the steeple tower consists of four

levels within the first three tiers, as the second tier includes two platforms. The first tier of the steeple tower is a rectangular space composed of brick masonry walls on three sides and the northwestern wall of the main building. The interior walls are all painted white, and the floor consists of rough flagstone pavers. A window opening pierces the southwest wall, and door openings fenestrate the northwest and southeast walls. The second tier has a similar rectangular volume to the first tier. The masonry walls are fenestrated with window openings in the northwest and southeast walls, a door opening leading to attic space, and a covered former window opening. The masonry walls have a partial plaster finish. The third tier on the interior of the steeple tower is split into two levels separated by a platform. The first level of the third tier features the volume and masonry brick walls of the second tier. The second level is defined by the octagonal volume of the steeple tower drum with walls that consist of a concrete octagon, above which is a wooden structure of dimensional lumber. The fourth tier, the steeple tower's cupola, continues the octagonal volume of the third tier. Eight arched openings establish an open character in the room. The room is composed of structural wood framing.

Interior Condition Assessment

Main Block – Northwest Wall

Overall, the northwest wall is in poor condition. The different types of issues can be broadly grouped into three categories: plaster deterioration, cracks, and staining. (figure 3-47)

Plaster Deterioration

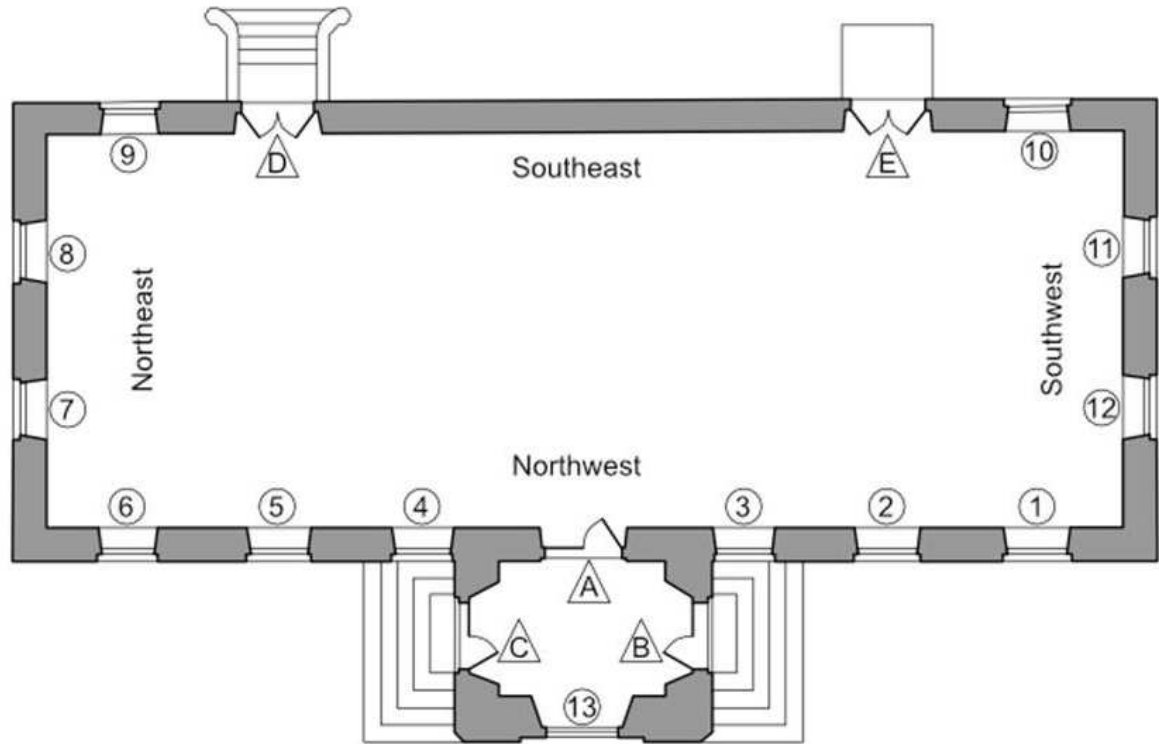


FIGURE 3-46. Interior Key Plan.



FIGURE 3-47. Interior looking Northwest.



FIGURE 3-48. Governor's box covered by plastic.

Significant plaster damage was found throughout the wall. In fact, the section of the wall behind the governor's box (by Window 3) was completely covered in plastic in an apparent effort to protect the replicated structure (Figure 3-48).

On the left side of this wall, plaster is actively failing behind the display boards (Figure 3-49). This damage continues up the wall on the top side of the mezzanine as well (Figure 3-50). This type of deterioration is also present around the opening of Window 1 (Figure 3-51). The same condition extends through to the opening of Window 2 and on toward Window 3 (Figure 3-52 and Figure 3-53). The full extent of the damage around Window 3 could not be seen due to the plastic. However, it appears to be as substantial as in the other locations.

The deterioration continues around the section of wall by the opening of Door A, though the extent of the damage is more severe on the left side than the right. In fact, the plaster damage, while still present, appears less severe on the right half of the wall except in areas directly adjacent to the window openings.

Plaster damage is visible around Window 4, though it is most severe on the left half of the opening. The plaster around Window 5 appears to be relatively intact, but failure does arise again around the opening of Window 6 on the left side. The remaining section of the wall between Window 6



FIGURE 3-49. Plaster failure behind display boards.



FIGURE 3-50. Plaster damage above mezzanine.



FIGURE 3-51. Plaster damage around Window 1.



FIGURE 3-52. Plaster damage around Window 2 toward Window 3.



FIGURE 3-53. Plaster damage behind plastic near Window 3.

and the corner does not show significant signs of plaster deterioration. Further extent of damage can be seen in Figures 3-54 through 3-57.

Cracks

The majority of the cracking in the interior of the building appears in close proximity to window and door openings. Two significant cracks are present around Window 1 (Figure 3-58). The first crack is located at the underside of the arched



FIGURE 3-54. Plaster damage around Door A's left side.



FIGURE 3-55. Plaster damage around Door A's right side.

opening, running the length of the window. The second crack derives from a rusted anchor that was imbedded in the wall. Both cracks appear relatively small in size, approximately 1/16"–1/8" in width.

Similar cracking was found around Window 2 (Figure 3-59). A roughly 1/16"–1/8" crack is present, running the length of the arched opening.



FIGURE 3-56. Plaster damage around Window 4.



FIGURE 3-57. Plaster around Window 6.



FIGURE 3-58. Crack above Window 1.



FIGURE 3-59. Crack above Window 2.



FIGURE 3-60. Crack above Window 3.

A second crack is also present around an imbedded anchor in the adjoining wall. The second crack, however, is significantly larger, ranging from 1/8" to 1/2" in width and extending in multiple directions radiating from the anchor.

Another crack can be seen above the plastic of the governor's box. This crack runs from the ceiling trim to the arched opening of Window 3 (Figure 3-60). As this location could not be reached, the full extent of the crack could not be measured. However, it appears to be fairly large and had several stains emanating from it.

A similar crack exists above the arched opening



FIGURE 3-61. Crack above Door A.



FIGURE 3-62. Crack under Window 4.

of Door A (Figure 3-61). This crack runs through the ceiling trim (starting roughly at the spring point) and down toward the arch, branching in two directions.

A crack is also present at the base of the sill for Window 4 (Figure 3-62). It is approximately 1/8" wide and stretches vertically from the sill for roughly 1'-0" – 2'-0".

Between Windows 5 and 6 is the series of cracks



FIGURE 3-63. Cracks between Windows 5 and 6.



FIGURE 3-64. Cracks under Window 6.

mentioned previously in the exterior section under Main Block – Northwest Elevation – West (Figure 3-63). These cracks start near the spring point for the arched opening of both windows and run toward the center of the wall.

The final cracks noted on this wall are located under Window 6 (Figure 3-64). The first crack is approximately 1/16" wide and runs roughly half the width of the window, splitting in two after about 6"-8". The second crack is also about 1/16" wide and runs down from the sill to the stepped floor below.



FIGURE 3-65. Stain above Window 2.



FIGURE 3-67. Missing half of Window 1.



FIGURE 3-66. Blue substance behind plaster.

Stains

Four primary staining locations are found on the northwest interior wall. The first location is at the arched opening of Window 2, where the stain appears to have been caused by different streams of water flowing down the wall from a crack behind the ceiling trim (Figure 3-65).



FIGURE 3-68. Broken Window 6.

The second stain location appears to be coming from the crack located above the governor's box. These stains also seemed to be caused by water leaking from the crack.

Similarly, the third set of stains, located above the arched opening of Door A, also seems to originate from water coming into the building from the crack above it.



FIGURE 3-69. Crack on right side of northeast wall.



FIGURE 3-70. Plaster damage under Window 8.

Finally, the fourth stain is of another type. An unknown blue coating was found behind the deteriorating plaster along the left side of Door A (Figure 3-66). As it was behind the plaster, it is possible that this is not a stain but rather a previous treatment added to the wall. However, this is the only location in the building where it was observed.

Other Observations

None of the windows in the Steeple Building are completely watertight. However, certain windows are able to provide better protection than others. The right (northwest) half of Window 1, including the sash and glass, appears to have been fully removed (Figure 3-67). In fact, a section of plaster appears to have been taken out of the wall when that window was removed.

Several components of Window 6 are missing (Figure 3-68). The bottom section of the left (southeastern) sash has fallen off, and the glass on the bottom pane of the right (northwestern) sash is broken/missing. Part of the frame's bottom wooden rail is missing on the right (northwestern) side.

Main Block – Northeast Wall

The northeast wall is in overall good condition. Few of the issues described for the other walls were found. On the right edge of the wall, a crack approximately 1/8" in width runs up half the length of the wall toward the ceiling (Figure 3-69).

A small section of plaster that has detached from the wall is located under Window 8 (Figure 3–70).

Both sashes of Window 7 are entirely missing, including the muntins and glass. Damage to the window frame is also apparent (Figure 3–71).

The left sash of Window 8 is also damaged and missing several components. The glass panes and wood muntins appear to have been broken off for the majority of the window (Figure 3–72).

Main Block – Southeast Wall

Overall, the southeast wall is in good to fair condition. Much like the other walls, most issues are centered on window and door openings. The primary issue is cracking.

A series of cracks in the plaster under Window 9 measures roughly 1/16”–1/8” in width. These cracks appear to be surface level only.

Along the lower edge of the wall from Window 9 through to the opening of Door D is another series of cracks (Figure 3–73). The cracks appear to be similar in width, though they are connected to patches of missing plaster.

Door D also has cracks on the underside of the arch and on the right side of the opening (Figure 3–74, Figure 3–75, and Figure 3–76). The side crack appears to originate from the door bracket attached to the wall and runs the length of the opening.

Adjacent to Door E is a large crack (1/8”–1/4” in width) that runs from the ceiling treatment toward the spring point of the opening (Figure 3–77). This crack (as well as the others around Door E on the



FIGURE 3–71. Missing Window 7.



FIGURE 3–72. Broken left half of Window 8.



FIGURE 3–73. Cracks under Window 9.

interior) corresponds with the cracks found on the exterior of this wall.

Two cracks also exist at the underside of the arch in the Door E opening (Figure 3-78).

On the lower right of the door opening is a large crack that extends several feet along the wall (Figure 3-79). This crack appears to start where the bolts that used to hold the doors closed are attached to the wall.



FIGURE 3-74. Cracks to the left of Door D.



FIGURE 3-75. Crack above Door D.



FIGURE 3-76. Crack to the right of Door D.



FIGURE 3-77. Large crack next to Door E.

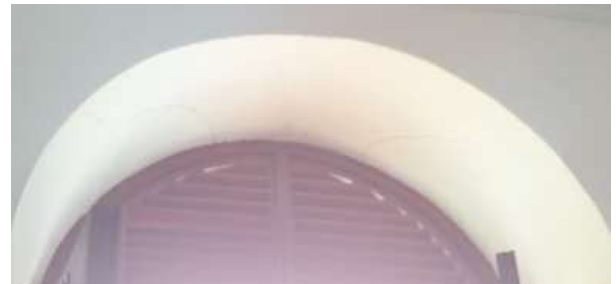


FIGURE 3-78. Cracks above Door E.



FIGURE 3-79. Cracks to the right of Door E.



FIGURE 3-80. Crack running from Door E to Window 10.



FIGURE 3-81. Crack below access hatch.



FIGURE 3-82. Crack at Window 10.



FIGURE 3-83. Rust-colored stain under Window 9.

A large crack runs horizontally from the spring point of the arch in Door E to Window 10 through the mezzanine (Figure 3-77 and Figure 3-78). Once the crack intersects with the opening of Window 10, a large chunk of the wall can be seen missing and the crack continues toward the center of the window (Figure 3-80).

Under the stairs to the mezzanine, there is a small closet that appears to house the building's various systems (electrical, security, etc.). In that closet, a built-up wall on top of the masonry wall has a crack at the lower right corner of an access hatch (Figure 3-81).

Other Observations

Under the left side of the sill of Window 9, a rust-colored stain runs down the wall toward the stepped floor (Figure 3-83).

Window 9 is also broken on the left side. Several panes of glass and wood muntins are missing and broken off (Figure 3-84).



FIGURE 3-84. Broken left half of Window 9.

Main Block – Southwest Wall

The southwest wall of the main block is generally in poor condition. As in other locations, plaster failure is the most prevalent visible issue; however, other types of damage are present.

Plaster Deterioration

Significant plaster damage exists throughout the wall. Around the opening of Window 11, plaster and paint are peeling away from the wall (Figure 3-85). This same condition continues down the wall behind the educational posters toward Window 12 (Figure 3-86).



FIGURE 3-85. Plaster damage around Window 11.



FIGURE 3-86. Plaster damage behind educational posters.

The opening around Window 12 also has plaster failure, but to an even greater degree (Figure 3-87). Under the window sill, scoring marks that were meant to help the plaster adhere can be seen on the wall. The same condition can be seen through to the wall's edge.

Above the mezzanine, near the left corner, a section of plaster is missing directly next to an electrical outlet (Figure 3-89). This condition is also seen near the other two outlets at this level. The second instance of missing plaster is between Windows 11 and 12 (Figure 3-90 and Figure 3-91). The third, most severe, instance is located between



FIGURE 3-87. Plaster damage around Window 12.



FIGURE 3-88. Plaster damage down wall.



FIGURE 3-89. Plaster damage at left outlet.



FIGURE 3-90. Plaster damage at middle outlet.



FIGURE 3-91. Plaster damage at right outlet.

Window 12 and the northwest wall. In this last location, an almost 2'-0" section of plaster has fallen off and exposed the electrical conduit within the wall.

Other Observations

A large crack along the edge of Window 12 runs the length of the window, where the frame edge meets the wall (Figure 3-92).

Window 11 is missing both halves of the assembly (Figure 3-93).

Like the southeast wall, the closet containing the building's various systems (electrical, security, etc.) takes up some space on this wall.

Potential causes of the extensive plaster damage are discussed in the Treatment Recommendations chapter; however, the ultimate reason is due to water infiltration. Further investigation using destructive methods, such as opening up wall probes, should be done to help determine if rising damp is a contributing factor.

Main Block – Ceiling, Floor, and Mezzanine

Ceiling

The ceiling in this building was replaced along with the roof in 2017. As such, it remains in very



FIGURE 3-92. Crack at edge of Window 12.

good condition. No visible cracks, stains, or other damages in need of repair could be seen from the ground (Figure 3-97).

Floors

The floor of the main building is in very poor condition. The majority of the floor is made up of



FIGURE 3-93. Missing Window 11.



FIGURE 3-94. Cracked and chipped black and white marble tiles.



FIGURE 3-95. Brick Flooring.



FIGURE 3-96. Ceiling.

roughly 1'-5" x 1'-5" black and white marble tiles (Figure 3-94). A large percentage of these tiles (estimated 15%–20%) are either broken, cracked, or chipped in some manner. In addition, the entire floor is uneven, with tiles at different heights. The likely cause for this is discussed in the structural report (Appendix E).

The flooring under where the seating pews are located and a U-shaped section of floor underneath the mezzanine are finished with brick

(Figure 3-95). This type of flooring does not have the same cracking issues as the tiles due to the nature of construction. However, this also made it difficult to discern whether differential settlement had taken place, as the floor was very uneven to begin with.

Mezzanine

The wooden mezzanine extends the length of the southeast wall and projects roughly 8'-5" into the



FIGURE 3-97. Mezzanine.



FIGURE 3-98. Rust stains under mezzanine.



FIGURE 3-99. Broken first step of mezzanine.



FIGURE 3-100. Large crack above Window 13.



FIGURE 3-101. Cracks above Door C.

space (Figure 3-97). It stands at about 7'-8" above the finished floor. Three free-standing columns and two engaged columns support the protruding southeast end. The railing is ornamented with wooden panels painted white and fitted with a mahogany handrail. Stairs are located on the southeast edge of the mezzanine and are surrounded by the same painted wood paneling with mahogany handrails.

Overall, the mezzanine appears to be in good condition. The columns are all intact and the wood framing looks to be in generally good order. There are, however, rust stains on the paint of the framing, likely coming from the nails and fasteners exposed to water in the humid environment (Figure 3-98).

The finished floor is in good condition and does not show serious signs of deterioration. The stairs are also in good condition, with the exception of the first step, which is split lengthwise along the grain (Figure 3-99).



FIGURE 3-102. Empty pockets from past door hardware flank



FIGURE 3-103. Empty pockets from past door hardware flank Door C.



FIGURE 3-104. Plaster failure adjacent to Door A.

Steeple Tower – First Tier

The first tier of the steeple tower is a rectangular space comprising brick masonry walls on three sides and the northwestern wall of the main building. It is approximately 9'-4" from Door A to Window 13, 14'-11" from Door B to Door C, and 14'-6" from floor to ceiling. The interior walls are all painted white, though they are heavily soiled in



FIGURE 3-105. Crack and paint peeling above Door B.

parts. Structural timber supports for the platform above are on either side of Door A. A structural support has been placed diagonally across the face of Window 13. The floor is comprised of rough flagstone pavers that are approximately 1'-8" x 1'-6".

Overall, the first tier of the steeple tower is in good to fair condition. The most prominent issues found on this level are cracks and soiling.

Northwest Wall

The largest and most prominent issue on this wall is a crack located at the top corner of the arched opening for Window 13 (Figure 3-100). This crack is so severe that an additional structural support is needed to ensure the arch does not fail.

The worst area on this wall is at the base of the ladder leading up to the second tier.

Northeast Wall

At the top of the arched opening for Door C is a series of cracks (Figure 3-101). These cracks appear roughly 1/8" in width and run the length of

the opening.

Open cavities are on either side of Door C where previous door brackets were once located (Figure 3-102 and 3-103).

Southeast Wall

Patches of plaster failure on the left side of Door A are the primary condition issue on the southeast wall (Figure 3-104).

Southwest Wall

A small crack (1/16" in width) and some paint peeling are present at the top of the arch above Door B (Figure 3-105).

Steeple Tower – Second Tier

The steeple tower's second tier is a relatively small space. There are four masonry openings along each wall: two openings are for windows, one is for Door F leading into the attic space, and one is a window opening that was closed during a previous restoration effort. The surrounding walls are exposed brick masonry construction with a partial plaster/whitewash finish. The structure and platforms are constructed from heavy timber framing and wood joists.

Overall, the second tier is in fair condition. Cracks and brick delamination/damage are the most prominent issues found on this tier.

Northwest Wall

Brick Delamination/Damage:

On the lower left side of the window opening, several bricks are either missing or have deteriorated (Figure 3-106). A similar condition also exists on the right side of the opening (Figure 3-107).

Cracks:

A series of cracks under Window 14 appears to be only in the surface plaster and the cracks are approximately 1/8" in width (Figure 3-108).

Other Observations:

The wall around the top right bracket holding the shutters for Window 14 appears to have been patched more recently (Figure 3-109). The wall



FIGURE 3-106. Brick deterioration left side of second tier, northwest wall.



FIGURE 3-107. Brick deterioration right side of second tier, northwest wall..



FIGURE 3-108. Cracks under Window 14.

section around the middle bar that holds the shutters closed on the left side also appears to have been patched, and there appears to have once been a middle bracket that is no longer in use (Figure 3-110). Slots for the anchorage still remain on both sides of the wall.

Northeast Wall

The northeast wall is the only wall on this level without an opening to the outside. Infill masonry covered in plaster fills what was previously a window opening.



FIGURE 3-109. Repaired bracket on right side of window 14.



FIGURE 3-110. Repaired bracket on left side of window 14.



FIGURE 3-111. Brick deterioration left side of second tier, northeast wall.

Brick Delamination/Damage.

On the lower left side of the masonry opening, two bricks have partially delaminated (Figure 3-111).

Cracks and Staining:

A series of cracks on either side of the horizontal plane are relatively small and are roughly 1/16"–1/8" in thickness (Figure 3-112). They appear to only be surface level in the plaster and they run down the height of the wall. These cracks originate



FIGURE 3-112. Cracking on left and right side of wall of second tier, northeast wall.



FIGURE 3-113. Water staining on northeast wall of second tier.

on the level above.

Stains:

A series of stains extends down the horizontal wall from the level above (Figure 3-113). The origin of these stains appears to be water damage leaking through the plaster.

Southeast Wall

The southeast wall is in relatively good condition.



FIGURE 3-114. Crack over the arched opening of Door F.



FIGURE 3-115. Door F unable to close left side.

The brickwork shows the same extent of wear as the other walls, but no areas of obviously failing brick are visible. The largest issue is a crack over the arched opening of Door F (Figure 3-114).

Also, it should be noted that the wood structure's current configuration makes the closing of Door F's left panel impossible (Figure 3-115).

Southwest Wall

Cracks:



FIGURE 3-116. Series of cracks underneath Window 14.



FIGURE 3-117. Top left patch Window 14.



FIGURE 3-118. Middle left patch Window 14.

A series of cracks under Window 14 appears to be in the surface plaster and partially in the brick behind (Figure 3-116). The cracks are approximately 1/8"–1/4" in width.

Other Observations:

The wall around the top left bracket holding the shutters for Window 15 appears to have been more recently patched (Figure 3-117). The wall section around the middle bar that holds the shutters closed also appears to have been patched (Figure 3-118). There also appears to have once been a



FIGURE 3-119. Series of cracks above Window 14.



FIGURE 3-120. Series of cracks on either side of the window.



FIGURE 3-121. Crack on left side of arch southwest wall of second tier.

middle bracket that is no longer in use, and slots for the anchorage still remain on both sides of the wall.

Steeple Tower – Third Tier

The third tier on the interior of the steeple tower is split into two tiers. The first part of the floor is a continuation from the second level. The same brick masonry walls and structural timber supports extend up past the platform. They are also finished in the same manner as in the second tier.

The other half of the third tier is the transitional section where the octagonal wood structure sits atop the rectangular masonry building. Above the masonry walls is a concrete octagon that acts

as the base for the wood structure above. Above the concrete is a wooden structure built from dimensional lumber. This is the section of the steeple tower that is clad in white wood paneling on the exterior.

Overall, the third tier is in fair condition. The most prominent issues found on this floor are cracks in the walls on the first tier. The second tier (the wood octagon) is in good condition and has no serious visible damage on the interior.

Northwest Wall

Cracks:

A series of cracks above Window 14 appears to be only in a surface plaster and exposes the brick arch below (Figure 3-119). The cracks are approximately 1/8"–1/4" in width. An additional series of cracks is on either side of the window (Figure 3-120). These are also approximately 1/8"–1/4" in width and seem to extend to the backing brick wall as well. A section of the brick at the left corner of the arch is also cracked (Figure 3-122).

Other Observations:

The lower half of the concrete wall above the masonry walls appears to have been patched or repaired during a previous project (Figure 3-122).

Northeast Wall

Cracks:

A series of cracks in the northeast wall appears to exist around the infill of a previous opening (Figure 3-123 and Figure 3-124). These cracks are approximately 1/8" in width and run down the length of the wall, extending down to the second tier below.



FIGURE 3-122. Concrete patch or repair on northwest wall of third tier.

Stains:

As can be seen in the previous figure, water staining appears to be coming from the cracks in the wall.

Other Observations:

The concrete structure above the masonry walls appears to have been patched or repaired during a previous project.

Southeast Wall**Cracks:**

About 4'-0" from the right edge of the wall, a roughly 1/8"-wide crack runs through the brick (Figure 3-125).

A series of cracks is also present in the concrete slab above the masonry wall (Figure 3-126). The cracked concrete appears to be in the initial slab. An additional concrete slab that matches the other walls appears to have been poured atop the original in this location (Figure 3-127).



FIGURE 3-123. Series of cracks around infill on northeast wall of third tier.



FIGURE 3-124. Concrete patch or repair on northeast wall of third tier.

Southwest Wall**Cracks:**

A series of cracks above the arch of Window 15 appears to be only in the surface plaster, and the cracks are approximately 1/16"-1/8" in width (Figure 3-128).

A crack also runs along the left side of Window 15 and is roughly 1/8" in width (Figure 3-129).

Other Observations:

The concrete structure above the masonry walls appears to have been patched or repaired during a previous project (Figure 3-130).



FIGURE 3-125. Crack at right edge of southeast wall of third tier.



FIGURE 3-126. Series of cracks in the concrete slab above the masonry wall on southeast wall of third tier.



FIGURE 3-127. New concrete slab pour on southeast wall of third tier.



FIGURE 3-128. Crack along arch of Window 15 on southwest wall of third tier.



FIGURE 3-129. Crack along left side of Window 15.



FIGURE 3-130. Concrete patch or repair on southwest wall of third tier.

Wood Octagonal Tier

As described previously, the interior of the octagon did not appear to have any significant damage.

Steeple Tower – Fourth Tier

The fourth tier of the steeple tower is an extension of the octagon below. Its exterior is fitted with clock faces and clad in wood shingles. The room is composed of structural wood framing upon

which is attached horizontal dimensional lumber. The dimensional lumber acts as sheathing for the exterior shingles. Plywood backing boards provide support for the exterior-facing clocks. The room is approximately 12'-6" across in all opposing directions (N-S, E-W, NW-SE, etc.).

The general condition of the fourth tier is good to fair. Multiple generations of projects are apparent in the floor, with wood members installed at different times. The older wood is generally more weathered and shows signs of age. The newer wood is generally better in appearance.

Northwest Wall

The northwest wall appears to be in fair to poor condition (Figure 3-131). The horizontal lumber seems to be older in age and is showing signs of weathering. The structural timber also appears to be older.

North Wall

The north wall appears to be in good condition (Figure 3-132 and Figure 3-133). The horizontal lumber seems to be newer in age and does not show significant signs of weathering. The structural timber, however, does appear to be older, with the exception of the diagonal cross beam on the left side.

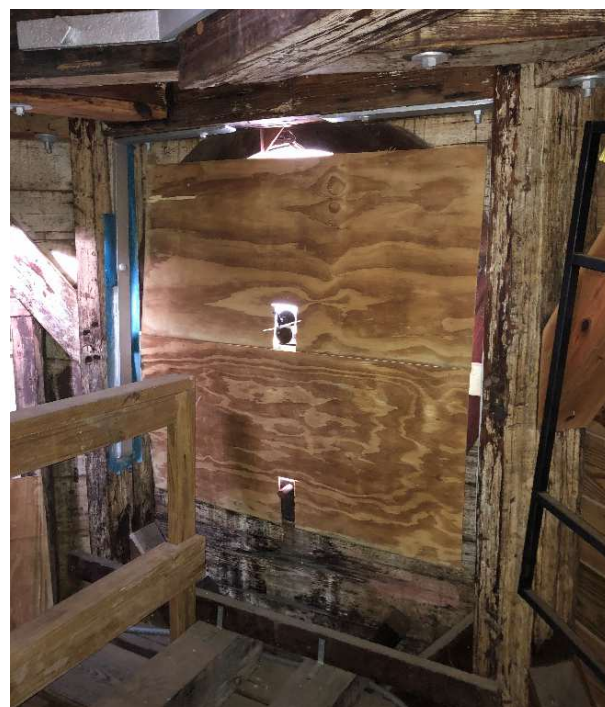


FIGURE 3-131. Northwest wall of fourth tier.



FIGURE 3-132. North wall of fourth tier.



FIGURE 3-133. North wall of fourth tier.

Northeast Wall

The northeast wall appears to be in fair condition (Figure 3-134). Some of the horizontal lumber seems to be older in age and is showing signs of weathering. The structural timber also appears to be a combination of old and new.

East Wall

The east wall appears to be in good condition

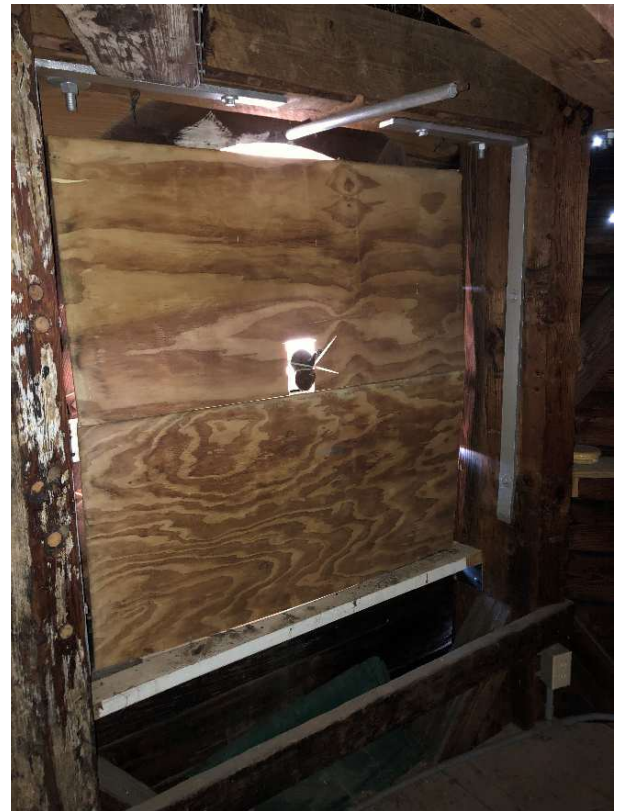


FIGURE 3-134. Northeast wall of fourth tier.

(Figure 3-135, Figure 3-136, and Figure 3-137). The horizontal lumber seems to be newer in age and does not show significant signs of weathering. The back of the wood, however, appears to be treated or stained with a darker color. The structural timber also appears to be a combination of old and new.

Southeast Wall

The southeast wall appears to be in good condition (Figure 3-138 and Figure 3-139). The horizontal lumber seems to be newer in age and does not show significant signs of weathering. The structural timber also appears to be a combination of old and new.

South Wall

The south wall appears to be in fair condition (Figure 3-140). Some of the horizontal lumber seems to be older in age and is showing signs of weathering. The structural timber also appears to be a combination of old and new.

Southwest Wall

The southwest wall appears to be in fair condition.



FIGURE 3-135. East wall of fourth tier.



FIGURE 3-137. East wall of fourth tier.



FIGURE 3-136. East wall of fourth tier.



FIGURE 3-138. Southeast wall of fourth tier.



FIGURE 3-139. Southeast wall of fourth tier.

The horizontal lumber seems to be older in age and is showing signs of weathering. The structural timber also appears to be older.

West Wall

The west wall appears to be in fair to poor condition (Figure 3-141). The horizontal lumber seems to be older in age and is showing signs of weathering. The structural timber also appears to be older. The west wall also contains a hatch to allow access to the exterior.



FIGURE 3-140. South wall of fourth tier.

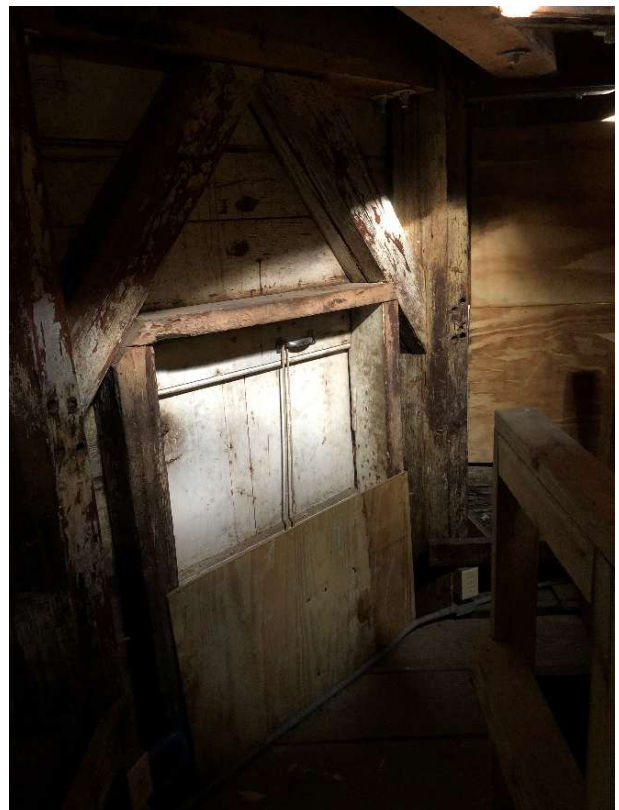


FIGURE 3-141. West wall of fourth tier.

Steeple Tower – Cupola

The cupola is a wooden structure adorning the top of the steeple tower. It is composed of eight painted wooden columns configured in an octagon with each post roughly 2'-6" apart at the inside edge. At approximately 7'-0" above the base, arches form to connect the columns. These arches are then topped with a tapering dome and weathervane. At the base of the columns is a roughly 4'-0" tall picket railing (Figure 3-142).

Overall, the cupola is in good condition. Despite being exposed to the elements, relatively few significant signs of deterioration exist. The most prominent issues present are rusting from fasteners and weathering of wood surfaces (Figure 3-143, Figure 3-144, and Figure 3-145).



FIGURE 3-143. Rusting of fasteners on cupola



FIGURE 3-142. Columns, railing, and arch of cupola facing north.



FIGURE 3-144. Slight pitting and cracking of finish layer wood under dome.



FIGURE 3-145. Slight pitting and cracking of finish layer on back side of cupola arch.

Structural Description

The HABS documentation provides a good general description of the building and is quoted below before this section goes into more specific structural elements:

The building and its yard occupy half a city block. It is bounded by Hospital and Church Streets to the east and west respectively and faces Company Street to the north. It is a one-story rectangular masonry structure, measuring 28' x 88', with a four-tiered steeple built against the approximate center of the Company Street face of the building. The Steeple measures 15' x 18' at ground level and is 77' high.

The body of the building is of rubble masonry construction with brick lining of doors and windows. The walls are plastered. It is roofed with corrugated iron on wood trusses and has a furred wood ceiling.

The yard to the south of the building is fenced by a brick and rubble masonry wall from 7' to 10' high. The yard is 66' deep and 97' wide along its south side.



FIGURE 3-146. Close-up of the top of the foundation beneath the exterior masonry wall.

Foundation and Ground Floor

From historic drawings, the building's masonry walls appear to be supported on a continuous shallow strip footing. The building and steeple footing were not accessible for the determination of material and constructed dimensions (Figure 3-146).

Based on the HABS documentation, it appears that the original rubble and brick masonry walls likely continue a foot or two below the grade and corbel out several inches at the base. Several of the old foundation walls that are now within the footprint of the building were documented as part of archeological work in the 1950s.

There was no crawlspace access in the building at the time of the site visit. It appears likely that this crawlspace was backfilled in the 1950s or 1960s. The 1956 condition report noted that the wood joists that had spanned above the crawlspace were in poor condition with significant termite



FIGURE 3-148. A transverse foundation wall documented below the existing floor in the HABS documentation.

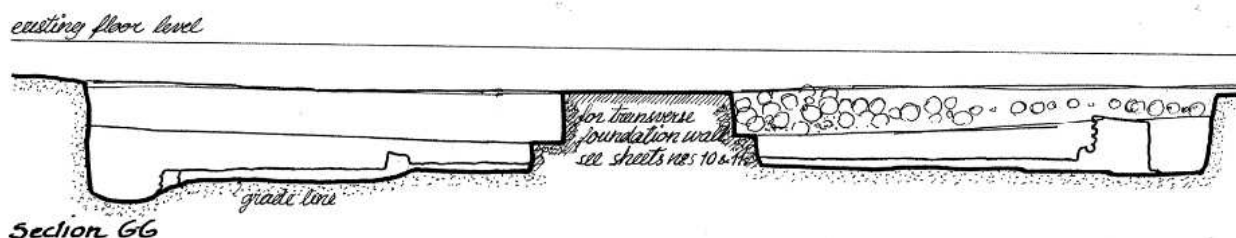


FIGURE 3-147. A transverse foundation wall documented below the existing floor in the HABS documentation.

damage, and photo documentation from around the time shows that the floor was taken out shortly thereafter.



FIGURE 3-149. Close-up of tile and brick paver transition at the pew locations.

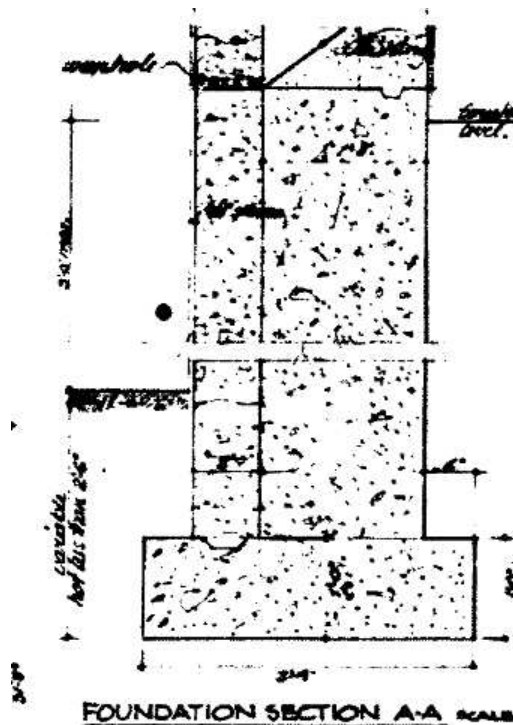


FIGURE 3-150. Section of new concrete spread footings from 1964 drawings.

The floor is currently covered with stone tiles and isolated locations of brick pavers beneath pews (see Figure 3-149). NPS proceeded with further investigations after our site visit and determined that the tiles are placed directly on a sand-setting bed with no underlying concrete slab.



FIGURE 3-151. Root resprouting adjacent to the building

Several of the walls were rebuilt in the 1960s appear to be bearing on concrete spread footings about 2'-6" below grade (see Figure 3-150).

Condition Assessment

Many of the foundation elements are below grade and not directly visible. Roots from a previously removed tree are resprouting near the foundations



FIGURE 3-152. Cracking observed in tile floor.



FIGURE 3-153. Site drainage toward the south wall.



FIGURE 3-154. Observed cracking pattern on the south side. (Figure 3-151).

Extensive tile cracking occurs throughout the floor of the church (Figure 3-152). There are several uneven areas across the flooring surface. A sand-setting bed was documented, which is a non-rigid substrate. The substrate is susceptible to differential settlements and does not provide a stiff enough backing to prevent the tile from cracking.

There is some evidence of differential settlement at the site. Several inches of soil subsidence or erosion create a negative drainage effect on the building footing (Figure 3-153).

The observed cracking patterns indicate that the middle portion of the longitudinal walls on the north and south are settling downward. The north side appears to be caused by the heavy loading due to the adjacent steeple tower. The settlement on the south side appears to be a result of heavy loading and erosion at the building footing caused by the negative drainage towards the yard-facing wall (see



FIGURE 3-155. Wood-framed mezzanine at the west end of the interior.

Figure 3-154).

Settling at the centers of the north and south walls has led to diagonal and horizontal cracking at the east and west ends of walls, where there are piers between windows.

Floor Framing

A wood-framed mezzanine at the west end of the interior consists of 4" diameter wood posts supporting a 5-1/2" x 10" wood edge beam (Figure 3-155). The largest clear span for the edge beam between the posts is 7'. The mezzanine floor is framed by a 2-1/2" x 8" wood joist at 18" on-center, spanning 8'-9" between the wall and the edge beam. The mezzanine floor is sheathed with 1" tongue-and-groove straight sheathing.

The stair stringers for the mezzanine are a single 2-1/2" x 14" unnotched stringer at each side of the stair treads.

Condition Assessment

The framing appears to be in relatively good condition; connections are hidden by molding/finishes.

Roof Framing

A wood-framed hipped roof covers the building. The rafters are 2 x 8 (nominal) spanning in the north-south direction at 16" on center with a 2 x 8 horizontal tie at each rafter. Rafters are sheathed with 1" tongue-and-groove straight sheathing. The ridge board is a nominal 2 x 10. Rafters are anchored with a hurricane tie on a wood ledger attached to the masonry wall with adhesive anchors



FIGURE 3-156. Roof framing over a one-story portion of Steeple Building.



FIGURE 3-157. Wood shingles (today) vs. corrugated metal roof (1950s).

at approximately 16” on center (Figure 3-156). The vaulted ceiling is framed by 1” tongue and groove boards.

Although no documentation has been provided, it appears this work may have been completed by HPTC in the 2017 time frame. All wood framing is relatively new and does not reflect the conditions shown in earlier drawing sets that have been reviewed.

The roof is covered in wood shingles that also appear to be from the recent HPTC intervention. Earlier photos of the Steeple Building show a corrugated metal roof (see Figure 3-157).

Condition Assessment

The framing has been rebuilt recently and is in good condition. Some diaphragm screws missed

joists during the original installation.

Steeple

Per the HABS documentation, “The two lower tiers of the steeple are brick masonry with stucco. The third tier is an octagonal drum with exterior walls of wood sheathing and shingles on a heavy timber frame and roofed with copper sheets and wood sheathing. The fourth tier is an open octagonal wood pavilion supporting a shingled wood cupola crowned by a wrought iron spire and weathervane.”

At the interface between the masonry and the timber portion of the steeple, a concrete bond beam was installed at the transition from the top of the masonry wall to the start of the wood framing (see Figure 3-159).

6” x 6” wood shoring posts with load distribution members at grade have been added to shore some of the wood framing and masonry arches at the ground level of the Steeple Building (see Figure 3-160).

An internal wood-framed ladder and landing system provide access to the cupola at the top of the steeple (Figure 3-161).

Condition Assessment

The steeple is in fair condition. Missing wood shingles are evident on the east-facing elevation of the steeple’s third tier (see Figure 3-162). It was reported on site that this damage occurred during Hurricane Maria.

It was also noted that there is a slight lean to the upper two wood-framed tiers of the steeple. Point cloud data was reviewed to understand the extent of deformation. It was reported that this too may have been related to Hurricane Maria. Point cloud analysis of the tilt indicates leaning toward the south of approximately 4” to 5” over the height of the steeple tower (from base to tip) (Figure 3-163). How much of the measured tilt is original and how much has been caused by past settlement or significant loading events is unknown.

The measured tilt is less than 1 degree toward the south and does not significantly affect internal stresses.

The wood framing at the lower tiers of the steeple

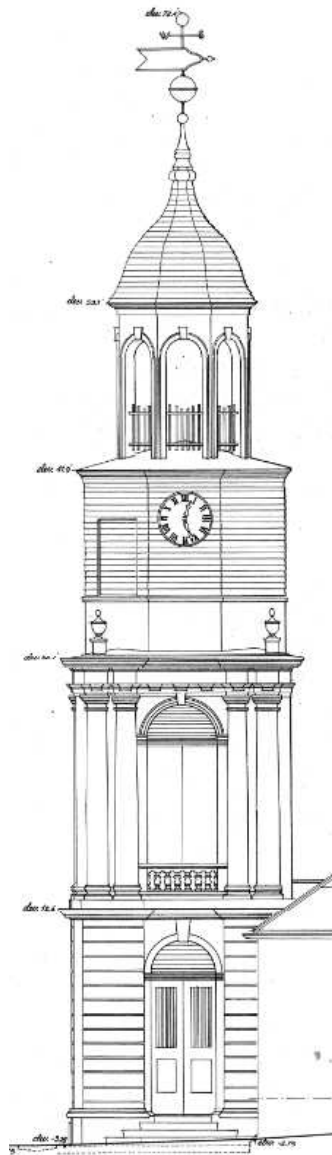


FIGURE 3-158. HABS elevation and photo of steeple tower as it appears today.



FIGURE 3-159. Concrete bond beam between second and third tier in the steeple.



FIGURE 3-160. Temporary shoring placed at ground floor.



FIGURE 3-161. Internal wood framed ladder and landing.



FIGURE 3-162. Missing wood shingles.

is independent of the masonry walls and just supports the small access floors. While some insect damage was noted, the framing is quite heavy given the limited loading it sees in current conditions.

The masonry at the lower two tiers is in fair condition. Vertical cracks were noted in the masonry above the arched openings on each elevation. It is unclear if this damage is related

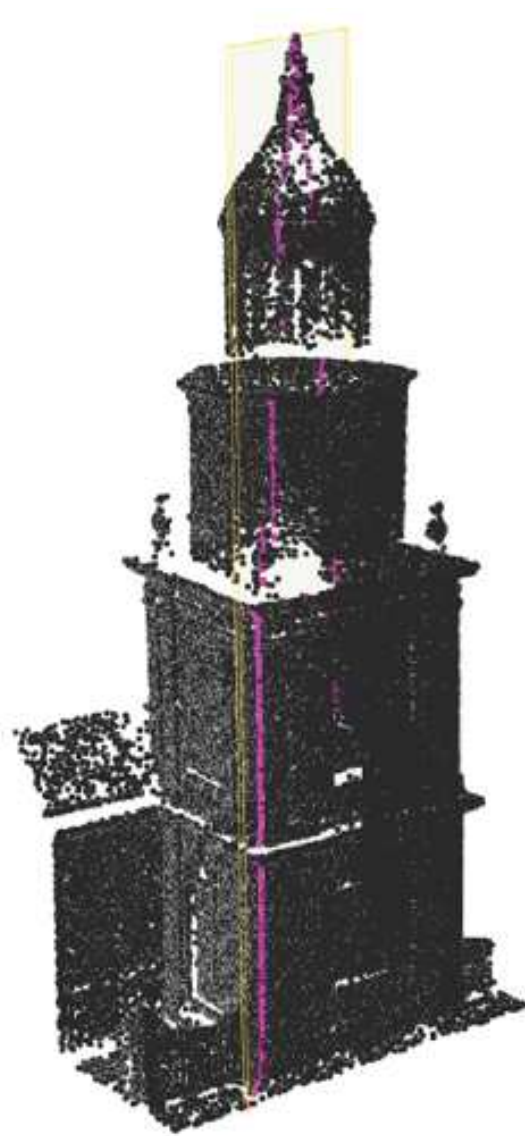


FIGURE 3-163. Point cloud silhouette at north-south cut.

to lateral loading or simply self-weight due to an inadequate arch depth (see Figure 3-164). Some cracking has also occurred at the edge of arches at the lower level (see Figure 3-165).

It should be noted that the upper two tiers of wood framing were retrofitted in the 1980s and matched the provided documentation well (see Figure 3-166).

Exterior

The exterior of the building consists of load-bearing masonry walls. The walls' thickness varies from approximately 1'-7" to 2'-4". The windows and door openings are framed with masonry lintels. Existing drawings show the south and eastern elevation as having been rebuilt from

concrete masonry. The north and western elevation are identified in the drawings as rubble masonry.

The lateral force-resisting system relies on the unreinforced masonry rubble walls and new reinforced concrete masonry unit cavity walls. While the building was not explicitly designed for seismic, it does appear that some detailing considerations were given to anchoring the roof diaphragm to the masonry walls (see Figure 3-169).

Condition Assessment

Active cracking was identified despite prior stucco patching six months before the site visit. Cracks up to approximately 1/4" wide appear to have been patched. The existing gutter is improperly sloped, and the new gutter is unable to prevent water build-up issues (Figure 3-170). The current downspout is not connected to a drainage line and exits at the building base adjacent to the footing (Figure 3-171). Some staining was observed behind the downspouts. There are moisture infiltration issues, as plastic sheeting was up in several locations at the interior face of the walls.

Shutters are not watertight and windows appear to remain open and could be a source of water intrusion (Figure 3-172).

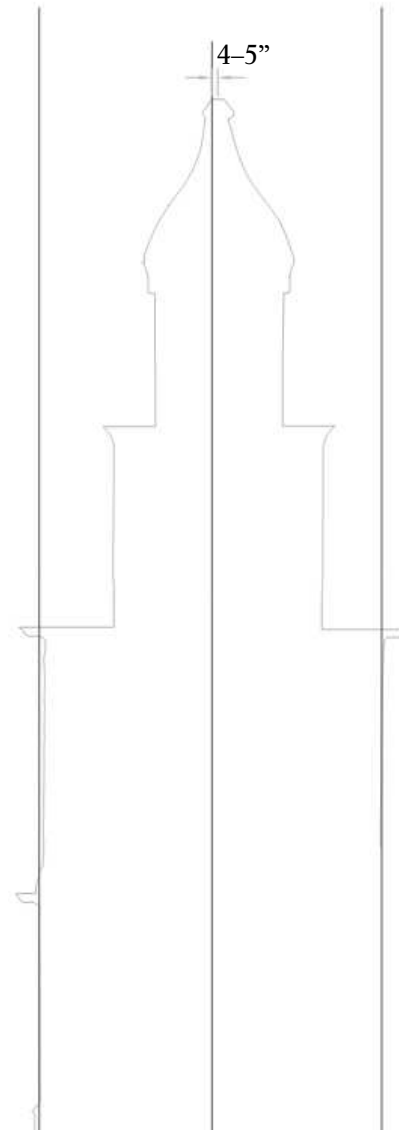


FIGURE 3-164. Vertical cracking above arched openings.



FIGURE 3-165. Vertical cracking above the arched opening at ground level.



FIGURE 3-168. Historic photo showing when two walls were removed and rebuilt.



FIGURE 3-166. Retrofit wood cupola framing.



FIGURE 3-169. Metal strap at the roof rafter attachment to the masonry wall.

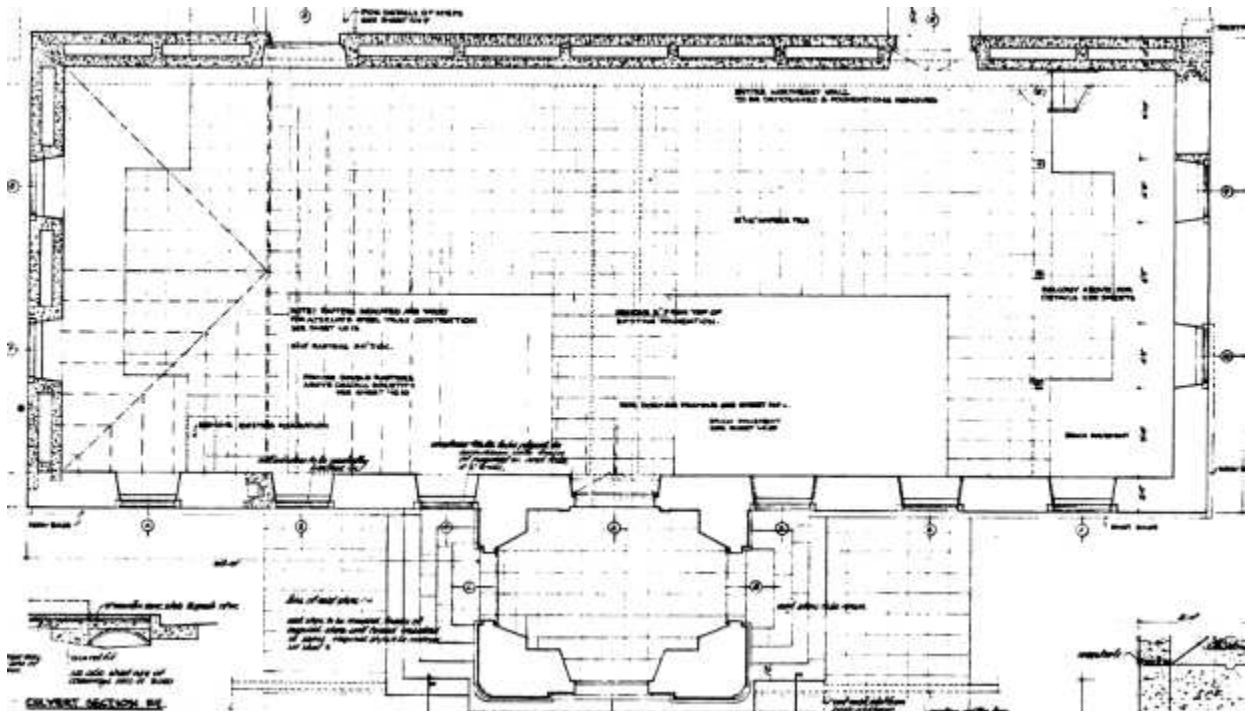


FIGURE 3-167. New vs. existing masonry walls as shown in 1960s drawings.



FIGURE 3-170. Gutter at existing Steeple Building.



FIGURE 3-172. Gaps in shutters.



FIGURE 3-171. The downspout is not connected to a drainage line.

Significance & Integrity

National Register of Historic Places

The National Register of Historic Places is the official list of the nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.¹

To be eligible for inclusion in the National Register, a property must possess significance under at least one of four criteria. The criteria apply to properties:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.²

1 National Park Service, "National Register of Historic Places," accessed June 2021, <https://www.nps.gov/subjects/nationalregister/index.htm>.

2 Code of Federal Regulations, Title 36, Part 60, "The National Register Criteria for Evaluation" (36 CFR Part 60).

Status of the Christiansted National Historic Site and the Steeple Building

Christiansted National Historic Site was administratively listed in the National Register of Historic Places (National Register) as a historic district with the passage of the National Historic Preservation Act on October 15, 1966. Documentation for the historic district was accepted on July 30, 1976, and nominated 135.9 acres of the historic town of Christiansted, including all of the Christiansted Historic and Architectural Control District and portions of the Christiansted National Historic Site. In 1999, additional documentation was accepted to include the Fort Christiansvaern Stable Building as an individual contributing resource. The National Register nomination form for Christiansted National Historic Site states that:

Christiansted National Historic Site provides an excellent example of the development, accomplishments, and way of life of a society based on a sugar producing plantation economy. It also preserves a representative sample of the architectural qualities that sprang from the wealth and accomplishments of Danish colonial development in the Lesser Antilles.³

Christiansted National Historic Site contains seven structures that represent the growth of the colony in the early eighteenth century under the Danish West India and Guinea Company rule and after 1754 under the Danish Crown. The Steeple Building is documented as a contributing resource to this historic district, significant for its architecture (National Register Criterion C) as well as its association with the development of the Danish West Indies (also known as the US Virgin

3 Gjessing, "National Register Nomination Form," sec. 9, 1.

Islands) as a colonial possession of Denmark (National Register Criterion A). The building is also significant as a representative building of religious and community life during the growth of the colony under company rule and crown possession.⁴

Recommended Significance

The Steeple Building contributes to the significance of the Christiansted Historic District. The Steeple Building is significant for its association with the development of Christiansted and the Danish West Indies and as a representative building of religious and community life during the growth of the colony under company rule and crown possession (Criterion A). Additionally, it is significant as a representative example of nineteenth-century Danish colonial religious architecture in the Danish West Indies (Criterion C).

The Steeple Building is currently restored to its circa 1800 appearance on the exterior and maintains the restrained formality and classical details typical of nineteenth-century Nordic/Danish architecture. The labor used to construct and maintain the Steeple Building was sourced from enslaved and free Africans; their work and participation in activities may also have influenced the appearance of the Steeple Building.

The Steeple Building has a simple floor plan with the decorative cornice and steeple serving as some of the only architectural adornment. The changes in the building's use over time are indicative of changes in the economy and government of Christiansted and St. Croix throughout the eighteenth, nineteenth, and twentieth centuries. From its construction as a Lutheran church to its function as a military bakery, followed by its conversion to a hospital and then a school, its various uses emphasize the never-waning importance of the Steeple Building to the Christiansted community. Despite the physical changes to the building, it has retained its formal and classical details of Nordic/Danish architecture, thus maintaining its significance as a piece of

Danish architecture during colonization of St. Croix.⁵

The recommended period of significance for the Steeple Building is 1753 to circa 1800, beginning at the date of the church's initial construction and ending after the significant building campaign that added the church's steeple (1793). In the 1960s, the National Park Service restored the exterior of the Steeple Building to its circa 1800 appearance based on the recommendations of Frederik Gjessing in his 1956 preliminary survey report and his 1960 historic building report for the restoration of the Steeple Building. Gjessing recommended restoration to this date because it had "reached its greatest physical development" through the addition of the steeple tower and it "still served as a church for the Danish Lutheran congregation." Gjessing noted that although the Steeple Building "continued to serve as such for another 30 years, the records indicate that the congregation had difficulties in financing the maintenance of the building and it rapidly deteriorated."⁶ The Steeple Building's recommended period of significance falls within the period of significance of the Christiansted National Historic Site (1700–1824).

This HSR recommends continued management of the Steeple Building under the Restoration standard to the 1753 to ca. 1800 period. Replica components that have been added over the years to reinforce the Restoration period and the building's appearance during its use as a Lutheran church should be treated as contributing, regardless of construction date.

Character-Defining Features

The historic nature of significant buildings and structures is defined by their character, which is

⁴ Gjessing, "National Register Nomination Form," sec. 7, 1.

⁵ Gjessing, "National Register Nomination Form," sec. 7, 2.

⁶ Frederik C. Gjessing, *Preliminary Survey Report (Architectural Data), Restoration of the Steeple Building, Christiansted, St. Croix, U.S. Virgin Islands* (United States Department of the Interior, National Park Service, Eastern Office, Division of Design and Construction, 1956), 122; Frederik C. Gjessing, *Historic Building Report, Architectural Data - Part II, Preliminary to the Restoration of the Steeple Building (Church of Our Lord of Zebaoth), Christiansted Waterfront, St. Croix, Virgin Islands now part of the Virgin Islands National Historic Site* (US Department of the Interior, National Park Service Eastern Office, Division of Design and Construction, 1960), 25.

embodied in their identifying physical features. Character-defining features can include the shape of a building; its materials, craftsmanship, interior spaces, and features; and the different components of its surroundings.⁷

The following list identifies existing character-defining features of the Steeple Building.

Siting, Location, and Landscape

- Setback on Hospital and Company Streets
- Location of the building
- Southeast yard

Exterior

Massing

- One-story rectangular main block
- Four-tier steeple with square massing on first and second tiers, octagonal massing at third and fourth tiers
- Cupola at fourth tier of tower with arched openings and wrought-iron spire and weathervane

Walls

- Original Hospital Street-facing and Company Street-facing walls
- All four walls of main block are unornamented single planes and crowned by a cornice
- Walls of tower ornamentation:
- Quoining
- Paired pilasters
- Cornices above first and second tiers
- Four finials above second tier
- Keystones crowning arched fenestration

- Balustrades at base of arched windows on second tier

Materials

- Masonry walls
- Stucco covering exterior walls
- Wood-shingle siding covering third tier of tower.

Roof

- Hipped roof
- Moderate pitch
- Steeple interrupting roofline on northwest elevation
- Gabled dormer connecting main block to tower
- Cupola roof covered with wood shingles

Doors

- Door locations and arched openings at first tier of tower

Windows

- Window locations on first of tower
- Arched window openings on first and second tiers of tower
- Fanlights in tower window openings
- Window locations and rectangular openings on northwest and southwest elevations of main block

Interior

- Rectangular volume of main block
- Rectangular volume of first and second floors of tower, octagonal volume of third and fourth floors of tower
- Brick floors under pews
- Patterned marble floors through rest of the interior

⁷ Lee H. Nelson, FAIA, *Preservation Brief 17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character* (Washington, DC: National Park Service, Technical Preservation Services, 1988).

- Mezzanine, including decorative paneling and supporting free-standing columns and engaged columns
- Cornice between interior walls and ceiling
- Smooth wall finish
- Vaulted ceiling
- Segmental arched wall recessions for windows
- Pews, governor's box, and pulpit reconstructed and reinstalled in 2002 and 2010.

link between an important historic event or person and a historic property.⁸

The property must retain the essential physical features that enable it to convey its historical significance. The essential physical features are those features that define both why a property is significant (National Register Criteria) and when it was significant (period of significance). The *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* defines integrity as “the ability of a property to convey its significance.”⁹

The historic integrity of the Steeple Building has been assessed as follows:

Assessment of Integrity

Assessment of integrity is based on an evaluation of the existence and condition of the physical features that date to a property's period of significance, taking into consideration the degree to which the individual qualities of integrity are present. The seven aspects of integrity as defined in the National Register Criteria for Evaluation are location, design, setting, materials, workmanship, feeling, and association. As noted in the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*:

Location is the place where the historic property was constructed or the place where the historic event occurred....
 Design is the combination of elements that create the form, plan, space, structure, and style of a property....
 Setting is the physical environment of a historic property.... Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.... Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory....
 Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.... Association is the direct

Integrity of Location. The Steeple Building maintains its integrity of location, as it remains in the place of original construction in 1751–52.

Integrity of Design. The Steeple Building maintains integrity of design. Character-defining features of the building design, such as the massing of a main block with a connected tower, hipped roof, exterior cornice, interior room volume, vaulted ceiling, and decorative features on the interior mezzanine remain as originally designed and constructed.

Integrity of Setting. The Steeple Building maintains integrity of setting. The building retains its original dense urban setting. The southeast elevation still faces a yard, the original churchyard. Although a non-historic fence extends around the building and yard, the integrity of setting is not diminished. The other three elevations face public streets, as when the building was originally constructed.

Integrity of Material and Workmanship. The Steeple Building maintains integrity of materials and workmanship. The original materials used in the construction of building, including the exterior masonry and stucco, are either still intact or have been replaced in kind. Maintenance repairs, stabilization, and rehabilitations have

8 National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, 44-45.

9 National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, 44-45.

taken place over the years but have not altered the integrity of the building.

Integrity of Feeling. The Steeple Building maintains its integrity of feeling. Although the building no longer serves its original function as a church, the floor plan and the relationship of the exterior and interior spaces are still extant. Further, the reintroduction of previously removed furniture and interior features, including the pews, governor's box, and pulpit in 2002 and 2010 reestablished the feeling of the building's original function as a church. The building conveys the historic character and contributes to the sense of place of the Christiansted National Historic Site.

Integrity of Association. The Steeple Building retains integrity of association as an example of eighteenth-century Danish colonial architecture and association with the religious and community life of Christiansted.

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PART II: TREATMENT AND USE

REQUIREMENTS FOR TREATMENT AND USE

ULTIMATE TREATMENT AND USE

RECOMMENDATIONS FOR TREATMENT

BIBLIOGRAPHY AND APPENDICES

Requirements for Treatment and Use

Several laws, regulations, and functional requirements delineate treatment and use of historic structures in national parks. In addition to protecting the cultural resource, these requirements also address issues of human safety, fire protection, energy conservation, abatement of hazardous materials, and accessibility. Some of these requirements may contradict or be at cross purposes with one another if they are rigidly interpreted. Any treatment must be carefully considered to preserve the historic fabric of the structure.

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) as amended mandates federal protection of significant cultural resources. As the Steeple Building is a contributing building within the Christiansted National Historic Site, which is listed in the National Register of Historic Places, major work undertaken at the site is required to undergo review under Section 106 of the NHPA, which requires federal agencies to “take into account the effect” of any undertaking affecting properties listed in or eligible for listing in the National Register of Historic Places. This process may require consultation with local governments, State and Tribal Historic Preservations Offices, and the Advisory Council on Historic Preservation.

Secretary of Interior’s Standards

The Secretary of the Interior’s *Standards for the Treatment of Historic Properties* (Standards) provide a philosophy to underpin historic preservation that is widely understood and almost universally accepted in the United States. By separate regulation, the Secretary has required the application of the Standards in certain programs that the Secretary administers through the National Park Service. They have also been widely adopted

by state and local governments and by the private sector and are intended to be applied to a wide variety of resource types, including buildings, sites, structures, objects, and districts. The Standards are neither technical nor prescriptive but are intended to promote responsible preservation practices that help protect the nation’s irreplaceable cultural resources.

The Standards describe four broad approaches to the treatment and use of historic properties. These are: Preservation, Rehabilitation, Restoration, and Reconstruction. The overall treatment approach identified for the Steeple Building is Preservation.

Architectural Barriers Act (ABA)

Passed in 1968, the ABA is one of the first laws to address access to the built environment. The law applies to federal buildings including post offices, Social Security offices, federal courthouses and prisons, and national parks. As of May 9, 2006, the National Park Service’s implementing standard for accessibility in new construction and alterations is the Architectural Barriers Act Accessibility Standard (ABAAS). As with other federal codes, full compliance with accessibility regulations may significantly impact the integrity of historic resources. In such cases, alternative methods of access may be negotiated to provide reasonable access while still maintaining the character-defining features of the historic resource.

International Building Code (IBC)

The National Park Service policy is guided by the International Building Code (IBC), which is applicable to both historical and non-historical buildings. The NPS is not legally bound to local or state building codes. The NPS Denver Service Center references the 2021 IBC and its appendices and the 2021 International Existing Building

Code (IEBC) and its appendices for design and construction. Additionally, the National Fire Protection Association (NFPA) 101 Life Safety Code is referenced for conditions where the IBC is silent.

National Fire Protection Agency (NFPA)

NFPA Codes for historic buildings include NFPA 909, “Code for Protection of Cultural Resources Properties – Museums, Libraries, and Places of Worship,” and NFPA 914, “Code for Fire Protection of Historic Structures.”

National Park Service Management Policies

The NPS General Management Policies (2006) guide overall management of historic properties. The introduction to Section 5, “Cultural Resource Management,” states that:

The National Park Service will protect, preserve, and foster appreciation of the cultural resources in its custody and demonstrate its respect for the peoples traditionally associated with those resources through appropriate programs of research, planning, and stewardship.

These goals are achieved through research and documentation of cultural resources, application of integrative and collaborative planning procedures, and appropriate treatment and stewardship to make cultural resources available for public understanding and enjoyment. Section 5 also explicitly states that preservation of cultural resources in their existing states should receive priority, and that alternatives should be considered before undertaking treatments of greater intervention.

Director’s Order 28

Director’s Order 28 is the NPS Cultural Resource Management Guideline. It requires that the NPS plan for the protection of cultural resources such as the Steeple Building. The development of this report addresses research and planning to protect and manage the Steeple Building.

Hazardous Materials

A hazardous materials survey was not included in the scope of work for this HSR.

Building Code Summary

Treatment and use of the Steeple Building are affected by federal laws and regulations including but not limited to the following:

- 2021 International Building Code (IBC) and its appendices
- 2021 International Existing Building Code (IEBC) and its appendices
- 2021 International Mechanical Code (IMC)
- 2021 International Plumbing Code (IPC)
- 2021 IFC (International Fire Code)
- National Fire Protection Association Codes (NFPA) current edition including but not limited to the following:
 - NFPA 101 Life Safety Code
 - NFPA 70 National Electrical Code
 - NFPA 72 National Fire Alarm and Signaling Code
 - NFPA 914 Code for Fire Protection of Existing Structures
- NPS Reference Manual 58 – Structural Fire
- Architectural Barriers Act Accessibility Standards (ABAAS)
- Americans with Disabilities Act (ADA) 2010 Design Guidelines
- 2003 ANSI A117.1-09 Accessible and Useable Buildings and Facilities
- Uniform Accessibility Standards (UFAS)

The following summary is an initial analysis to inform alternatives that might be explored during the design of any proposed work to the Steeple Building. This analysis is not comprehensive and

needs to continue to be updated and expanded throughout the design process.

Occupancy Type:

(Chapter 3 IBC: Use and Occupancy Classification)

A – Assembly

According to the IBC, Assembly Group A is intended for “the gathering together of persons for the purposes such as civic, social or religious functions, recreation, food or drink consumption or awaiting transportation” in a space with an occupant load of at least 50 persons.

The General Management Plan for the Steeple building states that it should “be developed as an interpretive museum with exhibits and audio/visual displays. Handicap access will be provided and will offer a special opportunity to those persons unable to navigate the uneven walkways and steep stairs of the fort and historic grounds.”

Construction Type:

(Chapter 6 IBC: Types of Construction)

Type IIIA or IIIB

According to the IBC, type III construction consists of exterior walls of noncombustible materials and interior construction (such as the roof) of combustible materials. Type IIIA consists of interior combustible materials with a fire rating of up to one hour. Type IIIB consists interior combustible materials that are not rated. Note that the construction types of the roof and cupola could not be confirmed, and therefore the fire rating is not fully understood.

Fire-Resistance-Rated Construction:

(Chapter 7 IBC: Fire and Smoke Protection Features)

The Steeple Building had a fire protection system installed in 2017 in the main block, but the steeple tower remains unsprinklered. Confirmation of the Underwriter Laboratories (UL) rating for the wall assemblies should be conducted to confirm with the intended use as an interpretive museum.

Fire Protection Systems:

(Chapter 9 IBC: Fire Protection and Life Safety Systems)

The Steeple Building had a fire protection system installed in 2017 in the main block, but the steeple tower remains unsprinklered. If the Steeple tower is expected to be occupied, the fire protection system should extend to the upper levels.

Occupancy Load Factor:

(Chapter 10 IBC: Means of Egress)

As the building is currently unused and unoccupied, there is no official current design occupancy load. However, for the purposes of analysis the occupant load has been capped at 49 persons within the main building and 9 persons in the steeple tower. Pending future design and structural investigations, this load would potentially increase to correspond with the intended occupancy type of A – Assembly for the main building.

Section 1005 of the IBC states that “The capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant.” The main building exceeds this threshold with each door opening.

For the steeple tower, section 1005 of the IBC also states “The capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairways by a means of egress capacity factor of 0.3 inch (7.6 mm) per occupant.” The stairs in the steeple tower exceed this threshold. However, as the steeple tower does not meet accessibility requirements according to ABAAS, it is recommended that occupancy be limited.

It should be noted that the steeple tower is not anticipated to be occupied. It does not comply with accessibility codes and efforts to bring the structure up to code will likely greatly impact the historic significance and integrity of the building.

Accessibility:

(Chapter 11 IBC: Accessibility, ABAAS)

An accessible path to the building appears to be in place. From the side yard entry on Church Street, there is a concrete path leading from the sidewalk to Door E on the south façade. A grading survey was not included as a part of this HSR, and any existing slopes should be confirmed prior to public access.

Additionally, the steeple tower does not contain an accessible means of travel to the top level of the cupola. However, there are exceptions for qualified historic buildings for accessible routes. The exceptions apply when the State Historic Preservation Officer or Advisory Council on Historic Preservation agree that compliance for specific element (such as stairs) would threaten the historic significance of the building.

International Existing Building Code (IEBC)

The Steeple Building is a contributing building within the Christiansted National Historic Site, which is listed in the National Register of Historic Places, and therefore, Chapter 12: Historic Buildings applies to the Steeple Building.

Planning for Resiliency

Resilience to Natural Hazards considers application of the goals set out in the 2016 National Park Service Cultural Resources Climate Change Strategy. The goals for cultural resources and climate change as described in the strategy are:

- **Connect Impacts and Information:** connect cultural resources to the four pillars of climate change response: science, adaptation, mitigation, and communication.
- **Understand the Scope:** Identify and improve understanding of the effects of climate change on cultural resources.
- **Integrate Practice:** Incorporate climate change into cultural resources research, planning, and stewardship.
- **Learn and Share:** Collaborate with partners to grow and use the body of knowledge and practice for cultural resources and climate change.

As is mentioned in the description of “Hurricane and Severe Storms” in Part 1: Developmental History, the annual average temperature in the US Caribbean has increased by about 1.5 degrees Fahrenheit since 1950, and this trend is expected to continue. Climate change projections suggest that warming will result in an increase in the frequency of Category 4 and Category 5 storms in the Caribbean region. Although the NPS on St. Croix maintains an emergency management plan, park resources face multiple challenges from outdated drainage and storm water infiltration of foundations to the potential of storm surges and significant water damage during increased storm events.

Ultimate Treatment and Use

Approach to Treatment

The Secretary of the Interior has established standards and guidelines for the appropriate treatment of historic properties. These standards identify three approaches that might be considered for treatment and use of the Steeple Building: Restoration, Preservation, and Rehabilitation (the fourth approach, Reconstruction, is not an applicable treatment approach for this site).

Because the Steeple Building property contributes to the national significance of the Christiansted National Historic Site under themes related to the park's legislated significance, the Management Category for the Steeple Building is Must Be Preserved and Maintained. The Ultimate Treatment was identified in 1960 as Restoration to the building's appearance circa 1800 and was implemented between 1960–1969. The Restoration treatment was codified in the 1986 General Management Plan and has been maintained since then.

Restoration

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 function is appropriate within a restoration project.” Based on the research that informs this HSR, the National Park Service adopted Restoration as the Ultimate Treatment of the Steeple Building in 1960, with a target period of circa 1800. This treatment followed the recommendations of architect Frederik Gjessing in his 1956 preliminary survey report and 1960

historic building report for the Steeple Building.¹ Therefore, the continued Restoration of the Steeple Building to its appearance circa 1800 is recommended and addressed in this HSR.

With a Restoration approach, many potential uses are still feasible for the building. Once life safety and accessibility requirements are met, the Steeple Building could be opened up as an interpretive historic building museum with exhibits showing both the history of the building as well as the surrounding site and community. The building could also be used as an event space for groups of under 50 people.

Preservation

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 than 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-required work to make properties functional is appropriate within a preservation project.” Under Preservation, the Steeple Building would be maintained in more or less its present state, with the maintenance necessary to continue in its present condition and to make improvements related to accessibility and building systems that would allow visitors into the building. Therefore, Preservation is included in the treatment approach toward the Steeple Building.

Rehabilitation

Rehabilitation is defined as “the act or process of making possible a compatible use for a property through repair, alterations, and additions while

¹ Gjessing, *Preliminary Survey Report (Architectural Data)*, 122; Gjessing, *Historic Building Report, Architectural Data - Part II*, 25.

preserving those portions of features which convey its historical, cultural, or architectural values.” A rehabilitation approach to treatment would provide the most flexibility for making modifications to the building that allow for public access and use of the Steeple Building. This approach emphasizes the retention and repair of historic materials, but more latitude is provided for replacement because it is assumed the property is more deteriorated prior to work. Like those for Preservation, the standards for Rehabilitation focus attention on the preservation of those materials, features, finishes, spaces, and spatial relationships that, together, give a property its historic character. A Rehabilitation approach to treatment for the Steeple Building would support modifications to add visitor amenities such as restrooms to the building or site. Because a planning effort has not been completed for the Steeple Building and the Management Category is “Must be Preserved and Maintained,” it would be inappropriate to recommend Rehabilitation as the approach to treatment at this time.

However, past Rehabilitation projects have occurred over the lifetime of the building. The building’s use as a storage facility and classroom are prime examples. These efforts were reversed by the park during the 1960s restoration project because they were inconsistent with the history of the building.

Accessible Path of Travel

The addition of defined site parking, including accessible site parking, and a new compliant approach to the building from the parking area would improve visitor access. This work would require modifications to the site that cannot be completely evaluated without a Cultural Landscape Inventory.

Recommendations for Treatment

Architectural Recommendations

Treatment recommendations presented in this document support the “Must be Preserved and Maintained” management category and follow the Restoration approach method. The building was rebuilt in the mid-1960s to the present configuration utilizing both new and original materials. The newer exterior materials include roofing and flashing, hollow core concrete masonry units (CMU), plaster, windows, and shutters. Other exterior elements are a combination of new materials and salvaged historic materials.

As was the case with Section 3 of this report, Physical Description and Condition Assessment, site visits for this HSR only involved visual observations of the building and did not include nondestructive testing.

Cracks

Issue: Cracks are found in the walls of both the interior and exterior of the main building and steeple (Figure 5-1).

Recommendation: The recommendations for crack repairs can be divided into three sections: investigation, repair, and monitoring. The first recommendation is to perform an in-depth examination of the structure of the Steeple Building’s walls where cracks and previous repairs are present. Small probes should be taken in locations exhibiting bulging, cracking, or displacement to better understand the existing conditions within the walls. The results of these probes will greatly inform the crack repair monitoring and recommendations.

Cracks that are large enough to allow water to pass into the wall assembly should have the finish material (stucco or plaster) removed sufficiently to reveal any damage to the underlying masonry. If nothing is found in the wall, plaster and stucco should be reapplied to match existing.

If a crack large enough to allow water migration (typically greater than 1/8”) is found in the interior masonry wall, crack injection should be performed. The repair material should be selected to be compatible with the physical properties of the original masonry. Information from recommended probes into the composition of the wall assembly will dictate the type of crack injection performed. In addition to injection repairs, some cracks may need to be stitched together with stainless steel dowels before replastering.

Following the repairs, the cracks should be visually checked at regular intervals using a tell-tale monitor. Monitors should be attached on either side of the crack using stainless steel anchors and epoxy, as per the manufacturer’s recommendations. As a part of regular maintenance, readings from the monitors should be recorded daily for the first seven days immediately following the repair and at least once a week for the next month. If movement is arrested, then no architectural or structural repairs are required. However, if settlement continues and causes the cracks to expand again, foundation reinforcement in the form of underpinning or deep foundations may be required.



FIGURE 5-1. Exterior crack.

Masonry

Issue: Deteriorated or damaged masonry units can be found in the walls of both the building and steeple. Observed examples of deterioration include cracking, bulging, and stucco and plaster delamination, which are discussed separately. Also, the interior composition of the walls varies depending on their date of construction.

Recommendation: In conjunction with the work for crack repairs, preliminary investigation of each type of masonry is recommended in the form of in-depth examination using exploratory probes where issues occur. This should occur at both the main building's walls and the steeple's walls and will provide more information on how water travels through the wall assembly. It will also inform whether further stabilization is required and if additional steps are needed to ensure the success of applied finishes like plaster, stucco, and paint.

For the steeple, it is recommended that any deteriorated mortar and masonry units should be removed and replaced in kind. Mortar analysis should be done to ensure the appropriate repair is made. Repairs using mortars that are either too strong or too weak in comparison to the surrounding material can cause further deterioration of the masonry wall.

It is also recommended that horizontal dowel or sock anchors should be added at the two lower masonry tier levels. Vertical cracks have developed in the arches above the arched openings. By core drilling and adding reinforcement, the bond beams distribute stress among the four corners of the steeple tower, allowing efficient structural behavior compared to having each corner act independently. By making all four corners act together, the seismic performance of the steeple is greatly improved. The additional anchors should significantly improve both the lateral and gravity performance of these areas of masonry by essentially introducing two levels of bond beams.

During a lateral load design event, the piers are expected to be loaded in tension. The piers need to be reinforced for tensile stresses by adding vertically cored (from the top down) sock anchors to provide vertical reinforcement and strengthen the masonry portions of the steeple.

Supporting narrative: The northwest wall appears to be original to the building and was built in 1749–1751. The masonry walls of the steeple tower were constructed in 1794. The southwest wall was constructed in 1909. The remaining northeast and southeast walls were rebuilt during the 1960s renovation. The type of construction varies greatly between each of these walls, and therefore the performance of each wall also varies greatly. On the interior of the main building, the most extensive plaster damage is largely concentrated on the northwest and southwest walls, which are the oldest. It is possible that water is entering these walls more readily than elsewhere in the building and is thus causing more serious damage. If this is the case, then a vapor barrier layer may be required in these locations. Information from the wall probes will inform this recommendation. Likewise, probe investigations will provide more information as to whether changes to the site drainage system could alleviate the need for installing damp proof coursing. Probes could help show if rising damp is a contributing factor to water infiltration.

Wall Drainage

Issue: The tops of the exterior walls of the main building are flat horizontal surfaces. This allows for water runoff from the roof and water overflow from the gutters to pool on top of the wall, a likely source for water infiltration and runoff staining. See figures 5-2 and 5-3.

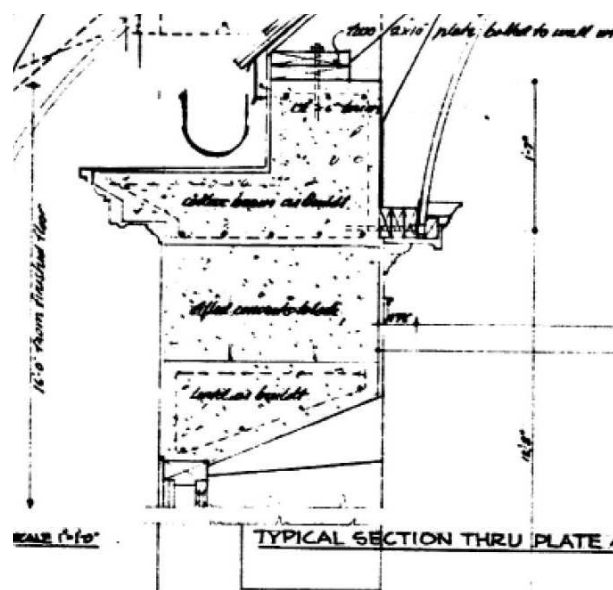


FIGURE 5-2. Typical section through wall 1960 drawings.

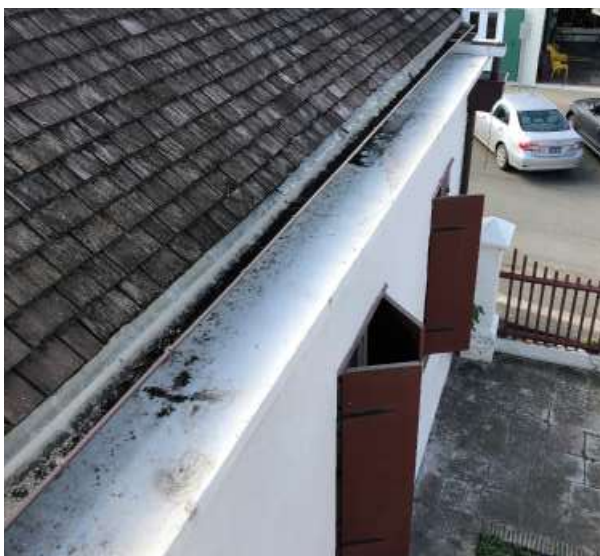


FIGURE 5-3. Top of wall detail.

Recommendation: It is recommended that a metal cap flashing be installed on the top of the walls, under the gutters, to divert water away from the interior of the building. The installation process involves attaching a pressure-treated wood nailer to the wall with a metal cap placed over it. The metal cap should be of a non-staining material (such as aluminum), painted white, and installed with a slope steep enough to direct water away but shallow enough not to create a visible line from the adjacent sidewalk. Priority should be put on retaining as much original fabric as possible

It is also recommended that the gutter and entire rain removal system be regularly inspected to ensure proper diversion of water away from the building. If a part is missing or broken, then it should be replaced and any blockages (such as vegetation) should be removed. Once the current system is repaired, an investigation should be done to make sure the current size and placement of gutters and downspouts is sufficient for the roof. If the current configuration is unable to properly divert water coming off the roof, it should be increased in size. The investigation should also check that there is positive slope on gutters to ensure that water is not being directed back toward the building.

Rising Damp

Issue: Rising damp can be seen in many locations around the courtyard, carriageway, and inside the building.

Recommendation: Rising damp occurs as a result of water traveling up from the ground into a wall assembly via capillary action. Much like with a straw, water is drawn up tiny holes in materials like brick or some stone. When another porous material (such as plaster or stucco) is installed over the wall, the water can then be absorbed and lead to further damage. This recommendation follows the “rehabilitation” approach and is a high priority.

The first recommendation is to take any finishes off a wall exhibiting signs of rising damp. The exposed wall should then be left to dry. It could be possible that water is coming from other sources, such as condensation, and is being trapped in place by stucco or plaster. If the wall is unable to dry or if the water appears along the ground, the rising damp can be confirmed.

It is then recommended that a damp-proof course be installed along a lower elevation on the wall. Damp-proof courses are water-impervious layers located in the lower sections of walls to prevent water rising. The use of damp-proofing injection cream is an effective way to retroactively install these courses in an existing wall. Holes are drilled at intermittent distances (as instructed by the manufacturer) in the mortar and the cream is injected in. The cream then reverts to a liquid phase and penetrates the surrounding masonry. As it cures, an impervious water barrier is created.

A second option for the creation of a damp-proof course is to remove a continuous layer a brick from the wall and then install a damp-proof membrane. To work most effectively, the membrane should act as through wall flashing, which would require similar work to be performed on the other side of shared walls.

Stucco or plaster should be reapplied to the treated wall only after the damp proof course has time to cure (if using injection cream) and the substrate masonry has thoroughly dried.

Additionally, the use of electro-osmotic pulse (EOP) technology should be investigated to mitigate water infiltration if the installation of full damp proof coursing isn't possible. The technology works by inserting positive electrodes, or anodes, into the wall or floor. Negative electrodes, or cathodes, are also installed in the soil exterior of the building. An electronic control units delivers

a pulse to the anodes which drives water to the cathodes and away from the building.

Wood Framing

Issue: The top wood-framed portions of the steeple require reinforcement to resist code-level forces.

Recommendation: It is recommended that additional structural plywood sheathing should be added to the octagonal drum of the steeple. The purpose of the plywood sheathing is to stiffen the otherwise flexible timber framing; in order to keep the plywood hidden and reduce visual impact, the sheathing should be applied outboard of the framing members and as the backing material for replacement wood shingle siding. The structural plywood would allow efficient stress distribution among the wood posts. Strengthening the connections between the wood elements will provide an adequate load path. The cupola is mostly open, with new members that were added during the 1983 reconstruction within the historic profile envelope. There is space adjacent to the wood members that can accommodate additional strengthening with steel plates or rods within the interior of the visible wood profile.

Staining

Issue: Dirt, dust, and other debris can be found along the walls of both the interior and exterior of the main building and steeple.

Recommendation: Prior to cleaning, all cracks or other openings that could allow water into the wall assembly should be repaired. Next, it is recommended that regular cleaning of the wall surfaces should be performed as a part of a maintenance routine. Cleaning solutions should be approved by the park prior to application, as many contain harmful chemicals that could damage the structure or surrounding landscape. High pressure washers or other abrasive techniques should not be employed.

Care should be taken to not over saturate the interior plaster, which is a porous material. Cleaning techniques for interior plaster include soaking a non-abrasive cloth in warm water and wringing it out thoroughly. Mild soap or other appropriate cleaning agents can be applied to the cloth and the plaster can be cleaned. All soap or



FIGURE 5-4. Bulging at window.

other residue should be wiped off completely and the wall should be dried.

Bulging

Issue: Bulging can be found in both the interior and exterior of the walls of the main building. Bulging was not found in the steeple (Figure 5-4).

Recommendation: It is recommended that areas that demonstrate bulging should have the plaster or stucco stripped away, and the substrate should be inspected for underlying cracks or other sources of water infiltration. If water is found coming through the wall assembly, the source should be identified and the cause remedied (i.e., cracks, roof leakage, pooling from the top of the wall). Once the source of water is fixed, the wall should be dried and prepared for the application of finish material. The reapplied plaster and stucco should be of a similar composition to the existing material and finished to match the surrounding wall.

Stucco and Plaster

Exterior

Issue: The composition and finish of the exterior stucco are not currently documented. The last physical investigation was conducted in 1956, and that information was used to inform the 1960s

restoration. Many repairs and alterations have occurred since that time.

Recommendation: It is recommended that a materials analysis be completed for the current stucco finish in order to determine its composition. Samples should be taken from multiple locations that may yield information on stucco mixes used throughout the history of the building. Based on available documentation, the exterior of the main building is most likely coated in a lime-based stucco. This was the traditional finish used during the building's period of significance and its use was popular up until the invention of Portland cement and gypsum-based plasters in the 1940s and 1950s. Lime-based stucco remains a suitable finish for the exterior of the building due to its workability, vapor permeability, longevity, and final appearance.

Once the composition of the stucco is determined, a similar mix should be used for the repairs described previously. The most important part of recommending stucco replacement is that it is done in kind with the existing material remaining. Dissimilar mixtures will expand and contract at different rates, thus causing cracks. In addition, different mixtures will have different rates of water permeability and will therefore cause water to either be trapped behind the surface or force it through an adjoining material.

Interior

Issue: Similar to the exterior stucco, it is recommended that the interior plaster be tested in each location where it is deteriorated to determine the composition.

Recommendation: It is recommended that a materials analysis should be completed for the current plaster finish in order to determine its composition. Samples should be taken from multiple locations that may yield information on plaster mixes used throughout the history of the building. Based on available documentation, the interior of the main building and the second and third levels of the interior of the steeple are most likely coated in a lime-based plaster. This was the traditional finish used during the building's period of significance.

There are sections of heavily deteriorated plaster that reveal a blue-colored material, which may be a vapor barrier applied as an undercoat to the finish

plaster. Further investigation and testing of this blue material is recommended. One of the primary benefits of lime-based plaster is that it is vapor permeable and will breathe, allowing for water to dry out of the wall assembly. Installation of a vapor barrier should only occur if it is compatible with the appropriate plaster type.

Similar to the stucco, once the composition of the plaster is determined, a similar mix should be used for the repairs described above. The most important part of recommending replacement of plaster is that it is done in kind with the existing material remaining. Dissimilar mixtures will expand and contract at different rates, causing cracks.

Paint or Other Finish Coating

Exterior

Issue: Repainting is a regular part of maintenance, and an appropriate finish needs to be determined for elements on the exterior of the building.

Recommendation: It is recommended that paint analysis should be performed on the exterior walls of the main building and steeple. For immediate repairs and repainting, a coating similar to what is present should be used. Use of dissimilar finishes can cause water infiltration issues and exacerbate problems such as cracking.

Limewash was used originally on the exterior of the building and a similar coating currently appears to be on the building. Limewash is not only a traditional finish material that works well with masonry and stucco because of its breathability, but it is also alkaline and is documented to deter biological growth. However, it often requires more maintenance and needs to be reapplied every couple of years.

Modern exterior mineral paints can have a service life of 10 to 15 years or more depending on the manufacturer and application process. Modern paints are also more standardized in their composition. Limewash consistency can vary depending on the availability of materials and accuracy of maintenance records. Modern mineral paints also often require the full removal of existing finishes down to the substrate. For the Steeple Building, this could result in the loss of layers of existing historic coatings. This is particularly an

issue for the steeple tower which appears to retain more original material than the main building. If a modern mineral paint is used, a full investigation and analysis of the existing finishes should be done prior to any removal. The results of the analysis will likely provide valuable information on the color, textures, and composition of the previous finishes. Once completed, the results should be documented in the park archives. Finally, any modern paint needs to maintain the vapor permeability of the wall assembly and film forming finishes should not be used.

It is also recommended that the park develop a maintenance schedule for expected availability for repairs. This should be considered when determining if a new coating system should be used. A historically accurate coating, like the current limewash, will need to be reapplied more frequently than a modern mineral paint. It is recommended first that limewash be kept as the finish material for the exterior, as it is historically appropriate and works well with the underlining wall assembly. However, if reapplying the limewash every couple of years is not feasible, a longer-lasting modern finish would be more appropriate provided that it matches the current color and appearance.

It is also recommended that the window shutters, doors, louvres, and surrounding trim should match the existing red in color and texture. The paint should be suitable for exterior application on wood in a marine environment.

The windows and doors have also been replaced since the 1960s renovation and do not retain any historic finishes. However, supporting documents show that the current color and finish appear similar to how the building's openings looked during its period of significance.

Supporting narrative: It is unlikely that original finishes remain from the period of significance, as a majority of the walls and stucco was removed and replaced during the 1960s renovation. In areas where original elements remain, it is likely that centuries of weathering and maintenance work have stripped what remains of historic finishes. However, based on historic documentation and paintings, it appears that the current finish on the exterior is similar to that of the building during its period of significance.

Interior

Issue: Repainting is a regular part of maintenance, and an appropriate finish needs to be determined for elements within the building.

Recommendation: The first recommendation is to perform a paint analysis on the interior walls of the main building. The results of the paint analysis and recommended coatings should be coordinated with the results of the plaster analysis. If the interior plaster is lime-based, the selected coating should be vapor permeable in order to not trap water within the plaster and cause further deterioration. The color and finish of the interior finishes should match the existing in all areas that require repainting.

It is also recommended that the mezzanine level and stairs should retain the white finish while the shutters and doors should match the existing red. The type of paint used should be suitable for unconditioned spaces in a marine environment and match the current matte finish.

It is recommended that inspection for repainting should be incorporated into a regularly set maintenance schedule. Paint finishes should last several years if properly applied and without underlining issues with the substrate.

For the steeple, it is not likely that a finish paint was applied in the interior above the first floor. It is recommended that exposed masonry and wood should be left unfinished in these areas. The plaster of the walls on the second and third floors should be treated similarly to the plaster of the walls of the main building.

Supporting narrative: It is highly unlikely that any original paint remains, as the entire interior was renovated in the 1960s. During this renovation, most walls were torn down and rebuilt and the plaster was stripped from the walls that remained. However, based on historic documentation and paintings, it appears that the current paint finish on the interior is similar to that of the main building during its period of significance.

The mezzanine, windows, and doors were also rebuilt and replaced during the 1960s renovation and therefore do not possess original paint finishes. However, according to available documentation, the current paint color matches the color during the period of significance.



FIGURE 5-5. Example of broken elements at Window 9.

Replacement and Repair

Windows

Issue: There are windows with broken or missing elements (Figure 5-5).

Recommendation: It is recommended that every window be surveyed for deficiencies and repair needs. Any element that is damaged or missing should be replaced in kind or with a material suitable for a tropical marine environment. The window assemblies of the Steeple Building consist of a wooden frame, wooden sashes and muntins, wooden shutters, single pane glass lights, and metal hardware.

A regularly scheduled survey of the window conditions should be a part of the building's standard maintenance plan. Survey frequency should be coordinated with the park, though surveys are recommended at least once annually

and after any major storm or other natural event that could cause damage.

Repair of the window parts should be the first option considered over full replacement. However, when the extent of the repairs becomes less practical and more cost prohibitive, replacement would be the more appropriate treatment. In addition, repairs should not be made with dissimilar materials. If a wooden piece is being repaired with a new wood species, then the two types of wood should be comparable in terms of thermal expansion, water absorption, etc. Dissimilar materials could cause further damage to the entire assembly.

Supporting narrative: The Steeple Building's windows have been replaced many times over its life. As such, replacement of damaged units with new materials would be acceptable provided that they match the historic color, profile, and type. For example, broken wooden window sashes should not be replaced with an entirely new material like aluminum or vinyl. However, use of a new species or type of wood like Accoya over the traditional mahogany would be appropriate. The determination of wood type is dependent on availability, cost, and serviceable lifespan in a tropical marine environment.

Similarly, single glass panes in the windows could be replaced with impact-resistant laminated glass. However, replacement of the single pane with a more modern double or triple paned assembly could change the appearance of the window and would not comply with the ultimate treatment of restoration.

The window hardware appears to be made from a ferrous (iron-based) metal such as cast iron or steel, which is painted black. This is evidenced by the existence of rust on some of the pieces. Though this is a more traditional metal for hardware in the Steeple Building, newer materials such as stainless steel may be a more appropriate solution because of their rust resistance. However, the new metal should be shaped in a similar manner to the existing and finished with a black coating.

Doors

Issue: There are doors with broken or missing elements.

Recommendation: The recommendations for the doors follow the same logic as those for the windows. Every door should be surveyed for deficiencies and repair needs. Any element that is damaged or missing should be replaced in kind or with a material suitable for a tropical marine environment. The doors of the Steeple Building consist of one or two wooden leaves, frame, wooden louvers, single-pane glass transom lites, and metal hardware. Furthermore, some of the door leaves are composed of stiles, rails, and panels.

A regularly scheduled survey of the door conditions should be a part of the standard maintenance plan for the building. Survey frequency should be coordinated with the park, though surveys are recommended at least once annually and after any major storm or natural event that could cause damage.

Repair of the door parts should be the first option considered over full replacement. However, when the extent of the repairs become less practical and more cost prohibitive, replacement would be the more appropriate treatment. Repairs should not be made with dissimilar materials. If a wooden piece is being repaired with a new wooden species, then the two types of wood should be comparable in terms of thermal expansion, water absorption, etc. Dissimilar materials could cause further damage to the entire assembly.

Supporting narrative: The doors of the Steeple Building have been replaced many times over the building's life. As such, replacement of damaged units with new materials would be acceptable provided that they match the historic color, profile, and type within reason. For example, broken leaves should not be replaced with an entirely new material like steel. However, use of a new species or type of wood like Accoya over the traditional mahogany would be appropriate. The determination of wood type is dependent on availability, cost, and serviceable lifespan in a tropical marine environment.

Similarly, the single glass panes in the transom lites could be replaced with impact-resistant laminated glass. However, replacement of the single pane with a more modern double- or triple-paned assembly could change the appearance of the lite

and would not comply with the ultimate treatment of restoration.

The door hardware appears to be made from a ferrous (iron-based) metal such as cast iron or steel, which is painted black. This is evidenced by the existence of rust on some of the pieces. Though iron is a more traditional metal for hardware in the Steeple Building, newer materials such as stainless steel may be a more appropriate solution because of their rust resistance. However, the new metal should be shaped in a similar manner to the existing and finished with a black coating.

Light Fixtures:

Issue: There are currently no light fixtures in or on the building.

Recommendation: It is recommended that further investigation be done to determine if light fixtures appropriate for the period of significance be added to the building. As described in the Developmental History section, there were originally three chandeliers (two crystal and one brass) that hung in the interior of the Steeple Building. During the 1960s Rehabilitation project, efforts were made to reproduce and install these chandeliers. However, it was determined that reproduction would be too costly. Further investigations should be done prior to any new renovation or rehabilitation projects to determine if replicas of the original chandeliers should be installed.



FIGURE 5-6. Floor tile setting bed.

Floor Bedding

Issue: The substrate under the tile floor is unknown. Currently, it appears that the tiles are laid atop compacted sand that sits directly above soil (Figure 5-6).

Recommendation: The first recommendation is to determine what makes up the flooring substrate. A series of at least four investigative probes should be performed in various locations along the floor to best determine the construction of the substrate.

The floor setting appears to consist of compacted sand sitting directly over soil. If this is the case, the floor tiles should be surveyed for damage, marked for salvage and reinstallation (where appropriate), and removed. A new solid substrate should then be installed. A lightweight concrete slab is typical for this type of construction. Finally, the salvaged and replacement tiles should be installed in place.

Floor Tiles

Issue: There are several broken marble floor tiles in the main building. The floor is also uneven and buckles in certain places.

Recommendation: It is recommended that a comprehensive survey of the floor tiles should be conducted. Each tile should be inspected for cracks and other damage and its location documented. Tiles without damage should be salvaged and kept for reinstallation. Tiles that

cannot be repaired should be discarded and replaced in kind. Replacement tiles should match the existing in style, color, size, composition, and location. Installation of both the salvaged and new tiles should match the existing checkered pattern. Salvaged tiles should be installed in their original location.

Shingles

Issue: There are damaged and missing shingles on the roof and octagonal section of the cupola.

Recommendation: On the roof, missing shingles should be replaced to match existing. Shingles should be attached to the underlining wood sheathing and installed to provide adequate overlap and coverage.

If the sheathing shows signs of deterioration (such as rot), it should also be replaced, and new shingles should be installed on top. The existing sheathing on the roof of the cupola should be examined from the interior side of the roof; if the existing sheathing shows similar signs of deterioration, the existing roofing should be removed, damaged sections of sheathing replaced, and new roofing installed.

For the octagonal drum, all shingles will need to be removed and replaced. New structural plywood sheathing should be installed to provide better support. All existing wood shingles should be removed and installed per Cedar Shake and Shingle Bureau installation recommendations.

Biological Growth

Issue: Biological growth in the form of vegetation and mildew can be found on the exterior of the building (Figure 5-7).

Recommendation: Regularly assess and remove vegetation that is growing within built features. Vegetation removal methods should be appropriate for the intensity of vegetation growth and the materials affected. Many chemical weed suppressants contain salts that accelerate deterioration of stone, concrete, and metal and should be avoided where those materials exist. Likewise, the use of biological suppressants with acids should be limited as they may deteriorate the stucco finish. Spot testing a small section in a discreet location should always be done first with any cleaning agent to observe any potential adverse



FIGURE 5-7. Plant growing through rain leader.



FIGURE 5–8. Broken Hospital Street drain. effects. High pressure washers or other abrasive techniques should not be employed.

Removal of vegetation and biological growth should occur wherever present. This includes but is not limited to mortar joints in the stone stairs and inside the rain leaders and gutter system.

Supporting narrative: Examples of cleaning procedures include: 1) Remove vegetation growing in deteriorated mortar joints of stone entry steps at Door B. Where vegetation has taken growth in the mortar, the joints should be cleaned out and repointed. 2) Apply a cleaning agent, such as D/2, on the surface of the exterior walls to remove mildew. Select a small section of the wall to first test the application. The solution should be diluted according to the manufacturer's recommendations and then applied with a brush, roller, or low pressure sprayer.

Site Recommendations

Paved Areas

Issue: The paved areas on the north façade appear to slope toward the building in certain locations.

Recommendation: It is recommended that the paved areas surrounding the building should be regraded so that the flow of water is directed away from the building. Any damaged pavers, bricks, or site concrete should be replaced.

Vegetation

Issue: Vegetation is coming through the paved site features in front of the northern façade as well as through built elements, such as the steps leading up to the doors and in the rainwater leaders.

Recommendation: Vegetation should be removed from paved and built elements surrounding the building. This includes any growth located in the paved areas of the north and south side yards, along the edge of the west façade and adjacent sidewalk, within the rainwater leader system, and in the joints of the steps leading to the exterior doors. Intentionally designed planting areas are excluded from vegetation removal. Removal of vegetation should be done in consultation with the NPS' 2021 CLI report for the same property.

Removal methods should be appropriate for the amount of plant growth present and where negative impacts to the building material can be avoided. Chemical weed suppressants contain salts that can accelerate the deterioration of stone, concrete, masonry, and metal. When these materials are present, removal of vegetation should be done by hand and without the use of chemicals.

Drainage

Issue: Improper drainage appears to be a cause of settlement on the south facade and site walls.

Recommendation: Drainage mitigation should be adopted to move water away from the building, including possible re-grading, redirecting, and improving the roof drainage system.

Site drainage should be assessed annually and corrected to ensure that rainwater flows away from the building and does not flow toward the foundation. Critical drainage areas are the front

paved areas (north façade) and the rear yard (south façade).

The series of drains that daylight onto Hospital Street should also be further investigated (Figure 5-8). It appears that these drains are no longer in operation. Either a test to determine waterflow or a borescope camera should be used to determine the extent of usability of the pipes. If completely damaged, they should be replaced in kind.

Exterior Recommendations

Foundation

Condition: The exact condition of the foundation was unable to be determined.

Treatment Recommendations to use: Further investigation should be conducted to determine the composition and condition of the foundation. This includes a geotechnical investigation to determine soil conditions as well as physical probes to determine if the existing documentation shows the correct structure.

Supporting narrative: Based on the HABS documentation, it appears that the original rubble and brick masonry walls likely continued a foot or two below the grade and corbeled out several inches at the base. Several of the old foundation walls, which are now within the footprint of the building, were documented as part of the archeological work in the 1950s.

There was no crawlspace access in the building at the time of the site visit. It appears likely that this crawlspace was backfilled in the 1950s or 1960s. The 1956 condition report noted that the wood joists that had spanned above the crawlspace were in poor condition with significant termite damage, and photo documentation from around the time shows that the floor was taken out shortly thereafter.

Main Building

Northwest Elevation – East Side

Condition: The eastern half of the northwest façade (facing Company Street) is in overall good condition. The wall appears to be intact, but instances of damage and deterioration are present.

The different types of issues can be broadly grouped into two categories: bulging and staining.

Treatment Recommendations to use: Treatment for the exterior eastern half of the northwest façade of the main building should follow the recommendations laid out in the following sections: the exterior portion of Stucco and Plaster, the exterior portion of Paint or Other Finish Coating, Cracks, Staining, Bulging, Masonry Walls, and Biological Growth.

Northwest Elevation – West Side

Condition: The western half of the northwest façade (facing Company Street) is in fair condition. The wall is intact, but several instances of damage and deterioration are present. The different types of damage and deterioration can be broadly grouped into four categories: penetrations, cracks, bulging, and staining.

Treatment Recommendations to use: Treatment for the western half of the northwest façade of the main building should follow the recommendations laid out in the following sections: the exterior portion of Stucco and Plaster, the exterior portion of Paint or Other Finish Coating, Cracks, Staining, Bulging, Masonry Walls, and Biological Growth.

Northeast Elevation – East Side

Condition: Overall, the northeast façade (facing Hospital Street) is in good condition. The most prominent issues found were cracking and plaster damage.

Treatment Recommendations to use: Treatment for the exterior northeast façade of the main building should follow the recommendations laid out in the following sections: the exterior portion of Stucco and Plaster, the exterior portion of Paint or Other Finish Coating, and Cracks.

Southeast Elevation

Condition: The southeast façade (facing the church yard) is in overall good condition, though with some issues of varying degrees of severity. The different types of issues can be broadly grouped into two primary categories: penetrations and cracks.

Treatment Recommendations to use: Treatment for the exterior southeast façade of the main building

should follow the recommendations laid out in the following sections: the exterior portion of Stucco and Plaster, the exterior portion of Paint or Other Finish Coating, and Cracks.

Southwest Elevation

Condition: Overall, the southwest façade (facing Church Street) is in good condition. Very few of the issues seen in other parts of the exterior are present here.

Treatment Recommendations to use: Treatment for the exterior southeast façade of the main building should follow the recommendations laid out in the following sections: the exterior portion of Stucco and Plaster, the exterior portion of Paint or Other Finish Coating, Staining, and Cracks.

Steeple

Northwest Elevation

Condition: The northwest façade of the steeple is in good condition. At the first tier, there is some paint loss below the window, particularly from the sill and apron.

At the second floor, there appears to be heavy black gypsum crusts and staining at the cornice level.

The third floor and cupola both appear to be in good condition with no major problems present.

Treatment Recommendations to use: Treatment for the exterior northwest façade of the steeple should follow the recommendations laid out in the following sections: the exterior portion of Paint or Other Finish Coating, Staining, and Masonry Walls. For the octagonal drum and upper cupola, refer to recommendations included in the Wood Framing and Shingles sections.

Northwest Elevation

Condition: The northwest façade of the steeple is in overall fair condition. Starting at the first floor, some vegetation is growing in the steps leading up to Door C. A crack over 1/2" wide runs directly under Door C. A section of the middle panel on the northwest leaf of Door C is missing.

At the top left corner of the first floor, another crack extends through the cornice. A smaller crack also runs through the cornice in the center of the elevation and extends up into the second floor.

The second floor has extensive paint and plaster damage. Several series of cracks are also present throughout both sets of pilasters and in the blind arch.

Approximately half of the wood shingles are missing from both the east and northeast elevations at the third floor.

The cupola appears to be in good condition with no major problems present.

Treatment Recommendations to use: Treatment for the exterior northeast façade of the steeple should follow the recommendations laid out in the following sections: the exterior portion of Stucco and Plaster, the exterior portion of Paint or Other Finish Coating, Staining, Cracks, Biological Growth, Shingles, Wood Framing, the door portion of Replacement and Repair, and Masonry Walls.

Southeast Elevation

Condition: The exterior southeast façade of the steeple only contains the third floor and cupola. Both seemed to be in good condition, though there are some missing shingles on the third floor.

Treatment Recommendations to use: Treatment for the exterior southeast façade of the steeple should follow the recommendations laid out in the Shingles section.

Southwest Elevation

Condition: The southwest elevation of the steeple is in overall good condition. Starting at the first floor, some vegetation is growing in the steps leading up to the building.

Plaster damage is located about halfway up the wall southwest of Door B. There also appears to be a broken section of door frame above Door B.

At the second floor, there appears to be cracks both above Window 15 and in the balustrade beneath it.

Plaster damage can also be seen on the southeastern pair of pilasters approximately three quarters up the wall. Gypsum soiling can also be seen along the pilasters and at the cornice.

The third floor and cupola both appear to be in good condition with no major problems present.

Treatment Recommendations to use: Treatment for the exterior southwest façade of the steeple should follow the recommendations laid out in the following sections: the exterior portion of Stucco and Plaster, the exterior portion of Paint or Other Finish Coating, Staining, Cracks, Biological Growth, the door portion of Replacement and Repair, and Masonry Walls.

Roof

Condition: The Steeple Building's roof is in very good condition. It was recently replaced and does not show serious signs of damage or leaking. There are some missing shingles, likely caused by roosting birds and wind during storms.

Treatment Recommendation to use: Treatment for the roof should follow the recommendations laid out in the Shingles section of this chapter. The roof should also be regularly inspected for damage, leaks, or missing elements as a part of the park's regular maintenance schedule.

The rain leader system should also be cleared of all obstructions (such as plant growth and debris), inspected to ensure that the water is draining away from the building, and regularly maintained.

Interior Recommendations

Main Building

Northwest Elevation

Condition: The interior northwest elevation of the main building is in poor condition. The different types of issues can be broadly grouped into three categories: plaster deterioration, cracks, and staining.

Treatment Recommendations to use: Treatment for the interior northwest elevation of the main building should follow the recommendations laid out in the following sections: the interior portion of Stucco and Plaster, the interior portion of Paint or Other Finish Coating, Cracks, Staining, and both windows and doors in Replacement and Repair.

Northeast Elevation

Condition: The interior northeast wall of the main building is in overall good condition. Few of the issues described for the other walls were found. The issues observed for this wall can be broadly

grouped into three categories: plaster deterioration, cracks, and staining.

Treatment Recommendations to use: Treatment for the interior northeast elevation of the main building should follow the recommendations laid out in the following sections: the interior portion of Stucco and Plaster, the interior portion of Paint or Other Finish Coating, Cracks, Staining, and windows in Replacement and Repair.

Southeast Elevation

Condition: Overall, the southeast wall is in good condition. Much like the other walls, most issues correlate to window and door openings. The primary issue is cracking.

Treatment Recommendations to use: Treatment for the interior southeast elevation of the main building should follow the recommendations laid out in the following sections: the interior portion of Paint or Other Finish Coating, Cracks, Staining, and both windows and doors in Replacement and Repair.

Southwest Elevation

Condition: The southwest wall of the main block is generally in poor condition. As in other locations, plaster failure is the most prevalent issue; however, other types of damage are present, including cracking and window damage.

Treatment Recommendations to use: Treatment for the interior southwest elevation of the main building should follow the recommendations laid out in the following sections: the interior portion of Stucco and Plaster, the interior portion of Paint or Other Finish Coating, Cracks, Staining, and windows in Replacement and Repair.

Ceiling

Condition: Along with the roof, the ceiling was replaced in 2017. This included all of the plaster material. As such, the ceiling remains in very good condition. No visible cracks, stains, or other damage in need of repair could be seen.

Treatment Recommendations to use: The ceiling should be regularly inspected for damage, leaks, or missing elements as a part of the park's regular maintenance schedule.

Floor

Condition: The floor of the main building is in very poor condition. Most of the floor is made up of roughly 1'-5" x 1'-5" black and white marble tiles. A large percentage of these tiles (estimated 15%–20%) is either broken, cracked, or chipped in same manner. In addition, the entire floor is uneven, with tiles at different heights.

Treatment Recommendations to use: Treatment for the tiled floor of the main building should follow the recommendations laid out in the floor bedding and floor tiles portions of the Replacement and Repair section.

Mezzanine

Condition: Overall, the mezzanine appears to be in good condition. The columns are all intact and the wood framing looks to be in generally good order. There are, however, rust stains on the paint of the framing that likely come from nails and fasteners.

Treatment Recommendations to use: Treatment for the underside of the mezzanine in the main building should follow the recommendations laid out in the following sections: the interior portion of Paint or Other Finish Coating and Staining.

Stairs

Condition: The stairs are also in good condition, with the exception of the first step, which is broken in half lengthwise.

Treatment Recommendations to use: The broken section of the stairs should be repaired in kind with like materials.

Floor

Condition: The finished floor is in good condition and does not show serious signs of deterioration.

Treatment Recommendations to use: The floor of the mezzanine should be maintained as a part of regularly scheduled maintenance.

Steeple

First Floor

Condition: Overall, the first floor of the Steeple was in good to fair condition. The most prominent issues found on this level are cracks and soiling.

Northwest Elevation

Condition: The largest and most prominent issue on the interior northwest façade is a crack located at the top corner of the arched opening for Window 13. This crack is so severe that an additional structural support is needed to ensure the arch does not fail. The wall is also covered with dust.

Treatment Recommendations to use: Treatment for the interior northwest elevation of the first floor of the steeple should follow the recommendations laid out in the following sections: the interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Northeast Elevation

Condition: The most prominent issues on the northeast façade are cracking and staining.

Treatment Recommendations to use: Treatment for the interior northeast elevation of the first floor of the steeple should follow the recommendations laid out in the following sections: interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Southeast Elevation

Condition: The most prominent issues on the southeast façade are cracking and plaster damage around Door A.

Treatment Recommendations to use: Treatment for the interior southeast elevation of the first floor of the steeple should follow the recommendations laid out in the following sections: the interior portion of Stucco and Plaster, the interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Southwest Elevation

Condition: The most prominent issues on the southwest façade are cracking and staining.

Treatment Recommendations to use: Treatment for the interior southwest elevation of the first floor of the steeple should follow the recommendations laid out in the following sections: the interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Second Floor

Condition: Overall, the second floor of the steeple tower is in fair condition. Cracks and brick delamination and damage are the most prominent issues found on this tier.

Northwest Elevation

Condition: The most prominent issues on the interior northwest façade are brick delamination and damage and cracking.

Treatment Recommendations to use: Treatment for the interior northwest elevation of the second floor of the steeple should follow the recommendations laid out in the following sections: the interior portion of Stucco and Plaster, the interior portion of Paint or Other Finish Coating, Cracks, Staining, and Masonry Walls.

Northeast Elevation

Condition: The most prominent issues on the northeast façade are cracking and staining.

Treatment Recommendations to use: Treatment for the interior northeast elevation of the second floor of the steeple should follow the recommendations laid out in the following sections: the interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Southeast Elevation

Condition: The southeast façade is in relatively good condition. The most prominent issues are cracks and staining.

Treatment Recommendations to use: Treatment for the interior southeast elevation of the second floor of the steeple should follow the recommendations laid out in the following sections: the interior portion of Stucco and Plaster, the interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Southwest Elevation

Condition: The most prominent issues on the southwest façade are cracking and staining.

Treatment Recommendations to use: Treatment for the interior southeast elevation of the second floor

of the steeple should follow the recommendations laid out in the following sections: the interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Third Floor

Condition: Overall, the third floor is in fair condition. The most prominent issues found on this floor are cracks in the walls on the first half. The second half of the third floor, which is made up of the octagonal drum, is in good condition and has no serious visible damage on the interior.

Northwest Elevation

Condition: The most prominent issues on the interior northwest façade are staining and cracking.

Treatment Recommendations to use: Treatment for the interior northwest elevation of the third floor of the steeple should follow the recommendations laid out in the following sections: the interior portion of Stucco and Plaster, the interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Northeast Elevation

Condition: The most prominent issues on the northeast façade are cracking and staining.

Treatment Recommendations to use: Treatment for the interior northeast elevation of the third floor of the steeple should follow the recommendations laid out in the following sections: the interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Southeast Elevation

Condition: The most prominent issues on the southeast façade are cracking and staining.

Treatment Recommendations to use: Treatment for the interior southeast elevation of the third floor of the steeple should follow the recommendations laid out in the following sections: the interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Southwest Elevation

Condition: The most prominent issues on the southwest façade are cracking and staining.

Treatment Recommendations to use: Treatment for the interior southeast elevation of the third floor of the steeple should follow the recommendations laid out in the following sections: the interior portion of Paint or Other Finish Coating, Cracks, and Staining.

Fourth Floor

Condition: The fourth floor is a continuation of the octagonal section below. Overall, it is in good condition.

Northwest

Condition: The northwest wall appears to be in fair to poor condition. The horizontal conventional framing seems to be older in age and is showing signs of weathering. The structural timber also appears to be older.

Treatment Recommendations to use: Treatment for the interior northwest elevation of the fourth floor of the steeple should follow the recommendations laid out in the Wood Framing section.

North

Condition: The north wall appears to be in good condition. The horizontal conventional framing seems to be newer in age and does not show significant signs of weathering. However, the structural timber does appear to be older, with the exception of the diagonal cross beam on the left side.

Treatment Recommendations to use: Treatment for the interior north elevation of the fourth floor of the steeple should follow the recommendations laid out in Wood Framing.

Northeast

Condition: The northwest wall appears to be in fair to condition. Some of the horizontal conventional framing seems to be older in age and is showing signs of weathering. The structural timber also appears to be a combination of old and new.

Treatment Recommendations to use: Treatment for the interior northeast elevation of the fourth floor of the steeple should follow the recommendations laid out in Wood Framing.

East

Condition: The east wall appears to be in good condition. The horizontal conventional framing seems to be newer in age and does not show significant signs of weathering. The back of the wood, however, appears to be treated or stained with a darker color. The structural timber also appears to be a combination of old and new.

Treatment Recommendations to use: Treatment for the interior east elevation of the fourth floor of the steeple should follow the recommendations laid out in Wood Framing.

Southeast

Condition: The southeast wall appears to be in good condition. The horizontal conventional framing seems to be newer in age and does not show significant signs of weathering. The structural timber also appears to be a combination of old and new.

Treatment Recommendations to use: Treatment for the interior southeast elevation of the fourth floor of the steeple should follow the recommendations laid out in Wood Framing.

South

Condition: The south wall appears to be in fair condition. Some of the horizontal conventional framing seems to be older in age and is showing signs of weathering. The structural timber also appears to be a combination of old and new.

Treatment Recommendations to use: Treatment for the interior south elevation of the fourth floor of the steeple should follow the recommendations laid out in Wood Framing.

Southwest

Condition: The southwest wall appears to be in fair condition. Some of the horizontal conventional framing seems to be older in age and is showing signs of weathering. The structural timber also appears to be a combination of old and new.

Treatment Recommendations to use: Treatment for the interior southwest elevation of the fourth floor of the steeple should follow the recommendations laid out in Wood Framing.

West

Condition: The west wall appears to be in fair to poor condition. The horizontal conventional framing seems to be older in age and is showing signs of weathering. The structural timber also appears to be older. The west wall also contains a hatch to allow access to the exterior.

Treatment Recommendations to use: Treatment for the interior west elevation of the fourth floor of the steeple should follow the recommendations laid out in Wood Framing.

Cupola

Condition: Overall, the cupola is in good condition. Relatively few significant signs of deterioration exist. The most prominent issues present are rust staining from fasteners and weathering of wood surfaces.

Treatment Recommendations to use: Treatment for the interior west elevation of the cupola should follow the recommendations laid out in Wood Framing and the exterior portion of Paint or other finish coating.

Structural Recommendations

Applicable Codes and Standards

The project will be governed by the following codes:

- 2021 International Building Code (IBC)
- 2021 International Existing Building Code (IEBC)
- ICSSC Recommended Practice 8 (RP 8)

The following standards will be followed as specified by the governing codes:

- ASCE 7-16 Minimum Design Loads (and Associated Criteria) for Buildings and Other Structures
- NDS-2018 National Design Specification (NDS) for Wood Construction
- ASCE 41-17 Seismic Evaluation and Retrofit of Existing Buildings

Material Properties

Masonry

The assumed masonry values below are based on default lower-bound strengths for historic unreinforced masonry (in the absence of testing) per Table 11-2c of the ASCE 41-17:

- Compressive Strength = 285 psi (f'm)
- Flexure Tensile Strength = 5 psi
- Shear Strength = 20 psi (using ASD approach)

Timber

The existing timber is assumed to be locally sourced subtropical hardwood. See below for the species and grade assumptions used for deriving material properties for both historic and new lumber. These can be refined with further material testing.

- Historic Lumber – Southern Pine #1 (used for material property purposes)
- New Lumber – Southern Pine #2

Design Loads

The loads presented below assume the structure is Risk Category II (ASCE 7-16, Table 1.5-1).

Dead Loads

- Masonry Unit Weight = 115 pcf (for use on walls)
- Wood Framing = 15 psf (for use on floors/roof)

Live Loads

The following values are specified by the applicable codes and standards:

Occupancy or Use	Uniform (psf)	Concentrated (lb)
Roof	20	300
Choir Mezzanine	100	-
Assembly Area (Fixed Seating)	60	-
Assembly Area	100	-
Attic/Steeple Floors	10	300

Wind Loads

- Basic Wind Speed
V = 165 mph (wind-borne debris region)
- Wind Directionality Factor (ASCE 7-16, Table 26.6-1)
K_d = 0.85
- Exposure Category (ASCE 7-16, §26.7)
D
- Topographic Factor (ASCE 7-16, §26.8)
K_{zt} = 1.0
- Ground Elevation Factor (ASCE 7-16, Table 26.9-1)
K_e = 1.0
- Gust Effect Factor (ASCE 7-16, §26.11)
G = 0.85
- Enclosure Classification (ASCE 7-16, §26.12)
Enclosed
- Internal Pressure Coefficient (ASCE 7-16, Table 26.13-1)

$$GC_{pi} = \pm 0.18$$

- Velocity pressure coefficient (ASCE 7-16, §26.10.1)

$$K_z = 1.12$$

- Velocity Pressure (ASCE 7-16, Eqn. 26.10-1)
 $q_z = 66 \text{ psf}$

- Wind Surface Area (N-S elevations)
 $A_{NS} = 1,330 \text{ sf}$

- Wind Surface Area (E-W elevations)
 $A_{EW} = 2,650 \text{ sf}$

- Wind Base Shear (N-S direction)
 $V_{NS} = 88 \text{ kips}$

- Wind Base Shear (E-W direction)
 $V_{NS} = 175 \text{ kips}$

Seismic Loads

The seismic parameters dependent on soil will be confirmed by a geotechnical engineer. The seismic force-resisting system has been assumed as unreinforced masonry walls. These values were coordinated with the soil report dated July 13, 2018, from the nearby Wharf Bulkhead replacement project.

- Soil Site Class (Assumed)
D

- Short Period Mapped Spectral Accel. (USGS)
 $S_s = 0.82 \text{ g}$

- One Second Period Mapped Spectral Accel. (USGS)

$$S_1 = 0.31 \text{ g}$$

- Short Period Design Spectral Acceleration
 $SDS = 0.64 \text{ g}$

- Seismic Importance Factor (ASCE 7-16, Table 1.5-2)
I $e = 1.0$

- Effective Seismic Mass
 $W = 700 \text{ kips}$

- Response Modification Factor
 $R = 1.5$ (for unreinforced masonry)

- Seismic Response Coefficient
 $C_s = 0.43 \text{ g}$

- Seismic Design Category
D

- Seismic Base Shear
 $V = 300 \text{ kips}$

Lateral Design

The project is in a unique location where both seismic and wind forces are both quite high relative to other parts of the United States. Seismic controls the overall behavior of the building due to the presence of the heavy masonry walls—the force is directly proportional to the weight of the structure. The seismic forces generated from a design-level earthquake are close to twice the maximum forces from a design-level wind event. While seismic controls the global behavior, there are isolated elements controlled by wind, such as (1) uplift forces on the roof and (2) the lateral design of the upper wood-framed portion of the steeple.

For seismic, the design level earthquake per ASCE 7 is based on 2/3 of the Maximum Considered Earthquake (MCE). The MCE is an earthquake with a 2% probability of exceedance in 50 years, in other words, an earthquake with a mean return period of 2,475 years.

For wind, the basic wind speed is based on a return period of about 700 years. For comparison in 2017, Hurricane Maria had sustained wind speeds of about 100 mph at St. Croix and gusts close to 140 mph. In 1989 Hurricane Hugo had sustained winds of close to 140 mph in some areas of St. Croix. In comparison, the design wind speed per the ASCE 7-16 standard is 165 mph. Recent FEMA documentation identifies St. Croix as a special wind region and recommends increased wind loadings in upcoming versions of the standard.

Analysis Results

Live Load Capacities

A live load capacity check was performed for the main roof and the mezzanine. The analysis shows the new roof meets current code requirements for the live load (20+ psf capacity) and wind uplift (up to 40 psf). Similarly, the mezzanine framing is adequate to meet current code requirements for the live load as well (100+ psf capacity). While a live load analysis was not explicitly performed for the floors of the steeple, the existing framing is more than adequate for current code requirements.

An analysis would need to be performed for gravity loads should any new superimposed dead loads (such as a bell) be added at the steeple.

Lateral Load Assessment

A structural assessment of the steeple has been performed using hand calculations, spreadsheets, and analytical modeling. The cumulative code-level forces at the top and base of the masonry are tabulated below.

	Wind	Seismic
Lateral Force at Top of Masonry	44,000 lb	10,000 lb
Lateral Force at Grade	87,100 lb	156,000 lb

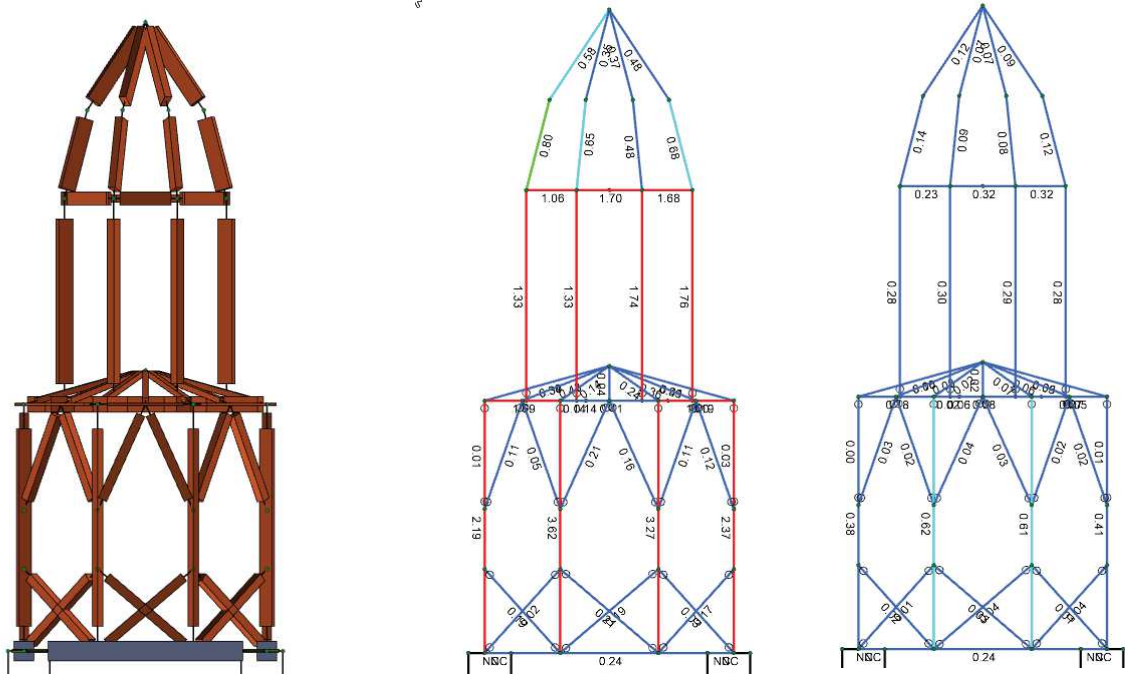
The wind demand on the wood-framed top tiers is approximately four times the seismic demand. The analytical model provides strength checks of the wood sections. For the upper two tiers, the wood framing itself and the connections would be significantly overstressed during a design-level wind event. While the 1980s retrofit has

significantly improved the performance of these upper tiers, further work would be required to meet modern standards.

For the lower two masonry tiers, seismic is the controlling force, and the corner piers would be significantly overstressed during a design-level event. While the shear stresses are likely within acceptable limits, the steeple is relatively slender for a masonry structure, and thus significant tensile stresses develop during an earthquake. Unreinforced masonry performs poorly in tension and the steeple could pose a life safety risk should it ever see the lateral forces implied by the code.

Based on this analysis there are significant vulnerabilities for both wind and seismic. Both the wood-framed and masonry portions of the steeple do not meet current code requirements. As described in the Code Approach section, there is nothing currently triggering a mandated lateral retrofit, and as such NPS has some flexibility in terms of the selected performance objectives.

It should be noted that the stresses from any lean or deformation of the steeple tower are quite minor



ASD Stress Checks:	Wind	Seismic
Masonry Compressive Stress	76 psi	93 psi
Masonry Tension Stress	28 psi	45 psi
Masonry Shear Stress	5 psi	10 psi

in comparison to the stresses imparted by a design-level wind or seismic event.

Recommendations

The structural recommendations will cover the code design basis and any triggers that would mandate an upgrade. Structural repair concepts are then provided to address settlement-induced cracking and the steeple strengthening retrofit concept.

Code Design Basis

The International Existing Building Code (IEBC) has special provisions for existing and historic buildings that should be understood before implementing a lateral retrofit. In general, the code has the concept of non-conforming rights built in, which helps to ensure that new codes being adopted does not automatically trigger mandatory reinforcement to meet current code requirements.

A seismic evaluation of the existing building is required per the IEBC if the demand-capacity ratio for elements in the lateral force resisting system (LFRS) is increased by more than 10% when the alteration is considered. This can be triggered by reducing the capacity of the LFRS (i.e., removing masonry walls) or increasing the demand (i.e., increasing the seismic weight). Past work does not appear to have crossed this 10% threshold, but it is something for NPS to consider as future projects are undertaken at the building.

As it is a federally owned building, the RP 8 also applies to the project. Executive Orders led to the adoption of *The Standards of Seismic Safety for Existing Federally Owned or Leased Buildings* (Standards or RP 8), which was developed by the Interagency Committee on Seismic Safety in Construction (ICSSC). The Standards were adopted as “the minimum level acceptable for use by federal departments and agencies in assessing the seismic safety of their owned and leased buildings and in mitigating unacceptable seismic risks in those buildings.” Within the Standards there is also a list of triggers for when a non-exempt building will be evaluated and unacceptable risks will be mitigated. These triggers focus on changes to a building’s occupancy or ownership, major renovations, and extensive structural damage. A case could be made that mitigation is required due to damage from an

extreme event; however, based on site observations it does not appear that past damage due to hurricanes has risen to the level of “significant structural degradation.” If triggered, the Standards call for the building to be evaluated and retrofitted using ASCE 31-03/ASCE 41-06 (now combined as ASCE 41-17).

In summary, it does not appear that there is a code mandate to retrofit the building or steeple for lateral forces. However, the code encourages owners to make voluntary upgrades to improve the performance of the building and mitigate life safety hazards. If this is the approach NPS decides to use, there will need to be a conversation about the level of seismic forces that should be used for the assessment and eventual retrofit. The steeple could be designed to meet current code requirements; however, this could sacrifice much of its historic fabric and character and result in an intensive and costly retrofit. There are a couple of other approaches that should be considered by NPS:

1. The IEBC has a provision whereby existing buildings can be retrofitted for reduced lateral forces that are 75% of what would be prescribed by modern standards using the ASCE 7.
2. Use the ASCE 41, a performance-based design approach to seismic. The standard allows the owner to pair a selected hazard level with a desired performance level to create a performance objective.

a. The ASCE 41 defines two seismic hazards that are intended for use on existing buildings (BSE-1E and BSE-2E). The BSE-2E is an earthquake with a 5% probability of exceedance in 50 years and the BSE-1E is an earthquake with a 20% probability of exceedance in 50 years. For comparison purposes, the BSE-1E results in forces that are about 70% of the design level earthquake using the ASCE 7. It is recommended to use the BSE-1E for the retrofit design.

b. The ASCE 41 defines several structural performance levels that can be selected for use on a project. They range from Immediate Occupancy to Damage Control to Life Safety to Limited Safety to Collapse Prevention. It is recommended to meet with NPS to explain what these performance levels mean in terms of post-seismic damage state and to help select one that balances life safety, costs, and historic preservation.



FIGURE 5-9. Example of Settlement Cracking to be Addressed

Settlement-Induced Cracking Mitigation

Improper drainage appears to be a cause of the settlement on the south side. Drainage mitigation to move water away from the building should be adopted, including possible re-grading, redirecting, and improving the roof drainage system. The settlement on the north side appears to be a combination of water issues and the heavy concentrated loads from the weight of the steeple tower.

As a first step, structural crack injection repairs are recommended for any cracks that appear on the north and south elevations. Cracking should be addressed by the removal of plaster and deep repointing of the wall mortar. In addition to injection repairs, some cracks may need to be stitched together with stainless steel dowels before replastering.

Following the structural repairs, the cracks should be visually checked regularly using a tell-tale monitor. If movement is arrested no further structural repairs are required, but if settlement continues foundation reinforcement in the form of underpinning or deep foundations may be required. See the Further Investigations section for recommendations on geotechnical input.

Steeple Strengthening Lateral Retrofit (Wind & Seismic)

It is recommended that horizontal dowels/sock anchors be added at the two lower masonry tier levels. Vertical cracks have developed in the arches above the arched openings and by core drilling and adding reinforcement (see Figure 5-8). The bond beams enable stress distribution among the four corners of the steeple tower, allowing efficient

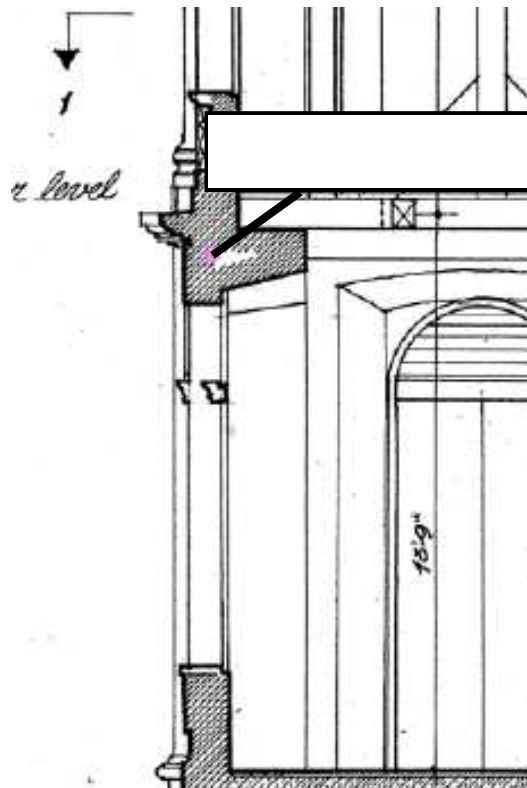
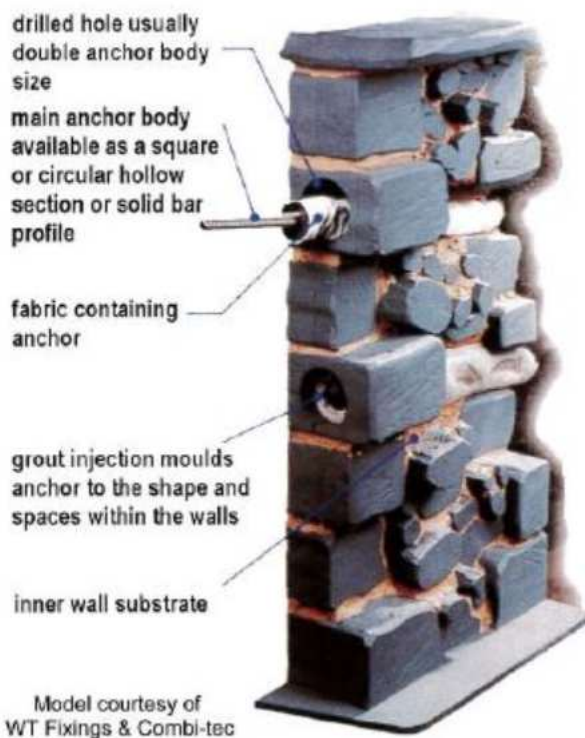


FIGURE 5-10. Example of sock anchor installation in historic masonry, and conceptual location over arches

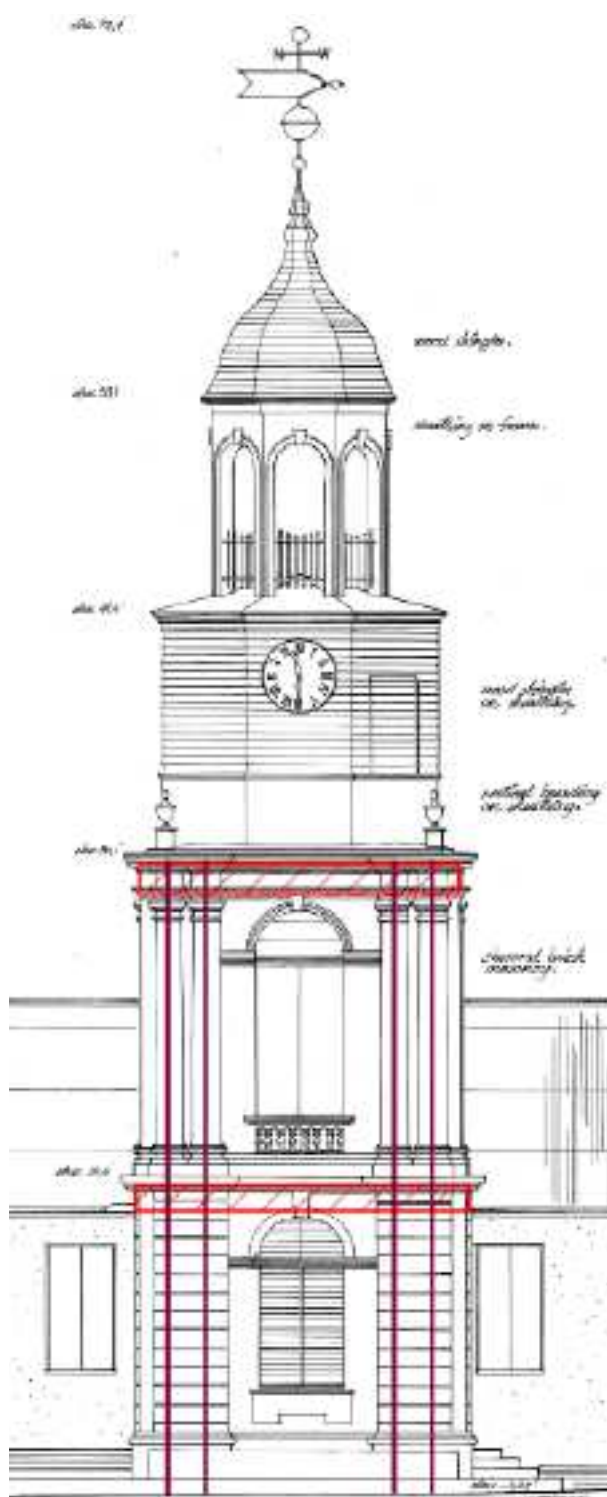


FIGURE 5-11. Location of horizontal bond beams (diagonally hatched) and vertical reinforcement locations.

structural behavior compared to having each corner act independently.

Ensuring that all four corners act together will greatly improve the seismic performance of the steeple tower. The additional anchors should significantly improve both the lateral and gravity

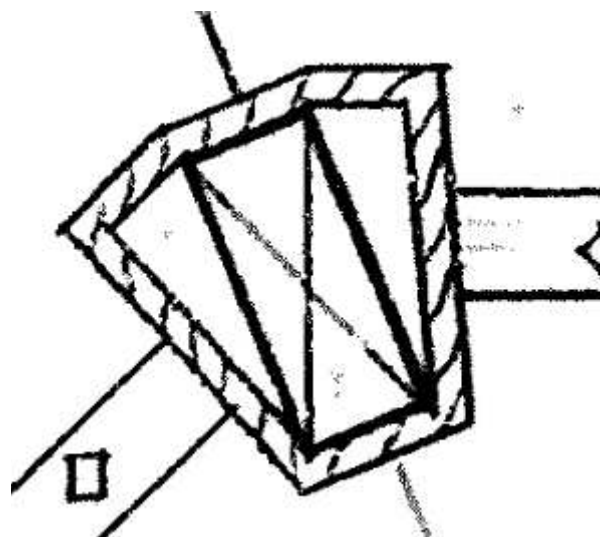


FIGURE 5-12. 1983 Reconstruction detailing of top wood framed posts.

performance of these areas of masonry by essentially introducing two levels of bond beams.

During a lateral load design event, the piers are expected to be loaded in tension. The piers need to be reinforced for tensile stresses by adding vertically cored (from the top down) sock anchors to provide vertical reinforcement and strengthen the masonry portions of the steeple (Figure 5-9).

Cracks throughout the interior and exterior of the masonry portion of the steeple should be repaired via injection crack repair. The repair material should be selected to be compatible with the physical properties of the original stone masonry.

The top wood-framed portions of the steeple require reinforcement to resist code-level forces. The intent is to keep all strengthening hidden and without visual impact. Additional structural plywood sheathing can be added to the lower wood-framed level. The new sheathing can serve as backing for the wood shingle cladding currently on that level. The structural plywood would allow efficient stress distribution among the wood posts. Strengthening the connections between the wood elements will provide an adequate load path. The upper wood-framed tier is mostly open, and new members were added during the 1983 reconstruction within a historic profile envelope (Figure 5-9). There is space adjacent to the wood members that can accommodate additional strengthening with steel plates or rods within the interior of the visible wood profile.



FIGURE 5-13. Finials at the top of the masonry pier

In addition, there are some vulnerable non-structural components such as the finials above each of the four corner piers at the second tier of the steeple. The hardly legible 1960 restoration set shows what appears to be the finials with an interior 5/8" diameter steel pin reinforcement. Their presence could not be confirmed during the site visit (see Figure 5-10 and Figure 5-11).

Further Investigations

Several additional investigations appear to be warranted based on the initial structural assessment. The following investigations are recommended to guide the work at the Steeple Building:

- Flat jack test of the original masonry to confirm assumed values used in the lateral analysis, specifically for the masonry at the steeple.
- Material compatibility testing of original masonry to determine injection repair material.
- A geotechnical investigation to determine soil conditions around the Steeple Building and settlement mitigation strategies (underpinning or deep foundations).

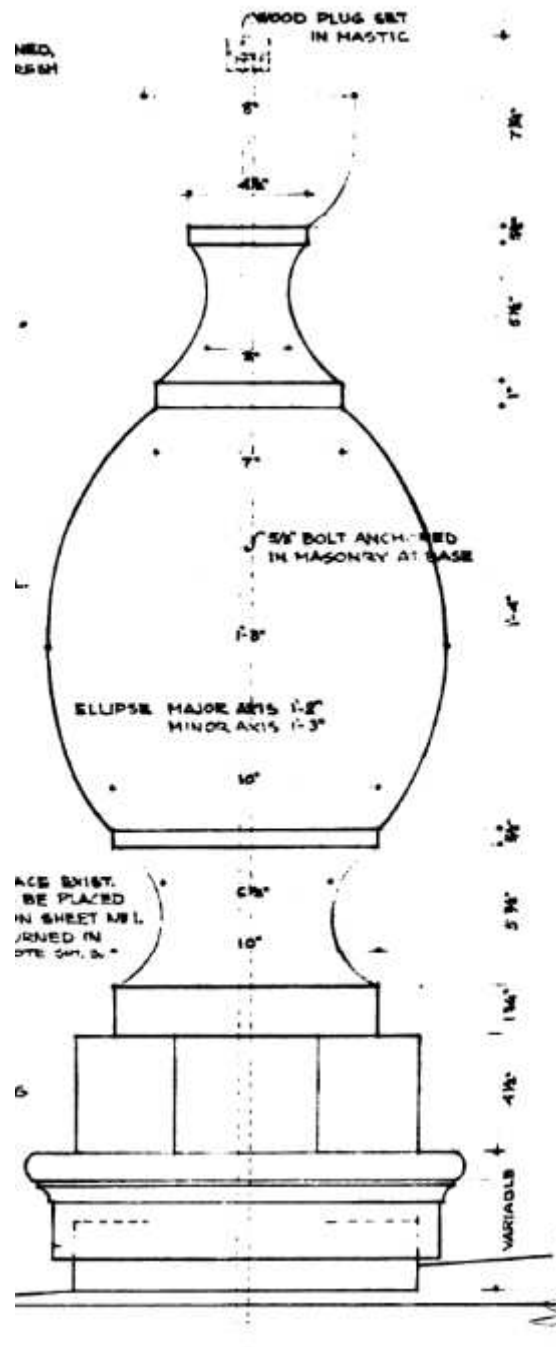


FIGURE 5-14. Hardly legible finial detail

- Wood species identification of the timber framing within the steeple to help refine the lateral analysis for the upper tiers of the steeple.

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Appendices

Drawings

- Appendix A: Historic American Buildings Survey (HABS) Drawings of the Steeple Building (1957, 1966)
- Appendix B: 1960 Drawings of the Steeple Building
- Appendix C: Floorplans Showing the Evolution of the Steeple Building
- Appendix D: Existing Drawings of the Steeple Building

Reports

- Appendix E: Frederik C. Gjessing, “National Register of Historic Places Inventory Nomination Form for Federal Properties, Christiansted National Historic Site.” (Atlanta, GA: National Park Service, Southeast Region, 1976)

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Appendix A

HABS Drawings of the Steeple Building (1957, 1966)

Sheet 1: Cover Sheet (dated 1966)

Sheet 2: Floor Plan (dated 1957)

Sheet 3: Plan of Church Yard and Excavations (dated 1957)

Sheet 4: Sections (dated 1957)

Sheet 5: Kompani Gade Elevation (Northwest) (dated 1957)

Sheet 6: Kirke Gade Elevation (Southwest) (dated 1957)

Sheet 7: Yard Elevation (Southeast) (dated 1957)

Sheet 8: Hospital Gade Elevation (Northeast) (dated 1957)

Sheet 9: Steeple Details (dated 1957)

Sheet 10: Steeple Details (dated 1957)

Sheet 11: Excavation Plan (dated 1957)

Sheet 12: Sectional Elevations (dated 1957)

Sheet 13: Old Foundation Plan(dated 1957)

Sheet 14: Key Plan to Excavations and Recorded Artifacts (dated 1957)

Sheet 15: Excavation of North End of Steeple Building (dated 1966)

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STEEPLE BUILDING

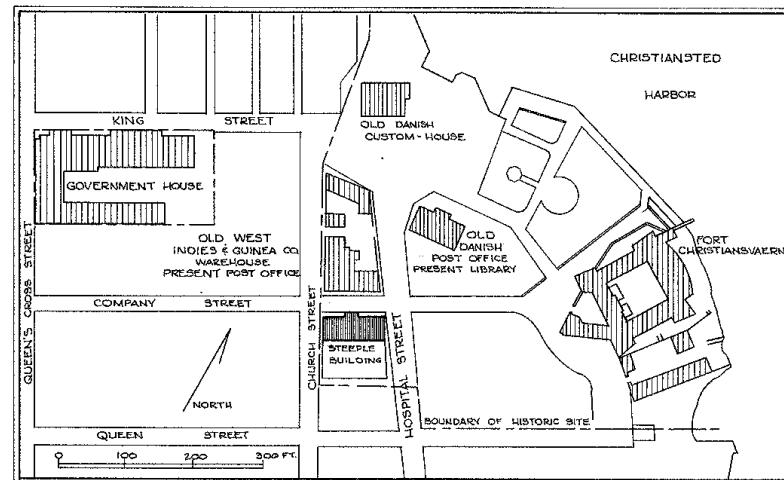
FORMER LUTHERAN CHURCH OF OUR LORD OF ZEBAOOTH

CHRISTIANSTED NATIONAL HISTORIC SITE

CHRISTIANSTED

ST. CROIX

VIRGIN ISLANDS



THIS CHURCH WAS BUILT BY THE GOVERNMENT OF THE DANISH WEST INDIES AND GUINEA COMPANY IN 1750-53. AS THE BUILDING THAT HOUSED THE ESTABLISHED CHURCH OF THE COLONY, IT WAS AN INTEGRAL PART OF THE ARCHITECTURE OF THE COLONIAL VENTURE AND IS AN INTERESTING EXAMPLE OF LUTHERAN ARCHITECTURE IN THE 18th CENTURY. THROUGH THE YEARS THE STEEPLE BUILDING HAS BEEN PUT TO SEVERAL USES AND IN 1961-63 IT WAS RESTORED AS A MUSEUM BY THE NATIONAL PARK SERVICE.

DRAWN BY: A. CRAIG MORRISON, 1966

UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE

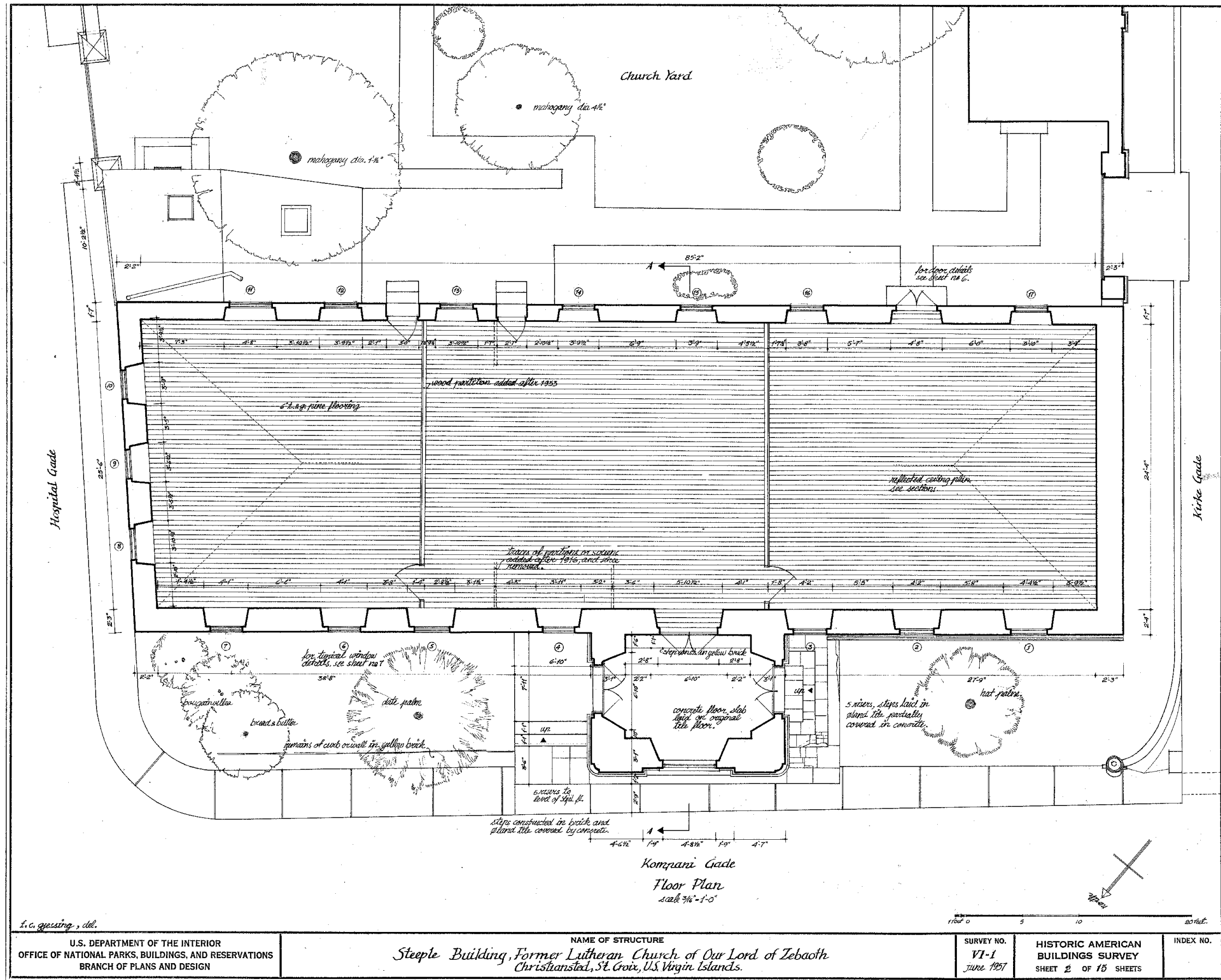
*Steeple Building, Former Lutheran Church of Our Lord of Zebaoth
Christiansted, St. Croix, U.S. Virgin Islands*

SURVEY NO.
VI-1

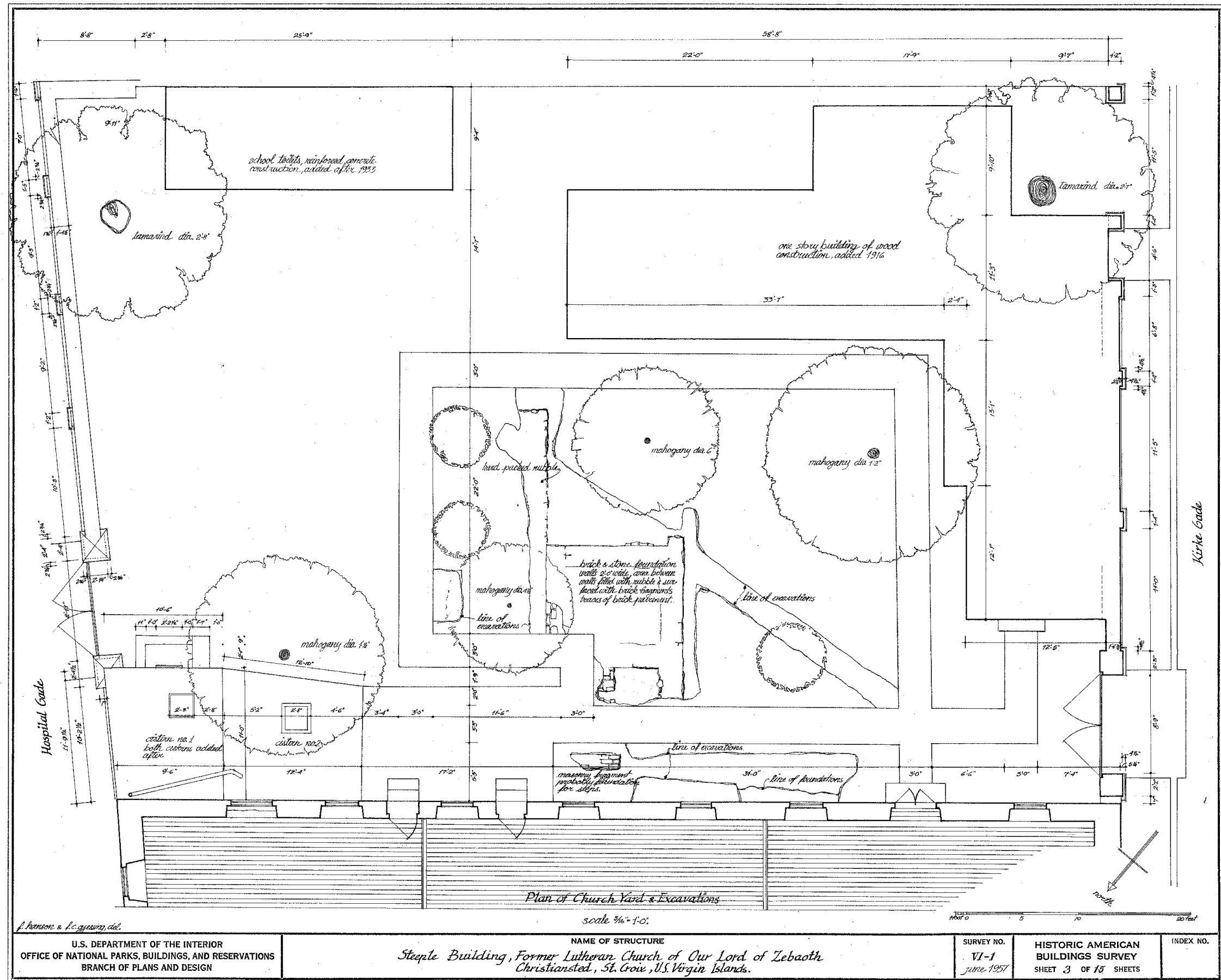
HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 1 OF 15 SHEETS

LIBRARY OF CONGRESS
INDEX NUMBER

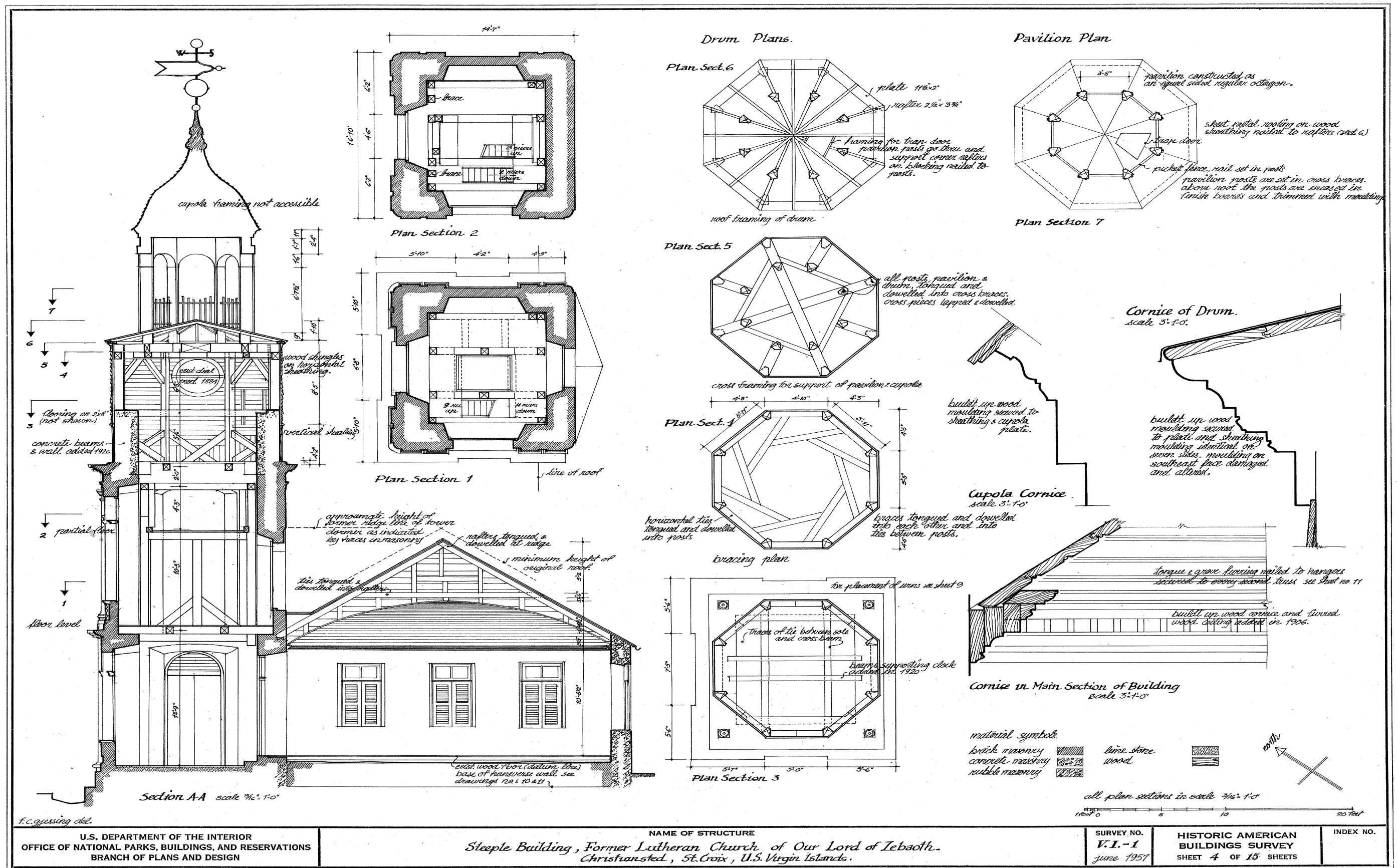
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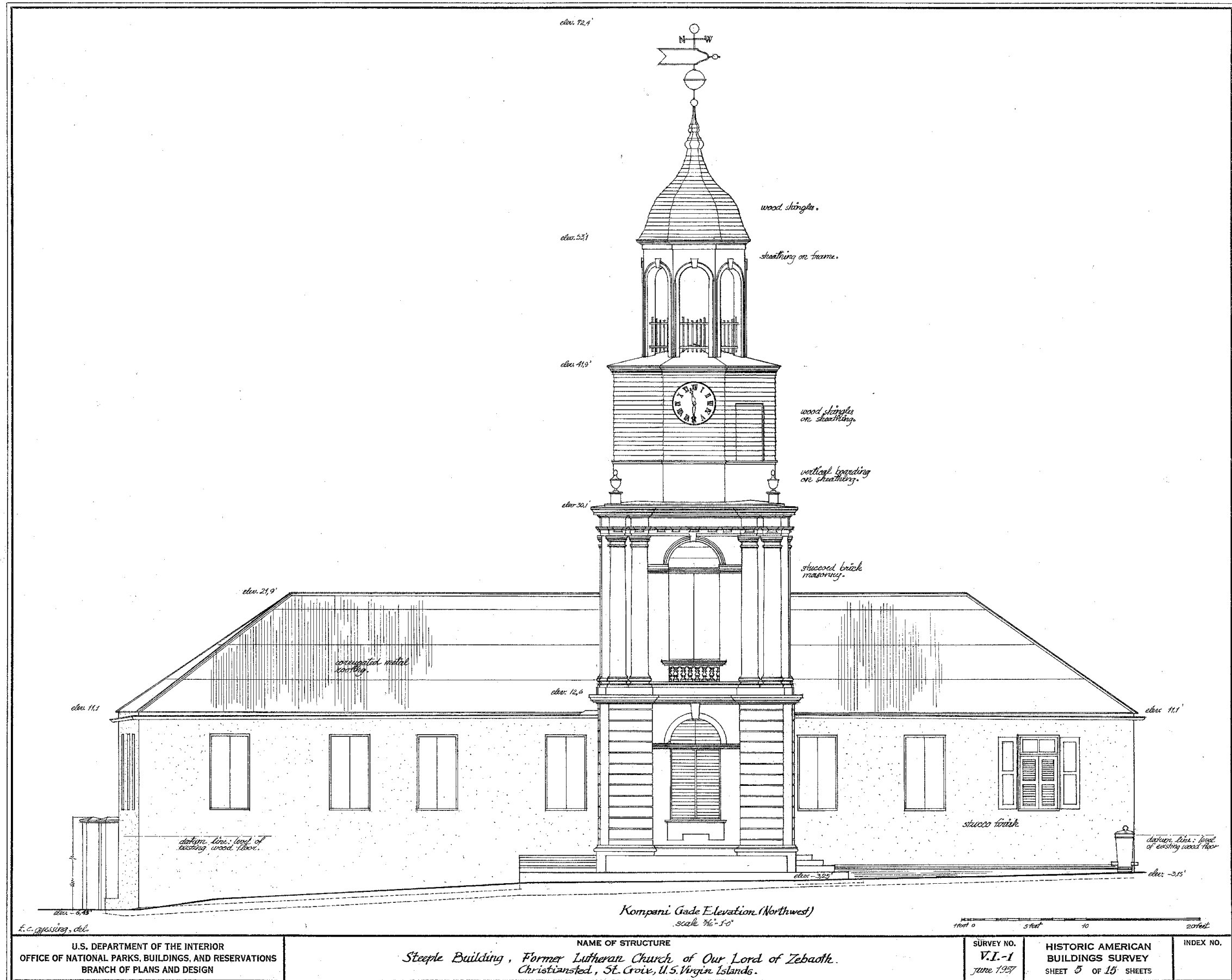
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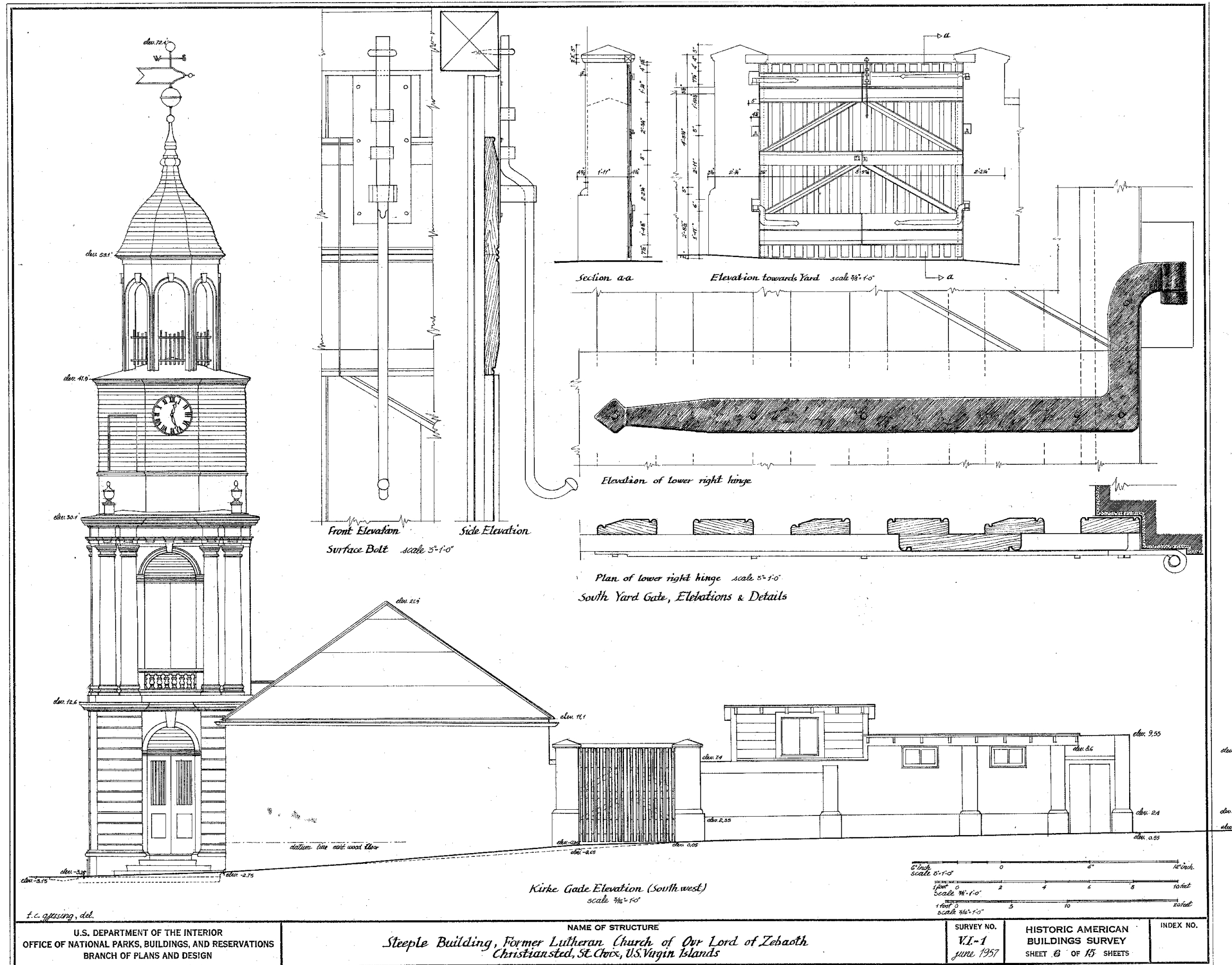
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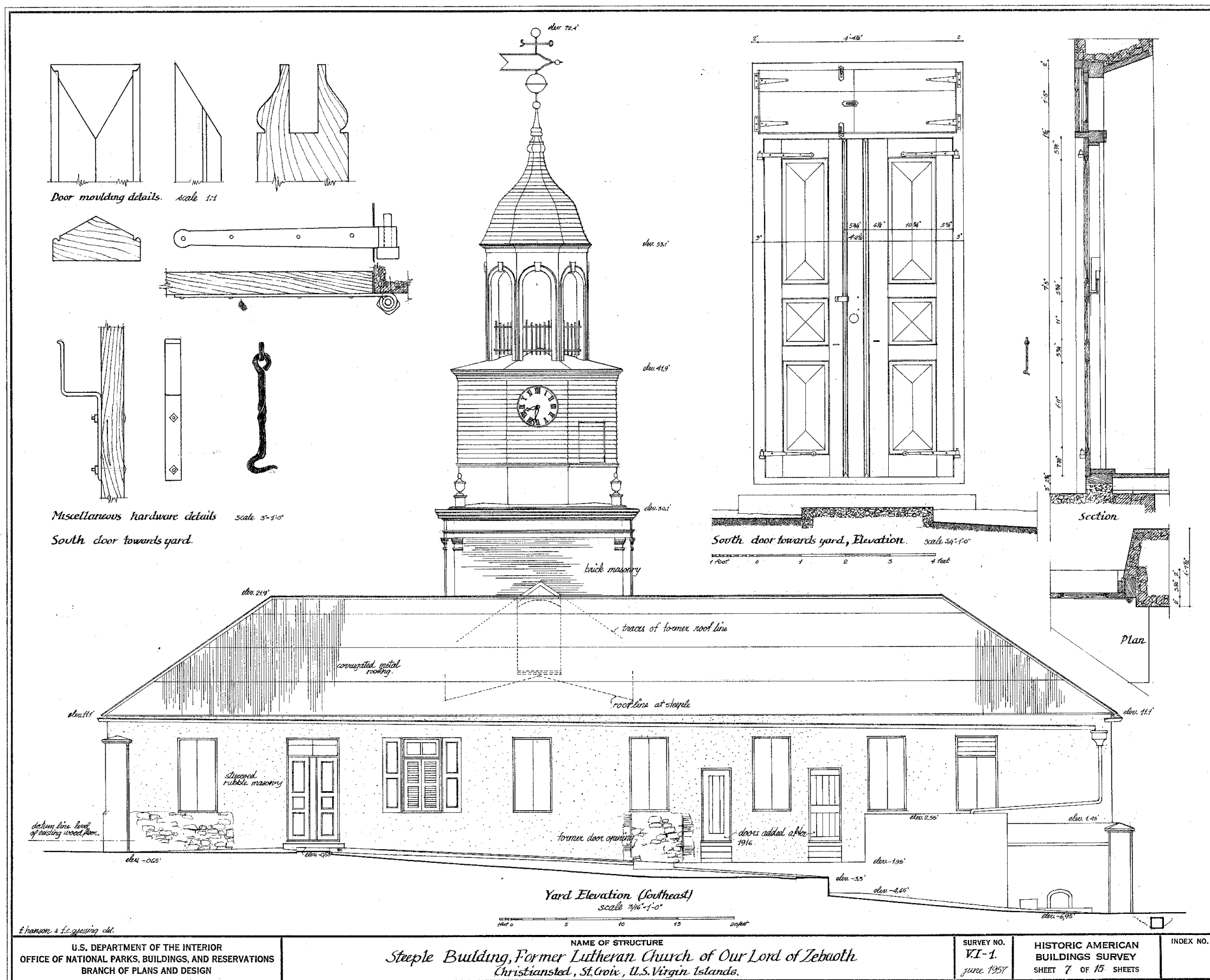
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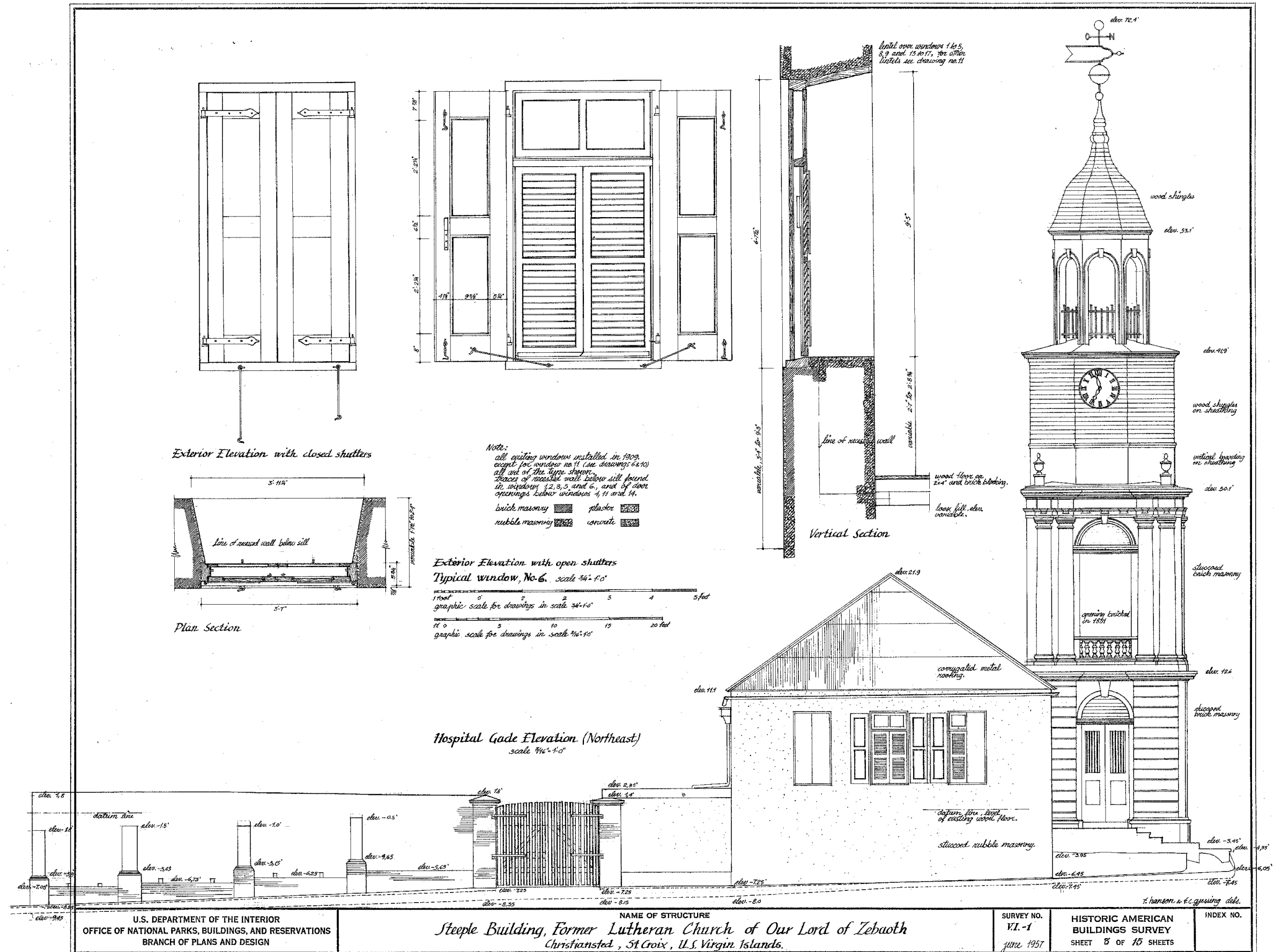
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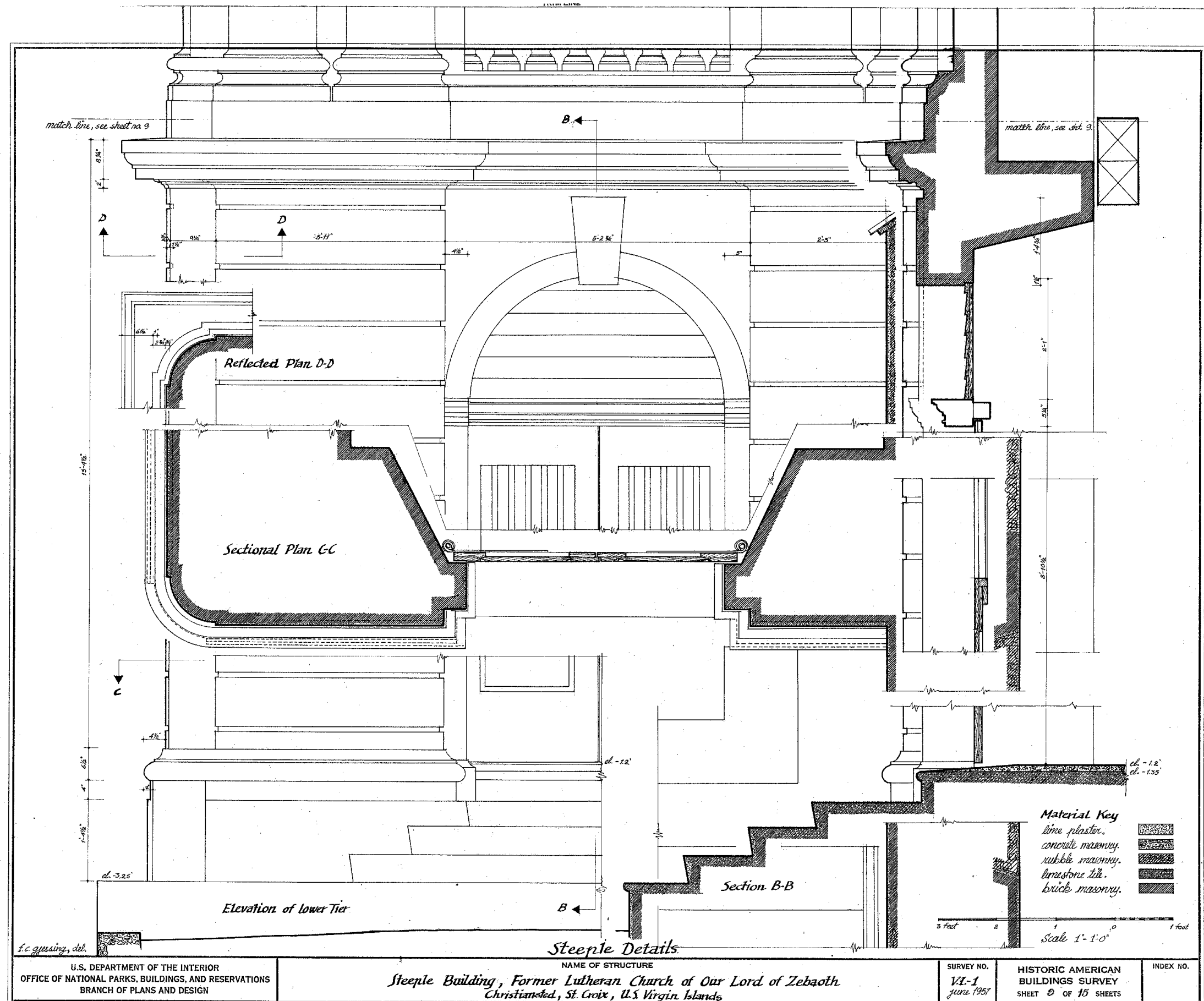
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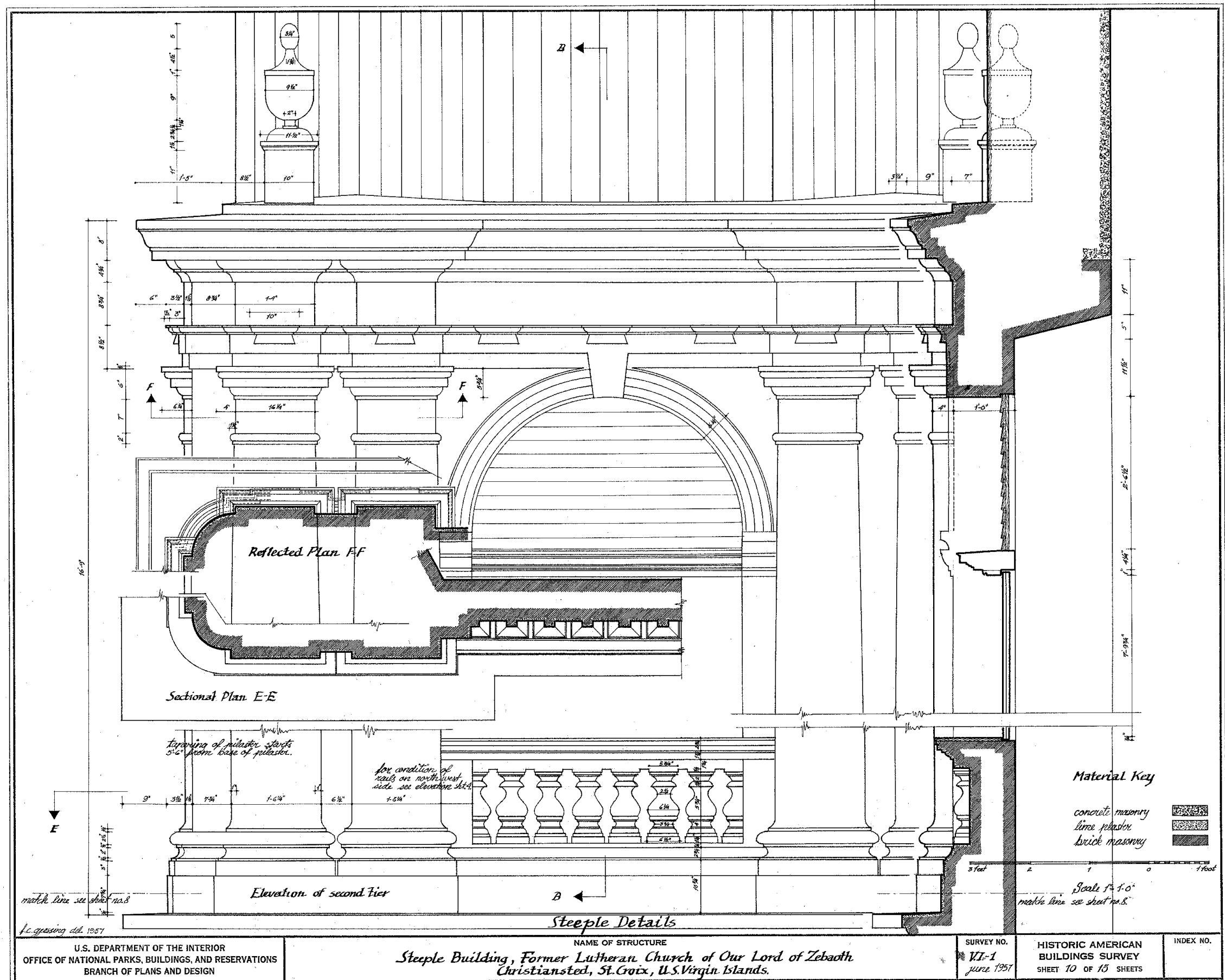
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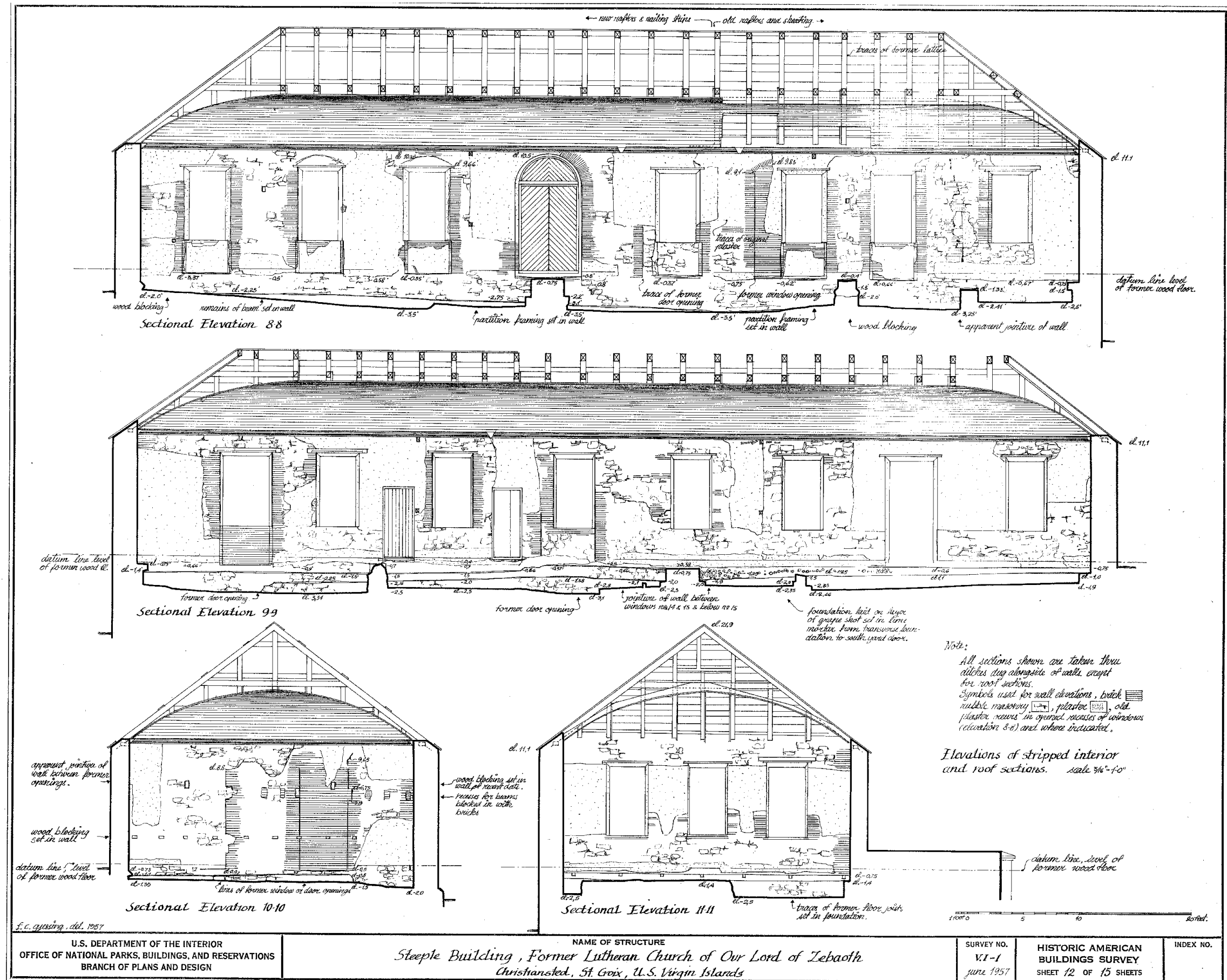


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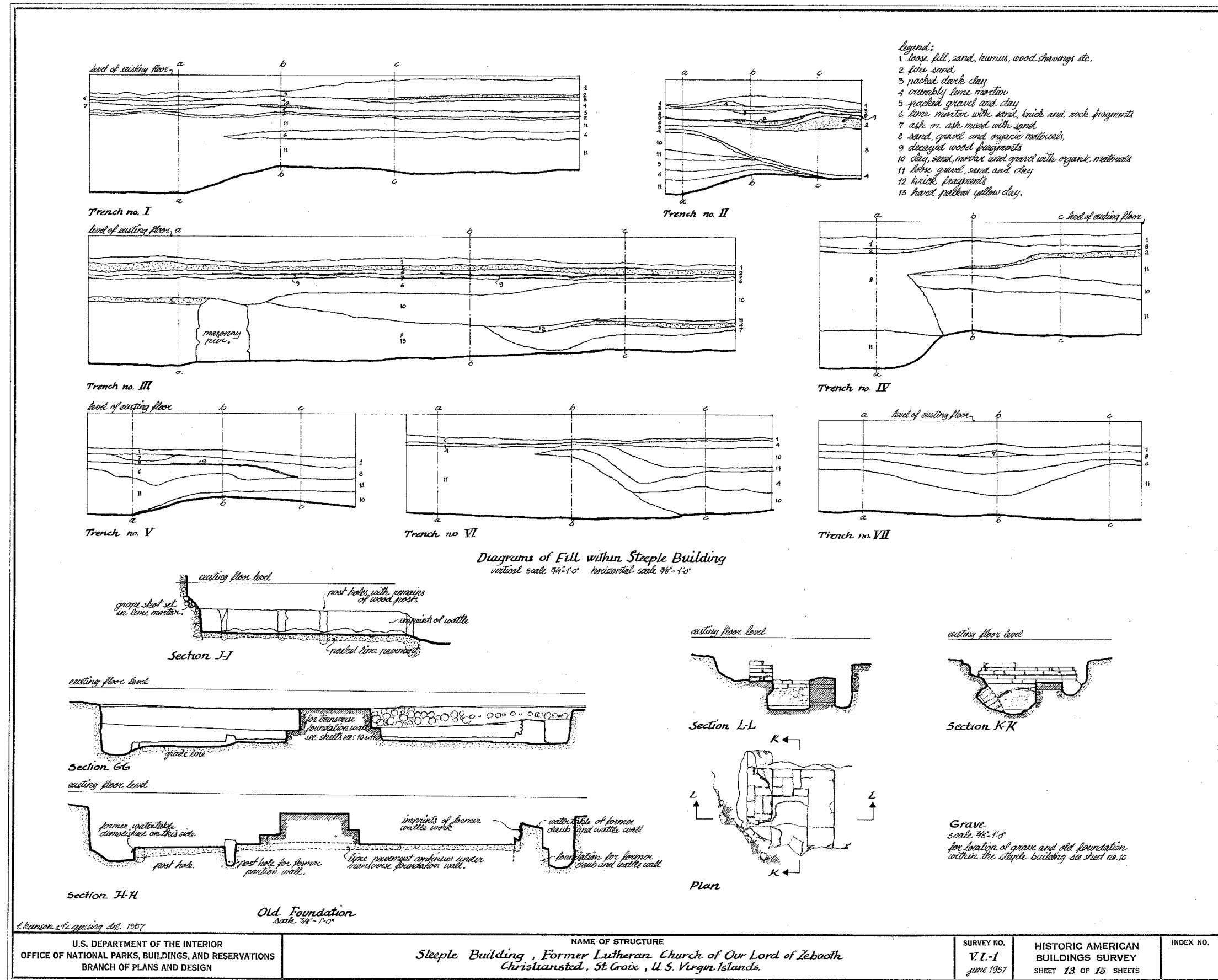


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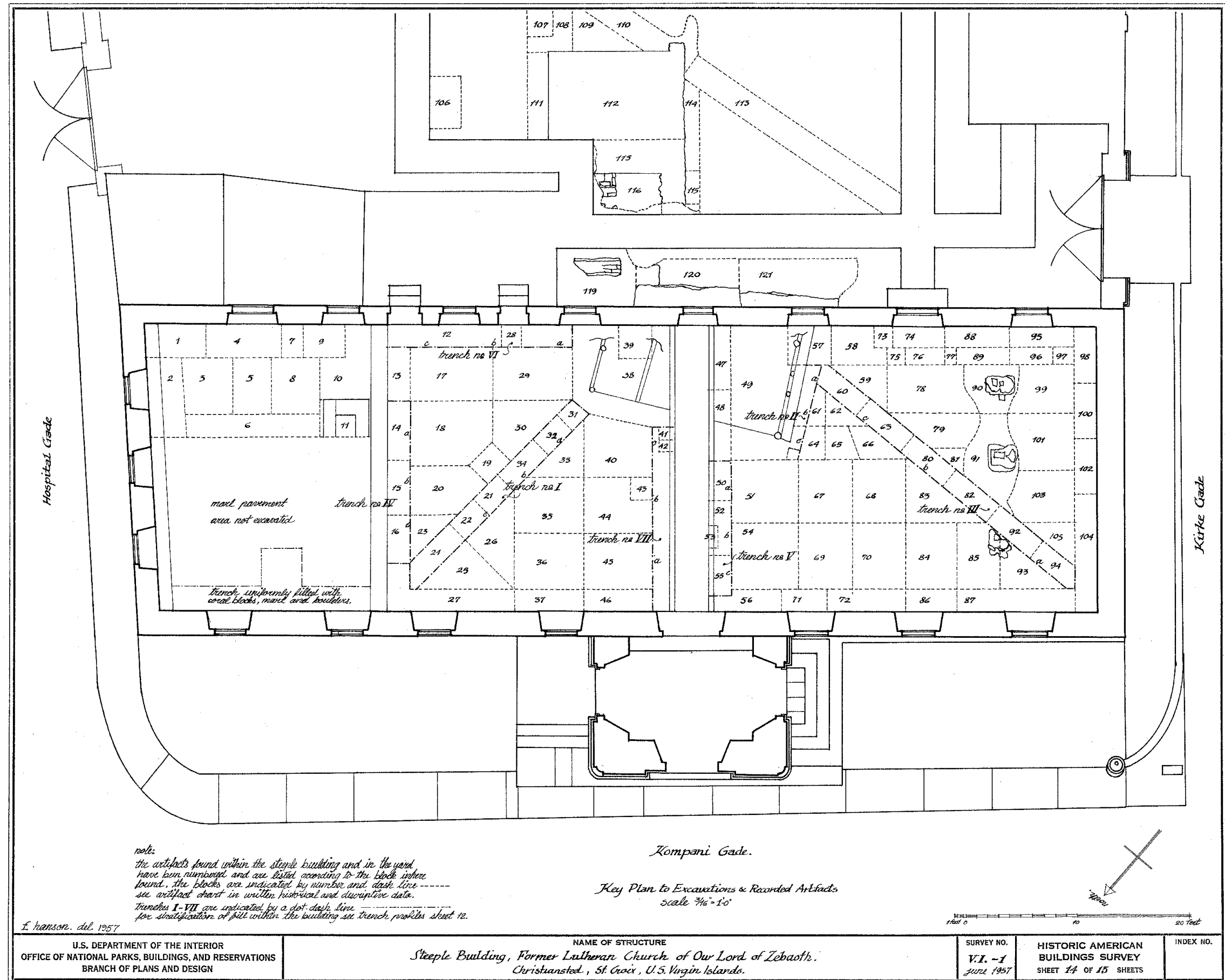
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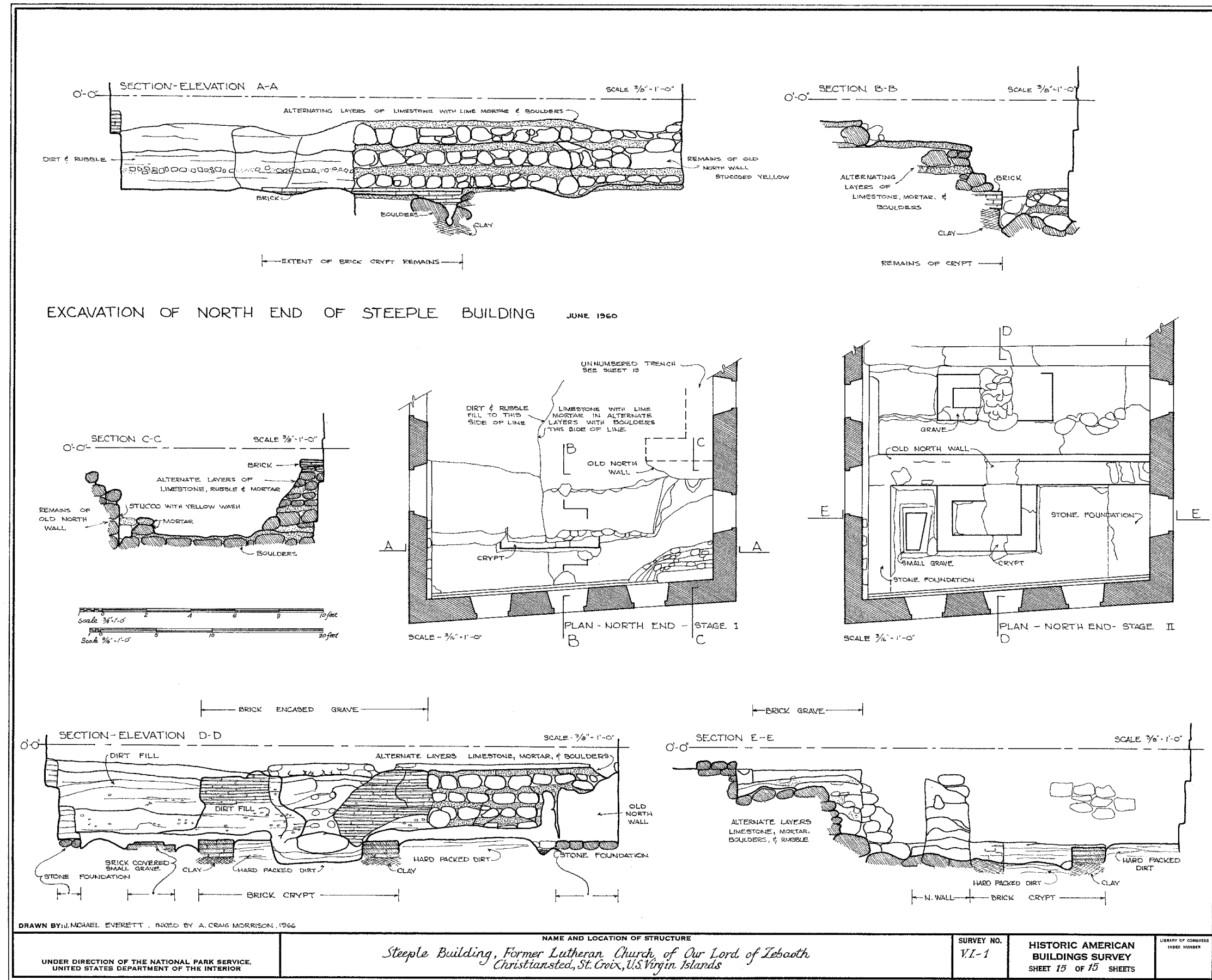
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Appendix B

1960 Drawings of the Steeple Building

Sheet 1: Plot Plan

Sheet 2: Steeple Roof Plan and Elevations

Sheet 3: Floor Plan and Miscellaneous Details of Steeple

Sheet 4: Shutter Door Details for Steeple

Sheet 5: Floor, Foundations, Roof Plan and Details

Sheet 6: Elevations

Sheet 7: Rear Elevation and Miscellaneous Details

Sheet 8: Door Details

Sheet 8A: Door Details

Sheet 9: Window and Shutter Details

Sheet 10: Cornice, Ceiling and Pavement Details

Sheet 10A: Revised Roof and Cornice Details

Sheet 11: Balcony Details

Sheet 11A: Balcony Details

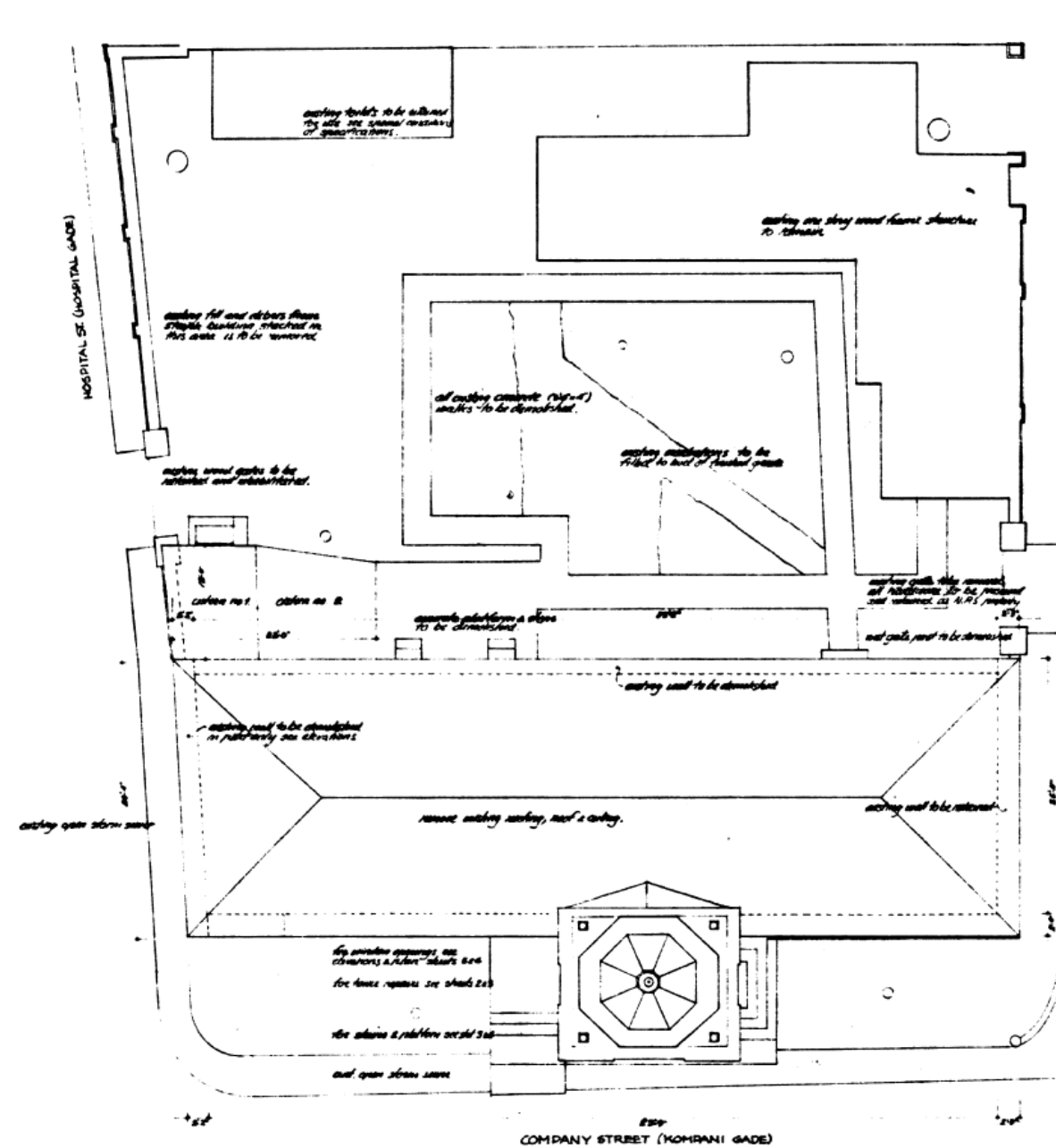
Sheet 12: Hardware Details

Sheet 13: Alternate Steel Roof Framing

Sheet 14: Electrical Layout Sheet

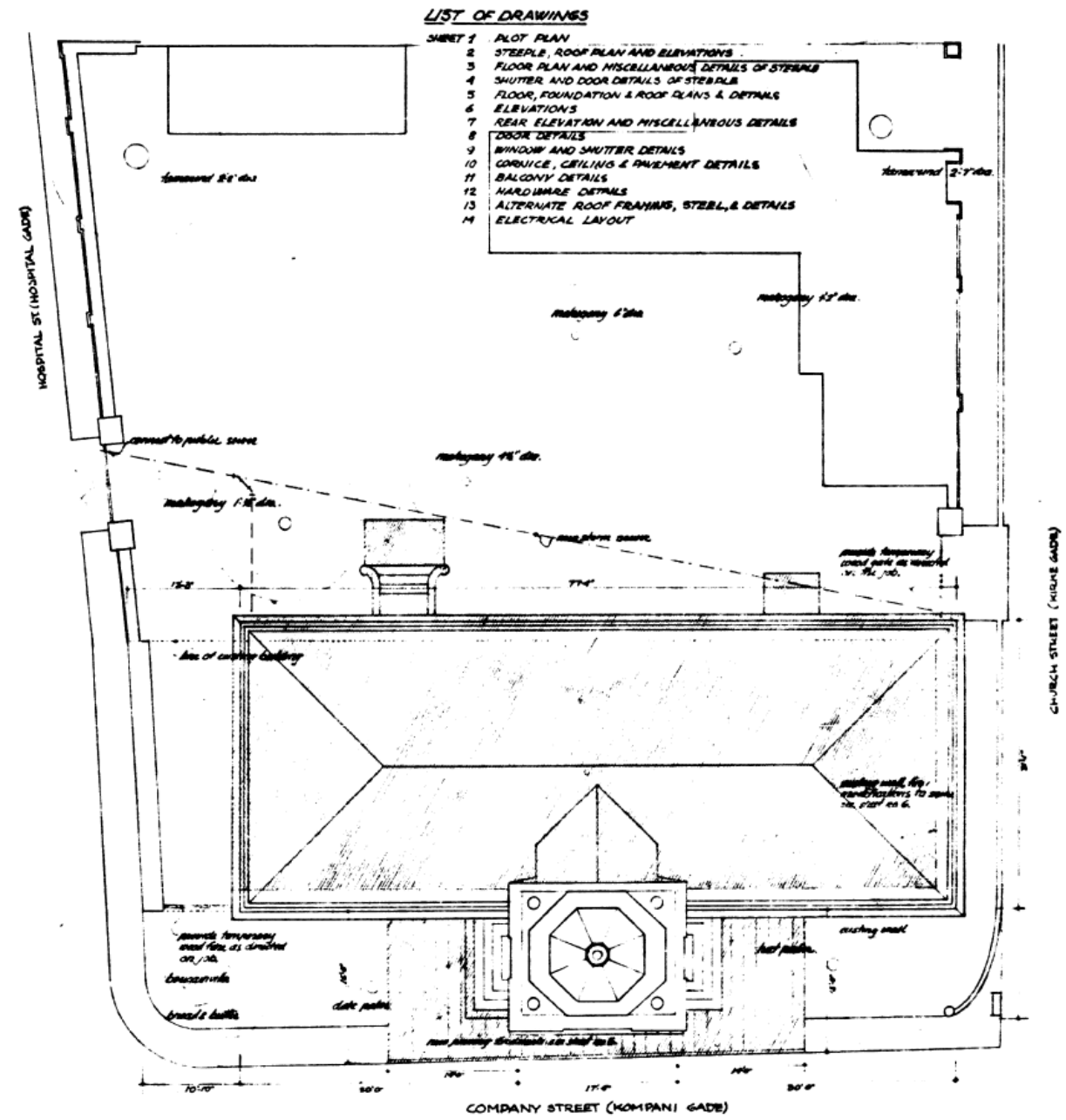
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STEEPLE BUILDING, VIRGIN ISLANDS NATIONAL HISTORIC SITE



PLOT PLAN, EXISTING CONDITIONS & DEMOLITION

NOTE
walls, walls, steps, etc. to be
demolished are shown
for future details of demolition and
for modifications of existing walls
which are to be retained see plans
& elevations sheets 2, 3, 5 & 6.
all lines shown are to be retained.



PLOT PLAN, NEW CONSTRUCTION

NOTE
new construction

LIST OF DRAWINGS

- SHEET 1 PLOT PLAN
- 2 STEEPLE, ROOF PLAN AND ELEVATIONS
- 3 FLOOR PLAN AND MISCELLANEOUS DETAILS OF STEEPLE
- 4 SHUTTER AND DOOR DETAILS OF STEEPLE
- 5 FLOOR, FOUNDATION & ROOF PLANS & DETAILS
- 6 ELEVATIONS
- 7 REAR ELEVATION AND MISCELLANEOUS DETAILS
- 8 DOOR DETAILS
- 9 WINDOW AND SHUTTER DETAILS
- 10 CORNICE, CEILING & FURNISHING DETAILS
- 11 BALCONY DETAILS
- 12 HARDWARE DETAILS
- 13 ALTERNATE ROOF FRAMING, STEEL, & DETAILS
- 14 ELECTRICAL LAYOUT



ORIENTATION

PREPARED

DESIGNED

DRAWN

CHECKED

DATE

INITIAL

REVISION

REGION

PROJECT

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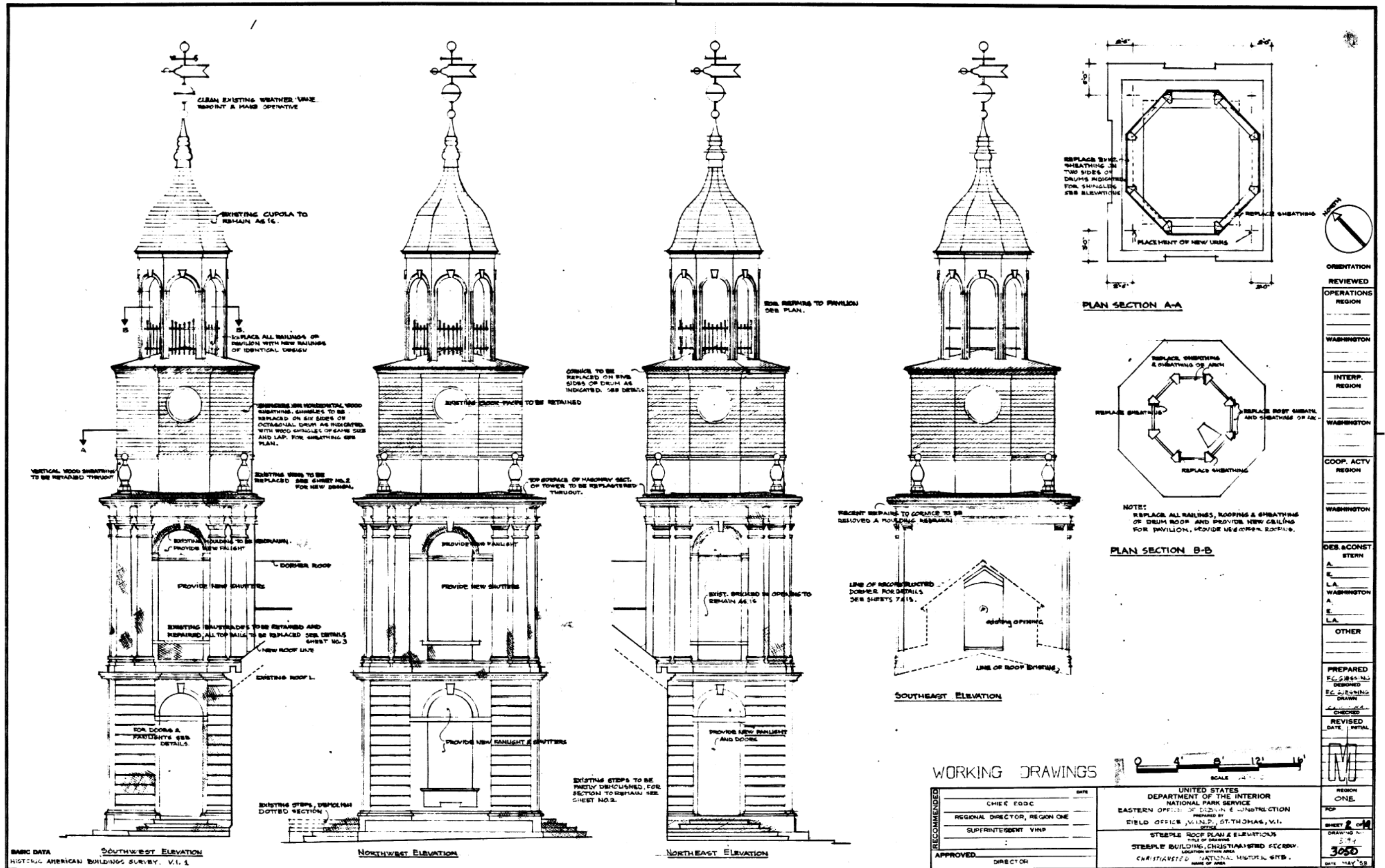
SHEET 1 OF 4

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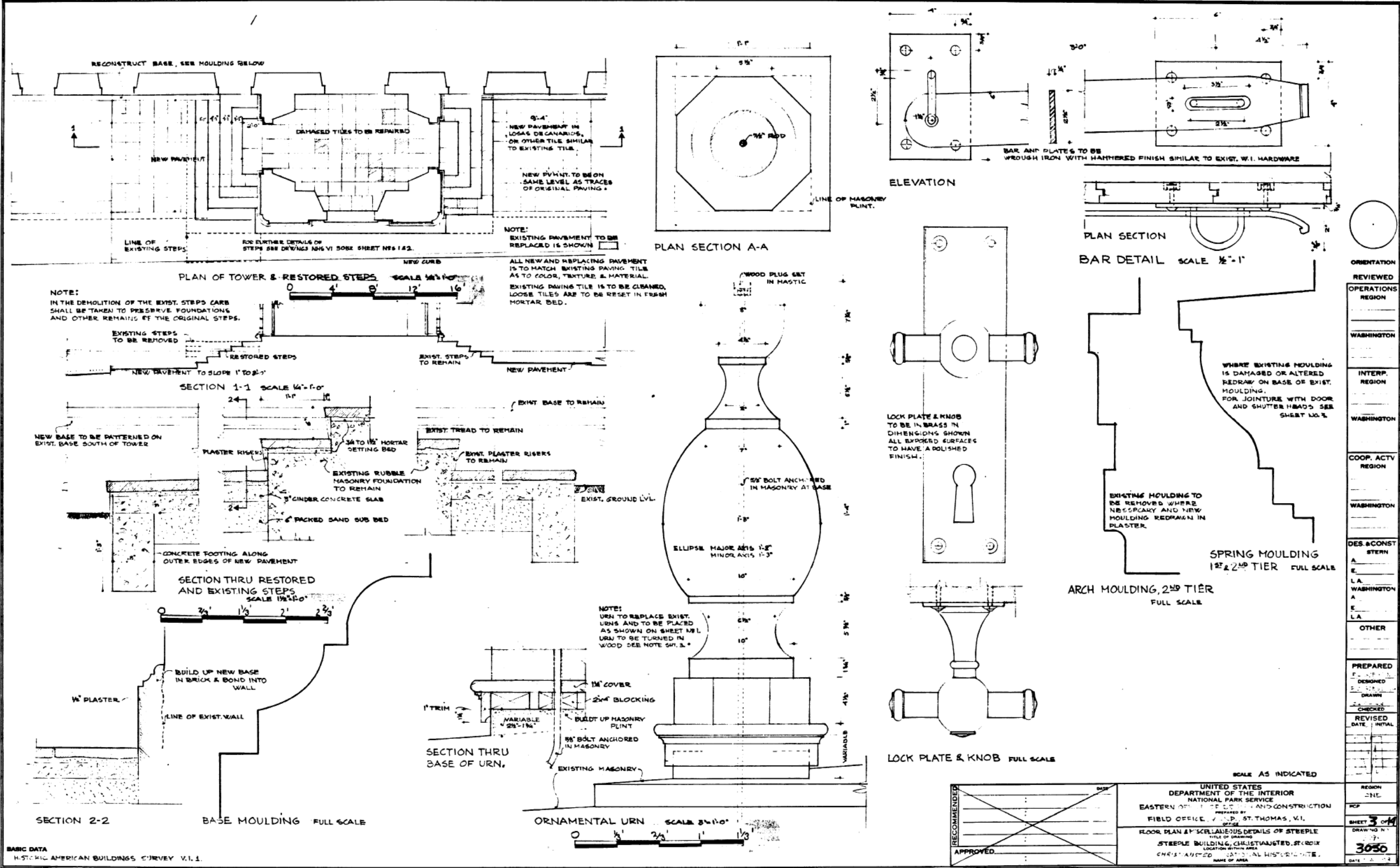
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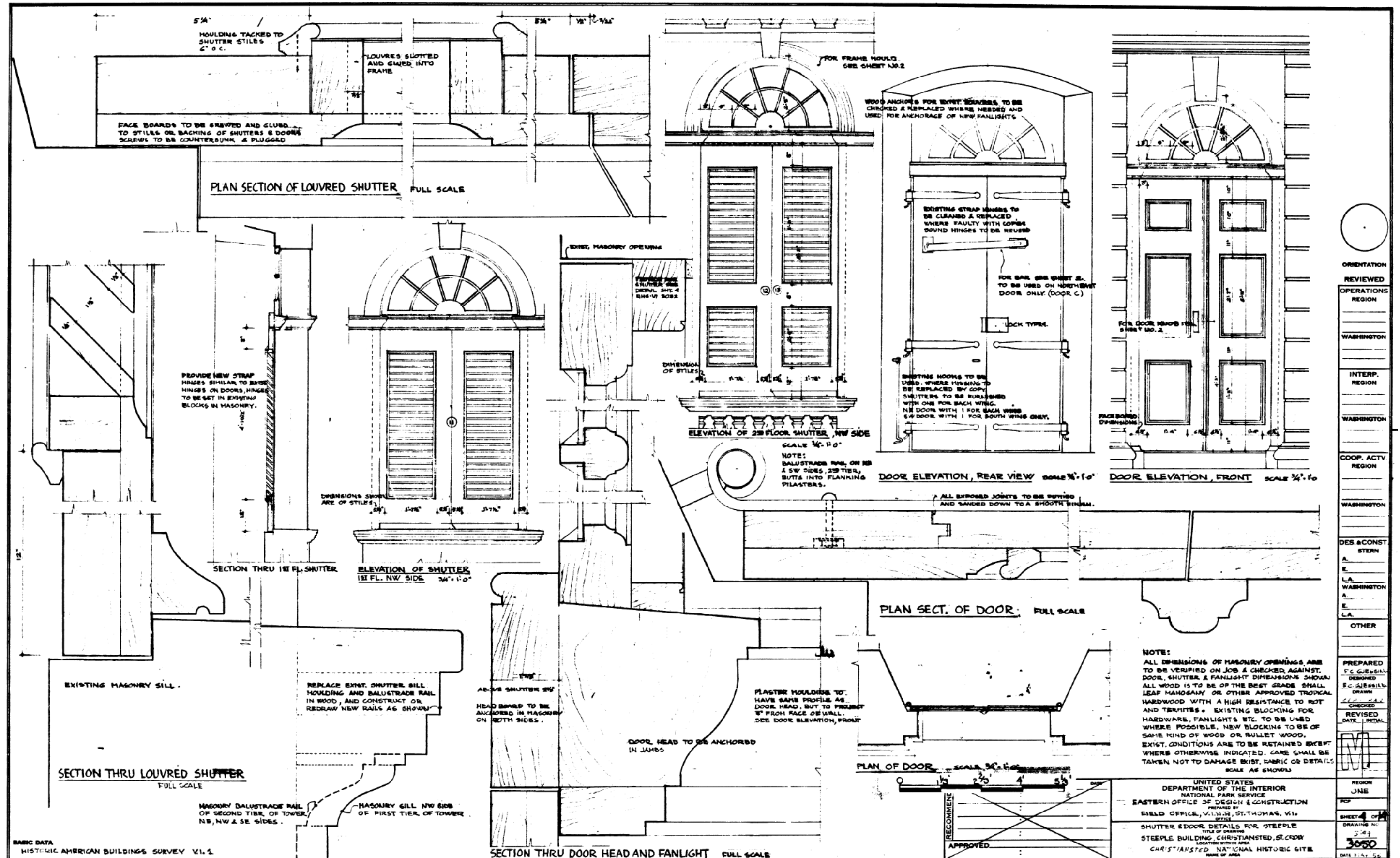
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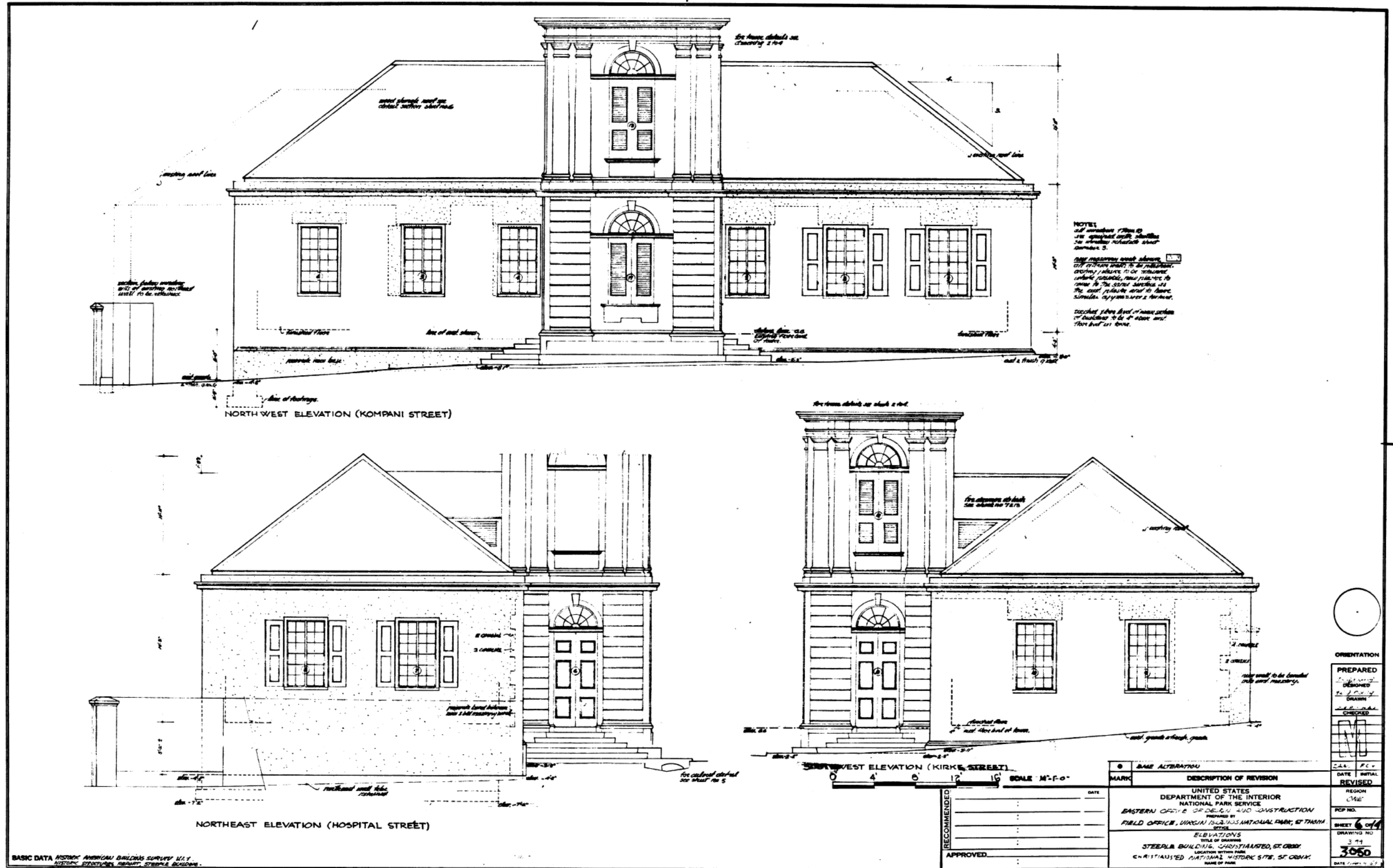


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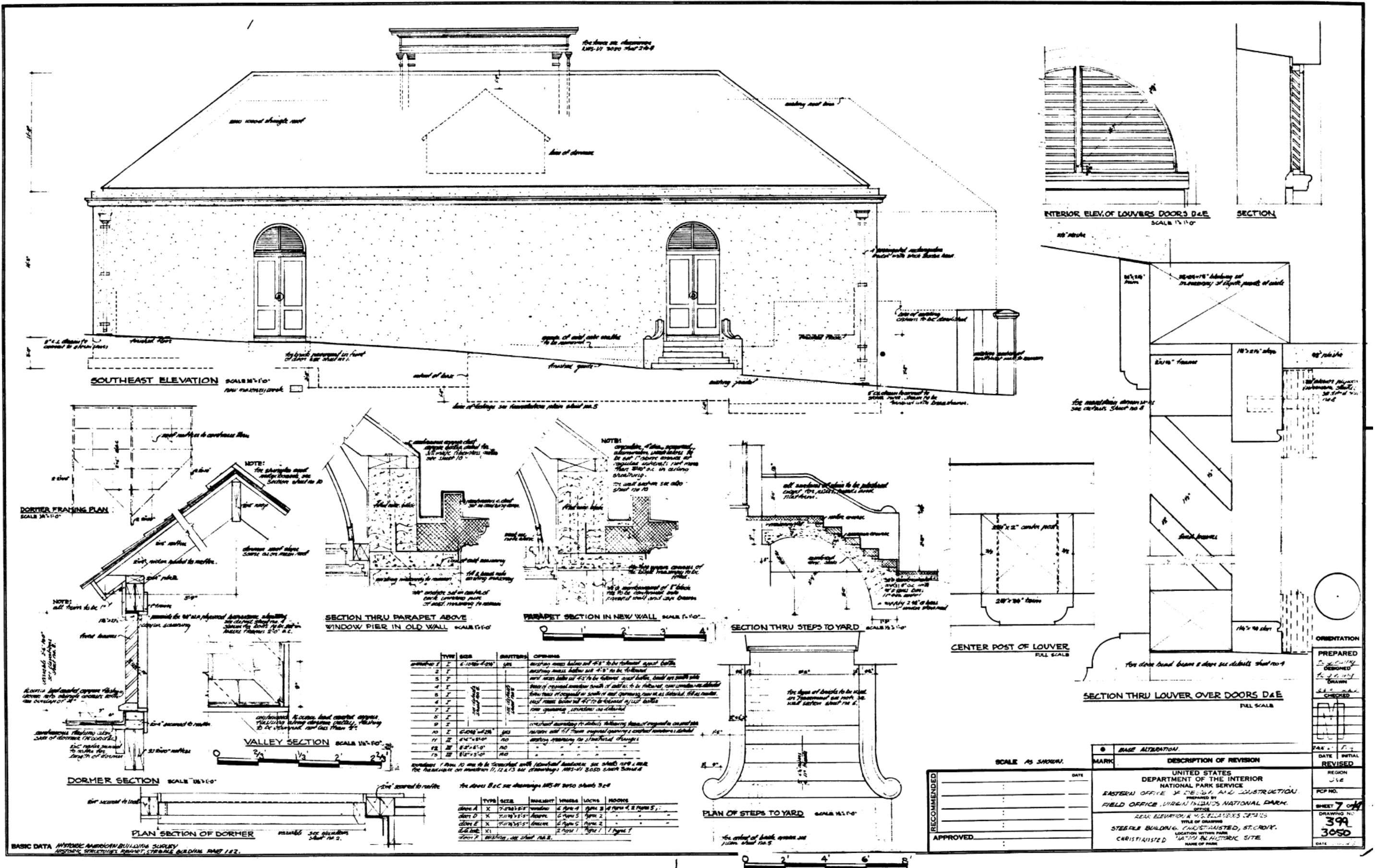


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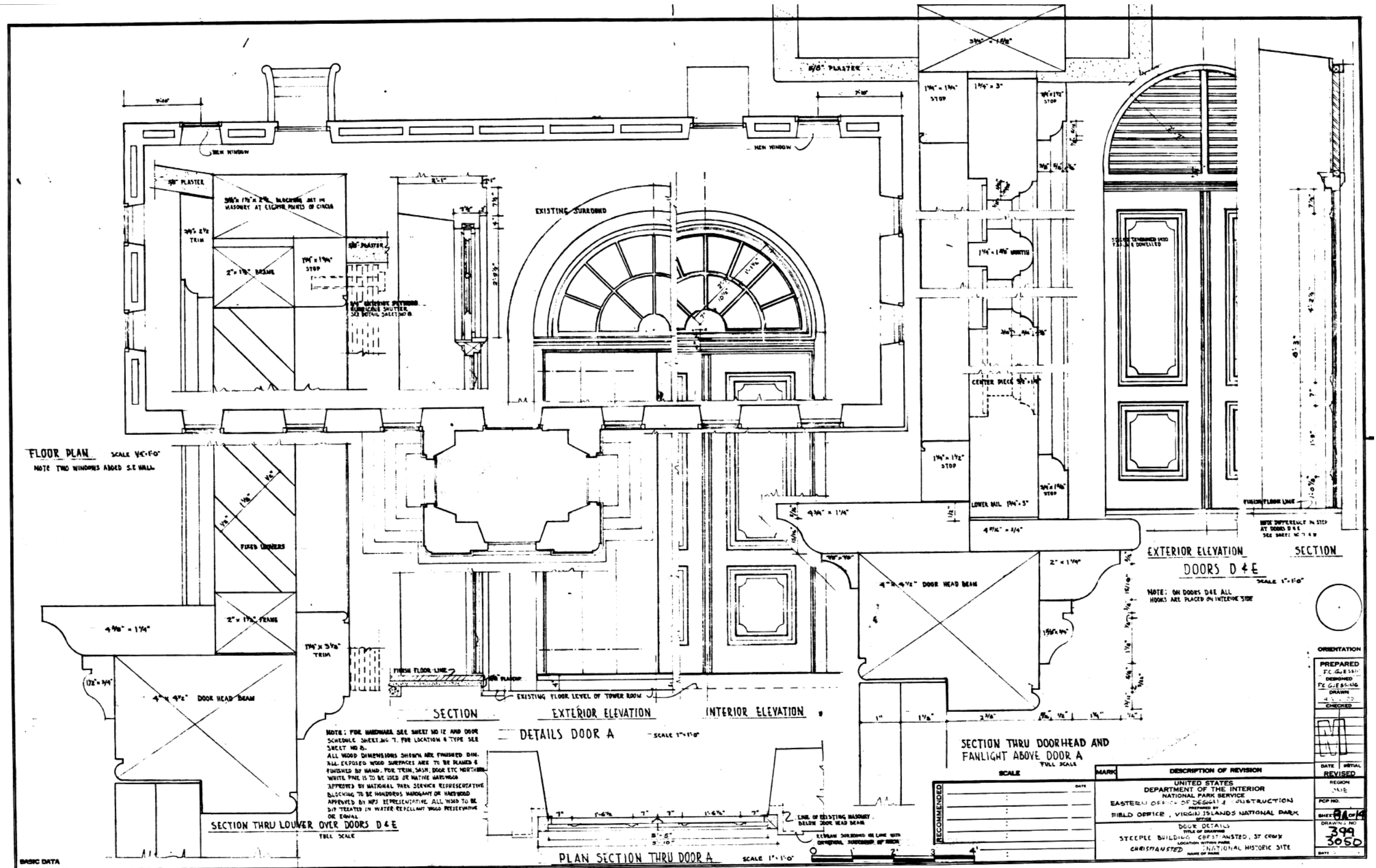


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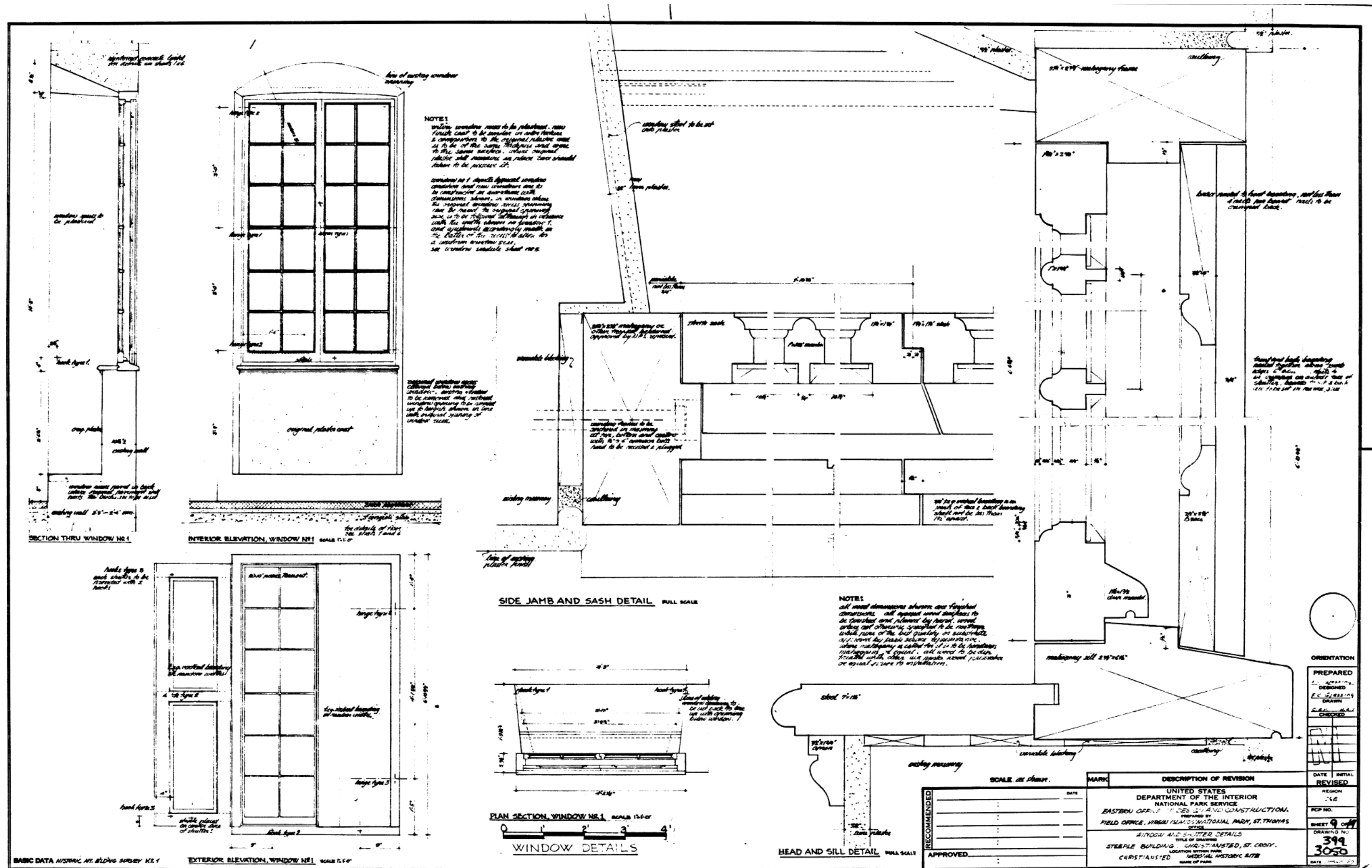


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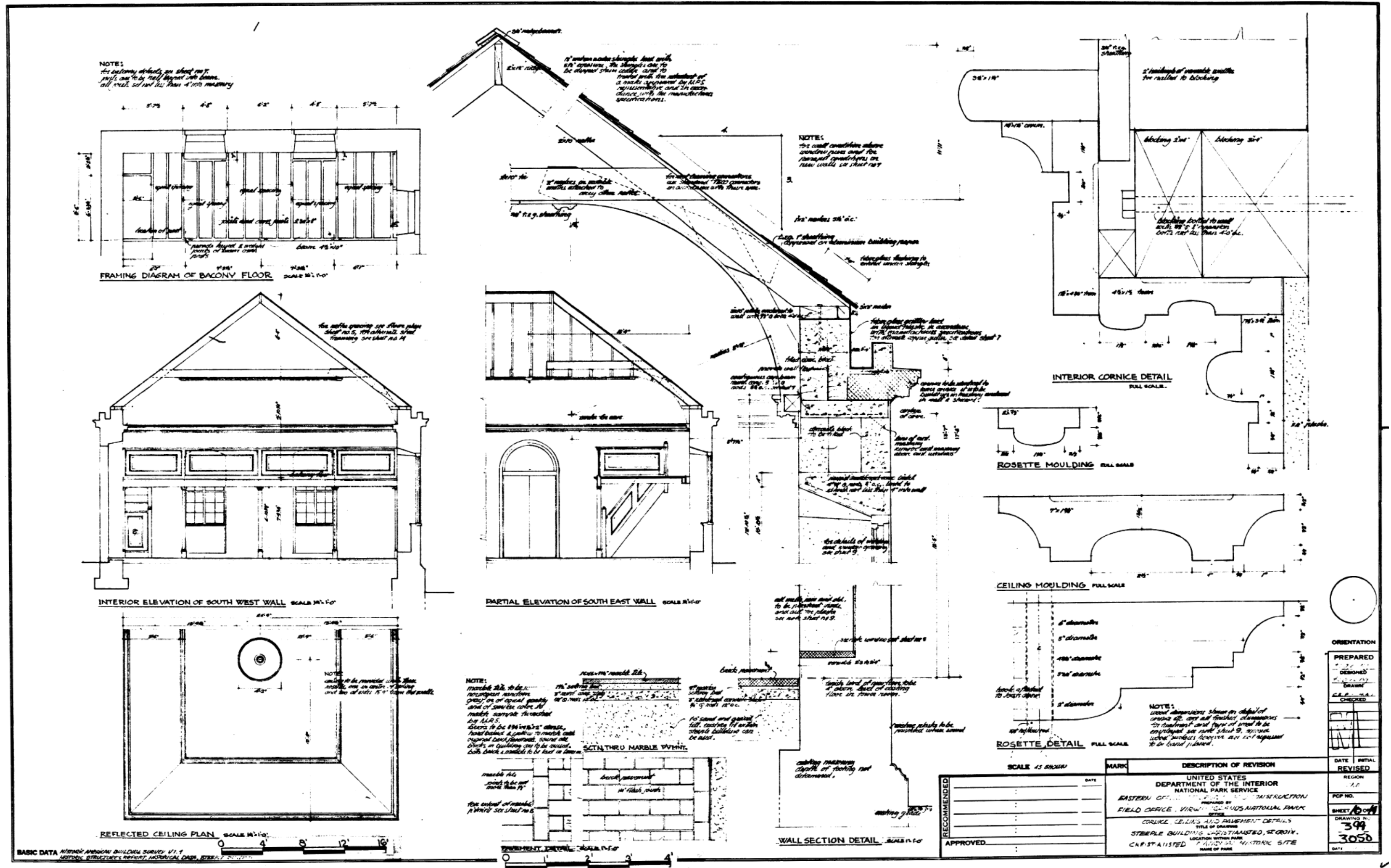
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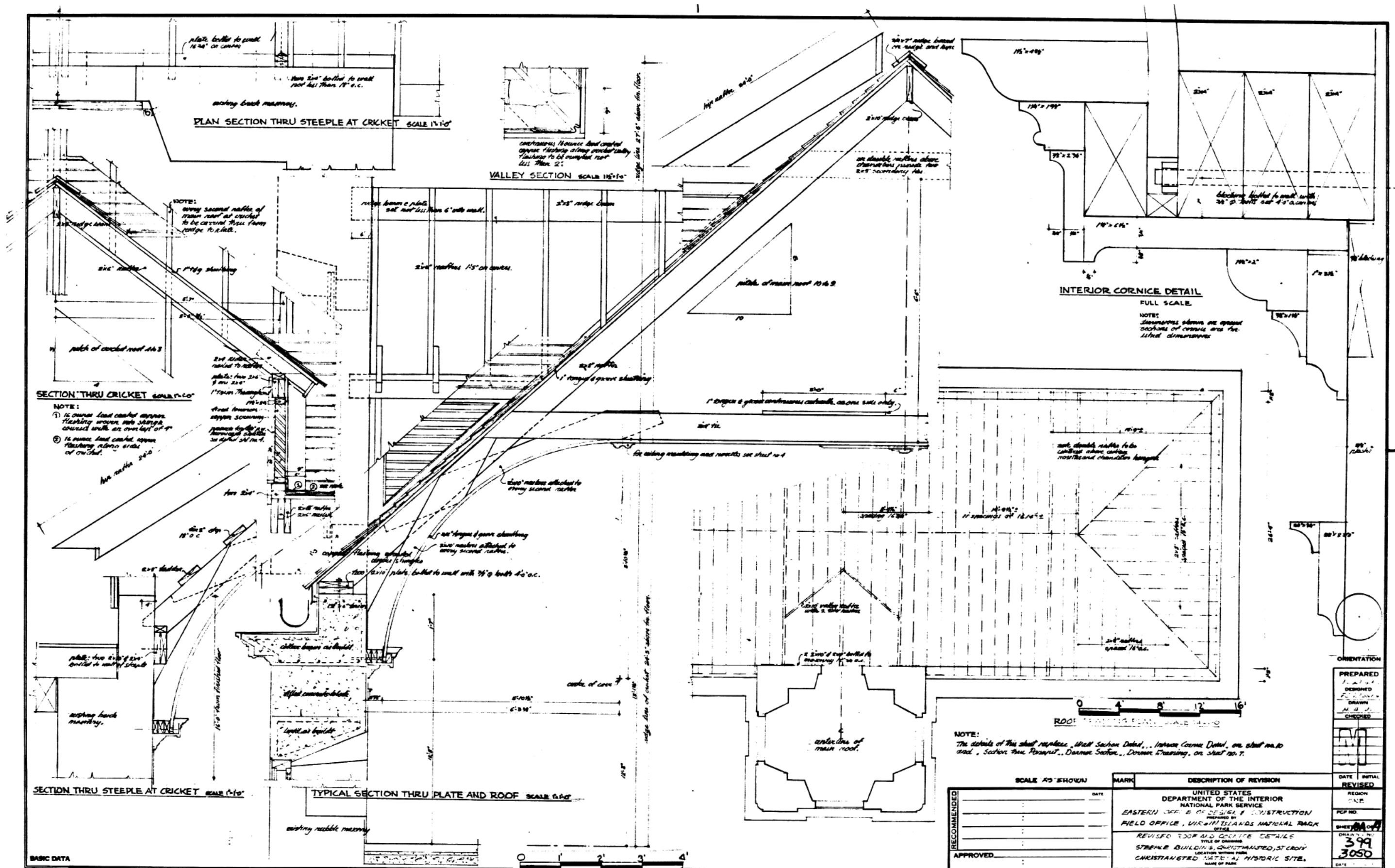
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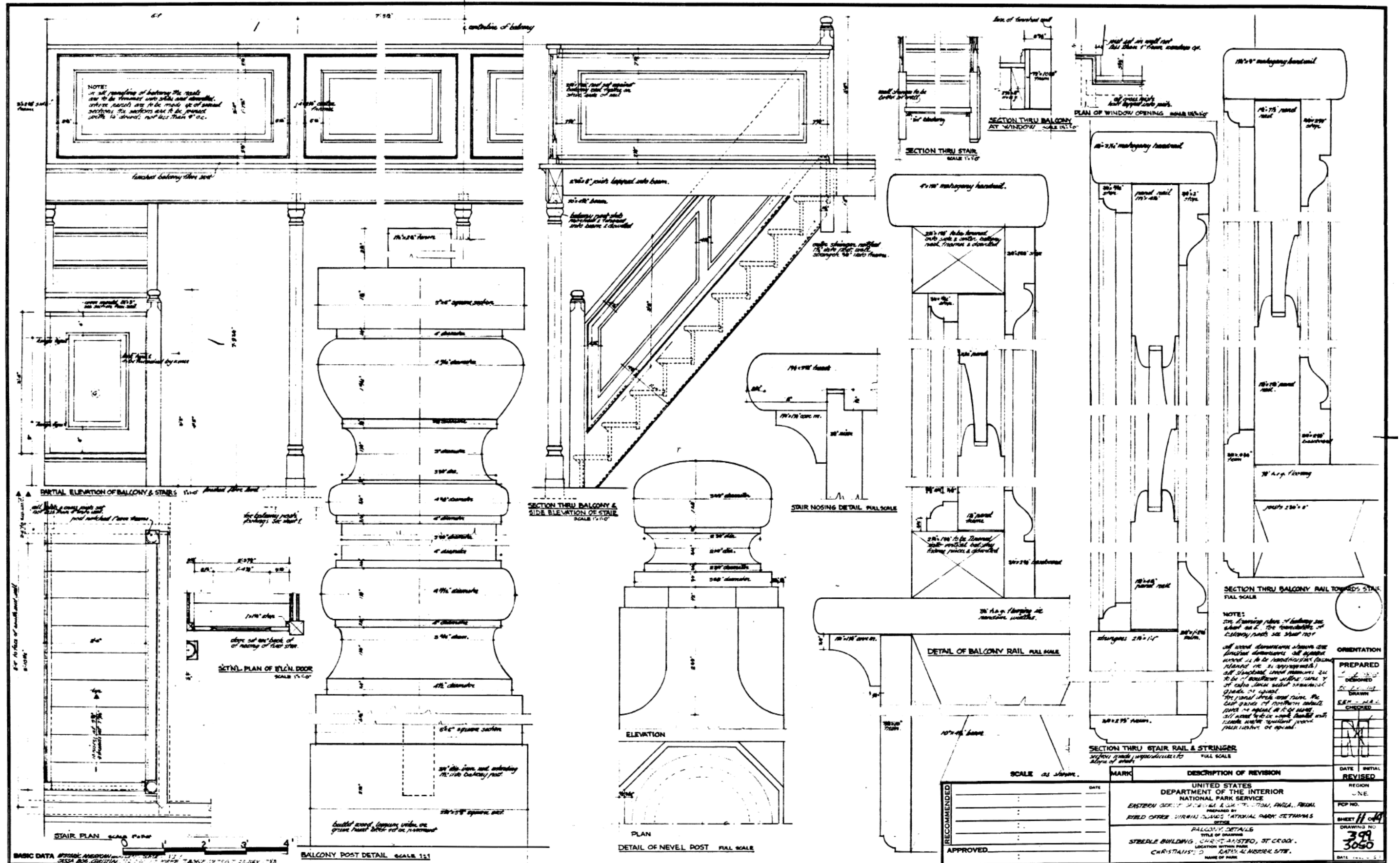
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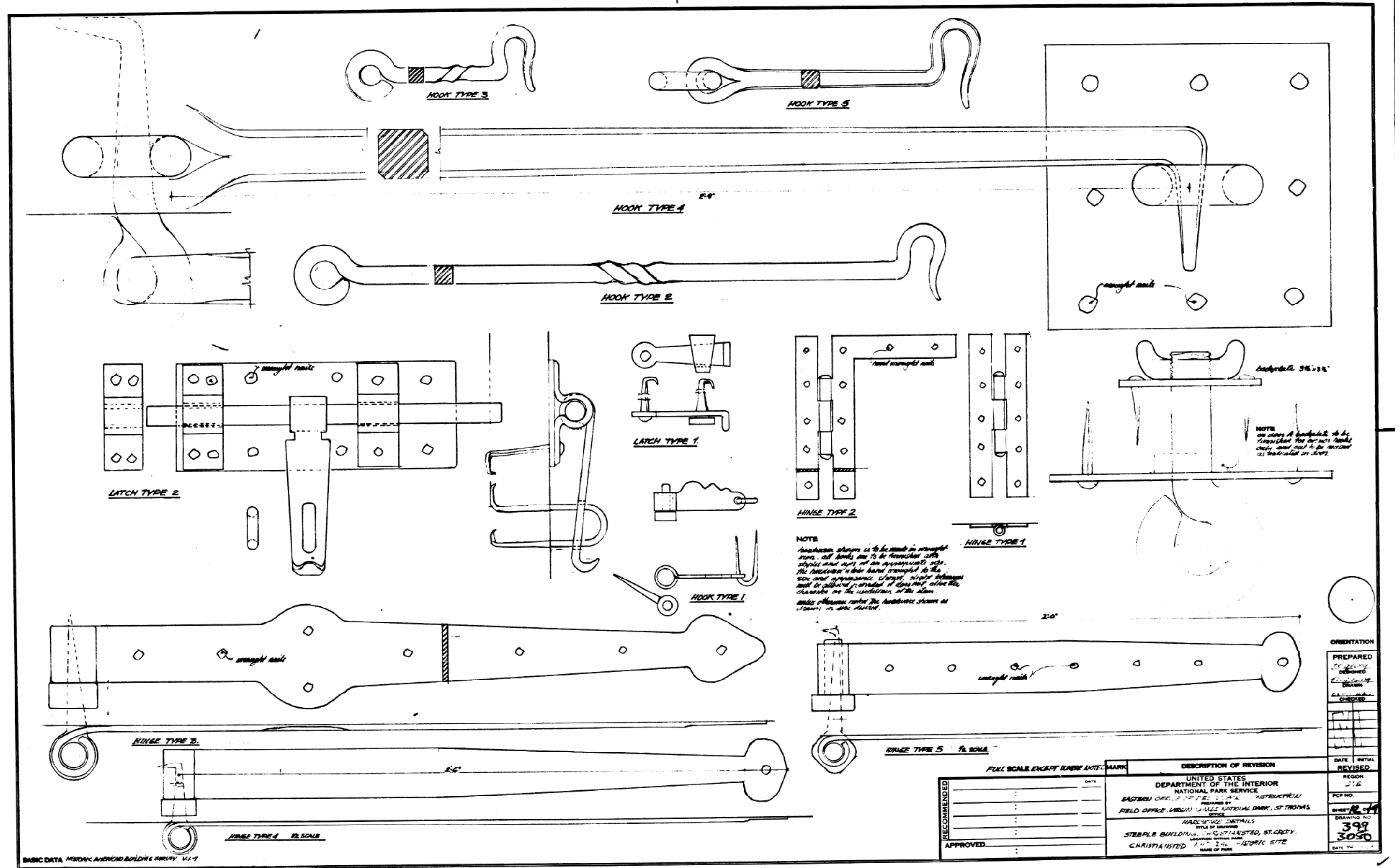


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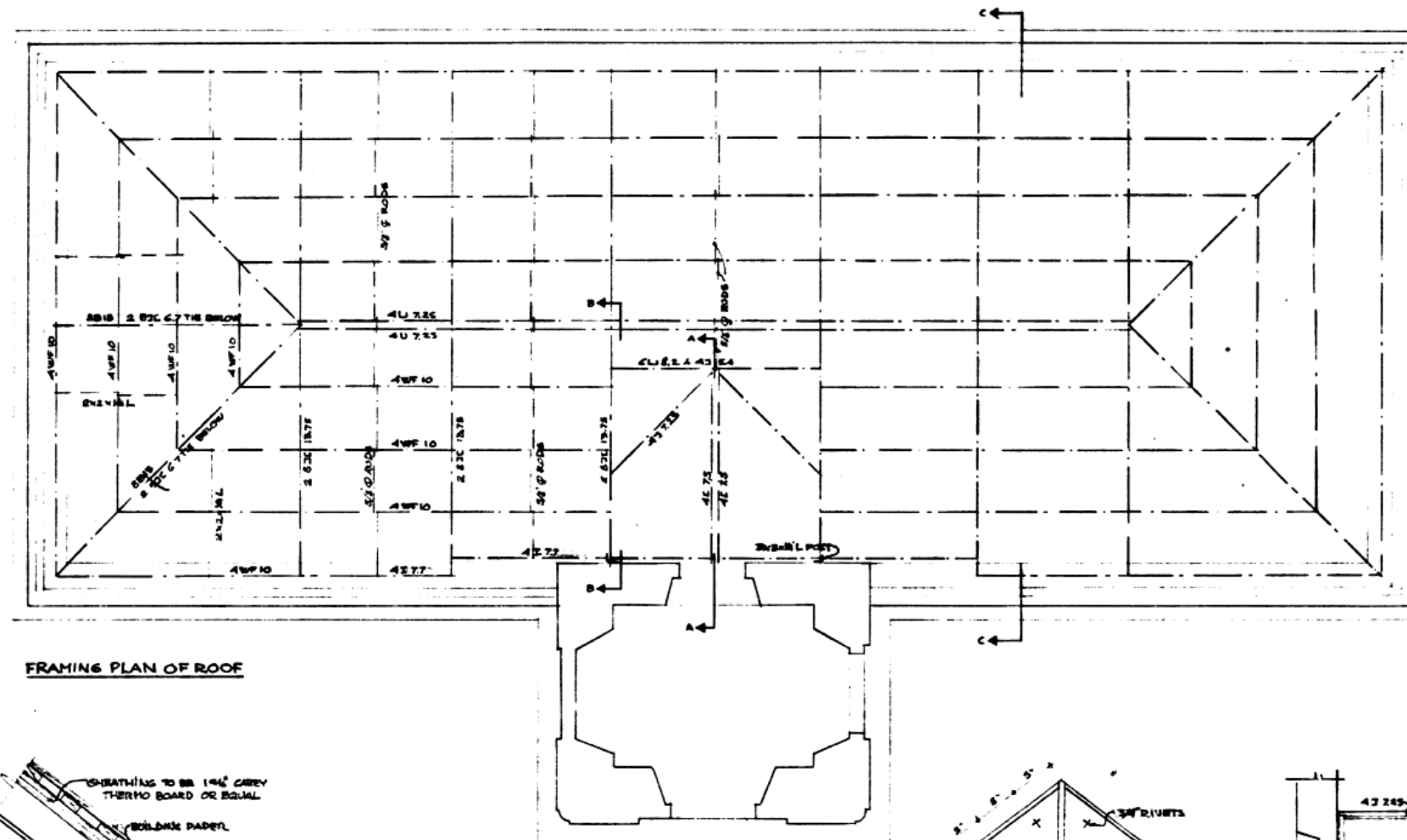


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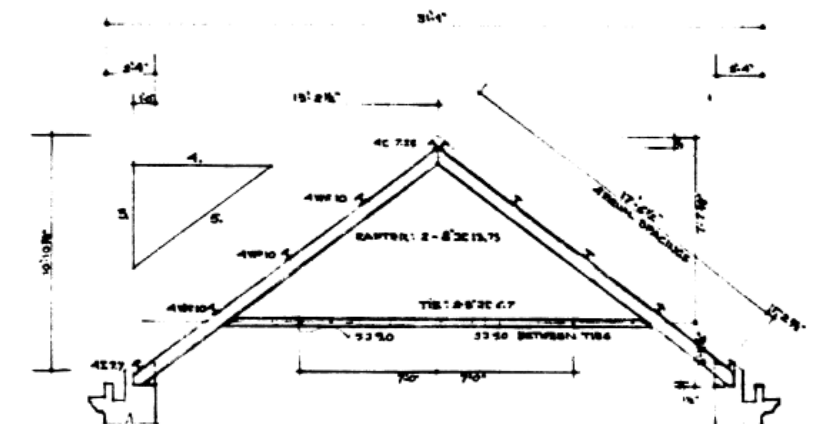
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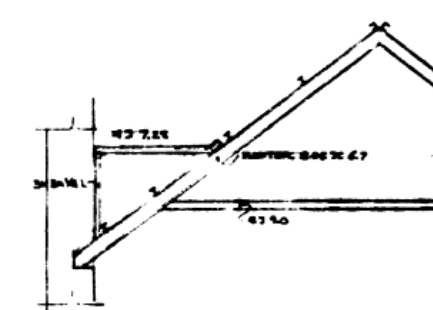
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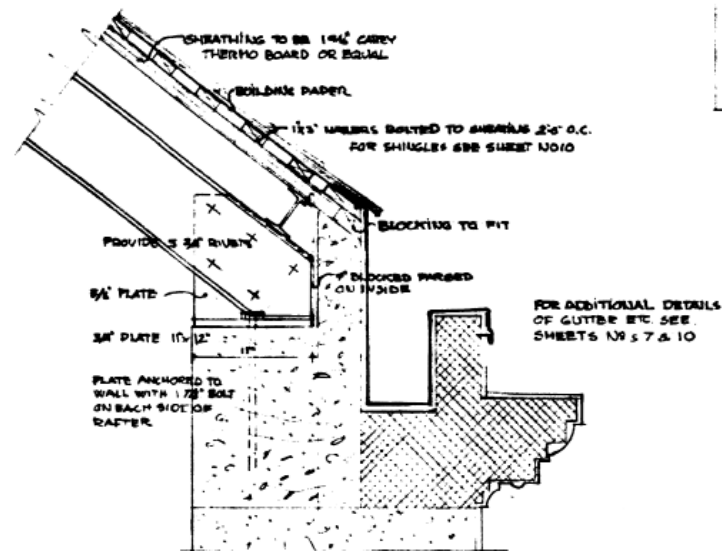
FRAMING PLAN OF ROOF



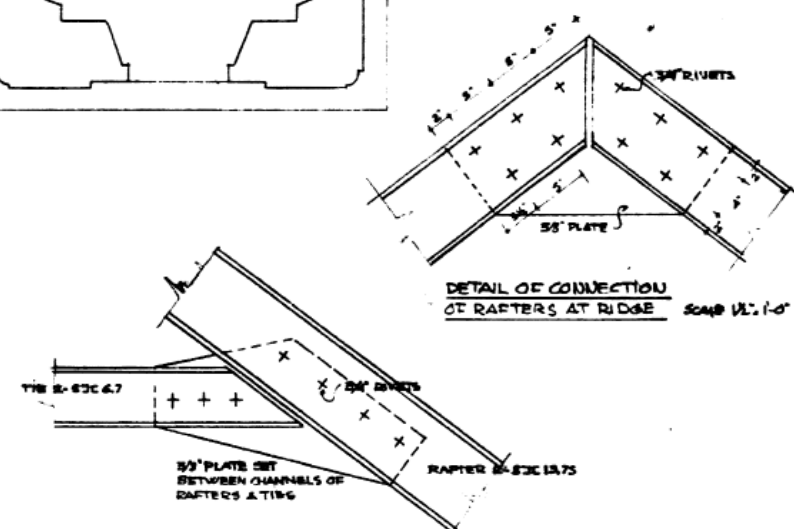
SECTION C-C THRU ROOF



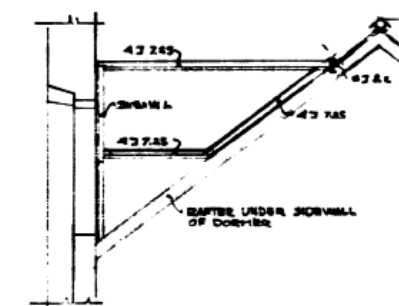
SECTION B-B THRU DORMER



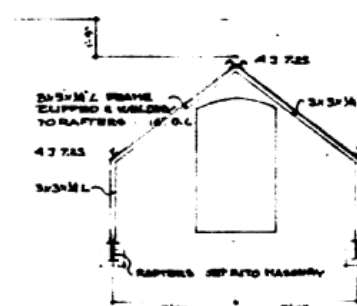
DETAIL OF PLATE & GUTTER
SCALE $1\frac{1}{2}'' = 1'-0''$



DETAIL OF CONNECTION OF
TIES AND RAFTERS SCALE $1\frac{1}{2}"=4'-0"$



SECTION A-A THRU DORMER



SECTION D-D THRU DORMER



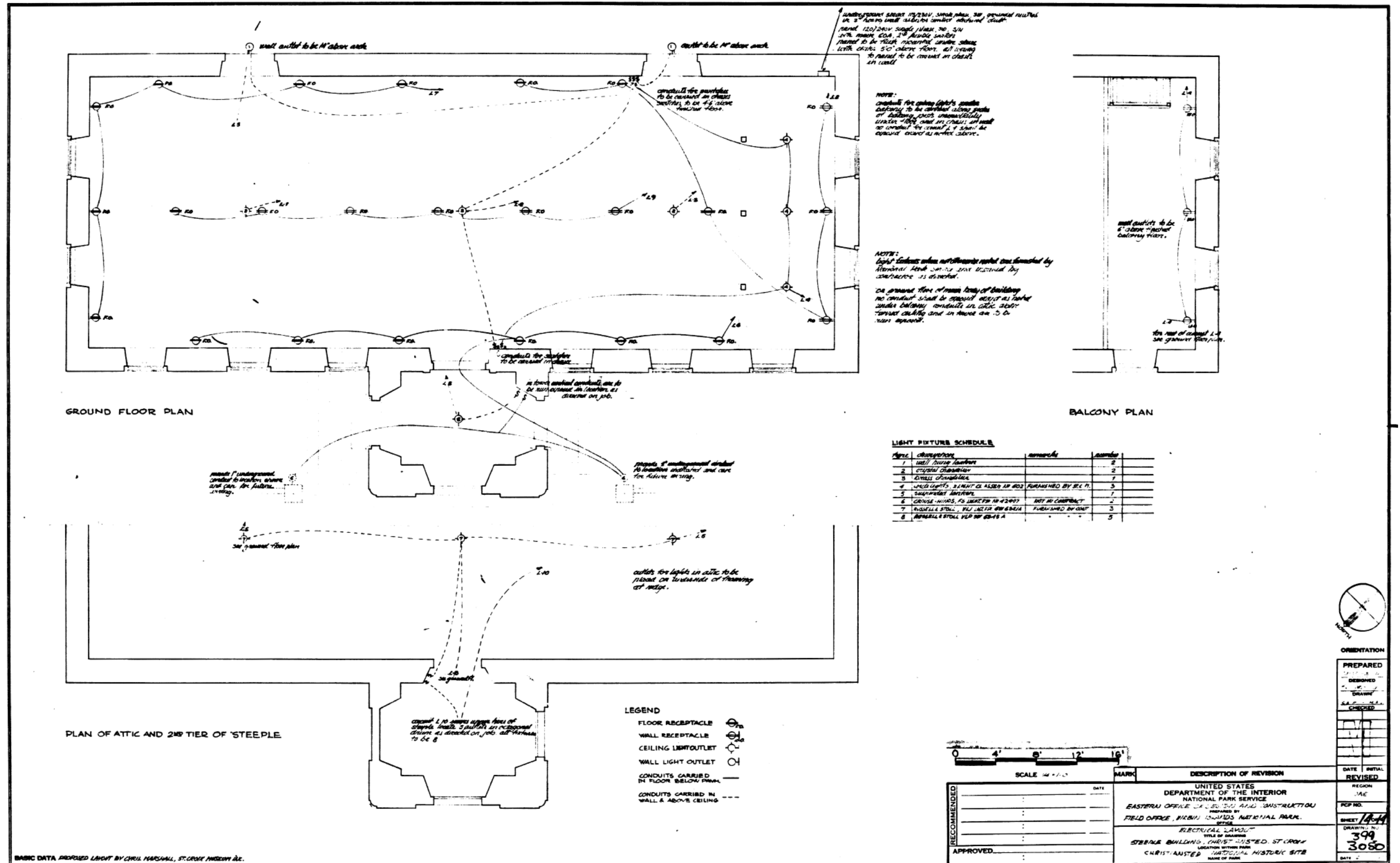
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SHEET 13 OF 47	
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ALTERNATE FRAMING OF ROOF IN STEEL

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Appendix C

Key Plans Showing the Evolution of the Steeple Building

Sheet 1: The Steeple Building (1749-1794)

Sheet 2: Changes to Steeple Building for Military Bakery and Storehouse (1841-1842)

Sheet 3: Changes to Steeple Building for Military Bakery and Storehouse (1841-1842)

Sheet 4: Changes to the Steeps Building for a Sunday School and Town Hall (ca. 1909)

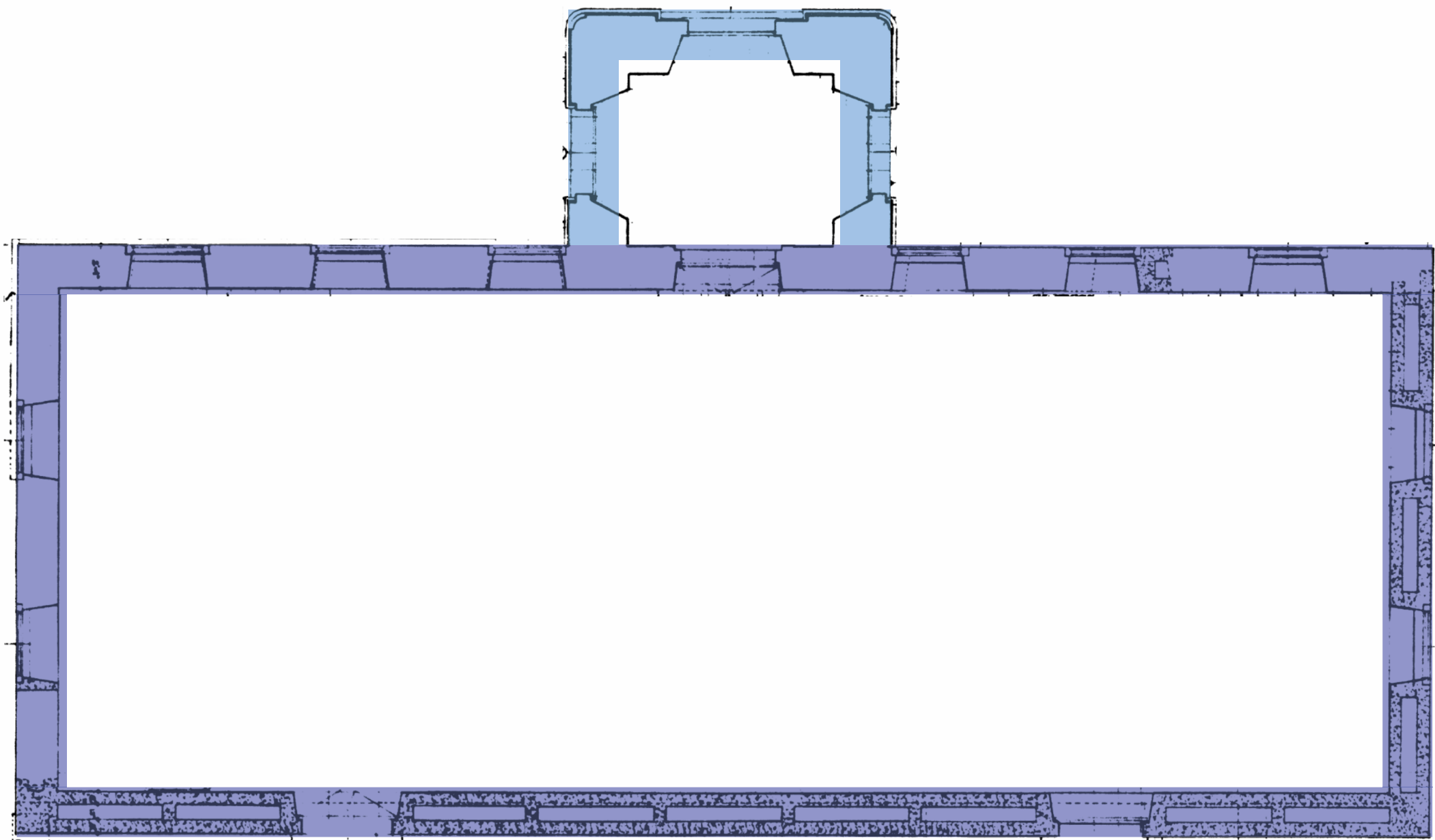
Sheet 5: Changes to the Steeps Building for a Sunday School and Town Hall (ca. 1909)

Sheet 6: Changes to the Steeple Building for Rehabilitation as a Museum (1960-1964)

Sheet 7: The Steeple Building post 1965

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Steeple Building (1749-1751)



- wall constructed* ca. 1749-1751
- wall constructed* ca. 1794

*wall locations are approximated based on available information

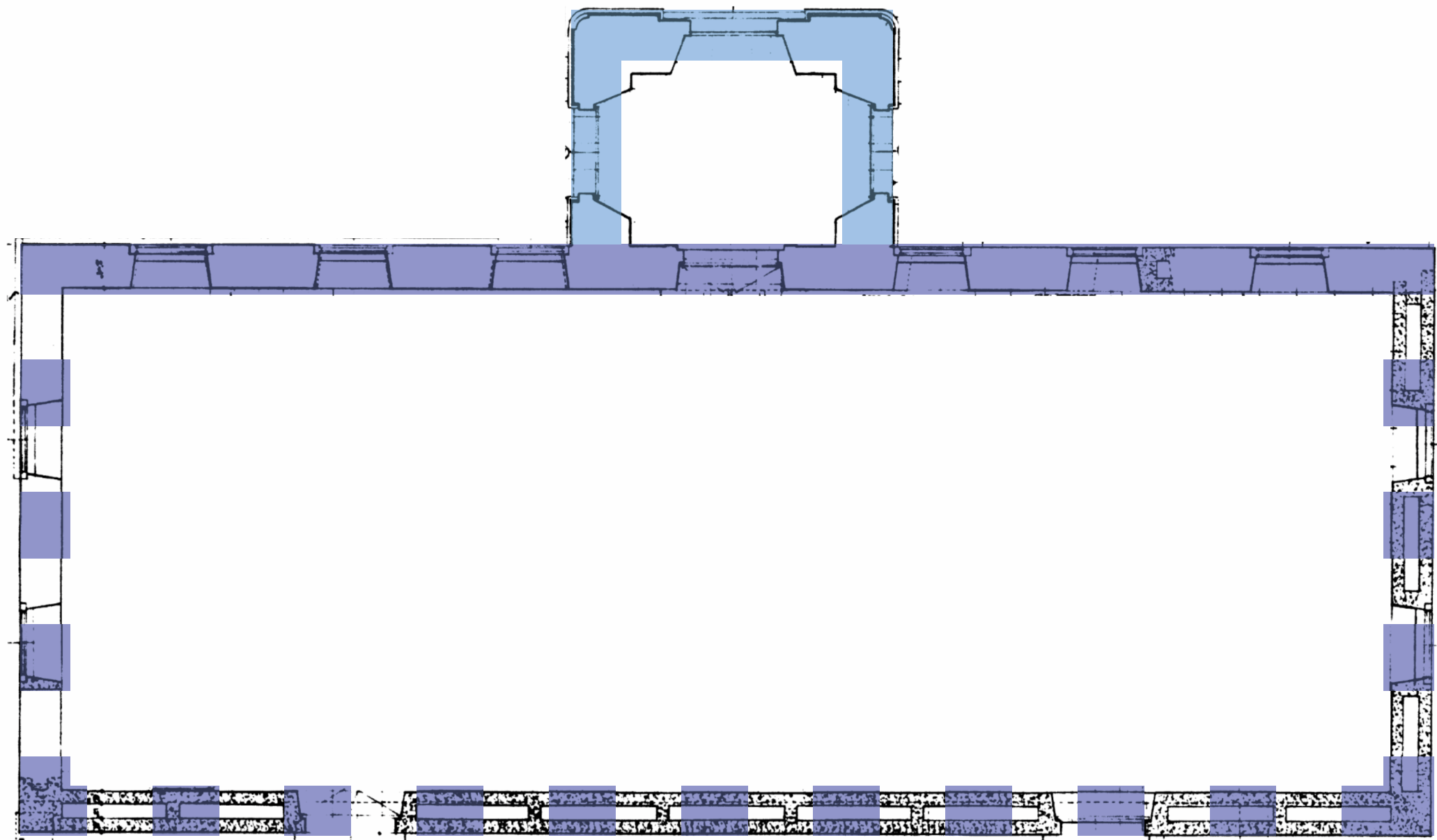


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Steeple Building (1841-1842)

Changes for Military Bakery and Storage



- wall constructed* ca. 1749-1751
- ■ ■ ■ ■ wall demolished* ca. 1841-1842
- wall constructed* ca. 1794



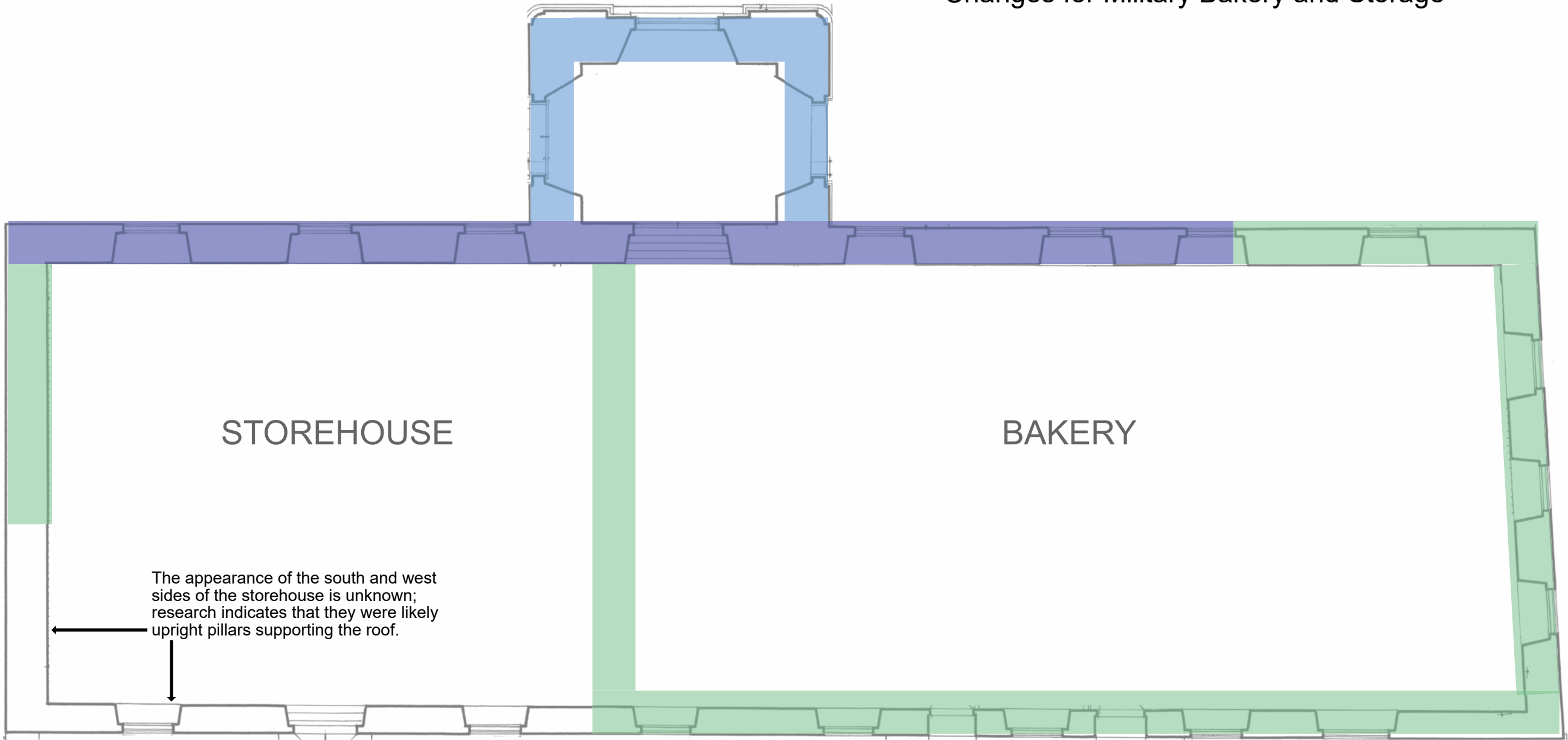
*wall locations are approximated based on available information

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Steeple Building (1841-1842)

Changes for Military Bakery and Storage



wall constructed* ca. 1749-1751

wall constructed* ca. 1841-1842

wall constructed* ca. 1794

*wall locations are approximated based on available information

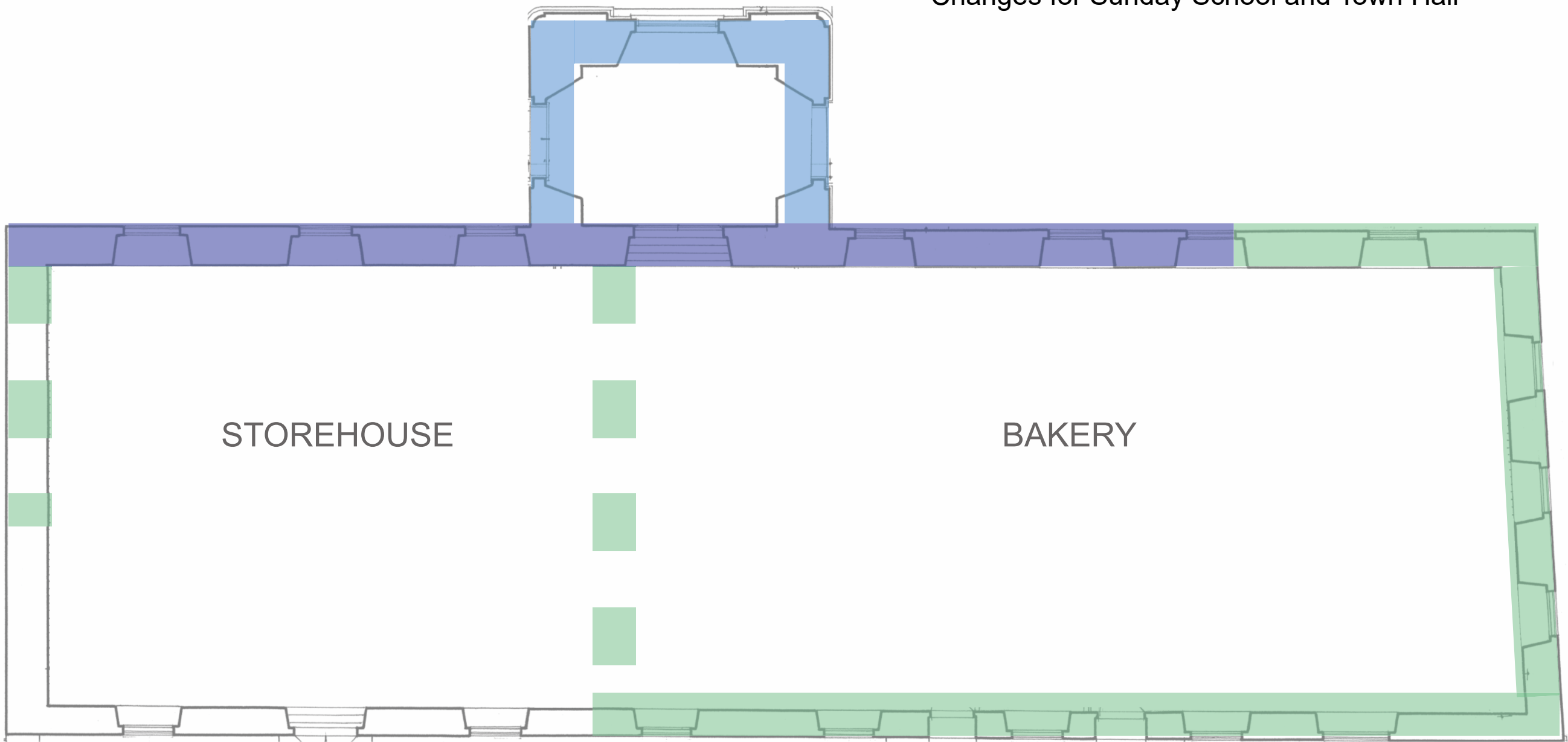


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Steeple Building (1909)

Changes for Sunday School and Town Hall



■ wall constructed* ca. 1749-1751

■ wall constructed* ca. 1794

■ wall constructed* ca. 1841-1842

■ ■ ■ ■ ■ wall demolished* ca. 1909

*wall locations are approximated based on available information

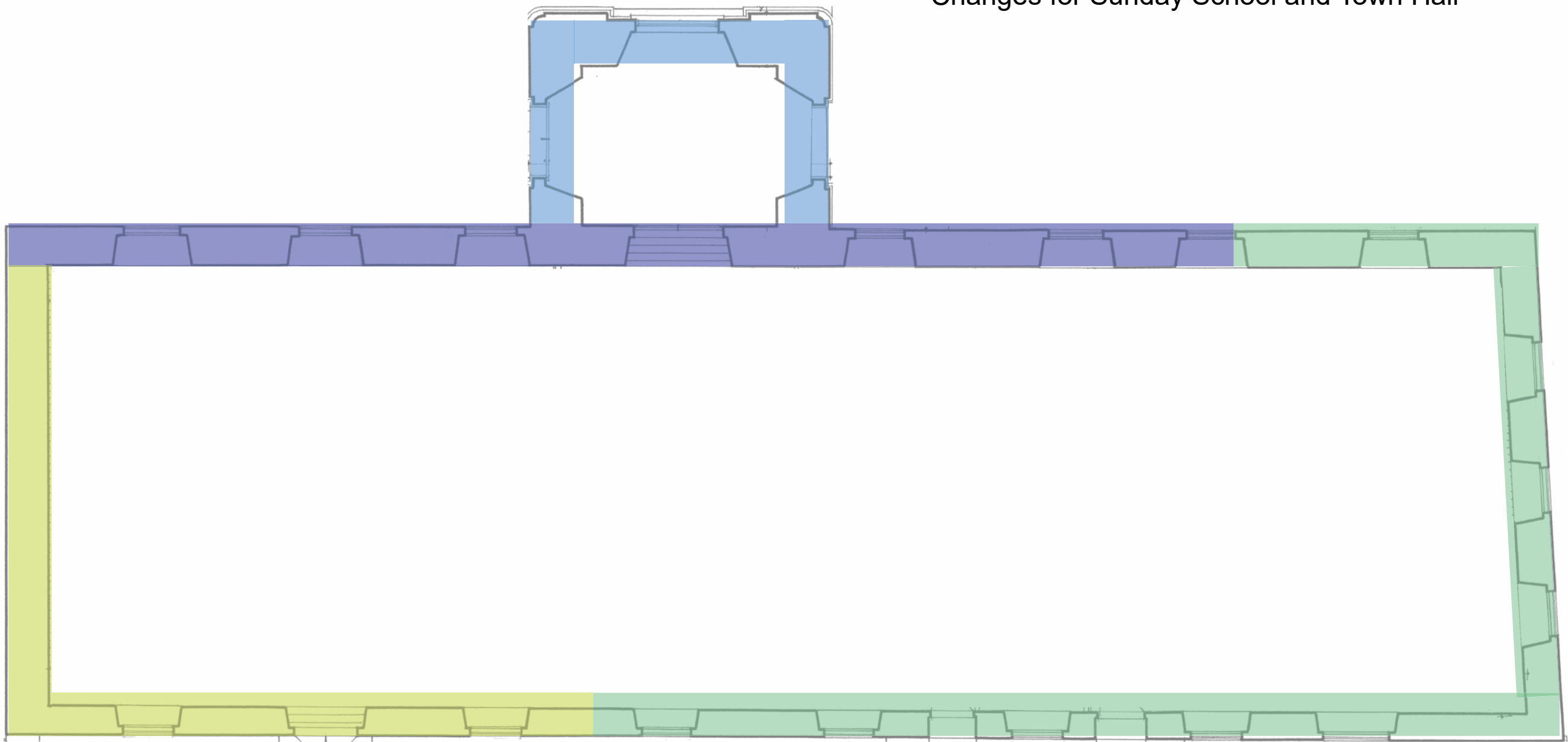


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Steeple Building (1909)

Changes for Sunday School and Town Hall



■ wall constructed* ca. 1749-1751

■ wall constructed* ca. 1794

■ wall constructed* ca. 1841-1842

■ wall constructed* ca. 1909

*wall locations are approximated based on available information

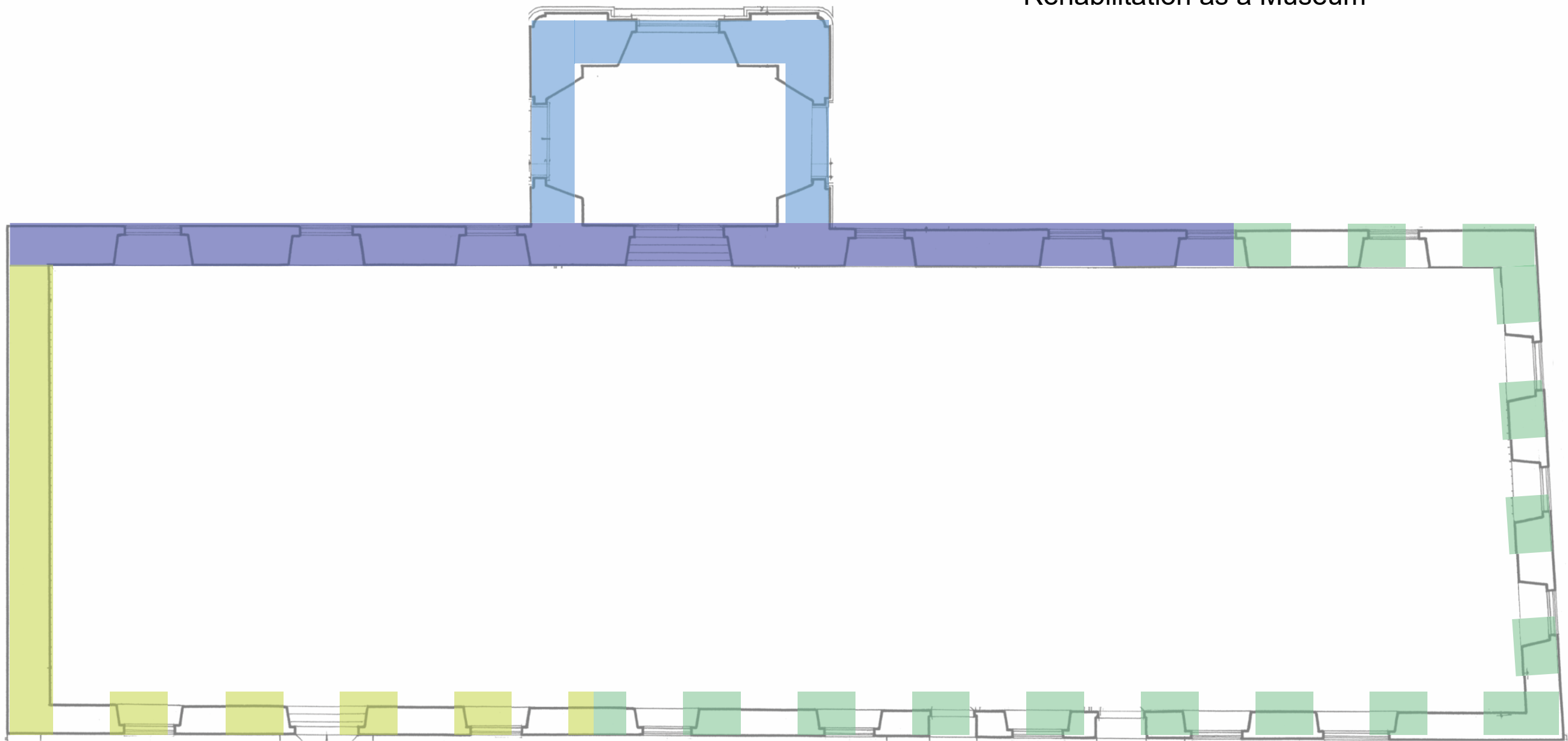


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Steeple Building (1960-1964)

Rehabilitation as a Museum



wall constructed* ca. 1749-1751

wall constructed* ca. 1794

*wall locations are approximated based on available information

wall demolished* ca. 1960-1964

wall constructed* ca. 1909

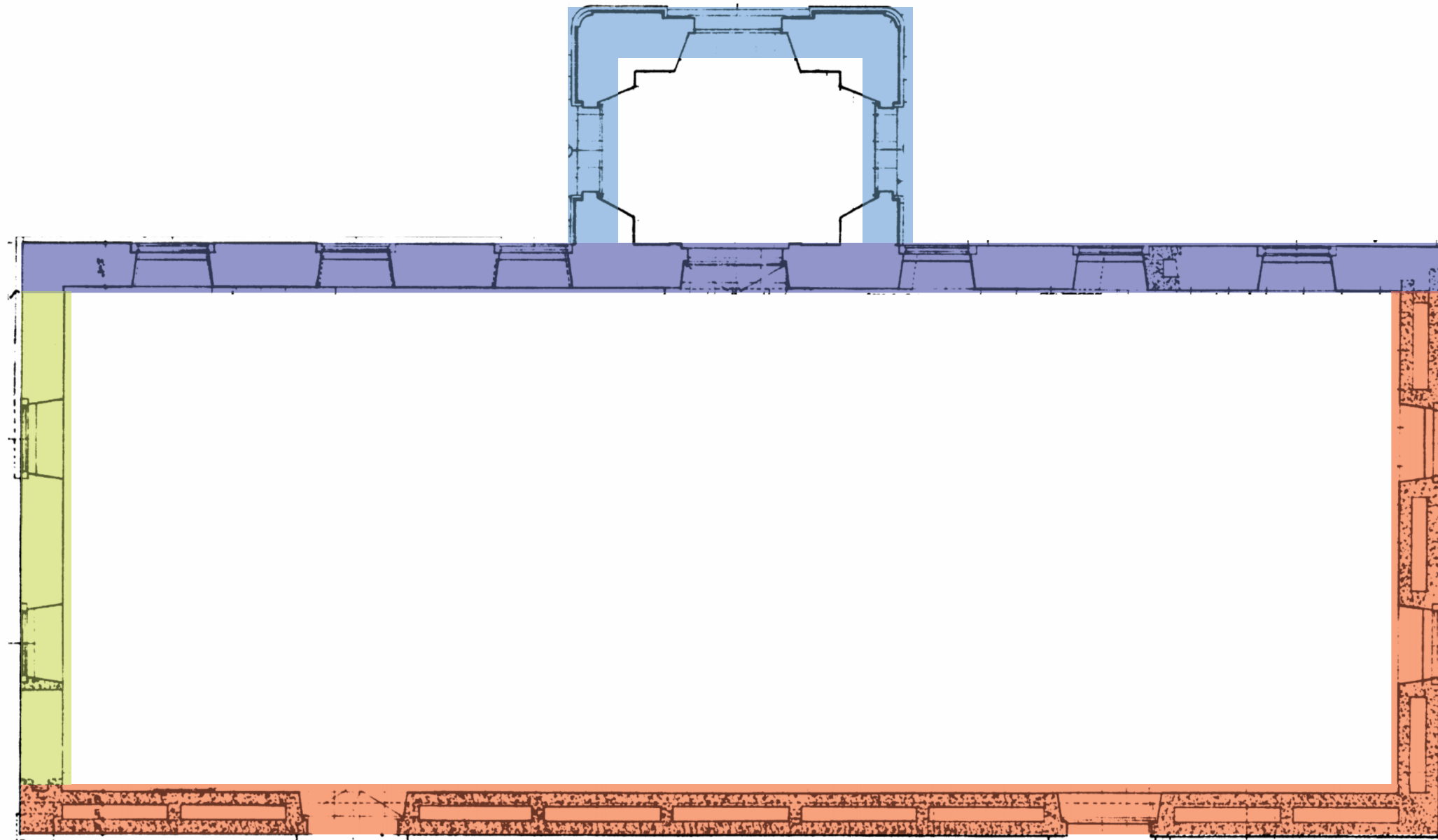
wall demolished* ca. 1960-1964



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Steeple Building (post 1964)



■ wall constructed* ca. 1749-1751

■ wall constructed* ca. 1909

■ wall constructed* ca. 1794

■ wall constructed* ca. 1960-1964

*wall locations are approximated based on available information



Drawing not to scale.

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Appendix D

Existing Drawings, The Steeple Building

Sheet 1: First Floor Plan

Sheet 2: Northwest Elevation

Sheet 3: Northeast Elevation

Sheet 4: Southeast Elevation

Sheet 5: Southwest Elevation

Sheet 6: Section Facing Southeast

Sheet 7: Section Facing Northwest

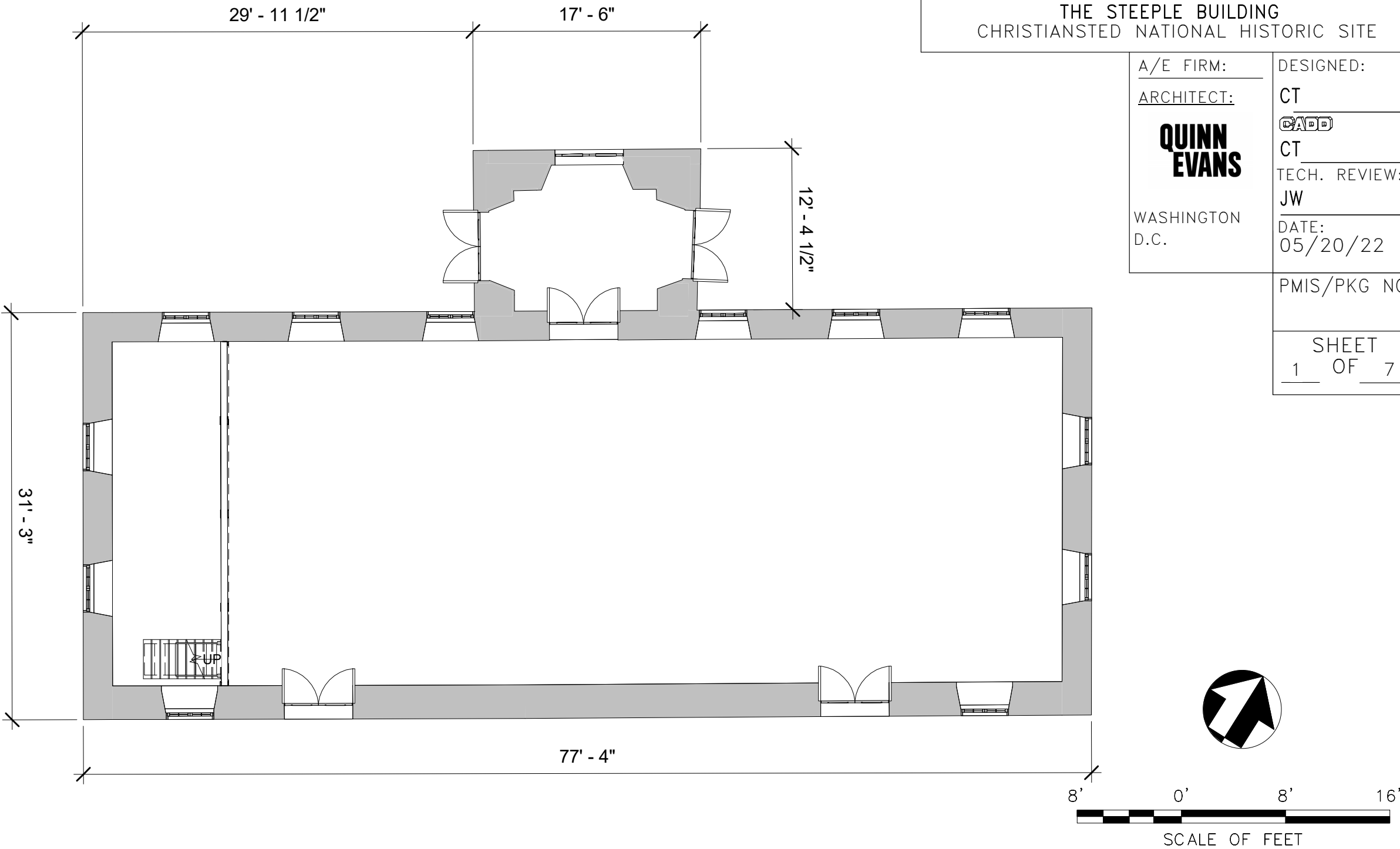
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EXISTING CONDITIONS
FIRST FLOOR PLAN

THE STEEPLE BUILDING
CHRISTIANSTED NATIONAL HISTORIC SITE

A/E FIRM:	DESIGNED:
ARCHITECT:	CT
QUINN EVANS	CADD
WASHINGTON D.C.	CT
	TECH. REVIEW:
	JW
	DATE:
	05/20/22
	PMIS/PKG NO

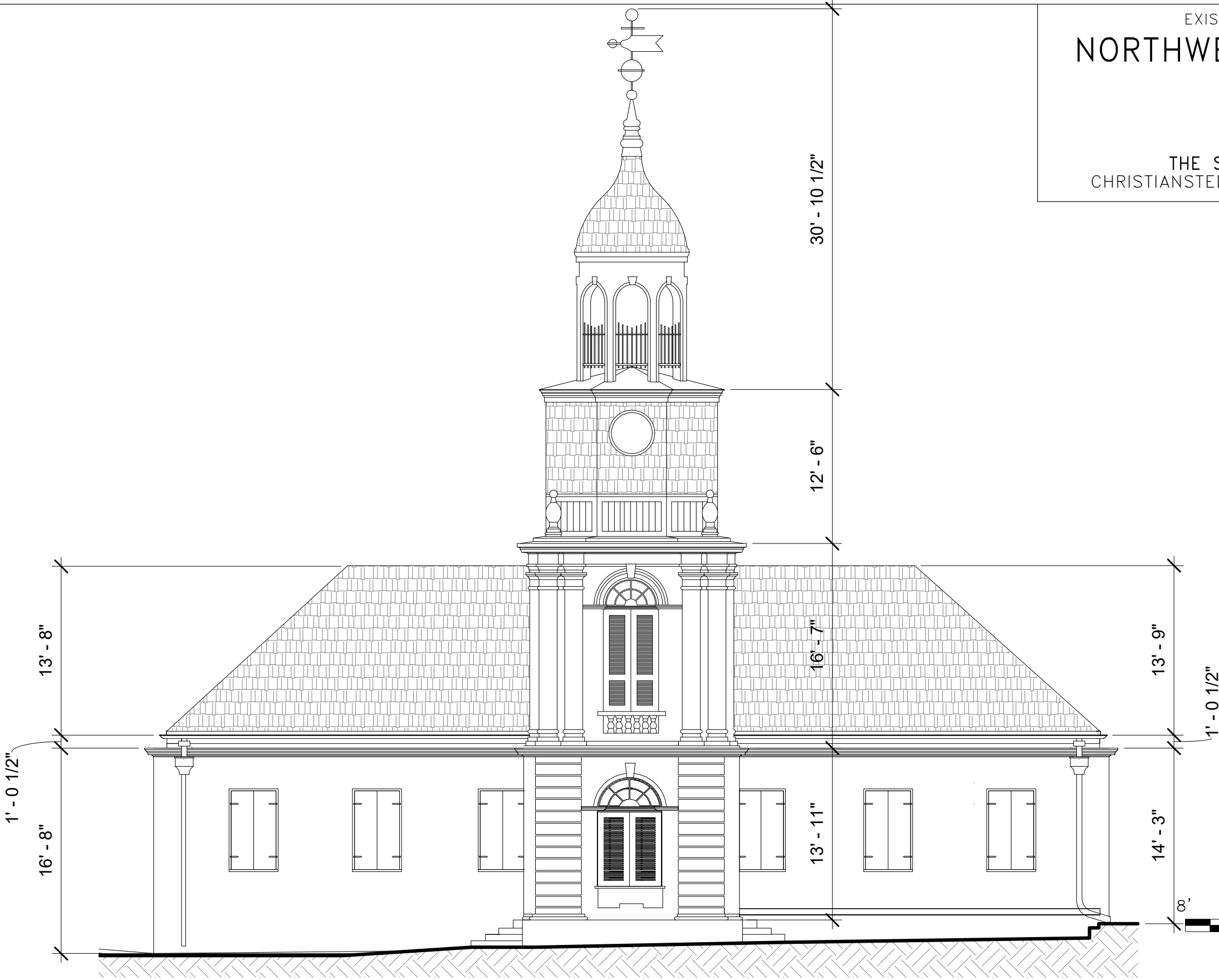
SHEET
1 OF 7



SCALE OF FEET

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EXISTING CONDITIONS

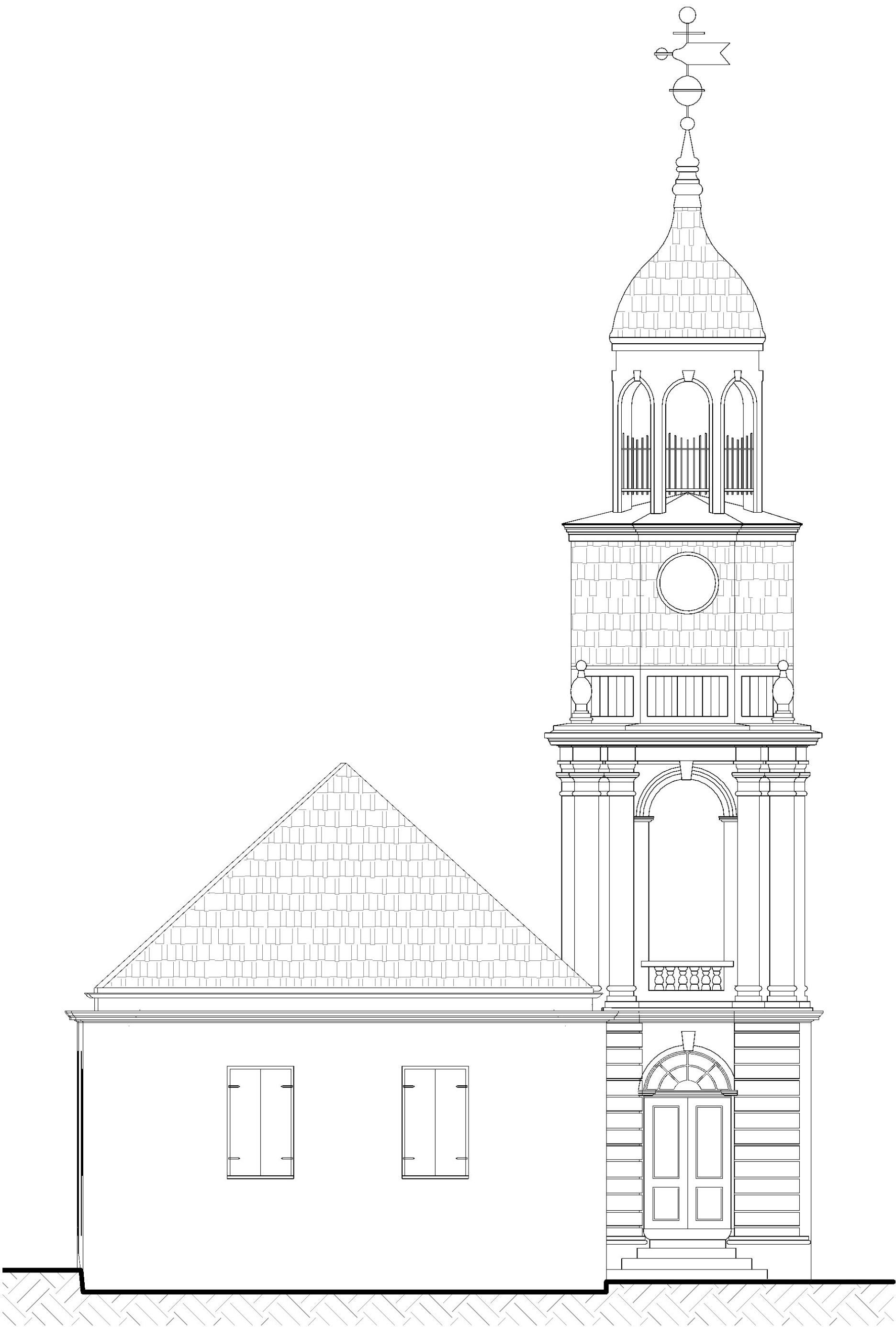
NORTHWEST ELEVATION

THE STEEPLE BUILDING
CHRISTIANSTED NATIONAL HISTORIC SITE

A/E FIRM:	DESIGNED:
ARCHITECT:	CT
QUINN EVANS	CAED
WASHINGTON D.C.	CT
	TECH. REVIEW:
	JW
	DATE:
	05/20/22
	PMIS/PKG NO
	SHEET
	2 OF 7

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EXISTING CONDITIONS
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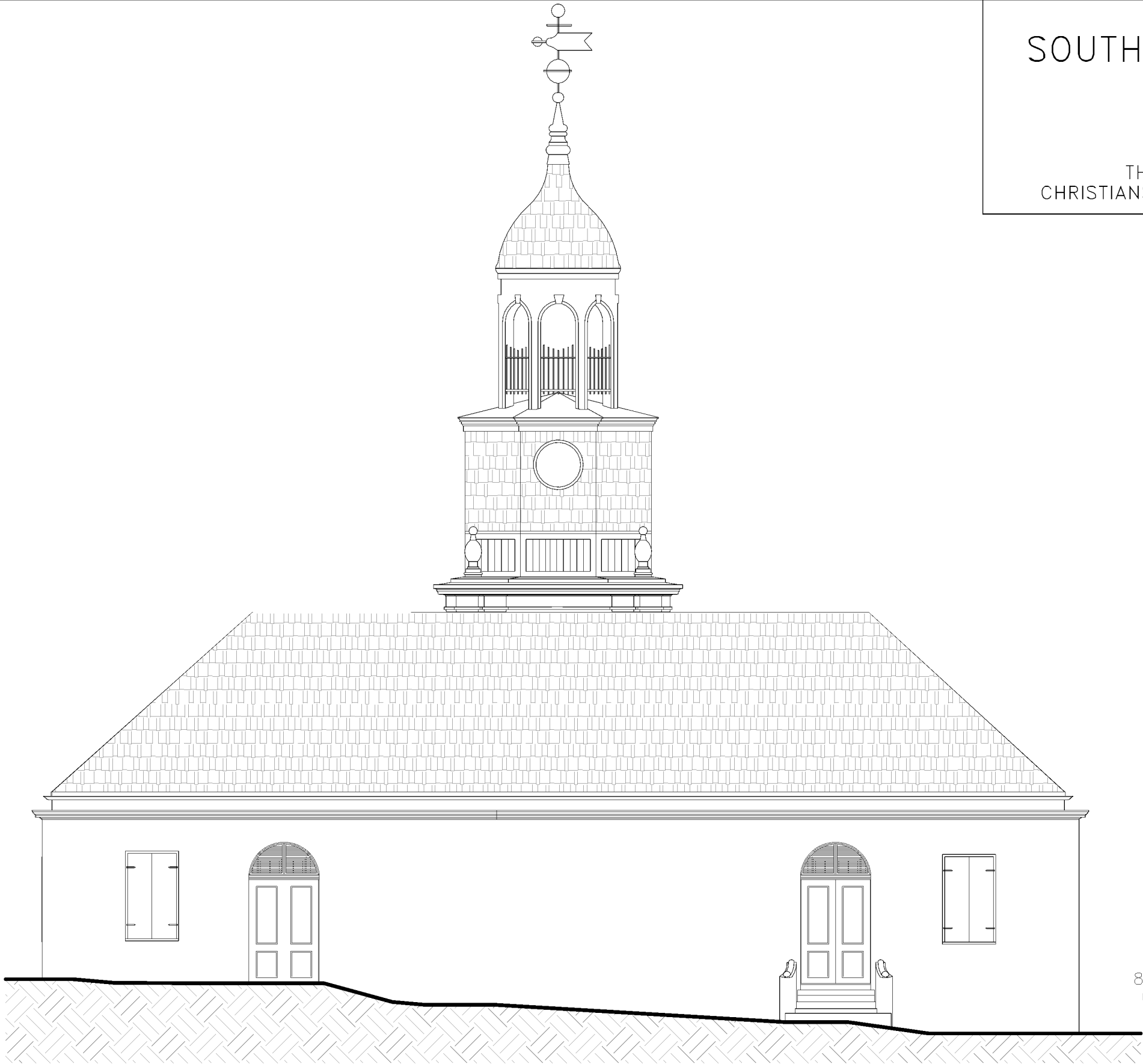
THE STEEPLE BUILDING
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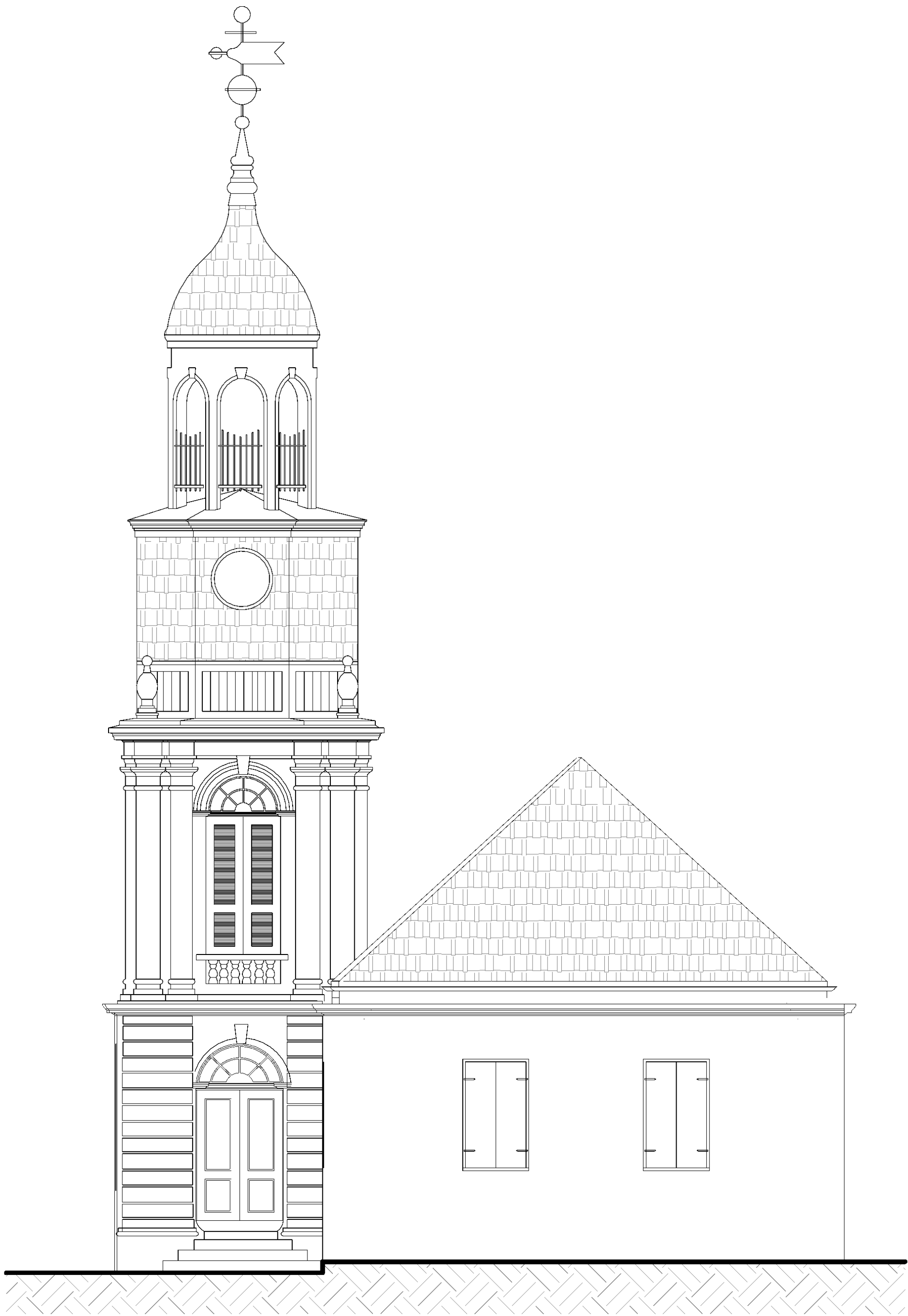
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EXISTING CONDITIONS
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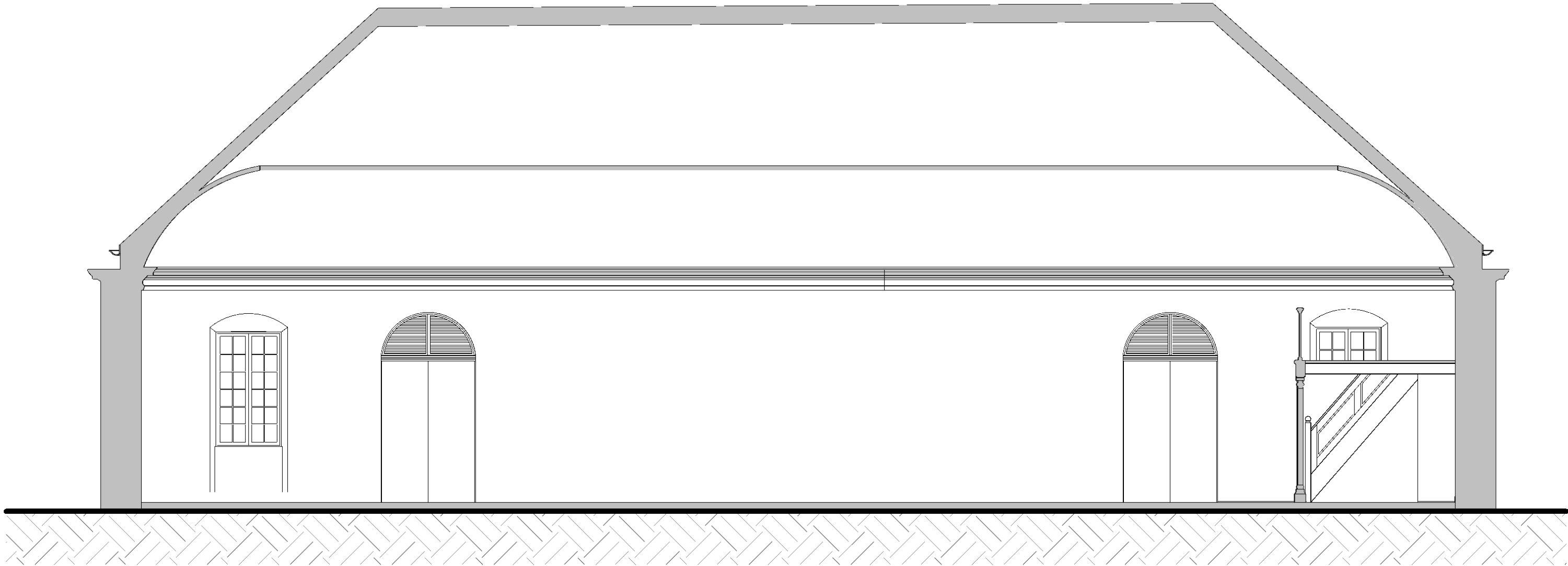


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EXISTING CONDITIONS
SECTION FACING
SOUTHEAST

THE STEEPLE BUILDING
CHRISTIANSTED NATIONAL HISTORIC SITE

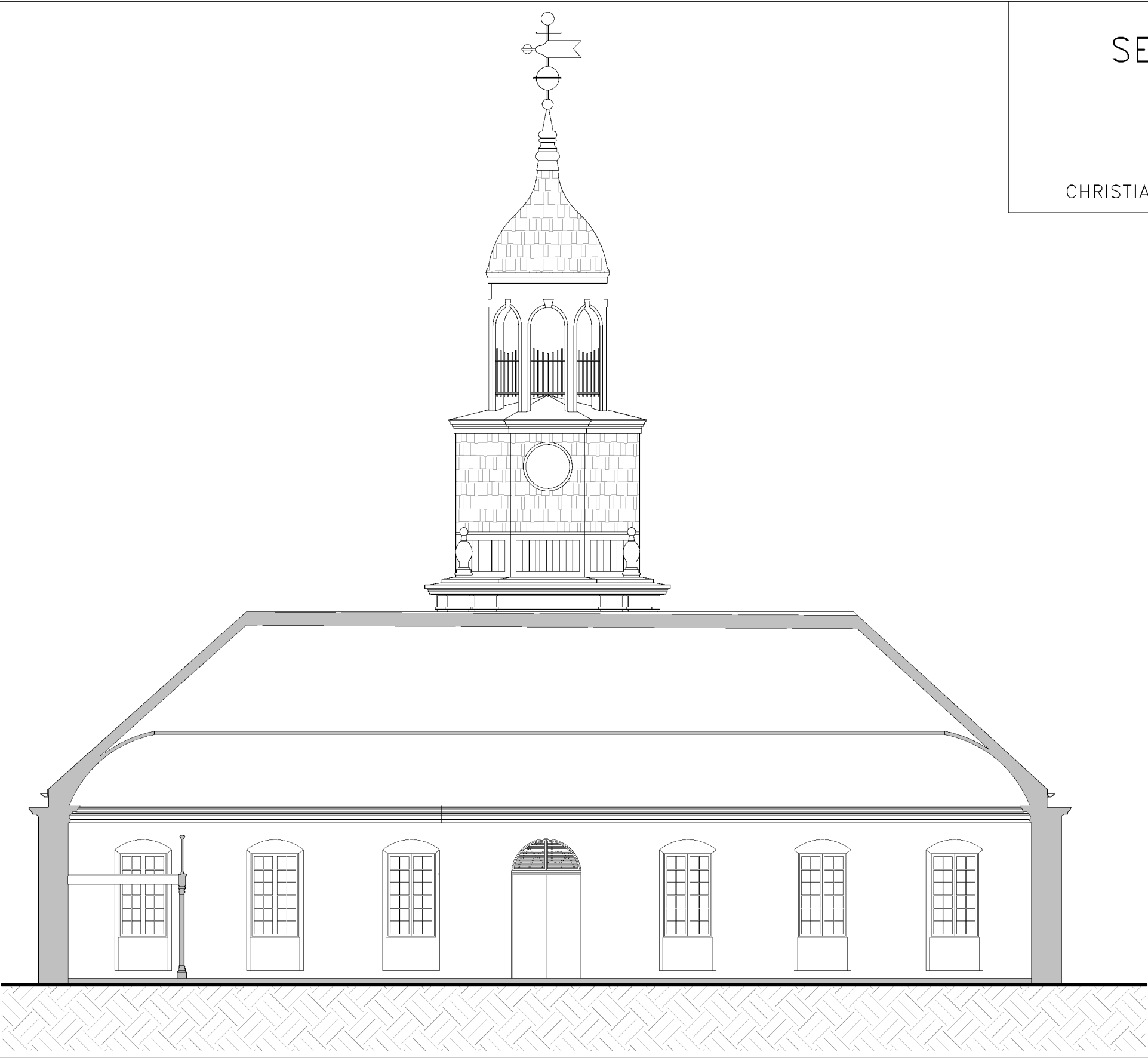


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EXISTING CONDITIONS
SECTION FACING
NORTHWEST

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Appendix E

Frederik C. Gjessing, "National Register of Historic Places Inventory Nomination Form for Federal Properties, Christiansted National Historic Site." (Atlanta, GA: National Park Service, Southeast Region, 1976)

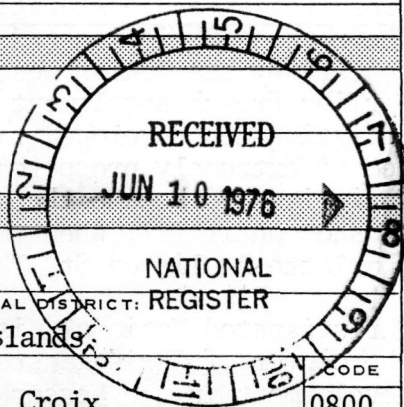
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**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM
FOR FEDERAL PROPERTIES**

(Type all entries - complete applicable sections)

on NR 3-4-52

STATE:	Virgin Islands
COUNTY:	St. Croix
FOR NPS USE ONLY	
ENTRY DATE	



1. NAME			
COMMON: Christiansted National Historic Site			
AND/OR HISTORIC: Wharf Area, Christiansted			
2. LOCATION			
STREET AND NUMBER: Christiansted National Historic Site			
CITY OR TOWN: Christiansted, St. Croix		CONGRESSIONAL DISTRICT: Virgin Islands	
STATE: Virgin Islands	CODE 078	COUNTY: St. Croix	CODE 0800

3. CLASSIFICATION			
CATEGORY (Check One)	OWNERSHIP	STATUS	ACCESSIBLE TO THE PUBLIC
☒ District ☐ Building ☐ Site ☐ Structure ☐ Object	☒ Public ☐ Private ☐ Both	☒ Occupied ☐ Unoccupied ☐ Preservation work in progress	Yes: ☐ Restricted ☒ Unrestricted ☐ No
PRESENT USE (Check One or More as Appropriate)			
☐ Agricultural ☐ Commercial ☐ Educational ☐ Entertainment	☒ Government ☐ Industrial ☐ Military ☒ Museum	☒ Park ☐ Private Residence ☐ Religious ☐ Scientific	☐ Transportation ☐ Other (Specify) _____ _____

4. AGENCY			
National Park Service			
REGIONAL HEADQUARTERS: (If applicable) Southeast Region		STREET AND NUMBER: 1895 Phoenix Boulevard	
CITY OR TOWN: Atlanta		STATE: Georgia	CODE 30349

5. LOCATION OF LEGAL DESCRIPTION			
COURTHOUSE, REGISTRY OF DEEDS, ETC: Registry of Deeds, Government House			
STREET AND NUMBER: King Street			
CITY OR TOWN: Christiansted, St. Croix		STATE: Virgin Islands	CODE 078

6. REPRESENTATION IN EXISTING SURVEYS			
TITLE OF SURVEY: Fort Christiansvaern, Scale House, Steeple Building, Old Customs House, Historic American Building Survey			
DATE OF SURVEY: 1957-1961 ☒ Federal ☐ State ☐ County ☐ Local			
DEPOSITORY FOR SURVEY RECORDS: Library of Congress			
STREET AND NUMBER: Capitol Hill			
CITY OR TOWN: Washington		STATE: D.C.	CODE

SEE INSTRUCTIONS

STATE:	Virgin Islands
COUNTY:	St. Croix
ENTRY NUMBER	
DATE	

FOR NPS USE ONLY

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	☒ Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)			(Check One)		
	☒ Altered	☐ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL (if known) PHYSICAL APPEARANCE

Preservation and Restoration Recommended:

The town of Christiansted was established in the second quarter of the 18th century by the Danish West India and Guinea Company on the site of the earlier French settlement of Basin. As the main port of St. Croix, Christiansted developed rapidly and in the second half of the 18th century became extremely prosperous on the sugar economy of the Islands. In 1755, Christiansted became the capital of the Danish West Indies and remained as such until 1871 when the seat of the colonial government returned to Charlotte Amalie on St. Thomas.

Christiansted National Historic Site was established in 1952 to preserve the center of Christiansted as an outstanding example of Danish colonial development in the Lesser Antilles. It includes the old wharf area in the center of Christiansted and six buildings of high architectural order representing different functions of the government of the islands when they were at the height of their prosperity.

1. Government House (No. H-1)

It is a large two and three story masonry structure that faces on King and Queen Cross Street, half a block from the wharf area. "U" shaped in plan, around a center courtyard, open towards the north, it measures 270 feet by 135 feet. The three and two story wing on King Street contains Virgin Islands Government offices on the ground floor, the formal reception rooms and the court on the second floor, and the official St. Croix residence of the Governor of the Virgin Islands. The two story south wing on Queen Cross Street houses court chambers and Virgin Islands Government offices. The two story east wing facing on the landscaped courtyard contains offices, services and general maintenance and support facilities for the building.

It was originally two separate structures. The Johan Vilhelm Schopen house on King Street dating from 1747 was a two story structure. It has been preserved in the central part of the existing building. The Schopen house was purchased by the government in 1771 as a residence for the governor and in 1776 a third "attic" story over the central section was added under a manzard roof.

The Søbøtkergaard on the corner of King and Queen Cross Street was built between 1794-97 by the planter and merchant Adam Søbøtke. Acquired by the Colonial Government in 1828 for use as offices, it was joined to Government House in the 1830's. As part of the same expansion, the manzard roof of the Schopen house was replaced by the existing full third story and the piazza and monumental staircase on the north end of the building was added. In the 1930's, Government House was rehabilitated with a reasonable attention to its original architectural features, but with some changes to the interior.

(Continued)

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM**

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(Number all entries)

It is in good structural condition. Presently, it is used as offices for the Virgin Islands Government and the Federal District Court. The grounds, the formal reception rooms, the ballroom on the second story with period furnishings and the old kitchen in the rear wing of the structure are open to the public. Government House is owned by the Federal Government but managed by the Virgin Islands Government with architectural control by cooperative agreement vested in the National Park Service.

Government House reflects three different architectural styles. On King Street, the two lower stories designed and built by Johan Vilhelm Schopen with local labor and artisans employed by the Danish West India and Guinea Company still retains the baroque details and features characteristic of the architecture popular in Denmark during the early 18th century. The simpler and more delicate details of the Søbøtkergaard represents a nordic version of the more restrained architecture of the Louis XVI period adapted to a locally developed architectural vernacular expressed in the open arched galleries.

The addition made during the 1830s, the third story of the Schopen house, the formal staircase and piazza on the north end of the west wing and the two story, three-bay section that connects the Schopen house and the Søbøtkergaard exhibit classical revival details modified and scaled to harmonize with the earlier architectural details. The design of these additions, built by the colonial government, have been credited to the Danish Military architect Lt. J. Gjellerup.

The reception rooms have some antique furniture and three portraits of note. Two original ones respectively of King Frederik the VII of Denmark and of Governor General Peter van Scholten, the latter by the Connecticut painter Metcalf. The third is a copy of an early portrait of Alexander Hamilton now hanging in the White House. The ballroom is furnished with replicas of its original chandeliers, wall sconces, mirrors and taburets.

Significance

Longitude 64° 42'-04"

Acreage

Recommended treatment:

Preliminary cost est:

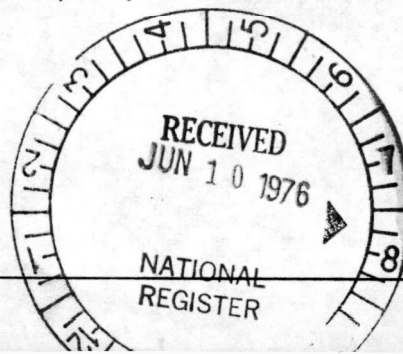
First order

Latitude 17° 44'-53"

0.95 acre

Preservation and adaptive restoration

\$120,000.00



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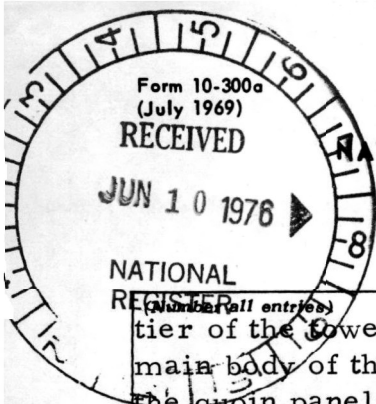
2. Steeple Building (H-2) Formerly known as "The Church of Our Lord of Sabadth

It is a one-story rubble masonry and brick structure 77' x 31' facing on Company Street with a 18' x 14' 4 tiered tower, 72 feet high centered on and projecting from the west side of the building. The building was constructed 1750-53 as a Lutheran Church and the tower was added in 1794. A small churchyard extends to the east and north, surrounded by a wood picket fence between brick pillars. Two arched brick gateways on Company Street provide access to the churchyard and the steeple building. In 1831 the Lutheran congregation sold the Steeple Building to the government after acquiring the former Dutch Reformed Church on King Street. It was converted into a military bakery and warehouse. Later it served as a community hall, hospital and elementary school. In the early sixties, the Steeple Building was restored by the National Park Service to its appearance of 1800 under the supervision of Historical Architect F. C. Gjessing, NPS. Owned and operated by the National Park Service, it now serves as a museum. The churchyard is landscaped but has not been included in the restoration except for the fence. The building is in good structural condition.

The building has the restrained formality and classical details of 18th century Nordic architecture that developed out of earlier Baroque traditions. The 1750-1753 structure has been preserved in two walls, the gable end on Church Street and the facade toward Company Street. The two other walls were reconstructed partially on the original foundations in the restoration of the 1960s. It was and is a severely simple structure symmetrical, well proportioned and without architectural adornments beyond a cornice. The steeply pitched hipped roof is shingled and the walls plastered and stuccoed. The interior has no subdivisions. The ceiling is wood. Deep and high quarter circle coves springing up from a fairly heavy wood cornice supports a central flat section. An organ gallery supported on turned wood columns stretches across the south end of the interior. The floor is paved in marble and brick.

The church was conceived as a hall church with altar, baptismal font and pulpit, all grouped about the center of the long wall opposite the entrance. The original furnishings, many of which have been preserved in the present Lutheran Church outside the National Historic Site, are elaborate and colorful in contrast to the simplicity of the building.

The tower added in 1794 and preserved in toto was built in front of the original entrance centered in the west wall on Company Street and for its lower story, served as a vestibule to the church. The exterior is plastered. It has an articulated base and panels of quoins flanking arched doorways to the north and south and toward the west an arched window opening. The first



UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
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X tier of the tower terminates in a cornice that continues in the cornice of the main body of the church. In the second tier, also plastered brick masonry, the quoin panels of the first tier continue in double pilasters with bases and caps of the Tuscan order flanking arched window openings and supporting an architrave and a second and more articulated cornice. The door and window openings of both the first and second tier have fan lights, surrounds and key-stones, projecting and moulded transoms bars and sills. The third tier is an octagonal drum constructed in wood and with an exterior finish of sheathing and shingles. Four decorative urns are placed above the cornice of the second tier in the triangular areas created by the transition from the rectangle of the lower tiers to the octagonal of the third tier. Clock faces are set in for sides of the drum. The fourth tier is an open octagonal pavilion constructed in wood and supporting a modified onion-shaped shingled dome terminating in a series of copper-covered projecting collars and balls and a weathervane.

Definite documentary reference to the designs of the church and the tower has not been found. Johan Vilhelm Schopen, an official of the Danish Westindia and Guinea Company and Chief Surveyor on St. Croix during the 1740s and early 50s, was involved in the construction and may have supplied the design of the church body. The designer of the tower is unknown. It was constructed by the mason James Entzell and the carpenter Collett. The mason Thomas Gray erected the masonry pillars of the fence in 1786 and the wood picket fencing between the pillars was constructed by carpenter Thomas Boggle who also installed the organ gallery of the interior in 1783.

Significance

First order

Longitude 64° 41'-59"

Latitude 17° 44'-54"

Acreage

0.25 acre

Recommended treatment includes preservation of restored structure and restoration of original features of the churchyard.

Preliminary cost estimate \$36,000.00

3. Fort Christiansvaern (H-3)

Fort Christiansvaern is a brick, rubble masonry and half-timber structure located on the shoreline of Christiansted harbor and commanding the harbor entrance to the north and northeast. Sited on the earthworks of the earlier French fortification, Fort Christiansvaern was begun in 1738 and largely completed by 1749. Roughly a square fort measuring 132' x 144' built around a central courtyard, it has corner bastions at the salient angles and a ravelin on the landward side. The south landward curtain is two stories

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NATIONAL PARK SERVICENATIONAL REGISTER OF HISTORIC PLACES
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while all other parts of the fort are one story supporting open gun decks. Toward the north, the harbor side, a projecting water battery supported on a vaulted magazine replaces the conventional curtain. In continuous use as a military installation until 1878, when it became a police station and courthouse, it has been remodeled and rehabilitated at different periods without basically altering the original fabric of the fort. In the 1830s a stableyard was added to the fort toward the east and subsequently a walled prison yard towards the west, increasing the overall dimensions of the fort to 240 feet by 245 feet.

Fort Christiansvaern, federally owned, is managed by the Virgin Islands Government but by cooperative agreement, under the jurisdiction of the National Park Service. It contains the Park Headquarters and is used as the Visitor Center for the historic site.

Fort Christiansvaern was built for the Danish Westindia and Guinea Company by the company's soldiers and slaves and in its initial stages under the guidance of Frederik Moth, the first Danish Governor of St. Croix. The designer of the fort is not known. Governor Moth was supplied with several standard plans of small citadels and also for brief periods had the advice of the Danish military engineers, Lieutenants Stahlmann, Warneck and Stoll. The Chief Surveyors Jens Sørensen Friis and after 1743, his successor Johan Vilhelm Schopen supervised the construction and also provided architectural designs. Others associated with repairs and additions to the fort during the 18th century are building inspector Julius von Rohr, Lt. Peter L. Oxholm and in the 19th century, the Lieutenants Lundbye, Gjellerup and von Friis, building inspector P. Beck and architect A. Løvmand.

In its general organization it follows the standard pattern of a small third degree citadel, varying from the typical in its water battery and two-story south curtain.

As the fort in the early years of the Danish colonization served as residence of the governor and was the nerve center of the colony, its architectural character is more elaborate than normally found in fortifications of its type. Style features such as the sally port, the masonry staircase and two-story arched gallery of the south curtain are derivatives of the "Italianated style" popular in Denmark during the first quarter of the 18th century. The extensive additions to Fort Christiansvaern in the 1830s are more sober in form and with the exception of the gate to the stableyard, plainly utilitarian in character.

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The quality of the structure and its impact is heavily dependent on its varied and fine details of pavements, masonry construction and finishes and to some degree, woodwork.

Structurally, it is in fair condition, in part excellent, and in areas, poor.

Significance:

First order

Longitude 64° 41'-56"

Latitude 17° 44'-58"

Acreage

6:00 acre (3/5 of wharf area)

Recommended treatment: Preservation

Preliminary cost estimate \$550,000.00

4. Westindia Company Warehouse (Post Office H-4)

A complex of three, two and one story masonry structures facing on Company, Church and Hospital Street, and grouped around a walled courtyard. The complex measures 78' x 168 1/2'. The main structure, a two-story "L" shaped building was completed in 1749 and housed the offices and quarters of the Westindia Company. The complex originally extended further north and included the old customhouse (H-6) as well as other structures, but in the 1790s, Hospital Street was extended and halved the original compound.

After 1833 it was a depot for the Danish military and subsequently used as a telegraph office. In the 1930s the buildings were rehabilitated and converted into office space for Customs and the Post Office. The exterior character and details were retained but interior considerably altered. It is now owned and operated by G.S.A. with architectural control by cooperative agreement vested in the National Park Service. It is structurally in good condition.

The main wing of the post office extends westward along Church Street some 78 feet and is 28 feet wide, while the eastern wing runs north and south along Company Street and is 28 feet wide by 68 feet long. The entire first floor houses the U. S. Post Office while the second floor is utilized by the U. S. Customs Service. The building is located in the southeast corner of the lot.

Two gates split the site on an axis perpendicular to Church and Hospital Streets. To the west of the south gate on Church Street is a kitchen with a brick hearth and chimney. Further west is a cistern which reaches to the southwest corner, and there are two more cisterns on the west side of the lot. In the northwest corner of the lot is a second kitchen with existing hearth and chimney with a flat brick ceiling. All buildings and walls are of brick and rubble masonry construction with brick frames to the original

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openings and stuccoed brick trim. Within the courtyard there are two stairways of brick masonry with solid balustrades which provide entrances to the second floor of the main building. Thus the post office lot is a complex of joined masonry buildings placed on three and half sides of an irregular walled quadrangular court.

The original Westindia and Guinea Company warehouse was built for the company by its slaves and artisans under the supervision of chief surveyor Johan Wilhelm Schopen and probably according to his designs. It has survived in the exterior masonry walls of the first story of the building toward Company Street and in the exterior of the building, the gateway and the wall facing on Church Street.

The full second story of the wing toward Company Street is an early 19th century replacement of a gambrel roofed second story similar to the one retained in the Church Street wing of the structure. The one-story structures facing on the wharf area and the extension of Hospital Street are late 18th century and early 19th century additions to the original warehouse complex.

The architectural character of the complex is a blending of 18th century and early 19th century details. Basically simple in design, decorative features are concentrated on gateways, corner posts of the surrounding walls and on the gable end of the main wing facing on Church Street. This latter feature with its gambrel gable end and horizontal banding is an unusual feature for the Virgin Islands architecture.

Significance: Second order
Longitude 64° 42'-01" Latitude 17° 44'-55"
Acreage 0.4 acre
Recommended treatment: Preservation
Restoration of exterior and finished
Preliminary cost estimate \$40,000.00

5. Scale House (H-5)

The scale house is a two-story building 43'5" x 61'0" located on the wharf area at the extension of King Street. As built in 1856, it had a brick masonry ground floor 25'4" x 61'0" supporting a second wood story with an exterior masonry staircase on the north side of the structure. A one-story extension of reinforced concrete (18'1" x 61'0") was added to the north side of the original structure in 1925. The building housed the facilities for inspecting and weighing imports and exports and on the second story, the weighmaster's office and quarters of the troops attached to the Customs Service. Utilitarian in nature, but pivotal in function to the community, it is the fourth structure of its kind to be erected on the wharf area.

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Managed by the Virgin Islands Government, but by cooperative agreement, the maintenance of its historic integrity is the responsibility of the National Park Service. It is presently serving as a visitors bureau and offices of the Bureau of Tourism of the Virgin Islands Government. It also houses the office of the Harbormaster.

The Scale House was designed by Building Inspector Ludvig Schellerup and built for the Colonial Government by Mason Martin Larke and Carpenter B. Thomas. The Brick masonry ground floor was divided into a scaleroom to the east, a central office and an inspection room toward the west by two wood partitions. Both the scaleroom and the inspection room had wide gates in the north and south walls to allow passage of carts through these rooms. The office in the central section of the ground floor had an exterior door in the south wall, doors to the adjoining rooms and a window in the north wall. The second floor that was accessible by the exterior masonry stairs against the north wall had two rooms only as the scale room went up through both stories. The exterior of the ground floor has projecting quoins at corners and around the four arched gateways. Window openings in the west, north and east walls have keystones but are not otherwise articulated. A rainguard supported on turned wooden posts protects the central entrance door in the south wall. The second story is shingled with grooved corner boards to simulate quoins. There is no cornice and the building is covered by a hipped roof with galvanized metal roofing. In 1925 when the reinforced concrete shed was added to the north side of the building, the original staircase was removed. In place of it, a concrete staircase was built against the east end of the addition that gave access to a continuous 4'0" wide passageway against the north wall at the second floor level.

The Scale House is devoid of style elements as such, but its logic, masonry and detail are characteristic of the Virgin Islands. For its effect, it relies on these features and on an exceptional high level of workmanship. On the second floor, for example, all wood members are exposed and finished. The studding serves as frames for door and windows and stop as trim. Moulded base boards are mitered around the exposed studs and around braces with adjustments to the changing angles of the mouldings and of the width of the base board to allow for perfect fit. Although building examples of this sort are now rare it must be assumed from the perfection of the workmanship in this plainly utilitarian structure that a similar degree of craftsmanship was not as uncommon as it now appears to be. For this reason as well as its function in the community it is an important element of the National Historic Site.

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REGISTER (entries)

The structural condition of the Scale House varies from good to poor.

Significance:

Second Order

Acreage

2 acres

1/5 of wharf area

Recommended treatment: Preservation and adaptive restoration

Preliminary cost estimate

\$60,000.00

6. The Library Building, formerly Danish Customs House and Post Office (H-6)

It is a two-story free-standing stuccoed limestone and brick masonry structure oriented east-west that faces on the Christiansted wharf. In its ground floor it retains structural elements dating from 1751. Changed and added to on several occasions during the 18th and early 19th century, it received its present form in 1840-1842. Originally part of the Danish Westindia and Guinea Company's compound and constructed as the residence of their bookkeeper, it became the Customs House and later the Customs House and Post Office. It served as such until 1926-27 when the Post Office moved to other quarters and the building was converted to a library. During the late 1940s and 50s, the ground floor was occupied by the St. Croix Museum Inc. Presently the entire structure is used by the Christiansted Library.

Managed and occupied by the V. I. Government, the architectural control of the structure is vested in the National Park Service by cooperative agreement.

The building is 59 feet, 6 inches long. Its ground floor consists of an enclosed section 19'7" wide, one room deep, divided into three rooms by two masonry partitions. A 10 foot wide arcade runs the full length of the enclosed section, along its north side. The center 26'3" of the north side projects another 10'5", providing on the ground floor a double arcade of the center three bays. Still centered on the north side, a large "open arms" brick masonry staircase extending 23' from the face of the second arcade and supported on two vaults provide the exterior access to the second floor and gives the building a "T" shaped plan. On the second floor, the entire area of the arcades and of the main body of the ground floor is enclosed.

A two-story sun and rain guard 8' wide supported on wood posts about 9' on center extends around the east, south and west side of the building. A wood picket fence between the posts encloses a walkway along the back and sides of the building. The structure has a flat roof behind a parapet wall. In 1902-3, part of the brick roof was removed and a corrugated metal roof on joists laid above it. To hide the second roof, the parapet walls were raised to their present height. The interior of the second floor is divided into four rooms by one masonry and two wood partitions. A wood stair at the west end provides interior communication between the first and second floors.

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ENTRY NUMBER	DATE

(Number all entries)

In 1828-29, the second story masonry walls of the existing building were erected to replace earlier wood construction and the library building as it stands now began to emerge. Both Custom Treasurer Testmann and Buildings Inspector Johan von Magens provided sketches for the change. Its final form and its architectural character was arrived at in 1840-42 when Architect Albert Løvmand rehabilitated the building for the colonial government. His improvement included the monumental staircase on the north side of the building, the removal of adjoining structure to the west and south, the designs of the present sash, the two-story sun and rain guards and other exterior and interior details.

Although Architect Løvmand was a classicist, his more usual architectural vocabulary is not apparent except in the selection of mouldings, particularly in the fairly elaborate interior wood work of the second floor. Stylistically, the vernacular elements of the building's design are dominant and its success dependent on the blending of solidity of massing and construction with the slightness and restraint of its mouldings and such contrasts as the perforated ground floor and the slimness of the rainguard provided. It is an exceptionally distinguished building.

Although formal and representational, the Library, like the Scale House is local in its architectural expression and owes less to outside influences than the four other structures included in the Christiansted National Historic Site.

Significance:	Third order
Longitude 64° 42' 00"	Latitude 17° 44' 56"
Acreage	2 acres (1/5 wharf area)
Recommended treatment:	Preservation
Preliminary cost estimate	\$170,000.00



8. SIGNIFICANCE

PERIOD (Check One or More as Appropriate)

- | | | | |
|--|---------------------------------------|--|---------------------------------------|
| ☐ Pre-Columbian | ☐ 16th Century | ☒ 18th Century | ☐ 20th Century |
| ☐ 15th Century | ☐ 17th Century | ☒ 19th Century | |

SPECIFIC DATE(S) (If Applicable and Known)

AREAS OF SIGNIFICANCE (Check One or More as Appropriate)

- | | | | |
|--|---|---|--|
| ☐ Aboriginal | ☐ Education | ☒ Political | ☒ Urban Planning |
| ☐ Prehistoric | ☐ Engineering | ☒ Religion/Philosophy | ☐ Other (Specify) _____ |
| ☐ Historic | ☐ Industry | ☐ Science | _____ |
| ☐ Agriculture | ☐ Invention | ☐ Sculpture | _____ |
| ☒ Architecture | ☐ Landscape Architecture | ☐ Social/Humanitarian | _____ |
| ☐ Art | ☐ Literature | ☐ Theater | _____ |
| ☒ Commerce | ☒ Military | ☐ Transportation | _____ |
| ☐ Communications | ☐ Music | | |
| ☐ Conservation | | | |

STATEMENT OF SIGNIFICANCE

Christiansted National Historic Site provides an excellent example of the development, accomplishments, and way of life of a society based on a sugar producing plantation economy. It also preserves a representative sample of the architectural qualities that sprang from the wealth and accomplishments of Danish colonial development in the Lesser Antilles.

For more than a century after Columbus sighted St. Croix during his second voyage in 1493 it remained a no-man's land, rarely visited by Europeans. During the 17th century the Island of St. Croix was occupied in turn by the British, Dutch and French, each in turn relinquishing their claim. In 1665 the French left the island, but retained their ownership until 1733 when the Danish West India and Guinea Company bought St. Croix to add to the islands of St. Thomas and St. John which they already held.

Under Danish rule the island thrived, becoming a major sugar producer bound to both Europe and America by commercial, social, and cultural ties. By 1755 the population was over 10,000 and that year the three islands became a crown colony with Christiansted as the capital. Prosperity continued to increase in direct proportion to sugar production as the Danish West Indies became a major part of the "Fabulous Sugar Islands" as the Lower Antilles were known. It was this prosperity that built St. Croix's substantial, attractive buildings and supported the planter's and merchant's gracious and luxurious way of life.

The Town of Christiansted grew as a planned community. Its gridiron street pattern designed to fit the topographic features of the site. Its architecture reflects both the wealth and accomplishments of the plantation society and the social injustices that made such a society possible. By the first decades of the 19th century, the end of prosperity resting on a single crop economy was approaching--the price of sugar dropped after 1820, sugar beets became a viable crop in many countries, and restrictive import laws of other nations curtailed trade. By 1848, when slaves were emancipated, the flourishing economy was a past memory.

Today, Christiansted National Historic Site contains six buildings in approximately three city blocks on the waterfront. They reflect the influence and interest of Danish colonial government. Fort Christianvaern

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Johannes Brøndsted, Vore Gamle Tropekolonier, Westermanns Forlag, 1953, Copenhagen, Denmark
 Waldemar Westergaard, The Danish Westindies under Company Rule, The Macmillan Co. 1917, N.Y.
 Tyge Hvass Dansk Vestindien C.A. Reitzels Boghandel, Copenhagen, 1925, Den.
 Tyge Hvass Møbler fra Dansk Vestindiens, Nordisk Forelag, Copengn, 1928, Den.
 Kay Larsen Dansk Vestindien 1666-1917, C.A. Reitzels Forlag, Copengn, 1928 Den.
 Herbert Olsen, HSR, NPS, Steeple Building 1959, Ft. Christiansvaern 1960, Scale House 1961, Library Bldg., Formly Old Custom House 1962
 F.C. Gjessing, HSR, NPS, Steeple Bldg. 1957 Part II, 1959

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY				LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES			
CORNER	LATITUDE			LONGITUDE			
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
NW	17°	44'	59"	64°	42'	17"	
NE	17°	44'	59"	64°	42'	04"	
SE	17°	44'	59"	64°	42'	17"	
SW	17°	44'	59"	64°	42'	04"	

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: 11 1/2 acres

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE

11. FORM PREPARED BY

NAME AND TITLE: Frederik C. Gjessing, Architect		DATE: June 15, 1973
BUSINESS ADDRESS: Virgin Islands National Park		
STREET AND NUMBER: P.O. Box 806, Charlotte Amalie		PHONE: 755-2050
CITY OR TOWN: St. Thomas	STATE Virgin Islands	CODE 078

12. CERTIFICATION OF NOMINATION

NATIONAL REGISTER VERIFICATION

State Liaison Officer recommendation:

- ☐ Yes
☐ No
☐ None

State Liaison Officer Signature

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Liaison Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The recommended level of significance is ☒ National ☐ State

[Signature] JUN 10 1976
 Federal Representative Signature Date
 Deputy Assistant Secretary
 Title

I hereby certify that this property is included in the National Register.

Director, Office of Archeology and Historic Preservation

Date

ATTEST:

[Signature]
 Keeper of The National Register

Date 60-20-74

SEE INSTRUCTIONS

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM**

(Continuation Sheet)

STATE Virgin Islands	
COUNTY St. Croix	
FOR NPS USE ONLY	
ENTRY NUMBER	DATE

(Number all entries)

8. Significance Continued

originally was the residence of the governor, as well as a military installation. It later housed the offices and functions of the metropolitan government. The Customhouse (Library) and Scalehouse were both intimately tied to the commerce and agriculture that was the island's economic base. Colonization by many European Nations often started with licensed private, commercial ventures under diplomatic and military protection of the home government. The West India and Guinea Company Warehouse is an excellent example of the headquarters of such a venture, and for the first 20 years after 1733 was the heart of the settlement.

Government house as the residence of the governor and headquarters of the Crown Colony was the center of administration. As the meeting place of the Colonial Council, it was the setting for decisions that at one time or another affected all individuals residing in the Danish Virgin Islands. Discussions conducted here led to Denmark's abolition of the slave trade in 1798 and emancipation 50 years later.

Denmark was in advance of most European Nations in its acceptance of religious tolerance, but religious functions of an official nature had to be performed by a minister of the Lutheran State Church. Construction on the Steeple building began in 1750 and was completed 3 years later. The steeple was added in 1794. The structure, built of rubble masonry with a four tiered steeple 77 feet high, is an unusual representative of Danish colonial architecture.

These six structures served the population of St. Croix and the adjoining islands and are an architectural expression of Danish colonial development.



Property Christiansted National Historic Site

Already on NR
3-4-52

State Virgin Islands Working Number 6.10.76

CHRISTIANSTED

TECHNICAL

Photos 9
Maps 1

CONTROL

pl
OK - 6.16.76

Map in NPS pamphlet provides sufficient
boundary definition.

HISTORIAN

ACCEPT
Linsengood
7-6-76

ARCHITECTURAL HISTORIAN

Accept
M. J. Huby
7-6-76

ARCHEOLOGIST

OTHER

HAER

Inventory

Review

REVIEW UNIT CHIEF

OK
Cole
10-15-76

BRANCH CHIEF

King
10-18-76

KEEPER

Wm
10/20/76

National Register Write-up

Send-back

Entered

Federal Register Entry

Re-submit

INT:2106-74

Christiansted National Historic Site
Christiansted
St. Croix, U.S. Virgin Islands

<http://www.nps.gov/chri>