



Hot Springs National Park Buckstaff Bathhouse Historic Structure Report

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Under the direction of

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About the cover: West (primary) facade of the Buckstaff Bathhouse.

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Hot Springs National Park

Buckstaff Bathhouse

Historic Structure Report

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Introduction: Project Summary & Administrative Data

Introduction

Under contract with the National Park Service (NPS), Seven Generations Architecture + Engineering developed this Historic Structure Report (HSR) for the Buckstaff Bathhouse. The project team included Seven Generations AE, WLA Studio (historic landscape architecture), RATIO Architects (historic preservation architecture and architectural history), ARSEE Engineers (structural engineering), and H.F. Lenz (mechanical, electrical, plumbing, and fire protection engineering). Historically, the Buckstaff Bathhouse has been referred to by several names, including “Buckstaff Bathhouse,” “Buckstaff Bath House,” “Buckstaff Baths,” and “the Buckstaff.” For consistency, this report uses “Buckstaff Bathhouse.”

HSR Purpose and Need

The Buckstaff Bathhouse at 509 Central Avenue in Hot Springs, Arkansas, is part of Bathhouse Row, a series of eight historic bathhouses along Central Avenue that is the largest collection of surviving twentieth century bathhouses in the United States and represents the peak of the industry between the 1920s and the 1940s. Completed and opened in 1912, the Buckstaff Bathhouse has been in continuous operation ever since and is the last such bathhouse to remain in operation.¹

The National Park Service (NPS) identified the need for a Historic Structure Report (HSR) to guide the future preservation and treatment of the Buckstaff Bathhouse. Hot Springs National Park (HOSP) will use the HSR to guide improvements and to support continued concession operations and preservation through continued use.

¹ The adjacent Quapaw Bathhouse closed in 1984. It was rehabilitated as a modern spa and reopened in 2008.

Scope of Work & Methodology

Project Scope and Goals

This Historic Structure Report (HSR) for the Buckstaff Bathhouse was prepared in conformance with NPS-28, Cultural Resource Management Guideline. HSR Part 1, Developmental History, includes an abridged historical background and context of bathhouse row. Additional information may be found in the 2010 CLR/EA . Part 1 incorporates narratives and images, a chronology of development, the evolution of the Buckstaff site and building over time, and a physical description with condition assessment. HSR Part 2, Treatment and Use, includes conceptual treatment alternatives developed based on input from the NPS and the park, a treatment workshop attended by stakeholders selected by NPS and the park, identification of a recommended treatment, and a Class C construction estimate.²

Project Issues

The HSR addresses the following project issues:

- History - The developmental history includes an abridged version of the overall site history while focusing on the Buckstaff Bathhouse’s long, near continuous, operational history of public bathing, documenting the evolution of public thermal bathing over time through the use and modification to the building by the concessioner.
- Research to Inform Treatment – Analysis of building episodes and identification of character defining features along with the defined period of significance will inform treatment decisions.
- Building Use – Treatment recommendations focus on retaining historic integrity while supporting continued concessioner operation of the building.

² Provision: Architect/Engineer Contract Design Services: Predesign Design: Product Historic Structure Report for the Buckstaff Bathhouse, PMIS 323237, December 2023.

- **Architectural and Site Feature Assessment** - Site assessment includes extant features, walkways, ramps, terraces, and formal landscape features. Survey of architectural fabric includes stucco-covered masonry foundation; brick walls; columns, spandrels, friezes, cornices, and parapet; porches; roof framing; chimneys; windows; doors, and interior floors, walls, ceilings, and finishes.
- **Structural Systems** – Structural assessment includes both interior structural system and exterior foundation wall systems.
- **Dynamic Systems** - Documents both functional and non-functional mechanical, electrical, and plumbing systems. Construction Documents for a planned HVAC system replacement in 2026 were reviewed by the team for the proposed use while also incorporating building preservation concerns.
- **Historic Elevator** – Documents the historic elevator’s evolution and condition and recommends necessary upgrades to make the elevator safe, accessible, and code compliant.
- **Structural Fire** – Evaluation of the existing fire suppression system for conformance to modern requirements, referencing NPS Reference Manual 58, Structural Fire Protection of Cultural Resources.
- **Supplemental Services** – Hazardous materials testing for lead based paint, asbestos, and other possible contaminants; and a site survey depicting topographical data and utilities.
- **Treatment Priorities** - Treatment recommendations include a prioritized list of corrective maintenance and repair treatments to address deficiencies that threaten long-term preservation of the building.
- **Design Alternatives** – NPS and the park identified that the building would remain in concession use as a public bathhouse. The building was evaluated for barrier-free access, applying ABAAS design principals to identify treatments that achieve accessi-

bility for visitors and staff while maintaining the integrity of the building. Preliminary interior space planning addressed the desired treatment identified by NPS and the park, switching the men’s and women’s floors to better align with the current demographics of the building users.

- **Cost Estimate** - Developed of a Class C construction cost estimate based on the preferred treatment alternative

Methodology

Members of the consulting team for the HSR completed a site visit in January 2025. The purpose of the site visit was to observe and document the current conditions and to catalog the character-defining features of the property. All field investigation was non-destructive. The team took field notes and digital photographs. The team also reviewed and synthesized extensive documentation on file in the park archives as well as previous studies and documentation of Bathhouse Row. This documentation was combined with limited new research to assemble the first chronology of development and use for the Buckstaff Bathhouse.

Report Organization

This report is organized into three parts (Executive Summary, Developmental History, and Treatment and Use), followed by a series of Appendices.

- **Part 0: Executive Summary**
- **Part 1: Developmental History**
 - 1A: Building & Site History
 - 1B: Chronology of Development
 - 1C: Character Defining Features
 - 1D: Physical Description & Condition Assessment
- **Part 2: Treatment & Use**

Building Use

The Buckstaff Bathhouse remains in operation for its original function as a mineral water bathhouse. It is the only historic bathhouse in Hot Springs to have remained in continuous operation to the present day. While the building remains in use for its original function and has been operated by the same company since 1912, it has seen many alterations, only some of which are clearly documented in archival sources. An understanding of the building's developmental history as documented in section 1B (Chronology of Development) is essential to making informed treatment decisions.

Existing Conditions

Overall, the building's site is in good condition, with many historic landscape features intact. There is evidence of ongoing drainage problems at the site over the years, worsened by the tight spaces between the bathhouses and Buckstaff's proximity to the retaining wall on its east side.

The building is in fair to good condition overall but has suffered from deferred maintenance in some areas. The building maintains a high degree of integrity, with historic finishes and features surviving on the exterior and throughout all of the primary interior spaces. The building's continuous operation means that repair work has often been piecemeal and phased to avoid disruption to the bathing experience. Water infiltration from roof leaks has done the most damage in recent years. Having been in continuous use for more than 110 years, the building needs repair, maintenance, and cleaning work to support its preservation and continued use. Building components and systems vary in condition. An HVAC system replacement is currently planned.

Treatment Recommendations

This HSR identified two possible treatments, Preservation or Rehabilitation. The current treatment for the Buckstaff Bathhouse is a Preservation treatment, maintaining the building in its current form and anticipating regular maintenance and ongoing repair campaigns. A preservation treatment allows ongoing use of the building in its historic and current use. A preservation treatment should be regarded as a treatment of indefinite length, requiring regular maintenance and cyclical repairs to maintain the present condition of the resource. An alternative treatment for the Buckstaff Bathhouse would be a Rehabilitation treatment. This treatment would include sympathetic adaptations to support the building's preservation through active use. The building's size and interior configuration would remain as they are today.

Treatment recommendations have been ranked by priority. Serious items should be addressed immediately. Moderate items should be addressed within the next two years. Minor items should be addressed within the next five years.

Administrative Data

Location Data

Building Name: Buckstaff Bathhouse
Location: 509 Central Avenue, Hot Springs, Arkansas
(Hot Springs National Park)
State/Territory: Arkansas

Related NPS Studies

Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc. *Hot Springs National Park Cultural Landscape Report and Environmental Assessment* (National Park Service Midwest Regional Office, January 2010)

Cromwell, Neyland, Truemper, Millett & Gatchell. *Historic Structures Report: Hot Springs National Park* (National Park Service, November 1973)

Real Property Information

Acquisition Date: 1832 (Hot Springs Reservation)
CRIS-HS Resource ID: 000709 (HB-102)
LAT/LONG Data: 34°30'49.0"N / 93°03'13.0"W

Size Information

Buckstaff Bathhouse: approximately 22,791 square feet (gross), approximate overall measurements 102 by 92 feet

Cultural Resource Data

The Buckstaff Bathhouse was listed in the National Register of Historic Places in 1974 as a contributing resource within the Bathhouse Row Historic District. The NPS designated Bathhouse Row a National Historic Landmark in 1987. The district is significant under National Register criteria A and C. The district nomination identifies a period of significance of 1892-1949.

Project Team

The following team members contributed to the preparation of this HSR.

Seven Generations AE

- Alex Hokkanen and Julia Sainz

RATIO Architects

- David Kroll and Benjamin L. Ross

WLA Studio

- Olivia Head and Madie Fischetti

ARSEE Engineers

- Fritz Herget and Dan Calabrese

H.F. Lenz

- Scott Mack and Tyler Trostle

NPS Personnel

Hot Springs National Park

- Laura Miller, Park Superintendent
- Tom Hill, Museum Curator/Resources Manager

Midwest Regional Office

- John Rosemurgy, COR/Project Manager
- Nicholas Murray, Contracting Officer

Recommendations for Future Study

It is recommended that the park complete the following documentation and investigation to further the understanding of the Buckstaff Bathhouse, its evolution, and its historic significance:

- Initiate a public call for information, memories, and photographs of the Buckstaff Bathhouse. Documentation of the building's history may survive in private family collections or other sources.
- Complete interior and exterior historic finish analysis to determine the building's first period finish schemes

DEVELOPMENTAL HISTORY

PART 1

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1A Building and Site History

Introduction

The Buckstaff Bathhouse was built in 1911 and opened in February 1912. It is the only historic bathhouse to have remained in continuous operation within the park and the only one which retains its historic interior character. The developmental history of the Buckstaff Bathhouse reflects the evolution of the thermal bathing industry in Hot Springs and the United States, from its golden age in 1920s through the 1940s to its decline following the introduction of antibiotics and modern medicine.

The Statement of Work for this HSR requires that the “developmental history will include an abridged version of the overall history while focusing on the Buckstaff Bathhouse’s long, near continuous, operational history of public bathing. Documenting the evolution of public thermal bathing over time through the use and modification to the building by each owner/leaseholder.”¹ To provide an abridged overall context, this section will use established time periods and contain brief excerpts from the 2010 CLR/EA when discussing the overall development of the Hot Springs area, Hot Springs National Park, and Bathhouse Row. Discussion of the specific development of the Buckstaff Bathhouse and how that development reflects changes in the thermal bathing industry over time will be more thorough and rely largely on primary research from the HOSP archives collections.

Native American Activities in the Hot Springs Region (Pre-1803)

The following narrative contains abridged contextual information, excerpted from the corresponding section of the 2010 *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*:

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1. Hot Springs National Park, “Produce Historic Structure Report for the Buckstaff Bathhouse, PMIS 323237,” December 2023, 4.

Although prehistoric Native American sites exist in the Hot Springs area, no archaeological evidence has been located indicating that the hot springs were used by people thousands of years ago. No prehistoric archaeological sites are known to exist in the immediate vicinity of the hot springs, or the study area. Ample stories of Native American use of the springs persist, however no scholarly information exists regarding the types of artifacts that would be related to prehistoric spring-use; and the numerous accounts are difficult to authenticate. A recent attempt to separate the myths from the facts indicates that it is likely that Native Americans spent time in the area, but the specific nature of their activities associated with the springs is unclear. Many of the stories are highly dubious.

Despite the difficulty of verifying information regarding prehistoric activities of Hot Springs, some authentic information does exist to provide a general understanding of possible early human use of the landscape. The first Native Americans arrived in Arkansas by 9500 B.C. The small bands of 20 or 30 members were made up of descendants of people who crossed to this continent from Asia on land currently submerged by the Bering Sea. It is likely that they hunted large game and collected plants to supplement their diet. As their population grew over the next ten thousand years they dispersed into smaller territories. In addition to hunting and gathering, some groups mined novaculite for use in creating tools. Novaculite was extracted from sites in the Hot Springs area with the peak of this activity occurring around 3000 years ago.

Caddo groups were present in the Hot Springs region by 800 A.D. The Caddo were made up of many tribes. In Arkansas, Oklahoma, Louisiana, and Texas, they included several ‘confederacies.’ The name of one of the confederations, the Caddohadacho, was shortened to the word ‘Caddo.’ Although not identical, Caddo cultures and dialects were similar. The local tribe was historically the Cahinnio or Cahainihoua. Members of Caddo cultures typically farmed in bottomland, built mounds, and traded commodities. Some evidence exists to indicate at least one mound

may have been built near Hot Springs Creek. An account dated 1827 described a “...little mound 20 inches high and 30 feet in diameter” near the creek. A photograph taken in 1867 by T.W. Bankes shows a feature that may be a mound in the current vicinity of Arlington Lawn. Construction activities related to the Arlington Hotel and other structures, as well as the implementation of the creek arch and later Arlington Lawn, have removed any trace of this feature.

Although legends indicate that Hernando de Soto’s expedition ‘discovered’ the hot springs of Arkansas, his group did not visit the hot springs area. In 1541-1543, de Soto’s expedition encountered Caddo groups in southwest Arkansas. By the 1800s stories indicated that the party had visited hot springs, but scholarly critiques have rejected this concept. More reliable accounts by early settlers and explorers who were in Hot Springs in the first part of the 19th century indicate that members of the Quapaw and Choctaw groups were familiar with the area by then. Two recently transcribed oral history accounts indicate that Quapaw used the springs for medicinal purposes. The main tribes associated in some way with the hot springs area were the Caddo, Quapaw, and to a lesser extent the Choctaw. The longest and most intensive use is related to the Caddo.²

Exploration/Settlement and the Establishment of Hot Springs Reservation (1803–1857)

The following narrative contains abridged contextual information, excerpted from the corresponding section of the 2010 *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*:

This period of landscape change begins in 1803 with the first written descriptions of visits to the

hot springs. Early accounts portray a mystical landscape with natural steaming hot springs rising in the midst of a rugged wilderness. The landscape—not yet manipulated by human alterations—was dominated by natural features including a valley surrounded by forest-covered mountains, steep rocky slopes and outcrops at the base of the mountains, numerous meandering hot and cold springs, and an untamed creek which carved an irregular path through the wooded valley. The width of the creek was variable and the banks shifted frequently due to levels of precipitation. Development in the valley included a roughly defined route for circulation and a few cabins [...]. These were mostly located to the west of the creek floodplain. The end of the period is 1857, the year before David Dale Owen visited Hot Springs. His accounts provide the first documentation of significant development in the valley.³

[...]

Throughout the period, the hot springs area was difficult to reach and sparsely populated. The journey to reach the area was challenging and uncomfortable—taking almost two full days to reach the hot springs from Little Rock. Upon arrival, visitors seeking health benefits took advantage of the spring water with none of the accoutrements associated with modern health resorts. They slept in the shelter of temporary cabins assembled for fair-weather lodging. They utilized the “natural bath,” in areas where water had carved pools into the rock, or where logs were extended over the springs. Small improvements sought to make the most of the opportunities provided by nature. In 1829 a visitor complained about the “entirely deficient” accommodations stating, “The sweat house is rudely constructed with boards which but partially exclude the air; and the mouth of it is stopped by a blanket. The patient has to come into the open air to dry himself, hurry on his clothes and go home.”

In other parts of the world, including the eastern United States, resorts were serving patrons who sought therapeutic relief from ailments at natural hot springs. These resorts typically provided

2. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc. *Hot Springs National Park Cultural Landscape Report and Environmental Assessment* (National Park Service Midwest Regional Office, January 2010), Chapter II, page 6-7.

3. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 8.

luxurious accommodations and were mainly attended by wealthy patrons. In contrast, at the Arkansas hot springs, accounts made by early explorers described the natural features including the amazing hot springs and the related flora and rough terrain as well as the lack of development, transportation options, services and supplies in the area.

According to sworn testimony taken in later years, Ludovicus Belding leased the hot springs for a five-year term from John Perciful [an early settler] in 1828. Leased structures probably included a boarding house in operation since 1820. Belding refurbished the facilities and subsequently advertised a hotel offering “good meals, clean linen, and silverware...” No physical description of the hotel has been located. Asa Thompson leased the nascent resort from Belding in 1830 and may have built the first bathhouse. The bathhouse was a simple log structure that included one wooden tub and a sweat bath near the present-day Arlington Lawn site. A second log bathhouse was built before 1832 near the present-day Hale Bathhouse. Another improvement was the establishment of a weekly postal delivery service to Hot Springs in 1833.⁴

Establishment of Hot Springs Reservation, 1832

The Arkansas Territorial Legislature recognized the hot springs as a “unique national resource” and, in 1820, requested that the federal government provide a means to preserve the land for the use of the public. Twelve years later, on 20 April 1832, the legislation to set aside four sections of land to protect the springs and surrounding area was signed by President Andrew Jackson. Yellowstone National Park (the nation’s first national park) was not created for another forty years, the Hot Springs Reservation was one of the earliest of the present-day National Parks to be federally protected. However, the legislation did not include directives regarding the administration of the Reservation. With no oversight or regulations, settlers continued to establish buildings and businesses near and

over the springs. As accounts of the Arkansas hot springs were published, interest in the area grew.⁵

Uncontrolled Growth at Hot Springs Creek (1858–1878)

The following narrative contains abridged contextual information, excerpted from the corresponding section of the 2010 *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*:

This period of landscape change begins in 1858, the year that geologist David Dale Owen initially visited Hot Springs. After a second visit to the area in 1859, Owen’s 1860 report and the accompanying survey map by William Glasgow, documented the existence of increased developments including large buildings on both sides of Hot Springs Creek, several bridges over the creek, and a rudimentary system for transporting hot spring water to the buildings [...]. In addition, the precursor of Central Avenue, then called Valley Street, was evident in the form of a corridor between two rows of parallel buildings running north/south on the western side of the creek [...]. By the end of the period, the corridor would include a trolley track providing a transportation route from the train depot through the downtown area. The period ends in 1878 when the landscape is changed dramatically by a fire that destroys most of the buildings and structures in the area.

The period is characterized by entrepreneurial development of the area around the hot springs. The earliest indications of Central Avenue and Bathhouse Row emerged as the first hotels and bathhouses were developed along and over Hot Springs Creek. These buildings were larger and contained more comforts for visitors than earlier shelters but still lacked basic amenities. The buildings were simple board-and-batten structures, clustered around and over the creek. The creek became clogged with debris, as it was utilized for waste disposal. Sometime before 1859

4. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 13-14.

5. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 15.

a system of sluices and holding troughs was constructed to transport hot spring water to the bathhouses [...]. These created a web of linear elements between the base of the mountain and the buildings.

Along with developments associated with Bathhouse Row, the town included hotels, other businesses, churches, a cemetery, railroad depot, and residences. Four pivotal events occurred toward the end of this period that greatly influenced the future development of the landscape of Hot Springs: the 1870 Congressional act that passed a law allowing claims to land at the Hot Springs Reservation to be settled by a Court of Claims; the 1875 arrival of a railroad line in Hot Springs; the Government intervention in the form of the Hot Springs Commission and establishment of a Reservation Superintendent in 1877; and a fire in 1878 that destroyed a large portion of the structures in the area.⁶

Bathhouse Row Development, 1858–1878

Following the American Civil War, a new surge of building, including larger and more elaborate structures, occurred at Hot Springs. Within the Reservation, Bathhouse Row was the main focus of development and activities during this period. Bathhouses were built over or near the creek, and near the springs, for direct use of the water, and disposal of sewage. Former resident John Hale returned and rebuilt his bathhouse on Central Avenue, and Hiram Whittington rented out rooms. In ca. 1870, William H. Gaines erected the Hot Springs Hotel at the southern edge of Bathhouse Row, and in 1871 the Grand Central Hotel was constructed on Central Avenue, northwest of the bathhouses [...].

By 1870 the year-round population included 1,200 inhabitants. Bathhouses began to offer amenities including oilcloth floor mats in the bathrooms, rugs and mirrors in the dressing rooms, and iron pipes that carried hot water from the springs to the bathhouses. By 1871 there were five bathhouses present along Hot Springs Creek. A boom during the next two years resulted in a total of twenty-four hotels

and boardinghouses and six bathhouses in the area near the springs by 1873. The first Arlington Hotel was opened in 1875; it was the first luxury hotel at Hot Springs. On the site of the former Rector Bathhouse, the Arlington either replaced, or was added to, the earlier building.

Prior to 1877, the lack of oversight and regulations led to haphazard development on Bathhouse Row. Structures were built according to individual whims, with little or no consideration for architectural style or quality. Their random orientation and placement added to the disorderly appearance of the town [...]. The route that would become Central Avenue was a dirt expanse that varied in width and was devoid of organizational and aesthetic features. Historic photographs indicate no vegetation in the developed area—with the exception of a few spindly trees that were apparently left uncut when buildings were constructed. The buildings were loosely arranged along the creek, which was used as a sewer creating unsanitary conditions. The majority of the substantial buildings were located on the western side of the creek. Some of the structures were built directly over the creek, and several had pedestrian bridges spanning the creek to the base of the mountain. Until 1878 the eastern side of the creek and base of the mountain slope continued to serve as the home for shacks and other ephemeral structures pieced together for the use of indigent people who came to bathe in the springs.

The route that would become Central Avenue was located to the west of the main row of structures, with a second, informally arranged row of buildings on the western side of the route. Dusty when dry and muddy when wet, the town did not provide the pleasant aesthetic of a resort spa town [...].

Throughout the period, improvements were made upgrade the buildings and transportation options. Tracks for a horse-drawn trolley/street railway were present by 1871, providing a fairly reliable means for traversing the route through the heart of town. The tracks led to the railway depot in anticipation of the implementation of a regional railroad connection, which finally occurred in 1875. The surface of the dirt was compacted and made more uniform, reducing the mud puddles. In some locations the creek banks were reinforced with stone retaining walls, im-

6. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 21-22.

proving their stability and adjacent conditions. In 1877 the Big Iron Bathhouse and the Rockafellow Bathhouse were both constructed. The same year, a flood damaged walls along Bathhouse Row. In 1878 the first superintendent's office was built on Fountain Street near the Arlington Hotel. Superintendent Kelley and the commissioners lived at the Arlington Hotel and worked at the office during the day. The building was a two-story frame structure with four rooms, and by 1890 it was described as dilapidated and scarcely habitable.

On 5 March 1878, a fire destroyed many of the buildings in Hot Springs including the Hot Springs Hotel, American Hotel, Baptist Church, Weir and George Bathhouse, Huffman and Hamilton Bathhouse, the city jail, Greenleaf's bathhouse and bagnio where the fire reportedly started, and the French Restaurant. A bathhouse on the present Fordyce site, probably the Central Bathhouse, was also burned. The Arlington, Sumpter, Grand Central, Avenue, Rockafellow, Big Iron, and Hale bathhouses safely escaped the fire.⁷

Organized Expansion Alongside the Creek (1879–1883)

The following narrative contains abridged contextual information, excerpted from the corresponding section of the 2010 *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*:

In the wake of the fire of 1878 a building boom occurred in Hot Springs. Unlike previous development, this time governmental supervision resulted in a more orderly overall appearance. This phase of development represents the beginning of the transformation of Hot Springs from a rough frontier town to a more polished spa resort. The period comes to a close in 1883, before construction of the creek arch was completed. The implementation of the underground

tunnel for the creek dramatically changed the landscape--in particular the topography--along Central Avenue and Whittington Avenue.

Based on the framework of blocks, plats, and firm reservation boundaries provided by the Hot Springs Commission, an adept arrangement evolved from the new development. Numerous substantial bathhouses, hotels, and other buildings were constructed and each new generation of buildings was larger and more elaborate than the previous. Standardized bathhouse design was now regulated by the Department of the Interior and Victorian style buildings gradually filled the eastern side of the creek, creating Bathhouse Row. Bathhouse Row materialized not only from the application of a uniform building style, but from the alignment of the building facades through a uniform set-back and the rhythm created by the similar massing and spacing of the structures—results of the blocks and plats imposed by the Hot Springs Commission. In addition, the width of the corridor between the creek and the western side—of what would become Central Avenue--was sufficient to balance the height and mass of the large buildings. Although the buildings were more neatly aligned, the road that would become Central Avenue was a dirt expanse lacking defined edges. Boardwalks were provided along the store fronts on the western side of the street, and bridges extended over the creek to the bathhouses on the eastern side of the creek, but there was no pedestrian route parallel to the corridor on the east side of the street.

Other changes led to a more high-class clientele, including the fact that the bathhouses were now regulated by the superintendent of the Reservation, ensuring a common standard for conditions and services. The landscape of Bathhouse Row included fences, sidewalks/boardwalks, utility poles and overhead lines, bridges spanning the creek to the bathhouses, and dirt roads.⁸

Bathhouse Row Development, 1879–1883

During this period the landscape of Bathhouse Row began to materialize. Although Central Avenue was still a rough, dirt route, the place-

7. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 32-33.

8. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 49.

ment of buildings after the 1878 fire was more organized, and the corridor of Bathhouse Row became more defined. Landscape features included fences, bridges spanning the creek to the bathhouses, and boardwalks (on the western side of the street). No ornamental vegetation is apparent within the corridor during this period. Buildings were changed dramatically as a result of the 1878 fire—major construction of buildings is enumerated:

1. Maurice-Palace Bathhouse built in ca. 1878-9 on west [*sic*] side of Hot Springs Creek.⁹
2. 1880, Independent Bathhouse built (Maurice)
3. 1880, Ozark Bathhouse built
4. 1880, Rammelsberg Bathhouse built
5. 1880, Palace Bathhouse built
6. 1884, Creek arch over Hot Springs Creek completed (Whittington to Malvern Avenue)¹⁰

Earlier Buildings on the Buckstaff Site

The site of the Buckstaff Bathhouse is believed to have been occupied by brick bathhouses since the late-1850s. The A. B. Gaines Bathhouse on the site was one of several bathhouses destroyed in the March 1878 fire.

The site's lease went through a series of transfers between December 1878 and May 1880, from Dr. J. M. Keller to a Mr. Long and thence to Harry Rammelsberg. The new Rammelsberg Bathhouse was built by contractor D. W. Halshal and was in operation by 1883.¹¹ The building was brick with a slate and metal roof. The Rammelsberg, Big Iron (1877), Ozark (1880), Palace, and Old Hale Bathhouses all employed a very similar design, with a one-sto-

ry building with a Mansard roof and a roughly E-shaped plan of the front wing, with a two-story tower in the center leg of the "E" topped by an open cupola¹² (Figure 1.A. 1).

The Rammelsberg operated as a men's only bathhouse.¹³ As of 1884, rates at the Rammelsberg were \$5.00 for twenty-one baths, \$2.50 for ten baths, and \$.30 for a single bath (Figure 1.A. 2). These rates were comparable to the Independent and Ozark Bathhouse rates, but more affordable than the Rockafellow, Old Hale, New Rector, Palace, and Big Iron bathhouses.

The Creek Goes Underground (1884–1891)

The following narrative contains abridged contextual information, excerpted from the corresponding section of the 2010 *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*:

Advertising brochures, guides and albums printed during this period describe—complete with artists' illustrations--a luxurious spa city. Many of the artists and writers took liberties to exaggerate the level of luxury and finesse of the surroundings [...]. Although greatly improved, the town was still rugged at the beginning of this period. Between 1884 and 1891 the landscape of Bathhouse Row was changed dramatically by the installation of the creek arch [...], construction of sidewalks, and implementation of lawns, street trees, and ornamental vegetation.

By 1888, the leased sites on Bathhouse Row all had Victorian-style bathhouses. By 1891, a government free bathhouse had been built in the center of the Row, in-ground reservoirs had been constructed to help distribute thermal water, and the Eastman and Park hotels, elaborate facilities complete with landscaping, had gone up just south of Bathhouse Row. Despite the improvements, dangerous conditions continued to exist. In 1890 business was booming while the old buildings were crumbling. The Secretary

9. The CLR incorrectly states that the Maurice-Palace Bathhouse was built on the west side of Hot Springs Creek, but all bathhouses were actually built on the east side of the creek.

10. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 60.

11. Thomas H. Musick, *Investigation of Hot Springs Affairs: Report to the Secretary of the Interior* (Washington, DC: Government Printing Office, 1890).

12. Halshal was also contractor for the construction of the Big Iron, Ozark, and Independent Bathhouses.

13. Hogaboom to Col. John E. Fordyce, 1920, Hot Springs National Park Administrative Archives #2, Box 121, Folder 15.

of the Interior sent a special investigator to Hot Springs to evaluate the condition of the bathhouses. Thomas H. Musick noted that two of the bathhouses, the Big Iron and the Old Hale, were no longer “fit for use,” and several others needed remodeling. He indicated that all new building should be in brick and iron, stone and concrete.¹⁴

Bathhouse Row: Creek Arch Installation and Major Landscape Change

Despite the more controlled development of buildings, the landscape of Bathhouse Row continued to be dominated by the ragged and abused creek. A turning point came on 7 August 1882 with the approval of a federal appropriation for covering Hot Springs Creek with a masonry arch. Work began in late 1883 to enclose the creek from Whittington to Malvern Avenue in an underground brick arch for flood and sewage control. This was upgraded in 1886 when a sewer pipe was installed in the creek arch. The area above the “creek arch” was graded and landscaped creating space for a linear tree-lined park—providing a basis for the first formal landscape to appear in the valley. In 1885 stone walls and steps were built around the Alum Spring for easier access. In 1888 the first Superior, Horse Shoe, Lamar, and Magnesia bathhouses opened and the Army and Navy General Hospital was constructed. By the end of 1887, the landscape took on a more polished appearance with lawns, walkways and formally landscaped areas. In 1888 approximately three hundred deciduous trees, lawn, and clover were planted in the “bath-house park.” Sidewalks to the bathhouses, some slightly inclined, were added between 1885 and 1889. The Government Free Bathhouse was built slightly behind and above the Horse Shoe and Magnesia bathhouses in 1890-1891. It opened to the public in February 1891. Also in 1891 the Government Pumphouse and impounding reservoir were constructed at the corner of Central Avenue and Reserve Street. The Government Pumphouse however was never to be used for its intended purpose. A March 1891 law prohibited the use pumps if

gravity flow was sufficient to move water.¹⁵

Rammelsberg Bathhouse, 1884-1891

The Rammelsberg continued to operate throughout this period. A photograph from 1889 shows that the building retained its design, including its mansard roof and open cupola (Figure 1.A. 3). An 1891 *Ground Plan for Improvement of the Front of the U.S. Reservation, Hot Springs, Arkansas*, displays lot numbers that would be used in future leases (Figure 1.A. 4). The bathhouse names on the map were likely added later, as they largely reflect post-1912 names, but the Rammelsberg and future Buckstaff bathhouses occupied Bathhouse Site No. 3.

A Landscape Design for Hot Springs Reservation (1892-1911)

The following narrative contains abridged contextual information, excerpted from the corresponding section of the 2010 *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*:

This period of landscape change begins in 1892, when Lieutenant Robert Stevens of the Army Corps of Engineers sent the first of his annual reports to the Secretary of the Interior on how the reservation “improvements” were progressing. It ends in 1911 after major changes to the landscape were implemented but before the revival of Bathhouse Row that began in 1912, marking the beginning of the next period of landscape change.

[...]

Bathhouse Row was already established as the front door for the Reservation as the primary location of the park’s architectural resources. Lt. Stevens conceived of Bathhouse Row as an “architectural park” where buildings and landscape would unite into one cohesive space. During this period several bathhouses along Bathhouse Row

14. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 65.

15. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 65-66.

were rebuilt (Arlington Bathhouse/previously Rector, Hale, Maurice/Independence, Imperial), and new structures were also constructed (second Arlington Hotel, Imperial Bathhouse, expansion of the Army-Navy General Hospital). The park included a total of ten “entrances” that provided access from Bathhouse Row to the Mountain Sidegrounds. These “entrances” represented a new philosophy of development at Hot Springs, wherein the landscape was utilized as an amenity. The Formal Entrance/Stevens Balustrade and Bandstand Pavilion were designed and built between 1894 and 1896. By 1899, deciduous trees were planted along walkways, entrance ramps (some inclined) linked the walkways with the bathhouses, and a paved entrance connected the Government Free and the Magnolia Promenade. Roads and trails on Hot Springs, North, and West Mountains were developed and improved, providing access for carriages, hikers, horseback riding, and bicycling. The Whittington Lake Reserve was designed and constructed, and then modified during this period.

In 1911 approximately 200,000 people visited national parks. The majority of those visitors traveled to either Platt National Park or the Hot Springs Reservation. Combined, these parks received an estimated 145,000 visitors that year. In comparison, the third and fourth most visited parks were Yellowstone (23,054 visitors) and Yosemite (12,530 visitors).¹⁶

Bathhouse Row Development, 1892–1911

Bathhouse Row was historically designed as an “architectural park” where buildings and landscape would unite into one cohesive space. Bathhouse Row is located along Central Avenue in the downtown core of the City of Hot Springs.

Although the spring water remained the main draw for visitors to the area, by the end of this period Bathhouse Row had been developed to a point where the springs and creek were no longer visible features on the landscape. Additions of buildings, enlargement of others, implementation of the creek arch and pipes for hot water transportation, and other activities that served

to formalize the landscape all resulted in reducing the previous visibility of the springs, creek, native topography, and rock outcrops. The steep slopes and rock outcrops on the eastern side of the buildings were still present to some extent, however blasting for roads and buildings during this period changed the visual appearance of this area as well. The “lawn park” was defined by Stevens as the main public front of the reservation. His description presented in his annual report of 1894 indicated:

It is a practical level, planted in blue-grass lawns, with selected trees and groups of shrubbery. A concrete promenade extends up the entire front, and, with car landings on the street and paved cross walks to the bath houses, forms a useful and attractive finish to the reservation and the street front. A marble hot-water fountain is to be placed in the center of the south extremity of the promenade and another forms a similar feature at the northern end. Two other fountains are to be placed about the center of the front, and, with the exedras and entrances, completes the architectural and useful features of this ground. The park is shaded with well-grown trees, and in a lawn border along the front of the promenade is a row of Lombardy poplars, presenting a marked feature along the street. Further out in the same border a line of magnolia trees are planted to replace the poplars, as shade, when these have served their term of usefulness.

Reservation superintendents began ordering deciduous trees to be planted along Bathhouse Row as soon as the creek arch was backfilled in 1884, but it was during this period that the trees began filling out enough to affect the character of the landscape. Photographs taken in this era show the extensive plantings along the western side of Bathhouse Row, including trees, shrubs, and herbaceous plants. The care taken to nurture the plants is evidenced by the stakes and structures constructed to protect them from damage and possibly to control their growth patterns.

[...]

Pedestrian routes included the walkways along the western side of the bathhouses, as well as a

16. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 79.

sidewalk on the opposite side of Central Avenue. These provided a highly visible pedestrian promenade for visitors. Eight entrances to the park existed including: the Reserve Street Entrance, the Entrance between the Ozark and Rammelsberg bathhouses, the Entrance to the Government Free Bathhouse, the Formal Entrance, the entrance near the Arlington Hotel, the superintendent's residence and grounds (Fountain Street), the gateway at the drive entrance near the Army and Navy Hospital grounds, and the entrance at the drive connecting Fountain Street to Hot Springs Mountain Drive. In 1912 a sidewalk and retaining wall were built behind the Maurice Bathhouse. Entrance walkways to the bathhouses provided organization for and access to the landscape.

Numerous existing buildings were demolished, others were renovated or expanded to accommodate new styles and functions, and new ones were constructed. The following list includes the major architectural changes during the period:

- *Arlington Bathhouse*, built 1892, on site of former Rector Bathhouse
- *Hale Bathhouse*, built 1892, on site of at least three previous Hale bathhouses
- *First Arlington Hotel* underwent significant changes from 1875-1892 including substantial additions (demolished to make way for Second Arlington Hotel) This hotel incorporated the Rector House/Hotel when it was created in 1875. The Rector House/Hotel was probably built ca.1870.
- *Second Arlington Hotel*, built 1893, brick building built on the site of the First Arlington Hotel. The DeSoto Rock, called the Tufa Rock was probably in its present position from at least 1892, when the second Arlington Hotel was built (see figure 2-149).
- *Maurice Bathhouse*, remodeled and renamed 1893, built in 1880 as the Independent Bathhouse (the Maurice was then demolished in 1911 to make way for the current building).
- *Imperial Bathhouse*, built 1893
- *Army and Navy General Hospital Building*

Eight (shops, laundry, and autopsy room), built 1901

- *Alum Spring Pavilion*, 1897, located in front of the Hale Bathhouse.
- *Government Pump House*, remodeled 1898, converted for use as the superintendent's office and reservation headquarters.¹⁷

Rammelsberg Bathhouse, 1892–1911

A 1909 postcard depicts turf lawn and deciduous trees in front of the otherwise unchanged Rammelsberg bathhouse (Figure 1.A. 4). The full lawn, more mature trees, and formal walk stand in contrast to the ca.1889 photograph with patchier lawn, saplings, and unpaved walk, reflecting Lt. Steven's focus on improving the landscape and developing the "landscape as an amenity" (Figure 1.A. 3).

Throughout its existence, Bathhouse Row served as the "Reservation Front," or the entrance to the Hot Springs Reservation. One of eight entrances from the pedestrian promenade along Central Avenue to the Hot Springs Mountain Sidegrounds was constructed in the 1890s between the Rammelsberg and Ozark bathhouses. The northern side of Bathhouse Site No. 3 thus became an important access point to the rest of the park.

In 1901, George H. Buckstaff, of Oshkosh, Wisconsin, and Jeanette Hogaboom, wife of Rammelsberg manager, Gilbert Hogaboom, conveyed a 1/3 interest of Bathhouse Site No.3 to Aaron H. Buckstaff and Milo R. Buckstaff for \$10.00.¹⁸ It is unclear when Harry Rammelsberg sold or gave up his stake in the site, but as of 1901, the main stockholders in the bathhouse site were members of the Buckstaff and Hogaboom families. Transfers of ownership apparently happened after 1901; as of 1907, the four stockholders were George A. Hogaboom, Gilbert E. Hogaboom, Aaron H. Buckstaff, and Milo R. Buckstaff. These four granted a 1/3 interest in Bathhouse Site No. 3 to Sinclair Mainland in 1907

17. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 90-92.

18. Deed from Geo. H. Buckstaff and Jeanette Hogaboom to Aaron H. and Milo R. Buckstaff, 1901, Hot Springs National Park Administrative Archives #2, Box 50, Folder 6.

for \$7,500.00.¹⁹

The Bathhouse Site No. 3 lease between the DOI and the Rammelsberg owners was up for renewal around 1909. At this time, the Rammelsberg advertised 21 baths for \$3.00, as shown in a 1909 postcard (Figure 1.A. 5). Rates had dropped \$2.00 since 1884, perhaps reflecting declining conditions of the Rammelsberg facilities. Most of the bathhouses on the Reservation Front were almost thirty years old by 1909, and their deteriorating conditions led the DOI to add the contingency to lease renewals that new, modern bathhouses must be built on each site. The proprietors of the Rammelsberg thus engaged the architecture firm of Frank W. Gibb & Company of Little Rock, Arkansas, to design a new, approximately \$100,000 bathhouse.²⁰ On the condition of the “erection of a satisfactory bathhouse,” the DOI conditionally granted a twenty-year lease to the Rammelsberg owners that would begin on January 12, 1912.²¹

In late 1910 or early 1911, the lessees changed the name of the building from the New Rammelsberg Bathhouse to the Buckstaff Bathhouse. This likely coincided with the incorporation of the Buckstaff Bath House Company on March 3, 1911, by many of the former Rammelsberg owners.²² Gilbert E. Hogaboom, Aaron H. Buckstaff, Milo R. Buckstaff, and Sinclair Mainland formed the Buckstaff Bath House Company, a stock company, “in order to obtain sufficient capital, for the construction of a new bath house [...] with a capital stock of \$125,000.”²³ At this point, no member of the Rammelsberg family appears to have been an owner of the bathhouse. However, multiple members of the Buckstaff family, owners of the Buckstaff Brothers Manufacturing Company of Lincoln, Nebraska, had

been stockholders in the Rammelsberg company since the 1880s, likely leading to the name change. The building’s name appears in various forms on documents from 1911 to the present, including Buckstaff Bathhouse, Buckstaff Bath House, or Buckstaff Baths.²⁴

The Buckstaff Bath House Company received approval by the Hot Springs Reservation’s Medical Director for their plans for a new, updated bathhouse in June 1911. Earlier that year and throughout 1910, Rammelsberg management and the Medical Director exchanged correspondence regarding the plans and issues identified by the Medical Director.²⁵ The Medical Director cited inadequate ventilation as an early obstacle to his approval. Additionally, the DOI required that the new bathhouse contain a women’s department, unlike the Rammelsberg. By mid-1911 with the approval of the Medical Director and Superintendent, the Rammelsberg had been demolished and construction began on the “modern” Buckstaff Bathhouse. During construction, the Hot Springs Reservation Superintendent sent photographs of the building to Mr. Clement S. Ucker, Chief Clerk of the DOI, stating that the new bathhouse “will resemble very much the Irish House of Parliament or the White House, or the Treasury Building, or some such magnificent structure; and from it you will also observe that within a very few years the front of the Hot Springs Reservation will be about the handsomest block of buildings in this, or any other country.”²⁶

Architectural Transformation

19. Deed from George A. Hogaboom, Gilbert E. Hogaboom, Aaron H. Buckstaff, and Milo R. Buckstaff to Sinclair Mainland, 1907, Hot Springs National Park Administrative Archives #2, Box 50, Folder 6.
20. Secretary of the Interior to Mr. W. T. S. Curtis, Attorney for Lessees of Rammelsberg Bath House, October 19, 1910, Hot Springs National Park Administrative Archives #2, Box 121, Folder 15.
21. Secretary of the Interior to Mr. W. T. S. Curtis, Attorney for Lessees of Rammelsberg Bath House, October 19, 1910, Hot Springs National Park Administrative Archives #2, Box 121, Folder 15.
22. Anti-Trust Affidavit, May 8, 1918, Hot Springs National Park Administrative Archives #2, Box 121, Folder 11.
23. Hot Springs Reservation Superintendent to the Secretary of the Interior, April 15, 1911, Hot Springs Administrative Archives #1, C3823 Concession Administration.

24. The current iteration of the name is “Buckstaff Bathhouse.” The building is thus largely referred to as Buckstaff Bathhouse throughout this report, but when referencing the Buckstaff Bath House Company or earlier quotes, the word bathhouse will appear as “bath house.”
25. Gilbert Hogaboom to Col. John E. Fordyce, 1920, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17.
26. Hot Springs Reservation Superintendent to Mr. Clement S. Ucker, Chief Clerk of the DOI, July 18, 1911, Hot Springs Administrative Archives #1, C3823 Concession Administration.

and National Park Service Landscape Design, 1912–1930

The following narrative contains abridged contextual information, excerpted from the corresponding section of the 2010 *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*:

During this period, the landscape of Hot Springs National Park was shaped by two major design influences—each inspiring change of a different nature. One affected Bathhouse Row, and the other impacted all other areas within the park. Bathhouse Row was transformed through a major modification of the buildings and architectural vocabulary within the landscape. Although the overall landscape of Bathhouse Row was not altered dramatically, the changes in the buildings were reflected in the evolving formal, urban character of the landscape. The remaining areas of the park were influenced by the newly budding theory of park design that was emerging within the National Park Service.

As the bathhouses were replaced or expanded, the landscape of Bathhouse Row was adjusted to respond to the building changes. All of the current bathhouses were constructed or completed during this period. The second Arlington Hotel burned down and the third Arlington Hotel was constructed in 1924 on a new site, off reservation land, making the former site available for landscaping and the emergence of Arlington Lawn as a park. Bathhouse Row underwent a major planting effort in 1914, including the addition of Magnolias and the installation of electric lights. Streets adjoining the park were paved resulting in a more urban character, and less dust.²⁷

Bathhouse Row Development, 1912–1930

The designation of the reservation as a national park [on March 4, 1921] ushered in the final phase of building construction culminating in the architectural character of Bathhouse Row today. During this period major changes to the buildings within the park impacted the overall landscape design. As current bathhouse lease

terms came to an end, the Department of the Interior required substantial improvements to be made, in order for the leases to be renewed. To meet the requirements for fire resistance and sanitation, many old buildings were removed and replaced with new structures. As the bathhouses were replaced or expanded, and the former Victorian cooling tanks were removed, some were replaced with new cooling tanks in the 1920s.

In September 1914 the old electric light poles were removed from the Reservation front. By 1918 the park saw increased pedestrian and automobile traffic, causing some concerns. That summer signs were placed at the Formal Entrance to the Mountain Sidegrounds warning that automobiles were prohibited from using the roadway.

In November 1914 concrete sidewalks were installed in front of Bathhouse Row and between the Ozark and Buckstaff bathhouses. Flower bulbs including Dutch hyacinths, tulips, narcissus and jonquils were planted in beds and in December twelve Magnolia trees were planted on the reservation. A 180 foot long by three foot high by one foot thick wall was constructed in the “ravine” on Hot Springs Mountain behind the Maurice Bathhouse.

During this period the vegetation of Bathhouse Row was formally arranged with rectilinear lawn terraces edged by pruned hedges. In addition, shade trees and ornamental trees lined the sidewalk along the Reservation front. The first major planting of Magnolias at the Reservation occurred in 1914. Maples were planted in the lawn surrounding the Government Free Bathhouse. By 1917 a privet hedge bordered the walkway along Bathhouse Row and “summer” ornamental plants and flowers were distributed throughout the area in the spring.

By the fall of 1918, a box hedge was present on both sides of the sidewalk along Bathhouse Row from the superintendent’s office to the Arlington Hotel. The hedge was enclosed by green stakes and wire to “prevent persons getting off street cars or crossing from the opposite side of the street to the Reservation from crossing the lawn between the curb and the outside of the concrete walk along the Reservation front.” The stake and wire treatment was also extended along the “en-

27. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 117.

trance walks” from the street to the Reservation front. The “white way” light poles were painted pea green and the bases were painted bronze green in September.

Concrete walks were built from the Main Promenade (Bathhouse Row) to the new Comfort Stations flanking the Quapaw Bathhouse. In March, 1924, shrubs were planted in front of the comfort stations as directed by Mann and Stern. The plants included Chinese Arbor Vitae, Amorence Privet, Wax Plants, Barberry, English Juniper, and Japonies. In November additional shrubs were planted along Bathhouse Row and at the Superintendents office and in February 1925 twenty crepe myrtle shrubs were planted at the grounds of the Government Free Bathhouse.

Most of the buildings currently present on Bathhouse Row were constructed or completed during this period. The following list includes buildings and other landscape features added to Bathhouse Row during this period.

1. *Maurice Bathhouse*, rebuilt 1911, opened 1 January 1912, remodeled 1915, previously Independent Bathhouse
2. *Buckstaff Bathhouse*, built 1911, opened 1 February 1912, replaced the Rammelsberg
3. *Arlington Hotel*, rebuilt 1913, burned down 1923
4. *Third Arlington Hotel*, built 1924, new site off government property
5. *Hale Bathhouse*, south wing added, rebuilt 1914, Classical revival (the new wing utilized a site that was designated, but never used for a bathhouse, but the Victorian Hale used more of that site than the new building)
6. *Fordyce Bathhouse*, built 1914-1915, replaced the Palace Bathhouse
7. *Superior Bathhouse*, rebuilt 1915, opened 16 February 1916, replaced the first Superior Bathhouse
8. *Government Free Bathhouse*, removed 1921 (Sharon’s review notes indicate it was demolished in 1922—the new Government Free Bathhouse opened on Reserve and Spring Streets)

9. *Ozark Bathhouse*, rebuilt 1922
10. *Quapaw Bathhouse*, built 1922, replaced Horseshoe and Magnesia (the two sites were merged)
11. *Removal of Most of the Cooling Towers*, created more open landscape between buildings on Bathhouse Row.
12. *Women’s and Men’s Comfort Stations*, built 1923
13. *Lamar Bathhouse*, rebuilt 1923
14. *Greenhouse near Cold Spring Pavilion*, built 1924

Small Scale Features, Bathhouse Row, 1912-1930

- *Electric Lights*, installed 1914 along Bathhouse Row. Fifteen ornamental steel cluster lights (with five globes on each pole) were erected on Bathhouse row. The lighted area was called the “white way.”
- *Curbs*, reconstructed along Bathhouse Row promenade sidewalk.
- *Fence*, built 1925, along Bathhouse Row to protect lawn beneath magnolia trees.
- Fountains Present:
 - *John W. Noble Fountain*
 - *Exedra Fountains (North and South)*
 - *Shell Fountain*
 - *Hoke Smith Fountain*
 - *Ornamental Tufa Fountain*, installed behind the Maurice Bathhouse in 1912
 - *Major Harry M. Hallock Fountain (formerly Alum Spring Pavilion)*, removed 1921
 - *Maurice Spring Fountain*
 - *Stevens Fountain*²⁸

28. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 129-131.

Construction of the Buckstaff Bathhouse and its Early Years/ or The Golden Age of Bathing (1912–1930)

The Buckstaff Bathhouse opened to the public on February 1, 1912. The changes required by the DOI caused a month's delay from the intended opening date of January 1, 1912. Gilbert Hogaboom, who had served as manager at the Rammelsberg Bathhouse since at least 1900, continued in this role at the Buckstaff.²⁹ With the completion and opening of the Buckstaff Bathhouse, the DOI formalized its lease with the majority shareholders of the Buckstaff Bath House Company in May 1912. The majority stockholders comprised the former Rammelsberg lessees—Sinclair Mainland (200 shares), G. E. Hogaboom (200 shares), Milo R. Buckstaff (90 shares), and Aaron H. Buckstaff (100 shares).³⁰

The Buckstaff Bath House Company aimed to evoke feelings of cleanliness and purity through its building's monumental massing, relatively monochromatic appearance, and "majestic columns" (Figure 1.A. 6). A "catalog" prepared by the Buckstaff Bath House Company and published in August of 1912 noted, "There it is to delight the eye and inspire the mind with lofty feeling and fill the heart of the yearning invalid with rich hopes of health and restored vitality. It is eloquent of clean living and bountiful in its kind seduction to enter its portals and be cured. And so we enter the Buckstaff, the Palace of Hydrotherapy."³¹ In similarly flowery language, this catalog provides insight into the appearance and layout of the building's interior in its opening year as well as the types of services the Buckstaff offered:

Within the beautiful portal we stop in pleased amazement. How quiet and restful and sweet it seems in here. Our feet feel the smooth tile floor of figured mosaics, our eyes behold the magnifi-

cent marble staircase, a little to the right. We are greeted by the courteous smile of the man behind the marble counter. We look about at the alabaster whiteness of the marble wainscoting, eight feet high; the beautiful walls and beams of hard and white cement. On one side of the counter is the elevator. The car is of the latest model, and large enough to permit an invalid's cot to be rolled into it. Back of the counter are innumerable locker boxes for valuables; and here too is the electric switchboard from which all the lights in the building are operated. To right and to left of the entrance hall, splendid mahogany doors lead into the bath, and at their sides are two beautiful drinking fountains of marble set into the wall.

THE BEAUTIFUL MAIN FLOOR

The word "Gentleman" in burnished brass upon the doors indicates that the entire first floor is devoted to the service of men patrons. Whether we enter from right or left we find ourselves in one of the sumptuous dressing rooms, which is an ante-chamber to the bathing chamber.

Going through the dressing room, we note the numerous lockers for the private use of the bathers, and here the preparation begins for the refreshing immersion in the healing pool of the wonder waters. Just beyond the dressing room is the cooling room, where the tired bathers tingling with the toning vitality of his bath may stretch himself in luxurious repose upon the spotless divans and resign himself to "Nature's sweet restorer, Sleep." But first he enters the immense bath hall. It is square and contains twenty-two regulation bath tubs ranged along the side walls. A flood of light immerses the bather as he enters which comes from a spreading skylight in the roof, and reveals the beauty and cleanness and polished excellence of the bath hall equipment. An exquisite white tile floor reflects the abundant light from above, and dashes it upon the marble side walls extending from the ceiling to the very floor. Looking about we see the hot air cabinets, the vapor cabinets, the shower baths and sitz tubs, the drinking fountains for the bathers, the towel cabinets, and the lavatories. Everything clean, and white, and polished, and rich looking, inoculating one's very senses with the purity of health and mental satisfaction.

THE LADIES' DEPARTMENT

29. Hogaboom to Mr. W. Scott Smith, May 2, 1900, Hot Springs National Park Administrative Archives #2, Box 121, Folder 15, HOSP-00736.

30. Gilbert Hogaboom to Hot Springs Reservation Superintendent, February 1, 1912, Hot Springs National Park Administrative Archives #2, Box 121, Folder 15, HOSP-00736.

31. Buckstaff Bath House Company, "Buckstaff Baths, Hot Springs, 1912," 1912, Hot Springs National Park Archives, 6.

Entering the Buckstaff from the street and passing directly through the office lobby up the grand marble stairway, or elevator, the lady patrons find the entire second floor of the bath house given up to their own exclusive use. In general arrangement it is much like the first floor, though there is evidence at once that the genius of the designers anticipated every want of the ladies. This makes a first visit to the bathing palace a succession of surprises. On every hand is the skilled touch of the sanitary expert. Not only in the Ladies' Department but everywhere in the building one can see the persistent efforts made by the builders to ensure hygienic conditions, and to secure an automatic process of eliminating the disease germ. There are no cracks under the baseboard, for the floor and the baseboard are one continued curve of solid material; there are no corners, for the corner is another curve. Nowhere can the prolific and adaptive germ get a lodging place to rear a family. The door facings are flush with the walls, and there are no mouldings. Marble, plate glass and adamantine surfaces of cement, vacuum cleaning system, and floods of sunlight, make the new Buckstaff as sanitary as any modern hospital in Europe or America.

Quite the most sensible and unique arrangement of the whole establishment is the placement of the bath tubs,—solid porcelain and handsomely designed. Where is the best place to put a bath tub? In the Buckstaff, the tub is placed directly in the center of the bath room. It is elevated several inches from the floor. It is accessible from the bottom and the top, from the sides and the ends, it is situated in the very place it can do the most good. It is placed where the attendant can work on the bather from any side and all sides. And to those who have ever taken a course of baths, nothing further need be said of the surpassing excellence of this placement of the bath tub. The tub may be filled clear to the top if desired, for there is no overflow pipe, and this makes a more invigorating and comfortable bath possible. Exact temperatures of water, just the specific degree of heat ordered by the physician, is obtained by the special "mixers" designed expressly for the Buckstaff Baths. And when one realizes that the temperature of the water is perhaps the most essential feature of the Hot Springs baths, it will be conceived how thoroughly the design-

ers of this bathing place have studied the science of giving a therapeutic bath.

But the regular hot water bath is only one of the splendid phases of the magnificent hydrotherapeutic equipment of the Buckstaff. Every modern method of hot water treatment, and all the accumulated apparatus for giving hydrotherapy effectively and successfully has been included in the service of the Buckstaff. There is the shampoo equipment; and the Buckstaff douche table; and the electric light cabinet with its magical powers; and the hot air cabinet; the shower and the sitz tub and the wonderful electric tub bath, the celebrated Neuheim bath, and the massage rooms for ladies and gentlemen.

REST ROOMS AND SUN PARLOR

When we step off the elevator on the third floor of the Buckstaff we are in a luxurious Rest Room, which seems more like the elegant drawing room of a high-class hotel than the lounging apartment of a bath house. Magnificent rugs cover the floor. Handsome mahogany furniture, upholstered in leather, give the room an air of cultured taste. Light and sunshine everywhere breathe a benediction of effulgence to refresh the heart of the invalid and inebriate his mind with delightful emotions. This is a place of rest and repose, for here is content and dignified quiet. On this floor and within easy access are the hair-dressing rooms and the manicure department. There is a smoking room and reading room for men. Private tables are provided for the ladies in the reading room, and a public stenographer is always in attendance on this floor to serve the patrons. Two fountains supply ice cold water and hot water, both fresh from the heart of the magic mountain upon which the Buckstaff is situated. The hot water is passed through coils cooled by ice, and it is the most refreshing drinking water in the world.

After the invigorating bath and soothing rest, the health seeker may go to the Sun Parlor and take a sun bath to finish off the therapeutic treatment. It is an excellent and vitalizing practice. The vivifying rays of the old sun god are most beneficent to the human organism.³²

32. Buckstaff Bath House Company, "Buckstaff Baths, Hot Springs, 1912," 1912, Hot Springs National Park Archives.

WHERE VULCAN WORKS

Imagination can glorify even a basement. Down under the heart of things in the Buckstaff there is a world of romance in the powerful forces which make things go. Upstairs where the air is sweet and pure and is entirely changed every fifteen minutes, the health seeker perhaps seldom thinks of the hidden energies in the basement which regulate the magnificent Ventilating System. But down here we see the marine boilers, the same type as are used on the giant steamships. Together their added power equals that of one hundred horses. The roaring fires of the natural gas infuriate the hidden forces within the boilers, and they burst from their container into the engines with stupendous force. They drive the seven-foot fan which sends the air through the steam coils and into the rooms above. They rush from the water from the hot springs into the cooling tanks at the ferocious rate of two hundred gallons a minute. They drive the vacuum pumps which keep the steam in circulation in the steam pipes and prevent water from gathering there. They furnish the energy to send the modern elevator rising noiselessly up and down all the day long, giving almost instantaneous transportation to any floor of the majestic edifice. This elevator is so large that a cot may be placed in it, allowing a bedridden invalid to be carried with comfort to his bath. The power boiler also gives the impulse to the vacuum cleaner system. This consists of a two-sweeper plant by which two rooms may be cleaned at once, and every particle of dirt and dust gathered with matchless sanitary elegance. And even the air is cleaned before it is allowed to go to the ventilator ducts by being driven through a cleansing chamber by the force of the energies furnished by Vulcan and his flames. Without Vulcan we could not have this palace of sanitation and health, this beautiful castle of hydrotherapy, the Buckstaff Baths. Gigantic forces arouse the feeling of sublimity, and none can view the gathered mechanical wonders of the Buckstaff basement without feeling the marvel of it all.

The new Buckstaff Bathhouse charged much higher rates for baths than the Rammelsberg had through 1911. In 1912, rates for 21 baths with an attendant were \$13.00; 10 baths with an attendant were \$6.50, 5 baths with an attendant were \$3.25, and 1 bath with an attendant was \$.70. The 1912

catalog noted that “The baths include service of attendant, private dressing room with locker, laundering of towels, sheets and mitt, shower, needle, douche, vapor, hot cabinet, and pack.”³³

With its various rooms and services, the modern Buckstaff Bathhouse offered a comprehensive bathing and recreational regime. Patrons began by purchasing bath and/or massage tickets in the lobby, then made their way either to the men’s locker rooms to the north or south on the first floor or up the stairs to the women’s locker room to store belongings and prepare for treatment. Many patrons underwent specific treatments based on a physician’s prescription; these “physicians were registered by Hot Springs National Park [or Reservation in the early 1900s] to assure their competency.”³⁴ Bathers would first take tub baths in the men’s or women’s bath hall and then proceed to their prescribed treatments or treatments of choice. Following baths and treatments, patrons would often finish in the cooling rooms but could also go to the gymnasium, sun parlor, or rest rooms for recreational activities or hairdressing.³⁵

The Buckstaff offered a variety of treatments, including vapor cabinets and sitz baths. In addition to proper ventilation and a women’s department, the DOI required the new Buckstaff Bathhouse to feature a hydrotherapy or “hydrotherapeutic” department for both men and women. This department was located on the second floor of the Buckstaff, and services included Electric Light Baths (\$1.25 or 12 for \$12.00), Nauheim (\$1.50 or 12 for \$15.00), Electric Tub Baths (\$1.25 or 12 for \$12.00), Steam Baths (\$1.00 or 12 for \$10.00), and Turkish Baths (\$1.00 or 12 for \$10.00)³⁶ (Figure 1.A. 7). Using period medical textbooks and journals, Carol A. Petravage largely determined the function and intended purpose of many of these treatments in her *Historic Furnishings Report: Hot Springs Fordyce Bathhouse*:

Electric Light Bath: The general electric light

33. Buckstaff Bath House Company, “Buckstaff Baths, Hot Springs, 1912,” 1912, Hot Springs National Park Archives.
34. Carol A. Petravage, *Historic Furnishings Report: Hot Springs Fordyce Bathhouse* (Harpers Ferry, WV: Harpers Ferry Center, 1987), 59.
35. Petravage, *Historic Furnishings Report*, 59-60.
36. Buckstaff Bath House Company, “Buckstaff Baths, Hot Springs, 1912,” 1912, Hot Springs National Park Archives.

bath was administered in an electric light bath cabinet, also called a sunray cabinet and was designed as a substitute for the natural sunbath. The light source was the arc or incandescent light, although the latter was more common. The length of time spent in the cabinet depended on the ailment being treated and varied from 3 to 40 minutes. The electric light bath was always followed by some kind of cooling therapy, such as a cool needle shower, douche, or bath.

The main effect of the light bath was to produce heat in the skin and tissues without overheating the air around the patient, enabling the patient to comfortably tolerate a higher degree of heat, which helped to reduce pain and relieve muscle spasms. The light bath increased the blood circulation in the skin, which in turn reduced congestion and swelling in various internal organs. Repeated use of this therapy was believed to help restore normal blood circulation and functioning of the internal organs. The increased perspiration induced by the light bath supposedly “washed” unhealthy materials out of the tissues and was used in treating the metallic poisoning that accompanied mercury treatment for syphilis. The light bath was considered effective in reducing pain and swelling in rheumatic joints, and in treating diabetes, obesity, kidney disease, sciatica, and syphilis. A short (three- to five-minute) treatment in the light bath was used as a tonic and as an appetite stimulant.

[...]

Nauheim Bath: The saline and effervescent Nauheim bath was composed of various chemicals, which when mixed together in a tub of warm water (85°-94°F) reacted to release carbon dioxide. Formulas usually included salt, baking soda, and some kind of acid like sodium bisulphate or muriatic acid. After the bath was prepared, the patient would lie in the solution for 5 to 20 minutes, with a cold compress on the head and an ice bag on the heart. During the course of the baths (never exceeding 20 in number), the temperature of the bath was gradually lowered and the salinity increased.

The Nauheim bath supposedly stimulated the blood circulation in the skin, caused the heart to beat more slowly and steadily, and raised the blood pressure. It also stimulated the metabolism and encouraged the elimination of “gouty

toxins.” The Nauheim bath was employed in the treatment of “valvular insufficiency and stenosis, cardiac dilation, hyperthyroidism, ...cardiac neuroses, ...Bright’s disease [kidney disease], chronic articular rheumatism, gout, and obesity.

[...]

Vapor [Steam] Bath: When taking a vapor bath, the patient was seated in a cabinet and exposed to steam at a temperature of 115-140°F. When the head was enclosed in the cabinet, the treatment was called a head-in vapor or sometimes a Russian bath. The vapor bath was a much more powerful therapy than the hot air bath, since the moist air communicates heat much better than dry air.

The vapor bath caused profuse sweating, rapid pulse, and an increased body temperature. Doctors believed that the increase in body temperature destroyed toxins associated with chronic rheumatism. A prolonged (15- to 30-minute) vapor bath was recommended for treatment of rheumatism, jaundice, obesity, and the final stage of syphilis. People suffering from neuralgias, paralysis, disorders of the spinal cord, hysteria, and hypochondria supposedly benefitted from the vapor bath. The head-in vapors helped temporarily relieve symptoms of bronchitis and cleared sinus passages.

[...]

Hot Room or Turkish Bath: In the Fordyce Bathhouse, the hot room was heated by radiators to a temperature of 140°F. Patients customarily drank several glasses of water both before and during their stay in the hot room. Treatment in the hot room produced profuse perspiration and was normally followed by some kind of cold bath or shower.

The hot room was used to treat cases of rheumatism, toxemia, obesity, and some forms of kidney disease, as well as sciatica and lumbago. Increased perspiration was believed by some to “wash” toxic material out of the body and to increase metabolism.³⁷

Mercury rubbing had also been used as a supplemental treatment to the thermal waters since at least 1887. In its first years, the Buckstaff did not

37. Petravage, *Historic Furnishings Report*, 63-76.

have a dedicated space for mercury treatments but did offer the service in various areas. According to Petravage, mercury rubbing “provided special therapy for patrons afflicted with venereal disease.”³⁸

Mercury Rubbing: Before antibiotics, mercury and potassium iodide were the standard treatments for syphilis. Preparations of mercury were administered by mouth; by injection; and by inunction, or rubbing.

The inunction method consists of rubbing mercury ointment (blue ointment) on the skin every day for a week, but each day on a different part of the body. The arms, the legs, the back, and the chest are the usual places for inunction treatment. At the end of a week the patient takes a bath and then the course is started again.

The side effect of this medication, essentially mercury poisoning, produced soreness and bleeding of the gums, excessive saliva, and diarrhea with bloody stools. Taking this treatment at the Fordyce Bathhouse afforded many advantages. Doctors believed that hot baths maintained good skin condition during treatment and stimulated the kidneys to excrete both the mercury and syphilis toxins. They also thought that copious drinking of the water flushed out the tissues and minimized mercury deposits. The hot water baths and drinking also supposedly rid the body of the syphilis toxins before they caused damage to the brain and other organs. Additional therapy suggested for syphilitics included “limiting the amount of brain work, ...avoiding mental worry,” eating a nourishing diet, exercising regularly in the open air, and using baths and massages to keep good skin condition. Obviously, all of these requirements could be easily met at a spa resort like Hot Springs, not to mention the advantage of being away from the prying eyes of family and friends. Thus, many of the doctors at Hot Springs specialized in the treatment of venereal diseases.

By the mid-1930s, intramuscular injections of mercury preparations were more commonly used to treat syphilis than mercury rubbing. The development of antibiotics sounded the final death knell for mercury rubs at Hot Springs. Antibiotic treatments for venereal diseases were

much safer, with fewer side effects, and had largely replaced mercury treatments by the mid-1940s.³⁹

The Buckstaff offered hydrotherapeutic treatments and mercury treatment throughout its first decade.

Changes in Thermal Bathing Trends and Subsequent Remodel, 1921

Apparently hydro-therapeutic treatments had already fallen out of favor only a year after the Buckstaff's opening, prompting management to request approval to close their Hydrotherapy Department multiple times. In a letter from Gilbert Hogaboom to Aaron Buckstaff, president of the stock company, Hogaboom complained, “Our hydro is doing nothing at all but the Hair-dressing is doing well and Mercury fairly well.”⁴⁰ The DOI initially denied the closure of the Hydrotherapy Department, as its existence had been a requirement of the lease. They finally granted approval in 1921 after Hogaboom noted that physicians were no longer prescribing the treatments, and the Buckstaff Bath House Company quickly submitted plans for “additions and improvements” by Mann & Stern Architects, including the conversion of the Hydrotherapy Room into more space for women bathers, whose number had increased since the construction of the bathhouse.⁴¹ The 1921 remodeling (discussed further in Chapter 1B) also included the conversion of the room above the south men's dressing hall into a second women's dressing hall and the transformation of the entire second floor into a female zone, with the exception of the gymnasium. The addition of dedicated mercury treatment rooms had been proposed, but these were apparently not built.

The 1921 remodeling marked the last substantial changes to the Buckstaff Bathhouse in this period. From its opening in 1912 until the Great Depression, the Buckstaff saw thousands of bathers, often servicing hundreds of bathers a day.

Landscape Improvements, 1912 – 1930

As mentioned, the DOI and bathhouse owners

39. Petravage, *Historic Furnishings Report*, 68-69.

40. Gilbert Hogaboom to Aaron Buckstaff, August 20, 1913, Hot Springs National Park Administrative Archives #2, Box 121, Folder 16.

41. Gilbert Hogaboom to Hot Springs Reservation Superintendent, January 31, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17; Penn & Stern Architects to Hot Springs National Park Superintendent, June 3, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17.

38. Petravage, *Historic Furnishings Report*, 59-60

implemented several landscape improvements during this period that remain today. These uniform improvements complemented the modern, sanitary bathhouses and made Bathhouse Row a more cohesive space. Landscape updates during this period around the Buckstaff included the 1914 installation of the sidewalk along the Reservation Front, the 1914 update of the walk (now concrete) between the Ozark and Buckstaff bathhouses, the 1914 planting of Magnolia trees lining the west side of the new Reservation front sidewalk, and the 1918 planting of a Chinese holly hedge lining the east side of the sidewalk.⁴² The central ramp to the Buckstaff and porch urns were added between 1914 and 1918 according to drawings by Hot Springs architect Harry C. Schwebke located in the Hot Springs National Park archives.

Depression-era Landscape Projects (1931–1940)

The following narrative contains abridged contextual information, excerpted from the corresponding section of the 2010 *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*:

During this period, the now well established National Park Service “Landscape Division” design office in San Francisco was headed by landscape architect Thomas Vint. The landscape division and the engineering division, headed by Frank A. Kittredge, were equals under the umbrella of the “Field Headquarters.” These offices influenced several major projects at Hot Springs including: the original design of the Grand Promenade; the design of a unified collection, cooling and distribution system for the hot spring water; and the replacement of the administration building. Although the projects were not all implemented during this period, their designs affected the development of the park landscape and were all eventually completed.

The execution of some of these projects, as well as others, utilized Public Works Administration (PWA) funds and labor. In May 1933, a Civilian

Conservation Corps (CCC) camp, NP-1, was established at Hot Springs National Park. The camp was located on rented private land. The CCC crew worked at the park for six months, and then was replaced with local labor through the Civil Works Administrations (CWA). The CCC and CWA crews implemented improvements at Gulpha Gorge Campground [...]. In 1935, Camp Garraday was built by the Federal Transient Bureau adjacent to the Gulpha Gorge Campground.

In 1939, a CCC work camp opened at Lake Hamilton. One half of the camp resources were allocated to improvements for Hot Springs National Park while the rest went toward Game and Fish commission projects. At Hot Springs the crew improved mountain roads and trails, landscaped the creek in Whittington Park, and prepared and stored materials. Although not located within the park boundary, the construction of the Army and Navy Hospital became a major visual element behind and above the southern end of Bathhouse Row.⁴³ The hospital opened in October of 1933. The large, prominent building is situated on a hill to the east of Bathhouse Row in the vicinity of the South Park. The massive scale of the structure has a strong visual effect on the southern portion of the Reservation Front.⁴⁴

Bathhouse Row, 1931–1940

In 1938 the trolley tracks on Central Avenue were removed. The canopy trees along Bathhouse Row were maturing—their larger size and now double line of trees defined the three-dimensional space of the linear corridor. Hedges and short walls also helped to define the landscape as a series of formal spaces. In October 1936 a hedge replaced the stone wall from the north entrance pylon to the Maurice Bathhouse lawn (the matching wall in front of Fordyce Bathhouse had already been removed at an unknown date). In 1939 the site around the Hale Bathhouse was landscaped.

Changes to buildings and structures during this

42. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 129-131.

43. The CLR inaccurately stated that the Army Navy General Hospital campus was outside of the park boundary, but it has actually always been within the national park boundary.

44. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 164.

period included the construction of an administration building in 1936, the demolition of the Imperial Bathhouse in 1937 to make way for the southern entrance to the Grand Promenade, and renovations to the Hale Bathhouse and landscape. Although not located on the National Park Service property, additions to the Army and Navy Hospital Complex impacted Bathhouse Row, due to the large scale of the hospital and the spatial relationship between the complex and Bathhouse Row.⁴⁵ The massive scale of the main hospital building, and the dominating presence of the entire complex on a rise directly above the southern end of Bathhouse Row, gave the complex a high level of visibility in the valley.

Changes to small scale features also affected the appearance of Bathhouse Row during this period. In 1932 a jug fountain was installed at the Reserve Street curb marking the southern entrance to Bathhouse Row. In June 1933 the overhead utility lines along Bathhouse Row were removed and either buried or concealed on lower portions of buildings. A display fountain was installed in front of the new Administration Building in 1936.⁴⁶

The Buckstaff During the Great Depression

The Buckstaff Bath House Company's lease of Bath House Site No. 3 was set to expire December 31, 1931. Despite the onset of the Great Depression, the company expressed its intent to the National Park Service Director, Horace M. Albright, to renew the lease on February 3, 1931.⁴⁷ Though no confirmation is documented in archival material, correspondence throughout the 1930s between members of the company and to members of the DOI and HOSP indicate that the lease was renewed.

Gilbert Hogaboom remained the manager of the bathhouse at this time and implemented several minor changes during the late 1930s. These changes are further discussed in Chapter 1B, but the

changes again reflected changing trends in bathhouse customer demand. For example, in 1937, Hogaboom received approval to replace two dry heat cabinets in the ladies' department with two vapor cabinets, as dry heat cabinets were seldom used. Hogaboom additionally removed dry heat cabinets in the men's bath hall to create space for two pack sinks to make hot packs for the bathers.⁴⁸ In 1939, the demand for sitz baths increased, prompting Hogaboom to replace a vapor cabinet in the ladies' department with a sitz bath.⁴⁹ Throughout this period, changes at the Buckstaff continued to correspond with customer needs.

Master Planning, WWII, and Mission 66 (1941–1972)

The following narrative contains abridged contextual information, excerpted from the corresponding section of the 2010 *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*:

World War II Impacts on Hot Springs

This period represents a high point of the bathing industry at Hot Springs, as well as the beginning of its decline. Although a shortage of medical staff and other employees and supplies impacted the bathing industry during World War II, facilities in Hot Springs continued to improve. During the war wounded and sick soldiers were brought to Hot Springs for treatment. In 1942 the military took over the enormous Eastman Hotel to help accommodate the overflowing Army and Navy Hospital across the street.

In 1944 Hot Springs was selected as a redistribution center for soldiers returning from overseas. From September 1944 through December 1945, over 32,000 returning soldiers spent time in Hot Springs. With 2,500 officers, enlisted men, army nurses, and WAACs a month spending 14 days each in Hot Springs, their use of the local

45. The CLR inaccurately stated that the Army Navy General Hospital campus was outside of the park boundary, but it has actually always been within the national park boundary.

46. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 164-165.

47. Gilbert Hogaboom to Horace Albright, NPS Director, February 3, 1931, Hot Springs National Park Administrative Archives #2, Box 121, Folder 18.

48. Superintendent D.S. Libbey to Gilbert Hogaboom, July 29, 1937, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

49. Superintendent D.S. Libbey to Gilbert Hogaboom, July 10, 1939, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

amenities was widespread. Arlington Lawn was selected as the site for numerous ceremonies conducted to present medals and mark patriotic occasions. A bandstand was constructed at Arlington Lawn in 1944. In addition, the Formal Entrance/Stevens Balustrade was utilized for military concerts. After all of this activity, it must have seemed strange when the military activities ended with the demolition of the Eastman in 1946. The removal of the huge Eastman complex, which previously served as an anchor at the southern end of Bathhouse Row, changed the character of this area.

Despite the withdrawal of large numbers of military personnel, Hot Springs thrived for a short time after the war. Hotels were reconverted for civilian use and in 1946 a new record was set for the number of people taking baths. The country was changing and a number of forces led to the decline of the bathing industry. The development of the field of scientific medicine, and in particular of modern antibiotics during the war, diminished the use of the thermal waters for medical purposes. Also, the leisure practices of post war Americans were changing. As the work lives of Americans shifted, and women in the work force became more commonplace, long restful vacations characterized by the 19th century spa life were no longer possible. In addition, as more Americans could afford to buy automobiles, and more highways were in place throughout the country, vacations became excursions to multiple places, in contrast to the former practice of visiting single destinations. Finally, a wider variety of recreational activities were gaining popularity and the practice of social promenading became outdated. All of these factors worked against the Hot Springs bathing industry, and after 1946 visitation to the bathhouses began a gradual decline.

Beginning in 1950 and continuing for the rest of the period, significant changes occurred at Arlington Lawn including the construction of a central cooling system for the spring water supplied to the bathhouses (1950), the removal of the old superintendent's residence (1958), and the design and construction of the Arlington Lawn landscape (1958-1974). From 1956 through 1958 the Grand Promenade was extended, landscaped, and lights were added. The Mountain Sidegrounds adjacent to the Grand

Promenade were also landscaped and the plants in the area became a focus of interpretation. The Ramble Street entrance to North Mountain was closed, and the Hot Springs Mountain Observation Tower was renovated in 1953 and removed in 1971. The National Park Service acquired Happy Hollow Spring and built a fountain to provide spring water for visitors. A development plan for Whittington Park was prepared by the NPS in 1941 proposing a wide array of active recreation and a plant nursery in the park.

The continued decline of the bathing industry in Hot Springs led to the closing of several bathing establishments in the city, and on Bathhouse Row. In 1962 the Fordyce Bathhouse was the first to close. During the 1970s the Maurice, Ozark, and Hale bathhouses all closed permanently.⁵⁰

1940s Master Planning Efforts at Hot Springs

In 1942 the National Park Service undertook an effort to develop master plans for all of the parks. These were meant to guide the parks into their next phase of development and use—and to attempt to ensure their appeal to the public. Vint's office applied their newly developed design principles of rustic architecture and landscape design to the issues related to the parks throughout the country. Although some of the Master Plans were implemented, funding was greatly reduced during the war and many of the plans were never put in place.

The plan developed for Hot Springs reflected an increasing emphasis on the use of the overall park landscape for recreational activities. As part of the master planning effort, roads, trails, shelters, and other amenities located on the park's mountain lands were scheduled for improvements and additions.⁵¹

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50. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 181-182.
 51. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 182.

Mission 66 at Hot Springs National Park

In 1956 the National Park Service Mission 66 program was enacted in commemoration of the 50th anniversary of the National Park Service Organic Act. The program enjoyed the support of Congress and President Eisenhower, enabling funding of large scale facilities. The 1942 Master Plans were revisited, only to find that in many cases changes that had taken place since their development made new plans necessary. The new designs were developed with modern methods and the picturesque prototypes that had characterized park design in the 1920s and 1930s were rejected. In the words of National Park historian Linda McClelland, “Although adherence to principles of naturalism such as avoiding straight lines and right angles in all aspects of design continued, the character of park structures, roads, and trails changed without the craftsmanship, primitive tools, training, and carefully worked out specifications that had been such important aspects during the New Deal.” The design of spaces and structures were specific to the parks, but no longer individually designed to be in harmony with the site. A major goal of the Mission 66 program was to provide visitors with easy access to primary park resources.

At Hot Springs, Mission 66 efforts mainly affected the campground at Gulpha Gorge, the Grand Promenade, and the new observatory on Hot Springs Mountain. Another significant part of the Mission 66 program at Hot Springs was the adaptation of the Government Free Bathhouse into the Physical Medicine Center in 1958. After Libbey died, the structure became the Libbey Memorial PMC. Conrad Wirth spoke at the dedication in 1960. The changes are summarized in the landscape characteristics sections for each landscape component.⁵²

Bathhouse Row, 1941–1972

Alterations to the water distribution and storage system for the park, based on earlier designs prepared by the office of Thomas Vint, were undertaken during this period. The distribution system included three “spring groups” and three

main underground laterals for collecting and transporting water from the springs. Each spring group consisted of water from several natural hot springs that was captured and combined and then stored in reservoirs until needed. In addition, a high pressure reservoir was located on the side of Hot Springs Mountain.

In 1942 the Ozark Bathhouse was improved with additions. A Civil War memorial drinking fountain, the Pioneer Fountain, was built north of the Superior Bathhouse in 1943. A plaque was mounted on the pedestal of the fountain. After the fountain was removed, ca. 1990, the plaque was relocated a few yards south of the site of the fountain on a tufa boulder. In 1945 the Noble Fountain was moved from the corner of Reserve Street and Central Avenue to the front of the Administration Building. In 1957 it was moved again to its present site at the Reserve Street entrance to the Grand Promenade.

The jug fountain near the front of the Administration Building was rebuilt in 1948. In 1956 a new jug fountain was completed in front of the Administration Building. The 1956 fountain is present today.

The vegetation along Bathhouse Row was altered when Hollies were planted to replace elms in 1949. Nine elms and five magnolias were damaged by work related to gas leaks. Also in 1949, a retaining wall at a parking lot on Exchange Street at the base of West Mountain failed causing a landslide that extended fifty feet into the National Park. The Pioneer Fountain was removed ca. 1990.⁵³

Buckstaff Bathhouse, 1941–1972

Despite the post-1946 decline in the thermal bathing industry in Hot Springs, Gilbert Hogaboom, still manager of the bathhouse and now president of the Buckstaff Bath House Company, continued to make improvements to the building in the late 1940s. Hogaboom added two attendant locker rooms to the southeast corner of the building between 1946 and 1947 to provide a separate space for attendants to get ready and store their

52. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 182-183.

53. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 183.

belongings.⁵⁴ In 1954 and 1955, the Buckstaff Bath House Company enlarged and improved the ladies' department, including the addition of two tubs. The new tubs suggest that demand at the Buckstaff continued.

During this period, Lindrel Hogaboom, son of Gilbert Hogaboom, took over as manager of the Buckstaff, likely when elder Hogaboom died in 1947. Lindrel died unexpectedly in 1960, and Orland Koonce became the Buckstaff's manager. Koonce had experience in Hot Springs, as he had worked for the U.S. Public Health Service at a HOSP building in 1937 and then Camp Garraday as a "Warehouseman, Medical photographer, and Medical Clerk making round [sic] with doctor and reporting same on permanent records."⁵⁵ In his resume, Koonce notes that he elevated the Buckstaff from number five to number one in baths given. The Buckstaff would remain number one for twenty-two consecutive years.⁵⁶

Under Koonce's direction, the Buckstaff Bathhouse installed whirlpool equipment in all of its baths in 1962, to modernize and possibly attract more customers. The Buckstaff began offering whirlpool baths on January 1, 1953. Of the whirlpool baths, a 1973 pamphlet for the Buckstaff advertised that "The Buckstaff is equipped to provide famous Whirlpool baths—tingling surges of Hot Springs Thermal Water, reinforced by tiny air bubbles to bombard the body with tension-relieving effect"⁵⁷ (Figure 1.A. 8). An earlier 1966-1967 report "Study Report of Bathhouse Row Establishments and Their Needs and Prospects" documented that from 1961 to 1965, the Buckstaff gave 240,604 baths, 62,790 of which were whirlpool baths. The Lamar Bathhouse provided the second most baths given during that period with 232,000, 37,284 of which were whirlpool. During the 1960s, the Buckstaff was the only bathhouse with whirlpool equipment

in all of its baths.⁵⁸ Koonce continued to perform routine maintenance on the Buckstaff through the duration of this period.

Redefining Visitor Use (1973–Present)

The following narrative contains abridged contextual information, excerpted from the corresponding section of the 2010 *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*:

In 1974 Bathhouse Row was listed as a National Register Historic District. Concurrently, in 1973-1974, a set of plans were prepared for the park and downtown Hot Springs that included major development proposals that would significantly alter the character of the area. Although the plans were not implemented, they illustrate a dichotomy in ideas for preserving or developing the area. The young field of historic preservation, and the National Register of Historic Places, were not yet well understood by the planners, designers, and managers who were making decisions regarding the future of the park. In retrospect, it seems clear that the identification of the property as an important historic site should have led to plans that respected the historic integrity of the resources. However, early in the period, alterations were made without the guidance of the Secretary of the Interior's standards.

By the early 1980s, many of the bathhouses had closed and more were near closing. National Park Service administrators became concerned about the deterioration of the bathhouses and other vacant structures within the park. Their concern increased when the Quapaw/Health Services, Inc., and the Superior closed in 1983 and the Lamar Bathhouse followed, closing

54. Gilbert Hogaboom to HOSP Superintendent, October 18, 1946, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

55. Orland Koonce, Resume, 1986, Hot Springs National Park Administrative Archives #2, Box 121, Folder 20.

56. Orland Koonce, Resume, 1986, Hot Springs National Park Administrative Archives #2, Box 121, Folder 20.

57. Buckstaff Bath House Company, Park and Bathe, 1973, Hot Springs National Park Archives.

58. H. Raymond Gregg, "Study Report of Bathhouse Row Establishments and Their Needs and Prospects," December 16, 1966, Hot Springs National Park Administrative Archives #2, Box 19, Folder 14.

in 1985. After 1985, the Buckstaff was the only bathhouse still operating on Bathhouse Row. A movement toward adaptive reuse of the buildings began and a primary focus for the park has been on rehabilitating the bathhouses on Bathhouse Row and finding appropriate uses for the buildings. As new uses for the buildings were being considered, the need for documentation of the buildings was apparent. The Historic American Buildings Survey undertook the task of documenting the historic architectural and functional features of the park. During 1984 and 1985 Department of the Interior photographer Jack E. Boucher photographed the interiors and exteriors of the buildings. In addition, measured drawings were prepared by Michael Peters, Gregory McCall and Daniel Wininski.

In 1987 Bathhouse Row, the Formal Entrance, and a portion of the Grand Promenade were designated parts of a National Historic Landmark District. In the same year, plans to update the utilities for Bathhouse Row were approved. The Fordyce Bathhouse was renovated and opened as the Hot Springs National Park Visitor Center in 1989. In 1989 a Landscape Management Plan for Bathhouse Row and Arlington Lawn was completed and the recommendations were implemented. These included the addition of fluted concrete walls in the lawn park along Bathhouse Row, the addition of an entrance signs at the north and south ends of the Magnolia Promenade, changes to the fountains at the Formal Entrance, and alterations to the sidewalks and thermal water cascade and pools at Arlington Lawn.

Changes also occurred within the mountain areas of the park. Several land acquisitions led to a total of 4,465.04 acres within the park boundaries by 1977. The current Hot Springs Mountain Observation Tower was completed in 1983. The Grand Promenade was designated a National Recreational Trail in 1982. In 2001 the National Park Service renovated the trail by adding mortar to the previously dry-laid brick pavement. The majority of the other historic landscapes within the park are being maintained with only minor changes made as necessary to make repairs. The Gulpha Gorge Campground continues to function as a year-round camping facility.

Whittington Park is maintained by the park and utilized by local residents. It is identified on park

maps as part of the National Park and the Division of Interpretation is presently considering new waysides for the Whittington trail.⁵⁹

Bathhouse Row, 1973–Present

In 1978 the creek arch was repaired by Childs Fabricating Company. In 1979 a design was prepared for design changes to be made at the Maurice Spring and the Grand Promenade in the vicinity of the spring. In 1987 plans for renovations to utilities on Bathhouse Row were approved and implemented. In 1989 the Fordyce Bathhouse opened as the Visitor Center for Hot Springs National Park.⁶⁰

Most of the bathhouses on Bathhouse Row have been rehabilitated since their closure to fit other uses, including the Lamar Bathhouse, which now houses National Park Service offices and the park's store, the "Bathhouse Row Emporium." The Quapaw Bathhouse closed in 1968 but was recently completely renovated into a modern bathhouse, and it is the only other building on Bathhouse Row (besides the Buckstaff) to offer a thermal bathing experience today. The Ozark Bathhouse has been rehabilitated to house the "Mystic Ozark," a children's science experiential museum that opened on May 17, 2025. The Hale Bathhouse is now a hotel, the Superior Bathhouse functions as a brewery and the Maurice Bathhouse is currently vacant.

Buckstaff Bathhouse, 1973–Present

The Buckstaff Bath House Company continued to renew its lease of Bath House Site No. 3 throughout this period even as most of its neighbors closed. This trend of shorter lease periods continues through the present. Orland Koonce retained his position as manager through 1986, when his son, Orland Koonce, Jr. succeeded him.⁶¹ The elder Koonce returned as acting manager in 1989, after his son left the position, until Michael Branch took

59. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 197-198.

60. Quinn Evans Architects, Mundus Bishop Design, and Woolpert, Inc., *Hot Springs National Park Cultural Landscape Report and Environmental Assessment*, Chapter II, page 198.

61. Acting Superintendent to the Regional Director, Southwest Region, September 22, 1986, Hot Springs National Park Administrative Archives #2, Box 121, Folder 20.

over later that year.⁶²

During the later part of Koonce, Sr.'s tenure, the Buckstaff converted to a geothermal heating system to keep utility costs down in the face of dwindling business. This conversion was completed in 1982.⁶³ Under the management of the Koonces, Branch, and later managers, the Buckstaff Bath House Company and the NPS have continued to perform routine maintenance to the building and landscape, including sandblasting and waterproofing the building, replacing Chinese holly hedges, repointing the building, updating the HVAC system and more. The Buckstaff Bath House Company is still the concessioner, and Mandi Hall is the current manager.

The Buckstaff Bathhouse is the only continuously operating bathhouse on historic Bathhouse Row, having been used for its original purpose since its opening in 1912. Although its ownership implemented several alterations over the years to accommodate changing trends in the thermal bathing industry, the most substantial changes occurred during the historic period. As all of the other bathhouses on Bathhouse Row have been rehabilitated for compatible uses, the Buckstaff is the only building on the Reservation Front to largely retain its interior composition, allowing it to truly reflect the feeling of and association with the "Golden Age of Bathing." Today, the Buckstaff continues to offer its customers whirlpool baths, sitz baths, steam cabinets, hot packs, massages, and facials, so visitors can still partake in the thermal bathing that originally attracted people to Hot Springs.

Statement of Significance

The Buckstaff Bathhouse was listed in the National Register of Historic Places in 1974 as a contributing resource within the Bathhouse Row Historic District. The NPS designated Bathhouse Row a National Historic Landmark in 1987. The district is significant under National Register criteria A and C. The district nomination identifies a period of significance of 1892-1949. The Buckstaff Bathhouse is significant both in the areas of Architecture and Health/Medicine:

Bathhouse Row is the largest collection of twentieth century bathhouses remaining in the United States, and it represents the high point of that industry when it reached its peak from the 1920s through the 1940s. Bathhouse Row is also one of the few collections of historic bathhouse [sic] remaining in the United States. As an entity, Bathhouse Row represents an area unique to the National Park System—an area where the natural resources historically have been harnessed and used rather than preserved in their natural state. On a regional level of significance, the bathhouses also form the architectural core of downtown Hot Springs, Arkansas. The bathhouses represent a fine collection of varied eclectic architectural styles popular during the 'teens and twenties.⁶⁴

62. Superintendent Roger Giddings to Mr. Michael J. Branch, Manager, Buckstaff Bath House, October 2, 1989, Hot Springs National Park Administrative Archives #2, Box 121, Folder 8.

63. Orland Koonce to Superintendent Giddings, February 23, 1982, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration 1981-1983).

64. Laura Soulliere Harrison, "Bathhouse Row, Hot Springs National Park National Register of Historic Places Inventory-Nomination Form," (Santa Fe: National Park Service Southwest Regional Office, 1985), Section 8, 1.



Figure 1.A.1. Bathhouse Row facing northeast, ca. 1880s (Source: HOSP 15079, J.F. Kennedy photograph). The bathhouses pictured from south to north are the Rammelsberg, Ozark, Palace, Independent, and Hale.

BATH HOUSE ASSOCIATION.

BATHING RATES.

ROCKAFELLOW.		OLD HALE	
21 Baths	\$6.00	21 Baths	\$6.00
10 "	3.00	10 "	3.00
Single	30	Single	30
HOT SPRINGS.		INDEPENDENT.	
21 Baths	4.00	21 Baths	5.00
10 "	2.00	10 "	2.50
Single	25	Single	30
NEW RECTOR.		PALACE.	
21 Baths	6.30	21 Baths	6.30
10 "	3.00	10 "	3.00
Single	30	Single	30
BIG IRON.		OZARK.	
21 Baths	6.00	21 Baths	5.00
10 "	3.00	10 "	2.50
Single	30	Single	30
RAMMELSBERG			
21 Baths	5.00		
10 "	2.50		
Single	30		

The owners of the above Bath houses desire all patrons to report to the managers any neglect on the part of the attendants. If the grievances are not at once corrected, report the same to the undersigned.

If any managers of any of the above houses are in any way discourteous to patrons or derelict in their duty a favor will be conferred by a prompt report of the same.

GEO. G. LATTA, President,
A. B. GAINES, Secretary.

HOT SPRINGS, ARK., Nov. 22d, 1884.

Figure 1.A.2. 1884 advertisement for the bathhouses on Bathhouse Row. Note the Rammelsberg rates are \$5.00 for 21 Baths, \$2.50 for 10 Baths, and \$.30 for a single Bath (Source: *Hot Springs Daily News*, Wednesday, December 24, 1884).



Figure 1.A.3. Rammelsberg Bathhouse, ca.1889 (Source: Hot Springs National Park Archives).

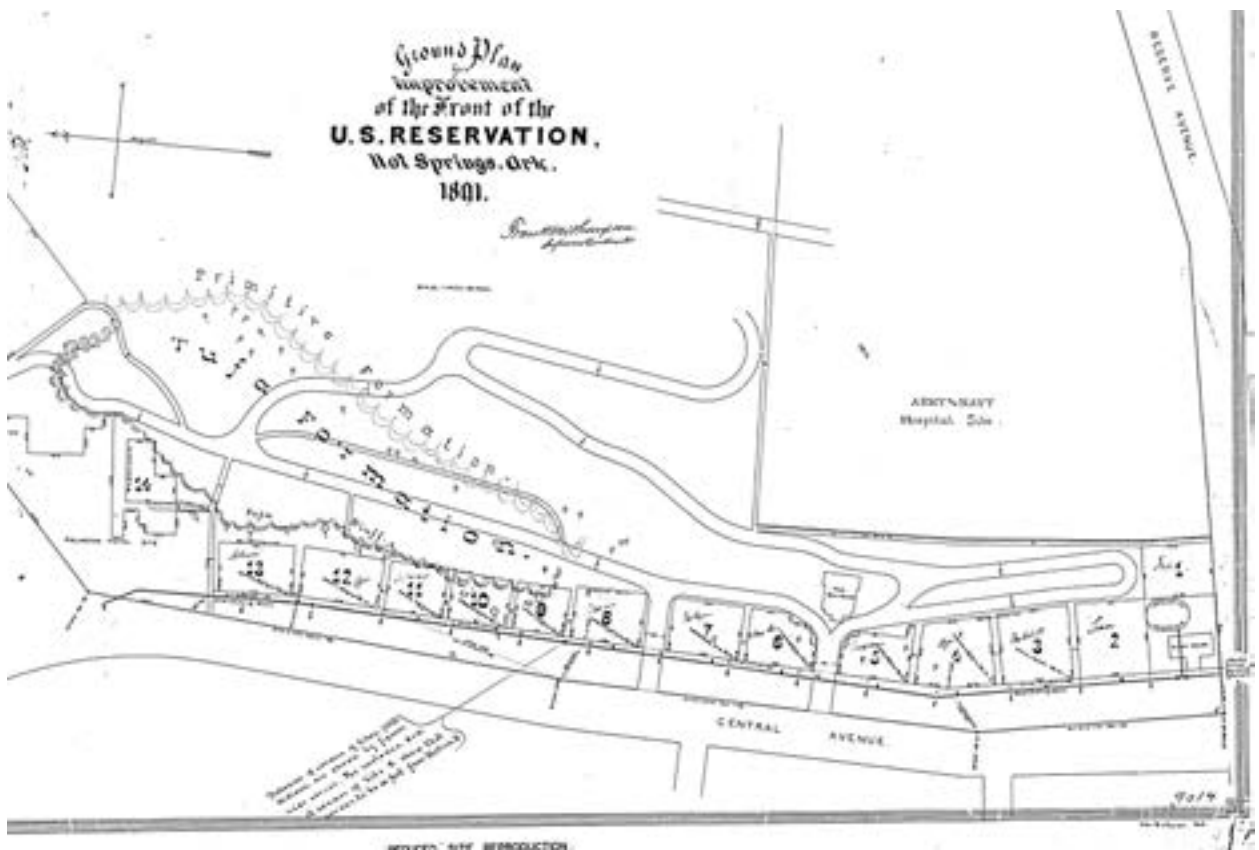


Figure 1.A.4. 1891 Ground Plan for Improvement of the Front of the U.S. Reservation, Hot Springs, Ark. Lot 3 had been the home of the Rammelsberg since 1880 and would be the home of the Buckstaff Bathhouse beginning in 1911-1912 (Source: E-TIC Drawing HOSP-9014).



Figure 1.A.5. Rammelsberg Bathhouse, ca.1909 (Source: Hot Springs National Park Archives).

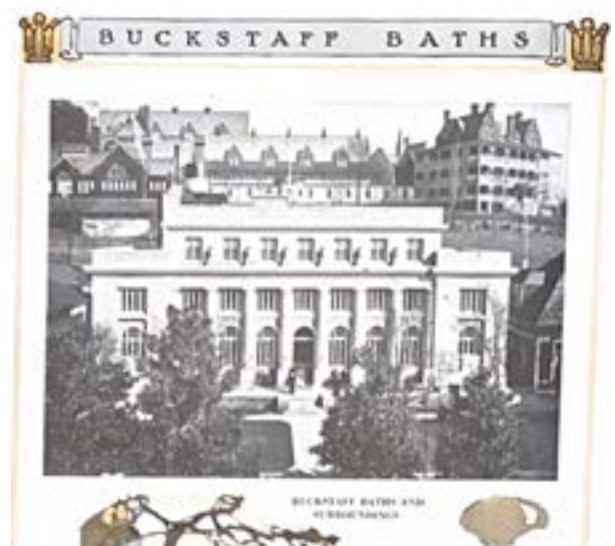


Figure 1.A. 6. Image of the completed "Buckstaff Baths and Surrounds" as presented in the 1912 catalog with its monumental massing and "majestic" pilasters (Source: Hot Springs National Park Archives).



Figure 1.A.7. View of the Hydrotherapeutic Department in the 1912 catalog (Source: Hot Springs National Park Archives).

Hello! Welcome to Hot Springs National Park, the Nation's Most Famous Spa!

We are happy that you are here and are sure that your visit will be most enjoyable and beneficial to you.

SOMETHING NEW

Whirlpool



THE BUCKSTAFF BATHS

One of the outstanding departments around the world, the nation's Hot Springs National Park, and for your comfort, convenience—and most important—your health, is the beautiful Buckstaff Bath. Located on world-renowned Buckstaff Road, these baths are situated in the heart of the Hot Springs National Park. The entire staff of bath and massage personnel is trained to a high degree of efficiency to ensure service that is outstanding. (Eleventh service is provided.)

On the first floor is the men's department—showers, saunas with most clothing lockers, and bath and massage departments.

The second floor is given over entirely to the bath, men for the bath.

In keeping with the elegance of our bath and massage departments, Buckstaff provides a lounge on the third floor for your comfort and relaxation. Here are comfortable lounge chairs and soft, relaxing music with musicians and popular entertainers—just the spot for a pleasant rest, or for visiting with friends. Off to the side of the lounge are two men's and ladies' rest rooms for the convenience of our guests.

THE BUCKSTAFF FEATURES

Whirlpool **THERMAL BATHS**

The Buckstaff is equipped to provide the most complete whirlpool bath—reaching every part of the body. The water is heated to the perfect temperature for the bath, and the water is constantly circulating, so that the water is always fresh and clean.

GOVERNMENT APPROVED RATES.
Equipment, Personnel and Services

In the Buckstaff, the most complete whirlpool bath and massage are administered under the supervision of the National Park Service of the United States Department of the Interior.

All rates also are approved by the Department of the Interior. All charges of the bath and massage are included in our fixed rates. There are no extra or additional charges, and no extra or additional services are included. But our guests are given the best of everything. Our bath and massage rates are as follows:

BATHS		THERMAL BATHS	
1 Bath	\$ 2.00	1 Treatment	\$ 4.00
2 Baths	\$ 4.00	2 Treatments	\$ 8.00
3 Baths	\$ 6.00	3 Treatments	\$ 12.00
4 Baths	\$ 8.00	4 Treatments	\$ 16.00

Bath attendants' and massage specialists' fees are included in the above rates.

WHIRLPOOL BATHS 10:00 TO 11:00 P.M.

BATHING HOURS

Men's (10:00 to 11:00 P.M.) 10:00 to 11:00 P.M.
Women's (10:00 to 11:00 P.M.) 10:00 to 11:00 P.M.

EQUIPMENT FOR THE BATHS AND MASSAGES • Towels and other bath, massage and massage accessories for the convenience of the bath and massage are furnished without charge. The guests need towels only in the bath, which is used by the attendant during the massage. It should be noted that the guests need not be provided by the guest if he desires.

Figure 1.A.8. 1973 Pamphlet advertising the Buckstaff's Whirlpool Thermal Baths (Source: Hot Springs National Park Archives).

1B Chronology of Development

Introduction

This section includes a chronology of the ownership, use, construction, and alterations to the Buckstaff Bathhouse.

inets in the Ladies' Bath Hall to vapor cabinets, and the removal of four dry heat cabinets in the center of the Men's Bath Hall for replacement with pack sinks

Abbreviated Timeline of Development

1911	The Buckstaff Bath House Company is incorporated
1911–1912	The Buckstaff Bath House Company constructs the Buckstaff Bathhouse building; the building opens to the public on February 1, 1912
1913	The Buckstaff Bath House Company installs a large electric sign, reading "BUCKSTAFF BATHS," approximately ten feet above the roof of the building for advertising purposes
1921	The Buckstaff Bath House Company remodels the building; changes include the partitioning of the west part of the second-floor south stair landing for a ladies' mercury treatment room, a second-floor addition to the east end of the north leg of the Ladies' Bath Hall, removal of the staircase from the south men's dressing room to the second floor and remodeling of the room above into a second women's dressing room
1937	The Buckstaff Bath House Company undertakes interior alterations to the building and changes to bathing equipment; changes include moving the men's massage room to the first floor, adding a new room for ladies' massage, the conversion of two dry heat cab-

1946	The Buckstaff Bath House Company adds two attendant locker rooms (one for men on the first floor and one for women at the intermediate stair landing level) to the southeast of the building; the company also added a new southeast entrance into this area for attendants
1951	The Buckstaff Bath House Company removes cooling tanks at the rear of the building due to obsolescence
1967	The Buckstaff Bath House Company installs a dumbwaiter and associated infrastructure
1980	The Buckstaff Bath House Company converts the building to a geothermal heating system using the Hot Springs thermal waters

Chronology of Ownership & Use

Property Ownership

1912–present	The United States Department of the Interior
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Lessees/Concessioners

1912–present	The Buckstaff Bath House Company
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Managers

1911–1947	Gilbert Hogaboom
1947–1960	Lindrel Hogaboom
1960–1986	Orland Koonce Sr.
1986–1989	Orland Koonce Jr.

1989	Orland Koonce Sr. (acting)
1989–2019	Michael Branch
2019–2025	Mandi Hall

Chronology of Construction & Alterations

Design & Construction (1909–1912)

Design (1909–1910)

The proprietors of the Rammelsberg Bathhouse began planning for construction of a new building around the time of their lease renewal in 1909. The company engaged Frank W. Gibb & Company, architects, of Little Rock to design the building.

The earliest surviving project drawings in the park’s collection are dated October 14, 1910, and reflect the building as built, but bear the project name “Rammelsberg Baths.” Ownership of the bathhouse shifted during the design of the building. The Buckstaff Bath House Company was officially incorporated on March 3, 1911, and their initial 20-year lease for the Rammelsberg site began January 1, 1912.

Initial plans were for a men’s only bathhouse like the Rammelsberg, but the DOI rejected these plans and mandated the inclusion of a women’s department and modern ventilation system. In the first half of 1911, the Buckstaff Bath House Company submitted several iterations of plans to the DOI and the Hot Springs Reservation Medical Director. The Medical Director and DOI eventually approved the plans with the women’s department and a modern ventilation system, along with the following changes requested by Manager Gilbert Hogaboom on May 2, 1911:¹

- “To excavate under the entire front portion of building to a depth sufficient for an eight foot cellar. In this basement will be a boiler room, elevator machinery, vacum [sic] cleaning machinery, pumps, and heating and ventilating aparatus [sic].”

- “Raise floor of room marked boiler room, to level of main floor. This room to be the Male Attendants room.”
- “Enlarge Female Attendants Room to size of room for Male Attendants.”
- “Widen both toilets on north side, two feet.”
- “Wainscot with marble, the North and South Cooling Rooms, North and South Dressing Rooms, Ladies Cooling and Dressing Rooms, 2nd floor Lobby, and Lounging Room, instead of plaster as specified.”
- “Combine Hydro-Therapeutic Rooms and enlarge Massage Rooms.”
- “Enlarge Ladies Bath Hall on north end 13 x 20 feet, and on south end make the Vi-brassage Room a part of this bath hall.”
- “Strengthen roofs over Ladies Cooling Room and over Hydro Room so that these roofs can be tiled and used as roof gardens. Cut out marble ceilings in bath halls and toilets and substitute either a metal ceiling or Ivory Wood Fiber Plaster and enamel paint. Either one of the above ceilings are sanitary and safe.”

On June 9, 1911, Hogaboom provided more information about the ventilation system:

The air inlets, two in number, are located in the front wall under the South Cooling Room, and are 3’ 0” x 3’ 0”, making an opening equal to eighteen square feet, and are shown as windows on the basement plan of the Heating & Ventilating plans. Arrangements have been made to install copper screens in these openings, to prevent foreign substances being taken in the air chambers, and air tight doors are to be installed in all openings shown in the fresh air and plenum chambers. These doors are to be furnished by us, and we know of no other reason why the ventilating contractor did not show them on the plans.²

1. Gilbert Hogaboom to Hot Springs Reservation Superintendent, May 2, 1911, Hot Springs National Park Administrative Archives #2, Box 121, Folder 15.

2. Gilbert Hogaboom to Hot Springs Medical Director, June 9, 1911, Hot Springs National Park Administrative Archives #2, Box 121, Folder 15.



Figure 1.B.1. Advertisement for L. Wolff Manufacturing Company featuring Gibb's rendered elevation of the Buckstaff Bathhouse, printed October 1911. Source: "L. Wolff Manufacturing Company," *Engineering Review*, October 1911.

On June 11, 1911, the Medical Director approved the ventilation system.³

A rendered elevation drawing of the building prepared by Gibb is known from a photographic reproduction used in 1911 magazine advertisements by the manufacturer of the building's plumbing fixtures but the drawing is not among those in the park's collection and may not survive.⁴ (**Figure 1. Advertisement for L. Wolff Manufacturing Company featuring Gibb's rendered elevation of the Buckstaff Bathhouse, printed October 1911..B.1**) The elevation drawing was also used, in a retouched form, for postcards that were distributed at the time of the building's opening in early

1912.⁵ (Figure 1.B.2)

Frank W. Gibb, architect

Frank Woster Gibb (1861-1932) was born in Rutland, Vermont, to Isabelle Emerson Gibb and Edward Wooster Gibb. The family moved to Chicago when he was a child, but his father's business was destroyed in the Chicago fire of 1871. When he was 14, the family moved to Little Rock, Arkansas, where his father engaged in the lumber business. Gibb was educated at the Missouri School of Mines in Rolla, Missouri, graduating in 1881. He worked as a mining engineer, assayer, chemist and civil engineer for most of the 1880s, occasionally

3. Hot Springs Medical Director to Gilbert Hogaboom, June 11, 1911, Hot Springs National Park Administrative Archives #2, Box 121, Folder 15.

4. "L. Wolff Manufacturing Company," *The Western Architect*, November 1911; "L. Wolff Manufacturing Company," *Engineering Review*, October 1911.

5. Another known example has a message dated February 1, 1912, the day the Buckstaff Bathhouse opened for business. "Arkansas Postcard 1912 Hot Springs Buckstaff Baths John A Hope Marshall TX," eBay, accessed March 27, 2025, <https://www.ebay.com/itm/176940148157>.

working as a foreman in his father's sawmill.⁶ Gibb married Mary Newton in 1887 and the couple had three children, Fred Newton Gibb, Edward William Gibb, and Cassie Belle Gibb Speed.

Gibb appears to have begun designing houses by 1887 and established a formal practice as an architect in 1890.⁷ Gibb practiced in partnership with Augustus L. Breysacher from 1893 to 1894, with George R. Mann from 1900 to 1903, and with Theodore M. Sanders (as Gibb & Sanders) from 1906 to 1908. Gibb designed numerous houses in Little Rock and public buildings in several cities. He designed several courthouses in Arkansas, including those for Ashley, Bradley, Calhoun, Cleveland, Conway, Crawford (addition to earlier building), Dallas, Franklin (1904, at Ozark), Franklin (1923, at Charleston), Lafayette, Texarkana, Phillips, Searcy (remodeling of earlier building with additions), and Yell Counties. Gibb's courthouses for Cleveland (1911), Dallas (1911), Phillips (1914), Yell (1914), Franklin (1923), and Conway (1929) Counties all featured a neoclassical expression comparable to his design for the Buckstaff Bathhouse, with stronger compositional similarities in the Phillips and Conway buildings. Like other architects of his generation, Gibb designed in a variety of styles over the course of his career.

Construction (1911-1912)

Construction of the new Buckstaff Bathhouse was "well underway" by the beginning of May 1911, although the final revisions to the design of the ventilation system were not approved by the Hot Springs Reservation's Medical Director until June 11.⁸ Shop drawings for office cabinets and lockers are dated May 9, 1911.

In August 1911, the Southwestern Marble and Tile Company of Little Rock received the \$30,000 contract for interior marblework for the new bathhouse. This was the second largest marble contract

let to date in Arkansas, after that for the interior of the Arkansas State Capitol (1900-1915).⁹

In September 1911, the Laser Decorating Company was awarded contracts for decorating the interiors of the Buckstaff Bath House, Maurice Bath House, and Auditorium Theater.¹⁰ Established in 1901, the company employed decorative painters, mural artists, wallpaper-hangers, and other artisans until its closure in 1915.

Also in September 1911, the Merchants & Manufacturers' Association of Milwaukee put on an exhibition of Milwaukee-made products. The Hoffman & Billings Manufacturing Company's exhibit featured bathtub filler fixture that had been custom designed for the Buckstaff Bathhouse.¹¹ The exhibit was featured in at least two trade publications, one of which reported that the Buckstaff "fixtures are remarkable for their immense size and also for their combination of bath-filler and Niedecken mixer to meet the requirements of patients receiving hydrotherapeutic treatments."¹² (**Figure 3. Exhibit of the Hoffman & Billings Manufacturing Company at the Merchants & Manufacturers' Association of Milwaukee exhibition, September 1911. The combination bathtub filler and Niedecken mixer fixture mounted on a stand to the left of the bathtub was custom designed by the company for the Buckstaff Bathhouse.**)

Construction was completed in January 1912. The Buckstaff Baths opened for public inspection on Wednesday, January 31, 1912. From 2 PM to 10 PM, the public was welcomed to tour the facility. The bathhouse opened for business the following day, Thursday, February 1, 1912. A postcard featuring a retouched version of Gibb's rendered elevation drawing and bearing a typewritten message from the company appears to have been part of a media campaign associated with the opening.

Hot Springs, Jan. 31, '12

My Dear Sir: – We have just opened the most luxurious bathing establishment in the world,

6. "Frank W. Gibb," *Rutland Daily Herald*, November 8, 1932; "Frank Wooster Gibb (1861–1932)," *Encyclopedia of Arkansas*, accessed March 27, 2025, <https://encyclopediaofarkansas.net/entries/frank-wooster-gibb-7588/>.
7. "Building Notes," *Daily Arkansas Gazette*, May 26, 1889.
8. "Tearing Down Maurice Bath," *Pine Bluff Daily Graphic*, May 4, 1911.

9. "Secure Large Marble Contract," *The Tradesman*, August 17, 1911.
10. "Big Decorating Contracts," *Sentinel-Record*, September 3, 1911.
11. "Promoting Business By Exhibition," *Metal Worker, Plumber & Steam Fitter*, November 10, 1911.
12. "Handsome Display at Milwaukee," *Domestic Engineering*, October 7, 1911.

having spared neither time nor expense in completing it. We have installed the most up-to-date Hydro-therapeutic Departments in the U. S.

If you or your friends visit the Springs, we will be pleased to have you inspect the Buckstaff.

Yours truly,

BUCKSTAFF BATH HOUSE CO.

P. S. - - Send for Booklet.¹³

In June 1912, the Van Dorn Iron Works Company of Cleveland, Ohio, sued the Buckstaff Bath House Company over a contract amount of \$3,042.50 for iron lockers and furnishings for the dressing rooms. Van Dorn contended that the company had refused payment, while the company contended that Van Dorn had not fulfilled its contractual obligations.¹⁴

Known Contractors & Suppliers

The following contractors are documented to have contributed to the construction of the building.

- Southwestern Marble & Tile Company of Little Rock, interior marble work
- Laser Decorating Company of Hot Springs, interior decoration
- Hot Springs Plumbing & Machine Company of Hot Springs, plumbing contractors
- L. Wolf Manufacturing Company of Chicago, plumbing fixtures
- Hoffman & Billings Manufacturing Company of Milwaukee, Wisconsin, custom-designed bathtub filler
- Christopher & Simpson Architectural Iron & Foundry Company of St. Louis, Missouri, structural ironwork
- Mesker & Bros. Iron Works of St. Louis, Missouri, staircases

- Art Metal Construction Company of Jamestown, New York, lockers and office cabinets
- Van Dorn Iron Works of Cleveland, Ohio, lockers and furnishings for dressing rooms

Chronology of Alterations

Terrace Improvements (ca.1914-1918)

The park retains an undated sheet of architectural drawings for improvements to the front terrace, including creation of the central ramp and the addition of urns. The project was designed by Hot Springs architect Harry C. Schwebke. Clues in Schwebke's title block on the sheet indicate that the project was designed sometime between 1914 and 1918.

No dated photographs between spring 1913 and the early-1920s are currently available to further narrow the potential date of the terrace improvements. Several photographs showing the terrace as built in 1911-1912 include people with clothing that appears to date to the mid-1910s. A photograph of the building printed in the 1912 Buckstaff Baths brochure was reused in the 1915 *Cutter's Guide*, in a ca.1916-1919 brochure, and on postcards postmarked as late as 1918.

Harry C. Schwebke, architect

Harry Clifton Schwebke Sr. (1881-1955) was born in Fort Smith, Arkansas. The 1900 census lists Schwebke as a factory hand, but he was working as an architect in Fort Smith by 1906. In 1907 he was a draftsman in the office of Alonzo Klingensmith. Schwebke moved from Fort Smith to Hot Springs following a fire in the latter city in early 1913. He entered a partnership with Charles M. Bonnell as Bonnell & Schwebke and designed many new buildings over the next few months.¹⁵ Schwebke bought out Bonnell's interest in the firm in April 1914 and remained in practice in Hot Springs into 1917.¹⁶ During this period, Schwebke designed the Superior Bathhouse (1915-1916). By late 1918, Schwebke had relocated to Muscle Shoals, Ala-

13. This example, postmarked February 6, 1912, bears a handwritten address to the cashier of the First National Bank of Cass Lake, Minnesota. "HOT SPRINGS, Arkansas Postcard 'Buckstaff Baths, U.S. Reservation' 1912 Cancel," eBay, accessed March 27, 2025, <https://www.ebay.com/itm/146082948763>.

14. "Hot Springs Boy Brings Suit for \$10,000 Damages," *Hot Springs New Era*, June 22, 1912.

15. "Report Much Building," *Hot Springs New Era*, November 7, 1913.

16. "Partnership Changed," *Hot Springs New Era*, April 24, 1914, sec. 3.

bama, where he was working as a draftsman for Westinghouse, Church, Kerr & Company of New York, which was then building a cyanamide plant for US Nitrate in that city. At the time of the 1920 census, Schwebke was working as a residential architect and living in Miami, Florida, with his family. He was in practice at Claremore, Oklahoma, from 1922 to 1923. In 1923, Schwebke designed the Lamar Bathhouse, immediately south of the Buckstaff. He was back in Miami by 1927, when he relocated to Nokomis, Florida. In 1929, Schwebke moved from Nokomis to Burlington, North Carolina. By 1930, Schwebke had relocated to Norfolk, Virginia, where he was working as an architect at Fort Monroe. He had moved back to Miami by 1949 and retired from practice in the early-1950s.¹⁷

Minor Additions and Maintenance (1913–1920)

In 1913 the Buckstaff Bath House Company installed a large electric sign above the front parapet, in front of the existing rooftop flagpole. Manager Hogaboom reported the following:

The Electric sign cost us \$160.00 erected complete. The frame work is made of 2 x 2 x ¼ angle iron and is solid as the rest of the house. The sign ‘BUCKSTAFF BATHS’ is ten feet above the top of the house and there is plenty of room below for any other words we want to put there. I have a time switch in the office which is set for 7-30 to 10-30 P.M. The sign faces the front and can be read from the Central Theare to the Lyric Theatre, and the bright light can be seen as far north as the Dugan-Stuart bldg. and South as far as Kleins drug store.¹⁸

This electric sign was typical of rooftop commercial signs of the 1910s, with a metal framework supporting letters covered with exposed incandescent electric bulbs. Historic photographs show that the sign included a lower element in the form of a waving American flag composed of electric light bulbs. This flag was in place before 1923 and was removed in 1925.

17. “Harry C. Schwebke Sr.,” *The Miami Herald*, February 5, 1955.

18. Gilbert Hogaboom to Aaron Buckstaff, August 20, 1913, Hot Springs National Park Administrative Archives #2, Box 121, Folder 16.

Also in 1913

- September 11 – Hogaboom notes that they worked all night installing a gas engine to run the pump after the fire¹⁹
- December 29 – Hogaboom writes to Buckstaff – “I am having a painter touch up all rough spots and having some necessary carpenter work done, in the gymnasium room. Have moved the Mercury Rubber to the Gym so we can always have some one near to keep watch on the stuff.”²⁰ This suggests that there was no dedicated space for the mercury rubbing treatment at this time.

1914

- At some point \$1,000 worth of gymnasium apparatus was installed in 1914 according to a February 1, 1915, letter²¹

1919

- August 15 – Gilbert Hogaboom orders lockers from Van Dorn Iron Works Company of Cleveland, Ohio: “Upon careful check I find that I will have to cut down with [sic] of lockers from 20 inches to 18 inches. You may enter our order for the 8 lockers and four dressing rooms with 1 Right Hand End of locker and allow us the difference in material by using the smaller locker.”²² Van Dorn responded August 23rd saying they would cut down the width of the lockers.

Remodeling (1921-ca.1922)

After five years of requesting DOI permission to

19. Gilbert Hogaboom to Aaron Buckstaff, September 11, 1913, Hot Springs National Park Administrative Archives #2, Box 121, Folder 16.

20. Gilbert Hogaboom to Aaron Buckstaff, December 29, 1913, Hot Springs National Park Administrative Archives #2, Box 121, Folder 16.

21. Gilbert Hogaboom to Sir (Unknown), February 1, 1915, Hot Springs National Park Administrative Archives #2, Box 121, Folder 16.

22. Gilbert Hogaboom to Van Dorn Iron Works Company, August 15, 1919, Hot Springs National Park Administrative Archives #2, Box 121, Folder 16.

close the Hydrotherapy Department because of minimal use, the Buckstaff Bath House Company received approval to convert the Hydrotherapy Room and make other substantial changes to the building in 1921. The project was designed by the Little Rock architecture firm of Mann & Stern. First and second floor plans of the proposed changes dated May 27, 1921, survive in the park archive. No subsequent drawings survive at the park, but correspondence documents multiple revisions during the summer of 1921. On June 3, 1921, Mann & Stern submitted plans showing proposed additions and alterations to the Superintendent on behalf of Buckstaff management, providing the following description:

The changes on the first floor consist of the addition of an attendants' room in the Northwest [Northeast] corner of the building, and the conversion of the present attendants' room into a men's massage room.

On the Southwest [Southeast] corner of the building it is proposed to move the stairs back so as to permit the placing of sufficient metal robe lockers in the space now occupied by the stairs to properly take care of the bathers bathrobes, etc. in a sanitary and sightly manner.

It is proposed to remove the stairs from the Southerly men's dressing hall to the second floor as this portion of the building will be devoted to women's department entirely above.

On the second floor it is proposed to do away with the Hydro Therapeutic department and the numerous small connecting rooms, which are not in accordance with the needs of the establishment, and to provide more cooling and dressing room space for the women's department. At present this department is very deficient in this respect and the Hydro Therapeutic Room is used very little and is, in our opinion, not a necessary department for the proper use of the hot waters of the Hot Springs.

The space gained on the second floor by the extension of the building on the Southeast corner, is intended to be used for mercury rooms. The space gained on the Northwest [Northeast] corner, for women's attendants.

It is also proposed to extend the rear line of the building on the second floor to enlarge the

men's gymnasium and to provide a small gymnasium for the women patrons.²³

On June 5, 1921, Hogaboom wrote to the architects, enumerating changes he would like to see:

1st Floor: New Room on rear to be Mens Massage Room. In rear wall put in two windows about 3 x 4 ft. near ceiling. Cut out door near outside wall and place where window is shown in partition wall.

In Attendants room, put in narrow partition (as shown in pencil) Upper portion of wall to be Florentine glass. The door from hall to massage room to give room for wheel chair.

2nd Floor" Rear Room to be Ladies Massage Room. Pilaster to be large enough to carry water supply pipes, will have to extend either Nort or East. Hall to be wider if pilaster can not extend East. Space (X) has to be retained for a place to dry off patrons after the shower. The narrow partition between attendants room and hallway to be Florentine glass upper part, from (A) to (B). The toilet shown in pencil is already installed. The door (C) is now in. Other openings impracticable on account of fixtures installed. / Drain of skylight will have to go though slab East of Large Beam instead of West as shown now.

Will Tile wall between gymnasium stand impacts of 11-lb medicine ball?

Door (3) leading to hairdressing room to remain. New partition wall between dressing room and cooling room to be narrow with upper portion Florentine glass.

General – I want to use all the narrow partition frames and glass that we now have, wherever possible. Also the Marble wainscoting without recutting when possible. Our present roof is reinforced concrete with slope made of cinder concrete. Is that any more expensive than the small beams and lath as you show? If you intend to drain the skylight through the first floor department, is it necessary to raise the gymnasium floors over two inches above other floor level? The cinder concrete can be dug up about as cheap as the 16" floor support can be put in and

23. Mann & Stern to HOSP Superintendent, June 3, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17.

we can get rid of the steps. Will it be necessary to show all light openings and electric opening for fixtures on these plans before Govt approval? Will it be necessary to show some plumbing fixtures before approval? As we should have a small lavatory in each Massage Room and one in the Hairdressing Dept.”²⁴

On August 12, 1921, Mann & Stern responded to the Superintendent, sending drawings in duplicate showing proposed alterations and additions to the Buckstaff, including the changes Hogaboom had requested in June.

First Floor: Adding Men’s Massage Room in Northeast corner of the building. Moving stairs back in southeast corner of the building, and building an extension to accommodate same. Second Floor: In the Southwest part of the building it is intended to remove the Hydrotherapeutic Department and provide additional dressing rooms and a cooling room for the women. The present accommodations in this department being entirely lacking in privacy.

On the second story of the Northeast corner of the extension mentioned above, a womens massage room is contemplated, and adjoining same an addition will be made over mens bath hall to provide a gymnasium for women bathers.

On the Southwest [Southeast] corner the extension to accommodate stairs will be carried up and the space gained (now occupied by the stairs) will be used for a mens mercury rubbing room.

An extension will be built on the North end of the gymnasium to provide more room for male patrons.²⁵

On August 15, 1921, the Superintendent recommended approval of changes to the NPS Director.²⁶ The next day, Hogaboom wrote to the NPS Director stating that he had filed plans for additions and improvements to the Buckstaff with the Superintendent and requested approval. He noted that the

company did not plan to complete all the work in 1921 but would like to at least do part; “The number of women bathers is gradually increasing and the day will soon be here when we will need more room in our Ladies Department and as physicians are beginning to prescribe gymnasium exercise, we feel the need of a Ladies Gymnasium. / By making the additions in the rear first, we can then have the Mens Massage on the first floor and the Mens Mercury Room in the rear and this will then give us the front of the second floor for the women.”²⁷

On August 31, W. B. Parks, Hot Springs Reservation Superintendent, passed on NPS approval of the project, requesting that the work be done gradually “so that there would be no passing of dividends nor assessment of stockholders.”²⁸

The company carried out only some of the planned work. They eliminated the southeast and northeast additions. The planned relocation of the back stair into the proposed southeast addition would have made room for back-to-back mercury treatment rooms for men and women at the second-floor level, the men’s room being accessed from the back stair. Instead, the company partitioned off the west part of the second-floor landing from the stair and converted it into a ladies’ mercury treatment room. The company built the second-floor addition to the east end of the north leg of the Ladies’ Bath Hall, but not the planned extension of the gymnasium intended to wrap around the east side of the Men’s Bath Hall skylight. The company also removed the staircase from the south men’s dressing room to the second floor and remodeled the room above into a second women’s dressing room. This change made all the second floor except for the gymnasium an exclusively female zone. They did not add the proposed additional window in the former hydrotherapy department (205) during its conversion into a women’s cooling room.

Minor Alterations (1922–1937)

On May 8, 1925, Superintendent Joseph Bolten, MD, of Hot Springs National Park ordered manager Hogaboom to remove the electrically lighted flag over the Buckstaff, as “It has been the policy of this

24. Gilbert Hogaboom to Mann & Stern, June 5, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17.

25. Mann & Stern to HOSP Superintendent, August 12, 1921, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration.

26. HOSP Superintendent to NPS Director, August 15, 1921, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration.

27. Gilbert Hogaboom to NPS Director, August 16, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17.

28. Superintendent W.B. Parks to NPS Director, August 31, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17.

Service for sometime to eliminate such decorations or signs on bathhouses along the row.²⁹

On June 24, 1925, Superintendent Bolton wrote to Hogaboom requesting that the Buckstaff hide their cooling tanks, as other bathhouses will be required to do, to make the row more “sightly.” These tanks sat in the notch at the northeast rear corner of the building and were elevated on concrete piers. Bolton requested that Hogaboom submit plans.³⁰ On August 17, 1925, Hogaboom replied that the company could not comply because such an alteration would be cost prohibitive, noting also that

The tanks are located in the rear of the building and can hardly be seen from the driveway through the Army & Navy Hospital grounds and the driveway immediately back of the Buckstaff is restricted to delivery vehicles. The tanks are large and about thirty feet from the ground and if they are masked and become one solid structure, they will appear to be a large building sticking up behind the Buckstaff and will look much more unsightly than the tanks. If we mask the foundation of the tanks, then we shut off two windows on the rear.³¹

Earlier that year, the Buckstaff Bath House Company had engaged architects Mann & Stern again, this time to design two options for building an enclosed porch over the existing front terrace. Such enclosed porches had become common features of bathhouses built over the prior decade. Blueprint drawings of two designs, both in the Colonial Revival style, survive in the park’s archive. One print bears a written approval by Superintendent Bolton dated June 13, 1925. This approval seems to be contradicted by a letter from Bolton dated July 3, where he requested more information, but states “It is the opinion of the Service that the present building, with its long front pillars, was designed for the present sort of portico, and that to enclose the porch will greatly distract from the appearance

of the building. However, with additional information, as requested, the Service will consider the matter thoroughly.”³² The company appears to have abandoned the porch project after receiving this feedback.

In 1931, the awnings were replaced.³³ In 1935, the Buckstaff Bath House Company proposed changes to the ramp and terrace floor. Drawings from the 1910s alteration to the terrace indicates that the original tile floor was left in place at that time. This tile had likely suffered damage over more than 20 years of weathering. A sheet of drawings for the project by Hot Springs civil engineer A. F. Annen is dated August 26, 1935. Annen’s drawing notes that the terrace had an “old tile floor” and showed a plan for a new topping slab over the tile. On August 27, Hogaboom wrote to Superintendent Thomas J. Allen Jr., stating “Our porch is in a bad state of repair and I want to replace it with a new floor and instead of tearing up the old floor, I want to bring the new floor up to the level of the floor of the office. This will necessitate changing the ramp by extending it a few feet toward the sidewalk so that the incline will not be increased.”³⁴ On August 29, Superintendent Allen responded, approving “alterations on your porch floor and ramp as requested. This approval is contingent upon your acceptance of the sample of the terrazzo or tile and the color scheme which you plan to use on the porch floor.”³⁵ The company submitted the following specifications for the project.

Specifications for the repair of the Buckstaff Bath House Porch and Ramp. General: - These specifications and plans are for the placing of a new TERRAZZO floor on the porch of the Buckstaff Bath House and the replacing of the Ramp to the Porch, and any other work in connection there-to. In removing the stone coping

29. Sp Superintendent Joseph Bolton to Gilbert Hogaboom, May 8, 1925, Gilbert Hogaboom to Mann & Stern, June 5, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17.
30. Superintendent Joseph Bolton to Gilbert Hogaboom, June 24, 1925, Gilbert Hogaboom to Mann & Stern, June 5, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17.
31. Gilbert Hogaboom to Superintendent Joseph Bolton, August 17, 1925, Gilbert Hogaboom to Mann & Stern, June 5, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17.

32. Superintendent Joseph Bolton to Gilbert Hogaboom, July 3, 1925, Gilbert Hogaboom to Mann & Stern, June 5, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 17.
33. Aaron Buckstaff to Gilbert Hogaboom, May 12, 1932, Gilbert Hogaboom to Mann & Stern, June 5, 1921, Hot Springs National Park Administrative Archives #2, Box 121, Folder 18.
34. Gilbert Hogaboom to Superintendent Thomas J. Allen, Jr., August 27, 1935, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.
35. Superintendent Thomas J. Allen, Jr., to Gilbert Hogaboom, August 29, 1935, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

and base the contractor must stack them upon the ground as designated by the owner. In order to protect the stone facing on the front of the building the contractor shall place building paper along the stone facing while placing concrete and after the Terrazzo floor has been completed the paper shall be cut even with the top of the finished floor. Terrazzo Floor:- Upon the present tile floor there shall be placed a five inch reinforced concrete floor base of the following mix, One part Portland Cement, Two part clean sharp sand and Four parts washed gravel or crushed stone which will pass a one and one-half inch screen and be retained upon a one-quarter inch screen, it shall be thoroughly mixed with enough water to make it plastic but not to wet, After being placed into the forms it shall be well spaded so as secure a uniform bond upon the reinforcing bars and to eliminate all voids. The top of the concrete base shall be left with a rough surface. 2. Underbed: - The underbed [sic] for Terrazzo, consists of one part Portland Cement and three parts clean sharp sand, mixed with enough water to make it plastic but not to [sic] wet, shall be placed upon the base concrete and brought to within one-half inch and not more than three-quarters of an inch of the top of the finished floor. Base Strips: - Into this underbed while still in a semi-plastic state, install brass strips, having proper bonding features, spaced approximately three feet centers each way. Terrazzo: - The Terrazzo topping [sic] to be not less than one-half inch nor more than three-fourths of an inch in thickness and shall be granulated marble of color and size to be selected by the owner. The topping shall be uniform in composition and the same marble granule that appears on the surface shall be used for the entire thickness. The mixture shall be one part Portland Cement and two parts marble granule, to be mixed dry and then water afterwards added to make the mix plastic but not to [sic] wet. Installation: - The mix shall then be placed in the space formed by the brass strips and rolled into a compact mass by means of a heavy roller until all the superfluous cement and water are extracted, after which it must be hand troweled to an even surface, disclosing the lines of the brass strips on a level with the Terrazzo filling. The finish surface to show the maximum of marble granule obtainable. It is advisable to keep the floor moist in the course of the various operations. 3. Surfacing: - When in the judgment of the Terraz-

zo contractor, the floor has set sufficiently hard, they shall be machine rubbed, using coarse carborundum grit stones for the initial rubbing after which a light grouting of pure cement shall be applied to the surface, filling all voids, and allowing to remain until the time for final cleaning. Cleaning: - Floors shall have the grouting coat removed by machine using a fine carborundum grit. This cleaning or fine stoning shall not take place sooner than 72 hours after the floor has been grouted, after which It must be washed thoroughly and left in condition acceptable to the Engineer in charge. After the Terrazzo floor has been completed the stone coping and base shall be replace [sic] in the original position. Ramp: - The floor of the present Ramp shall be removed and the end post and side walls shall be moved 3 feet and 6 inches towards the street, and reset the posts and side walls, the space left a the porch end of the ramp shall be built with concrete of a one, two, four mixture, same mix as in the base of the porch floor, after which it shall be given a plaster finish to match the present side walls. The space between the walls shall be filled with suitable material and wall tamped and then a four inch concrete slab, same mix as used in the base of the porch floor, upon which shall be placed a top coating of not less than one-half inch thick composed of one part Portland Cement and two parts clean sharp sand, the top shall be left with a wood float finish. Side walk: - Sixty-two square feet of sidewalks shall be removed and rebuilt at the end of the ramp, to be built in the same as the ramp floor except smooth finish. 4. All grades and elevations are to be as shown on the plans or as given by the Engineer in charge.³⁶

The project was not carried out as planned. The existing surface of the terrace may date from this project. The floor consists of exposed-aggregate concrete in a checkerboard pattern of two alternating colors, one white and the other a variegated mix of war-colored aggregate. This surface appears in postcards dating from the 1950s.

Remodeling (1937)

On June 24, 1937, Hogaboom submitted “plans and specifications for addition and improvements

36. Specifications for the repair of the Buckstaff Bath House Porch and Ramp, 1935, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

to the Buckstaff Baths, subject to your approval” to the NPS Director.

The proposed work will add no new features to the Buckstaff but will enlarge certain Departments which will mean that better service can be given. By removal of the Mens Massage Room from the 2nd to the 1st floor will put all service for male patrons on the first floor. By adding a new room for ladies massage, we will have more cooling room and more lockers for women patrons. At present, we often have women waiting for a locker in order to undress when some attendant has a tub vacant and could take care of a patron if more lockers were available. The new door on the South side will give us a more convenient entrance for male employees and for delivery of supplies. We want to begin work the first week of September unless labor conditions are such that any construction will be impracticable.³⁷

On July 29, Superintendent D. S. Libbey approved changes requested by Hogaboom that seem unrelated to the June 24 letter: 1. “To convert the two dry heat cabinets in the Ladies Bath Hall to vapor cabinets,” and 2. “To take out four dry heat cabinets in the center of the Mens Bath Hall and install to Pack Sinks.”³⁸ The letter about these changes from Hogaboom to the Superintendent notes,

Dry Heat cabinets are never used in either department. By converting the two in the Ladies Dept. there will be no change in appearance of the room. It will give us four vapors instead of two or 1 vapor to each two tubs.

In the Mens Dept, hot packs have to be made in a bath tub and during the rush period of the day, the tubs are needed for baths. As the Dry Heat cabinets are not needed we can install the two pack sinks in the same space which will be convenient to all the tubs and will improve our service.³⁹

On August 4, Superintendent Libbey wrote that the July 1 plans submitted by Hogaboom for changes

to the bathhouse had been approved. The dry heat cabinets appear to have been removed from the Men’s Bath Hall shortly after.

Minor Alterations (1938–1945)

In a March 22, 1938 letter to Superintendent Libbey, Hogaboom reported that the company would have to install new elevator machinery in May.⁴⁰

On July 10, 1939, the Superintendent approved replacement of one vapor cabinet with a sitz bath in the ladies’ department.⁴¹ Hogaboom’s request for this approval noted that “the demand for sitz baths is constantly increasing and the use of vapors is decreasing.”⁴²

In 1940, the company proposed several alterations to the Men’s Bath Hall, including the addition of vestibules at both entrances. On August 21, Hogaboom wrote to the Superintendent to “Request your approval of the following improvements in the Buckstaff Baths: - (1) Erect a vestibule North Side of Bath Hall. (2) Erect a vestibule South Side of bath hall. (3) Remove three bath tubs. (4) Change location of present Sitz tubs and install 2 additional Sitz Tubs. (5) Increase lounge space in bath hall as Sitz tub stalls are much smaller than bath tub stalls.”⁴³ An August 24 letter provides more details:

There is transmitted herewith original tracing of Plan No. NP-HS 8017, submitted by the Buckstaff Bath House Company for the erection of vestibules on the north side and the south side of the men’s bath hall. Under the present situation, a strong draft flows from the warm bath

37. Gilbert Hogaboom to NPS Director, June 24, 1937, Hot Springs National Park Administrative Archives #2, Box 121, Folder 19.

38. Superintendent Libbey to Gilbert Hogaboom, July 29, 1937, Hot Springs National Park Administrative Archives #2, Box 121, Box 19.

39. Superintendent Libbey to Gilbert Hogaboom, July 29, 1937, Hot Springs National Park Administrative Archives #2, Box 121, Box 19.

40. Gilbert Hogaboom to Superintendent Libbey, March 22, 1938, Hot Springs National Park Administrative Archives #2, Box 121, Folder 19.

41. HOSP Superintendent to Gilbert Hogaboom, July 10, 1939, Hot Springs National Park Administrative Archives #1, C3823, Concession Administration, 1930-1953.

42. Gilbert Hogaboom to HOSP Superintendent, July 10, 1939, Hot Springs National Park Administrative Archives #1, C3823, Concession Administration, 1930-1953.

43. Gilbert Hogaboom to HOSP Superintendent, August 21, 1940, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

hall to the cooler dressing and cooling rooms. The purpose of the vestibules is to interrupt the convention currents.⁴⁴

On September 16, the Superintendent approved the “plan for the construction of vestibules in the men’s bath hall.”⁴⁵

In 1941, the company engaged Irven P. McDaniel, the park’s architect, to design alterations to the toilet rooms. A sheet dated June 2, 1941, was submitted to the superintendent on June 6. When submitting the plans, Manager Hogaboom described the proposed project as follows:

We are submitting herewith plans in quadruplicate showing proposed installation of two toilets and one lavatory on the 2nd floor of the Buckstaff. These fixtures to be installed in the room now used as a Mercury Room. It adjoins the Ladies Bath Hall on the South end.

A few years ago we enlarged our Ladies Department by removing the Ladies Massage Department to a new room at the rear of the 2nd floor and by removing the Men’s Massage room to the 1st floor and adding a Cooling Room and Locker Room to the Ladies Department. Our Ladies Department occupies the entire 2nd Floor with the exception of the Gymnasium and Mercury Room. There are toilets and a Lavatory on the North end of the Ladies bath hall but the patrons who use the South locker and cooling Rooms have to go through the entire length of the Bath Hall to reach the toilets. By the installation of these additional facilities, it will be much more convenient to those patrons using the South end of the Ladies Department.⁴⁶

On June 23, Superintendent P. P. Patraw conditionally approved the plans for “proposed installation of two toilets and one lavatory on the second floor in a room adjoining the ladies’ bath hall,” noting, “I shall be glad to approve the plan provided it is un-

derstood that the type of construction will at least be equal to the construction standards existing in the house; for instance, the substitution of marble partitions for proposed wood partitions between toilet stalls.”⁴⁷ The Superintendent approved the project on July 6. The project, including modifications to the south window, appears to have been built largely as drawn by McDaniel. The original gymnasium door from the rear stair was still extant on the 1941 drawings and the new partition preserved access from the stair to this door.

On June 20, 1941, Hogaboom wrote to the Superintendent, “Attached hereto are four sets of a plan for erecting a counter in the Lobby of the Buckstaff. Your approval is requested.” These drawings do not appear to survive and it is unclear whether this project was carried out.⁴⁸

Southeast Addition (1946–ca.1947)

In the fall of 1946, the Buckstaff Bath House Company proposed building an addition to the southeast corner of the building to create dedicated locker rooms for the bath attendants. On October 18, 1946, Gilbert Hogaboom, now President of the Buckstaff Bath House Company, wrote to the Superintendent, sending plans and specifications for a new addition.

The addition will not change the exterior lines of the building nor will it require additional land area other than the space now allotted by our contract.

At present the Attendants quarters are inadequate and we can not allot more space to them unless we make this addition which will provide a room for female attendants and a room for male attendants. At present they [sic] attendants use the toilets provided for guests and their clothes lockers are in rooms used by other employees.⁴⁹

44. Gilbert Hogaboom to HOSP Superintendent, August 24, 1940, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

45. HOSP Superintendent to Gilbert Hogaboom, September 16, 1940, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

46. Gilbert Hogaboom to HOSP Superintendent, June 6, 1941, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

47. Superintendent P. P. Patraw to Gilbert Hogaboom, June 23, 1941, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

48. Gilbert Hogaboom to HOSP Superintendent, June 20, 1941, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

49. Gilbert Hogaboom to HOSP Superintendent, October 18, 1946, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

The Superintendent approved the plans. On November 8, Hogaboom sent an addition request.

I desire to ask your approval of some changes in the plans and specifications recently approved by you and the regional office. These plans and specifications were for an addition to the bath house and to provide private dressing rooms for male and female employees. (1) Change from Marble Partitions to Wood Partitions for toilets. (2) Use both metal windows now in use to new wall. (3) Install a small window over each toilet. (4) Use present stone window sills instead of making concrete sills. (5) Use brick instead of tile in walls as entire house is built with bricks. (6) Install Five Ply Roof instead of Four Ply Roof. (7) Back (East) Wall not be stucco as no other part of building is stucco. (8) Doors leading to each room to have glass panel. (9) Extend excavation two feet beyond building line. (10) Build concrete gutter to conform to present gutter. The architect thought that we would want marble used in toilet partitions because we use it in the toilets for the public. This will be unnecessary expense. The other changes will improve the whole job.⁵⁰

On December 17, a memorandum from Superintendent Thomas Boles to the Regional Director of Region 3 included the following:

Reference is made to your memorandum of December 3, with which you transmitted copy of a memorandum from the Director's Office dated November 15, concerning exceptions taken in connection with approved plan covering a small addition to the Buckstaff Bathhouse, this park.

As to footings shown, it should be borne in mind that the necessary excavations must be made in a solid rock ledge for a depth of two feet. This will be well below the frost level here at Hot Springs National Park.

The door to the locker room will be hinged on the opposite side, as suggested, so as to interfere

less with the toilet stall doors.⁵¹

The addition appears to have been built in late 1946 or 1947. It consists of two attendant locker rooms, one for men's attendants on the first floor (105) and one for women's attendants at the level of the intermediate stair landing (209). These rooms have sometimes been referred to as mercury treatment rooms or mercury rubbing rooms. However, mercury rubbing had largely been discontinued in Hot Springs in the mid-1930s in favor of mercury injections and new antibiotic treatments largely replaced mercury treatments at the end of World War II.⁵² Because period documentation describes these rooms as private dressing rooms for male and female employees, it seems unlikely that they were used for mercury treatment. The existing south side entrance likely dates from this remodeling. Drawings for the 1921-1922 remodeling show the door opening as a window.

Minor Alterations (1947–1970)

In 1951, the cooling tower was removed from the piers at the northeast corner of the building. On November 17, Smith Bros. Construction & Material Company wrote to Lindrel Hogaboom that the company will "furnish all tools, labor, and equipment necessary to remove cooling structure from the rear of the Buckstaff Bath House [...] This is meant to include removal of the engine in your basement as well."⁵³

During the winter of 1954-1955, the company modified the ladies' department. A November 5, 1954, letter from L. N. Hogaboom to the Superintendent notes that "the Buckstaff Bath House Company will proceed with plans for the enlargement of the ladies department on or about November 8, 1954. Permission for such improvement was

50. Gilbert Hogaboom to HOSP Superintendent, November 8, 1946, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

51. Superintendent Thomas Boles to the Regional Director, Region 3, December 17, 1946, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration 1930-1953.
52. Carol A. Petravage, *Historic Furnishings Report: Hot Springs Fordyce Bathhouse* (Harpers Ferry, WV: Harpers Ferry Center, 1987), 69–70.
53. Smith Bros. Construction & Material Company to Lindrel Hogaboom, November 17, 1951, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1930-1953.

granted by your letter of October 21, 1953.”⁵⁴ On February 11, 1955, Superintendent Libbey wrote to Regional Director Three, reporting that

all the improvements contemplated in our letter to Mr. Lindrel Hogaboom, Manager Buckstaff Bathhouse in connection with new contract have been completed. This letter dated April 24, 1951.

Also, that all improvements contemplated in letter from Mr. Hogaboom in his letter dated October 21, 1953 and forwarded with our memorandum to you under date of October 21, 1953, have also been completed.

With the completion of the two projects all 29 tubs covered by the new contract are now installed. This house for some time was paying the tubbage fee for 29 tubs although only 27 tubs were installed. The two tubs bringing the installation in tubbage to the approved number of 29 tubs have been placed in their women’s department.

In making the above mentioned changes the Buckstaff Bathhouse now presents an excellent appearance and has arranged to utilize a lot of heretofore unused space.”⁵⁵

Although available documentation only clearly mentions the addition of two tubs, physical evidence on the second floor suggests that other alterations may have been made at this time. Furred walls and tile wainscoting that likely date from the 1950s is in place at the south alcove and north wall of the women’s bath hall and within the women’s pack room (G15). A raised platform in room 214 likely dates from this project. The company reconfigured the original gymnasium (210/G15) sometime between 1941 and 1962, probably around this time. It partitioned the gymnasium into two rooms, created a large opening in the west wall to connect it to the women’s bath hall, and infilled the original door to the rear stair. The company may also have installed partitions to create six massage rooms along the east wall of rooms 210 and 213 around this time; these partitions were in place by 1962.

At an unknown date between 1921 and 1962, the company demolished an emergency egress bridge from the rear wall of the original gymnasium (210/G15), infilled the lower part of the door opening, and installed a window in the upper part of the door opening.

In 1962, the company installed whirlpool equipment on all tubs. The Buckstaff began offering whirlpool baths on January 1, 1963.⁵⁶

In the summer of 1965, manager Koonce had the exterior of the building sandblasted.⁵⁷

In 1967, the company added a dumbwaiter through the two bath halls and converted a partially excavated storage room in the basement into a laundry room. Correspondence indicates that the Buckstaff’s laundry was previously handled by an outside laundry service. On April 26, manager Koonce wrote to the Superintendent requesting “permission to install laundry facilities to take care of our own immediate laundry needs – washers and driers only, no mangle is contemplated at this time.” He reported, “No major construction changes will be made in the foundation and a dumb-waiter is to be installed from basement to second floor with three landings which include the basement. Walls of the dumb-waiter wall will be of material approved by the National Fire Underwriters Code of safety and all electrical plumbing installations will compile [sic] with standards now in effect.”⁵⁸

Work in the winter of 1968-1969 included installation of modern light fixtures on the front of the building, repairing ladies’ massage room plaster, and installation of acoustic ceiling tiles and light fixtures in the ladies’ massage room. On December 17, 1968, Koonce, wrote to Superintendent Bernard T. Campbell that

Modern lighting facilities (mercury-vapor) fixtures have been ordered [for the front of the building at night] and should be delivered any day now – we plan to have this installation completed before the 1st of the year. We are also in

54. L. N. Hogaboom to HOSP Superintendent, November 5, 1954, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1954-1967.

55. Superintendent Libbey to Regional Director, Region 3, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1955-1975.

56. Hot Springs National Park Administrative Archives #1, C3823 Concession Administration 1954-1967.

57. Hot Springs National Park Administrative Archives #1, C3823 Concession Administration 1954-1967.

58. Orland Koonce to HOSP Superintendent, April 26, 1967, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration 1954-1967.

the process of cleaning the floors of our entire building, repainting all areas [sic] in need of this service, re-plastering the ladies massage sections, leaving an air space between old and new plaster as an insulation to keep walls from sweating and damaging paint. Installing acoustic [sic] type modern ceiling and light fixtures in ladies massage. We are also scraping, washing, and re-painting the outer surface of all bath tubs and sitz tubs.”⁵⁹

Sometime before 1972 the company installed a suspended acoustical tile ceiling above the office with a new bulkhead at the lobby face of the desk opening. This work may have been part of improvements in the winter of 1968-1969 and may also have included replacement of the light fixtures in the lobby and office.

Maintenance (1971-2025)

In 1977 the company replaced the cloth awnings using same brackets and similar material and color scheme.⁶⁰

A May 27, 1978 letter from Koonce to the Superintendent noted that the work of the Western Waterproofing Company “will remove all chipped materials, repair surface and regrout all masonry, repair sun decks.[...] This will in no way change the appearance from its historical value, but it is our policy of keeping a nice appearance of our property to the public.”⁶¹

In 1980, the company partially converted the building’s systems to geothermal heat.⁶² A full conversion was completed in 1982. On February 23, 1982, Koonce wrote to Superintendent Giddings

about completing the installation of the geothermal system which would “require the use of seventeen (17) different size (dimension) TRANE water radiators equipped with air control valves.”⁶³

In 1997, the NPS completed electrical systems improvements designed by Rigsby Engineering of North Little Rock.

Sometime around 2000, the company built a series of partial-height partitions within the third-floor lounge (300) to create smaller cubicles. To date, no clear documentation of this work is available. It appears to postdate 1997.

In 2004, EMG of Hunt Valley, Maryland, prepared a real property condition assessment of the Buckstaff. This report identified that most of the building’s components were in fair condition but that the roof, stairs, and porch window grates were in poor condition. The report identified the need for repairs to address water infiltration.

In 2008, the NPS completed a condition assessment of the Buckstaff Bathhouse in preparation for a new concession contract. This led to the 2012 exterior masonry project.⁶⁴

In 2009, the company completed interior and exterior repairs and alterations. At the basement laundry room, a new 250 gallon hot water storage tank replaced an older 400 gallon tank that had cracked. At the Women’s Bath Hall’s north steam cabinets, the company installed stainless steel liners to cover the four-inch square wall tile that had become coated with mineral deposits. The company also cleaned and repainted white components of the façade.

In 2009-2010, the NPS replaced the existing built-up roof with a new membrane roof. The project also included replacement of the skylight over the Men’s Bath Hall with a new translucent polycarbonate skylight system. Project construction documents call for the contractor to salvage the thick wire glass panels of the historic laylight below the

59. Orland Koonce to Superintendent Bernard T. Campbell, December 17, 1968, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1968-1977.

60. Superintendent Bernard Goodman to Orland Koonce, April 18, 1977, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1968-1977.

61. Orland Koonce to HOSP Superintendent, May 27, 1978, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1978-1980.

62. Superintendent Richard H. Maeder to Regional Director, Southwest Region, July 16, 1980, Hot Springs National Park Administrative Archives #1, C3823 Concession Administration, 1978-1980.

63. Orland Koonce to HOSP Superintendent Giddings, February 23, 1982, Hot Springs National Park Administrative Archives #1, C3283 1981-1983 Concession Administration.

64. PMIS 152716

skylight, to store them, and to reinstall them after installation of the new skylight.⁶⁵

Between June 2012 and October 2013, the NPS re-pointed and waterproofed all the red brick walls on the side and rear walls of the Buckstaff Bathhouse in an attempt to address moisture infiltration issues causing damage at the interior. The project included limited areas of brick repair or replacement and repair and repainting of all windows and doors in these walls. Interior work during the same period included cleaning, repairing, and re-grouting all tile floors; rebuilding and re-tiling the sitz tub drain in the Women's Bath Hall, replacing deteriorated ceiling tiles in the men's bathroom, repairing a deteriorated wall in one of the women's massage rooms, replacing all broken glass, and repair or replacements of window screens and screen doors.⁶⁶

In 2014, the company replaced a drain line below sitz tubs and vapor cabinets in the Women's Bath Hall that was causing leaks at the first floor. Project documentation indicates that work was done within a chase at the second floor and by removal of plaster above the tile wainscot in room 107. The tile was not disturbed during the project. Older staining from this leak remains visible on the marble facing of the west wall of the Men's Bath Hall.⁶⁷

Also in 2014, the company installed a new six-inch PVC drain line for the nine tubs in the Women's Bath Hall. Three other tubs were already served by a smaller PVC drain line installed several years before to bypass clogged pipes. The new pipe bypassed clogged iron drain lines within the wall and avoided disturbance of the marble facing in the Men's Bath Hall below. The new pipe was run along the lower part of the wall, was designed for easy clean-out or replacement, and was covered with a metal shroud. Work was completed by a local contractor during the slower winter months, with supervision by NPS maintenance personnel and bathhouse management.⁶⁸

In 2017, the company completed several maintenance projects at the first floor. Work was performed by local contractors and the Buckstaff remained in operation while the work was carried out. This included repainting the lobby (room

100),⁶⁹ replacing an existing chandelier in the lobby with an antique pendant salvaged from another building,⁷⁰ replacement of non-historic signs at front desk and doors with new signs of sympathetic design, repainting the interior of the elevator to match the lobby, repainting the office (room 101) and adding new cabinets and fluorescent lighting,⁷¹ cleaning all marble and tile surfaces on the first floor (including inspection, pre-conditioner, buffing, steam cleaning, and extracting), and repainting the Men's Bath Hall and Ladies' Bath Hall to match the colors used in the lobby. The lockers and metal stalls of the dressing rooms were not to be repainted. The elevator cab carpet was to be removed, and the underlying tile floor assessed. If the floor was in poor condition, it was to be recarpeted.⁷² An undated maintenance plan for the Buckstaff identifies that interior window frames were in need of paint on all floors as of 2017 and that all light fixtures were to be re-lamped with LEDs as necessary.⁷³

In 2018, the Buckstaff's maintenance staff completed exterior masonry work to repair chips, holes, scuffs, and other minor damage to the exterior concrete wall surfaces on the front porch and entrance ramp. Holes in horizontal surfaces were patched

69. "Painting Lobby - Apply two coats of latex flat to ceiling (Sherwin-Williams SW7029 Agreeable Gray). Apply two coats of latex egg shell to all walls (same color as ceiling). Apply two coats of latex semi-gloss to all plaster trim (Sherwin-Williams SW7004 Snow-bound). Touch up stain and apply one coat of clear varnish to windows, doors, and frames. Stain, seal, and varnish display cabinet on north wall. Replace pewter door pulls (not historic or original to building) on bath hall doors with new brass pulls. Install brass kick panels on both doors as well."

70. Project documentation does not indicate where this pendant came from.

71. "Paint suspended tile ceiling latex black (Sherwin-Williams SW6991 Black Magic). Apply two coats of latex egg shell to all walls (Sherwin-Williams SW7029 Agreeable Gray). Sand and apply two coats of Sherwin-Williams Sher-Cryl enamel to metal counter and mailboxes (Sherwin-Williams SW6991 Black Magic). Remove plastic numbers and apply new brass number plates to all mailboxes to add period detail. Construct cabinets in office area for manager's desk and additional storage. Original marble and metal cabinetry will not be altered. Style of new cabinets will keep with historic period of bathhouse construction. Cabinetry will allow for a cleaner, more work-friendly environment. Replace recessed fluorescent light fixtures in suspended tile ceiling with 12 recessed LED can fixtures (Elite EZ61CAT with LEDRT56700930 FL80 trims and RT56TRIMBLK trim rings)."

72. PEPC Project ID 71736

73. CC-HOSP002-12, Exhibit E: Maintenance Plan.

65. PMIS 142709

66. PMIS 152716

67. PEPC Project ID 50452

68. PEPC Project ID 53822

with Quikrete and those on vertical surfaces were repaired with a commercial vinyl concrete patch. Project documentation reports that previous Quikrete patches on walls had fallen off after drying. Patches were painted to match the surrounding surfaces.⁷⁴ Soon after, the company replaced the dumbwaiter and associated equipment within the existing 1960s shaft.⁷⁵

In 2020, the NPS replaced heating coils due to ongoing leaks and thermal water buildup.⁷⁶

In 2021, the company and the NPS agreed to a maintenance plan. The company would remove trash and debris from the roof and grounds and clean the gutters, downspouts, and roof for proper drainage monthly. Interior work included replacement of rusted light plates on each floor, repair and painting of interior window frames in conjunction with an NPS project of repointing around the windows, replacing all broken window panes, repairing or replacing a damaged third-floor screen door, repairing and painting doors on all floors, and continuing ongoing mildew and mineral buildup removal from corners of treatment and tub rooms, restrooms, lockers, and plumbing fixtures. In the Men's Bath Hall, damaged or loose plaster was removed from the southeast and southwest panels of the ceiling and the underlying concrete was painted. The company was to send the NPS a list of rooms and paint colors to be painted in 2021 and to provide weekly copies of completed cleaning schedules.⁷⁷

In 2022, STRATA Architecture and Quinn Evans completed an assessment of the building's roof with treatment recommendations for a roof replacement.⁷⁸ The assessment found that the existing TPO membrane roofing and associated flashing, sealant, and insulation were past their expected service life, identified rusted flagpole brackets on the front parapet as a concern, noted that many terra cotta coping components were displaced or had open joints, noted that gutters and downspouts need to be replaced, and documented plaster damage in rooms 107 and 300 associated

with ongoing roof leaks.⁷⁹ The NPS removed loose ceiling plaster in room 300.⁸⁰ The roof has not been replaced since this assessment and the water damage in rooms 107 and 300 has gotten worse.

In 2022, the NPS installed sump pumps in the basement to address ongoing issues with rainwater flooding from the two exterior basement areas.⁸¹

In 2023, the NPS completed repointing at the yellow brick portions of the exterior walls. The project included repointing, sealing, and caulking around windows and other openings. The project was intended to address ongoing water infiltration issues causing damage to the building interior.⁸² Also in 2023, the NPS completed work on the front entrance ramp and walkways.⁸³ Work included repair and selective replacement of existing surfaces.⁸⁴ During this project, the NPS also completed emergency repairs to the south wing wall of the front entrance ramp.⁸⁵

In 2024, the NPS repaired and repainted the interior faces of wood windows in the building.⁸⁶ Also in 2024, the team of Kenneth Hahn Architects and Alvine Engineering designed a new HVAC system for the Buckstaff. This system was designed to replace the existing 1980s system, to improve efficiency, and to add cooling for the first time in the building's history.⁸⁷ The system is planned for installation in 2026.

74. PEPC Project ID 81662

75. PEPC Project ID 83822

76. PMIS 298551

77. PEPC Project ID 108665

78. Condition Assessment and Treatment Plan for Buckstaff Bathhouse, 100% draft, October 2022. PMIS Number 318915, PEPC Number 115448.

79. PEPC Project ID 111613

80. PEPC Project ID 115448

81. PMIS 318192

82. PMIS 318071

83. PEPC Number 108436.

84. PMIS 325223

85. Emergency Repair of Wing Wall of Entrance Ramp to Buckstaff Bathhouse, PEPC Number 117867.

86. PMIS 338379

87. PMIS 177425



Figure 1.B.2. Unused postcard with retouched and recolored version of Gibb's rendered elevation drawing of the Buckstaff Bathhouse. These cards appear to have been distributed at the time the building opened in early 1912. Source: "POSTCARD 1910. BUCKSTAFF BATHS. HOT SPRINGS, ARK. Z122," eBay, accessed March 27, 2025, <https://www.ebay.com/itm/296703842538>.



HOFFMANN & BILLINGS' DISPLAY AT MILWAUKEE EXHIBITION

Figure 1.B.3. Exhibit of the Hoffman & Billings Manufacturing Company at the Merchants & Manufactures' Association of Milwaukee exhibition, September 1911. The combination bathtub filler and Niedecken mixer fixture mounted on a stand to the left of the bathtub was custom designed by the company for the Buckstaff Bathhouse. Source: "Promoting Business By Exhibition," *Metal Worker, Plumber & Steam Fitter*, November 10, 1911.



Figure 1.B.4. West façade of the Buckstaff Bathhouse, facing east from the roof of a building across the street, 1912. Source: 1912 booklet.

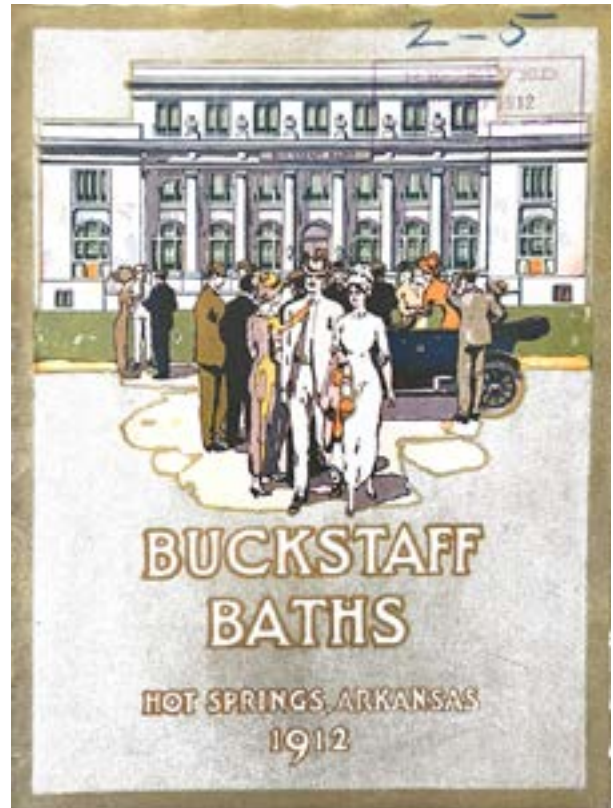


Figure 1.B.5. Cover of 1912 advertising booklet. Source: HOSP.



Figure 1.B.6. View of Buckstaff Bathhouse from the sidewalk, facing northeast, ca.1912. This photograph was taken before the installation of the rooftop sign in 1913. Source: displayed in building.



Figure 1.B.7. West façade of the Buckstaff Bathhouse, facing east from the sidewalk, ca.1913-1923. This was taken after the addition of the electric rooftop sign in 1913 and before the construction of the present Lamar Bathhouse in 1923. Source: displayed in building.



Figure 1.B.8. Exterior of Buckstaff Bathhouse, facing north-east from sidewalk, June 1984. Source: HABS.



Figure 1.B.9. Lobby (100), facing northeast in 1912 and 2025. Source: 1912 booklet.



Figure 1.B.10. Men's bath hall (106), facing east in 1912 and 2025. Source: 1912 booklet.



Figure 1.B.11. Men's bath hall (106), facing northeast in 1912 and 2025. Source: 1912 booklet.



Figure 1.B.12. North men's dressing room, facing east about 1916 and in 2025. Source: 1916 booklet.



Figure 1.B.13. Hydrotherapeutic Department, facing northwest in 1912 and 2025. Source: 1912 booklet.



Figure 1.B.14. Hydrotherapeutic Department, facing southeast in 1912 and 2025. Source 1912: booklet.



Figure 1.B.15. North women's dressing room in 1912 and 2025. Source 1912: booklet.



Figure 1.B.16 Women's bath hall, facing south in 1912 and 2025. Source 1912: booklet.



Figure 1.B.17 Women's bath hall, facing northeast in 1912 and 2025. Source 1912: booklet.



Figure 1.B.18 Third floor lounging room, facing north in 1912 and 2025. Source 1912: booklet.



Figure 1.B.19 Gymnasium, facing southwest about 1916 and in 2025. Source 1916: booklet.



Figure 1.B.20 North third floor room in about 1916 and 2025. Source 1916: booklet.

1C Character Defining Features

Introduction

Per the project scope of work, this section lists the characteristics of interior and exterior features that contribute to the physical character, integrity, and historic significance of the property.

Character-Defining Features

Location	Feature	Contribution Status	Notes
Site	Magnolia Promenade	C	
Site	Low holly hedge	C	
Site	Turf grass front yard	C	
Site	Stone retaining wall	C	
Site	Exposed-aggregate concrete walkways	C	
Exterior	Overall building massing	C	
Exterior	Yellowish tan brick and stone trim at front wing	C	
Exterior	Terrace, urns, ramp, and steps	C	
Exterior	Columns, cornice, and urns	C	
Exterior	Red brick at rear wing	C	
Exterior	Wood casement and fixed windows at façade	C	
Exterior	Metal sash windows at side and rear walls	C	
Exterior	Steel sash windows at rear walls	C	
Exterior	Operable fabric awnings (seasonal)	C	The awnings are replacements but reflect a type present on the building since 1912
Exterior	Glazed and paneled wood doors	C	
Exterior	Flush doors	NC	Non-historic door at south basement entrance
Exterior	Membrane roofing	NC	

Interior	Interior room arrangement including partition walls and circulation spaces.	C	
Interior	Flat plaster walls and ceilings	C	
Interior	Suspended acoustical tile ceilings	NC	Non-historic
Interior	Acoustical wall tiles	NC	
Interior	Mosaic tile floors	C	In all first- and second-floor public spaces
Interior	Concrete floors	C	In basement and non-public spaces
Interior	Carpeting	NC	Non-historic
Interior	Marble wainscoting and wall panels	C	In most first- and second-floor public spaces
Interior	Marble toilet and tub partitions	C	
Interior	Ceramic tile wainscoting	C	Likely dates from 1950s remodelings
Interior	Marble stair with brass hardware	C	Front stair (S1)
Interior	Decorative plasterwork including pilaster capitals and paneled beam casings	C	In rooms 100, 106, and 200
Interior	Historic steel lockers	C	In rooms 102, 110, 203, and 217
Interior	Mezzanines including staircases and brass railings	C	In rooms 102 and 110
Interior	Elevator cab, doors, and hardware	C	Original 1911 elevator
Interior	Dumbwaiter	NC	Non-historic addition
Interior	Wood doors	C	
Interior	Composite doors	NC	Non-historic
Interior	Glazed Aluminum Doors	NC	
Interior	Plumbing fixtures	C	
Interior	Laylight frames and glazing	C	In ceilings of rooms 106 and 212

1C CHARACTER DEFINING FEATURES



Figure 1.C.1. Figure 1. Character-defining features of the site and exterior include the Magnolia Promenade, turf grass lawn, holly hedges, exposed-aggregate concrete walkways, the overall massing and composition of the building, the terrace (with its urns, ramp, and steps), exterior materials (stone, brick), historic windows (wood, metal, and steel) and seasonal awnings, and glazed and paneled wood doors.



Figure 1.C.3. Character-defining features of the interior that can be seen in the south men's dressing room (102) include flat plaster walls and ceilings, mosaic tile floors, marble wainscoting, steel staircases and mezzanine with brass hardware, and historic steel lockers.



Figure 1.C.2. Character-defining features of the interior that can be seen in the lobby (100) include flat plaster walls and ceilings, decorative plasterwork (pilaster capitals, paneled beam casings), mosaic tile floors, marble wainscoting and wall panels, marble staircases with brass hardware, and the original elevator (cab, doors, and hardware).



Figure 1.C.4. Character-defining features of the interior that can be seen in the men's bath hall (106) include flat plaster ceilings, mosaic tile floors, marble wall panels and partitions, and historic plumbing fixtures.



Figure 1.C.5. Character-defining historic plumbing fixtures in the bath halls including tubs, sitz baths, sinks, needle showers, and steam cabinets.

1D Physical Description & Condition Assessment

Physical Description

Site

The Buckstaff Bathhouse is located within Hot Springs National Park (HOSP). This half-acre site in Hot Springs, Arkansas, is part of the Bathhouse Row/Architectural Park component landscape of HOSP. The NPS oversees the maintenance and up-keep of the site. The Buckstaff Bathhouse cultural landscape features character-defining elements such as the Magnolia Promenade, a low holly hedge, front turf grass areas, and a historic stone retaining wall (Figure 1.D.1). The spatial organization of the site remains faithful to the twentieth-century design for Bathhouse Row, with Magnolia Promenade to the west and the Grand Promenade to the east. The historic retaining wall along the east side of the building creates a topographic separation from the Grand Promenade above. The adjacent bathhouse sites enhance the character of the Buckstaff Bathhouse cultural landscape.

Overall, the site is in good condition, with many historic landscape features intact. There is evidence of ongoing drainage problems at the site over the years, worsened by the tight spaces between the bathhouses and Buckstaff's proximity to the retaining wall on its east side. In these areas, there are some inlets that provide access to the stormwater system below. The concrete is graded into shallow swales in some areas on the south side of the building to facilitate this flow. Degraded concrete and accumulated debris indicate ongoing drainage issues (Figure 1.D.2).

The vegetation at the site is minimal, featuring a turf grass lawn, a low holly hedge, and magnolia trees as the dominant elements. Most of the other vegetation at the site is volunteer. Above-ground utilities include both historic and nonhistoric lights, the previously mentioned drainage inlets, gas service equipment located at the northwest corner of the building, and HVAC equipment situated off the north concrete walk.

The retaining wall system located east of the building features two types of wall construction. Both walls are made of stone; the south wall displays an irregular pattern of uniquely shaped stones, while the north wall exhibits a running bond pattern of rectangular, hewn stones. Both walls are mortared and vary in height from 8 to 15 feet. The north wall includes a portion of a historic entrance to the Grand Promenade. Additionally, remnants of concrete piers, which once served as footers for a concrete cooling tank in the early 1900s, can be found on the north side of the building.

Exterior

The Buckstaff Bathhouse is a three-story building with a raised basement. It is of steel-reinforced concrete and steel construction. The front wing features painted stone cladding up to the level of the first-floor windowsills, yellowish tan brick up to the heads of the second-floor windows, a Doric frieze and cornice above the second-floor windows, and yellowish tan brick cladding on the parapets and third floor. All other exterior walls are of red brick laid in gray mortar.

The front façade is divided into nine bays. The outer bays are two stories in height while the central seven bays are three stories in height and are slightly recessed. The two stories of the seven central bays feature engaged giant order (colossal) Tuscan columns giving the effect of a portico. A terrace with four pedestals topped by urns extends across the front of these bays and is accessed by a central ramp and two flanking stairs. The main frieze features raised letters reading "BUCKSTAFF – BATHS" as well as circular medallions above the columns. Engaged urn finials stand atop the cornice above the central six columns. First- and second-floor windows are tripartite casements, with semicircular arched heads at the first floor and flat heads at the second. The third-floor windows are paired casements. The lower roofs of the outer bays originally served as sun decks. The side walls of the front wing have three-over-one double-hung windows at each floor, those of the first floor hav-



Figure 1.D.1. Parts of the designed Magnolia Promenade west of the Buckstaff Bathhouse. View to north (WLA Studio, 2025; information from 2010 Quinn-Evans Cultural Landscape Report).



Figure 1.D.2. Areas with drainage concerns typically have debris buildup and degraded concrete. The proximity of the building to the retaining wall east of the bathhouse makes facilitating positive drainage difficult (WLA Studio, 2025).

ing three-lite semicircular-arched transoms. Stone coping trims the tops of the parapets.

The rear wing is two stories in height. The typical window unit is a rectangular three-over-one double-hung window set into a masonry opening with a segmental-arched head. The rear wing was originally T-shaped, with notches at the southeast and northeast corners. The southeast corner is now filled by the 1946-1947 addition. At the second-floor level, this wing is roughly U-shaped, with

an open courtyard above and east of the skylight of the Men's Bath Hall. Windows of the north and south legs of the U are steel sash casements of varying designs. Glazed clay coping caps the parapets.

The flat roofs are now covered with a white membrane. An elevator penthouse projects from the roof of the third floor but is only visible from the elevated promenade to the east.

Basement

A raised basement extends under the front wing and limited portions of the rear wing. This basement is accessed only from two exterior stairs. The



Figure 1.D.3. Figure 1. Exterior of Buckstaff Bathhouse looking northeast from the sidewalk, showing the front wing.



Figure 1.D.4. View of rear of second and third floors of the Buckstaff Bathhouse as seen from the promenade on the hill above, facing northwest.

basement contains mechanical spaces, a maintenance shop, storage, and a laundry facility. The basement walls and ceilings are of exposed board-formed concrete, painted in some rooms. Floors are concrete slabs. Some interior partitions are of brick and are painted. The laundry room (B109) is only partially excavated and includes some stone foundation walls that may remain from the Ram- melsberg Bathhouse as well as portions of dirt

floor. Surviving historic basement interior doors are four-panel raised panel doors with rim locks.

First Floor

The center of the first floor contains the building lobby (100), which opens to the office (101), main staircase (S1) and elevator (E1). The lobby features high-style finishes, with pilasters subdividing the east and west walls into three bays, mosaic tile floors, plaster cornices and pilaster capitals, marble wainscot and pilaster cladding, and a marble desk at the front of the office. (Figure 1.D.5) The mosaic tile floor features borders in red orange and black on a gray ground with a field pattern of rosettes in black, gray, and red orange. The room is now fitted with historic light fixtures brought to the building around 2017. The original mahogany door to the office has been removed. The company added a suspended ceiling and bulkhead over the office around 1970. Doors at either side of the lobby open to the north and south men's dressing rooms (110 and 102). (Figure 1.D.6) Both rooms feature marble wainscots, white mosaic tile floors, and original steel lockers and cubicles as well as mezzanines with associated staircases. The mezzanines originally had glass floor panels on the steel frame and now have floors of tongue-and-groove bead-board with a resilient covering set on the original steel frame. The south men's dressing room (102) originally included a stair from the balcony up to the second floor (203), which connected to the original hydrotherapy department. The company removed this upper flight of the staircase during the 1921-1922 remodeling and repositioned the lower flight. Beyond the dressing rooms are the north and south men's cooling rooms (109 and 103). These rooms feature a marble wainscot and a mosaic tile floor with a border featuring a wide meander pattern in green with dark red borders. Both rooms now have acoustical panels installed on the side walls.

The north extension of the rear wing contains the north men's toilet room (108) and massage room (107). The toilet room features a white mosaic tile floor, marble wainscoting, and historic marble toilet partitions. The massage room features a mosaic tile floor with a medium meander pattern border in blue. The walls have a wainscot of four-inch-square white tile that likely dates from the 1950s.

The bulk of the rear wing is composed of the

Men's Bath Hall (106), the largest room in the building. (Figure 1.D.7) The center of the room contains a large skylight with four large columns at its corners. Bath compartments extend around the perimeter of the room and retain original marble partitions. The north and south walls are lined by tub compartments, the west wall by sitz bath compartments, and the east wall by tub and steam cabinet compartments flanked by two needle showers. The walls and columns are clad in marble panels up to the ceiling and the floors are of white mosaic tile. The central skylight features a grid of frosted wire glass panels divided by painted steel moldings with rosettes at the crossings. The inner corners of the large columns at the corners of the skylight include paneled capitals. The 1967 dumbwaiter addition is attached to the southeast column. The company built vestibules into the northwest and southwest corners in 1940 and clad them in marble to match the walls.

The south extension of the rear wing contains the south men's toilet room (104) and the rear stair (S2). The south men's toilet room features finishes like those in the north men's toilet room. The south stair is a room with painted concrete floors, plaster walls, and a painted steel stair. The southeast corner of the first floor contains the 1946-1947 addition, which originally contained one staff dressing room at the first floor and one at the intermediate stair landing. These rooms have painted concrete floors and plaster walls.

Second Floor

The second-floor plan is similar to that of the first. The central lobby (200) is nearly identical to the first-floor lobby (100). (Figure 1.D.8) The company appears to have added a wooden partition around the stair landing sometime between 1962 and 1973. To the north is the north women's dressing room (217). (Figure 1.D.9) This room's mosaic tile floor features a small meander pattern border in blue with a field of rosettes in blue and light blue. The walls feature marble wainscoting and original steel lockers and cubicles. To the north is the north women's cooling room (216). The walls have marble wainscoting, and the mosaic tile floor features a wide meander pattern border in blue. Non-historic, partial-height partitions subdivide this room into three cubicles. South of the lobby is the south women's dressing room (203). This room was originally a series of four smaller rooms and



Figure 1.D.5. First floor lobby (100), facing north.



Figure 1.D.6. Men's north dressing room (110), facing east.



Figure 1.D.7. Men's bath hall (106), facing southeast.

a corridor with a stair that connected down to the south men's dressing room (102) below. It appears to have served as a connection between the men's facilities on the first floor and the shared hydrotherapy department (205). During the 1921-1922 remodeling, the company removed the staircase and partitions and remodeled this room as a second women's dressing room, adding steel lockers and compartments. The room has a marble wainscot and a mosaic tile floor with a medium meander pattern border in blue. Mirrors on the east and west walls presumably date from the 1920s remodeling. To the south are two rooms. The southwest room (204) appears to have originally been the women's massage department but was converted into a hair salon in the 1920s and is now used as an extension of the south dressing room. The room has a marble wainscot and a white mosaic tile floor with a small meander pattern border in blue. A partition with borrowed-light windows fitted with patterned privacy glass divides this room from the adjacent hydrotherapy room (205), now used as a massage room. This room has a floor raised one step above the adjacent rooms. This raised floor appears to be original because the white mosaic tile bears the ghost marks of equipment shown in 1910s photographs of the room. The walls have a marble wainscot that also bears ghost marks of original equipment. The company reconfigured the northeast part of this room in the 1920s, creating a corridor from the new south women's dressing room to the women's bath hall.

The north extension of the rear wing contains the north women's toilet room (215) and a room (214) now used as a women's locker room. The toilet room is finished like the north men's toilet room below it, with a white mosaic tile floor, marble wainscot, and marble toilet partitions. Room 214's historic use is unclear in available documentation. It has been used as an employee locker room or lounge since the 1960s. The original mosaic tile floor matches that of the Gymnasium (210/G15), with an elaborate border in dark red, red orange, buff, dark green, and gray with a field pattern of large and small rosettes in dark red, red orange, dark green, and buff. This border and field pattern match Design 63M1065 illustrated in Sears Roebuck & Company's 1910 *Tile Book* catalogue. Sometime prior to 1962, probably in the mid-1950s, the company added a raised platform to the southeast part of the room and reinstalled original partitions and needle shower on top. The room has no wainscot except for a 1950s tile wainscot above the raised platform.

The center of the rear wing contains the women's bath hall (212), the largest room on the second floor. (Figure 1.D.10) This L-shaped room wraps around two sides of the light well over the men's bath hall skylight. The walls are clad in marble panels up to the ceiling and the floors are of white mosaic tile. The room is lit by two windows on the east wall and two on the south, both facing the light well. The original metal windows are fitted with interior wood sash containing four opaque panels below and six lites of textured privacy glass above. These interior sashes appear to postdate the building's original construction. Two skylights original illuminated the main leg of the room. These are fitted with laylights featuring eight lites of snowflake-patterned privacy glass that is now over-painted. The west wall contains a row of 11 marble tub compartments. The north wall contains a row of three sitz baths and two vapor cabinets upon a raised platform. The current configuration of the platform appears to date from a 1950s remodeling, but a platform in this location and fitted with two vapor cabinets, a sitz bath, and a needle shower is pictured in the Buckstaff's 1912 booklet. An alcove at the south end of the room now contains a raised platform with two sitz baths, a shower, and a vapor cabinet.

The platform and associated tile wainscot over the face of the original marble walls appear to date from a 1950s remodeling. The company added the east end of the north leg of the rear wing (213) during the 1921-1922 remodeling. Planned as a women's gymnasium, the company had partitioned it into a cooling room and three massage cubicles by 1962. The room has a white mosaic tile floor and marble wainscot. The south leg of the rear wing (210/G15) originally served as a combined gymnasium for men and women and was accessed only from the landing of the rear stair (S2), with an emergency egress bridge to the hillside from a door on the east wall. (Figure 1.D.11) This room features a mosaic tile floor with an elaborate border in dark red, red orange, buff, dark green, and gray with a field pattern of large and small rosettes in dark red, red orange, dark green, and buff. This border and field pattern match Design 63M1065 illustrated in Sears Roebuck & Company's 1910 *Tile Book* catalogue. Sometime between 1941 and 1962, probably in the 1950s, the company cut a large opening in the west wall of this room to connect it to the women's bath hall and infilled the original door to the rear stair landing. It then partitioned the room in half, using the west half as a women's pack room and the east half as a cooling room with three massage compartments partitioned along the east wall.

The south extension of the rear wing contains the south women's toilet room (206) and rear stair (S2). This toilet room was originally the upper stair landing and was open to the stair. It features a mosaic tile floor with a red and black border (framed in square tiles but with hexagonal tiles) and a field with asymmetrical elements in black and red. The company partitioned off the western two third of the landing in 1941 to create the south women's toilet room, adding a marble wainscot, marble toilet partitions, and infilling a window and adding a smaller window opening.



Figure 1.D.8. Second floor lobby (200), facing northeast.



Figure 1.D.9. North women's dressing room (217), facing east.



Figure 1.D.10. Women's bath hall (212), facing south.



Figure 1.D.11. Original gymnasium (210/G15), facing east, showing original mosaic tile floor.



Figure 1.D.12. Third floor lounging room (300), facing southwest

Third Floor

The third floor extends above only the center part of the front wing. The west half of this floor was originally the lounging room (300), a combined lounge for men and women that provided access to the men's and women's separate sun decks at the north and south ends. (Figure 1.D.12) The center portion of the east half contained an alcove off the lounging room that originally served as the women's writing and telephone room. Sometime after 1973, the company partitioned this alcove off from the main room for use as an office. A small closet with a glazed door near the staircase may have once served as a telephone booth. The east half of the floor contains rooms at the north and south end that original plan drawings designate as men's (303, south) and women's (304, north) gymnasiums. In the late-1910s, room 304 housed a beauty parlor. These rooms were in use as men's and women's writing rooms by 1962 and now serve as storage and a conference room, respectively. Both rooms feature mosaic tile floors with a border pattern in dark and light green and red with a field featuring rosettes in light green and red.

Condition Assessment

Site Summary Table and Condition

UNIFORMAT II Outline Data					
Topic	Code	Subtopic	Assessment Rating	Date	Contribution
G2030	Pedestrian Paving		Good with some minor cracking; trash and debris present	1912 with later updates	C

Exterior Summary Table and Condition

UNIFORMAT II Outline Data					
Topic	Code	Subtopic	Assessment Rating	Date	Contribution
B2010	Exterior Walls	Brick – Blonde Ironspot	Good	1911	C
		Brick – Red	Good	1911	C
		Limestone	Good	1911	C
		Coating on Stone	Good	Unknown	NC
		Mortar – General	Good	1911, 2023	C
		Mortar – Elevator Penthouse	Fair	Unknown	NC
		Vitrified Clay Tile Parapet Cap	Good	1911, 1920s, 1940s	C
		Sealant Joints	Fair	2010s	NC
		Loose Steel Lintels	Good	1911, 1920s, 1940s	C
		Metal Cap Flashing over Cornice	Fair	2000s	NC
		Flag Pole	Failed	c.1912	C
B2021	Windows	Wood Windows	Good	1911	C
		Galvanized Metal Windows	Good	1911	C
		Steel Windows	Fair	c.1921-1947	C
B2031	Glazed Doors & Entrances	Front Doors, South Side Door, Third-Floor Doors	Good	1911, 1940s	C
B2039	Other Doors & Entrances	North Side & Basement Doors	Fair		NC
B3010	Roof Coverings	Roofing Membranes – TPO	Good	2009-2010	NC
		Roofing – Terne Metal	Fair	c.2010	NC
		Gutters & Downspouts	Fair	2009-2010	NC

Interior Summary Table and Condition

UNIFORMAT II Outline Data					
Topic	Code	Subtopic	Assessment Rating	Date	Contribution
A1010	Standard Foundations	Wall & Column Foundations	Good	1911	C
A1030	Slab on Grade	Standard (Basement)	Good	1911	NC
A2020	Basement Walls	Basement Wall Construction	Good	1911	C
B1010	Floor Construction	Floor Structure Frame	Good	1911	C
		Exterior Stairs	Good	Unknown	C
		Porch & Ramp	Good	c.1914-	C
B1020	Roof Construction	Roof Structural Frame	Good	1911	C
		Structural Interior Walls Supporting Roof	Good	1911	C
		Roof Decks, Slabs & Sheathing	Good	1911	C
C1020	Interior Doors	Interior Wood Doors	Good	1911	C
		Interior Glazed Aluminum Doors	Good	c.1960	NC
		Interior Composite Six-Panel Doors	Good	c.2000	NC
		Interior Flush Doors	Good	c.2000	NC
C1031	Fabricated Toilet Partitions	Marble Toilet Partitions, Marble Tub Partitions	Good	1911, 1941	C
C2010	Stair Construction	Marble Stair Components	Good	1911	C
		Metal Stair Components	Good	1911	C
C3010	Wall Finishes	Marble Panels	Good	1911, 1940	C
		Ceramic Tile	Good	c.1950s	C
		Plaster	Good/Fair	1911	C
		Acoustical Tiles	Fair	c.1950s	NC

C3024	Flooring	Mosaic Tile Floors	Good	1911	C
		Painted Concrete Floors (First and Second Floors)	Good	c.2000s	NC
C3025	Carpeting	Carpeting	Fair	c.2017	NC
C3031	Ceiling Finishes	Plaster	Good/Poor	1911	C
C3032	Suspended Ceilings	Acoustical Ceiling Tile & Grid	Fair	c.1970, c.2000	NC
D1010	Passenger Elevators	Elevator	Unknown	1911	C
D1091	Dumbwaiter	Dumbwaiter	Unknown	1967, 2018	NC

A10: Foundations

A1010: Standard Foundations

- The load bearing walls of the building are supported by concrete basement walls. While a few cracks were noted they appear to be in reasonably good condition. There is some evidence these walls were unreinforced (Figure 1.D.13). The foundations for these walls are not visible.
- Cracks are visible in the perimeter basement walls (Figure 1.D.14). Improper repairs have been made to some of these cracks (Figure 1.D.15).
- A crack occurs in an interior load bearing concrete wall on the south side of the crawlspace. It occurs directly beneath a girder which bears into this wall (Figure 1.D.16). The widest part of the crack was measured to be 1/8 inch. It should be monitored periodically to see if it widens (Figure 1.D.17).
- Concrete piers supporting the steel columns are visible in portions of the basement and crawlspace (Figure 1.D.18 & Figure 1.D.19). These probably extend through the floor slab and bear on larger concrete spread foundations.

A1030: Slab on Grade

- The concrete floor slab in the basement has numerous changes in elevation. These range from a few inches to nearly two

feet. The majority of these changes in elevation are marked with yellow paint (Figure 1.D.20).

A20: Basement Construction

A2020: Basement Walls

- All perimeter and interior load bearing walls in the basement are constructed of concrete. They range in thickness from 16 to 24 inches.
- Interior partition walls within the basement are constructed of 2 wythes of brick masonry (8 inches in thickness). Openings in such walls incorporate a double course of arched rowlock brick above the opening (Figure 1.D.21).

B10: Superstructure

B1010: Floor Construction

- The floor construction consists of a reinforced concrete slab which is 6 inches thick. This slab is in turn supported by a series of beams and girders which appear to be wide flange steel shapes which are encased in concrete. We suspect the beams are 12 inches in depth in the 1st floor slab. The floors are in turn supported by steel columns which are not encased in concrete where visible in the basement and crawlspace (Figure 1.D.22). There is no

- evidence of any significant deterioration or distress in any of the supported floors where they were visible. Minor corrosion was visible on the bottom flange of some of the steel beams (**Figure 1.D.23 & Figure 1.D.24**).
- The slab reinforcement was laid directly on the wood forms. This caused the steel to be exposed in a few locations (**Figure 1.D.25**).
 - Concrete had fallen from the bottom of the 1st floor slab in one location exposing the wire reinforcement and allowing it to begin to rust (**Figure 1.D.26**).
 - Wherever the floor structure was exposed and visible on the other upper floor levels, the slab, beams and girders were completely covered in plaster and painted (**Figure 1.D.27**).
 - The exterior stairs leading down into the basement level are constructed of concrete and generally appear to be in reasonably good condition.
 - The elevated porch in the west elevation is supported by a concrete slab with perimeter walls that extend down to and below grade. There are a series of window wells which facilitate daylight into the east side of the basement.
 - Minor cracking was observed in portions of these perimeter walls (**Figure 1.D.28**). The concrete and stone surrounding the porch is painted to match the stone on the building. There is evidence of blisters beginning to form in the coating on a few isolated locations (**Figure 1.D.29**).
 - A concrete ramp and two sets of limestone steps flanking it extend from the porch to grade level and the concrete sidewalks. The side walls of the ramp are painted white and are generally in good condition. The posts of the metal railings extend into and are grouted into holes in concrete. Hairline cracks are visible at some of these posts. The limestone steps have worn over time, this allows water to collect and pond on some of the treads.

B1020: Roof Construction

- Where visible, the roof structural framing system appeared to be in good condition.
- Interior walls supporting the edges of the roof were structurally sound. Previous water damage in the form of bubbled and damaged plaster was evident.
- The various roof decks all appeared to be structurally sound wherever they were visible.

B20: Enclosure

B2010: Exterior Walls

- The exterior walls are composed of multiple wythes of clay brick masonry constructed in a monolithic fashion which is typically 13 inches thick. The west elevation and portions of the north and south elevations are constructed of blonde ironspot brick with limestone accents. All of the original limestone in this portion of the building has been painted white (**Figure 1.D.30**).
- The blonde ironspot brick are laid in running bond. They are believed to be anchored to the red clay back up brick with mill galvanized corrugated metal anchors. There is no evidence of significant corrosion of any of the anchors nor significant movement or cracking within the brick (**Figure 1.D.31**).
- All of the mortar joints in the blonde ironspot brick have been cut out and repointed. This is reported to have occurred in 2023 and the joints are generally in good condition. There is evidence of a lighter colored cementitious material on the sides of several of the joints. This material is adhered to the faces of the brick. It is probably the remnant of an even more previous repair effort where the mortar joints were “masked and grouted” (**Figure 1.D.32 & Figure 1.D.33**). This method of mortar joint repair was popular in the 1970s but is rarely seen today.

- There is evidence of what appears to be a clear waterproofing sealer on several surfaces of the blonde ironspot brick (**Figure 1.D.34**).
- Red clay face brick were used to face walls which were not readily visible from the street (**Figure 1.D.35**). The majority of any limestone accents within these elevations are also painted white. These walls were laid in common bond with header brick tying the various wythes together every 6th course to form a monolithic assemblage (**Figure 1.D.36**). Like the blonde face brick, all of the mortar joints in the red face brick have been repointed and are generally in good condition. There is no evidence of this portion of the building having been “masked and grouted.”
- The vast majority of the limestone accents have been painted white. The date when this work was performed is unknown. The coating also covers the mortar joints within the stone and several cementitious patches. The result is a very monolithic appearance. The coating appears to be well adhered and generally in good condition (**Figure 1.D.37**, **Figure 1.D.38** & **Figure 1.D.39**).
- A few of the original pieces of limestone used to create windowsills in the very east face of the building were left uncoated. This revealed the profile of the original stone was an “X cut” with X being the number of horizontal grooves per inch as the stone was fabricated (**Figure 1.D.40**).
- The one exception to the overall good condition of the mortar joints throughout the building was in the sides of the elevator hoist which protrudes above the roof (**Figure 1.D.41**).
- The top of the parapet walls where blonde ironspot brick were used are capped with painted limestone. The joints between the stones are raked and caulked. The sealant joints and limestone cap appear to be in good condition.
- Vitrified clay tile (VCT) was used to cap the parapets of the red brick walls. There are at least three different tile manufacturers as evidenced by the factory stamps pressed into the tile. The tile and the cementitious chinking appear to be in good condition (**Figure 1.D.42**).
- Sealant joints at the interface of sheet metal counterflashings and the adjacent masonry are beginning to debond (**Figure 1.D.43**, **Figure 1.D.44**, & **Figure 1.D.45**).
- The masonry above window and door openings is constructed of either multiple courses of arched brick or loose steel lintels. The arched masonry is performing well. Despite there being no flashings provided for the steel lintels, they appear to be in good condition with no evidence of significant corrosion (**Figure 1.D.46**).
- A limestone cornice projects outward at the level of the main roof. A secondary cornice projects out beneath the third floor windows. These cornice stones typically extend through the entire thickness of the wall to prevent the stone from rotating downward. This often results in damage to the interior plaster when head joints deteriorate and allow water a direct path to the interior. Significant plaster damage was observed inside the building in these areas.
- Sheet metal has been installed on top of both of the stone cornices (**Figure 1.D.47**). The date of this installation is believed to be 2009/10. We are working with the local National Parks folks to better understand the timing of these repairs and the damage to the interior plaster. We suspect the sheet metal was installed to address damage to the plaster.
- The seams in the sheet metal are screwed together. There was evidence of gaps in some of these seams. There were also gaps between the counterflashing used to tie the vertical leg of the flashing back to the brick and in the sealant joint between the sheet metal and the brick. All of these conditions could allow wind driven rain to circumvent the sheet metal cap (**Figure 1.D.48**, **Figure 1.D.49** & **Figure 1.D.50**).

- The flagpole had blown over and fallen onto the upper roof. The failure appeared to be a combination of the clamp connections used to secure the base of the pole to the back of the parapet. Bolts used to secure the steel clamps into the masonry failed in a combination of tensile failure (upper bolt) and pull-out (lower bolt) (Figure 1.D.51 & Figure 1.D.52). Historic photographs show the flagpole was not part of the original construction.



Figure 1.D.15. A cementitious material was buttered over some of the cracks on the exterior face of this wall.



Figure 1.D.13. There is no evidence of any reinforcing steel where portions of this concrete wall were removed.



Figure 1.D.16. Crack in an interior concrete wall in the crawlspace, which is load bearing. This occurs under a girder connection.



Figure 1.D.14. Concrete wall and stairs leading down to the basement level.



Figure 1.D.17. The widest portion of the crack was measured to be 1/8 inch.



Figure 1.D.18. Concrete foundations in the crawlspace.



Figure 1.D.19. These became relatively tall piers in the full depth portion of the basement.



Figure 1.D.20. The floor height changes numerous times within the basement.



Figure 1.D.21. Interior partition walls are constructed of double wythe (8 inch thick) brick masonry.



Figure 1.D.22. Location where a steel beam and girder connect into a steel column. The sides of the beams and girders are encased in concrete.



Figure 1.D.23. Slight corrosion on the bottom flange of a steel beam in the basement.



Figure 1.D.26. Portions of the concrete have fallen in this location exposing the slab reinforcement.



Figure 1.D.24. Slight corrosion bleeding through the paint in another location in the basement.



Figure 1.D.27. Beams, girders and slabs in finished spaces are completely covered in plaster and painted.



Figure 1.D.25. Slab reinforcement visible in the basement where honeycombing occurred during construction.



Figure 1.D.28. Minor cracking was observed in the concrete walls supporting the porch on the east elevation of the building.



Figure 1.D.29. Blisters in the coating were observed in a few isolated locations around the porch.



Figure 1.D.30. The west elevation façade is constructed of blonde ironspot face brick with limestone accents. All of the stone has been painted white.



Figure 1.D.31. The blonde ironspot brick are laid in running bond.



Figure 1.D.32. All of the mortar joints have been cut out and repointed. In general, they are in good condition but there is evidence of a lighter colored cementitious material on portions of the brick. This is probably a remnant of a previous repair effort where the mortar joints were "masked and grouted."



Figure 1.D.33. A location where the remnants of the "mask and grout" repair is much more evident.



Figure 1.D.34. What appears to be evidence of a clear sealer on the blonde ironspot brick.



Figure 1.D.36. These walls were laid in common bond with header brick tying the various wythes together every 6th course to form a monolithic assemblage.



Figure 1.D.35. Light reddish buff brick were used to face walls which were not readily visible from the street.



Figure 1.D.37. The vast majority of the original limestone elements have been painted.



Figure 1.D.38. This is evident where the coating continues onto the adjacent brick.



Figure 1.D.39. The result is a very monolithic appearance.



Figure 1.D.40. A few of the original limestone windowsills were left unpainted on the east elevation. The original profile is still visible which is called a "X cut" with X being the number of grooves per inch as the stone was fabricated.



Figure 1.D.41. The mortar joints in the top of the elevator hoist are in poorer condition.



Figure 1.D.42. The Vitreous Clay Tile (VCT) cap and chinking mortar is in good condition.



Figure 1.D.43. Sealant joints are often beginning to debond.



Figure 1.D.46. Loose steel lintels support the masonry above several of the windows.



Figure 1.D.44. A metal counterflashing is set into the masonry where lower roof membranes abut the wall.



Figure 1.D.47. Sheet metal has been installed on top of the stone cornice of both the main and upper roof levels.



Figure 1.D.45. The sealant joint at this interface has typically failed.



Figure 1.D.48. The laps are screwed together.



Figure 1.D.49. Gaps in this lap may allow wind driven rain to infiltrate under the metal.



Figure 1.D.50. Gaps are visible in the counterflashing.



Figure 1.D.51. The flagpole has fallen onto the upper roof.



Figure 1.D.52. Failure of the metal brackets which originally screwed the base of the pole to the back of the masonry parapet.

B2020: Exterior Windows

B2021: Windows

- Wood windows are in good condition overall. Some windows exhibit wear around hardware. Galvanized metal windows are in good condition overall but have a heavy accumulation of paint. Steel sash windows are in fair to good condition, with corrosion evident on many interior surfaces. (Figure 1.D.53-55)

B2030: Exterior Doors

B2031: Glazed Doors & Entrances

- The front doors are in good condition overall. The wood finish in high-touch areas and the surfaces of the exterior metal protective plates exhibit wear. (Figure 1.D.56)
- The south side door and third-floor roof terrace doors are in good condition overall. All of these doors have heavy paint accumulation and overpainting on the edges of the glass lites. The third-floor doors are fitted with non-historic screen doors.

B2039: Other Doors & Entrances

- The paneled wood north side door is in fair to good condition.
- The paneled wood north basement door is in fair condition overall.
- The non-historic south basement door is in poor condition.



Figure 1.D.53. Some of the multiple types of steel sash windows at the rear wings.



Figure 1.D.54. Typical wood windows at west façade.



Figure 1.D.55. Typical metal window at side and rear walls.



Figure 1.D.56. Front doors, showing wear to finishes.

B30: Roofing

B3010: Roof Coverings

- The majority of the flat roofs are covered with a white roof membrane which is believed to be a TPO system that was installed in 2009-10. The details for this installation call for vapor retarder to be applied onto the base concrete deck. This was covered with 1½ inches of rigid insulation – no mention or evidence of this being tapered with the roof membrane then adhered to the insulation (Figure 1.D.57, Figure 1.D.58, Figure 1.D.59 & Figure 1.D.60).
- The roof membrane generally appears to be in good condition and there are no known reported leaks at this time.
- The roof over the elevator hoist appears to be an original flat lock terne metal roof. Terne metal was a precursor to galvanized

steel. The base steel is coated with a corrosion resistant alloy of lead and tin. While there is evidence of a loss of the terne metal and corrosion of the base sheet steel, the roof remains functional (Figure 1.D.61).

- A few of what appear to be the original collector head and downspouts still exist in the back of the building. Field swab tests reveal they are also fabricated from terne metal (Figure 1.D.62 & Figure 1.D.63).
- Newer aluminum gutters and downspouts have been installed throughout much of the building. The roofs are pitched to drain water to the east or back side of the building. Several of these newer aluminum downspouts are in disrepair (Figure 1.D.64).



Figure 1.D.57. Aerial view of the various roof levels looking east.



Figure 1.D.58. All of the major sections of roof are covered with a TPO membrane.



Figure 1.D.59. This membrane extends up the interior face of the parapet.



Figure 1.D.62. The original collector heads and downspouts are also made of terne metal. The base steel is beginning to corrode.



Figure 1.D.60. Typical flashings around the base of mechanical exhaust units.



Figure 1.D.63. The red color reveals the base steel is coated with lead.



Figure 1.D.61. The roof of the elevator hoist is made of flat-lock terne metal.



Figure 1.D.64. One of the more recent aluminum downspouts has failed.

C10: Interior

C1020: Interior Doors

- Historic interior wood doors are in good condition overall. Some require touch-up of scratched finishes.
- Interior glazed aluminum doors date from around 1960 and are also in good condition, although a few appear to require adjustments to operate smoothly.
- Non-historic composite six-panel doors are in good condition but are inappropriate for the building.
- Non-historic flush doors are in good condition.

C20: Stairs

C2010: Stair Construction

- Marble stair components at the main stair (S1) are in good condition overall. Treads show some wear, as expected for their age. Sealant between components is inconsistent in appearance and is in fair to poor condition. (Figure 1.D.65)
- Metal stair components in the men's dressing rooms and back stair (S2) are in good condition overall. Finishes of the back stair (a non-public space) exhibit significant wear.
- Existing stair handrails are original and do not comply with current requirements.

C30: Interior Finishes

C3010: Wall Finishes

- Marble panel wainscoting in most rooms and full-height marble wall cladding in the bath halls is in good condition overall. These panels exhibit some staining from past plumbing leaks and staining and accumulation of minerals near some plumbing fixtures. (Figure 1.D.67-68)
- Ceramic tile wainscoting believed to date from the 1950s is in good condition overall. One section of built-out wainscoting at the south wall of the Women's Bath Hall is missing one tile component and currently has a hole exposing underlying plumbing.
- Plaster wall finishes dating from 1911 and subsequent remodeling and repair projects are in good condition overall. Plaster damage or loss is evident in areas of moisture infiltration, especially in rooms 107, 209, 216, and 300. (Figure 1.D.66)
- Acoustical tiles installed on the walls of rooms 103 and 109 are believed to date from the 1950s. These tiles are suspect asbestos containing material (suspect ACM).

C3020: Floor Finishes

- The building features mosaic tile floors in most rooms on the first, second, and third floors. Some rooms have only white tile, other have a white field with a border, and others have a border and a field pattern. Tile borders are composed of square tiles (except in room 206) while fields are composed of either hexagonal or circular tiles. Circular tiles are used in the fields of rooms 100, 200, 303, and 304. Other fields are of hexagonal tiles. (Figure 1.D.71-73)
- The following rooms have tile borders with field patterns:
 - First floor lobby (100) and second floor lobby (200) – borders in red orange and black on a gray ground with a field pattern of rosettes in black, gray, and red orange
 - North women’s dressing room – small meander pattern border in blue with field rosettes in blue and light blue
 - Lounging room (300) – meander pattern border in red with field pattern of large and small rosettes in red
 - Men’s and women’s lounges (303 and 304) – border pattern in dark and light green and red with circular field with rosettes in light green and red
 - Original back stair landing (S2) / south women’s toilet room (206) – red and black border (hexagonal tiles in a frame of square tiles) and a field with asymmetrical elements in black and red
 - Original Gymnasium (210/G15) and room 214 – elaborate border in dark red, red orange, buff, dark green, and gray with a field pattern of large and small rosettes in dark red, red orange, dark green, and buff. This border and field pattern match Design 63M1065 illustrated in Sears Roebuck & Company’s 1910 *Tile Book* catalogue.



Figure 1.D.65. Marble and brass components at front stair (S1).

- The following rooms have tile borders with white fields:
 - North and south men’s cooling rooms (103 & 109) – wide meander pattern in green with dark red borders
 - North women’s cooling room (216) – wide meander pattern in blue
 - Massage room (107) and south women’s dressing room (203) – medium meander pattern in blue
 - Southeast women’s dressing room (204) – small meander pattern in blue
- The mosaic tile floors all appear to date from 1911 and are in unusually good condition for their age, with few cracks or areas of damage. The primary issue with the tile floors is mineral accumulation and staining around plumbing fixtures.



Figure 1.D.66. Interior plaster wall surfaces are in good condition overall except at areas where water infiltration has caused damage. The east wall of room 107 exhibits the worst plaster damage in the building. The ceramic tile wainscoting is believed to date from the 1950s and is in good condition overall.



Figure 1.D.68 Mineral accumulation and staining at marble wall panels and partitions in men's bath hall (106).



Figure 1.D.67. Staining of marble wall panels at north wall of men's bath hall (106) from plumbing leak.

- Painted concrete floors in non-public areas of the first and second floors are historic, but the paint finishes themselves are non-historic. These finishes are in good condition except at the back stair, where the finishes are worn. (Figure 1.D.50)

C3025: Carpeting

- Non-historic carpet is in fair condition overall.

C3030: Ceiling Finishes

- Plaster ceiling finishes are in good condition overall but are in poor condition in rooms with water damage. (Figure 1.D.45)

C3032: Suspended Ceilings

- All suspended ceilings are non-historic and are in fair condition. Leaks in room 300 have stained tiles over the partitioned massage rooms. The ceiling tiles over the office (101) are past their expected life and are sagging and cupping. (Figure 1.D.45)



Figure 1.D.69. Plaster ceiling finishes are in good condition overall. This area below a major roof leak in room 300 exhibits some of the worst plaster damage in the building.



Figure 1.D.70. Non-historic suspended ceilings are in fair condition, with staining from leaks and typical and sagging cupping of aging acoustical tiles.

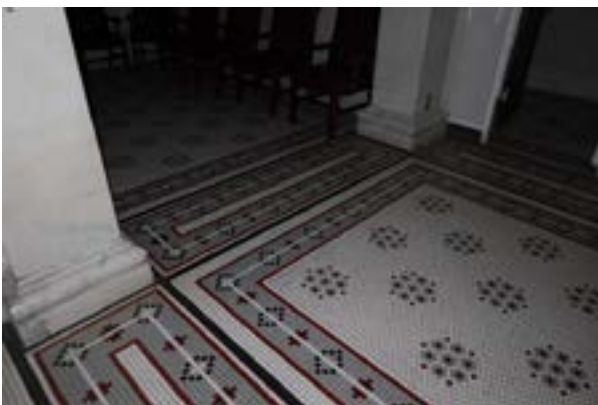


Figure 1.D.71. The building's original mosaic tile floor are in unusually good condition for their age, with minimal cracking damage.



Figure 1.D.72. Mosaic tile floor patterns vary. Nine rooms have borders and field patterns, while six more have borders alone with white fields.



Figure 1.D.73. Mosaic tile floor in men's bath hall (106) showing typical mineral accumulation around plumbing fixtures.



Figure 1.D.74. Painted concrete floor are only present in non-public areas, including the back staircase (S2).

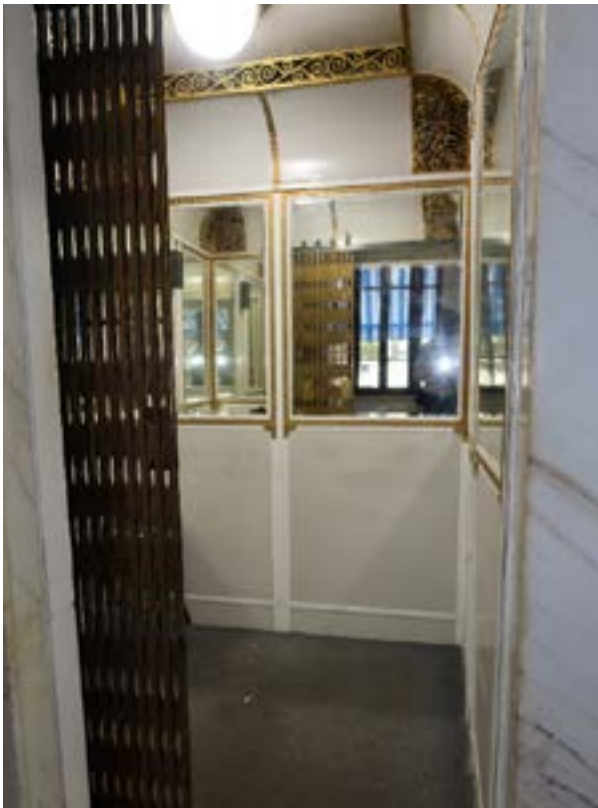


Figure 1.D.75. The elevator retains its original cab, gates, and hardware.



Figure 1.D.76. The company added the dumbwaiter through the bath halls in 1967.

D10: Conveying

D1010: Elevators and Lifts

- The building retains its original, manually operated 1911 elevator, which has a capacity of 2,000 lbs. and travels at a full load contract speed of 175 feet per minute. The drive machine is a basement-set winding drum traction type. The elevator serves three landings with front openings and a total travel distance of approximately 26'-0". While the elevator retains a high degree of integrity and currently operates, it lacks most standard safety features and does not meet many areas of present-day code or accessibility standards. Few people have knowledge to operate the elevator equipment and none of its components are manufactured today, leading to substantial downtime when any component breaks. The elevator requires rehabilitation to address fire and life safety risks. Three treatment options were developed and are summarized in the Treatment section. See Appendix E for more details on the elevator's condition and the proposed treatment. (Figure 1.D.75)

D1090: Other Conveying Systems

- Buckstaff staff were not available to report on operation of the dumbwaiter at the time of the site visit. (Figure 1.D.76)

D20: Plumbing

D2010 Plumbing Fixtures

- The majority of plumbing fixtures used for bathing, urinals and lavatories (outside of toilet rooms) appear original to the building. In most cases these have historic value being made of marble or other period specific materials and styles. Faucets, valves and other appurtenances are of varying age and types and are in poor condition in most cases.
- Bathtubs and tiled shower stalls which are exposed to the thermal water vary on the level of mineral deposits which remain on the surfaces. Cleaning and descaling products appear to be heavily used on these fixtures. A significant number of the different spa stations, such as the needle point showers, appear to be beyond repair. Other obsolete stations are simply used for storage of unused items.
- Water closets have mostly all been replaced overtime and vary significantly in manufacturer and model/appearance.
- Drinking fountains and water coolers are all in fair condition but are beyond useful life.
- Mop/service sinks show similar degradation of faucet sets, finish and age.

D2020 Domestic Water Distribution

- The building has three types of water services. Hot thermal water which is delivered to the bathhouse at about 135°F, cooled thermal water which is 90-95°F, and a municipal water supply.
- The hot thermal water is used for building heating and is also mixing with the cooled thermal water to obtain various bathing temperatures. The low temperature thermal water is used exclusively for bathing only. Concessioner staff manually shutoff the thermal water supply daily at valves ahead of the newer electronic meters in the basement. This is mainly due to poor positive shutoff at many of the individual fixtures.

- The municipal water is used for restrooms, handwash sinks, and the laundry.
- All the water sources are rich with mineral content causing significant buildup of scaling or tufa when and where exposed to atmosphere. Many emergency repairs with dissimilar materials are evident throughout as well as new piping bypasses to get water to bathtubs, etc.
- No piping in the building appeared to be insulated. Piping is not labeled throughout the building. Many pipes appear to be abandoned in place. No piping identification labels are present.
- A domestic, gas-fired, hot water boiler that uses the city water supply is located in the basement. The hot water is for the Concessioner's laundry. The system also includes a pump and storage tank for the hot water located next to the heater.
- No hose bibs or wall hydrants were visible around the perimeter of the building.

D2030 Sanitary Waste

- Thermal water, after use in bathing or heating, is returned to the Creek Arch via a series of pipes for aquifer recharge. Tufa buildup is considerable where thermal water is exposed to atmosphere in pits or manholes as it is returned to the Creek Arch.
- Multiple 4" sanitary pipes gather and then discharge to the 12" municipal sewer pipe which runs hung inside the Creek Arch.

D2040 Rainwater Drainage

- All roofs were pitched toward the rear of the building with no roof drains or associated rainwater conductors located within the building structure.

D2050 Other Plumbing Systems

- A sump pit with three sump pumps is located in front of the existing boilers to capture rainwater that runs down the exterior steps on the north side and through the door into the mechanical room. It is believed that the condition of the gutters and downspouts may contribute to this issue.

- A gas service on the northwest corner of the building is extended to the laundry domestic water heater and gas dryers.
- The gas will be upgraded to serve additional loads of the renovation project including a gas furnace, heating boilers, and an emergency generator.

D30: HVAC

- The existing HVAC system and associated miscellaneous equipment at the Buckstaff Bathhouse remains in place until the HVAC renovation project design, which was completed in February 2024, is bid. Therefore, only an abbreviated description of the existing systems is provided since nearly all will be removed under that project's scope of work. The future system as designed was reviewed as it relates to the building use and existing to remain items in Appendix G.

D3010 Energy Supply

- Hot thermal water (135°F) is used for building heating. This low temperature heating source is able to adequately heat the building under most conditions. However, using this thermal water directly in coils overtime has likely derating the equipment capacity and efficiency in doing so.

D3020 Heat Generating Systems

- The original steam boilers and associated equipment are abandoned in place. These will be removed under the HVAC project. All steam feed terminal equipment, including cast iron radiators, have long been removed from the building.

D3030 Cooling Generating Systems

- No central cooling generation equipment exists.

D3040 Distribution Systems

- The existing built-up air system is fed with outdoor air through window wells along the south end of the front façade. The outdoor air passed through a series of spaces, each of which contain combustible

materials which should not be stored in the outdoor air path. The preheat louvers, dampers, preheat coils, fan and all other associated systems will be demolished to the point of the supply distribution plenum and supply ductwork which will remain. Relief ductwork in walls to roof hoods is to remain throughout the building. Fan coil units, radiators, and ceiling fans used throughout will be removed.

D3050 Terminal and Package Units

- The existing window a/c units and electric space heaters will all be removed.

D3060 Controls and Instrumentation

- The existing fan coil units and builtup air handler have associated pneumatic thermostats. The associated compressor is located in the basement. Many of these controls look to be inoperable.

D3090 Other HVAC Systems and Equipment

- The existing plug in dehumidification units and portable fans will all be removed.
- The dryer exhaust duct is routed through the crawl space at the rear of the basement level, through the rear wall and up to near the roof line where it is turned horizontal for discharge. While it appears to be significantly oversized, the lint buildup at the discharge suggests that the system is due for a routine cleaning.

D40: Fire Protection

D40: Sprinkler System

- The building is not protected with a sprinkler system and has no provisions for one.

D50: Electrical

- The existing Electrical system at Buckstaff Bathhouse remains in place currently until the HVAC and Electrical renovation project design, which was completed in February 2024, is bid. The following is an

abbreviated description of the systems that remain. In addition, the future system design is described as it relates to the building use and existing to remain items.

D5010: Electric Service & Distribution

- The existing primary electric service appears to originate from the opposite side of Central Avenue, traveling below grade to a recessed in-grade composite quazite box that sits just across the property line on the neighboring Ozark Bathhouse front lawn. Passing through the below grade composite quazite box, primary feeds continue below grade to an Entergy Arkansas (Utility Company) owned, operated, and maintained existing pad mounted oil-filled transformer. The primary voltage rating and KVA rating for the existing utility owned transformer were unable to be obtained during the site investigation. The existing transformer secondary however, has dual 208Y/120V secondary taps, serving both the Ozark and Buckstaff Bathhouses respectively.
- The Buckstaff Bathhouse is served via one existing 800A, 208Y/120V, 3PH-4W Main Distribution Panel 'MDP' located in the basement boiler room. Distribution Panel 'MDP' is dedicated to serving the entire building load including existing branch panelboards, mechanical air handling equipment, the buildings only elevator, spring whirlpool equipment, and laundry equipment. At first glance, dust can be observed accumulating on the Distribution Panels protective enclosure. Age and operability wise, it appears that Distribution Panel 'MDP' is approximately 15-20 years old, and in great working condition.
- A new 1200A, 208Y/120V, 3PH-4W Main Distribution Panel with new line side conductors are proposed to be installed in order to handle the buildings additional load following HVAC upgrades. The proposed service entrance replacement indicates the existing pad mounted transformer to remain however existing secondary conductors would be removed and replaced. New secondary conductors would be pulled through a new below grade secondary ductbank, to a new elevated electric room.
- Each floor is equipped with an existing 225A, 208Y/120V, 3PH-4W branch panelboard that serves general lighting, receptacles, and typical 120V miscellaneous loads for respective floors. Branch panelboards at each floor appear to be stacked behind the elevator shaft, indicating that conduit risers follow the elevator shaft and distribute to each floors dedicated panelboard. All branch panels observed on the main floors, appear to be in great condition and have no signs of general wear and tear. Approximate time of installation is about 15-20 years ago.
- Following the installation of the new 1200A Main Distribution Panel, new conduit and conductor will be routed along the basement ceiling, to the existing electrical conduit riser location. Conductors feeding each panel will be removed entirely however, existing vertical conduit will remain for reuse. At the bottom of the electrical risers, a junction box will be provided in order to intercept the existing electrical risers that distributes up through the building. New conductor will be provided in both the new conduit routed through the basement, as well as the existing vertical conduits routed up through the building. The existing 225A branch panels at each floor will be existing to remain and back fed from the new distribution.
- The basement area, which houses much of the laundry and HVAC equipment, has three (3) dedicated branch panelboards. One (1) 225A, 208Y/120V, 3PH-4W panel located in the existing boiler room (directly across from the buildings Main Distribution Panel 'MDP') serves much of the general lighting, receptacles, basement sump pumps, and typical 120V miscellaneous loads. While in great condition, dust was observed accumulating within the panelboard's protective enclosure.
- The existing basement house panel will be replaced in kind and relocated to a new-

ly constructed electrical room. Existing branch circuiting would be intercepted and extended to the new branch panelboard.

- Within the basement laundry room, two (2) 225A, 208Y/120V, 3PH-4W branch panelboards reside, serving mostly laundry equipment, laundry elevator systems, bathtub whirlpool systems, and a handful of window air conditioners scattered throughout the building. The bathtub whirlpool systems were found to be located on both the First and Second Floor bath halls. Both laundry panelboards look to be in good shape however, large amounts of dust and lint can be observed on the interior and exterior sides of protective enclosures. Panel board life is approximately 15-20 years post installation.
- Both of the basement laundry room panels are planned to be replaced in kind; however, they will be relocated to a new location. Both panels are to be replaced in kind, with the interception and extension of existing branch circuiting to the new panel locations.

D5020: Lighting & Branch Wiring

- The standard light fixture in most public areas of the Buckstaff as built in 1912 was a flush-mounted plafonnier, a type of ceiling fixture with a bowl-shaped glass shade. Fixtures of this type had become common in high-style spaces like the public rooms of hotels and ocean liners, over the prior decade. Historic photographs show these fixtures in rooms 100, 101, 110, 212, 217, and 300. The surviving fixture within the elevator cab may be identical to these fixtures and appears to be the only such fixture left in the building. This fixture features an inverted dome shade with a cut starburst pattern and a molded brass canopy with scrolled bands. Historic photographs suggest that these fixtures were typically either centered in a panel of the ceiling or mounted to the underside of a beam. (Figures 1.D.76-77)
- The original Gymnasium (210/G15) featured a different type of flush-mounted

ceiling fixture. Photographs published in a 1916-1919 company booklet appear to show fixtures with a smaller base, indicating a single bulb, and flaring glass shades. These may have matched the shades on the original sconces of the lobby or may have been bell-shaped.

- The company appears to have replaced the original ceiling fixtures with linear fluorescent fixtures in most rooms before 1973, probably in the 1950s or 1960s. The lobby fixtures were succeeded by pendants with large, spherical shades by 1973. However, the original fixtures remained in room 109 in 1973.
- The 1910 elevation drawing of the lobby (100) and a photograph in the 1912 booklet show that each of the pilasters flanking the desk was fitted with two three-light down-light electric sconces, one on the outer face and one on the face above the desk. These sconces reflected the influence of the Arts and Crafts Movement and were of a popular style called “Mission” in the 1910s. They had metal components with square sections, square knuckle fittings at corners, and four-sided glass shades with angled sides. The lobby sconces appear to have survived until at least 1969 but the company had replaced them with new fixtures by 1973. Historic photographs indicate that matching sconces were originally in place on the west face of the corresponding pilasters in the third-floor lounge (300). The lobby sconce locations are now fitted with what appear to be reproduction electric sconces with round components, including bell escutcheons and bell-shaped shade holders. These sconces point upward. The lounging room (300) sconce locations are now fitted with two-arm sconces that appear to date from the 1920s or 1930s. These fixtures were in place by 1973, but their origin and date of installation are currently unknown. (Figures 1.D.76,79-80)
- In 2017, the company installed a large pendant fixture in the center bay of the lobby. The Buckstaff manager at that time reports that the fixture was purchased from 1st-

Dibs. Its origin is unknown, but it appears to date from the 1920s or 1930s. The center of the underside of the fixture is now fitted with a mismatched tapered conical component. The company replaced most of the existing linear fluorescent fixtures with LED fixtures in 2017. They replaced the lobby pendants with five-bladed ceiling fans with central light fixtures fitted with oversized “schoolhouse”-type shades of white opalescent glass. The company installed similar fans but with smaller “schoolhouse”-type shades in some other rooms. (Figure 1.D.78)

- The third-floor lounging room (300) now has five-arm chandeliers that appear to date from the 1920s or 1930s installed in the center of each ceiling panel. These fixtures were in place by 1973, but their origin and date of installation are currently unknown. (Figure 1.D.81)

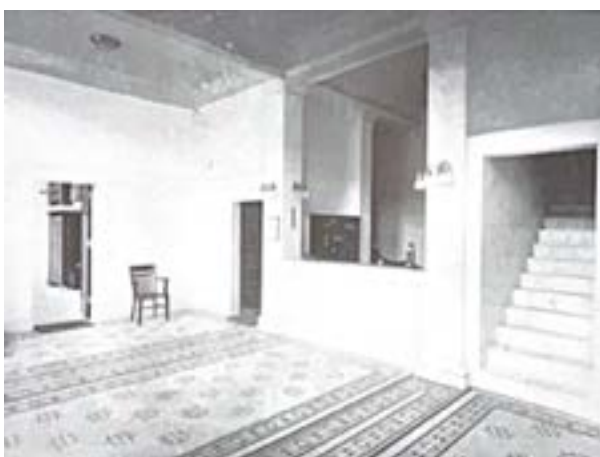


Figure 1.D.76. Lobby (100), facing northeast in 1912 showing original ceiling fixtures and sconces.

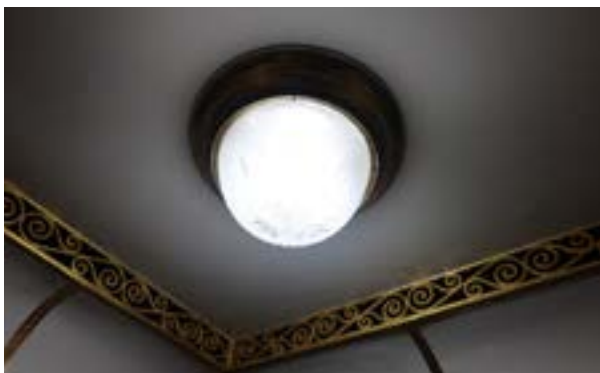


Figure 1.D.77. Plafonnier-type fixture in elevator cab. This fixture may match the original fixtures in the building.



Figure 1.D.78. Salvaged chandelier of unknown origin, purchased from 1stDibs and installed in room 100 by the company in 2017.

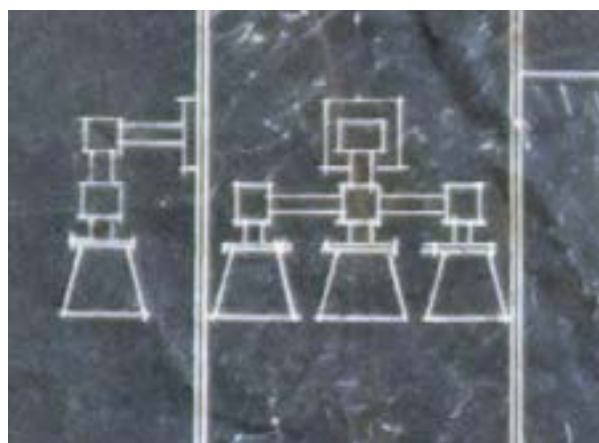


Figure 1.D.79. Detail of interior elevation drawing of lobby, October 14, 1910, showing typical Arts and Crafts style sconces at pilaster south of desk.

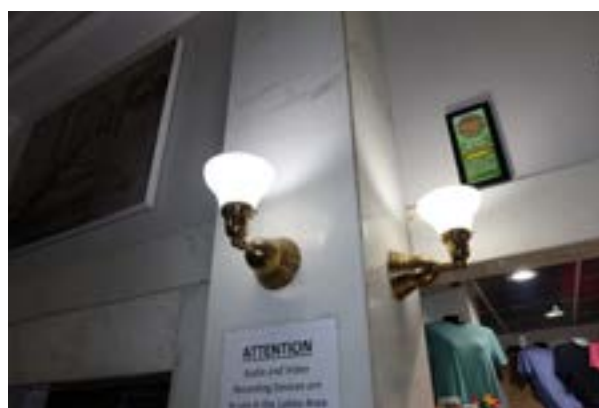


Figure 1.D.80. Sconces installed by the company around 2017.



Figure 1.D.81. Typical chandelier and sconce in third-floor lounging room (300). These fixtures likely date from the 1920s or 1930s and were in place by 1973.

D5030: Communication & Security

- The existing building is not protected by a Fire Alarm system and has no provisions for one.
- Existing Telephone and Telecommunications systems enter the building in the below grade boiler room, where both systems are mounted to a Telecommunication back board.
- An existing security system is present; however, the security head end was unable to be located during the site investigation.

D5090: Other Electrical Systems

- No existing emergency generator or emergency distribution system was observed.
- A new natural gas fired 45KW 208Y/120V, 3PH-4W generator is planned for installation. Associated equipment includes a 200A/3P automatic transfer switch and a 225A, 208/120V, 3PH-4W emergency branch panel. This branch panel is dedicated to serving existing basement sump pumps and the existing elevator.
- No existing lightning protection system was observed.
- Existing emergency lighting includes dual head battery packs and exit signage located at strategic locations along egress paths. Quantities of emergency wall packs appeared to be lacking in stairwells and Ground Floor egress exits.

G20: Site Improvements

G2030: Pedestrian Paving

G2031: Paving & Surfacing

Circulation					
Magnolia Promenade Lawn Border	Figure 1.D.1	A 9-foot-wide planting area with a raised curb, parallel to Central Avenue, extending continuously from Reserve Street to Fountain Street. Curbs are nine-inch-tall exposed aggregate concrete and provide a raised planting strip for the turf grass and southern magnolias. Original curbs were limestone, and the border was wider. 3 magnolias in one curb group in front of the Buckstaff Bathhouse.	1918 / 1989 (replaced)	Good (Altered)	C
Magnolia Promenade Concrete Walk	Figure 1.D.1	12-foot-wide sand-finished concrete surface. Two-foot-wide broom finish concrete bands on each side.	Design appeared in the late 1890s. 1918 / 1989 (replaced)	Good	C
Front Walk	Figure 1.D.81	8.5 by 18-foot-wide concrete area leading from the front ramp to Magnolia Promenade.	1918/1985 (replaced)	Good	C
Central Avenue	Figure 1.D.1	55-foot wide, asphalt paved road providing vehicular access on the west side of Bathhouse Row.	1890/1930s	Good	C
South Walk	Figure 1.D.82	4–10-foot-wide concrete walk between Lamar and Buckstaff Bathhouses. Broom-finished concrete. Has surface drains throughout and contains a concrete swale. Two sets of steps access the building from this walk.	1912/1923	Good with some minor cracking; trash and debris present	C
North Walk	Figure 1.D.83	Concrete paving on the north side of the building provides access to the north stair and the rear of the building. Varies in width. 2–3.75 feet wide. Has surface drains throughout. Stone curb wall on north side of walk retains turfgrass area between Buckstaff and Ozark Bathhouses.	1912	Good	C

Ramp and Stair Entry	Figure 1.D.85	8-foot-wide broom-finished concrete ramp with 11 percent slope. Extends from the front walk to the building porch. Concrete cheek walls are painted white and have brass handrails on top. Two sets of five limestone stairs with handrails are located on each side.	1912 (stairs), ca.1914-1918 (ramp)	Good	C
Basement Stair (Southwest)	Figure 1.D.82	Seven broom-finished concrete steps are located on the southwest side of the building, with a concrete retaining wall and a steel pipe guardrail on the south side of the steps. Have been present since the construction of the bathhouse. Blue-painted pipe railing.	1946-1947	Good	C
First Floor Stair (Southeast)	Figure 1.D.86	Five broom-finished concrete steps on the southeast side of the building with a concrete retaining wall and a steel pipe guardrail on the south side of the steps. Added during the 1946-1947 addition. The lowest tread is cut through to allow drainage. Blue painted pipe railing and handrail.	1946-1947	Fair, some cracking	C
Basement Stair (North)	Figure 1.D.86	Two sets of five and nine broom-finished concrete steps on the north side of the building, with a concrete retaining wall and a steel pipe guardrail on the north side of the steps. Have been present since the construction of the bathhouse. Black painted rail at top of stair wall, no handrail present.	1912	Good	C
Curved Concrete Walk	Figure 1.D.87	2'-10"-wide concrete walkway in south and north turf grass areas. Connects to the north and south walk and entry walk to the front stair. The northern section was altered at an unknown date from curved to angular.	1912 with later updates	Good with some cracking	C

1D: PHYSICAL DESCRIPTION AND CONDITION ASSESSMENT

Landscape Surface Drainage	(a) Figure 1.D.86 (b) Figure 1.D.88 (c) Figure 1.D.11 Figure 1.D.89	Sheet flow is generally away from the bathhouse except for: (a) A shallow concrete swale near the southeast side of the bathhouse to move water away from the building foundation. A “flume” is constructed below the bottom step of the northeast stair to allow the concrete swale to flow east to west under the stair. This condition has resulted in some stair cracking. (b) Paved and sloped area between ramp/buttress and south side of the bathhouse. Cracked and filled with debris. (c) Area paralleling the west side of the low hedge is graded to direct water to 3 brass inlets throughout. (d) Four drain inlets in turfgrass or concrete to facilitate drainage to the subsurface system. There are also inlets at the downspout locations around the building.			
Landscape Subsurface Drainage		The subsurface drainage system runs along the north and south sides of the bathhouse. There is also a subsurface system running parallel to the Magnolia Promenade,	Unknown / not assessed	Unknown	U



Figure 1.D.81. Front walk leading to stair and ramp entry. View to southeast (RATIO, 2025).



Figure 1.D.84. Detail view of the stone curb wall adjacent to the north walk. The stones and construction are similar to the North Retaining Wall east of the building. View to northwest (WLA Studio, 2025).



Figure 1.D.82. View of the south side of the Buckstaff Bathhouse, which includes a walk that leads to two sets of stairs and the rear of the building. The concrete area between the stair wells of the buildings (photo right) is graded to provide drainage to the inlet shown in the photo (WLA Studio, 2025).



Figure 1.D.85. Front ramp entry and stairs. Stairs flank both sides of the ramp. View to northeast (WLA Studio, 2025).



Figure 1.D.83. Concrete walk north of the bathhouse, which includes a stone curb to retain the turfgrass area between Buckstaff and Ozark. The walk provides access to the north stair. View to east (WLA Studio, 2025).



Figure 1.D.86. There are three sets of exterior stairs on the north and south side of the Buckstaff Bathhouse. The southwest stair is visible Figure 1.D.59. View of the south side of the Buckstaff Bathhouse, which includes a walk that leads to two sets of stairs and the rear of the building. The concrete area between the stair wells of the buildings (photo right) is graded to provide drainage to the inlet shown in the photo (WLA Studio, 2025).; southeast stair (left photo); north stair (right photo).



Figure 1.D.87. Turf grass area between the hedge and bathhouse (south panel, left; north panel, right). The front lawn has generally consistent cover. The grass species are varied, and there are some areas of minimal vegetative coverage. Concrete walks run through the front turf grass area and connect to the north and south walks and the front building entrance. Nandina are visible in both photos and a large holly is visible in the photo on the right (WLA Studio, 2025).



Figure 1.D.88. Paved area between the southeast corner of the bathhouse and the stone buttress/ramp is paved with concrete, sloped to facilitate drainage from behind the building to the surface drainage south of the building. The concrete is in fair condition with cracking and debris present (RATIO, 2025).

G2050: Landscaping

G2055: Planting

Vegetation					
Holly hedge	Figure 1.D.1	A Chinese holly (<i>Ilex cornuta</i>) hedge lines the Magnolia Promenade's concrete walk. There is one section of dead shrubs along the southern edge of the front turf grass area.	1918	Good/ Fair (sections missing)	C
Southern Magnolias	Figure 1.D.1	Southern magnolias (<i>Magnolia grandiflora</i>) along the "Magnolia Promenade" are planted in a raised turf grass bed that parallels Central Avenue. The original design intent was three rows of trees, but only one remains. Four trees in two separate raised lawn borders in front of Buckstaff. Several magnolias exhibit signs of stress, including root restriction and exposure.	Ca. 1918 / replanted 1950s	Fair; sub-standard root conditions	C
Raised Lawn Border	Figure 1.D.1	Turf grass planted under the southern magnolias in Magnolia Promenade.	1918/ rebuilt 1989	Fair; areas of missing turf and exposed soil	C
Front Lawn	Figure 1.D.87	Turf grass panels that extend from the front of the bathhouse to the holly hedge. Reinforces the consistent setback of the buildings from Central Avenue.	1918	Fair; some patches of missing turf and inconsistent cover	C
Holly and Nandina	Figure 1.D.87	Chinese holly (<i>Ilex cornuta</i>) and several nandina (<i>Nandina domestica</i>) in front of the bathhouse. This vegetation is not part of the original design for Bathhouse Row.		Good	NC
Volunteer Vegetation	Figure 1.D.88	Located along the building edge and near the retaining walls behind the building. Mostly consists of invasive exotics such as nandina and elaeagnus (<i>Elaeagnus pungens</i>). Moss is present in damp locations. Grasses and forbs grow on some of the more level ground surfaces.		Good	NC

G2059: Other Landscape Features

1D: PHYSICAL DESCRIPTION AND CONDITION ASSESSMENT

Feature Name	Photo #	Description	Date	Condi- tion	Contri- bution
Natural Features					
Rock Outcrop	Figure 1.D.90 Figure 1.D.93	Rock outcrop behind the bathhouse and below the mortared stone retaining wall. Exposed during the construction of the bathhouse.		Good	
Topography					
Level Area		This zone encompasses the Magnolia Promenade, the front turf grass area, and the building.	1884 (completion of the creek arch)	NA	C
Linear Edge created by Stone Retaining Walls		Retaining walls create edge along the east side of the site, with the Grand Promenade above.		NA	C
Spatial Organization					
Magnolia Promenade	Figure 1.D.1	Linear pedestrian promenade that extends from Reserve Street to Fountain Street and runs across the west side of the Buckstaff Bathhouse site. 12-foot-wide concrete walk and an 8-foot-wide raised lawn border with four magnolias (within the Buckstaff site).		Fair to Good	C
Bathhouse Setback from Central Avenue		Setback of +/- 50 feet from Central Avenue consistent with other buildings on Bathhouse Row.		Good	C
Low Holly Hedge	Figure 1.D.1	Surrounds front turf grass area on north, south, and west sides. One area on the southern border exhibits blight.	1918	Good to fair (areas of blight)	C
Narrow Rear Building Access	Figure 1.D.92	2–6.5-foot-wide space on the east side of the building adjacent to the retaining wall.		NA	C

Feature Name	Photo #	Description	Date	Condi- tion	Contri- bution
Structures					
South Stone Retaining Wall	Figure 1.D.93	Mortared limestone retaining wall with limestone capstone retaining the hill on the east side of the bathhouse. Exposed rock outcrop serves as foundation. Irregular-shaped stones in an irregular pattern. Ranges in height from 13 to 15 feet. Creates the edge between the Buckstaff Bathhouse site and the Grand Promenade above.	Early 1900s	Good	C
North Stone Retaining Wall	Figure 1.D.94	Mortared stone retaining wall with limestone capstone. Approximately 8 feet high. Rectangular-shaped mortared stones.	Early 1900s	Fair	C
Remnant Concrete Piers	Figure 1.D.96	Concrete piers from a cooling tank present in the early 1900s.	Early 1900s	Fair, concrete deteriorated	C
Remnant Base for Exedra Wall	Figure 1.D.95	Stone base of one of the historic entrances to the Mountain Sidegrounds and later Grand Promenade (entrance #2). Irregularly shaped mortared stone with poured concrete slabs.	1894	Fair, concrete deteriorated	C
Stone Buttress/Ramp	Figure 1.D.97	Between Lamar and Buckstaff Bathhouses. Mortared limestone ramp with turf surface. Ramp begins at the south walk and runs east toward a rock outcrop. Cheekwalls are stone, and the surface is turf grass.	Early 1900s	Good	C
Covered Break Area	Figure 1.D.99	Wood shed-roof structure with corrugated plastic roof. Constructed from dimensional lumber. A painted wood screen was installed between the break area and the west side of the building.	Unknown	Good	NC

1D: PHYSICAL DESCRIPTION AND CONDITION ASSESSMENT

Feature Name	Photo #	Description	Date	Condition	Contribution
Small-Scale Features					
Uplights	Figure 1.D.87	Lights bathhouse façade. Rectangular fixture set 18" above grade.	Early 2000s	Good	NC
Curb Wall on North Walk	Figure 1.D.83	28-foot long, 8-inch-high stone curb on the north side of the north walk. Stones are hewn, rectangular-shaped, and set with mortar. Retains the turfgrass area between Buckstaff and Ozark Bathhouses.	Early 1900s	Good. Some vegetation is growing into the mortar.	C
Wayside	Figure 1.D.98	Black steel frame and posts with UV-protected interpretive sign panels containing photos and text.	1989	Good	NC
Strip Drains	Figure 1.D.89	Rectangular bronze strip drains by Urban Accessories on the east side of the Magnolia Promenade concrete walk. Existing drains were installed in 1990 during a major sidewalk reconstruction project to replace 1920s drains.	1920s/ 1990	Good	C
Electrical Transformer	Figure 1.D.100 Figure 1.D.102	Green metal electrical transformer located on the north side of the bathhouse, Set on an 8-foot-square concrete pad.	ca.1997	Good	
Electrical Disconnect Boxes		Located east of the electrical transformer on the north side of the bathhouse. Set on a 3-foot-square concrete pad.	ca.1997	Good	NC
HVAC Equipment	Figure 1.D.100 Figure 1.D.102	Metal HVAC equipment is located on the northeast side of the bathhouse. Set on a 7-foot-square raised steel pad. The pad is elevated on concrete footers.	ca.1980s	Good	NC
Gas Meter	Figure 1.D.101	At the northwest corner of the bathhouse.	Unknown		U
Ornamental Lights	Figure 1.D.1	Two are installed along the west side of the lawn border. Five cluster globe top on cast iron fluted pole and cast iron bases.	1920s; rehab project in the 1980s	Good	C



Figure 1.D.89. The east edge of the sidewalk is paved to facilitate drainage to three brass strip drains. While there is some ponding present, the system works to drain water from the concrete walk to a subsurface drainage system (WLA Studio, 2025).



Figure 1.D.92. Narrow area between the east side of the building and the stone retaining wall. The north and south retaining walls are visible in this photograph. View to south (WLA Studio, 2025).



Figure 1.D.90. Exposed rock outcrop (indicated) on the east side of the Buckstaff Bathhouse. The outcrop serves as a foundation for the mortared retaining wall above. View to north (WLA Studio, 2025).



Figure 1.D.93. South retaining wall, set on exposed rock outcrop. The stones are mortared and irregular in an irregular pattern. The wall has a limestone cap. View to north (WLA Studio, 2025).



Figure 1.D.91. Blighted section of the holly hedge along the southern border of the front lawn area. View to south (WLA Studio, 2025).



Figure 1.D.94. North retaining wall, set partially on exposed rock outcrop. The stones are rectangular-shaped and mortared in an ashlar pattern. Square stone piers are spaced throughout the wall. View to east (WLA Studio, 2025).



Figure 1.D.95. Remnant pier for former location of the exedra. View to east (WLA Studio, 2025).



Figure 1.D.96. Remnant concrete piers from a former cooling tower at the site. Views to east and southeast (WLA Studio, 2025).



Figure 1.D.97. Stone ramp/buttness between Lamar and Buckstaff Bathhouses. The cheekwalls are mortared irregularly shaped stone. The surface once had turf growing in it, but vegetation now consists of moss, vinca, and nandina. View to southeast (WLA Studio, 2025).



Figure 1.D.98. Buckstaff Bathhouse Wayside (ARSEE, 2025).



Figure 1.D.99. A wood shed structure with corrugated plastic provides cover for a staff break area on the south side of the building. There is a painted wood screen installed between the break areas and the west side of the building to screen it from the public view. View to the West. (WLA Studio, 2025)



Figure 1.D.100. Electrical and HVAC equipment on the north side of the building (WLA Studio, 2025).



Figure 1.D.101. Gas meter at northwest corner of the Bathhouse (RATIO, 2025).



Figure 1.D.102. Access lid located on side lawn in front of the Buckstaff Bathhouse.

TREATMENT AND USE

PART 2

PART II

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2A Treatment and Use

Architectural

Alternative Programming: Relocating the Men's and Women's Bath Halls

Since 1912, the larger first-floor suite has housed men's facilities and the smaller second-floor suite has housed women's facilities. The women's facilities were expanded into formerly shared spaces during the 1921 remodeling, but the women's facilities remain smaller than the men's facilities. The demographics of bathhouse/spa goers have shifted since 1912, with women now outnumbering men.

The first floor (currently dedicated to men's bathing and the building lobby) has more usable square feet than the second floor (currently reserved for women's bathing). The project team was asked to consider the implications of switching the men's and women's programs to better serve park visitors and improve services for the concessioner's patrons. NPS staff in attendance at the treatment workshop noted that the Park may consider this scenario in a future concession renewal.

Swapping the men's and women's suites would likely include the following alterations:

First-floor Toilet rooms (104 and 108)

- Removal of urinals to create additional stalls.

Second-floor Toilet rooms (206 and 215)

- Addition of urinals.

Maintenance Recommendations

The building requires both intensive cleaning and regular cleaning.

- Recommend an annual condition assessment walkthrough by NPS staff to note conditions of building components.
- Recommend cycle of cleaning for tile, marble, and plumbing fixtures to reduce build-up of mineral residue.

Accessibility

As a federally-owned facility, the Buckstaff Bathhouse is subject to the Architectural Barriers Act Accessibility Standards (ABAAS). As a building listed in the National Register of Historic Places, the building falls under §F202.5 Alterations to Qualified Historic Buildings and Facilities.¹

The standards also provide several exceptions where compliance with the standards would threaten or destroy the historic integrity or significance of a facility as determined by the appropriate State Historic Preservation Official or Advisory Council on Historic Preservation. These exceptions apply to requirements for accessible routes (§F206.2) entrances (§F206.4), and toilet rooms (§F213.2).²

The existing main entrance ramp, installed in a remodeling between 1914 and 1918, is steeper than the allowable slope of 1:12 (§405.2). The ramp appears to have seen only maintenance since its construction. Three possible treatments could bring this condition closer to compliance, pending consultation with the SHPO or ACHP.

- Future reconstruction of the ramp could extend its length to the edge of the sidewalk. This appears to allow enough space to reduce the slope to below 1:10. This would still be non-compliant under §405.2 but would be closer to compliance than the existing ramps on most of the other bathhouses on Bathhouse Row. This option would be the least visually intrusive treatment.

- A platform lift could be added to one side of the main terrace. This treatment would be moderately intrusive but would allow the historic ramp to remain as is. Landscape Circulation Treatment 1 recommends realigning the north walkway around the side of the building to its historic curvilinear arrangement, potentially allowing for the construction of a spur to a platform lift at the north side of the terrace. The north walkway is currently 34" wide, which is 2" short of the minimum 36" clear width (§403.5.1) of walking surfaces. If a platform lift is installed on the north side of the terrace, the north walkway would need to be widened to meet the 36" minimum. Platform lifts present long-term maintenance and operations challenges.
- A ramp could possibly be added to one side of the front. Limited space on the Buckstaff Bathhouse property, historic hedges defining the boundaries of the property, the recommended rehabilitation of the north walkway to its historic alignment, and the high visibility of the property's front yard present significant challenges to this approach. A ramp extending into the adjacent Ozark Bathhouse front yard might be possible depending on the concession/lease agreement for that property. A ramp extending into an adjacent building's yard would be visually intrusive.

The front entrance is a pair of doors each measuring 27" wide. These are narrower than the minimum 32" clear width (§404.2.2). Automatic door openers could allow this opening to be compliant because the clear opening provided by both leaves in the open position (§404.3.1). The addition of an automatic door opener is recommended. An alternative treatment of replacing the historic paired doors with an offset pair with one leaf meeting the minimum clear width would remove historic fabric and would be visually intrusive.

Vertical circulation between the first and third floors is via the building's original elevator, installed in 1911. More detailed analysis of this elevator can be found in the elevator assessment.

Base elevator modernization is recommended to improve safety and make the elevator a compliant means of access between floors.

Within much of the first floor, historic doors between dressing, cooling, toilet, and bath hall rooms have been replaced with double-swing storefront doors. Most of these openings appear to provide compliant maneuvering clearances if the door were modified to swing in one direction. Several of these doors were propped open at the time of the site visit and may be left in this position during normal operation by the concessioner. If doors are not needed at these openings, they could be removed to create an accessible path without the need for maneuvering clearances.

Within the first-floor dressing rooms, the south (102) is the only one providing the minimum clear width for passage to the bath hall. Modifications to the historic changing cubicles could provide clear passage in room 110 and could provide a better path in room 102. These modifications would reduce the number of cubicles. Accessible changing cubicles could be created at the west end of dressing rooms 102 and 110. Some of the existing service and storage functions currently at the west end of the rooms could be accommodated in cabinetry or shelving at the locations of the removed cubicles.

Within changing room 217, three existing cubicles in the northeast corner could be modified to create two accessible cubicles. The door between this room and bath hall 212 provides appropriate maneuvering clearances. Within changing room 203, two accessible changing cubicles could be created at the west end of the room. However, the existing corridor to bath hall 212 lacks appropriate approach clearances to the door. Modification of this corridor would require more extensive alterations to adjacent rooms.

Within the second floor, doors to cooling room 216 lack appropriate maneuvering clearances. Reversing the swing of these doors could provide appropriate approach clearances. Modification of the door to toilet room 215 must be coordinated with modification of that room.

No fewer than one accessible toilet room per sex shall be provided (§F213.2). This should be possible by creating one accessible stall and at least

one accessible lavatory within one toilet room on the men's floor and one on the women's floor. The north toilet rooms (108 and 215) appear to provide sufficient space to create one accessible stall each (§604.8.1). This treatment will require reconfiguration of these toilet rooms. It is recommended that the historic marble toilet partitions be reused and reconfigured where possible to maintain the character of these spaces.

Within the bath halls, two existing bathtub compartments may be combined to create a tub compartment with appropriate clearances, seats, and grab bars, (§607). Contemporary tubs and sitz baths with compliant designs and dimensions should be provided within these compartments. Modification of existing steam cabinets to create an accessible experience appears to present significant challenges. The NPS and the concessioner should evaluate whether the potential to create compliant steam rooms would allow a comparable bathing experience for patrons who cannot enter the existing steam cabinets (§612). These steam rooms could be constructed within tub compartment enclosures in a manner similar to the historic steam cabinets along the east wall of room 106.

Vertical Circulation

The elevator assessment identified three potential treatment options to address safety and operational deficiencies of the 1911 elevator.

- Option 1: Base Elevator Modernization
- Option 2: Elevator Modernization with Automatic Doors
- Option 3: Complete Elevator Replacement

NPS staff in attendance at the treatment workshop preferred the precedent of the Fordyce Bathhouse elevator modernization, which is most similar to Option 1. The project should maintain as much of the historic fabric of the elevator as possible while taking steps to ensure staff and visitor safety.

Additional Recommendations

If a major rehabilitation or change in programming of rooms occurs in the future, consider reopening partitioned rooms and removal of dropped ceilings where possible. This is particularly important in

the lobby and office (100-101) and the third-floor lounging room (300), as well as several rooms (103, 107, 210, 213, 216) within the bathing suites.

Architectural Comments on Proposed HVAC project

The following comments are based on review of the construction documents for the mechanical, electrical, and plumbing drawings dated February 22, 2024. These comments attempt to address potential adverse effects on the historic fabric and architectural character of the building.

- Proposed vertical pipe chases should be installed over the top of the existing marble or tile wainscoting in a manner that their installation and future removal will leave the wainscoting unaltered. The proposed solid surface wainscot on the vertical pipe chases should be of a color similar to the marble or tile wainscot in each room.
- Proposed ceiling bulkheads (fascia and soffit) around new systems appear to be minimally intrusive in general.
- Proposed bulkheads around duct chases in room 300A are intrusive and should be eliminated if possible to reduce their adverse effect on the building's architectural character. These bulkheads interrupt the spatial volume of one of the historic lobbies and limit daylight access to the corridor portion of room 300. Consider replacing the intrusive chase between rooms 303 and 300C with a chase running across the ceiling of the landing of stair S1 between rooms 301 and 303. A bulkhead across the stair ceiling would be less visible and minimally intrusive. The duct chase and bulkhead between rooms 301 and 300D is not ideal but is less intrusive than the chase between 303 and 300C. If possible, hold the ductwork closer to the ceiling and raise the height of the bulkhead as high as possible to minimize the adverse effect.
- Proposed reuse of existing grilles and ductwork in the primary spaces of the first and second floors is ideal from an architectural perspective.

- The installation of small FCUs in most spaces should be minimally intrusive. These units should be installed in a manner that minimizes damage to existing marble and tile so that these historic materials are intact in the future, when these FCUs are removed at the end of their service life.
- The proposed light fixtures in the basement and in rooms 300C, 300D, 300E, and 301 have no adverse effect on the historic fabric of the building.

Treatment Recommendations & Alternatives

Two possible treatments are outlined below, followed by an outline of prioritized treatment recommendations.

Treatment: Preservation

The current treatment for the Buckstaff Bathhouse is a Preservation treatment, maintaining the building in its current form and anticipating regular maintenance and ongoing repair campaigns. A preservation treatment allows ongoing use of the building in its historic and current use. A preservation treatment should be regarded as a treatment of indefinite length, requiring regular maintenance and cyclical repairs to maintain the present condition of the resource. When unsympathetic modern elements (e.g. partitions and suspended ceilings) may interfere with the ongoing operation of the building, a preservation treatment would not preclude their removal.

The Secretary of the Interior's Standards for the Treatment of Historic Properties defines Preservation as follows:

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction... The Standards for Preservation require retention of the greatest amount of historic fabric along with the building's

historic form.¹

A preservation treatment would not preclude the research and investigation leading to an ultimate rehabilitation treatment. For this reason, a preservation treatment could serve as an intermediate level of treatment until research and investigation are completed and funding can be secured for a rehabilitation treatment.

Treatment: Rehabilitation

An alternative treatment for the Buckstaff Bathhouse would be a Rehabilitation treatment. This treatment would include sympathetic adaptations to support the building's preservation through active use. The building's size and interior configuration would remain as they are today. Sympathetic alterations could allow conversion of some parts of the buildings to other uses (e.g., converting either the north or south men's dressing and cooling rooms into a café or retail tenant space).

The Secretary of the Interior's Standards for the Treatment of Historic Properties defines Rehabilitation as follows:

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values. The Rehabilitation Standards acknowledge the need to alter or add to a historic building to meet continuing or new uses while retaining the building's historic character.²

A rehabilitation treatment could be part of a long-term plan for the building to remain in service in its original use or could be part of an adaptive reuse project.

Architectural

Priority: Serious

- Patch roof to stop ongoing leaks until roof can be replaced.

Priority: Moderate

- Clean out rear (east) yard, including brush, debris, and trash. Ensure proper drainage away from building.

- Clean out debris and dirt from basement.
- Plan for concurrent repair, rehabilitation, or restoration work to adequately address facility needs while minimizing disruption to operation of bathhouse.
- Once water infiltration issues have been addressed, repair damaged plaster and interior paint finishes.

Priority: Minor

- Touch up worn finishes on wood doors.
- Remove staining and mineral buildup from tile, marble, fixture, and hardware surfaces using the gentlest method possible and avoiding damage to the material.
- Consider removing paint from laylights below skylights in women's bath hall to restore original daylighting scheme.
- Consider removing bulkhead and suspended ceiling over center bay of office (101) to restore volume of space open to the lobby (100).

Structural**Priority: Serious**

- Remove loose concrete in the bottom of the 1st floor slab which could fall and hurt staff or damage equipment or stored materials. Patch with a cementitious-based patching material.
- Epoxy inject cracks in the perimeter basement concrete walls.
- Epoxy inject crack in the interior concrete wall of the crawlspace which occurs beneath a floor girder connection. Monitor this crack and if it widens or reopens install a steel support bracket beneath the end of the girder.

Priority: Minor

- Epoxy inject minor cracking in the perimeter concrete walls of the porch and ramp on the west elevation of the building.

Exterior Preservation**Priority: Serious**

- Replace broken downspouts on the east elevation.
- Inspect and repair remaining gutters and downspouts throughout the building.
- Replace deteriorated sealant joints wherever sheet metal counterflashings terminate into the brick masonry.
- Inspect and seal any gaps or other breaches in the sheet metal flashings that cover the limestone cornices at the upper roof level and below the 3rd floor windows.
- Repair the parapet where the flagpole fell and make watertight.

Priority: Minor

- Monitor the white coating covering the limestone and reapply as necessary.
- Monitor the loose steel lintels for signs of corrosion.

Treatment Recommendations: MEP Systems**Mechanical**

The building's HVAC systems are to be fully replaced once the project is bid. Refer to appendix for more information regarding the new system.

Treatment recommendations to the existing system while it remains in place.

- The outdoor air passes through a series of spaces as it is drawn in from the exterior to the fan inlet. Each space during our visit contained combustible materials which should not be stored in the outdoor air path. This issue should be resolved as quickly as possible.

Electrical

Existing locations frequently wet, damp, or high in humidity during normal business operations, were observed and appeared to be lacking proper GFCI protection at or ahead of branch circuiting serving receptacles at damp/wet locations. Some existing systems throughout the building, such as the whirlpool systems on both the first and second floors, were protected with GFCI breakers upstream.

The Mechanical, Electrical, and Plumbing drawings dated February 22, 2024, address the one-for-one replacement of the GFCI protection ahead of the whirlpool systems, but not ahead of or at, general purpose receptacles throughout damp/wet locations.

Preventative Maintenance/ Treatment Recommendations

While no incidents were reported by the NPS, it is recommended as a form of preventative maintenance and to reduce the potential for electric shock and or injury, the following areas be equipped with proper GFCI protection at each general-purpose duplex receptacle.

First Floor:

- Dressing 102
- Cooling Room 103
- Men's Bath Hall 106
- Massage 107
- Cooling Room 109
- Dressing 110

Second Floor:

- Women's Bath Hall 212
- Foyer 213A
- Foyer 210A

Plumbing

All the water sources are rich with mineral content causing significant scaling or buildup of tufa when and where exposed to atmosphere. Due to the nature of the water and age of the systems many emergency repairs with dissimilar materials and bypasses are evident throughout both on the three water systems as well as on the two sanitary sewerage and drain systems.

As the functionality of the plumbing systems is paramount to the ongoing use of the facility, a full piping system replacement should be a priority. The ability to perform the work associated with the HVAC replacement, while not impacting the entirety of the plumbing system, will have significant challenges with demolition and installation in the basement working around the existing active and abandoned plumbing piping. The downtime associated with the HVAC project is also the downtime that can be expected if replacing the plumbing piping in a non-phased approach.

Treatment recommendations to existing to remain.

- The drain at the base of the stair that accesses the boiler room should be cleaned of trash and leaf debris. The pipe from the drain to the sump pit should be jetted clean.
- The sump pit should be cleared of all mud and other debris. Cleaning should include mud on floor around the sump pit as well.
- The three sump pumps should be cleaned. Confirmed floats or other on/off controls mechanisms are in good working order.

Treatment Recommendations: Landscape

Overall Landscape Preservation Treatment Approach

Preserve the scale and form of contributing landscape features. Preserve the visual character of the site's spatial organization, with the buildings set back from Central Avenue, a hedge defining the road-side and north and south edges of the property, and the magnolia trees lining the sidewalk. Make necessary improvements to the drainage system around the building to ensure effective conveyance of stormwater away from the building.

Landscape Treatment Recommendations

Landscape Vegetation Treatment 1:

The front lawn is a character defining feature, therefore preserve and maintain the existing lawn at the front and sides of the building.

- Refer to the University of Arkansas Cooperative Extension for recent best practices of lawn maintenance.
- The maintenance schedule will depend upon the type of turfgrass used at the site. The current grass is a warm season species, probably Bermuda grass, with a mixture of common lawn weeds and cool season grasses mixed in.
- Species selection: historic documents suggest that Kentucky bluegrass was used during the historic period. Other types of turfgrass, in particular Bermuda grass, have shown to be more resilient and require lower maintenance. Bermuda grass will require weekly mowing during the active growing season.
- Bermuda is more commonly installed as sod rather than seed. Use sod to fill in places left over when removing existing shrubs and eliminating existing planting beds around the building (see Vegetation Treatment 2 and 3 below).

Landscape Vegetation Treatment 2:

The holly hedges lining the north and south edges of the front lawn are contributing features to the Buckstaff Bathhouse's significance, therefore replace dead holly hedge on the south side of the lawn to preserve the historic character of the landscape. The treatment recommendations chapter of the 2010 Cultural Landscape Report noted that the hedges around the secondary entrances to the bathhouses were noncontributing and should thus be removed. However, photographs from the period of significance show hedges lining the north and south of the lawns along Bathhouse Row, serving as a unifying element between all of the bathhouses on the row. These hedges are thus historic character-defining features and should be maintained and replaced in kind when necessary.

Landscape Vegetation Treatment 3:

The various shrubs growing along the foundation of the front façade and on the sides of the front porch/ramp are non-contributing, therefore remove the foundation shrubs.

- Additional fine grading may be required to ensure positive drainage away from the building.
- Resod with grass that matches the rest of the lawn.

Landscape Vegetation Treatment 4:

The woody trees and shrubs that are spontaneously growing on the stone wall behind the building and growing in the open space between the wall and the building are non-contributing. This vegetation creates leaf litter that traps moisture along the rear elevation. This vegetation has root systems that can damage masonry features. Therefore, remove the vegetation growing in the area behind the building.

- Cut trees and shrubs close to the ground and treat with herbicide.
- Regularly rake the fallen leaves from the area along the rear elevation of the building.

Landscape Vegetation Treatment 5:

The magnolia trees growing in the planting island along Central Avenue are a character-defining feature, therefore preserve and maintain the trees to maximize their health. Replace in kind when necessary.

- The magnolia trees have a restricted root zone area, evidenced by the large number of roots growing abnormally close to the surface. This makes the trees more vulnerable to changing environmental conditions (e.g., drought) and will likely shorten their lifespan and overall health/vitality/form.
- When a tree is replaced, maximize the area of non-compacted, root zone. Removal must include removing the root ball in order to provide the newly planted tree a viable root zone.
- A wholesale effort to renovate all of the magnolia trees along Central Avenue should be considered if a significant number of trees die or are showing signs of serious deterioration.
- If a large area of the magnolia planter in front of the building is going to be replanted and if the adjacent sidewalk is replaced, consider adding a structured soil system that would extend the available rootzone under the sidewalk.

Landscape Utilities Treatment 1:

Clear debris from all drop inlets and drain inlets. Inspect interior of drainpipes if there appears to be a drainage problem. Fix all building gutters to convey water from the building to a working drain and drain pipe.

Landscape Utilities Treatment 2:

Remove flood lights in front yard and replace with lighting that conforms to NPS-approved Night Skies outdoor lighting principles.

- Engage the NPS Night Skies team to determine if illumination of the front façade of the building is necessary.
- If NPS wants to continue lighting front façade, identify minimum light levels re-

quired and select fixture that is shielded to minimize light pollution.

Landscape Circulation Treatment 1:

Realign north walkway around the side of the building to its historic curvilinear alignment.

- The north walkway's alignment historically mirrored the current curvilinear alignment of the south walkway.
- The north walkway should be realigned to mirror its south counterpart and more accurately reflect the historic landscape design.

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ASBESTOS & LEAD CONTAINING PAINT INSPECTION REPORT

APPENDIX B

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June 19, 2025

Seven Generations Architecture & Engineering, LLC
600 E. Michigan Avenue, Suite B
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Attn: Mr. Alex Hokkanen

Re: Asbestos and Lead-Containing Paint Inspection Report
Buckstaff Bathhouse
509 Central Avenue
Hot Springs, AR
Terracon Project No. 35247204

Dear Mr. Hokkanen:

The purpose of this report is to present the results of an asbestos and lead-containing paint inspection performed on November 18, 2024 and May 14, 2025, at the above-referenced site in Hot Springs, Arkansas. This inspection was conducted in accordance with Terracon's proposal P35247204 dated April 2, 2024. In addition, mercury vapor was screened in client specified rooms that historically were potentially utilized for mercury treatments. We understand that this inspection was requested to facilitate the potential renovations to the building.

Asbestos was identified in samples collected and analyzed for this project. **Lead containing paint was identified** in samples collected and analyzed for this project. Please refer to the report for mercury vapor observations.

Terracon appreciates the opportunity to provide this service to Seven Generations Architecture & Engineering LLC. If you have questions regarding this report, please contact Jody Adams in our Bryant, Arkansas Office at 501.870.9292.

Sincerely,
Terracon Consultants, Inc.

Prepared by:


Jody Adams, P.G.
Project Manager

Reviewed by:


Matt Johnston
Authorized Project Reviewer

Asbestos and Lead-Containing Paint Inspection Report

Buckstaff Bathhouse

509 Central Avenue

Hot Springs

June 19, 2025

Terracon Project No. 35247204

Prepared for:

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600 E. Michigan Avenue, Suite B

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■ Environmental
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ASBESTOS AND LEAD-CONTAINING PAINT INSPECTION REPORT

**Buckstaff Bathhouse
509 Central Avenue
Hot Springs, Arkansas**

EXECUTIVE SUMMARY

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead-containing paint inspection of the Buckstaff Bathhouse located at 509 Central Avenue in Hot Springs, Arkansas. The purpose of this inspection was to identify and sample suspect asbestos-containing materials (ACM) and lead-containing paints (LCP) to provide information regarding the identity, locations, condition and approximate quantities of ACM and LCP that may require special handling and waste disposal as part of the potential seismic upgrades to the building. Suspect materials on the roof were not included in the scope of the inspection.

The asbestos inspection was performed on November 18, 2024 by State of Arkansas certified asbestos inspector in general accordance with the sampling protocols established in Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763, the Asbestos Hazard Emergency Response Act (AHERA), and in general accordance with Terracon's Proposal P35247204 dated August 20, 2024.

Terracon collected 35 bulk samples from 9 homogenous areas of suspect ACM observed.

Asbestos was identified in the following material:

- Window glazing on basement windows
- Caulking (white) on exterior windows on the porch

Terracon collected 24 samples of suspect LCP from various painted surfaces observed at the site. Lead in a concentration above the analytical limit of detection was identified in 22 of the 24 paint samples. Occupational Safety and Health Administration (OSHA) regulations govern exposure of workers to lead, regardless of the concentration of lead identified. The OSHA regulations, which have been established for general and construction industries, cover any type of workplace activity that could expose an employee to potential lead contamination (OSHA Standards 29 CFR 1926.62 and 1910.1025).

In addition, mercury vapor was screened within rooms identified by the Client to have historically been utilized for mercury treatments (areas of concern). Mercury vapor readings were compared to background readings obtained from areas with no history of mercury treatments. The readings from the areas of concern did not indicate concentrations above the background readings from the remaining areas of the building and were below the Occupational Safety and Health Administration (OSHA) of 0.1 milligram per cubic meter (mg/m³).

Please refer to the report for additional information.

ASBESTOS AND LEAD-CONTAINING PAINT INSPECTION REPORT

**Buckstaff Bathhouse
509 Central Avenue
Hot Springs, Arkansas**

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted an asbestos-containing materials (ACM) and lead-containing paint (LCP) inspection of the Buckstaff Bathhouse located at 509 Central Avenue in Hot Springs, Arkansas. It is our understanding the inspection was conducted to facilitate the potential renovations to the building.

Interior and exterior building components were inspected, and homogeneous areas of suspect asbestos-containing materials (ACM) were visually identified and documented. Although reasonable effort was made to inspect accessible suspect materials, additional suspect but unsampled materials could be located in walls, in voids or in other concealed areas. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763, the Asbestos Hazard Emergency Response Act (AHERA). Samples were delivered to an accredited laboratory for analysis by Polarized Light Microscopy (PLM). Suspect materials on the roof were not included in the scope of the inspection.

In addition, paint chip samples were collected in order to determine the presence or absence of lead content in observed paint.

Mercury vapor screening was conducted in rooms the Client identified as historically utilized for mercury treatments. Mercury vapor screening was conducted utilizing a Jerome J405 mercury vapor analyzer.

1.1 Project Objective

The purpose of this survey was to identify and sample suspect ACM and LCP. This inspection provides information regarding the identity, locations, condition, and approximate quantities of ACM and LCP that may require special handling and waste disposal as part of the renovation of the structure.

1.2 Reliance

This report is for the exclusive use of Seven Generations Architecture & Engineering LLC. Reliance by any other party on this report is prohibited without written authorization of Terracon and Seven Generations Architecture & Engineering LLC. Reliance on this report by Seven Generations Architecture & Engineering LLC and its affiliates and subsidiaries, and all

authorized parties will be subject to the terms, conditions, and limitations stated in this report and Terracon's proposal P35247204 dated August 20, 2024.

2.0 BUILDING DESCRIPTION

Building Description	
Building Description	Three-story occupied bathhouse. The building is approximately 27,000 sf.
Interior Description	Bathhouse with bathing areas, changing rooms, massage areas, bathrooms, and basement.
Interior Walls	Drywall and plaster
Interior Ceilings	Plaster and suspended ceiling tile
Interior Floors	Ceramic tile and unfinished concrete
Exterior walls	Plaster and brick
Roof	Membrane system. The roof and suspect materials on the roof were not included in the scope of the inspection

3.0 ASBESTOS INSPECTION FIELD ACTIVITIES

The inspection was conducted by Mr. Jody Adams, a State of Arkansas certified asbestos inspector; a copy of the asbestos inspector certificate is attached in Appendix H. The inspection was conducted in general accordance with the sample collection protocols established in EPA regulation 40 CFR 763, the AHERA. A summary of inspection activities is provided below.

3.1 Visual Assessment

Our inspection activities began with visual observation of the interior and exterior of the building (excluding roof) to identify homogeneous areas of suspect ACM. A homogeneous area (HA) consists of building materials that appear similar throughout in terms of color, texture and date of application. Interior assessment was conducted throughout visually accessible areas of the building. Building materials identified as concrete, glass, wood, masonry, metal or rubber were not considered suspect ACM.

Terracon observed above suspended ceiling tiles, where possible, but did not observe additional suspect materials except where noted; however, as Terracon could not assess above all ceiling areas, there may be isolated areas of additional suspect material present above the ceiling tile system.

Ceramic flooring and wall covering was observed in the building during the inspection. Due to the client provided information that the ceramic tiles would not be impacted by the planned renovations, Terracon did not break and remove the ceramic tile to for underlying suspect

materials. Suspect materials present beneath the ceramic tile should be assumed asbestos-containing until sampling and analysis can confirm or deny their asbestos content.

3.2 Physical Assessment

A physical assessment of each HA of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a material which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

3.3 Sample Collection

Based on results of the visual observation, bulk samples of suspect ACM were collected in general accordance with EPA sampling protocols. Random samples of suspect ACM were collected from each HA. Terracon collected bulk samples using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

Terracon collected 35 bulk samples from nine HAs of suspect ACM observed. A summary of suspect ACM samples collected is included as Appendix A.

3.4 Sample Analysis

Bulk samples were submitted under chain of custody to Moody Labs of Farmers Branch, Texas for analysis by PLM with dispersion staining techniques per USEPA's *Method for the Determination of Asbestos in Bulk Building Materials* (600/R-93-116). The percentage of asbestos, where applicable, was determined by microscopic visual estimation. In additional accordance with this method and USEPA regulation, if the laboratory identifies additional layers in the sample (ie. Mastic/adhesive on floor tile, wall system joint compound, tape, paper backing, gypsum, etc) each layer or distinct material are analyzed, and results reported individually. Moody Labs is accredited under the National Voluntary Laboratory Accreditation Program (Accreditation No. 102056-0).

4.0 LEAD-CONTAINING PAINT FIELD ACTIVITIES

Mr. Jody Adams conducted the lead paint inspection to identify LCP that may be present in the building prior to the potential seismic upgrades to the building. This information is necessary for contractors to comply with OSHA regulation 29 CFR 1926.62 Safety and Health Regulations for Construction – Lead.

Terracon collected 24 samples from representative paint coatings observed. These samples were submitted under chain-of-custody to EMSL in Cinnaminson, New Jersey for analysis by Atomic Absorption Spectrophotometry (EPA SW846 3050B; 7000B); the analytical results

are reported in percent by weight. EMSL participates and is accredited by the AIHA LAP accredited (#100194).

4.1 Site Limitations

It should be noted that suspect LCPs, other than those identified during the sampling, may be present in the building. This LCP testing is not considered comprehensive in nature, and the results are not intended to identify all lead hazards present in the building or to be used to prepare detailed cost estimates for abatement. Manufacturer applied powder coating is not considered a painted surface and not included in the sampling. Based on information provided by the client, the subject buildings are proposed for renovation and/or demolition. Suspect LCP which have not been specifically evaluated should be tested prior to disturbance of the material. If additional suspect LCP is identified during the renovation process, those materials should be assumed LCP pending sampling and laboratory analysis to rebut the presence of lead.

4.2 Methodology and Analysis

The lead-containing paint testing was conducted by scraping approximately 2 square inches of paint from the supporting substrate. Sample results reported below the limit of detection may contain lead at a concentration below the analytically defined limit. A summary of the lead-containing paint samples and analysis is included in Appendix D.

There were no additional materials that were assumed to be LCP. Any inaccessible areas that contain painted surfaces should be tested when access permits or should be assumed to contain lead.

5.0 MERCURY VAPOR SCREENING FIELD ACTIVITIES

Mr. Jody Adams conducted mercury vapor screening throughout the Client identified rooms that were historically utilized for mercury treatments as well as rooms that were not historically utilized for mercury treatments. The screening was utilized to determine if mercury contamination was present within the identified rooms and drain pipes.

Mercury vapor screening was conducted utilizing a Jerome J405 (Serial number 40501847). The Jerome J405 Mercury Vapor Analyzer is an ambient air analyzer with a range of 0.05 to 500 micrograms of mercury vapor per cubic meter ($\mu\text{g}/\text{m}^3$ Hg).

Terracon utilized "Search Mode" on the Jerome J405 that continuously draws in samples of air to search the identified rooms. Search Mode analyzes to a detection limit of $0.1 \mu\text{g}/\text{m}^3$ Hg. Terracon performed room transects at five foot intervals throughout the identified rooms.

Terracon utilized "Standard Mode" at each drain observed in or adjacent to the identified rooms. Standard mode has a detection limit of $0.05 \mu\text{g}/\text{m}^3$ Hg.

6.0 REGULATOR OVERVIEW

6.1 Asbestos Regulatory Overview

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I nonfriable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packings, gaskets, resilient floor coverings and asphalt roofing products containing more than 1% asbestos. Category II nonfriable ACM are any materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II nonfriable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM). A memo issued by the Arkansas Department of Environmental Quality (ADEQ) on December 19, 2006 clarifies that Category I nonfriable ACM becomes RACM if it has become friable or it will be or has been subjected to sanding, grading, cutting, or abrading, whether by manual or mechanical means.

RACM must be removed prior to renovation or demolition activities which will disturb the materials. In the state of Arkansas, asbestos activities are regulated by the ADEQ. The ADEQ requires that asbestos-related activities conducted in a public building be performed by personnel licensed by the ADEQ. The owner or operator must provide the ADEQ with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities. Asbestos abatement must be performed by ADEQ-licensed asbestos abatement contractors in accordance with a Project Design prepared by an ADEQ-licensed Asbestos Consultant. Air monitoring must be conducted during the abatement activities; a third-party air monitor is recommended. Management Plans developed for the in-place management of asbestos-containing materials must be developed by an ADEQ-licensed Management Planner.

The Occupational Safety and Health Administration (OSHA) Asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below the Permissible Exposure Limit (PEL) of 0.1 fibers per cubic centimeter (f/cc) of air as an 8-hour Time Weighted Average (TWA). The OSHA standard classifies construction and

maintenance activities which could disturb ACM and specifies work practices and precautions which employers must follow when engaging in each class of regulated work.

6.2 Lead Paint Regulatory Overview

OSHA regulations govern exposure of workers to lead, regardless of the concentration of lead identified. The OSHA regulations, which have been established for general and construction industries, cover any type of workplace activity that could expose an employee to potential lead contamination (OSHA Standards 29 CFR 1926.62 and 1910.1025).

Any contractor and/or workers conducting any renovation, repair or demolition activities should be notified of these findings and the contractor should be tasked with determining whether lead-safe work practices are to be employed and/or whether personnel should be provided personal protective equipment (PPE).

All occupational exposure to lead occurring in the course of construction work, including maintenance activities, painting, alteration and repairs is subject to the OSHA Lead Exposure in Construction standard (29 CFR 1926.62).

Construction work covered by 29 CFR 1926.62 includes any repair or renovation activities or other activities that disturb in-place lead-containing materials but does not include routine cleaning and repainting where there is insignificant damage, wear, or corrosion of existing lead-containing coatings or substrates. Employers must assure that no employee will be exposed to lead at concentrations greater than 50 micrograms per cubic meter averaged over an 8-hour period without adequate protection. Utilizing lead-safe work practices is recommended to reduce employee exposure during activities that disturb or generate lead dust.

The Resource Conservation and Recovery Act (RCRA) gives the USEPA authority to regulate the waste status of demolition or renovation debris, including lead-containing materials. The USEPA has stated that components removed with intact lead-based paint (LBP) that is not delaminating from the substrate may be disposed as general demolition debris. If the LBP is stripped from components, or if it is delaminating from the substrate, the waste may be subject to hazardous waste rules [i.e., TCLP]. Lead containing wastes are considered hazardous waste under RCRA if TCLP results exceed 5 milligrams per liter (mg/L). USEPA exempts from most RCRA requirements those generators whose combined hazardous waste generation is less than 100 kilograms (kg) per month.

The above overview is not intended to be inclusive of all potentially pertinent regulatory information. The relevant USEPA and OSHA standards should be consulted prior to undertaking activities involving the demolition, renovation, or maintenance of surfaces coated with lead-containing paints.

6.3 Mercury Vapor Regulatory Overview

OSHA has established permissible exposure limits (PELs) for mercury vapor in the workplace to protect workers from potential health hazards. The current OSHA PEL for mercury vapor is 0.1 mg/m³ (or 100 µg/m³) averaged over an 8-hour work shift. Additionally, OSHA includes a "skin" notation, indicating that mercury vapor can be absorbed through the skin, posing a risk of systemic poisoning.

7.0 FINDINGS AND RECOMMENDATIONS

7.1 Asbestos Sample Results

Asbestos was identified in the following material:

- Window glazing on basement windows
- Caulking (white) on exterior windows on the porch

Window glazing was observed on windows in the basement. The material is classified as RACM. The material was observed in good condition.

White caulking was observed at the wood/brick contact and around doors and windows on the exterior porch. The material is classified as Category II Nonfriable ACM. The material was observed in good condition.

A summary of the classification, condition and approximate quantity of identified ACM are presented in Appendix B. Laboratory analytical reports are included in Appendix C.

It should be noted that suspect materials, other than those identified during the November 18, 2024 and May 15, 2025, inspection may exist within the building. Should suspect materials other than those which were identified during this inspection be uncovered prior to or during the abatement and/or demolition process, those materials should be assumed asbestos-containing until sampling and analysis can confirm or deny their asbestos content.

7.2 Lead Sample Results

The following materials were determined to **contain concentrations of lead** above the limit of detection for the analytical method performed and classified as lead containing under the OSHA Lead Standard for Construction:

- Blue paint on metal lockers, walls, and stairs in the locker rooms
- White on wood windows and doors and associated trim
- White on metal windows
- Black on wood windows and doors and associated trim
- Gray on plaster walls and ceilings

- White on plaster ceiling trim
- White on exterior wood windows and trim
- Gray on concrete floor
- White on metal locker room stairs and beams
- Blue on metal exterior handrails
- Yellow on concrete basement walls
- Dark gray on metal HVAC ducts in basement
- White on wood doors and windows and associated trim in basement
- White on brick walls in basement
- Silver on metal vent frame in basement
- White on metal pipes in basement
- White on metal boiler in basement
- Silver on metal pipes in basement
- Gray/black on metal fan duct in basement
- Gold on metal trim in elevator

The lead was not identified above the limit of detection for the analytical method performed for the remaining lead paint samples.

The lead paint sample summary is provided in Appendix D; the laboratory analytical report is provided in Appendix E.

Any Contractor and/or workers conducting any renovation, repair or demolition activities should be notified of these findings and the contractor should be tasked with determining whether lead-safe work practices are to be employed and/or whether personnel should be provided personal protective equipment (PPE).

It should be understood, however, that OSHA regulations govern exposure of workers to lead, regardless of the concentration of lead identified. The OSHA regulations, which have been established for general and construction industries, cover any type of workplace activity that could expose an employee to potential lead contamination (OSHA Standards 29 CFR 1926.62 and 1910.1025).

7.3 Mercury Vapor Screening Results

Mercury vapors were not detected above interior background levels or above the OSHA PEL of 0.1 mg /m³ throughout the Client identified rooms. In addition, elevated readings were not detected within the drains in the in or adjacent to the identified rooms. Mercury wipes were not collected due to the lack of elevated readings and no mercury was observed.

8.0 GENERAL COMMENTS

The results, findings, conclusions and recommendations expressed in this report are containing on conditions observed during our inspection of the subject building. The information contained in this report is relevant to the date on which this inspection was performed and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by the Seven Generations Architecture & Engineering LLC for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary.

APPENDIX A
ASBESTOS INSPECTION SAMPLE SUMMARY

APPENDIX A
ASBESTOS INSPECTION SAMPLE SUMMARY
Buckstaff Bathhouse
509 Central Avenue
Hot Springs, Arkansas
Terracon Project No. 35247204

HA	SAMPLE NO.	DESCRIPTION	MATERIAL LOCATION	NESHAP CATEGORY	ASBESTOS CONTENT
1	1,2,3,4,5,6,7	Plaster	Walls and ceiling throughout	NA	ND
2	1,2,3,4,5	Drywall with joint compound	3 rd floor buildout	NA	ND
3	1,2,3	2'x2' Ceiling tiles (pores)	3 rd floor facial room	NA	ND
4	1,2,3	2'x4' ceiling tile (dots)	2 nd floor north massage	NA	ND
5	1,2,3	2'x4' Ceiling tiles (long groove)	1 st floor massage	NA	ND
6	1,2,3	Window glazing	1 st floor exterior windows	NA	ND
7	1,2,3	Window glazing	Basement windows	Friable RACM	2% C – Window glazing
8	1,2,3,4,5	Surface texture (white)	Exterior walls	NA	ND
9	1,2,3	Caulk (white)	Exterior porch	Category II Nonfriable ACM	2% C - Caulking
NA = Not applicable ND = Asbestos not detected					

APPENDIX B
MATERIALS CONFIRMED
TO CONTAIN ASBESTOS

APPENDIX B
MATERIALS CONFIRMED TO CONTAIN ASBESTOS
Buckstaff Bath House
509 Central Avenue
Hot Springs, Arkansas
Terracon Project No. 35257204

HA No.	Description	Material Location	Percent/Type Asbestos	NESHAP Classification	Condition	Estimated Quantity*
7	Window glazing	Basement windows	2% C – Window glazing	Friable RACM	Good	40 LF
9	Caulk (white)	Exterior windows	2% C - Caulking	Category II Nonfriable ACM	Good	100 LF

HA = homogeneous area

* Quantities are estimates only.

LF = linear feet

SF = square feet

ND = None detected

C = Chrysotile asbestos

APPENDIX C
ASBESTOS LABORATORY ANALYTICAL REPORTS



PLM Summary Report

NVLAP Lab Code 102056-0

TDSHS License No. 300084

2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

Client :	Terracon - Bryant	Lab Job No. : 24B-13800	002
Project :	Buckstaff Bathhouse	Report Date : 11/25/2024	
Project # :	35247204	Sample Date : 11/18/2024	
Identification :	Asbestos, Bulk Sample Analysis		
Test Method :	Polarized Light Microscopy / Dispersion Staining (PLM/DS) EPA Method 600 / R-93 / 116		

Page 1 of 2

On 11/20/2024, twenty two (22) bulk material samples were submitted by a representative of Terracon - Bryant for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
1-1	Plaster, 3rd Floor Southwest Ceiling	None Detected - Plaster None Detected - Texture
1-2	Plaster, 3rd Floor Southwest Wall	None Detected - Plaster 1 None Detected - Plaster 2 None Detected - Plaster 3
1-3	Plaster, 2nd Floor Wall above Stairs	None Detected - Plaster
1-4	Plaster, 2nd Floor Massage Room Ceiling	None Detected - Plaster
1-5	Plaster, 2nd Floor North Central Wall	None Detected - Plaster
1-6	Plaster, 1st Floor North Massage Wall	None Detected - Plaster
1-7	Plaster, 1st Floor Southeast Locker Wall	None Detected - Plaster
2-1	Drywall with Joint Compound, 3rd Floor Buildout South	None Detected - Drywall Material None Detected - Joint Compound
2-2	Drywall with Joint Compound, 3rd Floor Buildout North Room	None Detected - Drywall Material No Joint Compound
2-3	Drywall with Joint Compound, 3rd Floor Buildout North	None Detected - Drywall Material No Joint Compound
3-1	2' x 2' Ceiling Tile (Pores), 3rd Floor Facial Room	None Detected - Acoustic Tile
3-2	2' x 2' Ceiling Tile (Pores), 3rd Floor Facial Room	None Detected - Acoustic Tile
3-3	2' x 2' Ceiling Tile (Pores), 3rd Floor Facial Room	None Detected - Acoustic Tile
4-1	2' x 4' Ceiling Tile (Dots), 2nd Floor North Massage	None Detected - Acoustic Tile
4-2	2' x 4' Ceiling Tile (Dots), 2nd Floor North Massage	None Detected - Acoustic Tile
4-3	2' x 4' Ceiling Tile (Dots), 2nd Floor South Massage	None Detected - Acoustic Tile
5-1	2' x 4' Ceiling Tile (Long Groove), 1st Floor Massage	None Detected - Acoustic Tile
5-2	2' x 4' Ceiling Tile (Long Groove), 1st Floor Massage	None Detected - Acoustic Tile



PLM Summary Report

NVLAP Lab Code 102056-0

TDSHS License No. 300084

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

Client : Terracon - Bryant

Lab Job No. : 24B-13800

002

Project : Buckstaff Bathhouse

Report Date : 11/25/2024

Project # : 35247204

Sample Date : 11/18/2024

Identification : Asbestos, Bulk Sample Analysis

Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)

EPA Method 600 / R-93 / 116

Page 2 of 2

On 11/20/2024, twenty two (22) bulk material samples were submitted by a representative of Terracon - Bryant for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
5-3	2' x 4' Ceiling Tile (Long Groove), 1st Floor Massage	None Detected - Acoustic Tile
6-1	Window Glazing, 1st Floor Exterior Window South	None Detected - Window Glazing
6-2	Window Glazing, 1st Floor Exterior Window Central	None Detected - Window Glazing
6-3	Window Glazing, 1st Floor Exterior Window North	None Detected - Window Glazing

These samples were analyzed by layers. Quantification, unless otherwise noted, is performed by calibrated visual estimate. The test report shall not be reproduced except in full without written approval of the laboratory. The results relate only to the items tested. These test results do not imply endorsement by NVLAP or any agency of the U.S. Government. Accredited by the National Voluntary Laboratory Accreditation Program for Bulk Asbestos Fiber Analysis under Lab Code 102056-0.



Analyst(s): Brian R. Schmidt, Willie Pruitt

Lab Manager : Heather Lopez

Approved Signatory :

Lab Director : Bruce Crabb

Approved Signatory :

Thank you for choosing Moody Labs

Moody Labs

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

PLM Detail Report
Supplement to PLM Summary Report

NVLAP Lab Code 102056-0

TDSHS License No. 300084

Client : Terracon - Bryant

Project : Buckstaff Bathhouse

Project # : 35247204

Lab Job No. : 24B-13800

Report Date : 11/25/2024

002

Page 1 of 2

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
1-1	Plaster (Off-White)	100%	Aggregate	15%	11/25	BS
			Calcite / Binders	85%		
	Texture (White)	<1%	Gypsum / Talc / Binders	100%		
1-2	Plaster 1 (Light Grey)	25%	Aggregate	65%	11/25	BS
			Calcite / Binders	35%		
	Plaster 2 (Grey)	55%	Aggregate	65%		
			Calcite / Binders	35%		
	Plaster 3 (White)	20%	Calcite / Binders	100%		
1-3	Plaster (White)	100%	Calcite / Binders	100%	11/25	BS
1-4	Plaster (Tan)	100%	Aggregate	65%	11/25	WP
			Calcite / Binders	35%		
1-5	Plaster (White)	100%	Calcite / Binders	100%	11/25	WP
1-6	Plaster (Off-White)	100%	Aggregate	65%	11/25	WP
			Calcite / Binders	35%		
1-7	Plaster (White)	100%	Calcite / Binders	100%	11/25	WP
2-1	Drywall Material (Light Pink)	85%	Cellulose Fibers	5%	11/25	WP
			Gypsum / Binders	95%		
	DW Paper Facing (Tan)	5%	Cellulose Fibers	100%		
	Joint Compound (White)	10%	Calcite / Talc / Binders	100%		
2-2	Drywall Material (Light Pink)	50%	Cellulose Fibers	5%	11/25	WP
			Gypsum / Binders	95%		
	DW Paper Facing (Tan)	50%	Cellulose Fibers	100%		
	No Joint Compound					
2-3	Drywall Material (Light Pink)	90%	Cellulose Fibers	5%	11/25	WP
			Gypsum / Binders	95%		
	DW Paper Facing (Tan)	10%	Cellulose Fibers	100%		
	No Joint Compound					
3-1	Acoustic Tile (Light Grey)	100%	Cellulose Fibers	80%	11/25	WP
			Perlite	20%		

Moody Labs

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

PLM Detail Report
Supplement to PLM Summary Report

NVLAP Lab Code 102056-0

TDSHS License No. 300084

Client : Terracon - Bryant

Project : Buckstaff Bathhouse

Project # : 35247204

Lab Job No. : 24B-13800

Report Date : 11/25/2024

002

Page 2 of 2

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
3-2	Acoustic Tile (Light Grey)	100%	Cellulose Fibers Perlite	80% 20%	11/25	WP
3-3	Acoustic Tile (Light Grey)	100%	Cellulose Fibers Perlite	80% 20%	11/25	WP
4-1	Acoustic Tile (Tan)	100%	Wood Fibers	100%	11/25	WP
4-2	Acoustic Tile (Tan)	100%	Wood Fibers	100%	11/25	WP
4-3	Acoustic Tile (Tan)	100%	Wood Fibers	100%	11/25	WP
5-1	Acoustic Tile (Light Tan)	100%	Cellulose Fibers Perlite	80% 20%	11/25	WP
5-2	Acoustic Tile (Light Tan)	100%	Cellulose Fibers Perlite	80% 20%	11/25	WP
5-3	Acoustic Tile (Light Tan)	100%	Cellulose Fibers Perlite	80% 20%	11/25	WP
6-1	Window Glazing (White)	100%	Calcite Binders / Fillers	60% 40%	11/25	WP
6-2	Window Glazing (White)	100%	Calcite Binders / Fillers	60% 40%	11/25	WP
6-3	Window Glazing (White)	100%	Calcite Binders / Fillers	60% 40%	11/25	WP



Chain of Custody

Lab Job # 2413 - 13800
Lab Job # PLW-22
Lab Job # _____

AFTER HOURS / WEEKEND WORK: ☐ YES ☐ NO

Please call in advance for after hours / immediate pricing & availability

Page _____ of _____

ASBESTOS PLM

Bulk ☐ Immediate ☐ 1 day ☐ 2 day ☒ 3 day ☐ 5-7 day
☒ Analyze All ☒ Positive Stop

PCM Air (7400)

☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Analyze Blanks ☐ Yes ☐ No

TOTAL DUST(0500/0600)

☐ 1 day ☐ 2 day

ASBESTOS TEM

Air AHERA Method ☐ Late Night* ☐ 6 hr ☐ 12 hr ☐ 24 hr
Air 7402 (Modified) ☐ 1 day ☐ 2 day ☐ 3 day
Bulk ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Water/Wipe/Micro Vac ☐ 1 day ☐ 2 day ☐ 3 day
Analyze Blanks ☐ Yes ☐ No

*Late night analysis surcharges apply

MOLD

Direct Exam ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
Standard Air ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
Expanded Air ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
TPC w/ Yeast & Mold (TYMC)** ☐ 5 day
Culture** ☐ 14 days
Analyze Blanks ☐ Yes ☐ No

BACTERIA**

Total Plate Count (TAMC) ☐ 2 day
Coliform & E. coli (P/A) ☐ 1 day
Coliform & E. coli (Q) ☐ 1 day
Please note Bacteria / Mold Culture turnarounds are approximate and subject to analytical requirements

OTHER:

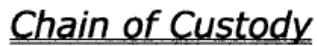
Billing Company / City: Terracon / Bryan # of Samples: 22 Sample Date: 11-18-24
Project: Buckstaff Bethhouse Project #: 35247204
Contact Information: Name: Judy Adams Phone #: 479-970-0290
E-mail Results to: Judy.Adams@Terracon.com Mobile #: _____
Invoice Address: 25304 I-30 S. Bryan, AR P.O. #: _____

Please review paperwork and samples before submitting to lab. Unsealed / Improperly packaged / damaged / expired samples or excessive administrative requests may incur additional fees

Notes:

Sample #	Sample Description	Vol. / Area (if applicable)	Location / Notes
1-1	Plaster		3rd floor SW ceiling
1-2	"		3rd floor SW wall
1-3	"		2nd floor wall above stairs
1-4	"		2nd floor Massage room ceiling
1-5	"		2nd floor North central wall
1-6	"		1st floor north massage wall
1-7	"		1st floor SE locker wall
2-1	drywall w/ joint compound		3rd floor building south
2-2	"		" north
2-3	"		" north
3-1	2'x2' CT (pore)		3rd floor facial room
3-2	"		"
3-3	"		"

Released By:	Date / Time: <u>11-19-24/1000</u>	Received By: <u>Monica Tison</u>	Date / Time: <u>11/20/24 9:49</u>
Released By: _____	Date / Time: _____	Received By: _____	Date / Time: _____



Lab Job # _____

[illegible]



PLM Summary Report

2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

NVLAP Lab Code 102056-0
TDSHS License No. 300084

Client : Terracon - Bryant
Project : Buckstaff
Project # : 352517204
Identification : Asbestos, Bulk Sample Analysis
Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
EPA Method 600 / R-93 / 116

Lab Job No. : 25B-05863
Report Date : 05/28/2025
Sample Date : 05/14/2025

Page 1 of 1

On 5/19/2025, thirteen (13) bulk material samples were submitted by a representative of Terracon - Bryant for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
2-4	Drywall with Joint Compound, 3rd Floor Building North	None Detected - Drywall Material None Detected - Joint Compound
2-5	Drywall with Joint Compound, 3rd Floor Building South Room	No Drywall Material None Detected - Joint Compound
7-1	Window Glazing, Basement Windows	2% Chrysotile - Window Glazing
7-2	Window Glazing, Basement Windows	2% Chrysotile - Window Glazing
7-3	Window Glazing, Basement Windows	None Detected - Window Glazing
8-1	Surface Texture (White), Exterior, Southwest	None Detected - Texture
8-2	Surface Texture (White), Exterior, South Central	None Detected - Texture
8-3	Surface Texture (White), Exterior, West Porch	None Detected - Texture
8-4	Surface Texture (White), Exterior, West Porch	None Detected - Texture
8-5	Surface Texture (White), Exterior, Northwest	None Detected - Texture
9-1	Caulk (White), Porch, North	None Detected - Caulking
9-2	Caulk (White), Porch, Central	2% Chrysotile - Caulking
9-3	Caulk (White), Porch, South	None Detected - Caulking

These samples were analyzed by layers. Quantification, unless otherwise noted, is performed by calibrated visual estimate. The test report shall not be reproduced except in full without written approval of the laboratory. The results relate only to the items tested. These test results do not imply endorsement by NVLAP or any agency of the U.S. Government. Accredited by the National Voluntary Laboratory Accreditation Program for Bulk Asbestos Fiber Analysis under Lab Code 102056-0.



Analyst(s): Bruce Crabb

Lab Manager : Heather Lopez

Lab Director : Bruce Crabb

Approved Signatory : _____

Approved Signatory : _____

Thank you for choosing Moody Labs

Page intentionally left blank

Moody Labs

2051 Valley View Lane

Farmers Branch, TX 75234 Phone: (972) 241-8460

PLM Detail Report
Supplement to PLM Summary Report

NVLAP Lab Code 102056-0

TDSHS License No. 300084

Client : Terracon - Bryant

Project : Buckstaff

Project # : 352517204

Lab Job No. : 25B-05863

Report Date : 05/28/2025

Page 1 of 1

Sample Number	Layer	% Of Sample	Components	% of Layer	Analysis Date	Analyst
2-4	Drywall Material (White)	80%	Cellulose Fibers	5%	05/28	BC
			Gypsum / Binders	95%		
	DW Paper Facing (Tan)	10%	Cellulose Fibers	100%		
	Joint Compound (White)	10%	Calcite / Talc / Binders	100%		
2-5	No Drywall Material				05/28	BC
	DW Tape (White)	35%	Cellulose Fibers	100%		
	Joint Compound (White)	65%	Calcite / Talc / Binders	100%		
7-1	Window Glazing (Light Tan)	100%	Chrysotile	2%	05/28	BC
			Calcite / Binders	98%		
7-2	Window Glazing (Light Tan)	100%	Chrysotile	2%	05/28	BC
			Calcite / Binders	98%		
7-3	Window Glazing (Light Tan)	100%	Calcite / Binders	100%	05/28	BC
8-1	Texture (White)	3%	Calcite / Talc / Binders	100%	05/28	BC
	Paint (Paint)	97%	Pigment / Binders	100%		
8-2	Texture (White)	3%	Calcite / Talc / Binders	100%	05/28	BC
	Paint (Paint)	97%	Pigment / Binders	100%		
8-3	Texture (White)	3%	Calcite / Talc / Binders	100%	05/28	BC
	Paint (Paint)	97%	Pigment / Binders	100%		
8-4	Texture (White)	3%	Calcite / Talc / Binders	100%	05/28	BC
	Paint (Paint)	97%	Pigment / Binders	100%		
8-5	Texture (White)	3%	Calcite / Talc / Binders	100%	05/28	BC
	Paint (Paint)	97%	Pigment / Binders	100%		
9-1	Caulking (White)	100%	Calcite	60%	05/28	BC
			Binders / Fillers	40%		
9-2	Caulking (Tan)	100%	Chrysotile	2%	05/28	BC
			Calcite / Binders	98%		
9-3	Caulking (White)	100%	Calcite	60%	05/28	BC
			Pigment Binders / Fillers	40%		



Chain of Custody

Lab Job # 25B-05863
Lab Job # 13 PUM
Lab Job # _____

AFTER HOURS / WEEKEND WORK: ☐ YES ☐ NO
Please call in advance for after hours / immediate pricing & availability

Page _____ of _____

ASBESTOS PLM

Bulk ☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☒ 5-7 day
☒ Analyze All ☐ Positive Stop

PCM Air (7400)

☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Analyze Blanks ☐ Yes ☐ No

TOTAL DUST(0500/0600)

☐ 1 day ☐ 2 day

ASBESTOS TEM

Air AHERA Method ☐ Late Night* ☐ 6 hr ☐ 12 hr ☐ 24 hr
Air 7402 (Modified) ☐ 1 day ☐ 2 day ☐ 3 day
Bulk ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Water/Wipe/Micro Vac ☐ 1 day ☐ 2 day ☐ 3 day
Analyze Blanks ☐ Yes ☐ No

*Late night analysis surcharges apply

MOLD

Direct Exam ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
Standard Air ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
Expanded Air ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
TPC w/ Yeast & Mold (TYMC)** ☐ 5 day
Culture** ☐ 10-14 days
Analyze Blanks ☐ Yes ☐ No

BACTERIA**

Total Plate Count (TAMC) ☐ 2 day
Coliform & E. coli (P/A) ☐ 1 day
Coliform & E. coli (Q) ☐ 1 day
Enterococci (P/A) ☐ 1 day

Please note Bacteria / Mold Culture turnarounds are approximate and subject to analytical requirements

OTHER:

Billing Company / City: Terracon/Bryant

of Samples: 13 Sample Date: 5-14-25

Project: Buckstaff

Project #: 35297204

Contact Information: Name: Jody Adams

Phone #: 479-970-0290

E-mail Results to: Jody.Adams@Terracon.com

Mobile #: _____

Invoice Address: 25809 I-30 S., Bryant, AR 72022

P.O. #: _____

Please review paperwork and samples before submitting to lab. Unsealed / improperly packaged / damaged / expired samples or excessive administrative requests may incur additional fees

Notes: _____

Sample #	Sample Description	Vol. / Area (if applicable)	Location / Notes
2-4	drywall w/joint comp		3rd floor building north
2-5	"		" south room
7-1	window glazing		basement window
7-2	"		"
7-3	"		"
8-1	surface texture (white)		exterior SW
8-2	"		" south central
8-3	"		" west porch
8-4	"		" west porch porch
8-5	"		" NW
9-1	ceiling (white)		porch north
9-2	"		" central
9-3	"		" south

Released By:	Date / Time: <u>5-16-25/10:00</u>	Received By: <u>DW fedex</u>	Date / Time: <u>5/19/25 9:30am</u>
Released By: _____	Date / Time: _____	Received By: _____	Date / Time: _____

APPENDIX D
LEAD PAINT SAMPLE SUMMARY

APPENDIX D
LEAD-CONTAINING PAINT SAMPLE SUMMARY
Buckstaff Bathhouse
509 Central Avenue
Hot Springs, Arkansas
Terracon Project No. 35247204

Sample No.	Paint Color	Paint Substrate	Material Location	Analytical Result (% wt)
L-1	Blue	Metal	Locker rooms	0.77
L-2	White	Wood	Windows and door trim	14
L-3	White	Metal	Metal windows	0.29
L-4	Black	Wood	Windows and door trim	0.39
L-5	Gray	Plaster	Walls and ceilings	1.4
L-6	White	Plaster	Ceiling trim	0.081
L-7	White	Wood	Exterior wood windows	1.8
L-8	Black	Metal	Stair rails	0.35
L-9	Gray	Concrete	Floor	0.071
L-10	White	Metal	Locker room stairs and beams	0.026
L-11	White	Metal	Exterior metal windows	1.2
L-12	White	Concrete	Exterior	<0.008
L-13	Blue	Metal	Exterior handrails	0.42
L-14	Yellow	Concrete	Basement walls	0.030
L-15	Dark gray	Concrete	Basement ceilings	<0.0064
L-16	Dark gray	Metal	Basement HVAC ducts	0.028
L-17	White	Wood	Basement interior doors and frames	7.5
L-18	White	Brick	Basement walls	0.0091
L-19	Silver	Metal	Basement vent frame	0.018

APPENDIX D
LEAD-CONTAINING PAINT SAMPLE SUMMARY
Buckstaff Bathhouse
509 Central Avenue
Hot Springs, Arkansas
Terracon Project No. 35247204

L-20	White	Metal	Pipes in basement	0.018
L-21	White	Metal	Boiler in basement	1.2
L-22	Silver	Metal	Pipes in basement	0.79
L-23	Gray/black	Metal	Basement fan duct	0.37
L-24	Gold	Metal	Elevator trim	7.4

Bold – Exceeded the laboratory analytical detection limit

APPENDIX E
LEAD PAINT ANALYTICAL LABORATORY DATA

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012437648
LIMS Reference ID: AC37648
EMSL Customer ID: TERC25

Attention: Jody Adams
Terracon Consultants, Inc. [TERC25]
25809 I-30 South
Bryant, AR 72022
(501) 847-9292
jody.adams@terracon.com

Project Name: Buckstaff Bathhouse

Customer PO: 35247204
EMSL Sales Rep: Jason McDonald
Received: 11/20/2024 09:45
Reported: 11/25/2024 10:39

Analytical Results

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L - 1/Blue - Locker Rooms Matrix: Chips							Date Sampled: 11/19/24 LIMS Reference ID: AC37648-01		
Lead	0.77 % wt	0.041 % wt	0.2435	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B	D	5
Sample Comments:									
Client Sample ID: L - 2/White - Window & Door Trim Matrix: Chips							Date Sampled: 11/19/24 LIMS Reference ID: AC37648-02		
Lead	14 % wt	0.77 % wt	0.2603	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B	D	100
Sample Comments:									
Client Sample ID: L - 3/White - Metal Windows Matrix: Chips							Date Sampled: 11/19/24 LIMS Reference ID: AC37648-03		
Lead	0.29 % wt	0.010 % wt	0.2058	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B		1
Sample Comments:									
Client Sample ID: L - 4/Black - Windows & Doors Matrix: Chips							Date Sampled: 11/19/24 LIMS Reference ID: AC37648-04		
Lead	0.39 % wt	0.021 % wt	0.0965	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B		1
Sample Comments:									
Client Sample ID: L - 5/Gray - Walls & Ceilings Matrix: Chips							Date Sampled: 11/19/24 LIMS Reference ID: AC37648-05		
Lead	1.4 % wt	0.044 % wt	0.2279	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B	D	5
Sample Comments:									
Client Sample ID: L - 6/White - Ceiling Trim Matrix: Chips							Date Sampled: 11/19/24 LIMS Reference ID: AC37648-06		
Lead	0.081 % wt	0.008 % wt	0.2796	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B		1
Sample Comments:									
Client Sample ID: L - 7/White - Ext Wood Window Matrix: Chips							Date Sampled: 11/19/24 LIMS Reference ID: AC37648-07		
Lead	1.8 % wt	0.071 % wt	0.1412	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B	D	5
Sample Comments:									
Client Sample ID: L - 8/Black - Stair Rail Matrix: Chips							Date Sampled: 11/19/24 LIMS Reference ID: AC37648-08		
Lead	0.35 % wt	0.008 % wt	0.2504	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B		1
Sample Comments:									
Client Sample ID: L - 9/Gray - Floor Matrix: Chips							Date Sampled: 11/19/24 LIMS Reference ID: AC37648-09		
Lead	0.071 % wt	0.008 % wt	0.2423	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B		1
Sample Comments:									

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012437648
LIMS Reference ID: AC37648
EMSL Customer ID: TERC25

Attention: Jody Adams
Terracon Consultants, Inc. [TERC25]
25809 I-30 South
Bryant, AR 72022
(501) 847-9292
jody.adams@terracon.com

Project Name: Buckstaff Bathhouse

Customer PO: 35247204
EMSL Sales Rep: Jason McDonald
Received: 11/20/2024 09:45
Reported: 11/25/2024 10:39

**Analytical Results
(Continued)**

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L - 10/White - Locker Room Staris & Beams							Date Sampled: 11/19/24		
Matrix: Chips							LIMS Reference ID: AC37648-10		
Lead	0.026 % wt	0.010 % wt	0.2089	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B	1	
Sample Comments:									
Client Sample ID: L - 11/White - Ext Metal Windows							Date Sampled: 11/19/24		
Matrix: Chips							LIMS Reference ID: AC37648-11		
Lead	1.2 % wt	0.039 % wt	0.257	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B	D	5
Sample Comments:									
Client Sample ID: L - 12/White - Ext Surfaces							Date Sampled: 11/19/24		
Matrix: Chips							LIMS Reference ID: AC37648-12		
Lead	<0.008 % wt	0.008 % wt	0.2868	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B	1	
Sample Comments:									
Client Sample ID: L - 13/Blue - Ext Handrails							Date Sampled: 11/19/24		
Matrix: Chips							LIMS Reference ID: AC37648-13		
Lead	0.42 % wt	0.041 % wt	0.2452	11/22/24 CZX	SW-846 3050B	11/22/24 PMX	SW846-7000B	D	5
Sample Comments:									

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012437648
LIMS Reference ID: AC37648
EMSL Customer ID: TERC25

Attention: Jody Adams
Terracon Consultants, Inc. [TERC25]
25809 I-30 South
Bryant, AR 72022
(501) 847-9292
jody.adams@terracon.com

Project Name: Buckstaff Bathhouse

Customer PO: 35247204
EMSL Sales Rep: Jason McDonald
Received: 11/20/2024 09:45
Reported: 11/25/2024 10:39

Certified Analyses included in this Report

Analyte	Certifications
SW846-7000B in Chips	
Lead	AIHA LAP

List of Certifications

Code	Description	Number	Expires
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2025
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
NYSDOH	New York State Department of Health	10872	04/01/2025
California ELAP	California Water Boards	1877	06/30/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2026
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2025
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2025
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2026

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.

Notes and Definitions

Item	Definition
D	Analyte was reported from a dilution run.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
NR	Spike/Surrogate showed no recovery.
Q	Qualifier
RL	Reporting Limit For paint chips, the RL is 0.008% by wt. (equiv. to 80 mg/kg, or ppm) based upon a minimum sample weight of 0.25 grams. For soils, the RL is 40 mg/kg (ppm) based upon a minimum sample weight of 0.5 grams. For dust wipes, the RL is 10 µg/wipe; reporting units of µg/sq. ft. are not validated by the lab based upon data provided by non-lab personnel.
Wet	Sample is not dry weight corrected.
Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.	

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012437648
LIMS Reference ID: AC37648
EMSL Customer ID: TERC25

Attention: Jody Adams

Terracon Consultants, Inc. [TERC25]
25809 I-30 South
Bryant, AR 72022
(501) 847-9292
jody.adams@terracon.com

Project Name: Buckstaff Bathhouse

Customer PO: 35247204

EMSL Sales Rep: Jason McDonald

Received: 11/20/2024 09:45

Reported: 11/25/2024 10:39

Owen McKenna Laboratory Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. QC sample results are within quality control criteria and met method specifications unless otherwise noted. All results for soil samples are reported on a dry weight basis, unless otherwise noted.

Analysis following EMSL SOP for the Determination of Environmental Lead by FLAA. The laboratory has a reporting limit of 0.008% by wt., based upon a minimum sample weight of 0.25g submitted to the lab, and is not responsible for any result or reporting limit provided in mg/cm² since it is dependent upon an area value provided by non-lab personnel. A "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty and definitions of modifications are available upon request. Results in this report are not blank corrected unless specified.



EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Lead Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: CinnaminsonLeadLab@emsl.com

AC37648

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name: <u>Terracon</u>		Company Name: <u>Same</u>	
Contact Name: <u>Jody Adams</u>		Billing Contact:	
Street Address: <u>2580 9 I-30 S.</u>		Street Address:	
City, State, Zip: <u>Bay, AR 72022</u>		City, State, Zip:	
Country:		Country:	
Phone: <u>479-970-0290</u>		Phone:	
Email(s) for Report: <u>Jody.Adams@Terracon.com</u>		Email(s) for Invoice:	
Project Information			
Project Name/No: <u>Buckstaff Bathroom</u>		Purchase Order: <u>35247204</u>	
EMSL LIMS Project ID:		US State where samples collected: <u>AR</u>	
(If applicable, EMSL will provide)		State of Connecticut (CT) must select project location: ☒ Commercial (Taxable) ☐ Residential (Non-Taxable)	
Sampled By Name: <u>Jody Adams</u>		Sampled By Signature: <u>[Signature]</u>	
No. of Samples in Shipment:			
Turn-Around-Time (TAT)			
☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☒ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week			
Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.			
MATRIX	METHOD	INSTRUMENT	REPORTING LIMIT
CHIPS ☒ % by wt. ☐ ppm (mg/kg) ☐ mg/cm ² *Chips reporting limit based on a minimum 0.25g sample weight. Not appropriate for Ceramic Tiles - XRF is recommended.	SW 846-7000B	Flame Atomic Absorption	*Please select reporting limit on left. -0.008% -80 ppm -mg/cm ² - RL is Variable
	SW 846-6010D*	ICP-OES	*Please select reporting limit on left. -0.0004% -40 ppm -mg/cm ² - RL is Variable
	NIOSH 7082	Flame Atomic Absorption	4µg/filter
AIR	NIOSH 7303M	ICP-OES	1.0µg/filter
	NIOSH 7303M	ICP-MS	0.05µg/filter
WIPE ☐ ASTM ☐ NON-ASTM	SW 846-7000B	Flame Atomic Absorption	10µg/wipe
If no box is checked, non-ASTM Wipe is assumed	SW 846-6010D	ICP-OES	1.0µg/wipe
TCLP	SW 846-1311 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW 846-1311 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)
SPLP	SW 846-1312 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW 846-1312 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)
TTLIC	22 CCR App. II, 7000B	Flame Atomic Absorption	40mg/kg (ppm)
	22 CCR App. II, SW 846-6010D*	ICP-OES	2mg/kg (ppm)
STLC	22 CCR App. II, 7000B	Flame Atomic Absorption	0.4 mg/L (ppm)
	22 CCR App. II, SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)
Soil	SW 846-7000B	Flame Atomic Absorption	40mg/kg (ppm)
	SW 846-6010D*	ICP-OES	2mg/kg (ppm)
Wastewater	SM 3111B / SW 846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)
Unpreserved ☐			
Preserved with HNO ₃ ☐ PH<2	EPA 200.7	ICP-OES	0.020 mg/L (ppm)
Drinking Water	EPA 200.5	ICP-OES	0.003 mg/L (ppm)
Unpreserved ☐			
Preserved with HNO ₃ ☐ PH<2	EPA 200.8	ICP-MS	0.001 mg/L (ppm)
TSP/SPM Filter	40 CFR Part 50	ICP-OES	12 µg/filter
Other:			
Sample Number	Sample Location	Volume / Area	Date / Time Sampled
L-1	blue, locker rooms		
L-2	white, window & door trim		
L-3	white, metal windows		
L-4	black, windows & doors		
L-5	gray, walls & ceiling		
Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: <u>[Signature]</u>		Received by: <u>[Signature]</u>	
Date/Time: <u>11-17-24/1000</u>		Date/Time: <u>11-20-24</u>	
Relinquished by:		Received by:	
Date/Time:		Date/Time: <u>9:45</u>	

Controlled Document COC-25 Lead R19 08/19/2024

*6010C Available Upon Request

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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Lead Chain of Custody

Emsl Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: CinnaminsonLeadLab@emsl.com

AC 37648

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information.

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

[illegible]

Controlled Document COC-25 Lead R19 08/19/2024

7

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**EMSL Analytical, Inc.**

100 Green Park Industrial Court, St.Louis, MO, 63123
Telephone: (314) 577-0150 Fax:(314) 776-3313
www.emsl.com

EMSL Order ID: 392552404
LIMS Reference ID: FD52404
EMSL Customer ID: TERC25

Attention: Jody Adams

Terracon Consultants, Inc. [TERC25]
25809 I-30 South
Bryant, AR 72022
(501) 847-9292
jody.adams@terracon.com

Project Name: Buckstaff 35247204

Customer PO: 35247204

EMSL Sales Rep: Jason McDonald

Received: 05/19/2025 10:05

Reported: 05/21/2025 15:48

Analytical Results

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-14						Date Sampled: 05/14/25			
Matrix: Chips						LIMS Reference ID: FD52404-01			
Lead	0.030 % wt	0.0064 % wt	0.2511	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-15						Date Sampled: 05/14/25			
Matrix: Chips						LIMS Reference ID: FD52404-02			
Lead	<0.0064 % wt	0.0064 % wt	0.2509	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-16						Date Sampled: 05/14/25			
Matrix: Chips						LIMS Reference ID: FD52404-03			
Lead	0.028 % wt	0.0064 % wt	0.2523	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-17						Date Sampled: 05/14/25			
Matrix: Chips						LIMS Reference ID: FD52404-04			
Lead	7.5 % wt	0.31 % wt	0.2567	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	D	50
Sample Comments:									
Client Sample ID: L-18						Date Sampled: 05/14/25			
Matrix: Chips						LIMS Reference ID: FD52404-05			
Lead	0.0091 % wt	0.0064 % wt	0.2514	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-19						Date Sampled: 05/14/25			
Matrix: Chips						LIMS Reference ID: FD52404-06			
Lead	0.018 % wt	0.0064 % wt	0.2541	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-20						Date Sampled: 05/14/25			
Matrix: Chips						LIMS Reference ID: FD52404-07			
Lead	0.056 % wt	0.0085 % wt	0.1874	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-21						Date Sampled: 05/14/25			
Matrix: Chips						LIMS Reference ID: FD52404-08			
Lead	1.2 % wt	0.036 % wt	0.2228	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	D	5
Sample Comments:									
Client Sample ID: L-22						Date Sampled: 05/14/25			
Matrix: Chips						LIMS Reference ID: FD52404-09			
Lead	0.79 % wt	0.022 % wt	0.0715	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	1	
Sample Comments:									

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EMSL Order ID: 392552404
LIMS Reference ID: FD52404
EMSL Customer ID: TERC25

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25809 I-30 South
Bryant, AR 72022
(501) 847-9292
jody.adams@terracon.com

Project Name: Buckstaff 35247204

Customer PO: 35247204
EMSL Sales Rep: Jason McDonald
Received: 05/19/2025 10:05
Reported: 05/21/2025 15:48

Analytical Results
(Continued)

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-23				Date Sampled: 05/14/25					
Matrix: Chips				LIMS Reference ID: FD52404-10					
Lead	0.37 % wt	0.0066 % wt	0.2412	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-24				Date Sampled: 05/14/25					
Matrix: Chips				LIMS Reference ID: FD52404-11					
Lead	7.4 % wt	0.32 % wt	0.2524	05/21/25 FS	SW-846 3050B	05/21/25 FS	SW 846-7000B	D	50
Sample Comments:									

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Received: 05/19/2025 10:05
Reported: 05/21/2025 15:48

Certified Analyses included in this Report

Analyte	Certifications
<i>SW 846-7000B in Chips</i>	
Lead	39-AIHA ELLAP

List of Certifications

Code	Description	Number	Expires
39-AIHA ELLAP	American Industrial Hygiene Association (AIHA LAP, LLC) - ELLAP	102636	05/01/2027
39-AIHA IHLAP	American Industrial Hygiene Association (AIHA LAP, LLC) - IHLAP	102636	05/01/2027
39-MO	Missouri Department of Natural Resources Drinking Water Laboratory	165	05/31/2027
39-A2LA Food	A2LA Food Microbiology Certificate	2845.10	04/30/2026
39-OR	Oregon Environmental Laboratory Accreditation Program (NELAP)	4194	02/26/2026

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.

Notes and Definitions

Item	Definition
D	Analyte was reported from a dilution run.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DA	Direct Analysis
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
NR	Spike/Surrogate showed no recovery.
Q	Qualifier
RCS	Respirable Crystalline Silica
RL	Reporting Limit
Wet	Sample is not dry weight corrected.

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.

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Received: 05/19/2025 10:05
Reported: 05/21/2025 15:48

Jeff Siria Laboratory Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. QC sample results are within quality control criteria and met method specifications unless otherwise noted. All results for soil samples are reported on a dry weight basis, unless otherwise noted.

Analysis following EMSL SOP for the Determination of Environmental Lead by FLAA. The laboratory has a reporting limit of 0.0064% by wt., based upon a minimum sample weight of 0.25g submitted to the lab, and is not responsible for any result or reporting limit provided in mg/cm² since it is dependent upon an area value provided by non-lab personnel. A "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty and definitions of modifications are available upon request. Results in this report are not blank corrected unless specified.



EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Lead Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: CinnaminsonLeadLab@emsl.com

FD 52404

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name: <u>Terracon</u>		Company Name: <u>Sure</u>	
Contact Name: <u>Jody Adams</u>		Billing Contact:	
Street Address: <u>25809 I-30 S</u>		Street Address:	
City, State, Zip: <u>Bryant, AR 72202</u>		City, State, Zip:	
Country: <u>us</u>		Country:	
Phone: <u>479-970-0290</u>		Phone:	
Email(s) for Report: <u>Jody.Adams@Terracon.com</u>		Email(s) for Invoice:	
Project Information			
Project Name/No: <u>Buckstaff 35247204</u>		Purchase Order:	
EMSL LIMS Project ID:		US State where samples collected: <u>AR</u>	
(If applicable, EMSL will provide)		State of Connecticut (CT) must select project location:	
Sampled By Name: <u>Jody Adams</u>		☒ Commercial (Taxable) ☐ Residential (Non-Taxable)	
Sampled By Signature: <u>[Signature]</u>		No. of Samples in Shipment: <u>10</u>	
Turn-Around-Time (TAT)			
☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☒ 96 Hour ☐ 1 Week ☐ 2 Week			
Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.			
MATRIX	METHOD	INSTRUMENT	REPORTING LIMIT
CHIPS* ☒ % by wt. ☐ ppm (mg/kg) ☐ mg/cm ²	SW 846-7000B	Flame Atomic Absorption	*Please select reporting limit on left
Chips reporting Limit based on a minimum 0.25g sample weight. Not appropriate for Ceramic Tiles - XRF is recommended.	SW 846-6010D	ICP-OES	*Please select reporting limit on left
	NIOSH 7082	Flame Atomic Absorption	4µg/filter
AIR	NIOSH 7303M	ICP-OES	1.0µg/filter
	NIOSH 7303M	ICP-MS	0.05µg/filter
WIPE ☐ ASTM ☐ NON-ASTM	SW 846-7000B	Flame Atomic Absorption	10µg/wipe
If no box is checked, non-ASTM Wipe is assumed	SW 846-6010D	ICP-OES	1.0µg/wipe
TCLP	SW 846-1311 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW 846-1311 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)
SPLP	SW 846-1312 / 7000B / SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW 846-1312 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)
TTLC	22 CCR App. II, 7000B	Flame Atomic Absorption	40mg/kg (ppm)
	22 CCR App. II, SW 846-6010D*	ICP-OES	2mg/kg (ppm)
STLC	22 CCR App. II, 7000B	Flame Atomic Absorption	0.4 mg/L (ppm)
	22 CCR App. II, SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)
Soil	SW 846-7000B	Flame Atomic Absorption	40mg/kg (ppm)
	SW 846-6010D*	ICP-OES	2mg/kg (ppm)
Wastewater	SM 3111B / SW 846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)
Unpreserved ☐	EPA 200.7	ICP-OES	0.020 mg/L (ppm)
Preserved with HNO ₃ ☐ PH<2	EPA 200.5	ICP-OES	0.003 mg/L (ppm)
Drinking Water	EPA 200.8	ICP-MS	0.001 mg/L (ppm)
Unpreserved ☐	40 CFR Part 50	ICP-OES	12 µg/filter
Preserved with HNO ₃ ☐ PH<2			
TSP/SPM Filter			
Other:			
Sample Number	Sample Location	Volume / Area	Date / Time Sampled
L-14	yellow - basement walls		5-14-25
L-15	dark gray - basement ceiling		
L-16	dark gray - basement ducts		
L-17	white - basement doors & windows		
L-18	white - basement walls		
Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by: <u>[Signature]</u>	Date/Time: <u>5-16-25/10:20</u>	Received by: <u>AM</u>	Date/Time: <u>5/19/25 1005</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:
		<u>F2887 3681 9302</u>	

Controlled Document COC-25 Lead R19 08/19/2024

*6010C Available Upon Request

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Lead Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.

200 Route 130 North

Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: CinnaminsonLeadLab@emsl.com

FD 52404

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)
--

[illegible]

Method of Shipment:

Sample Condition Upon Receipt:	
--------------------------------	--

Relinquished by:

Date/Time:

5:16.25/10.20

Received by:

Date/Time

Relinquished by:

Date/Time:

Received by:

Date/Time

Controlled Document COC-25 Lead R19 08/19/2024

☐

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APPENDIX F

FIELD DIAGRAMS

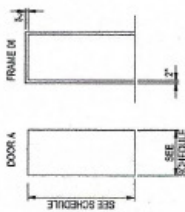


DOOR AND FRAME SCHEDULE									
NO.	SIZE	DOOR			FRAME			FIRE RATING	DETAIL
		TYPE	MAT.	TYPE	MAT.	DEPTH	TYPE		
8101	2'-0" x 6'-4" x 1'-3 1/4"	A	HM	R01	HM	5/8"	45 MIN.	45 MIN.	A, D
8102	2'-0" x 6'-4" x 1'-3 1/4"	A	HM	R01	HM	5/8"	45 MIN.	45 MIN.	A, B, D
8103	2'-0" x 6'-4" x 1'-3 1/4"	A	HM	R01	HM	5/8"	45 MIN.	45 MIN.	A, C
8104	2'-0" x 6'-4" x 1'-3 1/4"	A	HM	R01	HM	5/8"	45 MIN.	45 MIN.	A, C
8105	2'-0" x 6'-4" x 1'-3 1/4"	A	HM	R01	HM	5/8"	45 MIN.	45 MIN.	A, C
8106	2'-0" x 6'-4" x 1'-3 1/4"	A	HM	R01	HM	5/8"	45 MIN.	45 MIN.	A, C
8107	2'-0" x 6'-4" x 1'-3 1/4"	A	HM	R01	HM	5/8"	45 MIN.	45 MIN.	A, C

NOTES:
 A. FIELD VERIFY ALL DOOR AND FRAME SIZES.
 B. FRAME AND DOOR TO FIT UNDER AIR DUCT.
 C. PROVIDE SEALANT AT PERIMETER OF FRAMES.
 D. PROVIDE PRE-ROUTED CALLOUT AT RATED DOORS.

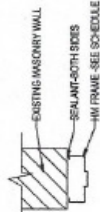
LEGEND

HM GALVANIZED HOLLOW METAL



2 WALL PENETRATION

NOT TO SCALE



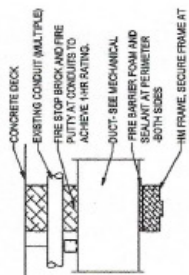
3 DOOR JAMB HEAD @ MASONRY

SCALE: 1/12" = 1'-0"



4 DOOR HEAD @ WOOD INFILL

SCALE: 1/12" = 1'-0"



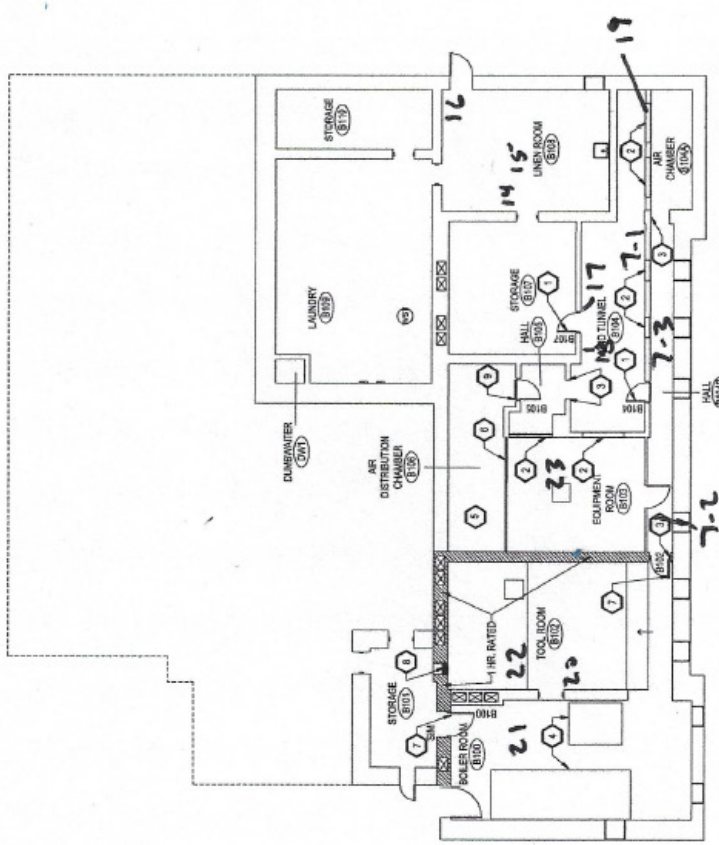
5 FRAME HEAD - 1 HOUR-RATED

SCALE: 1/12" = 1'-0"



FLOOR PLAN KEYNOTES:

1. NEW DOOR AND FRAME PAINT. SEE SHEET A1.
2. NEW OPENING PER JAMB. PROVIDE SEALANT AT PERIMETER BOTH SIDES. PRIME AND PAINT. USE 8" STUDS WHERE ABLE DUE TO WALL THICKNESS.
3. AS NEEDED PATCH AND REPAIR WHERE FRAME WAS REMOVED. WATCH ADJACENT AREA.
4. NEW CONCRETE HOUSING KEEPING PADS. SEE MECHANICAL.
5. PATCH AND REPAIR AIR DISTRIBUTION CHAMBER AS NEEDED TO BE REASONABLY AIRTIGHT. COORDINATE WITH COCCO.
6. NEW OPENING WITH GALVANIZED SHEET METAL ON METAL STUD FRAMING. SEE BAG.
7. NEW DOOR AND FRAME. 1-HOUR RATED. PAINT. SECURE FRAME AT JAMBS. PROVIDE SEALANT AT PERIMETER. PROVIDE 1-HR RATING. FOLLOW MANUFACTURER'S RECOMMENDATIONS. PROVIDE FIRE SEALANT AND FIRE BARRIER FOAM AT DOOR HEAD AND JAMBS. SEE BAG.
8. EXISTING PENETRATION APPROX. 36" x 1/4" x 1/4" OF METAL FRAMES THROUGH CONCRETE WALL. NEW OPENING WITH FIRE STOP BRICKS AND FIRE PUTTY TO ACHIEVE 1-HR RATING. FOLLOW MANUFACTURER'S RECOMMENDATIONS. SEE 204.
9. NEW DOOR AND FRAME PAINT. METAL. 2X SUPPORT UNDER EDGE OF PLUMB DECK TO STABILIZE. SEE A01.



1 BASEMENT PLAN

SCALE: 1/8" = 1'-0"

FINAL CONSTRUCTION DOCUMENTS

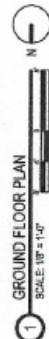
DESIGNED BY	KLH	TITLE OF SHEET	BASEMENT PLAN	DRAWING NO.	XXXXXXX
PREPARED BY	KLH	DATE	17/1/25	TIME NO.	17/1/25
DESIGNED BY	KLH	DATE	21/5/2024	SHEET	6 OF 60
PROJECT NAME	BUCKSTAFF GARAGE USE JAMB	PROJECT NO.	HOT SPRINGS NATIONAL PARK		
CLIENT NAME	OKLAHOMA				

1. PATCH/REPAIR FLOOR AS REQUIRED TO MATCH ADJACENT AREA WHERE NEW FOU DOES NOT COMPLETELY COVER OLD LOCATIONS.
2. PATCH AND REPAIR FLOOR AND WALL TO MATCH ADJACENT AREA WHERE EQUIPMENT IS PERMANENTLY REMOVED.
3. CLEAN FLOOR AND WALL AT FOU AS NEEDED AS PART OF PREP FOR NEW FOU.

- 1 VERTICAL PIPE CHASE—FULL HEIGHT WITH SOLID SURFACE FINISH. SEE PRIME AND PAINT EXPANDED VIEW. SEE 2.4.1A. SEE MECHANICAL. SEE 2A3 FOR RECOMMENDED SIZE.
- 2 PARTIAL HEIGHT, INSIDE CHASE. HEIGHT TO MATCH FLOOR. METALLIC FINISH. COMPATIBLE WITH MECHANICAL. SEE 2.4.1A. SEE MECHANICAL. SEE 2A3 FOR RECOMMENDED SIZE.
- 3 OFFSET/HORIZONTAL PIPE CHASE—PRIME AND PAINT. SEE 2A3 AND MECHANICAL.
- 4 MECHANICAL EQUIPMENT PLATFORM WITH GALVANIZED STRUCTURAL STEEL BEAMS/PANT. GALVANIZED STEEL PIPE RAILINGS AND BPT UNLOADED DATE-PANT. AND GALVANIZED BAR STEEL LADDERS WITH EXTENSIVE ONS-PANT. SEE STRUCTURAL. NOTE: PAINT IS HIGH-PERFORMANCE PRODUCTS.
- 5 EQUIPMENT—SEE ELECTRICAL AND MECHANICAL.

RECOMMENDED OUTSIDE DIMENSION, COORDINATE VARIANCE W/ COCOR	
A	10" X 2-0"
B	9" X 2-0"-WIDTH AS NEEDED TO FIT BEHIND DOOR
C	11-0" X 2-0"
D	10" X 11-0"
E	11-0" X 2-0"

2



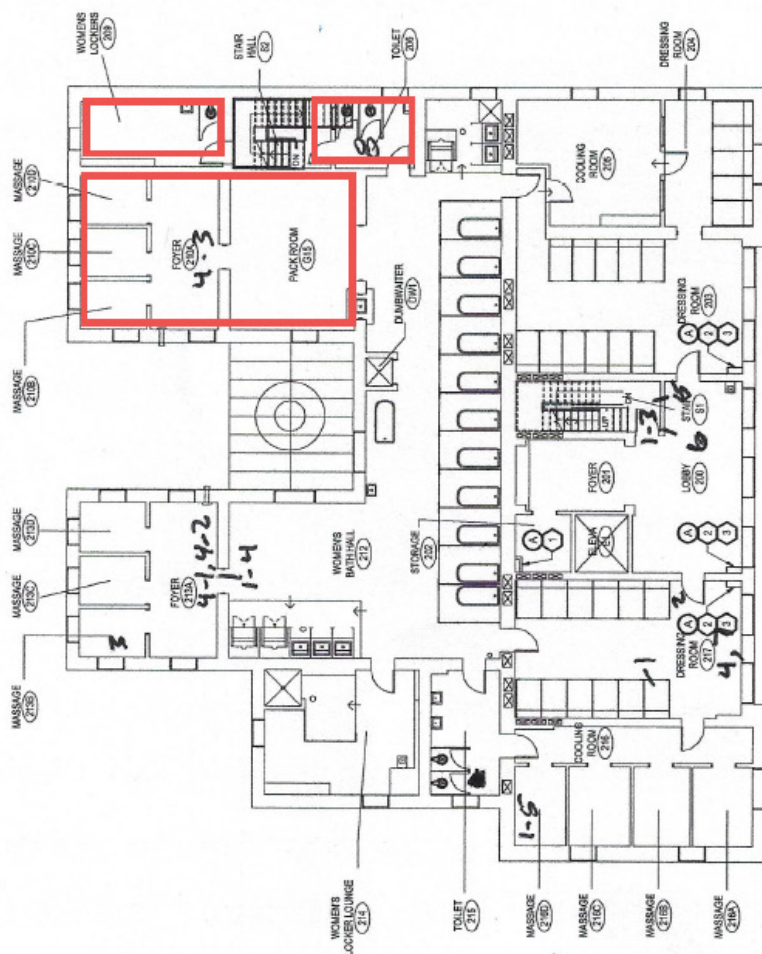
FINAL CONSTRUCTION DOCUMENTS

DRAWING NO. XXXXXXXX P&B NO. 177425 SHEET 7 OF 60	TITLE OF SHEET GROUND FLOOR PLAN BLUICKSTAFF BATHHOUSE HVAC HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK
SUB STREET NO. A2	DESIGNED KJH DRAWN BY J. H. HAN ADJUSTED BY TWM CHECKED BY TWM REVISION CLZ DATE 2/15/2024
A/E/IN/EN FIRM J. H. HAN ADJUSTED BY TWM CHECKED BY TWM REVISION CLZ DATE 2/15/2024	

Identified Historical Mercury Treatment Use Area

1. PATCH/REPAIR FLOOR AS REQUIRED TO MATCH ADJACENT AREA WHERE NEW FCU DOES NOT COMPLETELY COVER OLD LOCATIONS.
2. PATCH AND REPAIR FLOOR AND WALL TO MATCH ADJACENT AREA WHERE EQUIPMENT IS PERMANENTLY REMOVED.
1. CLEAN FLOOR AND WALL AT FCUs AS NEEDED AS PART OF PREP FOR NEW FCUs.

- 1 PARTIAL PRE-CHISEL WITH HEIGHT-RIMMER AND PLANT CHISEL. PROVIDE LARGE VERTICAL NOTCH TO MATCH EXISTING SEE 2.3.5. SEE MECHANICAL. SEE 2A2 CHASE SIZE SCHEDULE FOR RECOMMENDED SIZE.
- 2 PARTIAL FULL VERTICAL CHASE. HEIGHT TO MATCH FOU. INSTALL MECHANICAL. SEE 2.3.5. SEE SCHEDULE FOR RECOMMENDED SIZE. ALIGN FACE OF CHASE WITH THE FACE OF THE FOU.
- 3 AT THE FOU INSTALLED IN FRONT OF THE WINDOW INSTALL SOLID SURFACE BEAT AT THE SAME LEVEL AS THE TOP OF THE FOU WILL BE AT THE SAME LEVEL AS THE TOP OF THE WALL. SEE MECHANICAL. SEE 2.3.5. SEE SCHEDULE FOR RECOMMENDED SIZE. THE SPACER 1/4" LARGER THAN THE FOU AND NOTCH THE SPACER AT THE SILL.



FINAL CONSTRUCTION DOCUMENTS

DATE PLEN	CONTINUED	SUB SHEET NO.	TITLE OF SHEET	EXAMINING NO.
PHONE	KUH		2ND FLOOR PLAN	XXXXXXXX
ADDRESS	UNIVERSITY			PLANS NO.
CITY, STATE, AND ZIP	TWM			177425
SUBTRACTOR	TECH. RECORD			SHEET
NAME (FIRM)	CLZ			8 OF 60
DATE				

1 2ND FLOOR PLAN
SCALE: 1/8" = 1'-0"

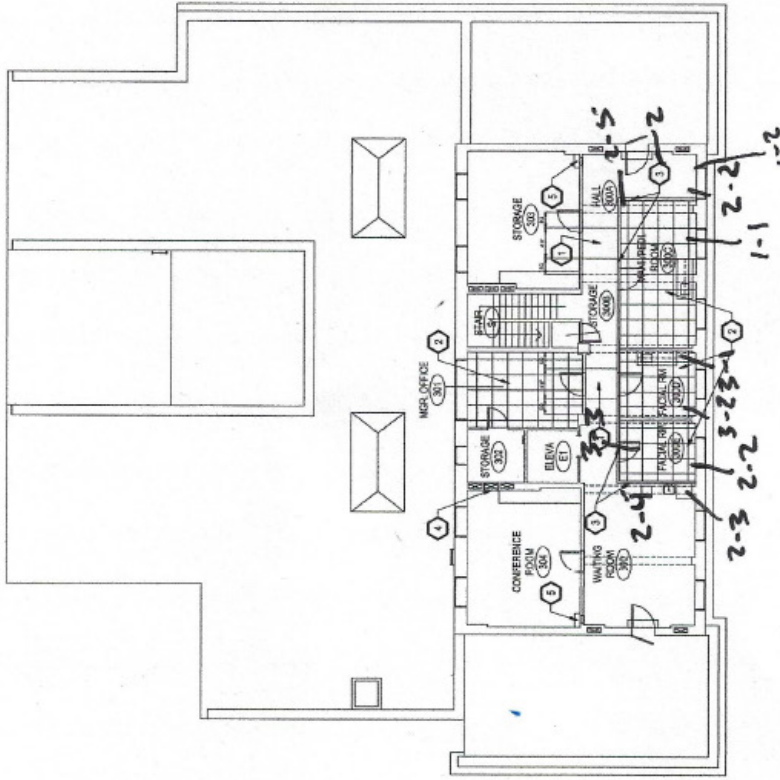
2ND FLOOR PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. PATCH REPAIR FLOOR AS REQUIRED TO MATCH ADJACENT AREA WHERE NEW FLOOR IS NOT COMPLETELY COVERED BY LOCATION.
2. PATCH AND REPAIR FLOOR AND WALL TO MATCH ADJACENT AREA WHERE EQUIPMENT IS PERMANENTLY REMOVED.
3. CLEAN FLOOR AND WALL AT FLOOR AS NEEDED AS PART OF PREP FOR NEW FLOOR.
4. PATCH AND REPAIR AT NEW WORK TYPING INTO ADJACENT AREAS.

FLOOR PLAN KEYNOTES:

1. SOFFIT-HORIZONTAL DUCT CHASE- PRIME AND PAINT. SEE 8/4.
2. 2' X 2' ACQUISITION CEILING TILE IN 15' X 15' ALUMINUM GRID. INSTALL AT 8' X 4' A.P.F., INSTALL AS HIGH AS POSSIBLE UNDER DUCTWORK IN HALL OFFICE 301.
3. EXTEND EXISTING WALL TO DECK. KEEP LOWER CROWN MOLDING IN PLACE. REMOVE UPPER CROWN MOLDING-PATCH. ADD MATCHING CROWN MOLDING AT DECK. PRIME NEW GWS AND PAINT FULL WALL BOTH SIDES. SEE 8/4.
4. LOWER EXISTING GRILL IN RM 304. PROVIDE NEW THRU-WALL OPENING FOR NEW DUCT AND OFFUSE. SEE MECHANICAL.
5. NEW THRU-WALL OPENING FOR TRANSFER DUCT. SEE MECHANICAL. PROVIDE SOFFIT TO ENCLOSE TRANSFER DUCT. CONSTRUCTION BOTH SURFACES IN A SIMILAR MANNER AT SIMILAR HEIGHTS. SEE 3/04 8/4.



1 3RD FLOOR - REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

FINAL CONSTRUCTION DOCUMENTS

DESIGNED BY ARCHITECT ALBERTSON & ASSOCIATES, INC. DURHAM, N.C.	DRAWN BY TAMM TECH. SERVICES CLZ DATE: 2/15/2024	SUB SHEET NO. A4	TITLE OF SHEET 3RD FLOOR REFLECTED CEILING PLAN BUCKSTAFF BATHHOUSE I/MAC HOT SPRINGS NATIONAL PARK HOT SPRINGS, AR	DRAWING NO. X000000X PMB NO. 177425 SHEET 9 OF 80
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APPENDIX G
PHOTO LOG



Photo 1 Exterior of the Buckstaff Bath House



Photo 2 RACM window glazing observed on basement windows HA-7.

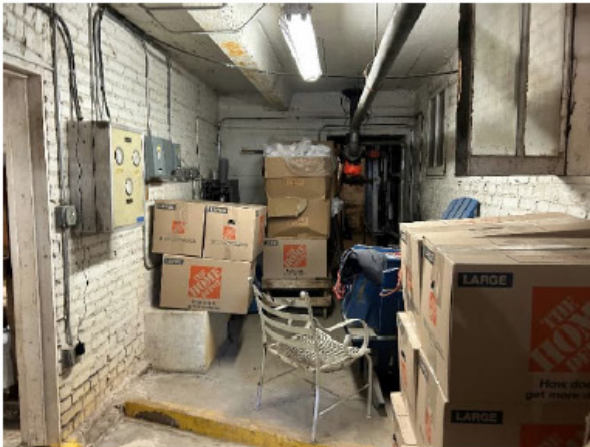


Photo 3 Basement with window with RACM window glazing HA-7.



Photo 4 ACM Exterior caulking around windows and doors HA-9.

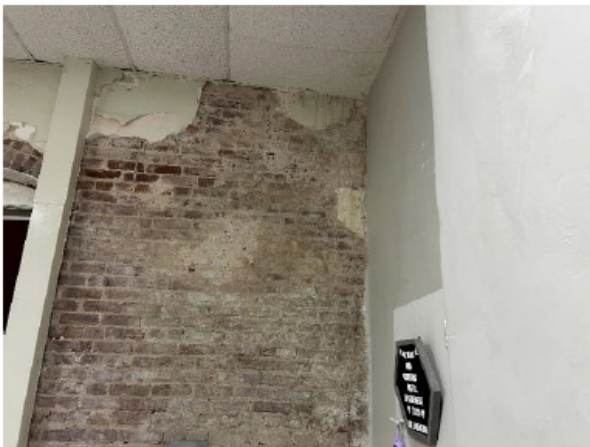


Photo 5 Damaged wall plaster

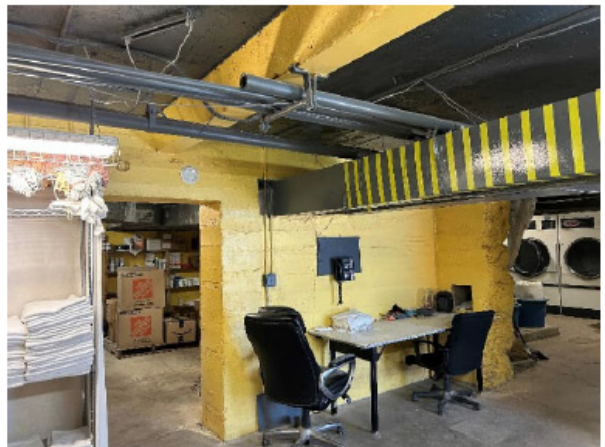


Photo 6 Overview of basement.



Photo 7 Overview of interior of the bath house.

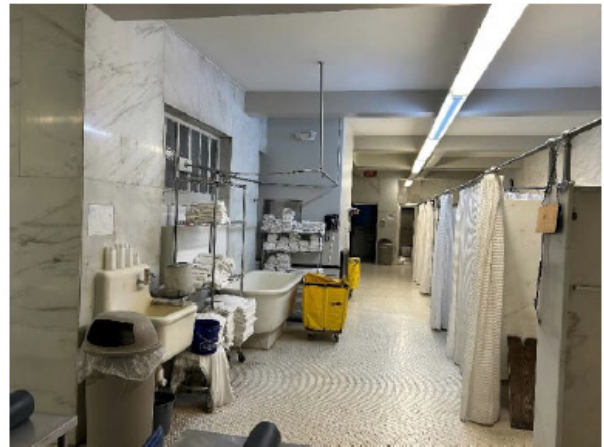


Photo 8 Overview of the interior of the bath house.



Photo 9 Overview of the interior of the bath house.



Photo 10 Overview of the interior of the bath house.



Photo 11 Example of area with the Jerome J405.



Photo 12 Screening drains near identified rooms.

APPENDIX H CERTIFICATIONS

ARKANSAS DIVISION OF ENVIRONMENTAL QUALITY
ASBESTOS PROGRAM



Terracon Consultants, Inc.

is qualified to perform certain asbestos-related work within the State of Arkansas, under Rule 21 of the Arkansas Pollution Control and Ecology Commission and Ark. Code Ann. § 20-27-1001 *et seq.*, and is hereby licensed as an

Asbestos Abatement Consultant



License Number: 002275-CCL-CL
Expiration Date: February 28, 2026

A handwritten signature in black ink that reads "Bailey Taylor". The signature is written over a horizontal line.

Bailey Taylor
Director, Division of Environmental Quality
Chief Administrator of the Environment
Arkansas Department of Energy and Environment

ARKANSAS DIVISION OF ENVIRONMENTAL QUALITY

ASBESTOS PROGRAM



JODY B. ADAMS

has satisfied the requirements of AHERA/ASHARA under TSCA Title II, and those of Rule 21 of the Arkansas Pollution Control and Ecology Commission, pursuant to Ark. Code Ann. § 20-27-1001 *et seq.*, and is hereby certified to perform certain asbestos-related work, within the State of Arkansas, in the following discipline(s):

Discipline	Expiration Date
Mgmt Planner	05/31/2026
Proj Designer	04/30/2026
Inspector	10/31/2025



Bailey Taylor

Bailey Taylor
Director, Division of Environmental Quality
Chief Administrator of the Environment
Arkansas Department of Energy and Environment

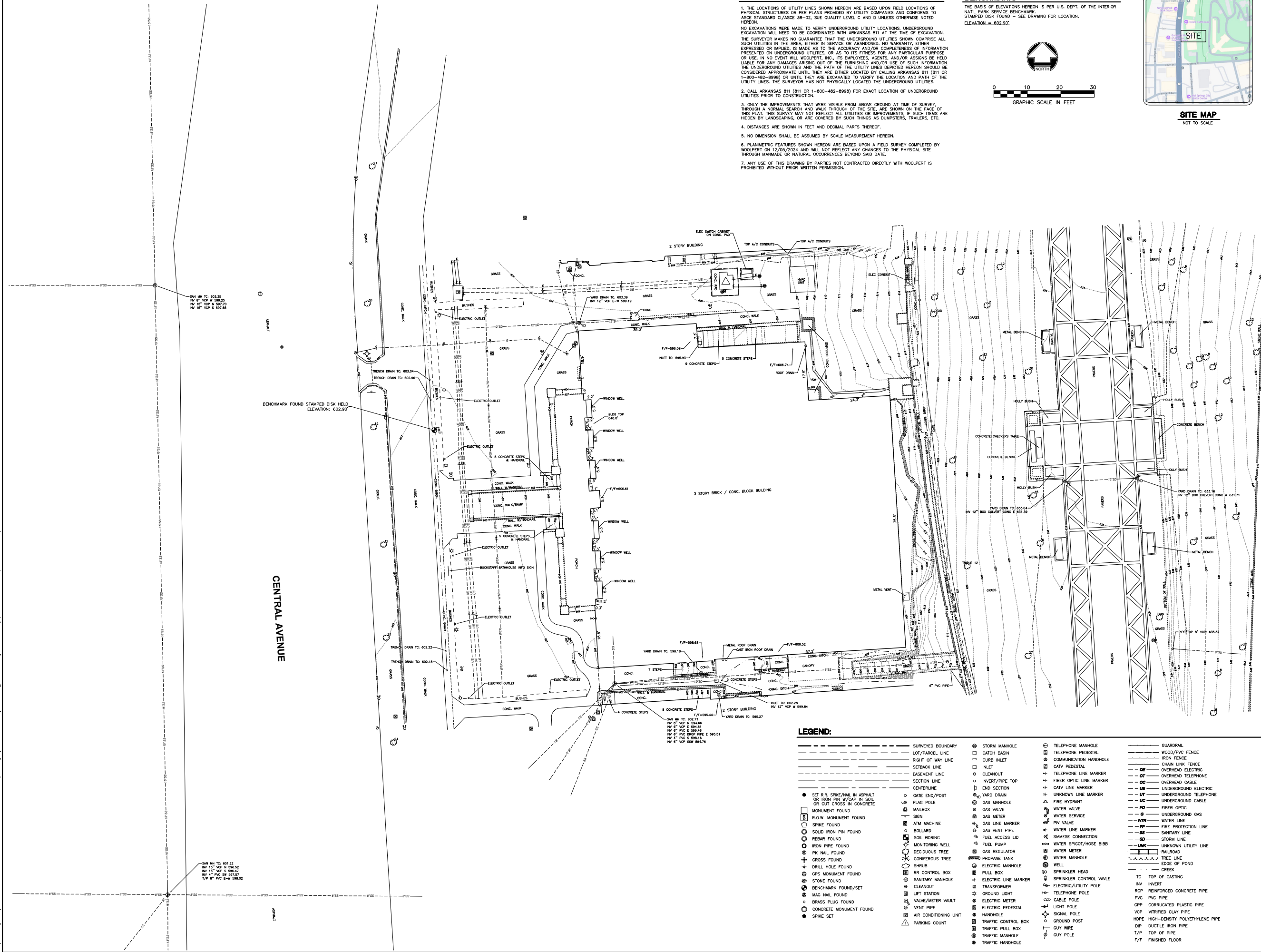
Certification Number: 013888

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TOPOGRAPHIC SURVEY

APPENDIX C

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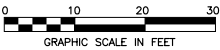


SURVEYOR'S NOTES:

1. THE LOCATIONS OF UTILITY LINES SHOWN HEREON ARE BASED UPON FIELD LOCATIONS OF PHYSICAL STRUCTURES OR PER PLANS PROVIDED BY UTILITY COMPANIES AND CONFORMS TO THE BEST OF OUR KNOWLEDGE AND BELIEF TO THE HIGHEST LEVEL OF ACCURACY PERMITTED HEREON.
2. ANY EXCAVATION WORKS MADE TO VERIFY UNDERGROUND UTILITY LOCATIONS, UNDERGROUND EXCAVATION WILL NEED TO BE COORDINATED WITH ARKANSAS 811 AT THE TIME OF EXCAVATION. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL OF THE UTILITIES THAT MAY BE PRESENT AT THE LOCATION. ANY INFORMATION NOT EXPRESSLY EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY AND/OR COMPLETENESS OF INFORMATION PROVIDED HEREON. THE SURVEYOR ASSUMES NO LIABILITY FOR ANY PARTICULAR PURPOSE OR USE, IN ANY EVENT WILL WOOLPERT, INC., ITS EMPLOYEES, AGENTS, AND/OR ASSIGNS BE LIABLE FOR ANY DAMAGES ARISING OUT OF THE FURNISHING AND/OR USE OF SUCH INFORMATION FOR ANY PURPOSES OTHER THAN THAT FOR WHICH IT WAS PROVIDED. ANY INFORMATION NOT CONSIDERED APPROPRIATE UNTIL THEY ARE EITHER LOCATED BY CALLING ARKANSAS 811 (811) OR BY THE UTILITY COMPANIES, OR BY THE UTILITY COMPANIES AND PART OF THE UTILITY LINES. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
3. CALL ARKANSAS 811 (811 OR 1-800-482-8998) FOR EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
3. ONLY THE IMPROVEMENTS THAT WERE MEASURED FROM ABOVE GROUND AT TIME OF SURVEY, AND NOT THE UNDEVELOPED AREAS, ARE SHOWN THROUGHOUT THE SITE. THE INFORMATION ON THIS PLAN, THIS SURVEY MAY NOT REFLECT ALL UTILITIES OR IMPROVEMENTS, IF SUCH ITEMS ARE NOT SHOWN, IT DOES NOT MEAN THAT SUCH ITEMS ARE NOT THERE. CAMPSTERS, TRAILERS, ETC.
4. DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.
5. NO DIMENSION SHALL BE ASSUMED BY SCALE MEASUREMENT HEREON.
6. PLANNIMETRIC FEATURES SHOWN HEREON ARE BASED UPON A FIELD SURVEY COMPLETED BY WOOLPERT ON 12/05/2024 WHICH WILL NOT REFLECT ANY CHANGES TO THE PHYSICAL SITE DURING MANMADE OR NATURAL OCCURRENCES BEYOND SAID DATE.
7. ANY USE OF THIS DRAWING BY PARTIES NOT CONTRACTED DIRECTLY WITH WOOLPERT IS AT THEIR OWN RISK.

BENCHMARK:

THE BASIS OF ELEVATIONS HEREON IS PER U.S. DEPT. OF THE INTERIOR
NAT'L PARK SERVICE BENCHMARK.
STAMPED DISK FOUND - SEE DRAWING FOR LOCATION.
ELEVATION = 602.90'



SITE MAP
NOT TO SCALE

PROJECT NO.	NO.	DATE	REVISION
10012112			
DATE 12/20/24			
SCALE AS SHOWN			
DES. SRK			
DR. PTK			
CND. SRK			

WOOLPERT, INC.
343 Fountains Parkway
Suite 100
Fairview Heights, IL 62208
618.632.7004
FAX: 618.632.0100



HOT SPRINGS NATIONAL PARK, AR
A PART OF THE SOUTHWEST 1/4 OF SECTION 33,
TOWNSHIP 2 SOUTH, RANGE 19 WEST OF THE 5TH
PRINCIPAL MERIDIAN, GARLAND COUNTY, ARKANSAS

TOPOGRAPHIC SURVEY

LEGEND:

- | | | | | |
|---|-------------------------|------------------------|---------------------------|---------------------------------------|
| ● SET R.R. SPIKE/NAIL IN ASPHALT OR IRON PIN W/CAP IN SOIL OR CUT CROSS IN CONCRETE | ○ LOT/PARCEL LINE | ⊗ STORM MANHOLE | ⊗ TELEPHONE POLE | ===== GUARDRAIL |
| ■ MONUMENT FOUND | — RIGHT OF WAY LINE | ⊗ CATCH BASIN | ⊗ COMMUNICATION MANHOLE | ===== WOOD/PVC FENCE |
| □ R.O.W. MONUMENT FOUND | — SETBACK LINE | ⊗ INLET | ⊗ CATV PEDESTAL | ===== IRON FENCE |
| ○ SPIKE FOUND | — EASEMENT LINE | ⊗ CLEANOUT | + TELEPHONE LINE MARKER | ===== CHAIN LINK FENCE |
| ○ SOLID IRON PIN FOUND | — SECTION LINE | ⊗ INVERT/PIPE TOP | + FIBER OPTIC LINE MARKER | — OE OVERHEAD ELECTRIC |
| ○ REBAR FOUND | — CENTERLINE | ⊗ ENG. SECTION | + CATV LINE MARKER | — OC OVERHEAD CABLE |
| ○ IRON PIPE FOUND | ○ GATE END/POST | ⊗ YARD DRAIN | ⊗ UNKNOWN LINE MARKER | — UT UNDERGROUND ELECTRICAL |
| ○ PK NAIL FOUND | ○ FLAG POLE | ⊗ GAS MANHOLE | ⊗ FIBER HYDRANT | — UC UNDERGROUND CABLE |
| ○ CROSS FOUND | ○ MAILBOX | ⊗ GAS VALVE | ⊗ WATER VALVE | — F FIBER OPTIC |
| ○ DRILL HOLE FOUND | ○ SIGN | ⊗ GAS METER | ⊗ WATER SERVICE | — GO UNDERGROUND GAS |
| ○ GPS MONUMENT FOUND | ○ ATM MACHINE | ⊗ GAS LINE MARKER | ⊗ PV VALVE | — WTR WATER LINE |
| ○ SOIL FOUND | ○ BOLLARD | ⊗ GAS VENT PIPE | ⊗ WATER LINE MARKER | — FP FIRE PROTECTION LINE |
| ○ BENCHMARK FOUND/SET | ○ SOIL BORING | ⊗ FUEL ACCESS LID | ⊗ SIAMESE CONNECTION | — SS SANITARY LINE |
| ○ MAG NAIL FOUND | ○ MONITORING WELL | ⊗ FUEL PUMP | ⊗ WATER SPOGG/HOSE BIBB | — SO STORM LINE |
| ○ BRASS PLUG FOUND | ○ DECIDUOUS TREE | ⊗ GAS REGULATOR | ⊗ WATER METER | ===== UNK UNKNOWN UTILITY LINE |
| ○ CONCRETE MONUMENT FOUND | ○ CONIFEROUS TREE | ⊗ PROPANE TANK | ⊗ WATER MANHOLE | ===== RAILROAD |
| ○ SPIKE SET | ○ SHRUB | ⊗ ELECTRIC MANHOLE | ⊗ WELL | ===== TREE LINE |
| | ⊗ RR CONTROL BOX | ⊗ PULL BOX | ⊗ SPRINKLER HEAD | ===== EDGE OF POND |
| | ⊗ SANITARY MANHOLE | ⊗ ELECTRIC LINE MARKER | ⊗ SPRINKLER CONTROL VALVE | ===== CREEK |
| | ⊗ CLEANOUT | ⊗ TRANSFORMER | ⊗ ELECTRIC/UTILITY POLE | TC TOP OF CASTING |
| | ⊗ LIFT STATION | ⊗ GROUND LIGHT | ⊗ TELEPHONE POLE | INV INVERT |
| | ⊗ VALVE/METER VAULT | ⊗ ELECTRIC METER | ⊗ CABLE POLE | RCV REINFORCED CONCRETE PIPE |
| | ⊗ VENT PIPE | ⊗ ELECTRIC PEDESTAL | ⊗ LIGHT POLE | PVC PVC PIPE |
| | ⊗ AIR CONDITIONING UNIT | ⊗ HANDHOLE | ⊗ SIGNAL POLE | CPV CORRUGATED PLASTIC PIPE |
| | ⊗ PARKING COUNT | ⊗ TRAFFIC CONTROL BOX | ⊗ GROUND POST | CPV VITRIFIED CLAY PIPE |
| | | ⊗ TRAFFIC PULL BOX | ⊗ GUY WIRE | HDPE HIGH-DENSITY POLYETHYLENE |
| | | ⊗ TRAFFIC MANHOLE | ⊗ GUY POLE | DC DUCTILE IRON PIPE |
| | | ⊗ TRAFFIC MANHOLE | | T/P TOP OF PIPE |
| | | | | F/F FINISHED FLOOR |

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ARCHITECTURAL CONSERVATION REPORT

APPENDIX D

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Buckstaff Bathhouse

Hot Springs, Arkansas



Finishes Analysis

May 2026



BUILDING CONSERVATION ASSOCIATES INC.

Buckstaff Bathhouse

Hot Springs, Arkansas

Finishes Analysis

Prepared For

Seven Generations Architecture + Engineering
600 E. Michigan Avenue, Suite B
Kalamazoo, Michigan 49007

Prepared By

Building Conservation Associates, Inc.
242 Cherry St.
Philadelphia, PA 19106

BCA Team

Dorothy S. Krotzer
Wei (Melissa) Luo-Hita

May 2026



BUILDING CONSERVATION ASSOCIATES INC.

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APPENDICES

Appendix A: Sample Location Key

Appendix B: Sample Stratigraphy Sheets

I.0 INTRODUCTION

At the request of Seven Generations Architecture + Engineering, part of Bodwé Professional Service Group, Building Conservation Associates, Inc. (BCA) performed a finishes analysis for the Buckstaff Bathhouse located in Hot Springs, Arkansas. Buckstaff Bathhouse provides mineral water baths and has operated continuously since its construction in 1912 (Figure 1 – Figure 4).

The goal of BCA's finishes analysis is to document the exterior and interior finishes in select rooms, focusing on the original paint scheme in each space. The paint analysis is part of a Historic Structure Report (HSR) undertaken by Seven Generations AE at the request of National Park Service.

The report begins by summarizing background information relevant to the finishes analysis, followed by BCA's methodology and summary of findings. The final section of the report provides BCA's conclusions and color matches for the identified original finishes.

All work required for this study was performed by Wei (Melissa) Luo-Hita, Architectural Conservator, and Dorothy S. Krotzer, Director of BCA South. All photographs were taken by BCA in 2025 unless noted otherwise.



Figure 1. Façade (west elevation) of Buckstaff Bathhouse.



Figure 2. South elevation, view looking northeast.



Figure 3. North elevation, view looking southeast.



Figure 4. Rear of north elevation, view looking southeast.

2.0 BACKGROUND INFORMATION

Buckstaff Bathhouse is one of eight historic bathhouses in Hot Springs National Park. Constructed in 1912, it is the only one that has been in continuous operation to the present day. The bathhouse's interior retains a high level of integrity reflecting its historic character.

The construction history relevant to the paint analysis is extracted from the HSR currently being produced by Seven Generations AE, presented below. For more information on the history of the building, refer to the body of the HSR to which this report is appended.

Relevant Construction History

1911 – 1912	Bathhouse completed and opened to the public in February 1912.
1921	Bathhouse remodeled, including: • Removal of a staircase in the current Men's Dressing Room (Room 102). • Consolidation of several smaller rooms into the current Women's Dressing Room (Room 203). A staircase into this room was removed. • Construction of an addition to the east end of the north leg of the Women's Bath Hall.
1931	Awnings replaced.
1937	Bathhouse remodeled, including • Men's Massage Room moved to the first floor. • New Women's Massage Room added.
1940s	Vestibules to Men's Bath Hall added. Constructed toilet rooms on the south side of the second floor.
1950s	Gymnasium partitioned to create the current Room 210A and G15. Opening created to connect these rooms to the Women's Bath Hall.
1965	Exterior of the building was sandblasted.
1967	Dumbwaiter and associated infrastructure added through Men's and Women's Bath Halls.
2000s	Partitions added in Room 300 to create facial and manicure rooms.
2009	Areas painted white on the exterior cleaned and repainted.
2017	Lobby (Room 100), Room 101, and elevator repainted. Men's and Women's Bath Hall repainted to match Lobby.
2024	Interior faces of wood windows repaired and repainted.

3.0 METHODOLOGY

Prior to the site visit, BCA reviewed background information provided by Seven Generations AE, including the 50% draft of the current HSR. Additional building information identifying potentially original architectural elements and subsequent changes was provided by RATIO Architects, who are responsible for historic preservation architecture and architectural history for the current HSR. RATIO also provided instructions on rooms and architectural elements to sample.

3.1 Field Microscopy

BCA performed in-situ field microscopy at each area of investigation. With the aid of X-ACTO blades and a Dermalite for magnification, BCA made small craters to examine the existing paint layer sequencing. Cratering provides the conservator with a general sense of how many finish layers exist, their approximate colors, and the condition of the substrate. Various craters can then be quickly compared to each other to help determine whether an area has been overpainted, repaired and/or restored, whether early finishes may exist, how one area appears in relation to another, and which areas should be sampled for laboratory analysis. Architectural elements where no paint sample was removed were examined with field microscopy.

3.2 Laboratory Analysis of Paint Samples

BCA removed a total of 134 samples from stucco, plaster, wood, and metal architectural elements using X-ACTO blades or an oscillating saw. Each finish sample was bagged, labeled with its sample number and returned to BCA's Philadelphia conservation laboratory. Sample locations were guided by RATIO's instructions and BCA's field investigations. After eliminating some lower priority rooms in discussion with RATIO and performing a preliminary bulk sample examination under the stereo microscope, 78 samples were selected for full analysis. All sample locations were recorded and documented in *Appendix A*.

Each sample was embedded in Extec Polyester Clear Resin® and sectioned on a Buehler IsoMet® low-speed saw. The sectioned samples were then dry polished using a series of fine Micromesh® cloths ranging from 4,000 to 12,000 grit. Sectioned samples were observed under a Nikon Eclipse E200® compound microscope in both visible light passed through a daylight correction filter and ultraviolet light. The ultraviolet light was generated by a mercury illumination system filtered through a violet filter cube (V-2A Ex380/420 Dm430 Bar 450M). Photomicrographs of paint samples were taken using Nikon DS-Fi3® color digital camera system and are included in this report to illustrate specific observations. Photomicrographs for all analyzed samples are included in *Appendix B*.

BCA performed color matches for potentially original historic finishes through mechanical exposure of bulk samples viewed in simulated natural light. Exposed paint layers were visually matched to the standardized Munsell color system and commercial Benjamin Moore palette. All available color matches are included in the *Recommendations* section and documented in *Appendix B*.

3.3 Color Names

All color names for paint layers were assigned following the ISCC-NBS Color System. The ISCC-NBS system specifies 267 color categories with non-technical names such as “light yellowish green.” The system was developed by the Inter-Society Color Council (ISCC) and the National Bureau of Standards (NBS) in 1955 to provide a standard for specifying colors with common words.¹

¹ Centore, Paul. “sRGB Centroids for the ISCC-NBS Colour System,” May 4, 2016. 1.

4.0 SUMMARY OF FINDINGS

The findings of BCA's paint analysis are presented below. After BCA examined each bulk sample, some samples were selected for full laboratory study. Samples that do not have historic paint layers and samples that appear to have the repeated paint stratigraphy were excluded from the full analysis, however, BCA's observations of these samples are noted in relevant passages below. BCA's findings are organized by exterior elements, followed by interior rooms presented in ascending room numbers.

4.1 Exterior

BCA analyzed samples from representative exterior architectural features including wood and metal window elements, wood door elements, and stucco columns, urns, and cornices.

BCA found that all the exterior elements were originally finished in a very light pale grayish yellow except for the front doors and the fanlight, which had a dark natural wood finish. These findings are consistent with the appearance of the building in c. 1912 historic photographs (Figure 5 – Figure 7). Specific features are discussed in more detail below, organized by material.

Stucco (Figure 8)

BB.EXT.2 – Pilaster base
BB.EXT.3 – Pilaster pedestal
BB.EXT.4 – Urn (first floor)
BB.EXT.13 – Cornice
BB.EXT.17 – Urn (third floor)

All of the samples from the stucco appear to contain only a few layers of non-historic paint, likely latex paint based on their lack of autofluorescence under ultraviolet light. The current HSR documents that the exterior was sandblasted in 1965. If the stucco had historic paint layers, they were likely lost during this process. However, the appearance of the stucco can be inferred from other evidence. Based on the c. 1912 historic photographs, the stucco had a light color value, indicating that it was either unpainted originally (as the color of the stucco is yellowish white) or it was painted a light color (Figure 5 – Figure 7). The earliest existing, likely original, finish on the exterior woodwork was identified as a pale grayish yellow sand paint with sand inclusions creating a rough textured paint likely intended to mimic stucco. This evidence suggests that the stucco was likely unpainted and the woodwork was painted to match it, although BCA was unable to confirm this since all of the stucco's early paint finishes appear to have been removed from the exterior.

Wood and Metal Windows (Figure 9 – Figure 10)

BB.EXT.1 – Wood window trim, west elevation first floor*
BB.EXT.6 – Wood window sash, west elevation first floor*
BB.EXT.8 – Metal window casing, north elevation
BB.EXT.10 – Metal window lintel, east elevation roof level*

* Indicates samples retaining historic paint layers, including the original (1912) finish.

BB.EXT.11 – Metal window sash, east elevation roof level
BB.EXT.18 – Wood window casing, west elevation third floor*

All of the wood samples and the metal window lintel sample that contain historic paint layers indicate that the original finish is a sand paint in pale grayish yellow, likely intended to match the appearance of the stucco. Only BB.EXT.6 has an earlier paint layer under the sand paint—a brownish orange. This is likely a preparatory layer as all the window sash appear white in the c. 1912 historic photographs. After the original finish, the windows were painted in a series of moderate yellows, then pale orange yellows, and finally many layers of whites.

BCA performed field investigation on select windows and found that many metal windows on all levels and the wood windows on the south and east roof level do not contain any historic paint layers, as demonstrated by BB.EXT.8 and BB.EXT.11.

Wood Doors (Figure 11)

BB.EXT.7 – Wood door stile, south elevation
BB.EXT.15 – Wood door jamb, south elevation third-floor exit to roof*
BB.EXT.19 – Wood door surround, west elevation front door*
BB.EXT.22 – Wood fanlight sash, west elevation front door*

Samples BB.EXT.15 and 19 suggest that the wood door elements were also originally finished with the same pale grayish yellow sand paint. BB.EXT.15 appears to have retained all historic paint layers, showing the same progression from sand paint to moderate yellows, pale orange yellows, and whites as observed on the window samples. The initial bulk sample examination found that the door to the third-floor roof and some of the front door trim also contain the original sand paint (see BB.EXT.16, BB.EXT.20, and BB.EXT.21 in *Sample Location Key*).

The front doors and the fanlight were finished with a dark natural wood color. BB.EXT.22 from the fanlight sash suggests the original finish is a brownish orange paint topped with a transparent coating, creating an overall appearance in glossy very dark purplish brown. Although the front doors only contain the current black paint, the historic photograph in Figure 5 captured them in a dark color value, possibly finished the same way as the fanlight sash.

Field investigation found that the south elevation side door contains the greatest number of paint layers. Other side doors only contain a few latex-like paint layers. The earliest existing finish on the south elevation door sample (BB.EXT.7) is a moderate yellow, likely contemporaneous with one of the early yellow campaigns found on the window elements, suggesting that the door is historic but does not date to the original construction.

* Indicates samples retaining historic paint layers, including the original (1912) finish.



Figure 5. Photograph of Buckstaff Bathhouse in 1912. Note that all of the exterior elements have a very light color value except the front doors and its fanlight, which are very dark. (Image extracted from current HSR, Figure 1B.4)



Figure 6. Image of Buckstaff Bathhouse c. 1912. (Image extracted from current HSR Figure 1B.6)

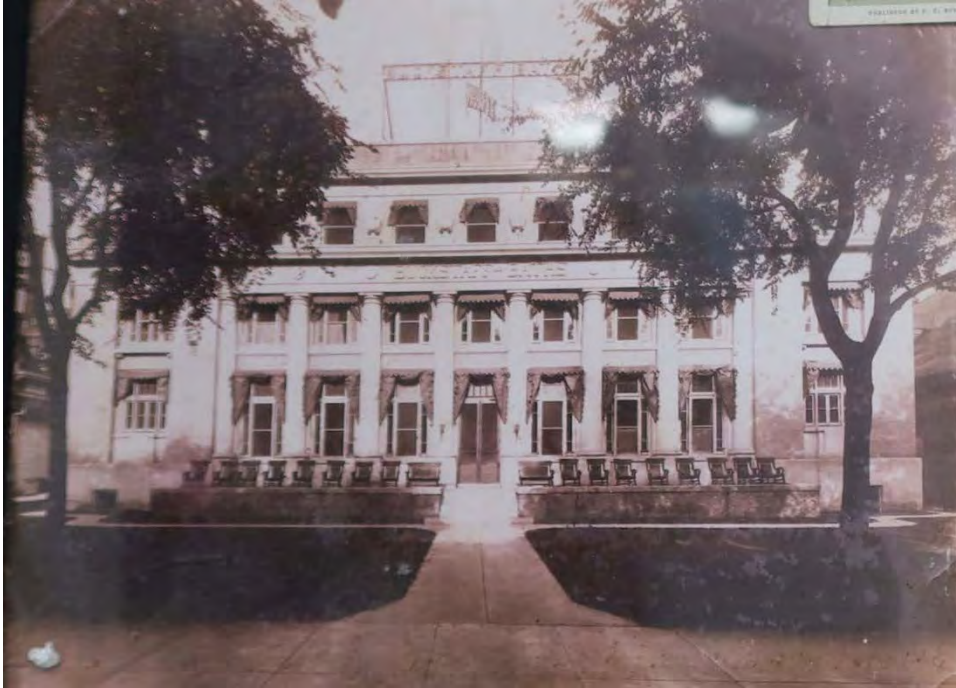


Figure 7. Image of Buckstaff Bathhouse c. 1913 – 1923. (Image extracted from current HSR Figure 1B.7)

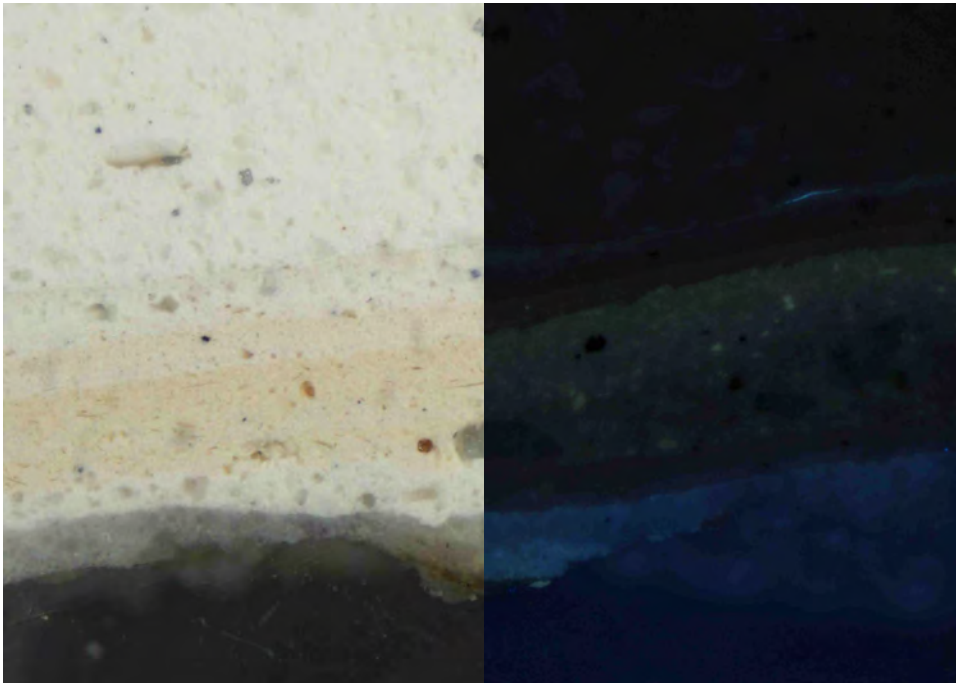


Figure 8. A representative stucco sample removed from a pilaster base shows that all layers are likely latex paint, and no historic layers are present. BB.EXT. 2, visible light (L), ultraviolet light (R), 40x magnification.

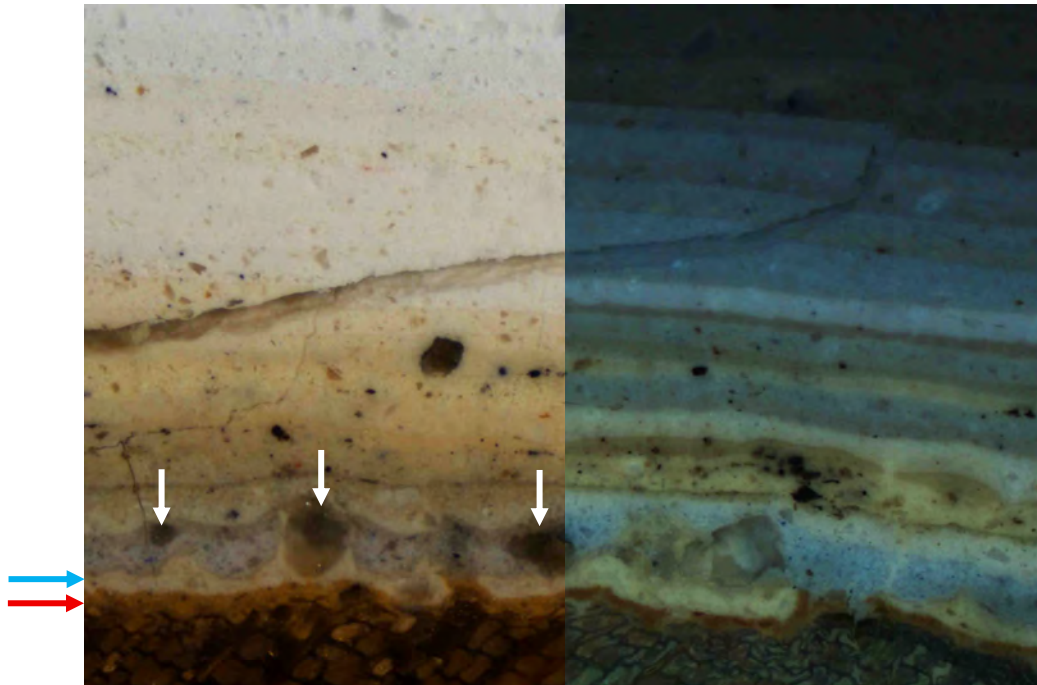


Figure 9. A sample from a wood window sash on the first-floor façade showing a brownish orange, likely a preparatory layer (red arrow), and the original pale grayish yellow sand paint (blue arrow) found on most other exterior wood elements. Note the sand grains indicated by white arrows. BB.EXT. 6, visible light (L), ultraviolet light (R), 40x magnification.

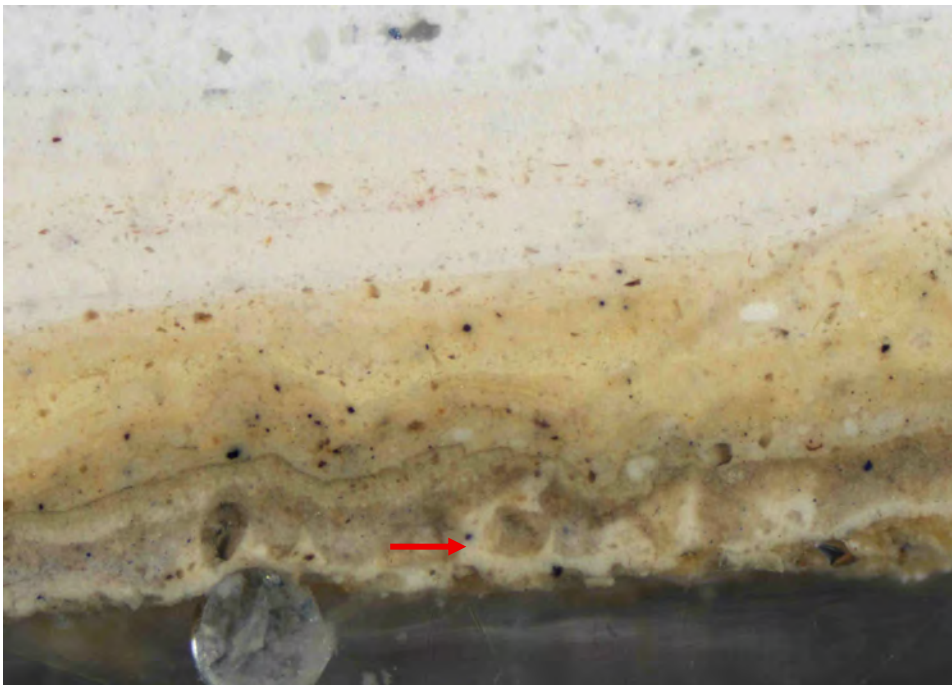


Figure 10. A representative woodwork sample from window trim on the first-floor façade showing the typical original pale grayish yellow sand paint (red arrow). See Sample Stratigraphy Sheets for the substrate and primer. BB.EXT. 1, visible light, 40x magnification.



Figure 11. The sample from the fanlight sash suggests that the original finish is a brownish orange paint/stain (red arrow) topped with a transparent coating (blue arrow), creating an overall appearance of glossy very dark purplish brown. BB.EXT. 22, visible light (L), ultraviolet light (R), 40x magnification.

4.2 Interior

BCA analyzed samples from the most significant interior spaces, including the following rooms:

- Room 100 Lobby/Room 101 Office
- Room 102 Men's Dressing Room
- Room 106 Men's Bath Hall
- Room 109 Men's Cooling Room
- Room 200 Lobby
- Room 212 Women's Bath Hall
- Room 300A Hall and 300C Manicure/Pedicure Room

BCA removed select samples following instructions provided RATIO. The interior rooms are discussed in detail in the sections below, ordered by ascending room numbers.

4.2.1 Room 100 Lobby/Room 101 Office

Rooms 100 and 101 are located at the center of the first floor, serving as the entrance lobby for guests (Figure 12 – Figure 14). BCA's analysis suggests that the original paint scheme consisted of plaster painted pale grayish yellow (lighter than the pale grayish yellow on the exterior), woodwork both painted white and naturally finished in dark brown, and the elevator painted grayish orangish yellow with some gold details.

Plaster Walls, Ceiling, Moldings (Figure 15)

- BB.100.1 – Plaster wall*
- BB.100.2 – Plaster ceiling*
- BB.100.3 – Plaster cornice molding*
- BB.100.6 – Plaster beam surround*

BCA's initial bulk sample examination and sample analysis found that all plaster elements were originally finished monochromatically in pale grayish yellow on top of a translucent, dark yellow sealer. A 1912 historic photograph captures the Lobby walls and ceiling in a light color value with some darker areas (Figure 12). The contrasts visible in the historic photograph are likely only due to shadows and not different paint colors. The pale grayish yellow is easily identifiable in cross-section under ultraviolet light by its bright yellow autofluorescence, a typical characteristic of oil-based paint. Most subsequent campaigns are either monochromatic or low contrast polychromatic finishes in light yellows until later bright red and bright orangish pink campaigns. Based on their location in the stratigraphy, the red and pink campaigns date to the mid-to-late 20th century. Afterwards, the Lobby was again painted in light colors such as light yellows and whites until the present paint scheme.

Woodwork (Figure 16 – Figure 17)

- BB.100.8 – Wood front door surround*

* Indicates samples retaining historic paint layers, including the original finish.

BB.100.9 – Wood fanlight*

BCA found that the woodwork in the Lobby generally retained the same finish over time. The currently white door surround was painted in grayish yellowish white originally and refinished in similar colors except when it was painted bright red and bright orangish pink to match the plaster walls. The current dark brown finish on the fanlight appears to be the third campaign. The original finish consists of a very dark brown stain and a glossy translucent coating, followed by a similar second campaign. Field investigation of the window elements suggests they have the same finish history as the fanlight. As discussed in the exterior *Wood Doors* section, the outside face of the fanlight was originally finished in a glossy very dark purplish brown. The very dark brown original interior finish is very similar in color to the very dark purplish brown found on the exterior.

Elevator (Figure 14, Figure 18 – Figure 19)

BB.E2 – Metal grille*

BB.E3 – Metal ceiling*

BB.E4 – Metal Greek key molding*

BB.E5 – Metal wall*

The original elevator paint scheme was not as polychromatic as it appears today. Field investigation and cross-section analysis suggest that the original scheme included grayish orangish yellow walls (including seams), ceiling, and corner metal grille; the currently gold cornice and other gold trim were painted gold. The ceiling and the grille were repainted approximately six to eight times in light yellows or whites. The only gold finish on the grille is the current one. The elevator walls were mostly painted in the same color as the ceiling except for one period when they were painted light yellow green then bright red.

Room 101

BB.101.1 – Metal shelf under counter (Figure 20)

Field investigation of various locations of the built-in metal shelf under the counter suggests that they only contain a few paint layers. The face of the bottom shelf appeared to contain the greatest number of paint layers and BCA removed a sample for analysis. The cross-section shows the earliest existing finish is very dark yellowish green on a dark brown primer, followed by two more yellow green schemes, then a light yellow before the current white. However, all paint layers display the characteristics of modern latex paint, such as very few visible pigments in cross-section and a lack of autofluorescence under ultraviolet light. The paint evidence suggests that the built-in shelves either do not date to the original construction or they have been refinished by removing historic paint layers.



Figure 12. Image of Lobby (Room 100) in 1912, view looking northeast. (Image extracted from current HSR Figure 1B.9)



Figure 13. View of Lobby in 2025, looking northeast.



Figure 14. View of elevator in 2025.

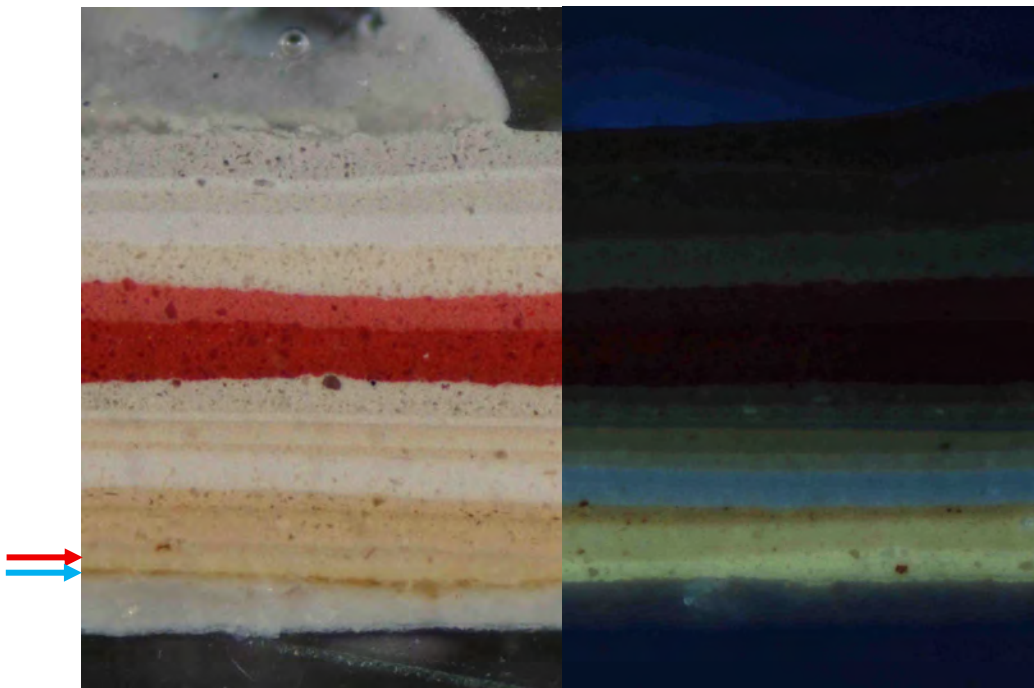


Figure 15. A representative plaster sample removed from the plaster ceiling of the Lobby showing the sealer (blue arrow) and the original pale grayish yellow finish (red arrow) with bright yellow autofluorescence. BB.100.2 (IF Lobby), visible light (L), ultraviolet light (R), 40x magnification.

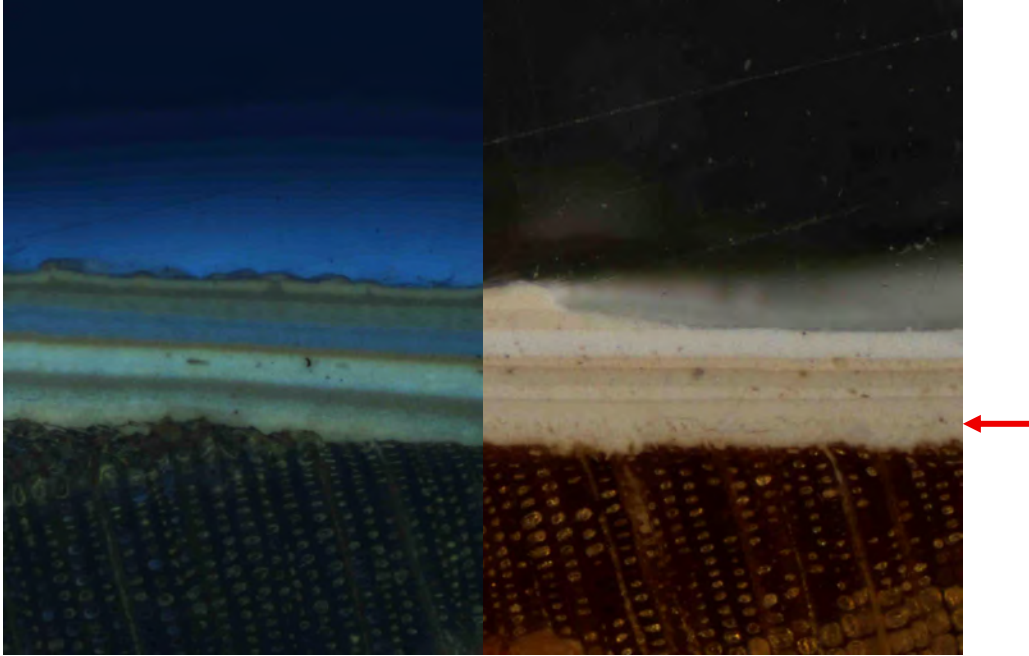


Figure 16. Most of the woodwork that is currently painted white in the building has always been painted white or other pale neutral colors, as shown in this sample removed from the front door surround. The original finish here is a grayish yellowish white (arrow). BB.100.8 (1F Lobby), ultraviolet light (L), visible light (R), 40x magnification.

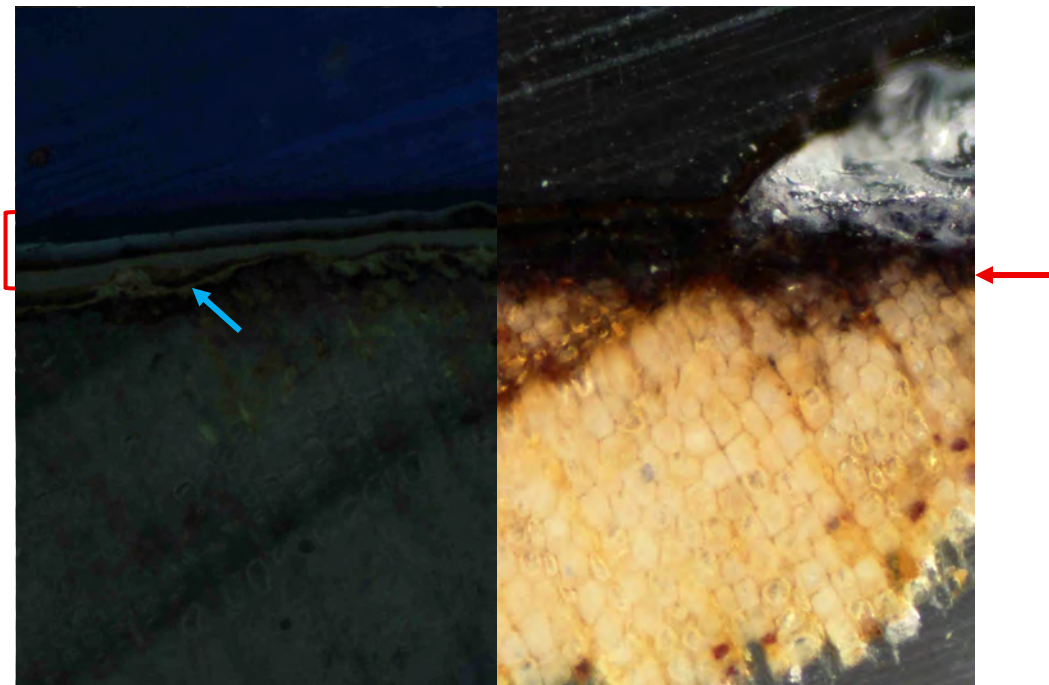


Figure 17. Most of the naturally finished woodwork in the building was originally stained (red arrow) with a pigmented transparent topcoat (blue arrow), followed by two to three refinishing campaigns (bracket), as seen in this sample removed from the wood fanlight. BB.100.9 (1F Lobby), ultraviolet light (L), visible light (R), 40x magnification.



Figure 18. The metal grille in the elevator was originally painted with grayish orangish yellow (arrow). It was only painted gold in the most recent paint scheme. BB.E2 (elevator), ultraviolet light (L), visible light (R), 40x magnification.

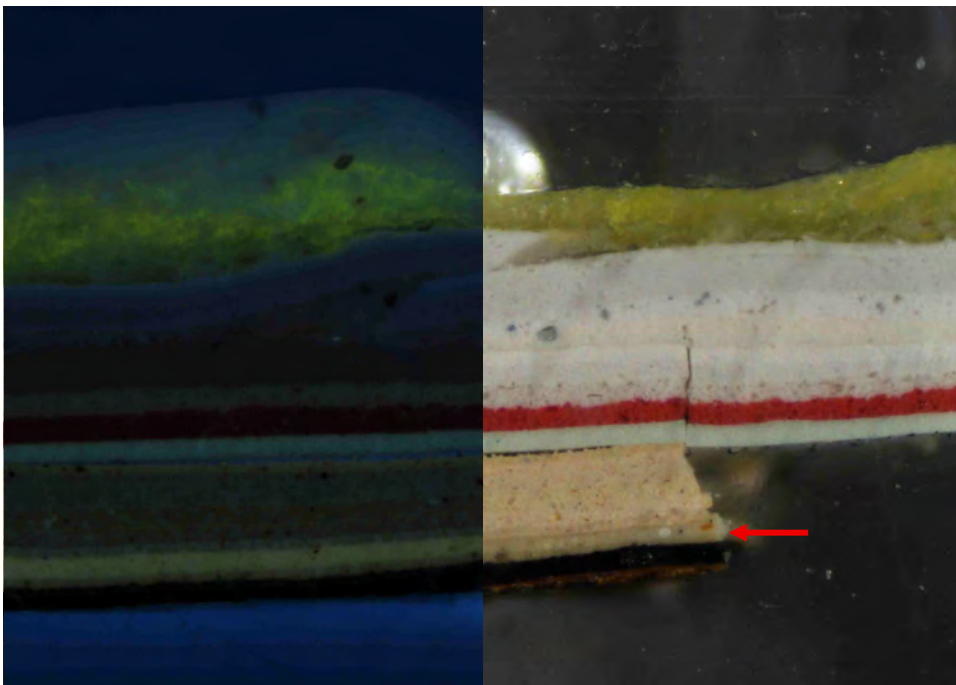


Figure 19. The elevator walls, including the metal seams, and the ceiling were originally painted with the same grayish orangish yellow (arrow) as the metal grille, as seen in this cross-section of the wall sample. BB.E5 (elevator), ultraviolet light (L), visible light (R), 40x magnification.

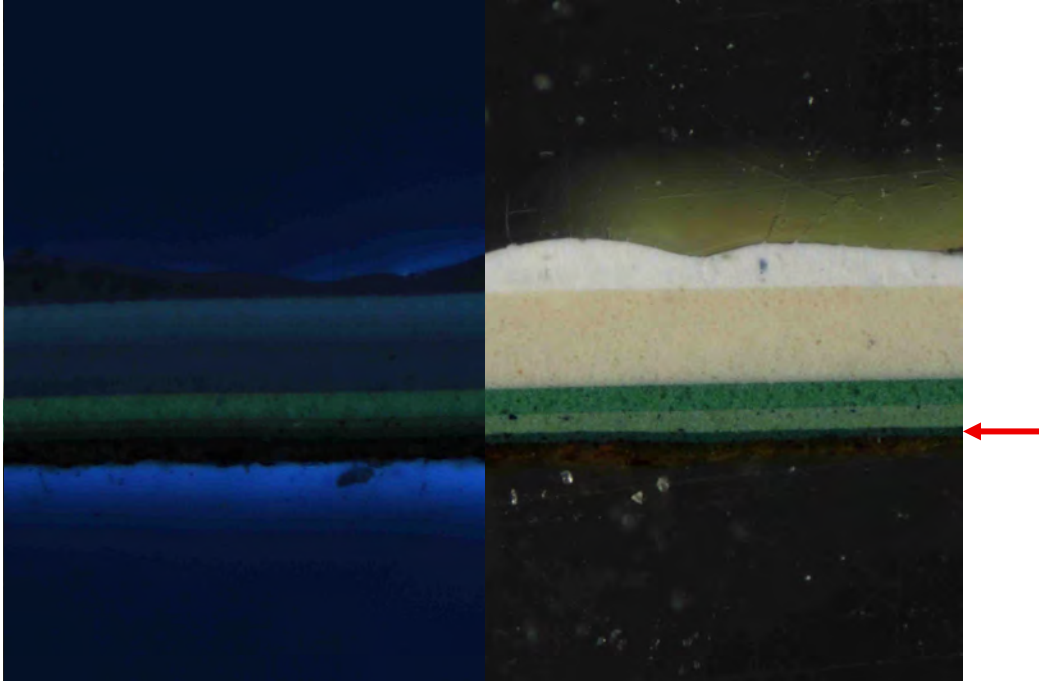


Figure 20. The earliest existing finish on the face of the bottom shelf is a very dark yellowish green (arrow). However, all the paint layers appear to be latex paint, suggesting they are not historic. *BB.101.1 (Lobby Office), ultraviolet light (L), visible light (R), 40x magnification.*

4.2.2 Room 102 Men's Dressing Room

BCA's investigation found that the original paint scheme in the Men's Dressing Room included pale yellow walls and brownish white balcony elements (Figure 21 – Figure 22). The plaster ceiling samples are missing their earliest paint layers. All the paint layers present on the locker elements appear relatively modern.

Plaster Walls and Ceiling (Figure 23 – Figure 24)

BB.102.4 – Plaster wall*

BB.102.9 – Plaster ceiling beam

BB.102.10 – Plaster ceiling

Cross-section analysis shows that the plaster walls of the Men's Dressing Room were originally painted pale yellow on top of multiple primer or preparatory layers. This is unusual compared to plaster samples in other rooms, which typically consist of a translucent sealer and one finish layer. The earliest existing finish on the beam and ceiling samples matches approximately the 12th layer on the wall sample, suggesting that the ceiling samples are missing earliest paint layers. However, the paint evidence from other rooms suggests that the walls, ceiling, and ceiling beams were generally painted in the same color, which may also be the case in the Men's Dressing Room.

Metal and Wood Balcony Elements (Figure 25 – Figure 26)

BB.102.2 – Metal balcony support beam+

BB.102.3 – Metal Greek key molding+

BB.102.5 – Wood deck at the underside of the balcony+

Field investigation and laboratory analysis found that the Greek key molding on the sides of the balcony floor, the metal support beam, and the wood deck all share the same original finish in brownish white and similar subsequent layers in light yellows or light yellow oranges, suggesting that these features have the same installation date. According to RATIO, the 1911 shop drawings indicated that the balcony floors were glass. If that is the case, then the current balcony structure is a replacement. However, the multiple layers of paint on these elements suggest that they likely date to early 20th century. The balcony structure in the c. 1916 photograph appears to match the current one and was painted in a very light color, likely white (Figure 21).

Metal Lockers (Figure 27)

BB.102.1 – Metal locker door, outside face, first floor

BB.102.6 – Metal locker interior, first floor

BB.102.7 – Metal locker door, outside face, balcony level

BB.102.8 – Metal locker interior, balcony level

* Indicates samples retaining historic paint layers, including the original (1912) finish.

+ Indicates samples retaining early historic paint layers but uncertain if they date to 1912.

The four paint samples from the metal lockers contain two to five layers, including the dark brown primer. All layers show the typical visual characteristics of latex paint, suggesting either that the lockers were installed after the mid-twentieth century or that the lockers are original and have had their historic layers removed during preparation for repainting. Three of the locker samples (BB.102.1, 102.6, 102.7) share the same dark green earliest existing finish, with subsequent layers in pale grayish blue, white, and the current vivid blue. The same dark green is the only finish layer on the interior of the balcony level lockers. The dark green is similar to the very dark yellowish green found on the counter in the Office (Room 101), although not an exact match.



Figure 21. Image of north Men's Dressing Room (Room 110) c. 1916, view looking east. (Image extracted from current HSR, Figure 1B.12)



Figure 22. South Men's Dressing Room (Room 102) in 2025, view looking east.

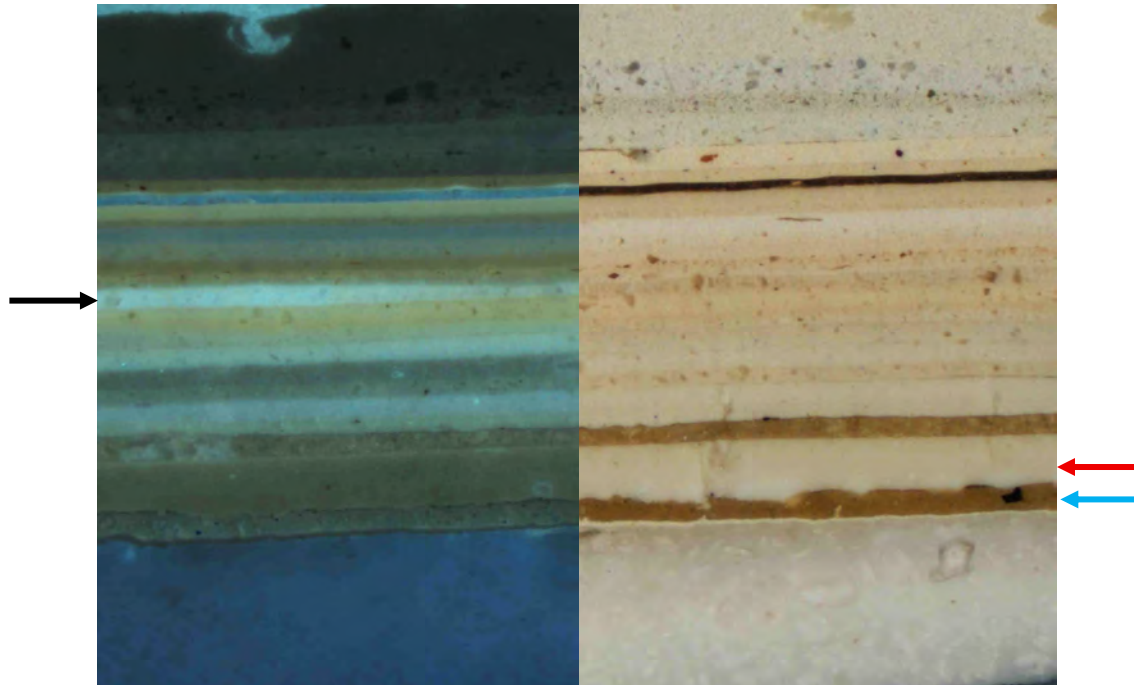


Figure 23. The plaster walls were originally painted in pale yellow (red arrow) on top of a dark grayish yellow (blue arrow) preparatory layer. The earliest existing and subsequent layers on the ceiling (see Figure 24) line up with approximately the 12th layer (black arrow) on this sample. BB.102.4 (Men's Dressing Room), ultraviolet light (L), visible light (R), 40x magnification

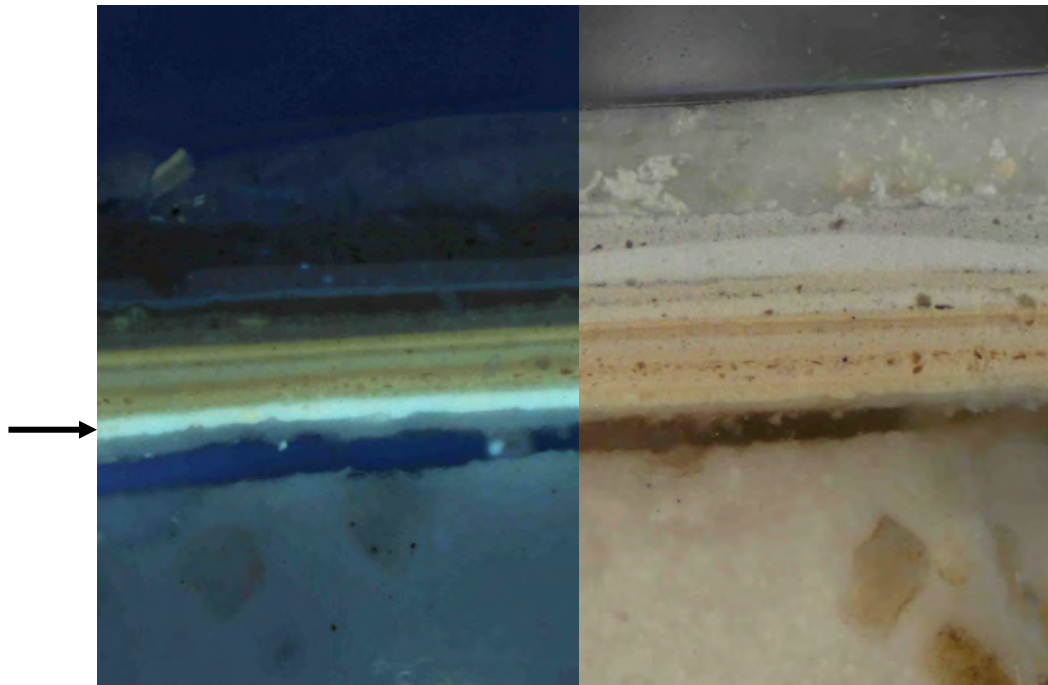


Figure 24. The ceiling sample is missing the earliest layers found on the wall sample (see Figure 23). The earliest existing paint layer on the ceiling (black arrow) match with approximately the 12th and later layers on the wall. BB.102.9 (Men's Dressing Room), ultraviolet light (L), visible light (R), 40x magnification

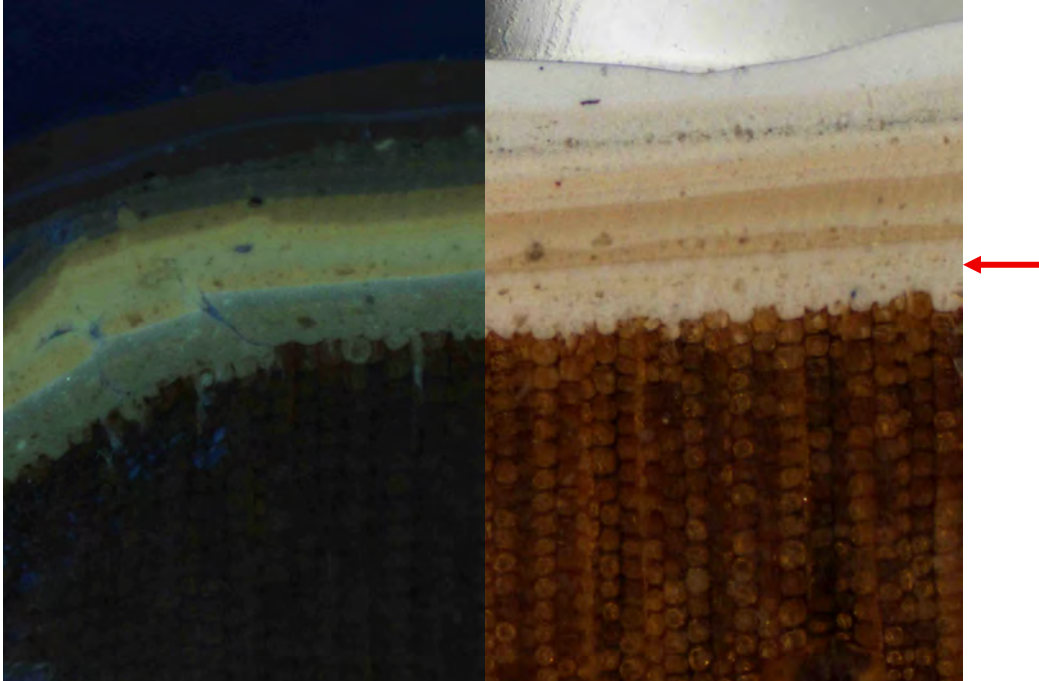


Figure 25. The wood deck at the underside of the balcony is painted the same original brownish white (red arrow) as the metal Greek key molding (see Figure 26) and the metal balcony support beam. BB.102.5 (Men's Dressing Room), ultraviolet light (L), visible light (R), 40x magnification

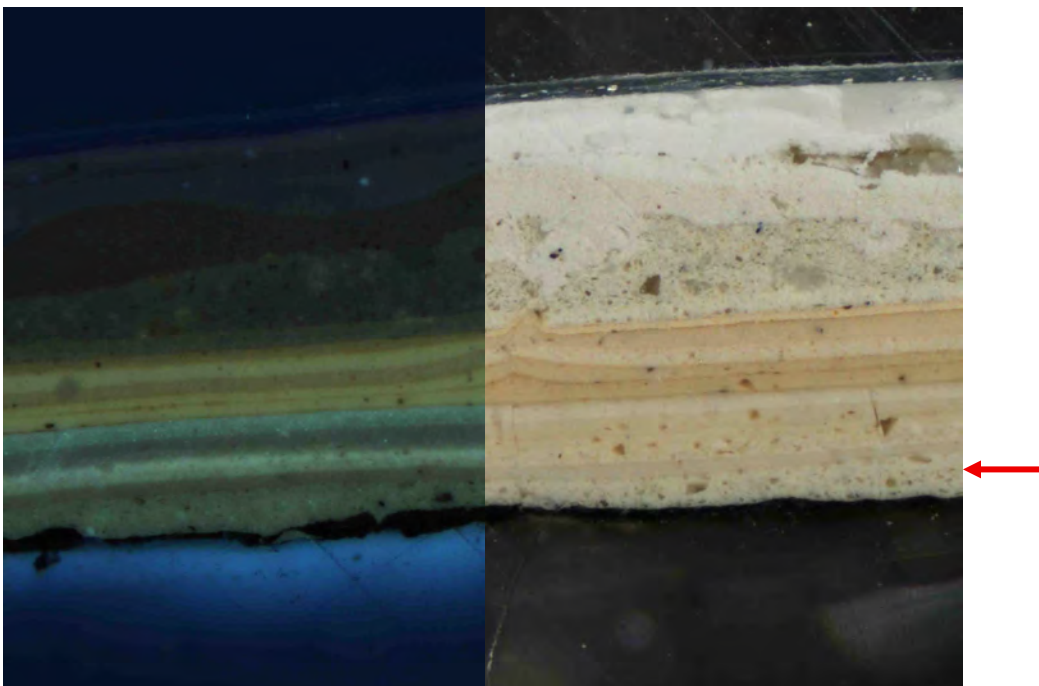


Figure 26. The Greek key molding is painted with the same original brownish white (red arrow) as the wood deck at the underside of the balcony (see Figure 25) and the metal balcony support beam. BB.102.3 (Men's Dressing Room), ultraviolet light (L), visible light (R), 40x magnification.

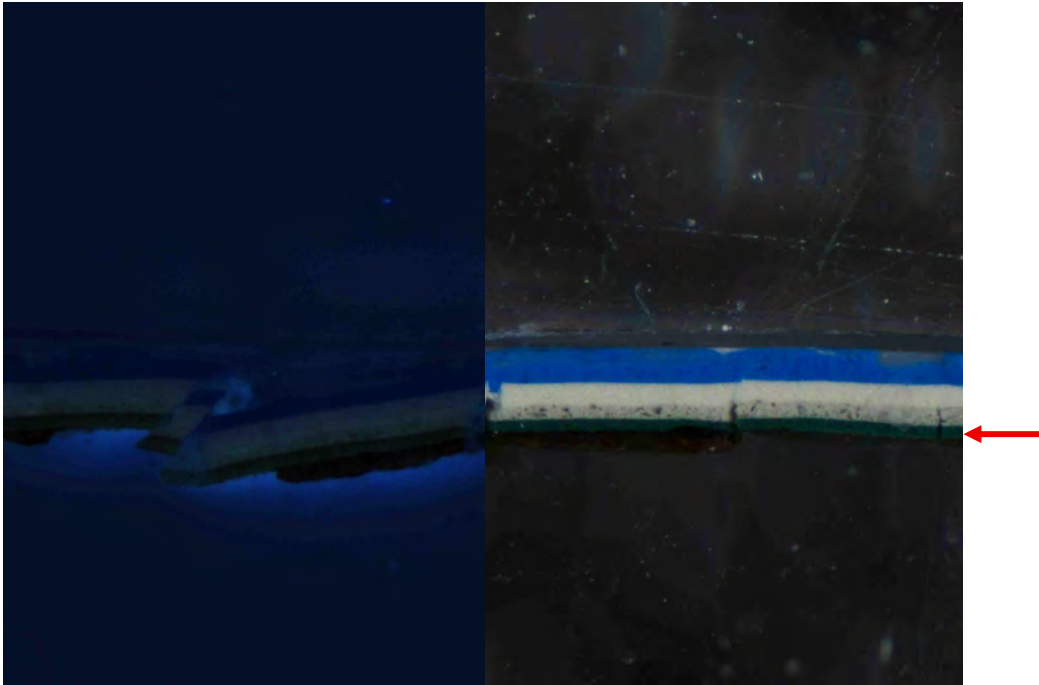


Figure 27. The earliest existing finish on all the locker samples is a dark green (arrow). However, all the layers appear to be latex paint, suggesting they are not historic. *BB.102.1 (Men's Dressing Room), ultraviolet light (L), visible light (R), 40x magnification.*

4.2.3 Room 106 Men's Bath Hall

The sample analysis suggests that the original paint scheme of the Men's Bath Hall included pale grayish yellow on the ceiling surrounding the skylight and the metal skylight elements, brownish white on all of the paneled column capital elements, and silver on the sauna metal roof (Figure 28 – Figure 29). The metal grille sample only contains non-historic paint layers. The original upper ceiling color is unknown, as the samples did not retain historic paint layers. The walls in the Bath Hall are clad with marble panels, so no sample was removed.

Plaster Ceiling (Figure 30)

BB.106.1 – Plaster ceiling at skylight*

BB.106.6 – Plaster ceiling

BB.106.11 – Plaster ceiling debris on top of southwest vestibule

Much of the ceiling in the Bath Hall is displaying signs of deterioration. BCA performed field investigation at multiple ceiling and beam locations and analyzed three samples. Out of the three, only Sample BB.106.1 potentially retains the original finish, a pale grayish yellow, the same color as the original plaster finish in Rooms 100 and 200. However, this sample only contains two paint layers that appear to be historic paint. In comparison, BB.106.3, removed from the column capital, has approximately 12 layers that appear to be historic. This suggests that Sample BB.106.1 is likely missing many historic paint layers. The 1912 historic photograph shows that the skylight ceiling was in a relatively light color value, potentially the pale grayish yellow identified by BCA (Figure 28).

Sample BB.106.11 appears to have retained the original primer like those identified in the Room 100 plaster samples, but followed by only more recent presumably latex paint layers. Sample BB.106.6 only contains more recent presumably latex paint layers.

Wood Partition Cornice (Figure 31)

BB.106.8 – Wood partition cornice

The partitioned vestibule is a known 1940 addition. BCA removed one sample from the wood cornice in attempt to establish a known 1940 paint layer as a reference for other samples. The earliest existing finish on the partition cornice is a light orange yellow that matches the seventh layer on the paneled capital samples. The cornice was then painted light orange yellow a few more times, followed by pale greens and pale blues, then white. These later cornice layers generally also align with those of the capital samples.

Metalwork (Figure 32 – Figure 33)

BB.106.2 – Metal skylight rosette*

BB.106.3 – Metal paneled capital, panel center*

BB.106.5 – Metal paneled capital, surround*

* Indicates samples retaining historic paint layers, including the original (1912) finish.

BB.106.9 – Metal grille

BB.106.10 – Metal sauna roof*

Sample BB.106.2 suggests that the original finish on the skylight rosette is likely the same pale grayish yellow as the plaster ceiling surrounding the skylight. BCA's field investigation found that the metal skylight frames were also finished in the same pale grayish yellow.

The two column capital samples share the same original brownish white finish and largely the same subsequent layers. The bulk sample examination of the molding around the center panel suggests it shares the same layers as well. The brownish white is also identified as the original finish on the balcony elements in Men's Dressing Room. The findings are consistent with the 1912 historic photograph that captures the column capitals in a monochromatic light color (Figure 28). After the original finish, the capital was painted in a series of light yellows and light orange yellows, followed by pale greens and blues, then light grays and whites. As discussed above, the 1940 light orange yellow on the partition cornice matches the seventh layer on the capital samples, therefore dating the seventh layer to 1940. This finding suggests that the paint scheme on the column capital changed from light orange yellows to pale green around the 1960s or '70s.

The metal grille sample appears to contain only more recent presumably latex paint layers, first a moderate gray on a dark brown primer, then the current black. Either the grille is a later replacement, or the earlier paint layers have been lost or removed.

The metal sauna roof sample may contain three silver paint layers, although it is difficult to confirm as the separations between metallic paint layers are not visually distinctive. The potentially original finish is a silver paint that is slightly yellower than the current finish. The cross section suggests that there may be a clear coating on top of the silver paint, but BCA was unable to identify one on the bulk sample.

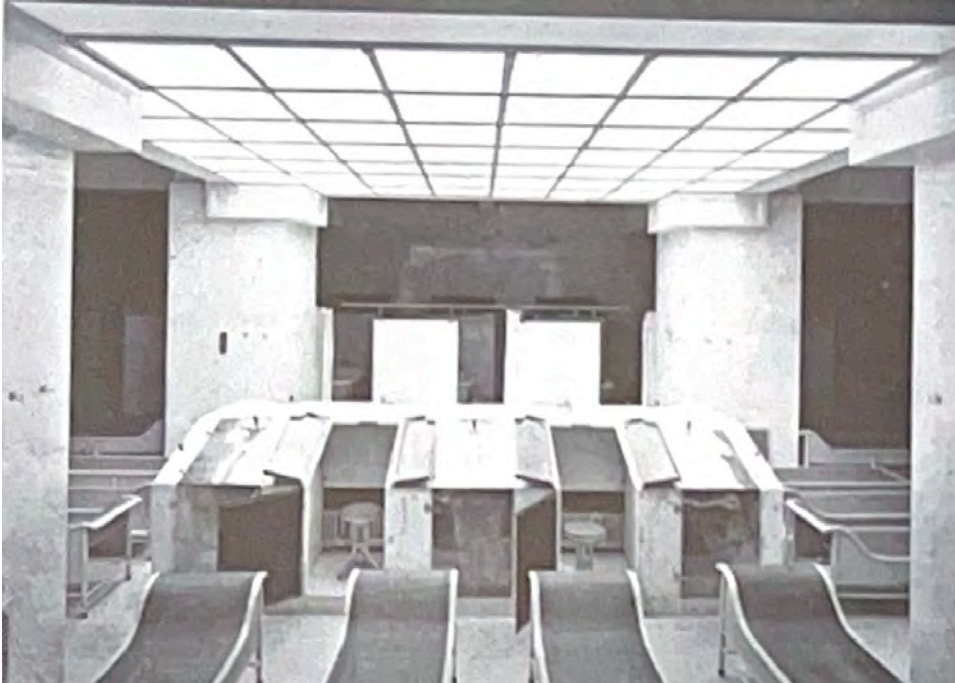


Figure 28. Image of the Men's Bath Hall in 1912, view looking east. (Image extracted from current HSR, Figure 1B.10)



Figure 29. Image of the Men's Bath Hall in 2025, view looking east. (Image extracted from current HSR, Figure 1B.10)

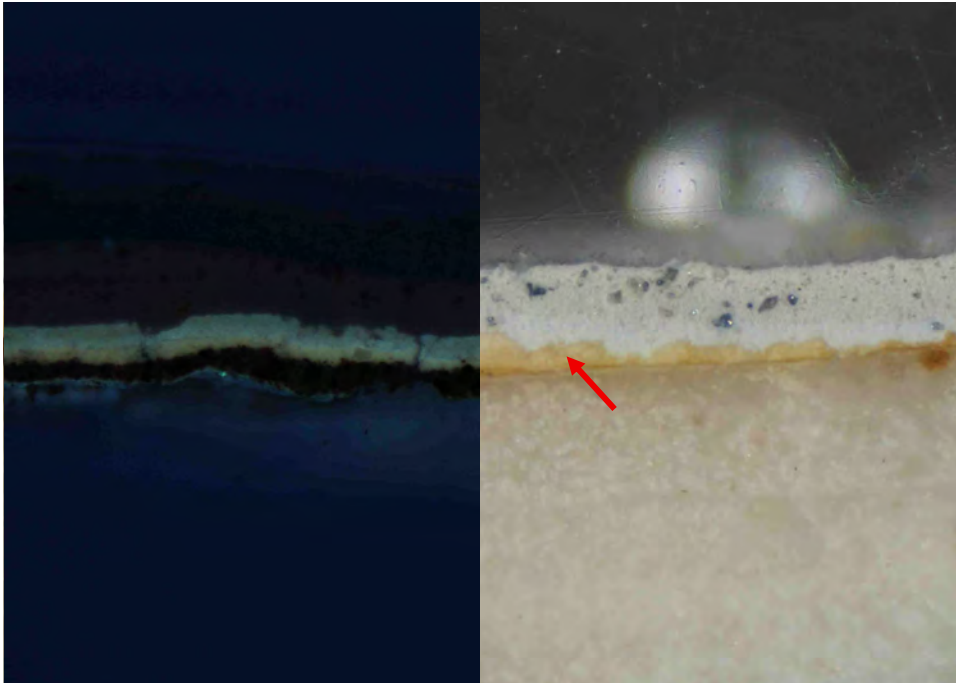


Figure 30. This is the only ceiling sample containing the potentially original finish in pale grayish yellow (arrow). It appears that some historic paint layers may be lost, considering how few layers remain on this sample compared to the metal panel sample in Figure 32. BB.106.1 (Men's Bath Hall), ultraviolet light (L), visible light (R), 40x magnification.

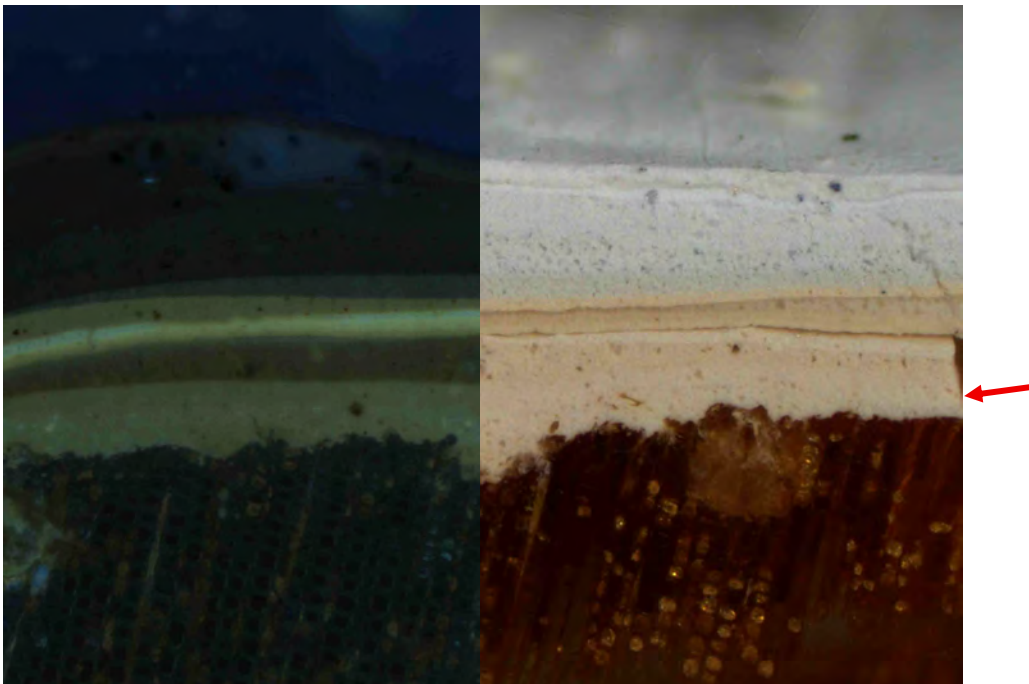


Figure 31. The earliest existing finish on the 1940s partition cornice is a light orange yellow (arrow) that matches the seventh layer on the paneled capital sample (see Figure 32). BB.106.8 (Men's Bath Hall), ultraviolet light (L), visible light (R), 40x magnification



Figure 32. A representative sample of the metalwork originally painted brownish white (arrow), removed from the paneled capital center. The blue arrow indicates the light orange yellow that likely matches the earliest existing layer on the partition cornice. BB.106.3 (Men's Bath Hall), ultraviolet light (L), visible light (R), 40x magnification.

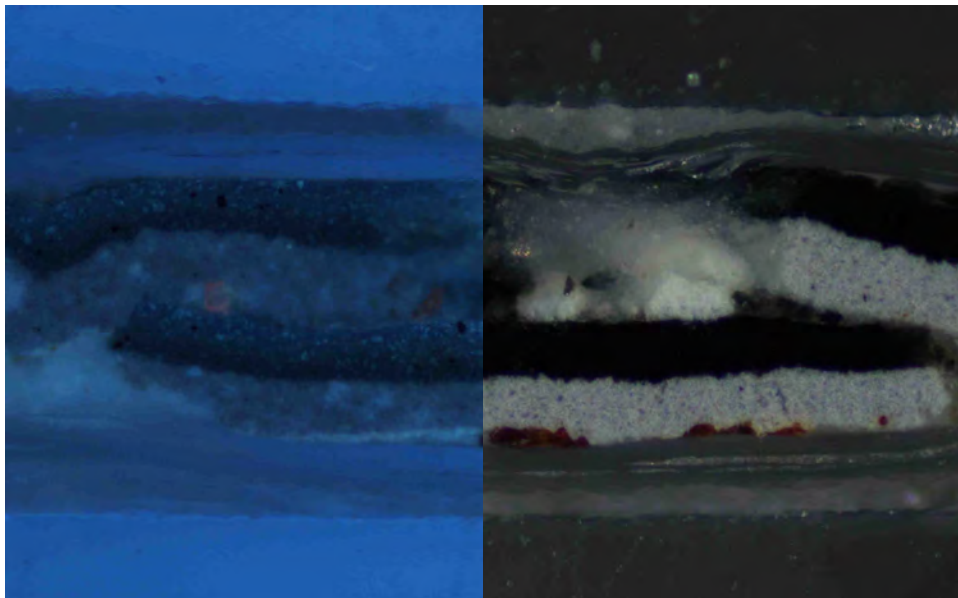


Figure 33. All paint layers on the metal grille sample appear to be latex, suggesting they are not historic. BB.106.9 (Men's Bath Hall), ultraviolet light (L), visible light (R), 40x magnification

4.2.4 Room 109 Men's Cooling Room

The Men's Cooling Room was originally painted with brownish yellow plaster walls, ceiling, and beams (Figure 34 – Figure 35). Both wood and metal windows were finished with grayish reddish brown sash and grayish yellowish white frames/trims.

Plaster Walls and Ceiling (Figure 37)

BB.109.3 – Plaster wall*

BB.109.7 – Plaster ceiling beam*

The plaster walls and ceiling were originally finished with a thin brownish yellow on top of a pale yellow primer. Subsequently, they were painted in many campaigns of light orange yellows, followed by more recent layers in pale green, light grays, and whites. Bulk sample examination of the ceiling sample suggests that it has the same layers as the beam sample (BB.109.7). The overall evolution of the room's paint schemes is similar to that of the Men's Bath Hall.

Wood and Metal Window Elements (Figure 36, Figure 38 – Figure 39)

BB.109.1 – Wood window sill*

BB.109.2 – Wood window sash*

BB.109.4 – Metal window sash*

BB.109.5 – Metal window trim*

BB.109.8 – Metal window transom sash*

BB.109.9 – Metal window mullion*

Two kinds of windows are present in the Cooling Room, a tripartite wood casement window on the west elevation and two metal double-hung windows with arched transoms on the north elevation. The wood window sill on the west elevation was originally painted in the same grayish yellowish white identified on the Lobby door surround. All subsequent layers are white or light neutrals. BCA's field investigation on the other currently white wood casement window elements suggests that they share similar layers as the window sill. The naturally finished wood window sash has been refinished three times. The original finish consists of a grayish reddish brown stain with a transparent coating, slightly redder than the current presentation finish.

The samples suggest that the metal windows, like the wood windows, were painted in a dual white and dark brown scheme originally. The window trim and mullions were painted in the same grayish yellow white as the wood windows. The double-hung window sash and transom sash were painted in a dark grayish reddish brown, likely intended to match the stained wood window sash. The findings are corroborated by a historic photograph, although from a different room on the second floor, capturing a double hung window with dark sash and light colored frame/trim (Figure 36).

* Indicates samples retaining historic paint layers, including the original (1912) finish.



Figure 34. Men's Cooling Room (Room 109), view looking west.



Figure 35. Men's Cooling Room (Room 109), view looking northeast.



Figure 36. The Hydrotherapeutic Department in 1912, currently Room 205. Note the dual-color scheme on the window with dark sash and light frame, which may also have been applied to the Men's Cooling Room. (Image extracted from current HSR, Figure 1B.14).

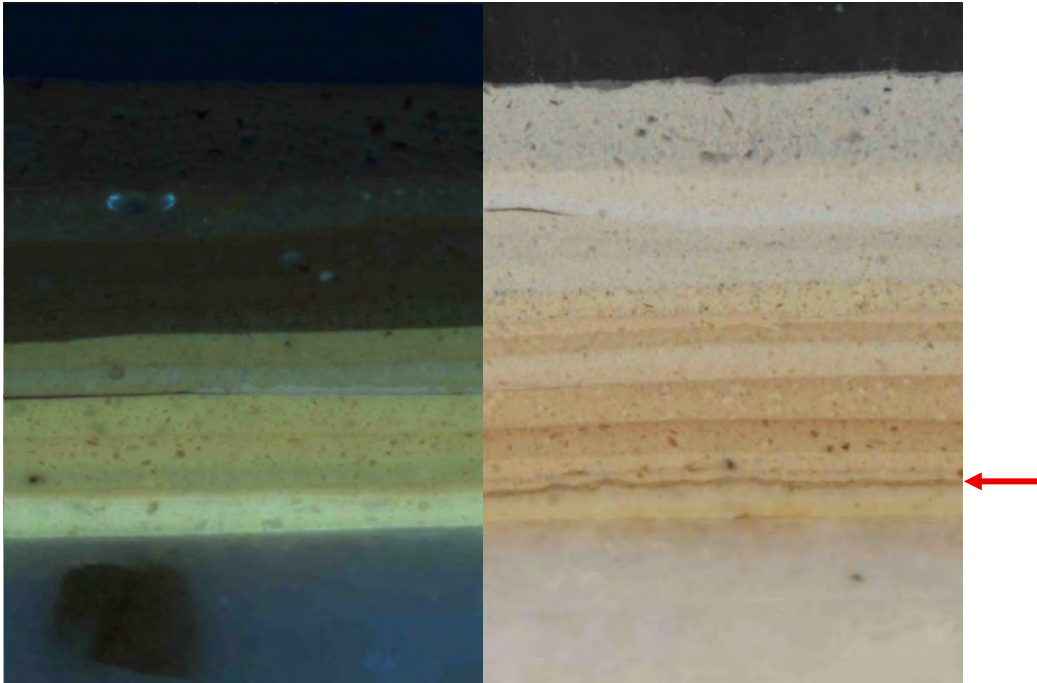


Figure 37. The plaster walls and ceiling were originally painted in brownish yellow (arrow), as seen in this wall sample. BB.109.3 (Men's Cooling Room), ultraviolet light (L), visible light (R), 40x magnification.

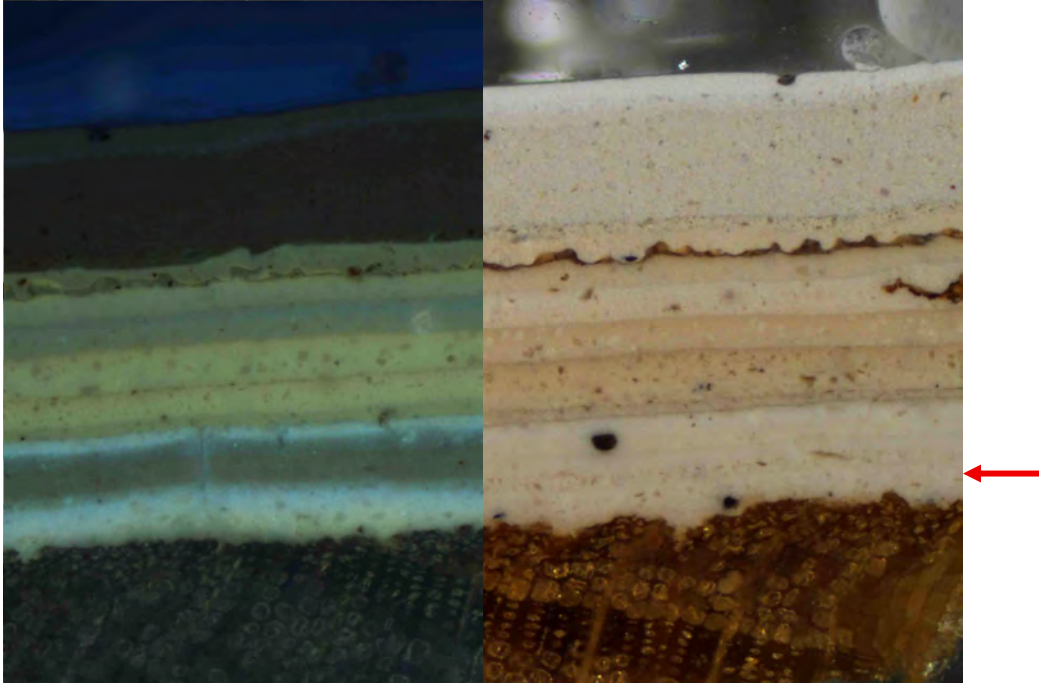


Figure 38. The wood window sill was originally painted in the same grayish yellowish white as the first-floor Lobby door surround (see Figure 16). BB.109.1 (Men's Cooling Room), ultraviolet light (L), visible light (R), 40x magnification.



Figure 39. The metal windows were finished in a dual white and brown color scheme like the wood windows. The metal window transom, pictured, was originally painted in dark grayish reddish brown (arrow), likely intended to match the naturally finished wood window sash. BB.109.8 (Men's Cooling Room), visible light, 40x magnification.

4.2.5 Room 200 Lobby

The Lobby on the second floor shares similar architectural features as the first floor Lobby (Figure 40). All of the plasterwork was originally painted monochromatically in pale grayish yellow, the same as the first floor Lobby and Men's Bath Hall. The doors and windows had a dark brown and white dual-color original scheme, similar to their current presentation finish.

Plaster Walls and Ceiling (Figure 41)

- BB.200.1 – Plaster pilaster capital*
- BB.200.6 – Plaster ceiling*
- BB.200.8 – Plaster beam center panel*
- BB.200.11 – Plaster wall return*
- BB.200.12 – Plaster wall*

BCA's bulk sample examination and laboratory analysis suggest that all of the plaster elements were originally painted monochromatically in pale grayish yellow. Most subsequent layers on the samples are the same until recently. After the original finish, the plasterwork was painted light orange yellow, then white, yellow, light green, and a moderate yellowish pink. The light green and the moderate yellowish pink layers are likely contemporaneous with the vivid red schemes in the first-floor Lobby. The plasterwork was then painted white a few times. The most recent paint scheme on the plasterwork is a subtle dual-color scheme in white and pale orange yellow.

Wood Partition (Figure 42)

- BB.200.13 – Wood partition near stair landing

BCA removed a sample from the wood partition to determine how the paint layers on the partition align with the paint layers on the adjacent plaster wall. The partition sample contains two fewer layers than the plaster wall sample, suggesting that the partition was not original but was likely installed early in the building's history. The earliest existing finish on the partition is a moderate orange yellow that appears to match the third layer on the plaster samples. The partition was painted with three more light orange yellows before the light green, then all layers that follow are the same as those on the plaster wall.

Wood Windows and Doors (Figure 43 – Figure 44)

- BB.200.9 – Wood window mullion*
- BB.200.10 – Wood window sash*
- BB.200.14 – Wood door frame*
- BB.200.15 – Wood door+

The finishes on the windows and doors generally remained the same over time. The wood window mullion and door frame were originally painted in the same grayish yellowish white identified previously in other rooms, such as 101 and 109. The window sash was stained in

* Indicates samples retaining historic paint layers, including the original (1912) finish.

+ Indicates samples retaining early historic paint layers but uncertain if they date to 1912.

grayish reddish brown topped with a transparent coating, the same finish as the wood sash in Room 109. The door has a very dark brown stain that is not as red as the window, also topped with a transparent coating. Both elements were refinished at least once.



Figure 40. Second floor Lobby (Room 200), view looking west.

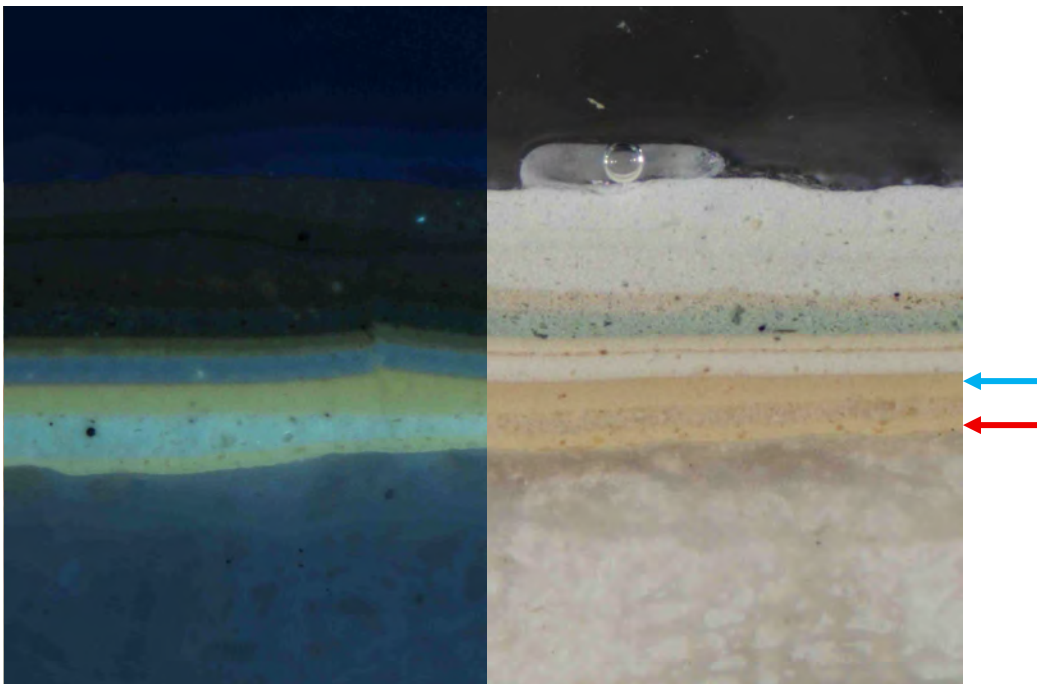


Figure 41. A representative plaster sample removed from the pilaster capital showing the original pale grayish yellow finish (red arrow). The third layer (blue arrow) appears to match the earliest existing finish on the wall partition sample in Figure 42. BB.200.1 (2F Lobby), ultraviolet light (L), visible light (R), 40x magnification.



Figure 42. The partition sample contains two fewer layers than the plaster wall sample, suggesting that the partition was installed early. The earliest existing finish on the partition is a moderate orange yellow (arrow) that appears to match the third layer on the plaster (see Figure 41). BB.200.13 (2F Lobby), ultraviolet light (L), visible light (R), 40x magnification.

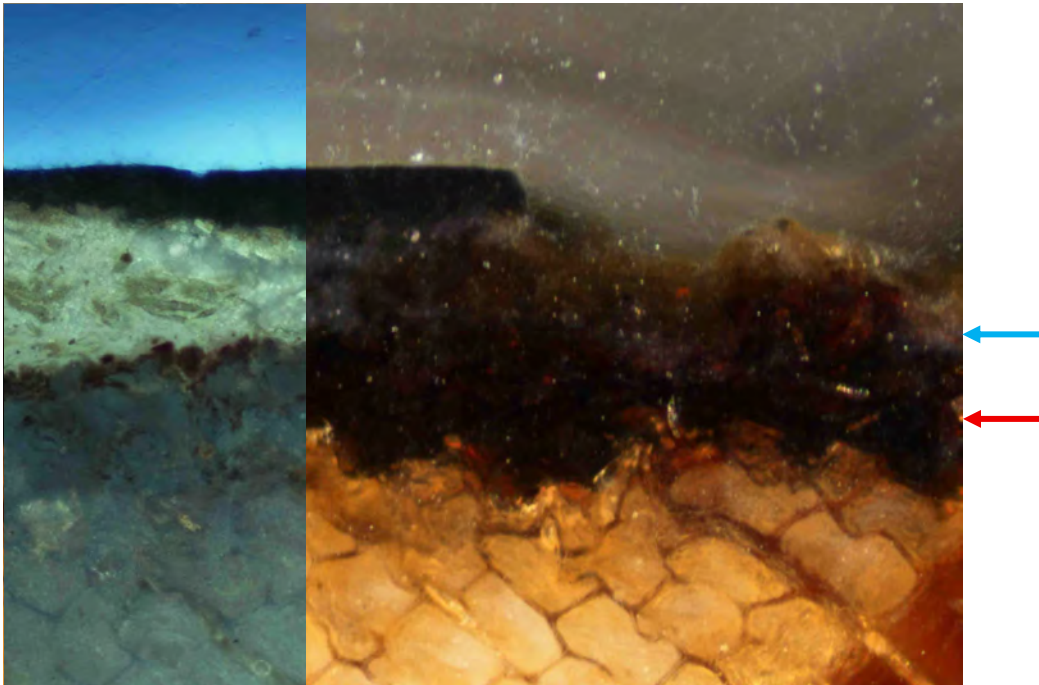


Figure 43. The wood window sash was originally stained in grayish reddish brown (red arrow) and topped with a transparent coating (blue arrow). BB.200.10 (2F Lobby), ultraviolet light (L), visible light (R), 100x magnification.

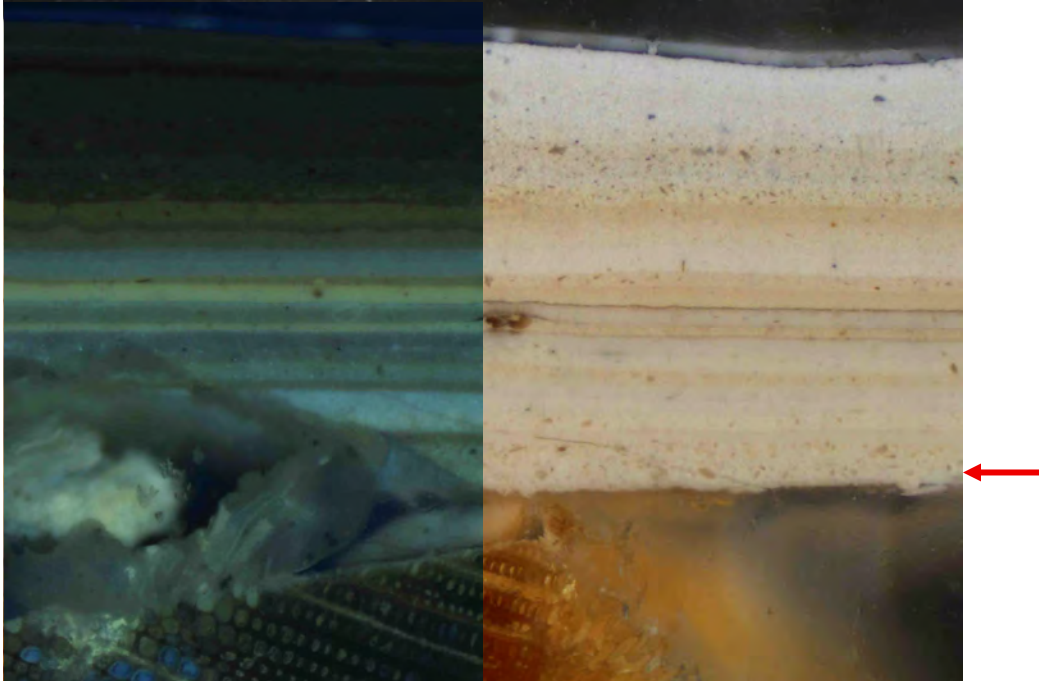


Figure 44. The door frame was originally painted in the same grayish yellowish white (arrow) identified in other rooms. BB.200.14 (2F Lobby), ultraviolet light (L), visible light (R), 40x magnification.

4.2.6 Room 212 Women's Bath Hall

The original paint scheme of the Women's Bath Hall included a grayish yellow plaster ceiling and beam and a grayish yellowish white skylight frame and moldings (Figure 45 – Figure 48). The interior wood sash for the metal window was originally painted in pale grayish yellow, but the element itself was likely installed post-1912. The metal grille does not contain historic paint layers.

Plaster Walls and Ceiling (Figure 49)

- BB.212.1 – Plaster wall (1967 addition to accommodate the dumbwaiter)
- BB.212.4 – Plaster ceiling beam
- BB.212.5 – Plaster ceiling*

BCA's analysis suggests the plaster ceiling was originally painted in grayish yellow, a slightly different color from the original plaster finish found in the lobbies and Men's Bath Hall. The plaster beam sample is missing the earliest three paint layers, but it was likely painted in the same color as the ceiling as they were in other rooms. The grayish yellow is consistent with the moderately light color value of the ceiling captured in the 1912 historic photograph (Figure 45). The ceiling and beam were painted with a few more light yellows or light orange yellows after the original finish, then pale blues and whites. The earliest paint layer on the 1967 plaster wall is an off-white that comes after the pale blue on the plaster ceiling sample, therefore placing the pale blue as a 1950s-1960s layer.

Wood Window and Skylight Elements (Figure 50 – Figure 52)

- BB.212.2 – Wood window sash+
- BB.212.6 – Wood skylight frame*

According to the current HSR, the interior sash of the metal windows in this room were installed after the original construction. The earliest existing paint layer found on the sash is a pale grayish yellow, a slightly different color from the grayish yellowish white layer observed on other woodwork in the building. The pale orange yellow (fifth layer) on the sash sample appears to be the same color both in visible and under ultraviolet light as the eighth layer of architectural features dated to the original construction, such as the window mullion in Room 200. This suggests the sash may date to the 1920s or 30s.

The skylight frame was originally finished in grayish yellowish white, also identified as an original woodwork finish in Rooms 100, 109, and 200. Both elements were repainted in a sequence of light orange yellows or whites, followed by more recent pale blue or light grays.

Metal Grille

- BB.212.3 – Metal Grille

* Indicates samples retaining historic paint layers, including the original (1912) finish.

+ Indicates samples retaining early historic paint layers but does not date to 1912.

The metal grille sample contains only non-historic paint layers, most likely latex-based. The earliest existing finish is a white on a dark brown primer, followed by the current black. Like in the Men's Bath Hall, the grille may be a replacement, or the earlier layers have been lost or removed.



Figure 45. Image of Women's Bath Hall, 1912. (Image extracted from current HSR Figure 1B.16).



Figure 46. Image of Women's Bath Hall, 2025. (Image extracted from current HSR Figure 1B.16).



Figure 47. Image of Women's Bath Hall, 2025. (Image extracted from current HSR Figure 1B.17).



Figure 48. Image of Women's Bath Hall, 2025. (Image extracted from current HSR Figure 1B.17).

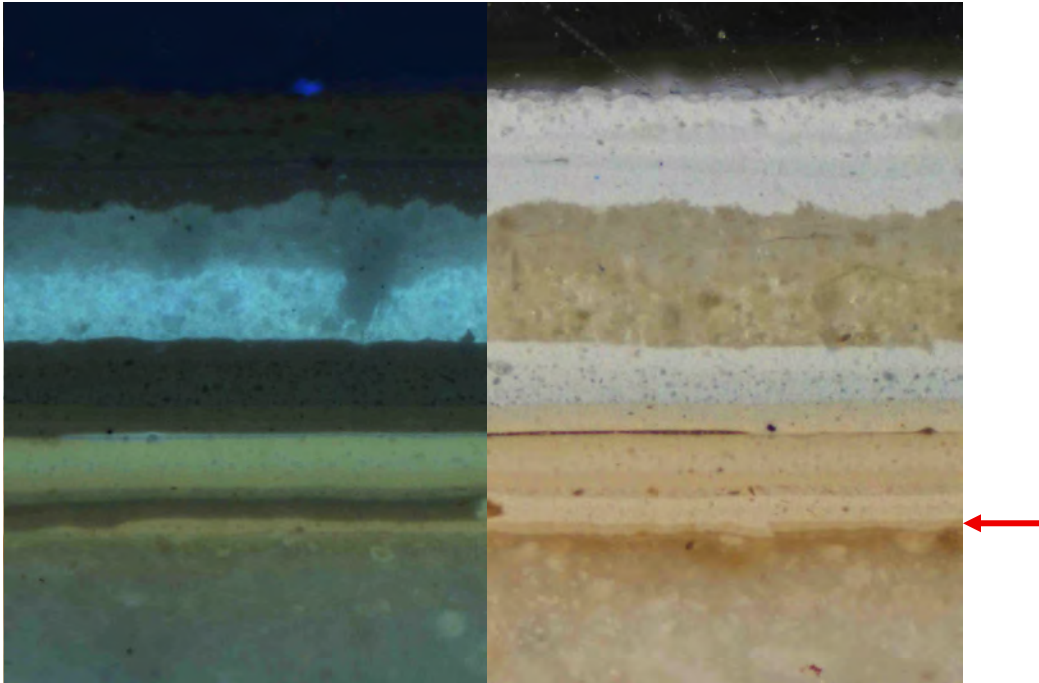


Figure 49. The plaster ceiling in Room 212 was originally painted grayish yellow (arrow). BB.212.5 (Women's Bath Hall), ultraviolet light (L), visible light (R), 40x magnification.

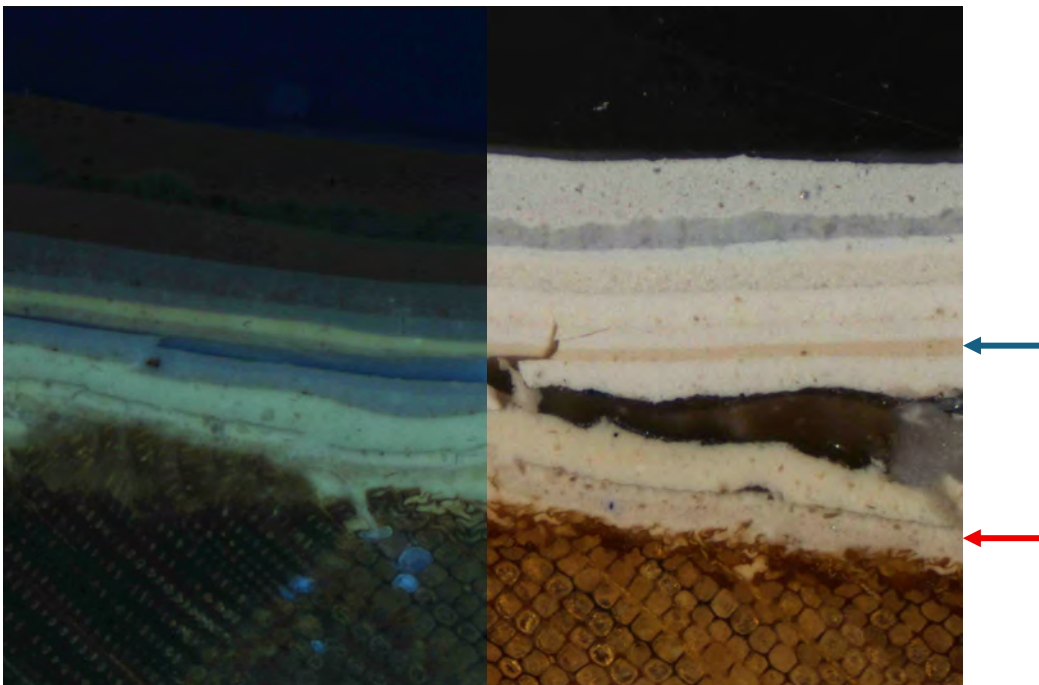


Figure 50. The interior wood sash to the metal window was installed sometime after the construction. It shows a different original finish in pale grayish yellow (red arrow) compared to the grayish yellowish white on original woodwork (see Figure 52). Also note the fifth layer (blue arrow) is the same color as the eighth layer of a 1912 window mullion in Room 200 (see Figure 51). This dates the installation date of the sash to 1920s or 30s. BB.212.2 (Women's Bath Hall), ultraviolet light (L), visible light (R), 40x magnification.

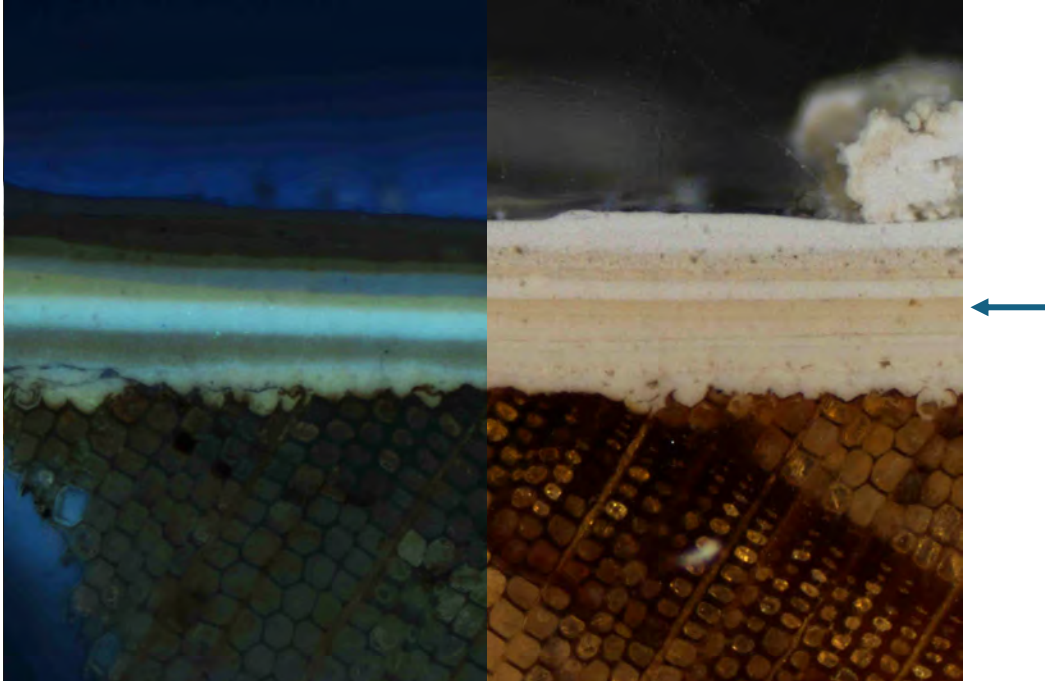


Figure 51. A window mullion dated to 1912 with a pale orange yellow eighth layer (blue arrow) that is likely the same as the fifth layer on the Room 212 sash sample (Figure 50). BB.200.9 (Second Floor Lobby), ultraviolet light (L), visible light (R), 40x magnification.

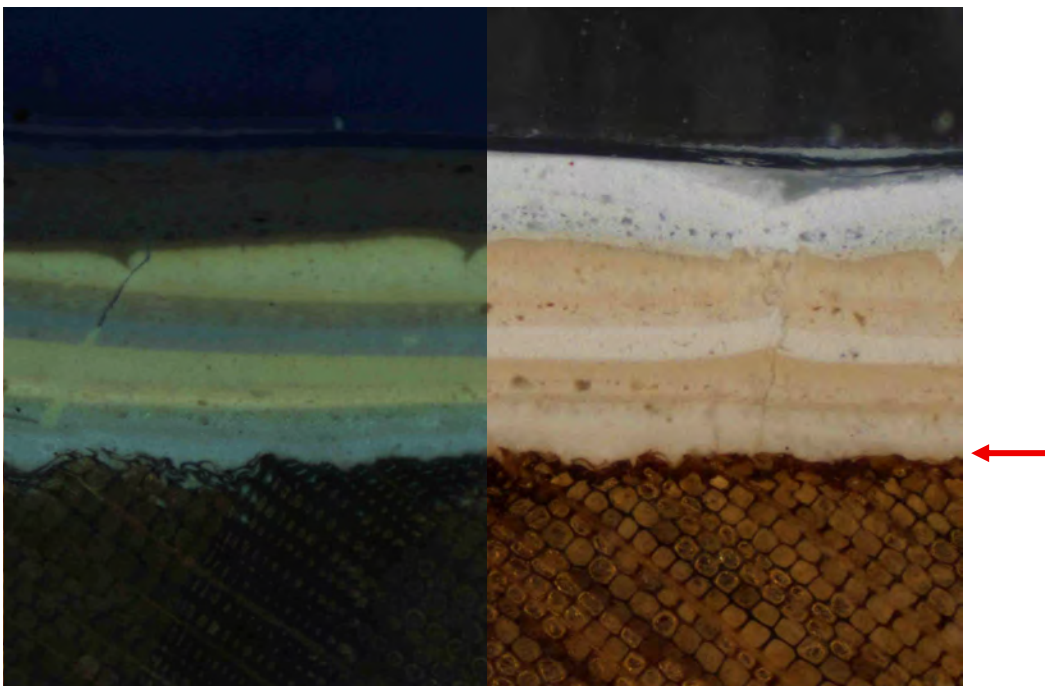


Figure 52. The wood skylight elements were originally painted in grayish yellowish white (arrow). BB.212.6 (Women's Bath Hall), ultraviolet light (L), visible light (R), 40x magnification.

4.2.7 Room 300A Hall and Room 300C Manicure/Pedicure Room

The third-floor Hall, before it was partitioned to create the Manicure/Pedicure Room, was originally finished with grayish yellow green plaster walls and ceiling with dual colored woodwork in grayish yellowish white and grayish reddish brown (Figure 53 – Figure 54).

Plaster Walls and Ceiling (Figure 55)

BB.300.3 – Plaster wall return*

BB.300.8 – Plaster pilaster*

BB.300.9 – Plaster pilaster*

BB.300.10 – Plaster ceiling*

All the plaster elements share the same original finish in grayish yellow green on top of a light olive preparatory layer. The 1912 historic photograph captures the walls, ceiling, and ceiling beams in a relatively light color, which may be grayish yellow green (Figure 53). In the historic photograph, the walls, the side and the face of the ceiling beam have different color values. This is likely due to highlight and shadow, BCA found that these elements were painted in the same grayish yellow green. The subsequent layers on walls and ceiling elements diverge at times, although both were painted in vivid yellow for the second campaign. Then, the walls were painted strong orange yellow while the ceiling elements either remained yellow or were painted pale orange yellow. Following this, the wall colors were painted in neutral orange yellows before they were painted with many layers of pale greens or light greenish blues. The ceiling elements remained in light neutral colors after the vivid yellow.

Wood Window and Door Elements (Figure 56 – Figure 57)

BB.300.1 – Wood window frame*

BB.300.2 – Wood window trim*

BB.300.5 – Wood door stile*

BB.300.6 – Wood door surround*

All of the woodwork samples except the door stile share the same original finish in grayish yellowish white. The window trim was painted in a few light blue greens more recently to match the walls; all other woodwork has subsequent layers in light yellows and off-whites. The original finish on the door appears to be a grayish reddish brown stain with a glossy transparent coating. The original finish is similar to its current appearance, but redder. The door has been refinished twice in similar finishes. No historic paint layers were found on the window sash during BCA's field investigation.

Partition

BB.300.7 – Drywall partition

The drywall partition has four paint layers, all of which appear to be latex paint. Based on the number of layers present, it was likely installed in the last 20 to 30 years.

* Indicates samples retaining historic paint layers, including the original (1912) finish.



Figure 53. Image of third floor Lounge Room in 1912, now the Hall (Room 300A) and Manicure/Pedicure Room (300C), view looking north. (Image extracted from current HSR IB.18).



Figure 54. Image of third floor Hall and Manicure/Pedicure Room in 2025, view looking northeast.

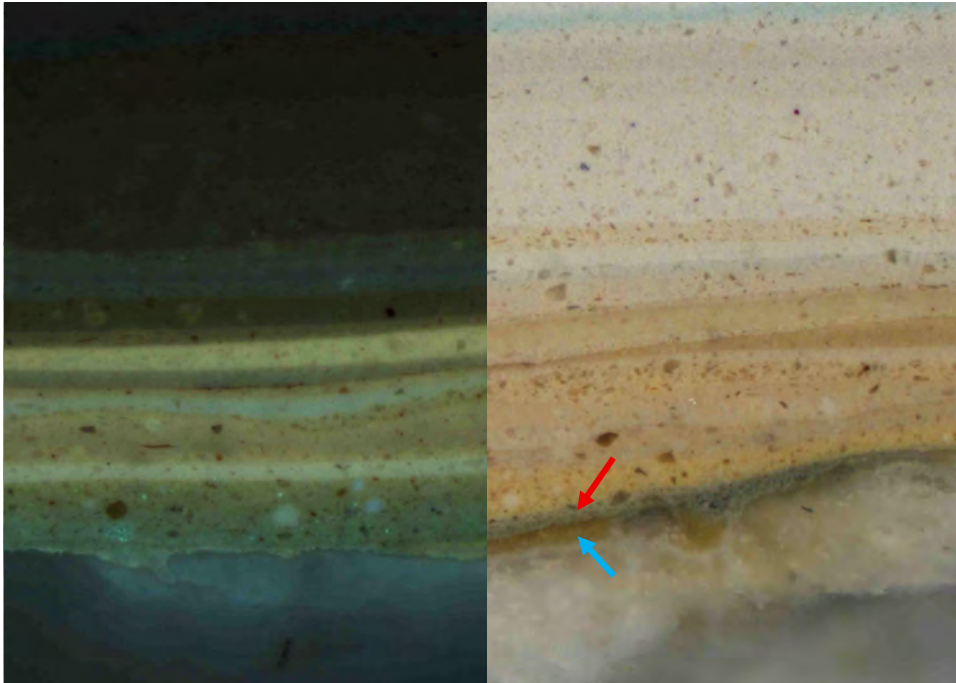


Figure 55. The plaster was originally painted in grayish yellow green (red arrow) on a light olive preparatory layer (blue arrow), as seen in this representative sample removed from the plaster. BB.300.8 (3F Hall), ultraviolet light (L), visible light (R), 40x magnification.

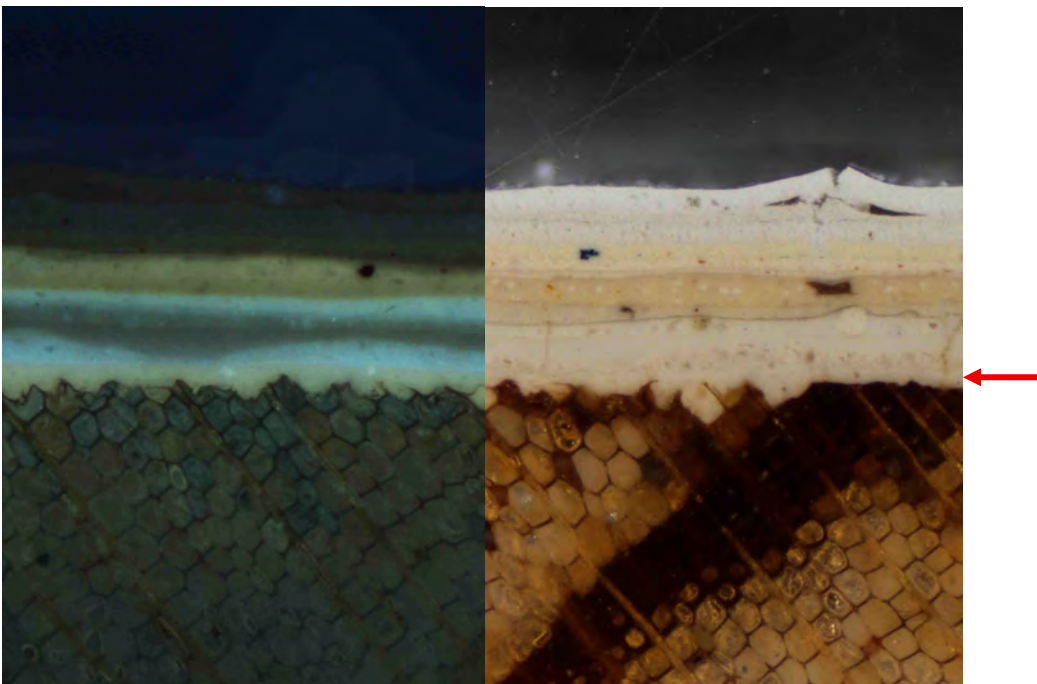


Figure 56. A representative woodwork sample removed from the window frame showing the original finish in grayish yellowish white (arrow). BB.300.1 (3F Hall), ultraviolet light (L), visible light (R), 40x magnification.

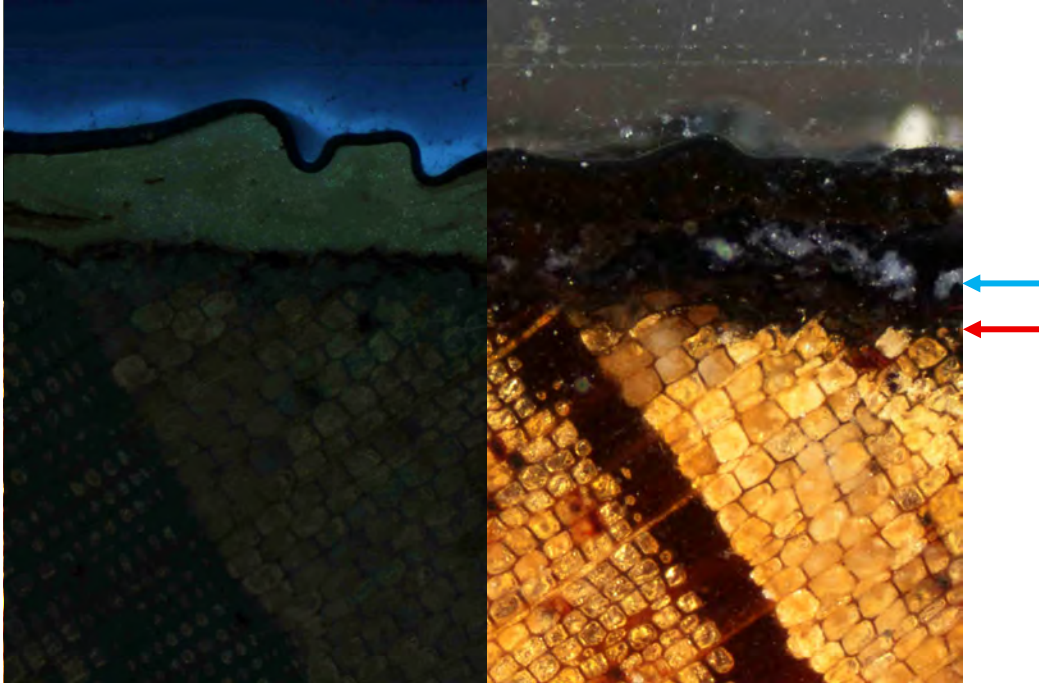


Figure 57. Like naturally finished woodwork in other rooms, the door stile was originally finished with a grayish reddish brown stain (red arrow) topped with a transparent coating (blue arrow). *BB.300.5, ultraviolet light (L), visible light (R), 40x magnification.*

5.0 CONCLUSIONS AND COLOR MATCHES

5.1 Conclusions

The exterior of the Buckstaff Bathhouse was predominantly a light grayish yellow color originally. The light grayish yellow color can be attributed to the building's stucco, which was likely unpainted originally, and the sand paint applied to the majority of its exterior woodwork. The sand paint was also a light grayish yellow color and was likely intended to match the color of the unpainted stucco. While it is possible that the stucco was painted originally, all physical evidence has been lost due to prior sandblasting and repainting campaigns. However, given the similarity in color of the sand paint and the stucco, it is more likely that the stucco was originally unpainted. The only exterior wood elements not originally painted with the sand paint were the front doors and fanlight above it, which were naturally finished and clear-coated. These findings are consistent with the appearance of the building in c. 1912 historic photographs.

The original interior finishes of the bathhouse were generally plain and light colored. The plasterwork was monochromatically painted in pale yellows or off-whites. The doors and windows were finished in off-white or dark brown, much like their current appearance. When historic photographs are available, the color values of the architectural elements captured in the photographs are generally consistent with the physical paint colors of the identified original finishes. The only location that had a slightly more vibrant original paint scheme is the third floor Lobby, which was painted with grayish yellow green walls. All the finishes found on the metal lockers are more recent (presumably latex) paint, suggesting they date closer to mid-20th century. Either the lockers were replaced, or the historic finishes have been lost.

5.2 Color Matches

BCA has prepared color matches for the potentially original finishes identified through the finishes analysis. These color matches are for documentation purposes as part of the current HSR.

The following tables are organized by exterior and interior finishes, with interior rooms listed numerically by room number. The elements where each color was documented are listed in the left column. The color name and color matches to the standardized Munsell color system and the commercial Benjamin Moore color palette are presented in the middle column. A virtual rendition of the Benjamin Moore color swatch is included in the right column. The color swatches in this report are for reference only. Due to differences in monitors and printers, only physical swatches of the stated Munsell notation or Benjamin Moore color system should be used for paint replication purposes.

Note that the color matches for stains are only an approximation, as their appearance is affected by the wood substrate itself; accurate matching would require in-situ exposure and mock-ups. Note also that the sand paint color match is matched to the paint only, not to the overall appearance with sand inclusions. Accurate replication of this finish would also require in-situ exposures and mock-ups.

Table 1. Color Match for C.1912 Exterior Paint Scheme

Element	Color Match	B. Moore Swatch
All stucco elements	No historic paint layers were observed on the samples. Stucco was either unpainted or painted in the same pale grayish yellow as the exterior woodwork.	N/A
Wood window elements, metal window lintel. Wood door elements (except front doors)	<i>Finish:</i> pale grayish yellow sand paint <i>Munsell Color Match:</i> 2.5Y 8/2 <i>Benjamin Moore Color Match:</i> HC-45 Shaker Beige	
Wood fanlight above front door	<i>Finish:</i> brownish orange paint with very dark purplish brown transparent coating <i>Approximate Munsell Color Match:</i> 7.5R 2/2 <i>Benjamin Moore Color Match:</i> AF-180 Wenge	

Table 2. Color Match for C.1912 First Floor Lobby (Room 100)

Element	Color Match	B. Moore Swatch
All plaster elements	<i>Finish:</i> pale grayish yellow <i>Munsell Color Match:</i> 2.5Y 8/2 <i>Benjamin Moore Color Match:</i> HC-35 Powell Buff	
Wood door surround	<i>Finish:</i> grayish yellowish white <i>Munsell Color Match:</i> 2.5Y 8.5/2 <i>Benjamin Moore Color Match:</i> OC-15 Baby Fawn	

Element	Color Match	B. Moore Swatch
Metal elevator ceiling, walls, and corner grille	<i>Finish:</i> grayish orangish yellow <i>Munsell Color Match:</i> 10YR 8/2 <i>Benjamin Moore Color Match:</i> CC-320 Bar Harbor Beige	
Metal elevator moldings	<i>Finish:</i> gold <i>Munsell Color Match:</i> N/A <i>Benjamin Moore Color Match:</i> N/A	N/A

Table 3. Color Match for C.1912 First Floor Men's Dressing Room (Room 102)

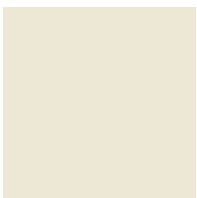
Element	Color Match	B. Moore Swatch
Plaster walls	<i>Finish:</i> pale yellow <i>Munsell Color Match:</i> 10YR 8/2 <i>Benjamin Moore Color Match:</i> HC-39 Putnam Ivory	
Metal Greek key molding, underside of balcony	<i>Finish:</i> brownish white <i>Munsell Color Match:</i> 2.5Y 8.5/2 <i>Benjamin Moore Color Match:</i> OC-33 Opaline	

Table 4. Color Match for C.1912 First Floor Men's Bath Hall (Room 106)

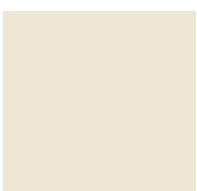
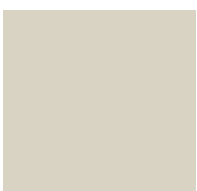
Element	Color Match	B. Moore Swatch
Plaster ceiling at skylight, metal skylight rosette	Finish: pale grayish yellow Munsell Color Match: 2.5Y 8/2 Benjamin Moore Color Match: HC-35 Powell Buff	
All metal paneled capital elements	Finish: brownish white Munsell Color Match: 2.5Y 8.5/2 Benjamin Moore Color Match: OC-33 Opaline	
Metal sauna roof	Finish: grayish yellowish silver Munsell Color Match: N/A Benjamin Moore Color Match: N/A	N/A

Table 5. Color Match for C.1912 First Floor Men's Cooling Room (Room 109)

Element	Color Match	B. Moore Swatch
Plaster walls and ceiling elements	Finish: brownish yellow Munsell Color Match: 10YR 6/4 Benjamin Moore Color Match: HC-42 Roxbury Caramel	
Wood windowsill, metal window trim and mullion	Finish: grayish yellowish white Munsell Color Match: 2.5Y 8.5/2 Benjamin Moore Color Match: OC-15 Baby Fawn	

Wood window sash	<i>Finish:</i> grayish reddish brown stain with dark brown transparent coating <i>Approximate Munsell Color Match:</i> 7.5R 3/4 <i>Benjamin Moore Color Match:</i> 1260 El Cajon Clay	
Metal window sash	<i>Finish:</i> dark grayish reddish brown <i>Approximate Munsell Color Match:</i> 10R 3/2 <i>Benjamin Moore Color Match:</i> 2113-10 Chocolate Sundae	

Table 6. Color Match for C.1912 Second Floor Lobby (Room 200)

Element	Color Match	B. Moore Swatch
All plaster elements	<i>Finish:</i> pale grayish yellow <i>Munsell Color Match:</i> 2.5Y 8/2 <i>Benjamin Moore Color Match:</i> HC-35 Powell Buff	
Wood window elements (currently painted white), wood door frame	<i>Finish:</i> grayish yellowish white <i>Munsell Color Match:</i> 2.5Y 8.5/2 <i>Benjamin Moore Color Match:</i> OC-15 Baby Fawn	
Wood window sash	<i>Finish:</i> grayish reddish brown stain with dark brown transparent coating <i>Approximate Munsell Color Match:</i> 7.5R 3/4 <i>Benjamin Moore Color Match:</i> 1260 El Cajon Clay	
Wood door	<i>Finish:</i> very dark brown stain with dark brown transparent coating <i>Approximate Munsell Color Match:</i> 10R 2/1 <i>Benjamin Moore Color Match:</i> 2115-10 Appalachian Brown	

Table 7. Color Match for C.1912 Second Floor Women's Bath Hall (Room 212)

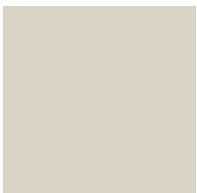
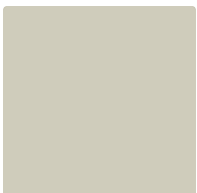
Element	Color Match	B. Moore Swatch
Plaster ceiling	<i>Finish: grayish yellow</i> <i>Munsell Color Match: 2.5Y 7/4</i> <i>Benjamin Moore Color Match: 1101 Fennel Seed</i>	
Wood window sash	<i>Finish: pale grayish yellow</i> <i>Munsell Color Match: 5Y 8.5/2</i> <i>Benjamin Moore Color Match: OC-48 Hazy Skies</i>	
Wood skylight frame	<i>Finish: grayish yellowish white</i> <i>Munsell Color Match: 2.5Y 8.5/2</i> <i>Benjamin Moore Color Match: OC-15 Baby Fawn</i>	

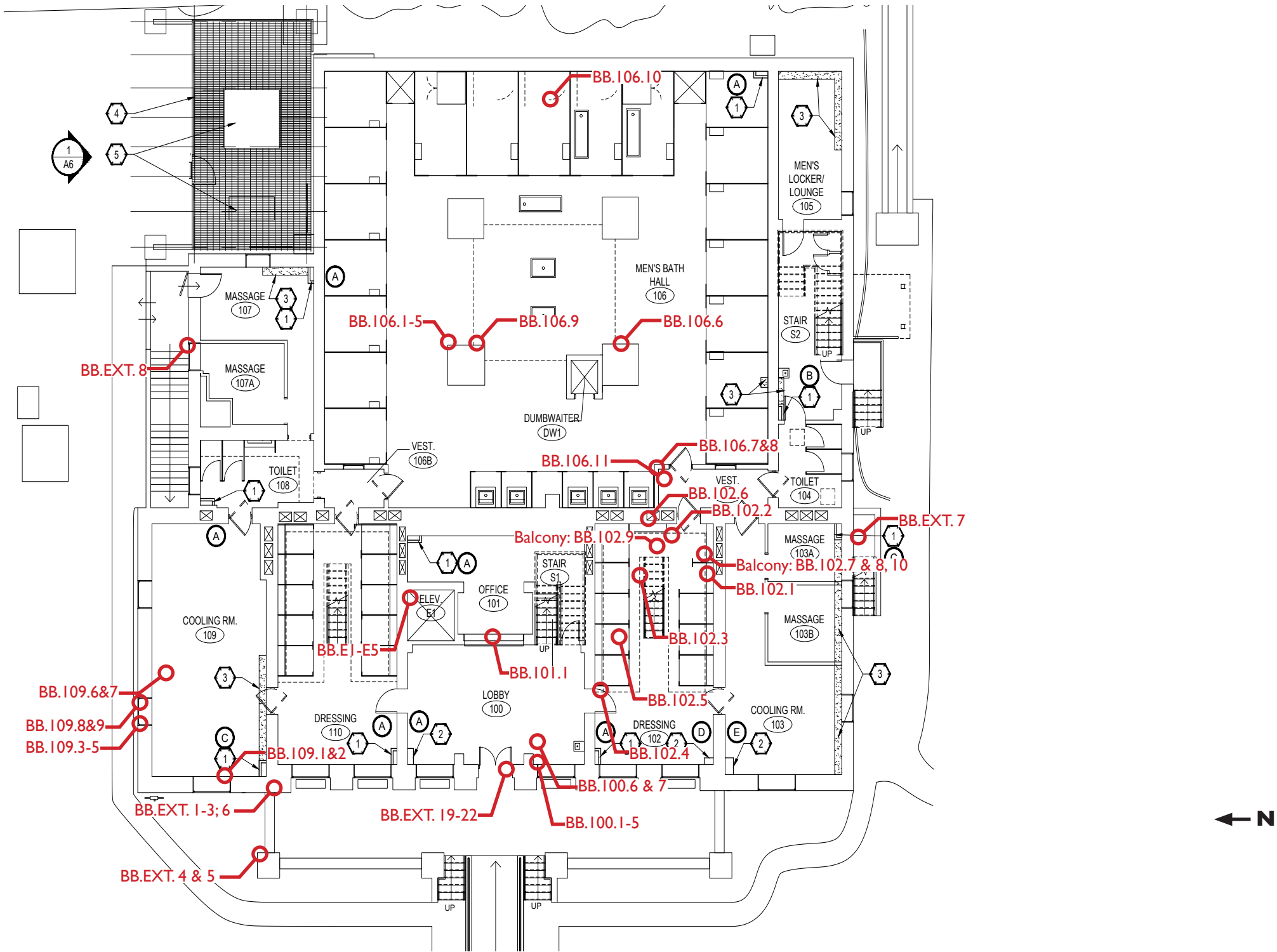
Table 7. Color Match for C.1912 Third Floor Lobby (Room 300)

Element	Color Match	B. Moore Swatch
Plaster walls and ceiling	<i>Finish: grayish yellow green</i> <i>Munsell Color Match: 5GY 6/2</i> <i>Benjamin Moore Color Match: 464 Mistletoe</i>	
Wood window frame and trim, wood door surround	<i>Finish: pale grayish yellow</i> <i>Munsell Color Match: 5Y 8.5/2</i> <i>Benjamin Moore Color Match: OC-48 Hazy Skies</i>	

Element	Color Match	B. Moore Swatch
Wood door	<i>Finish:</i> grayish reddish brown stain with dark brown transparent coating <i>Approximate Munsell Color Match:</i> 7.5R 3/4 <i>Benjamin Moore Color Match:</i> 1260 El Cajon Clay	

APPENDIX A
SAMPLE LOCATION KEY

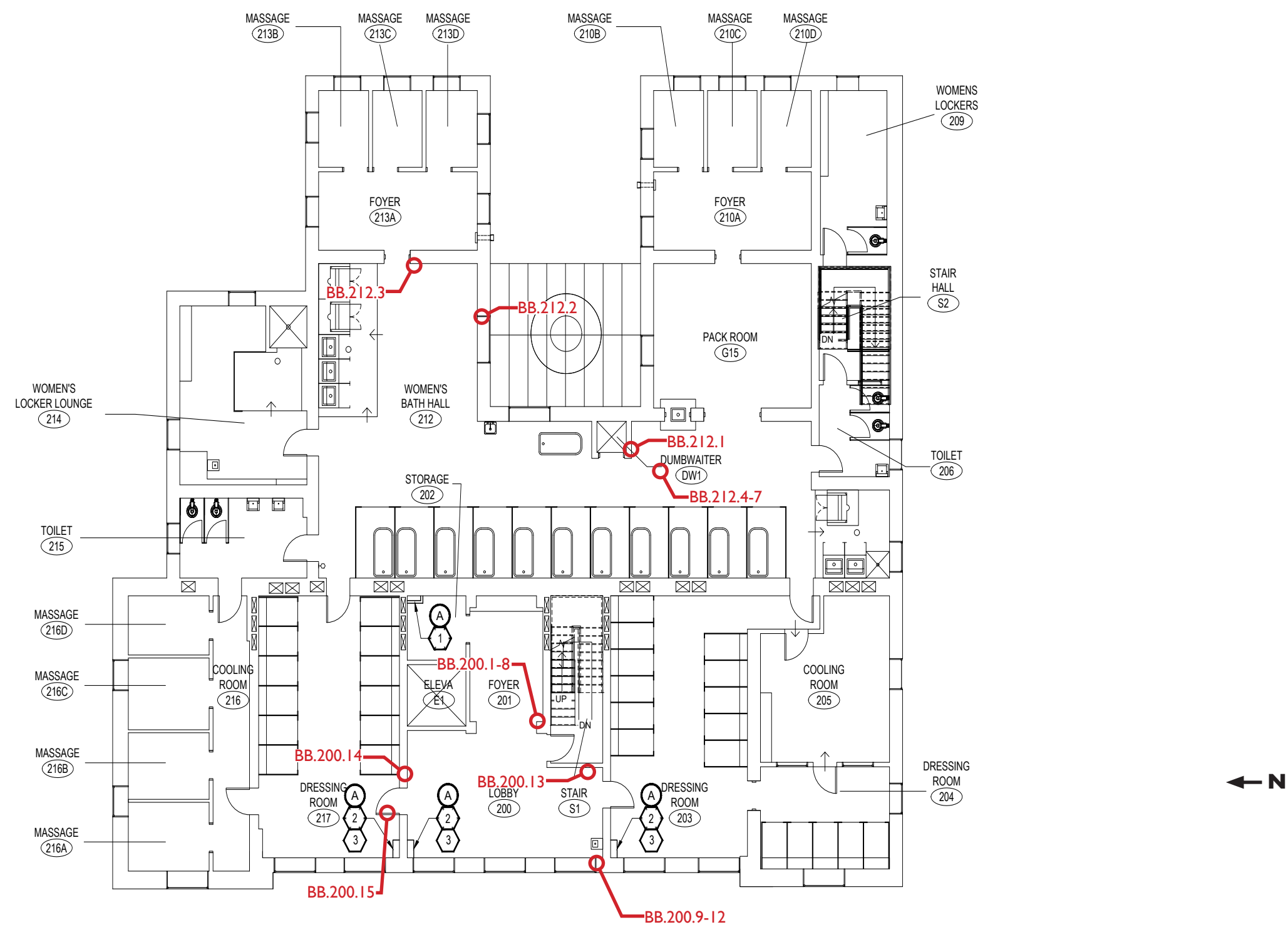
Buckstaff Bathhouse Finishes Analysis: Sample Location Key
Samples Collected by Building Conservation Associates, Inc. in June 2025



FIRST FLOOR PLAN

Key	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number
BB.###.##	Buckstaff Bathhouse.Room #.Finishes Sample Number

Buckstaff Bathhouse Finishes Analysis: Sample Location Key
Samples Collected by Building Conservation Associates, Inc. in June 2025



SECOND FLOOR PLAN

Key

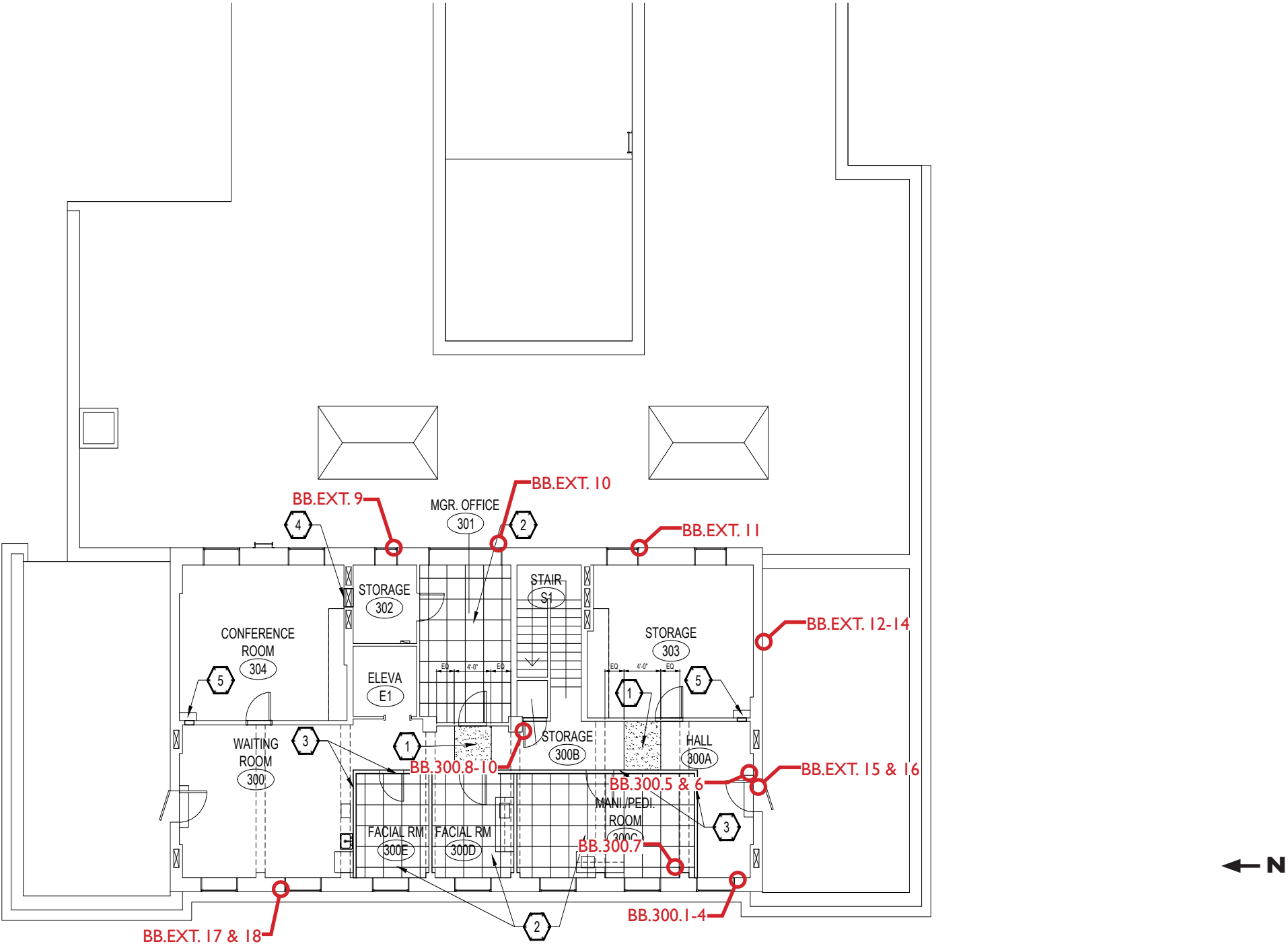
BB.EXT.##

Buckstaff Bathhouse.Exterior.Finishes Sample Number

BB.###.##

Buckstaff Bathhouse.Room #.Finishes Sample Number

Buckstaff Bathhouse Finishes Analysis: Sample Location Key
Samples Collected by Building Conservation Associates, Inc. in June 2025

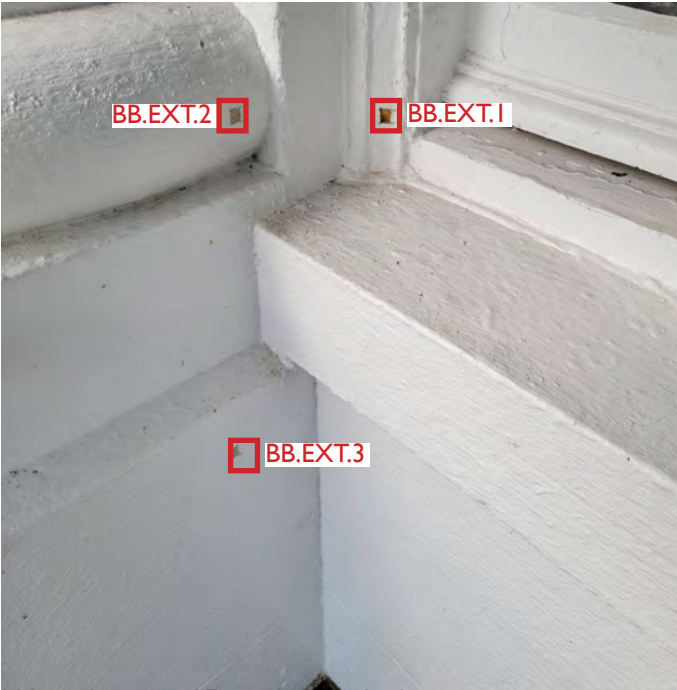


THIRD FLOOR PLAN

Key	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number
BB.####.##	Buckstaff Bathhouse.Room #.Finishes Sample Number

Buckstaff Bathhouse Finishes Analysis: Sample Location Key

Samples Collected by Building Conservation Associates, Inc. in June 2025



West elevation IF, window and pilaster



West elevation IF



West elevation IF, window



South elevation IF, door



North elevation IF, window



East elevation roof, window



East elevation roof, window



East elevation roof, window

Exterior Sample Images

<u>Key</u>	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number (Analyzed)
BB.####.	Buckstaff Bathhouse.Room #.Finishes Sample Number (Analyzed)
BB.EXT/####.	Buckstaff Bathhouse.Exterior/Room #.Finishes Sample Number (Limited Observation)

Buckstaff Bathhouse Finishes Analysis: Sample Location Key

Samples Collected by Building Conservation Associates, Inc. in June 2025



North elevation roof, cornice



North elevation roof, door



West elevation 3F, urn



West elevation 3F, window



West elevation 1F, front door



West elevation 1F, front door

Exterior Sample Images

<u>Key</u>	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number (Analyzed)
BB.###.##	Buckstaff Bathhouse.Room #.Finishes Sample Number (Analyzed)
BB.EXT/###.##	Buckstaff Bathhouse.Exterior/Room #.Finishes Sample Number (Bulk Sample Examination only)

Buckstaff Bathhouse Finishes Analysis: Sample Location Key

Samples Collected by Building Conservation Associates, Inc. in June 2025



Rooms 100/101 Sample Images

Key	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number (Analyzed)
BB.###.##	Buckstaff Bathhouse.Room #.Finishes Sample Number (Analyzed)
BB.EXT/###.##	Buckstaff Bathhouse.Exterior/Room #.Finishes Sample Number (Bulk Sample Examination only)

Buckstaff Bathhouse Finishes Analysis: Sample Location Key

Samples Collected by Building Conservation Associates, Inc. in June 2025



Room 102 Sample Images

<u>Key</u>	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number (Analyzed)
BB.###.##	Buckstaff Bathhouse.Room #.Finishes Sample Number (Analyzed)
BB.EXT/###.##	Buckstaff Bathhouse.Exterior/Room #.Finishes Sample Number (Bulk Sample Examination only)

Buckstaff Bathhouse Finishes Analysis: Sample Location Key

Samples Collected by Building Conservation Associates, Inc. in June 2025



Room 102 Sample Images

<u>Key</u>	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number (Analyzed)
BB.####.##	Buckstaff Bathhouse.Room #.Finishes Sample Number (Analyzed)
BB.EXT/####.##	Buckstaff Bathhouse.Exterior/Room #.Finishes Sample Number (Bulk Sample Examination only)

Buckstaff Bathhouse Finishes Analysis: Sample Location Key

Samples Collected by Building Conservation Associates, Inc. in June 2025



Room 106 Sample Images

<u>Key</u>	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number (Analyzed)
BB.###.##	Buckstaff Bathhouse.Room #.Finishes Sample Number (Analyzed)
BB.EXT/###.##	Buckstaff Bathhouse.Exterior/Room #.Finishes Sample Number (Bulk Sample Examination only)

Buckstaff Bathhouse Finishes Analysis: Sample Location Key

Samples Collected by Building Conservation Associates, Inc. in June 2025



Room 109 Sample Images

Key

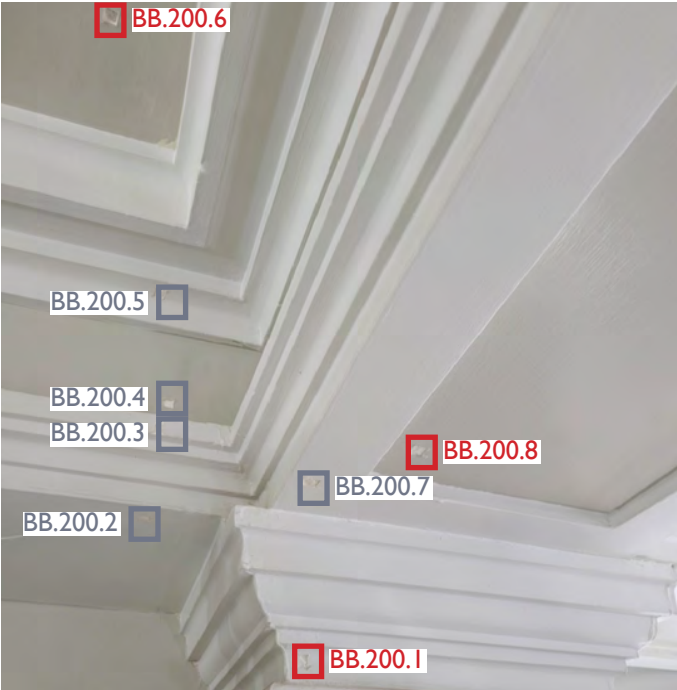
BB.EXT.## Buckstaff Bathhouse.Exterior.Finishes Sample Number (Analyzed)

BB.###.## Buckstaff Bathhouse.Room #.Finishes Sample Number (Analyzed)

BB.EXT/###.## Buckstaff Bathhouse.Exterior/Room #.Finishes Sample Number (Bulk Sample Examination only)

Buckstaff Bathhouse Finishes Analysis: Sample Location Key

Samples Collected by Building Conservation Associates, Inc. in June 2025



Room 200 Sample Images

<u>Key</u>	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number (Analyzed)
BB.###.##	Buckstaff Bathhouse.Room #.Finishes Sample Number (Analyzed)
BB.EXT/###.##	Buckstaff Bathhouse.Exterior/Room #.Finishes Sample Number (Bulk Sample Examination only)

Buckstaff Bathhouse Finishes Analysis: Sample Location Key

Samples Collected by Building Conservation Associates, Inc. in June 2025



Room 212 Sample Images

<u>Key</u>	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number (Analyzed)
BB.###.##	Buckstaff Bathhouse.Room #.Finishes Sample Number (Analyzed)
BB.EXT/###.##	Buckstaff Bathhouse.Exterior/Room #.Finishes Sample Number (Bulk Sample Examination only)

Buckstaff Bathhouse Finishes Analysis: Sample Location Key

Samples Collected by Building Conservation Associates, Inc. in June 2025



Room 300 Sample Images

<u>Key</u>	
BB.EXT.##	Buckstaff Bathhouse.Exterior.Finishes Sample Number (Analyzed)
BB.###.##	Buckstaff Bathhouse.Room #.Finishes Sample Number (Analyzed)
BB.EXT/###.##	Buckstaff Bathhouse.Exterior/Room #.Finishes Sample Number (Bulk Sample Examination only)

APPENDIX B
SAMPLE STRATIGRAPHY SHEETS

Buckstaff Bathhouse

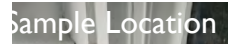
Finishes Analysis

SAMPLE STRATIGRAPHY SHEETS

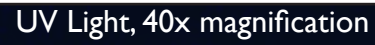
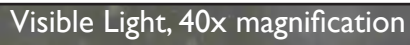


BUILDING NAME: Buckstaff Bathhouse	
CONSTRUCTION DATE: 1912	
TOTAL NUMBER OF SAMPLES: 78	
SUBSTRATE TYPE: plaster, stucco, metal, wood	
DATE SAMPLED: June 2025	DATE ANALYZED: June - October 2025
SAMPLED BY: M. Luo-Hita	ANALYZED BY: M. Luo-Hita; D. Krotzer
MICROSCOPE: Nikon Eclipse E200 compound fluorescence microscope	CAMERA: Nikon DS-Fi3
DESCRIPTION: Exterior and interior paint samples removed from plaster, stucco, metal, and wood	

Finishes Analysis



SAMPLE #: BB.EXT.I	ROOM: Exterior
DESCRIPTION: West elevation window trim, substrate.	

[illegible]

// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



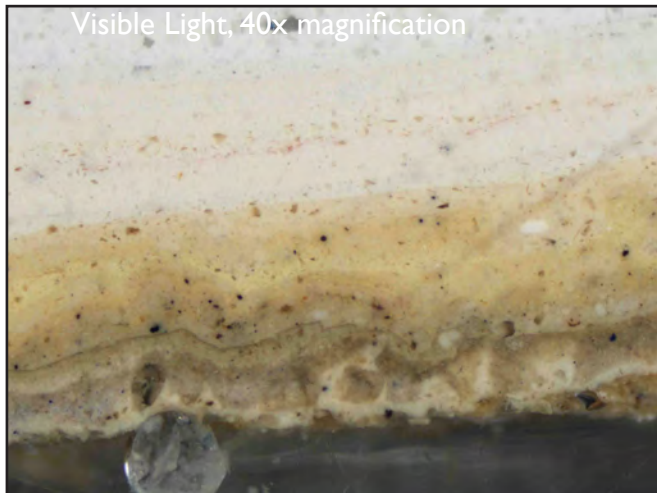
SAMPLE #: BB.EXT.I

ROOM: Exterior

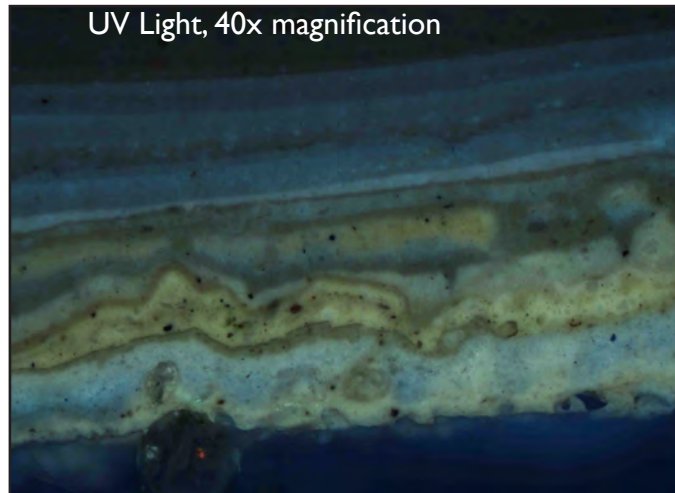
DESCRIPTION:

West elevation window trim, early layers.

Visible Light, 40x magnification



UV Light, 40x magnification



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
//		See previous page for substrate
1	yellowish white	Primer
2	pale grayish yellow	Sand paint, likely original. Color match (paint only, excluding sand): Munsell 2.5Y 8/2; B.Moore: HC-45 Shaker Beige
3	pale purplish gray	
4	dark yellow	
5	grayish greenish yellow	
6	dark grayish yellow	
7	light yellow	
8	pale orange yellow	
9	white	
10	yellowish white	
11	yellowish white	
12	yellowish white	
13	white	
14	white	
		See next page for more recent layers.

// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



sample Location

ROOM: Exterior

West elevation window trim, more recent layers.

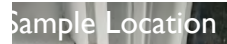
Visible Light, 40x magnification

UV Light, 40x magnification

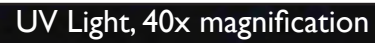
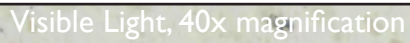
[illegible]

Bold denotes known presentation layer.

Finishes Analysis



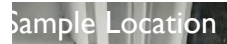
SAMPLE #: BB. EXT.2	ROOM: Exterior
DESCRIPTION: West elevation pilaster base, early layers.	

[illegible]

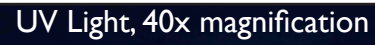
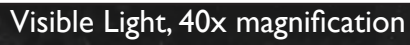
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. EXT.2	ROOM: Exterior
DESCRIPTION: West elevation pilaster base, more recent layers.	

[illegible]

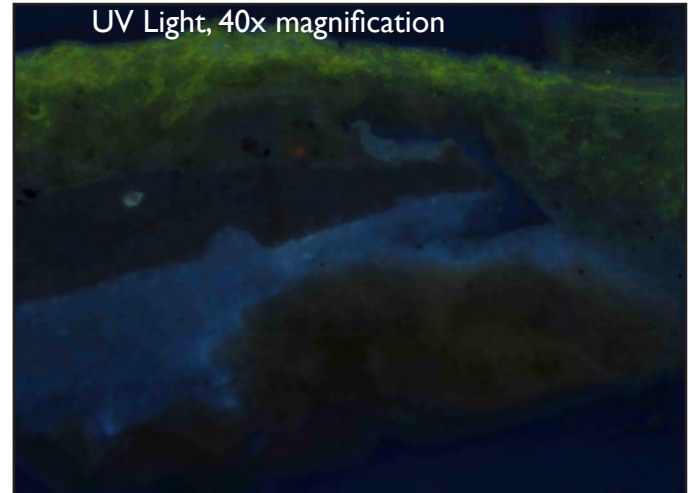
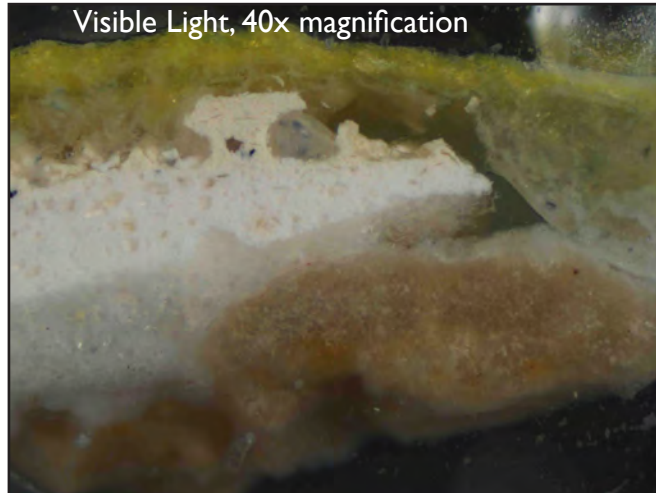
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. EXT.3	ROOM: Exterior
DESCRIPTION: West elevation pilaster pedestal, early layers.	

[illegible]

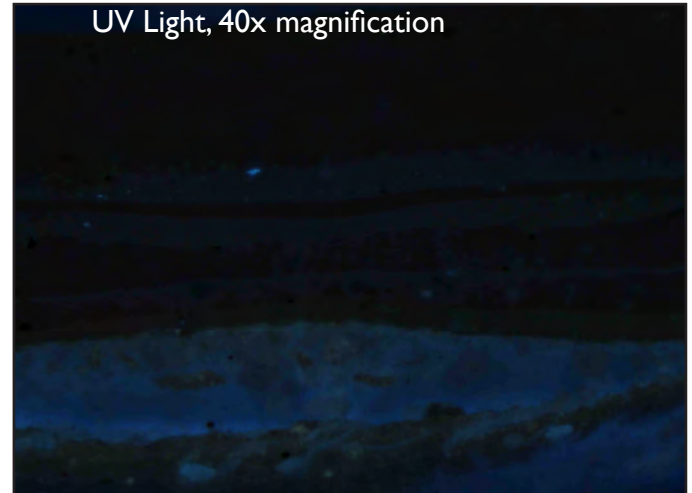
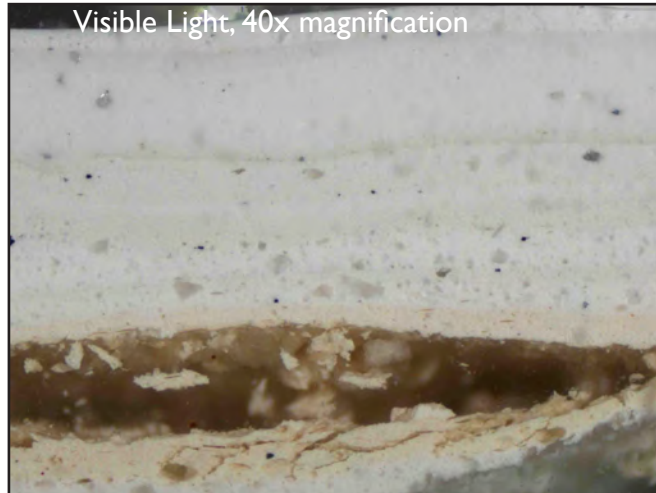
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. EXT.3	ROOM: Exterior
DESCRIPTION: West elevation pilaster pedestal, more recent layers.	

[illegible]

// denotes a break in the sample.

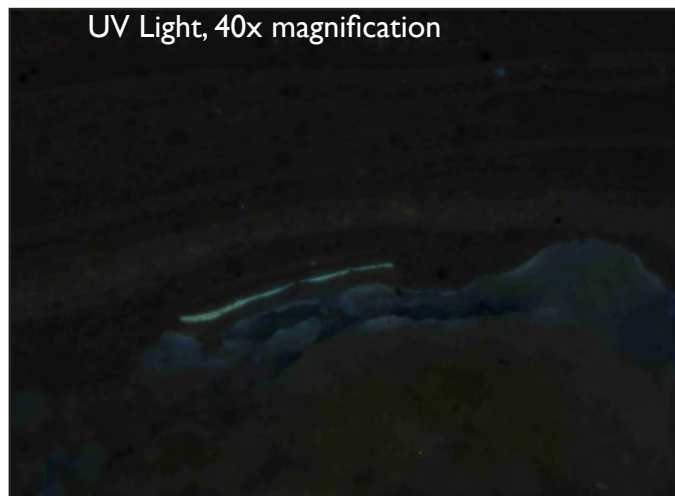
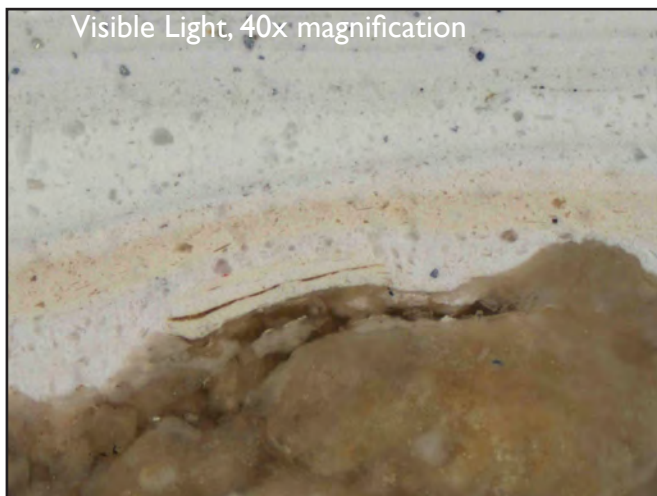
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. EXT.4	ROOM: Exterior
DESCRIPTION: West elevation planter	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	stucco	Possibly lost historic paint layers due to 1965 sandblasting.
1	white	
2	light yellow	
3	light orange yellow	
4	pale orange yellow	
5	white	
6	very pale blue	
7	white	
8	white	
9	white	
10	white	
		See next page for more recent layers

// denotes a break in the sample.

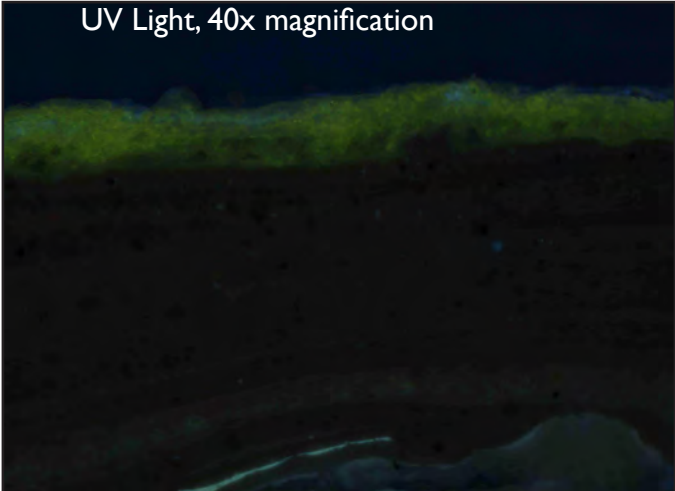
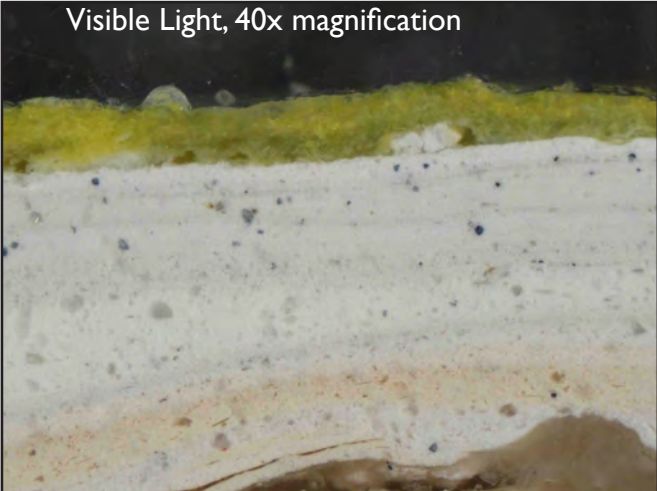
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. EXT.4	ROOM: Exterior
DESCRIPTION: West elevation planter, more recent layers.	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	stucco	
1	white	
2	light yellow	
3	light orange yellow	
4	pale orange yellow	
5	white	
6	very pale blue	
7	white	
8	white	
9	white	
10	white	
11	white	
12	white	
13	yellow	Tape (to assist paint sampling)

Buckstaff Bathhouse

Finishes Analysis



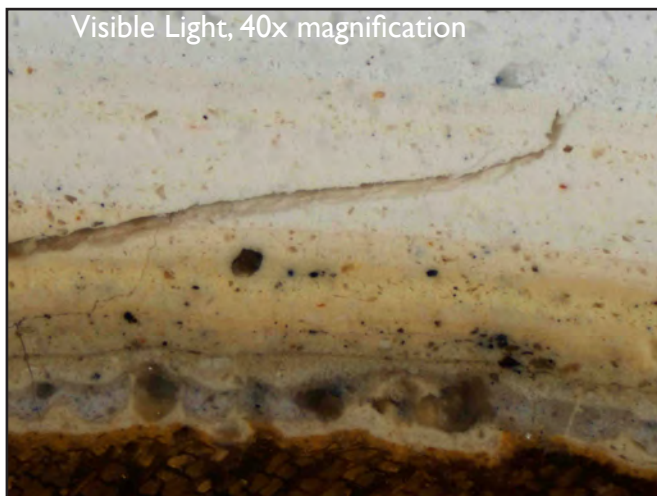
Sample Location

SAMPLE #: BB. EXT.6

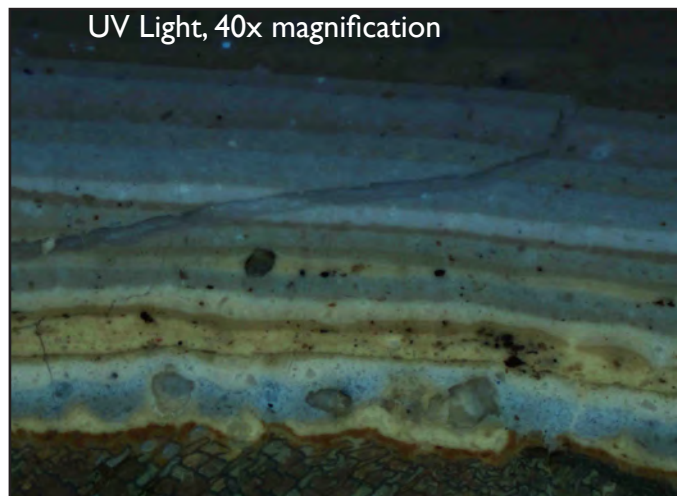
ROOM: Exterior

DESCRIPTION:

West elevation window sash, early layers.



Visible Light, 40x magnification



UV Light, 40x magnification

LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
1	brownish orange	Stain with glossy transparent coating.
2	yellowish white	Primer
3	pale grayish yellow	Sand paint, likely original. Color match (paint only, excluding sand): Munsell 2.5Y 8/2; B.Moore: HC-45 Shaker Beige
4	pale purplish gray	
5	dark yellow	
6	grayish greenish yellow	
7	dark grayish yellow	
8	light yellow	
9	pale orange yellow	
10	white	
11	yellowish white	
12	yellowish white	
13	yellowish white	
14	white	
15	white	
16	white	
17	white	
18	white	
		See next page for more recent layers.

// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



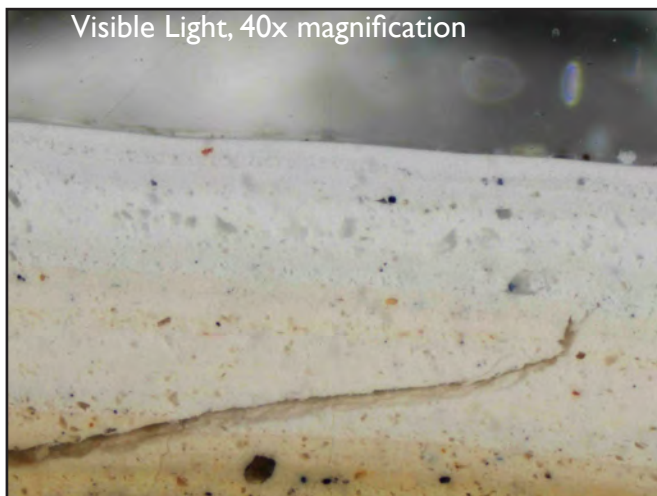
Sample Location

SAMPLE #: BB. EXT.6

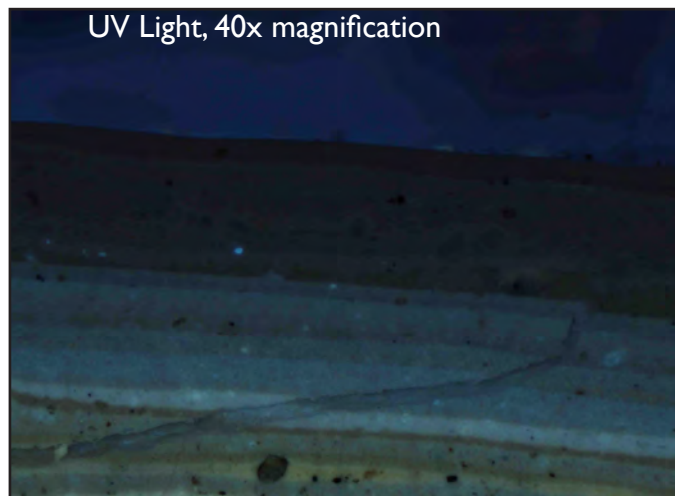
ROOM: Exterior

DESCRIPTION:

West elevation window sash, more recent layer.



Visible Light, 40x magnification



UV Light, 40x magnification

LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate		
		See previous page for early layers.
7	light yellow	
8	pale orange yellow	
9	white	
10	yellowish white	
11	yellowish white	
12	yellowish white	
13	white	
14	white	
15	white	
16	white	
17	white	
18	white	

// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis

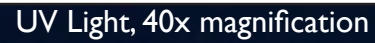
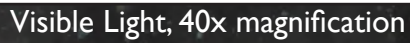
South elevation door stile

[illegible]

Bold denotes known presentation layer.

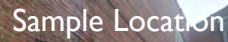
Finishes Analysis

South elevation door stile

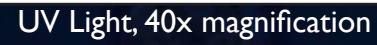
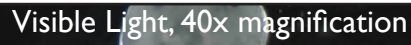
[illegible]

Bold denotes known presentation layer.

Finishes Analysis



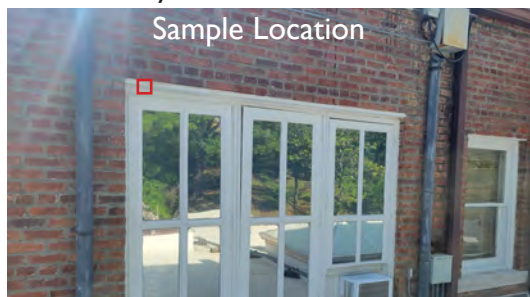
North elevation window trim

[illegible]

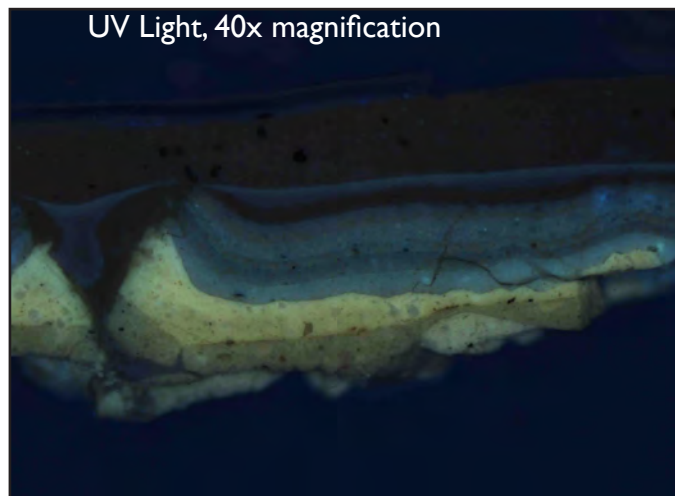
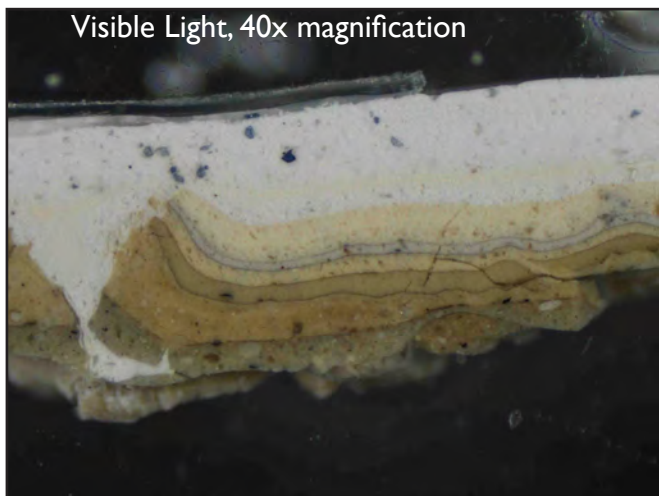
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. EXT.10	ROOM: Exterior
DESCRIPTION: East elevation roof, window lintel	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	metal	
1	yellowish white	Primer
2	pale grayish yellow	Sand paint, likely original. Color match (paint only, excluding sand): Munsell 2.5Y 8/2; B.Moore: HC-45 Shaker Beige
2	yellowish gray	
3	moderate yellow	
4	grayish yellow	
5	light yellow	
6	pale gray	
7	light yellow	
8	light yellow	
9	white	
10	pale yellow	
11	white	
12	white	

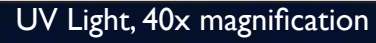
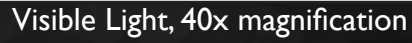
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis

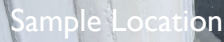


East elevation roof, window sash

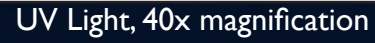
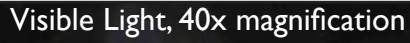
[illegible]

Bold denotes known presentation layer.

Finishes Analysis



East elevation roof, window sash

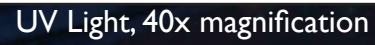
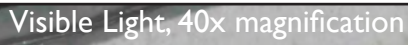
[illegible]

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. EXT.13	ROOM: Exterior
DESCRIPTION: North elevation roof, cornice	

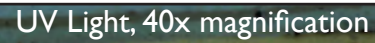
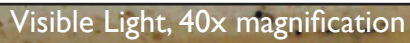
[illegible]

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. EXT.15	ROOM: Exterior
DESCRIPTION: North elevation roof, door frame	

[illegible]

// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



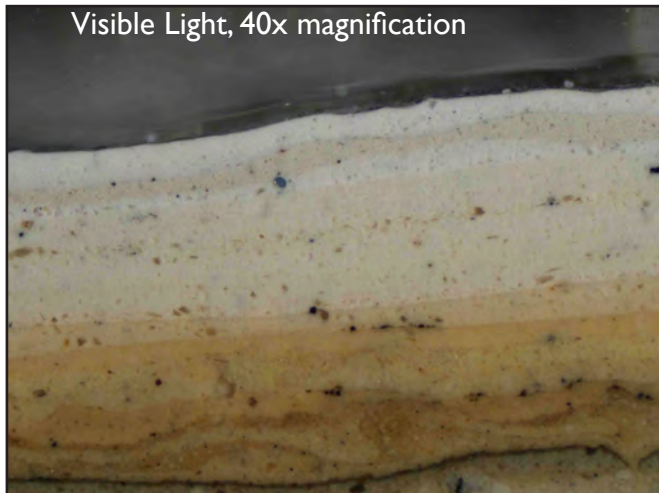
SAMPLE #: BB. EXT.15

ROOM: Exterior

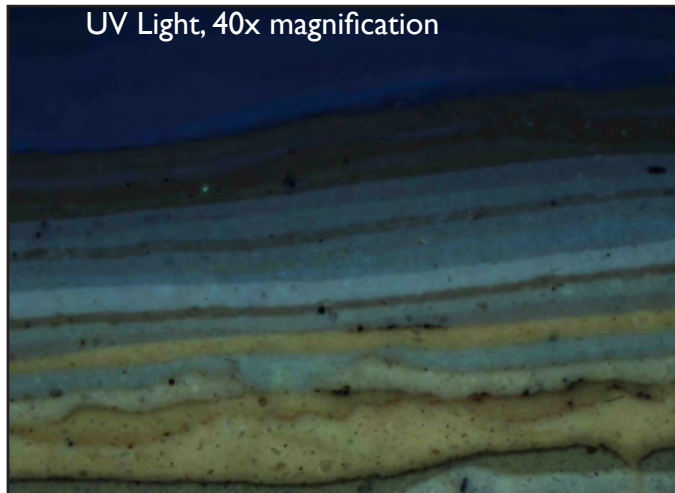
DESCRIPTION:

North elevation roof, door frame

Visible Light, 40x magnification



UV Light, 40x magnification

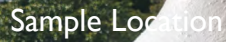


LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate		
		See previous page for early layers.
3	light gray	
4	dark gray	
5	dark grayish yellow	
6	moderate orange yellow	
7	light greenish yellow	
8	light orange yellow	
9	moderate orange yellow	
10	yellow	
11	pale orange yellow	
12	pale yellow	
13	pale yellow	
14	pale yellowish pink	
15	white	
16	pale yellowish pink	
17	white	

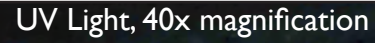
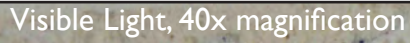
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis

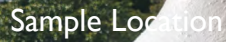


North elevation, third floor, urn

[illegible]

Bold denotes known presentation layer.

Finishes Analysis



North elevation, third floor, urn

[illegible]

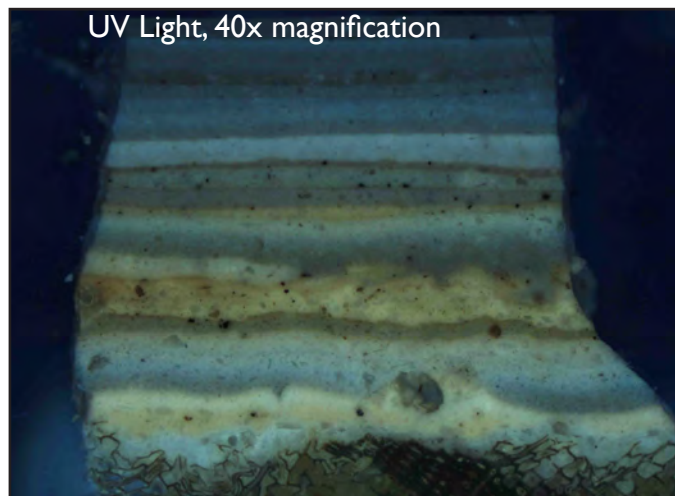
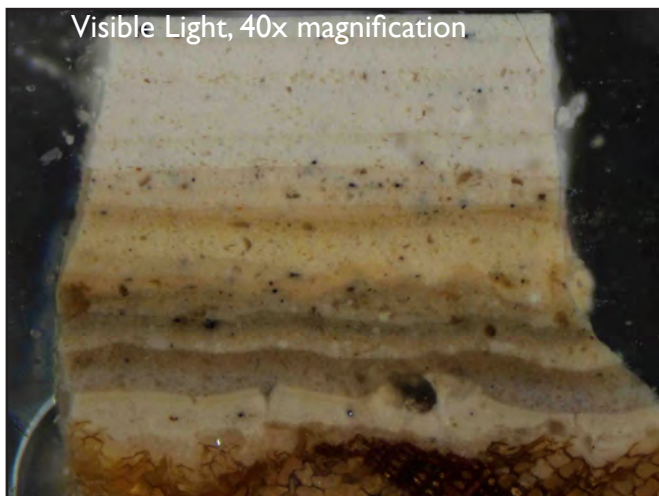
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. EXT.18	ROOM: Exterior
DESCRIPTION: North elevation, third floor, window frame	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
1	yellowish white	Primer
2	pale grayish yellow	Sand paint, likely original. Color match (paint only, excluding sand): Munsell 2.5Y 8/2; B.Moore: HC-45 Shaker Beige
2	pale yellow	Thin
3	pale purplish gray	
4	dark yellow	
5	grayish yellow	
6	grayish greenish yellow	
7	dark grayish yellow	
8	light orangish yellow	
9	light yellow	
10	light yellow	
11	light orange yellow	
12	light orangish yellow	
13	light orangish yellow	
14	yellowish white	
15	yellowish white	
16	yellowish white	
17	yellowish white	
18	yellowish white	
19	yellowish white	See next page for more recent layers

// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

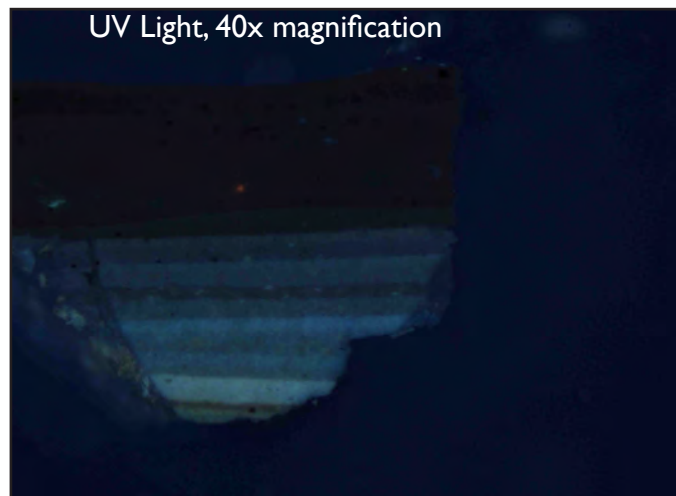
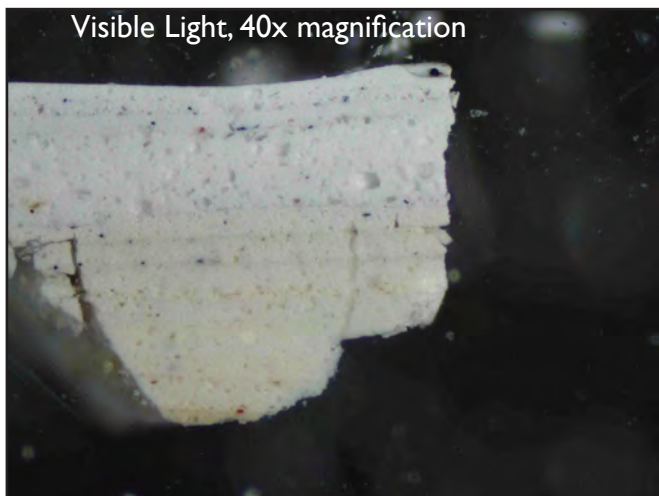


SAMPLE #: BB. EXT.18

ROOM: Exterior

DESCRIPTION:

North elevation, third floor, window frame



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
//		See previous page for early layers.
14	yellowish white	
15	yellowish white	
16	yellowish white	
17	yellowish white	
18	yellowish white	
19	yellowish white	
20	yellowish white	
21	yellowish white	
22	yellowish white	
23	yellowish white	
24	pinkish white	
25	white	
26	white	
27	grayish white	
28	grayish white	

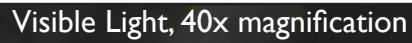
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



West elevation, front door trim

[illegible]

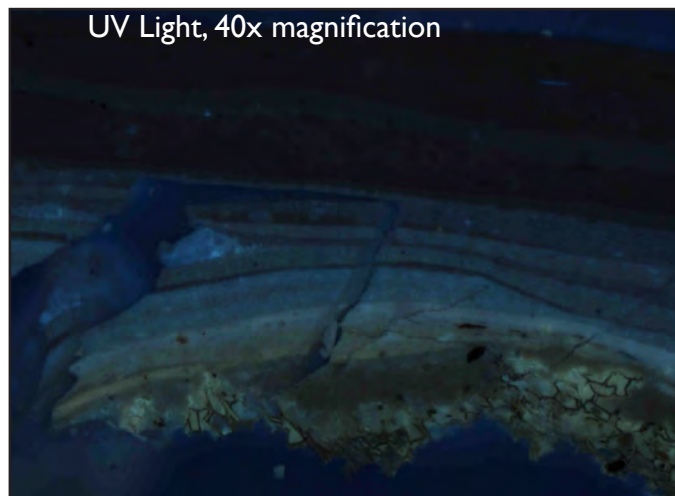
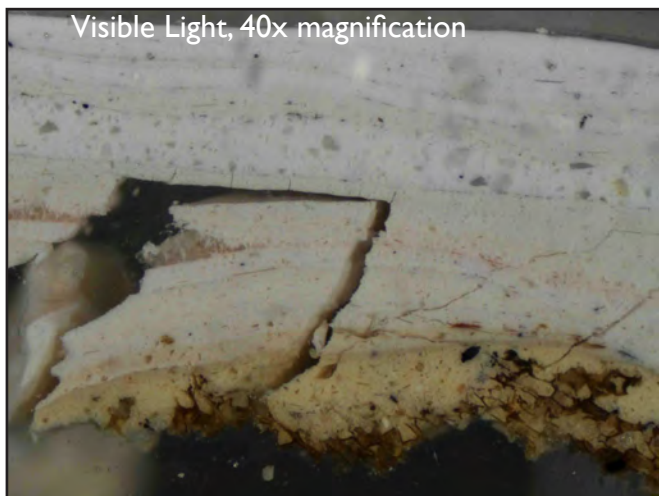
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. EXT.19	ROOM: Exterior
DESCRIPTION: West elevation, front door trim	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
		See previous page for early layers.
1	moderate yellow	
2	pale orange yellow	
3	yellowish white	
4	yellowish white	
5	yellowish white	
6	pale yellowish pink	
7	yellowish white	
8	yellowish white	
9	white	
10	yellowish white	
11	yellowish white	
12	white	
13	white	

// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



Sample Location

ROOM: Exterior

West elevation, front door fan lite

Visible Light, 40x magnification

This image shows a cross-section of a shell under visible light at 40x magnification. The upper portion is a white, brittle-looking material with several cracks and small dark spots. The lower portion is a brown, textured material with a scale-like pattern. A distinct horizontal line separates the two layers.

UV Light, 40x magnification

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



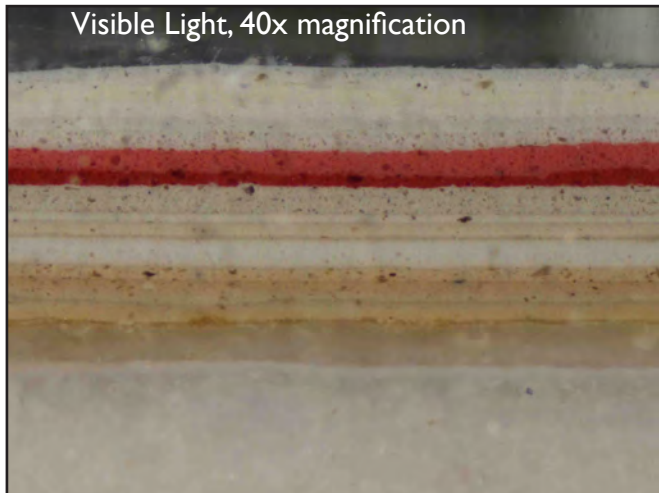
SAMPLE #: BB. 100.1

ROOM: 100

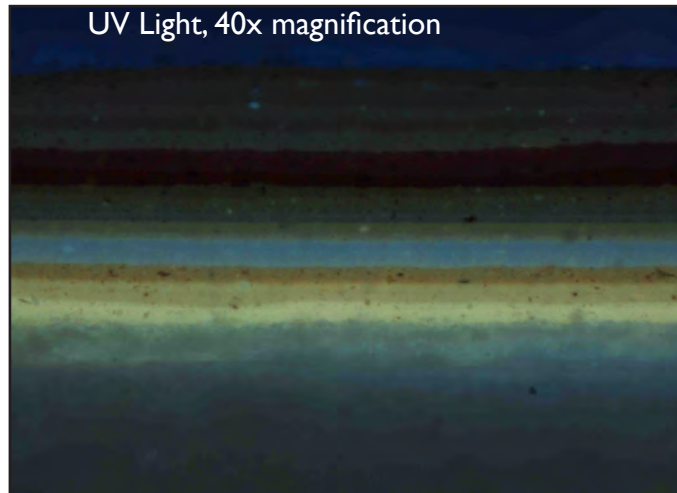
DESCRIPTION:

Wall

Visible Light, 40x magnification



UV Light, 40x magnification



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	dark yellow	Translucent, sealer.
2	pale grayish yellow	Potentially original. Color match: Munsell 2.5Y 8/2; B. Moore HC-35 Powell Buff
3	grayish yellow	
4	moderate orange yellow	
5	light orange yellow	
6	grayish white	
7	light yellow	
8	light yellow	
9	yellowish white	
10	light yellowish pink	
11	deep red	
12	deep pink	
13	grayish white	
14	grayish white	
15	yellowish white	
16	yellowish white	
17	yellowish gray	

// denotes a break in the sample.

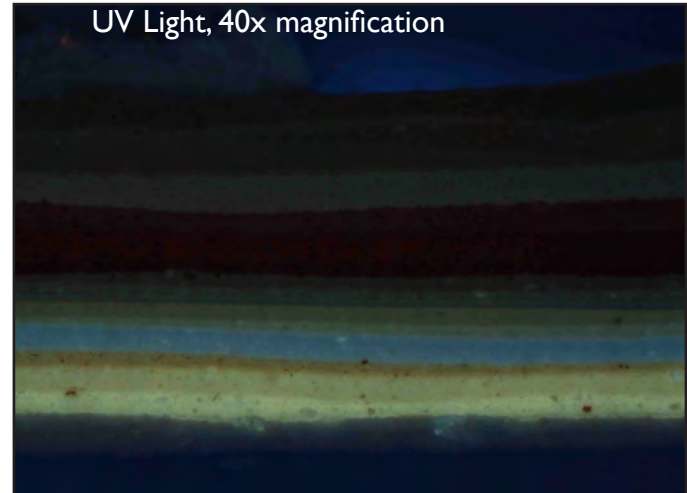
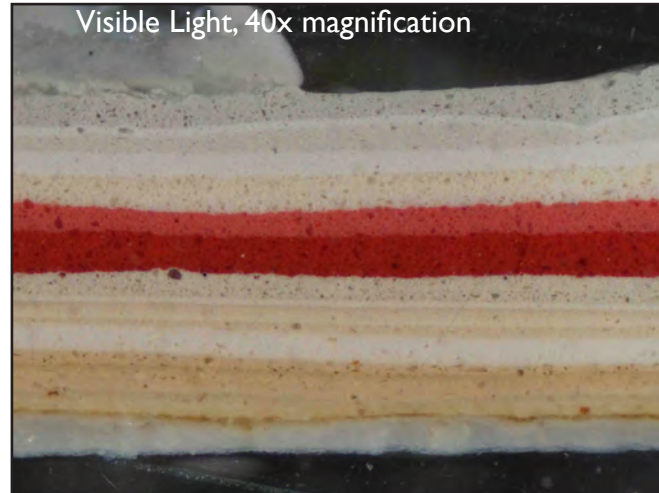
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 100.2	ROOM: 100
DESCRIPTION: Ceiling field	



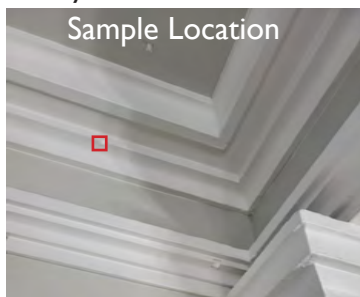
LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	dark yellow	Translucent, sealer.
2	pale grayish yellow	Potentially original. Color match: Munsell 2.5Y 8/2; B. Moore HC-35 Powell Buff
3	grayish yellow	
4	moderate orange yellow	
5	light orange yellow	
6	grayish white	
7	light yellow	
8	light yellow	
9	yellowish white	
10	light yellowish pink	
11	deep red	
12	deep pink	
13	light yellow	
14	grayish white	
15	pale gray	
16	yellowish white	
17	yellowish gray	

// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

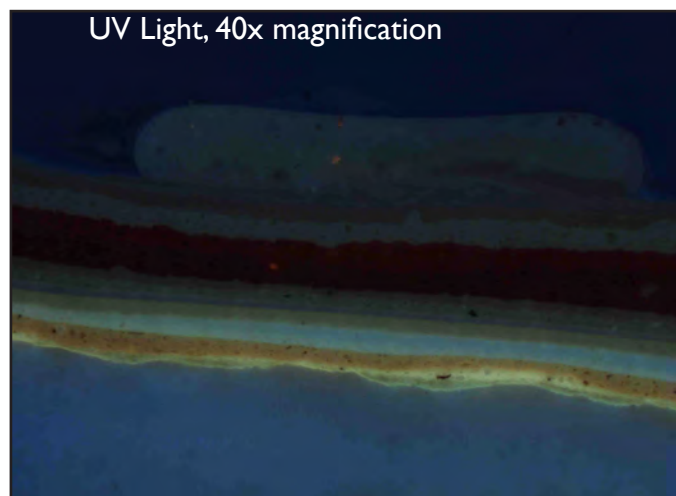
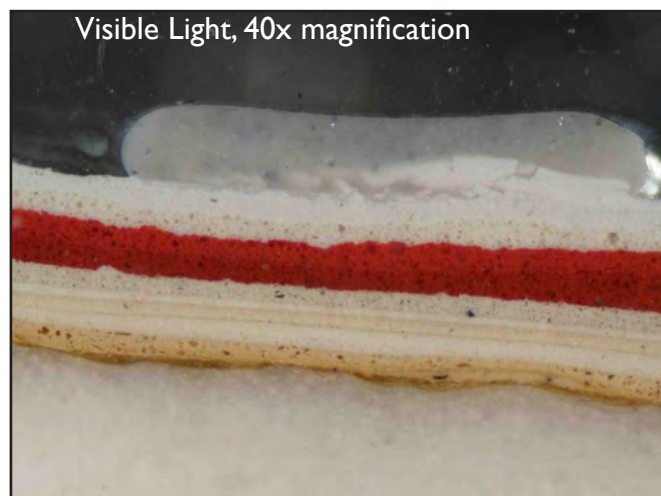


SAMPLE #: BB. 100.3A

ROOM: 100

DESCRIPTION:

Cornice molding



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	dark yellow	Translucent, sealer.
2	pale grayish yellow	Potentially original. Color match: Munsell 2.5Y 8/2; B. Moore HC-35 Powell Buff
3	moderate orange yellow	
4	light orange yellow	
5	grayish white	
6	light yellow	
7	light yellow	
8	yellowish white	
9	light yellowish pink	
10	deep red	
11	deep pink	
12	pale orange yellow	
13	white	

// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

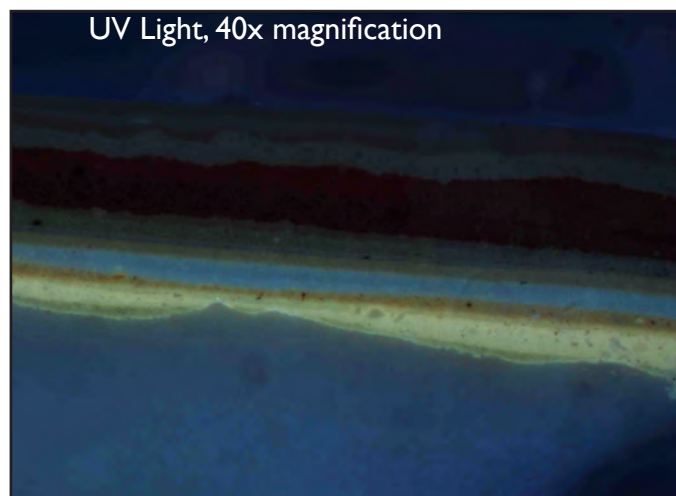
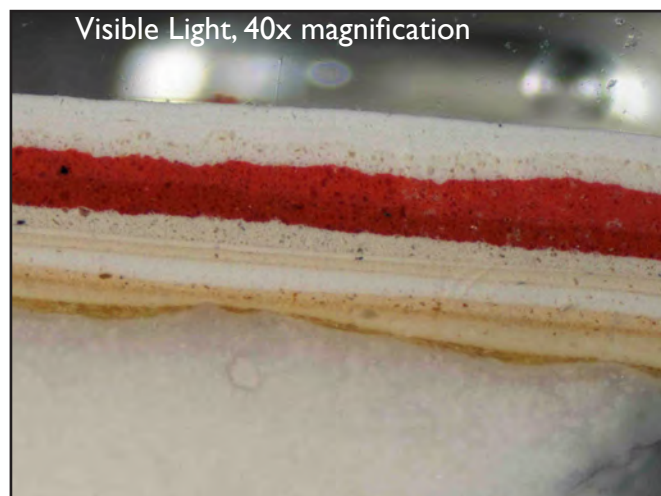


SAMPLE #: BB. 100.3B

ROOM: 100

DESCRIPTION:

Cornice molding



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	dark yellow	Translucent, sealer.
2	pale grayish yellow	Potentially original. Color match: Munsell 2.5Y 8/2; B. Moore HC-35 Powell Buff
3	moderate orange yellow	
4	light orange yellow	
5	grayish white	
6	light yellow	
7	light yellow	
8	yellowish white	
9	light yellowish pink	
10	deep red	
11	deep pink	
12	pale orange yellow	
13	white	

// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



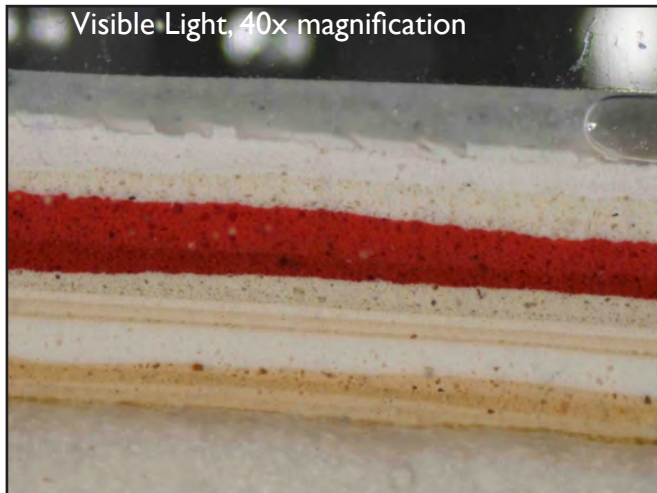
SAMPLE #: BB. 100.6

ROOM: 100

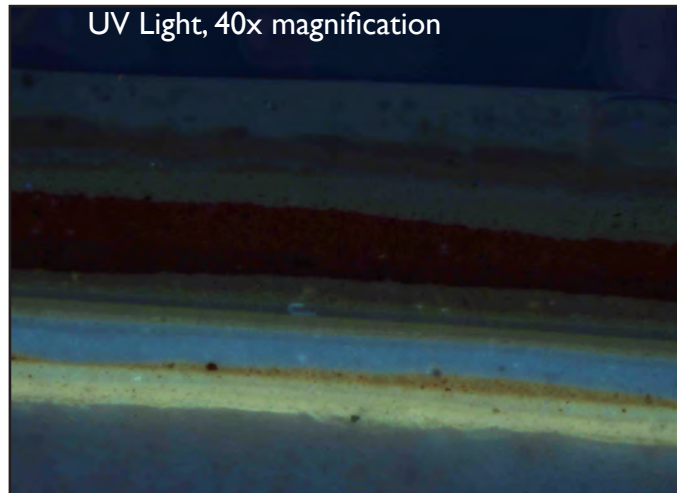
DESCRIPTION:

Ceiling beam surround

Visible Light, 40x magnification



UV Light, 40x magnification



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	dark yellow	Translucent, sealer.
2	pale grayish yellow	Potentially original. Color match: Munsell 2.5Y 8/2; B. Moore HC-35 Powell Buff
4	pale grayish yellow	
5	light orange yellow	
6	grayish white	
7	light yellow	
8	light yellow	
9	yellowish white	
10	light yellowish pink	
11	deep red	
12	deep pink	
13	pale orange yellow	
14	white	

// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



Sample Location

ROOM: 100

Door surround

Visible Light, 40x magnification

This micrograph shows a cross-section of a dental restoration. The top layer is dark and irregular, likely representing the interface between the restoration and the underlying tissue. Below this is a thin, light-colored layer, possibly a primer or bonding agent. The bottom layer is a thick, textured, brownish material, which appears to be the restoration material itself, showing a granular or woven structure.

UV Light, 40x magnification

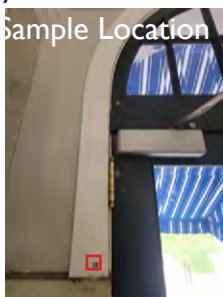
[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location

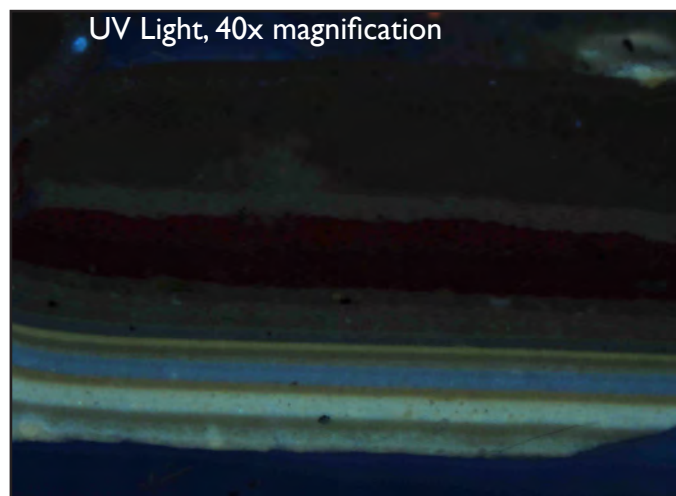
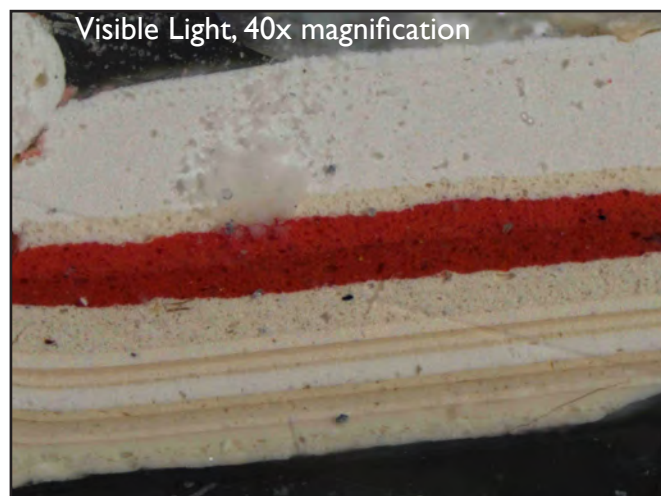


SAMPLE #: BB. 100.8

ROOM: 100

DESCRIPTION:

Door surround



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate		
//		See previous page for early layers
2	grayish yellowish white	Potentially original. Color match: Munsell 2.5Y 8.5/2; B. Moore OC-15 Baby Fawn
3	light yellow	
4	light grayish yellow	
5	light orange yellow	
6	white	
7	light orange yellow	
8	light yellow	
9	light yellow	
10	deep red	
11	deep pink	
12	light orange yellow	
13	white	

// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis

SAMPLE #: BB. 100.9	ROOM: 100
DESCRIPTION: Door rail	

Visible Light, 40x magnification

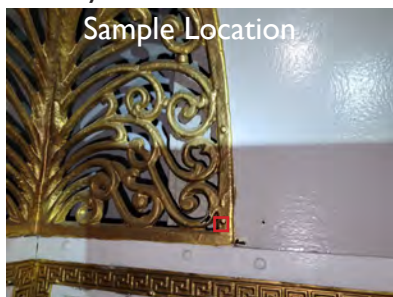
UV Light, 40x magnification

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



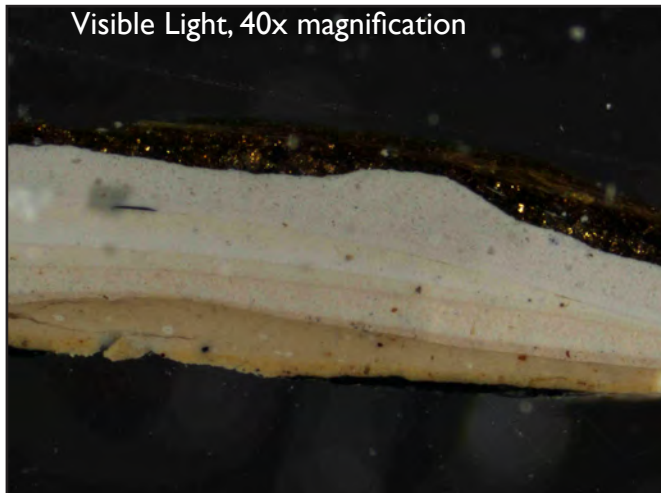
SAMPLE #: BB. E2

ROOM: 100

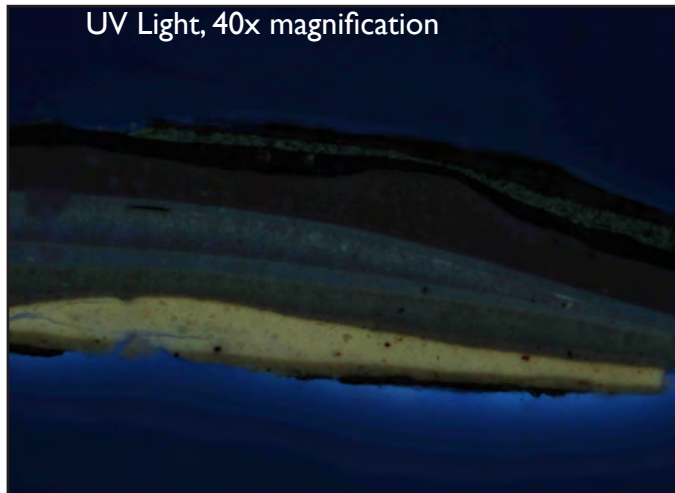
DESCRIPTION:

Elevator decorative metalwork

Visible Light, 40x magnification



UV Light, 40x magnification



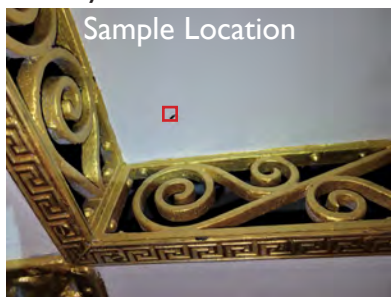
LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	metal	
1	black	Primer.
2	moderate orangish yellow	Intermediate layer.
3	grayish orangish yellow	Potentially original. Color match: Munsell 10YR 8/2; B. Moore CC-320 Bar Harbor Beige
4	pale orange yellow	
5	yellowish white	
6	pale pinkish yellow	
7	pale yellow	
8	white	
9	pale yellow	
10	pale yellowish pink	
11	gold	

// denotes a break in the sample.

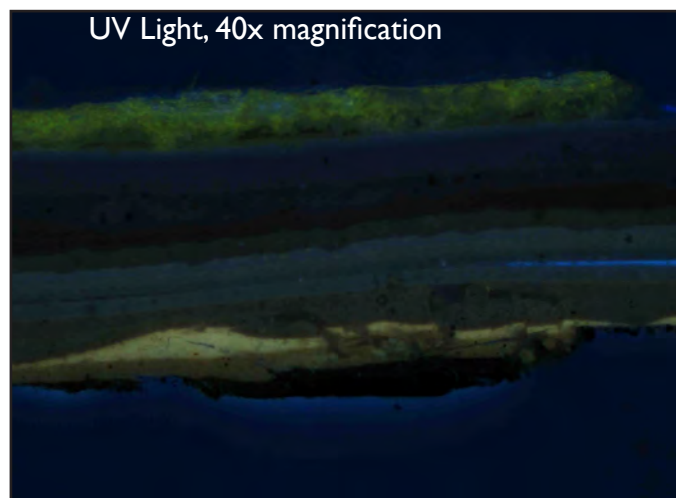
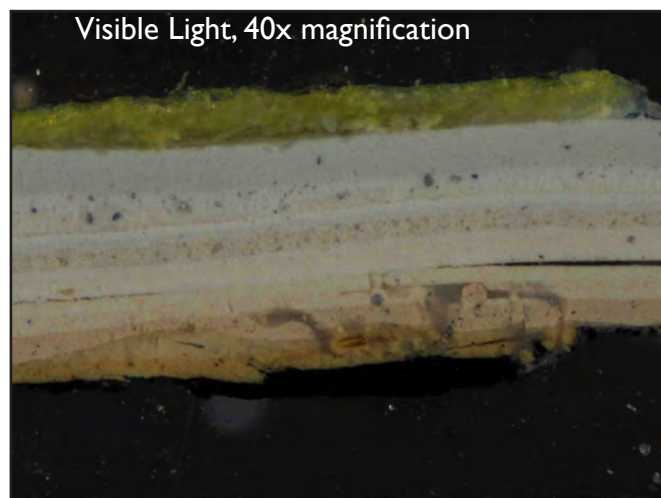
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. E3	ROOM: 100
DESCRIPTION: Elevator ceiling	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	metal	
1	black	Primer.
2	moderate orangish yellow	Intermediate layer.
3	grayish orangish yellow	Potentially original. Color match: Munsell 10YR 8/2; B. Moore CC-320 Bar Harbor Beige
4	light orange yellow	
5	light yellow	
6	light yellow	
7	white	
8	pale orange yellow	
9	light yellow	
10	pale bluish gray	
11	white	
12	pale orange yellow	
13	grayish white	
14	pale yellowish gray	

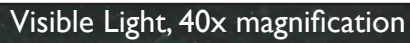
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



Elevator decorative metalwork

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



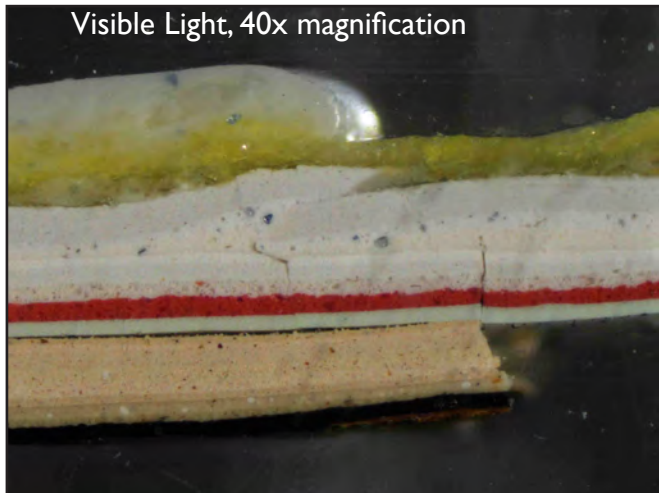
SAMPLE #: BB. E5

ROOM: 100

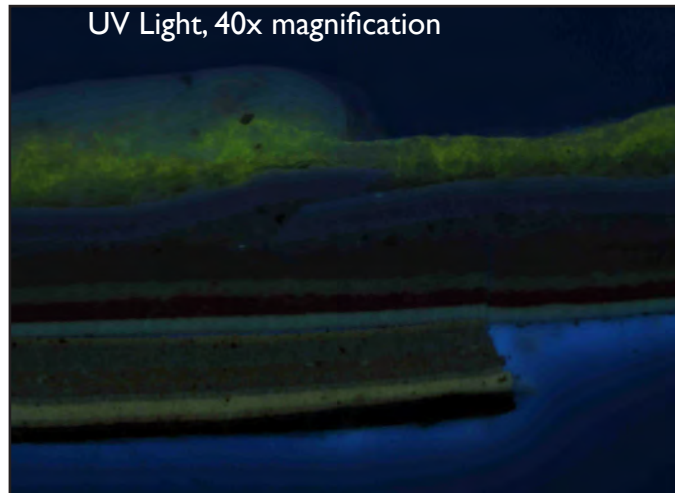
DESCRIPTION:

Elevator lower wall

Visible Light, 40x magnification



UV Light, 40x magnification

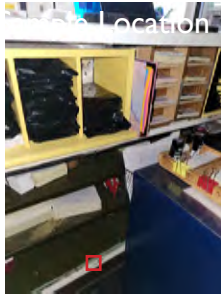


LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	metal	
1	black	Primer?
2	moderate orangish yellow	Intermediate layer.
3	grayish orangish yellow	Potentially original. Color match: Munsell 10YR 8/2; B. Moore CC-320 Bar Harbor Beige
4	light orange yellow	
5	light orange yellow	
6	light orange yellow	
7	very pale green	
8	deep red	
9	pale pink	
10	white	
11	white	
12	pale orange yellow	
13	white	
14	pale yellowish gray	

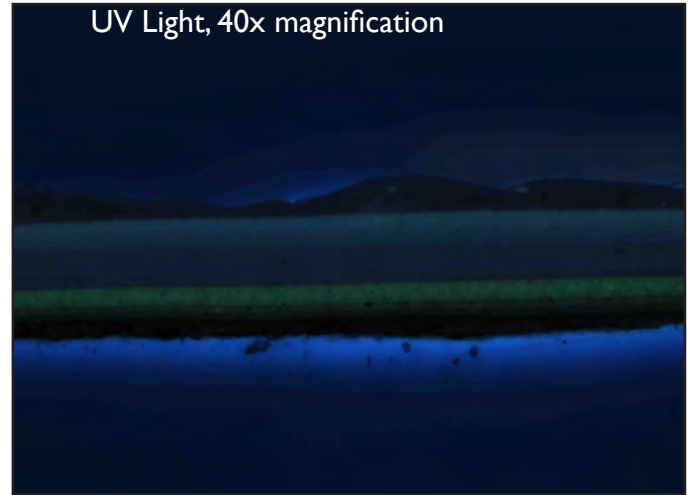
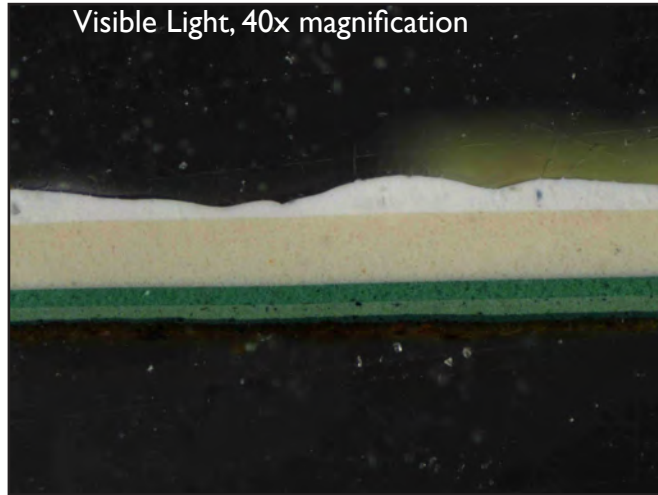
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. 101.1	ROOM: 101
DESCRIPTION: Lobby office counter	

[illegible]

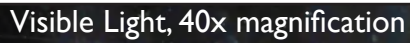
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



Locker door, lower level

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



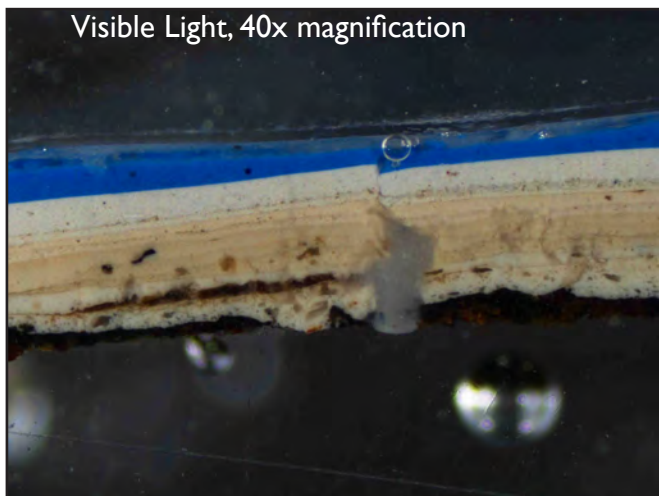
Sample Location

SAMPLE #: BB. 102.2

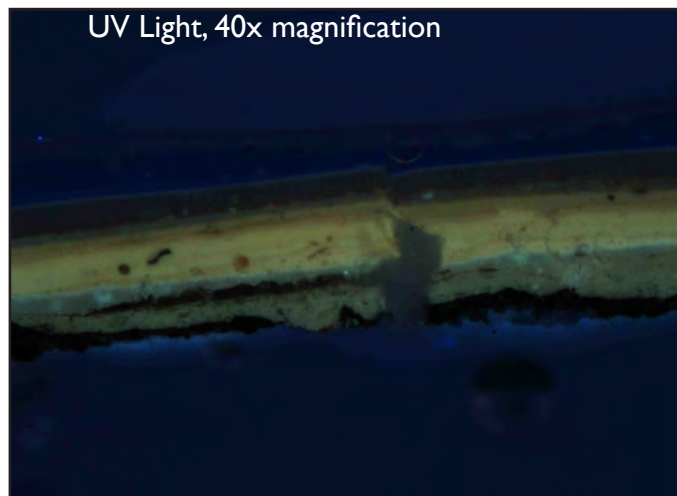
ROOM: 102

DESCRIPTION:

Balcony support beam



Visible Light, 40x magnification



UV Light, 40x magnification

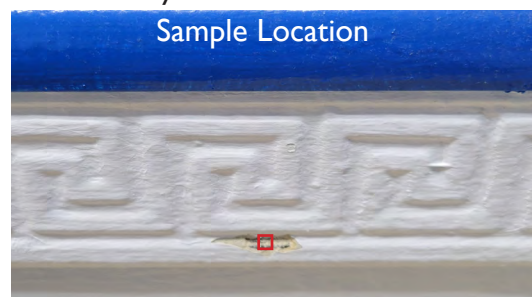
LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	metal	
1	black	Primer
2	brownish white	Potentially original. Color match: Munsell 2.5Y 8.5/2; B. Moore OC-33 Opaline
3	moderate yellow	
4	strong yellowish brown	Partial, slightly translucent.
5	yellowish white	
6	light orange yellow	
7	light orange yellow	
8	light orange yellow	
9	light orange yellow	
10	yellowish white	
11	yellowish white	
12	vivid blue	

// denotes a break in the sample.

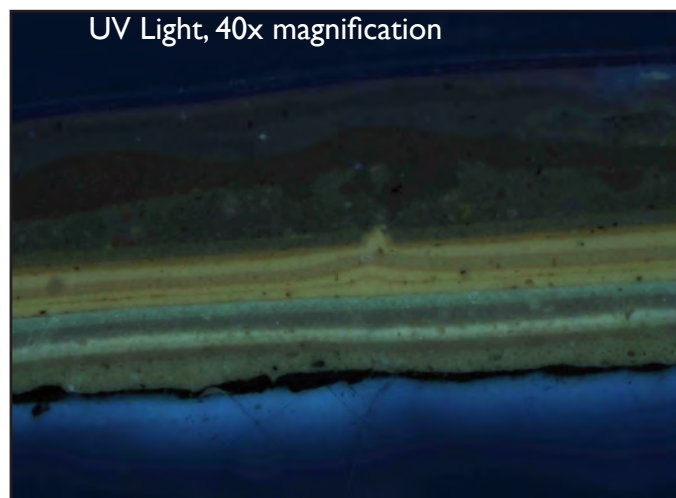
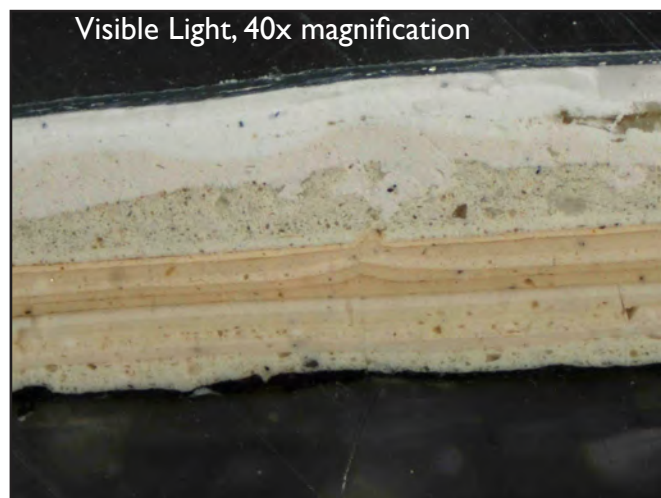
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 102.3	ROOM: 102
DESCRIPTION: Greek key ornamental metalwork on balcony	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	metal	
1	black	Primer
2	brownish white	Potentially original. Color match: Munsell 2.5Y 8.5/2; B. Moore OC-33 Opaline
3	brownish white	
4	pinkish white	
5	off white	
6	grayish yellow	
7	yellowish white	
8	light orange yellow	
9	light orange yellow	
10	light orange yellow	
11	light orange yellow	
12	light orange yellow	
13	pale greenish gray	
14	pale yellowish pink	
15	white	
16	white	
17	white	

// denotes a break in the sample.

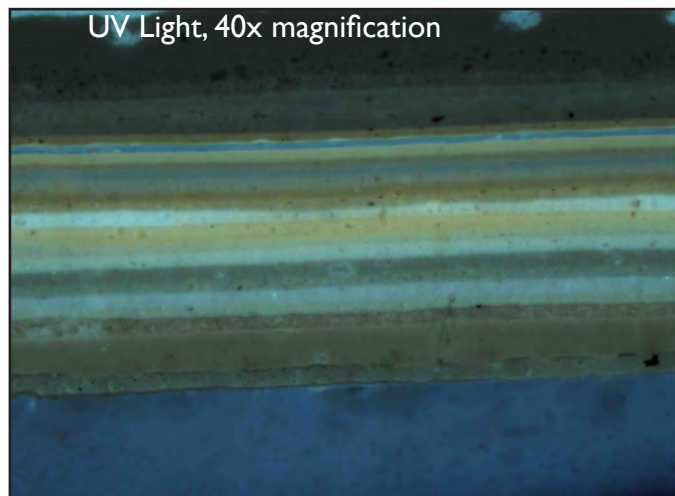
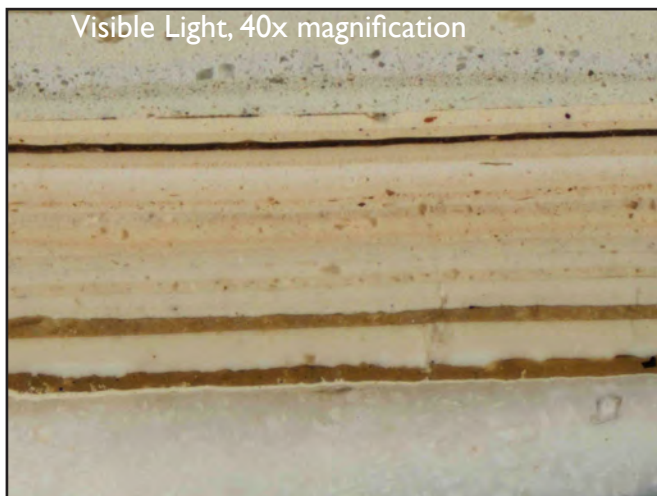
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 102.4	ROOM: 102
DESCRIPTION: Wall	

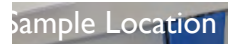


LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	white	Prep layer.
2	dark grayish yellow	Sealer/prep. Thicker here than in Room 100.
3	white	Primer
4	pale yellow	Potentially original. Color match: Munsell 10YR 8/2; B. Moore HC-39 Putnam Ivory
5	dark grayish yellow	Prep layer/primer
6	pale orange yellow	
7	pale orange yellow	
8	pale orange yellow	
9	pale yellow	
10	pale yellow	
11	pale orange yellow	
12	pale orange yellow	
13	pale orange yellow	
14	pale orange yellow	
15	yellowish white	
16	light yellow	
17	pale orange yellow	
18	light yellow	
19	pale yellow green	
20	pale yellow green	
21	white	
22	light yellowish gray	

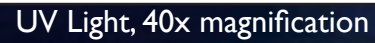
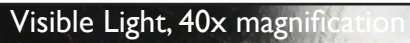
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. 102.5	ROOM: 102
DESCRIPTION: Underside of balcony	

[illegible]

// denotes a break in the sample.

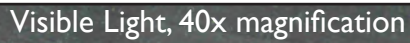
Bold denotes known presentation layer.

Finishes Analysis



ROOM: 102

Locker interior, lower level

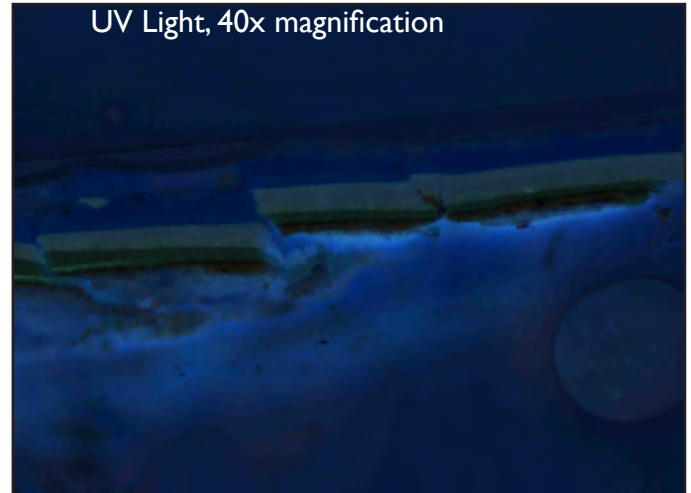
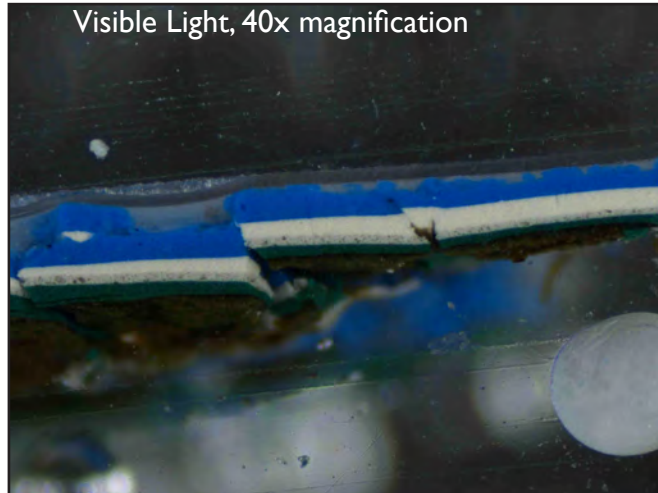
[illegible]

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. 102.7	ROOM: 102
DESCRIPTION: Locker door, balcony level	

[illegible]

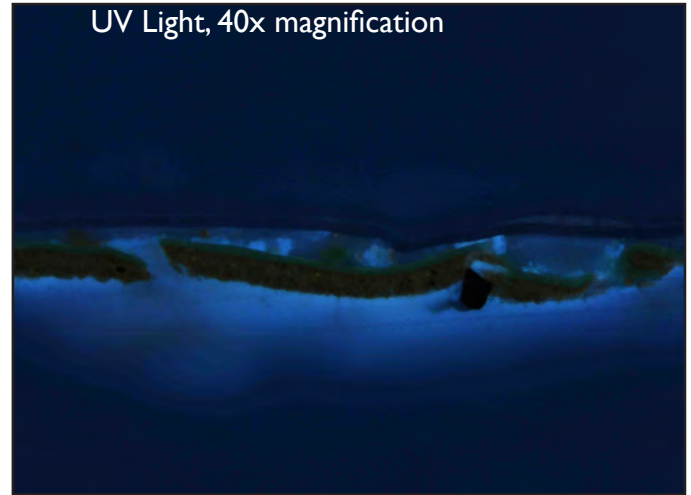
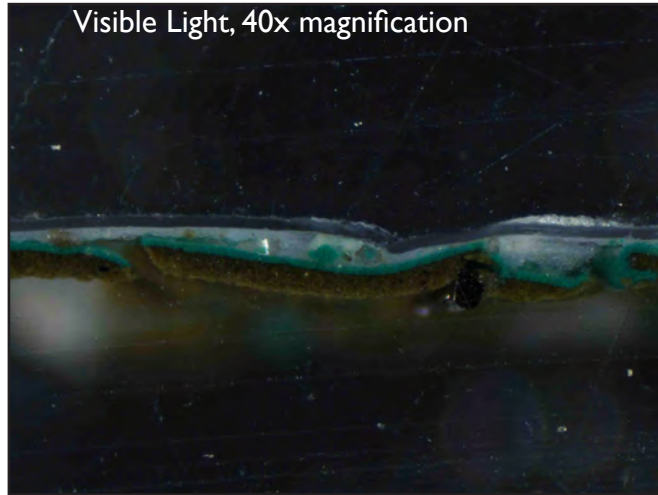
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. 102.8	ROOM: 102
DESCRIPTION: Locker interior, balcony level	

[illegible]

// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



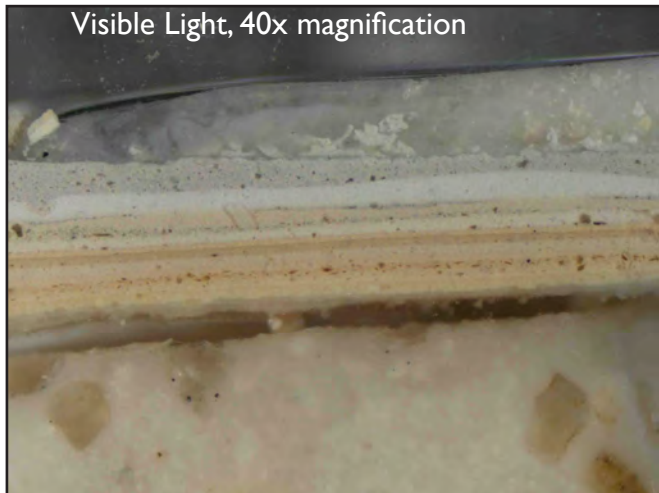
SAMPLE #: BB. 102.9

ROOM: 102

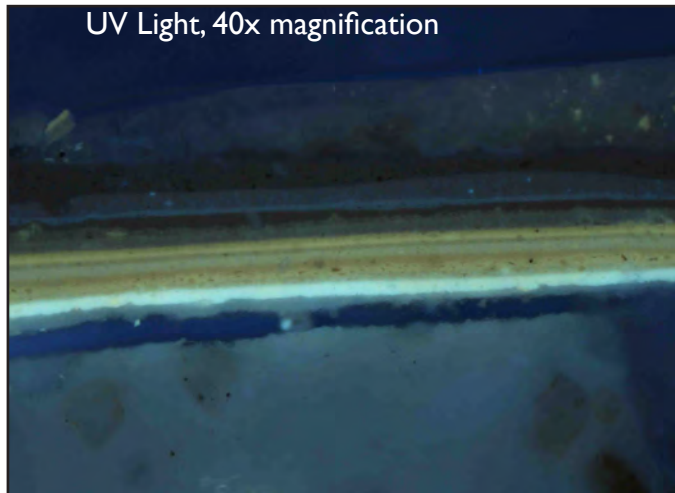
DESCRIPTION:

Ceiling beam

Visible Light, 40x magnification



UV Light, 40x magnification

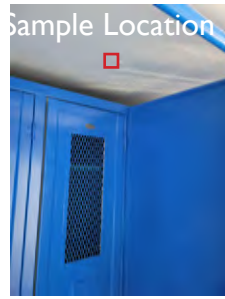


LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	pale yellow	Earliest existing but not original. Missing historic paint layers present on 102.4.
2	pale orange yellow	
3	pale yellow	
4	pale yellow	
5	pale orange yellow	
6	light brownish yellow	
7	pale orange yellow	
8	yellowish white	
9	pale greenish gray	
10	pale orange yellow	
11	white	
12	grayish white	

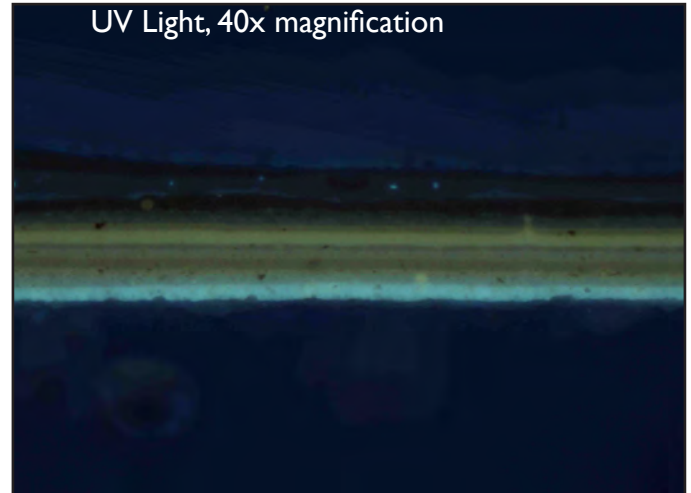
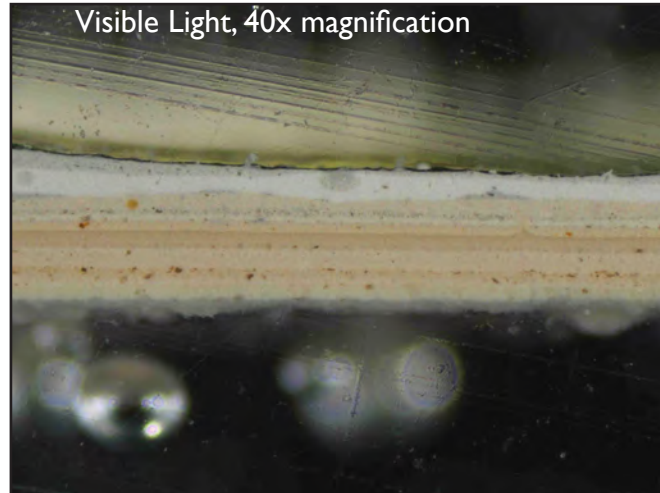
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. 102.10	ROOM: 102
DESCRIPTION: Ceiling	

[illegible]

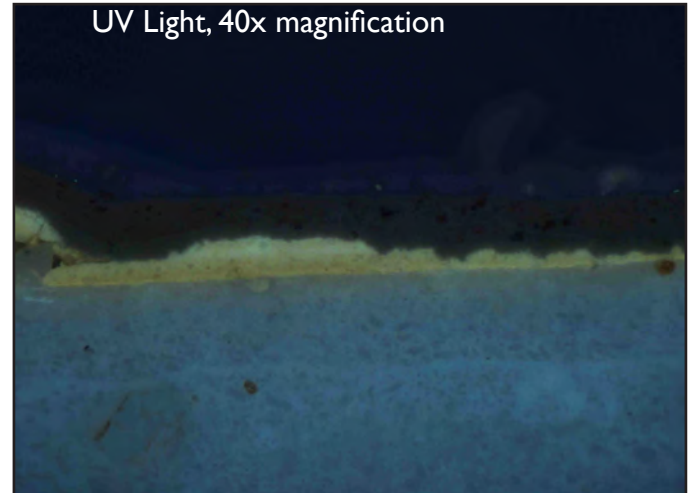
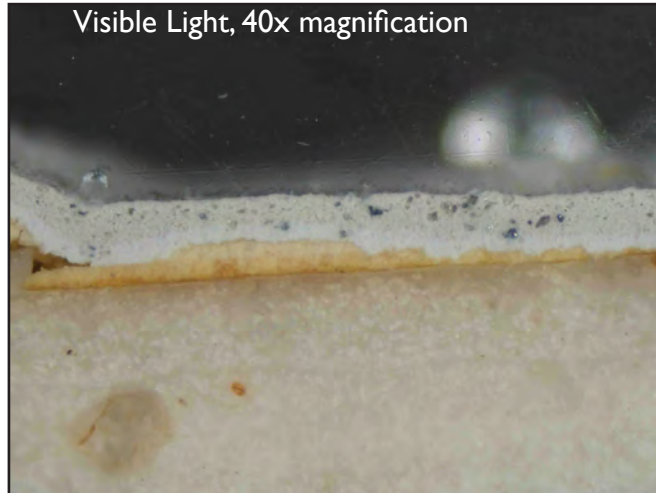
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. 106.1	ROOM: 106
DESCRIPTION: Ceiling at skylight	

[illegible]

// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis

ROOM: 106

Skylight ornament

Visible Light, 40x magnification

UV Light, 40x magnification

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

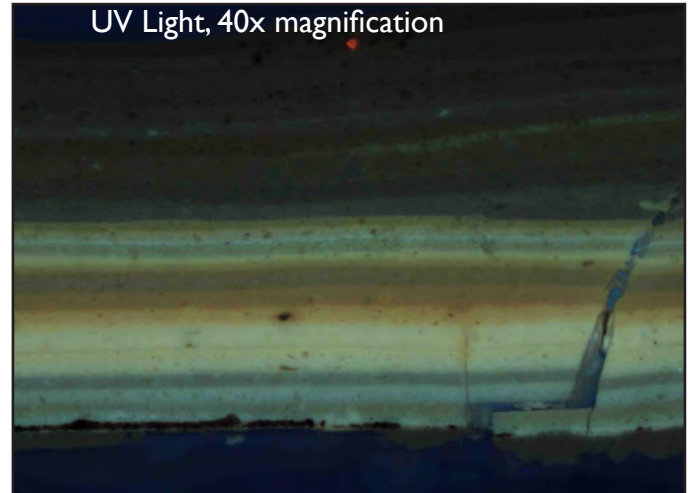
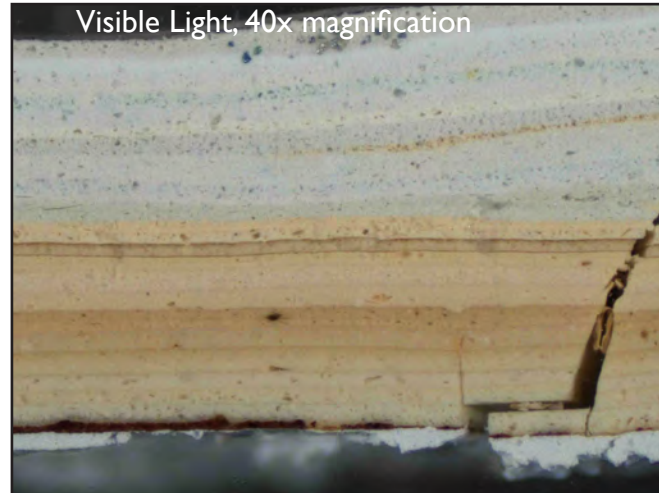


SAMPLE #: BB. 106.3

ROOM: 106

DESCRIPTION:

Skylight capital panel center



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	metal	
1	dark brown	Primer
2	brownish white	Potentially original. Color match: Munsell 2.5Y 8.5/2; B. Moore OC-33 Opaline
3	pale yellow	
4	pale yellow	
5	pale orange yellow	
6	pale orange yellow	
7	grayish yellow	
8	light brownish orange	
9	pale yellow	
10	pale orange yellow	
11	light yellow	
12	light yellow	
13	light yellow	
14	light orange yellow	
15	light bluish green	
16	pale blue	
17	pale blue	
18	brilliant orange yellow	Partial.
19	pale bluish gray	
20	white	
21	grayish white	
22	pale blue	See next page for more recent layers.

// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis

ROOM: 106

Skylight cornice panel center

Visible Light, 40x magnification

This micrograph shows a cross-section of a wood-polymer interface. The wood, on the left, has a light tan color and a visible grain. The polymer, on the right, is a darker, more uniform color. A distinct, dark, irregular line runs along the interface, indicating a crack or a region of poor adhesion between the two materials.

UV Light, 40x magnification

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



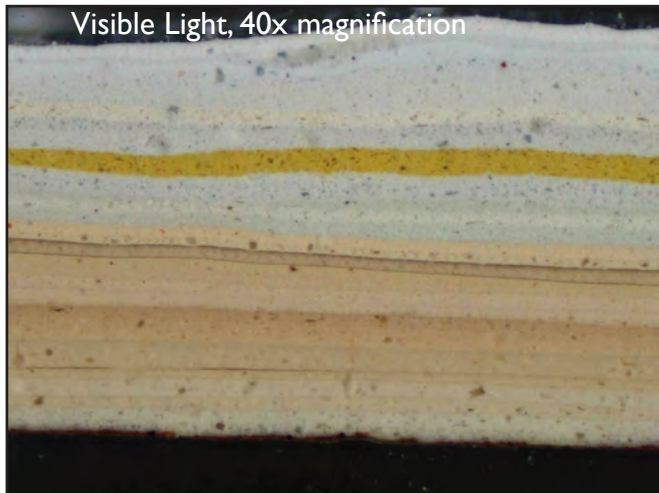
SAMPLE #: BB. 106.5

ROOM: 106

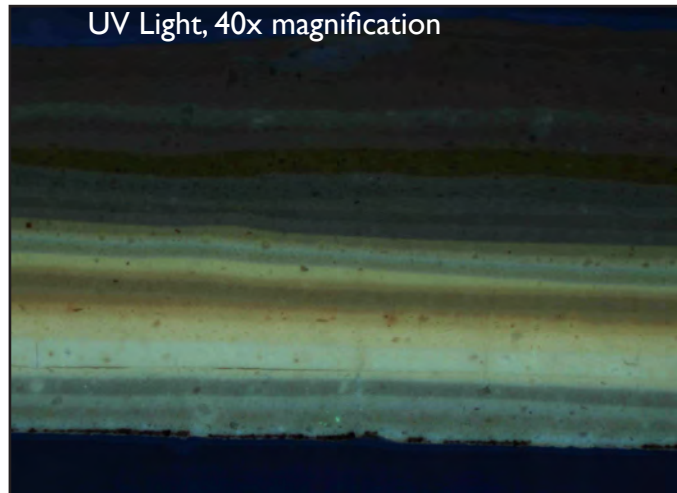
DESCRIPTION:

Skylight cornice panel molding

Visible Light, 40x magnification



UV Light, 40x magnification



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	metal	
1	dark brown	Primer
2	brownish white	Potentially original. Color match: Munsell 2.5Y 8.5/2; B. Moore OC-33 Opaline
3	pale yellow	
4	pale yellow	
5	pale orange yellow	
6	pale orange yellow	
7	grayish yellow	
8	light brownish orange	
9	pale yellow	
10	pale orange yellow	
11	light yellow	
12	light yellow	
13	light yellow	
14	light orange yellow	
15	light bluish green	
16	yellowish white	
17	pale blue	
18	pale blue	
19	brilliant orange yellow	
20	pale blue	
21	light grayish blue	See next page for more recent layers.

// denotes a break in the sample.

Bold denotes known presentation layer.

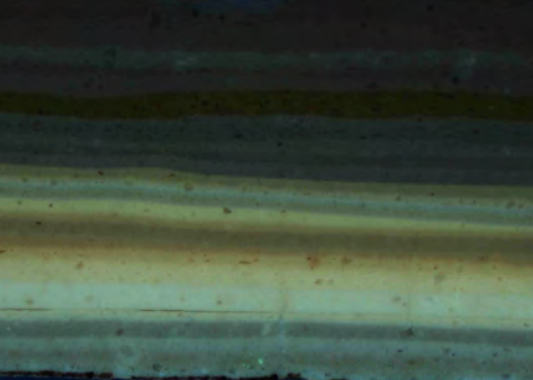
Finishes Analysis

ROOM: 106

Skylight cornice panel molding

Visible Light, 40x magnification

UV Light, 40x magnification



This image shows a cross-section of a material under UV light at 40x magnification. The material exhibits a layered structure with alternating light and dark horizontal bands. The top layer is dark, followed by a lighter band, then a darker band, and so on. The bottom layer is a light, yellowish-green color. The overall appearance is that of a thin, translucent film or coating.

[illegible]

Bold denotes known presentation layer.

Finishes Analysis



Ceiling

[illegible]

Bold denotes known presentation layer.

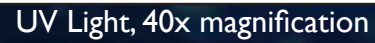
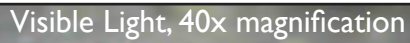
Finishes Analysis

Sample Location



ROOM: 106

Partition cornice

[illegible]

Bold denotes known presentation layer.

Finishes Analysis



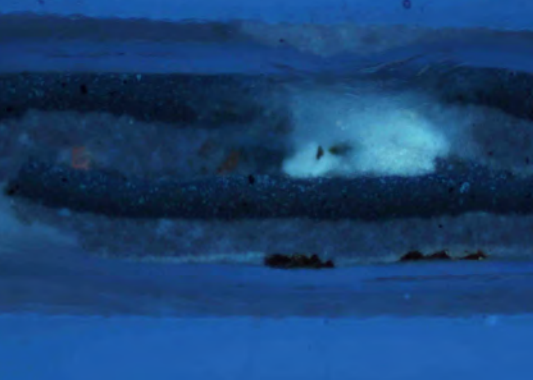
A photograph showing the physical location of the sample. It depicts a white, rectangular, box-like structure with a black, grid-like panel on its front face. A red square is marked on the right side of the black panel, indicating the specific location of the sample.

ROOM: 106

Metal grille

Visible Light, 40x magnification

UV Light, 40x magnification

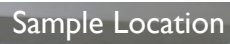


This image shows a cross-section of a material under UV light at 40x magnification. A bright, glowing region is visible in the center, indicating a specific material property or defect. The surrounding material appears dark and textured.

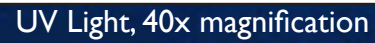
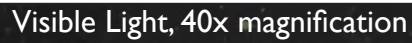
[illegible]

Bold denotes known presentation layer.

Finishes Analysis

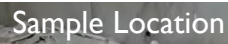


Metal frame of sauna roof

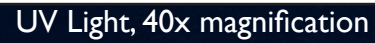
[illegible]

Bold denotes known presentation layer.

Finishes Analysis



Assumed ceiling fragments on partition roof.

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



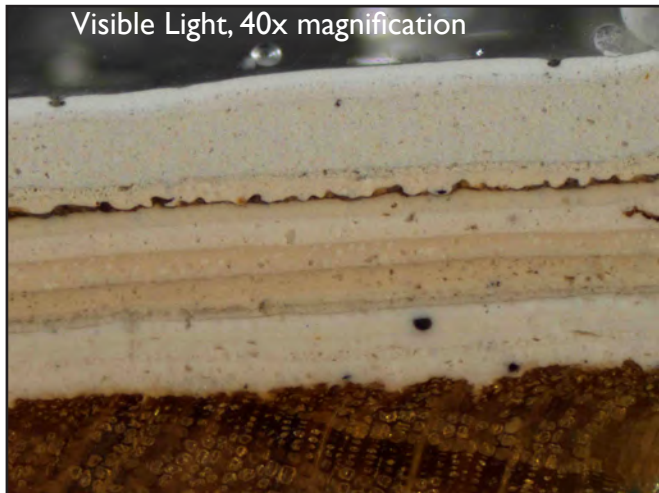
SAMPLE #: BB. 109.1

ROOM: 109

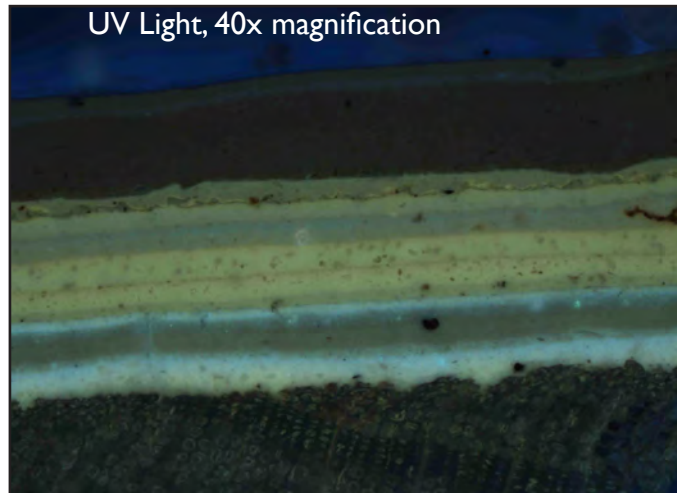
DESCRIPTION:

Window sill

Visible Light, 40x magnification



UV Light, 40x magnification



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
1	yellowish white	Primer
2	grayish yellowish white	Potentially original. Color match: Munsell 2.5Y 8.5/2; B. Moore OC-15 Baby Fawn
3	brownish white	
4	yellowish white	
5	pale grayish yellow	
6	light orange yellow	
7	light orange yellow	
8	pale orange yellow	
9	pale orange yellow	
10	light orange yellow	
11	light grayish yellow	
12	light grayish yellow	
13	white	
14	light yellowish gray	

// denotes a break in the sample.

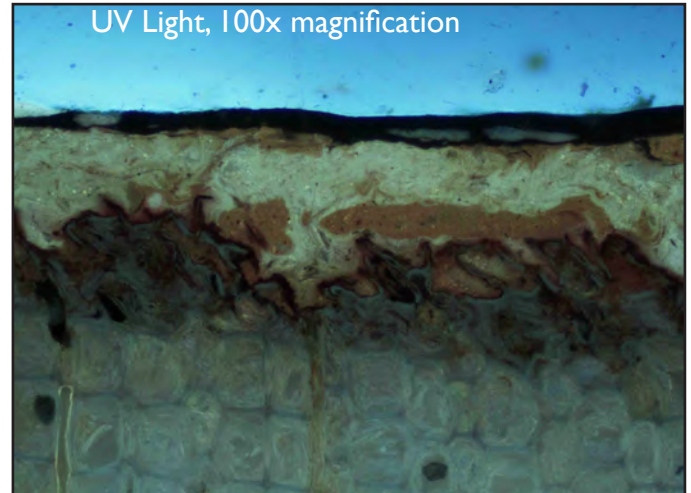
Bold denotes known presentation layer.

Finishes Analysis



ROOM: 109

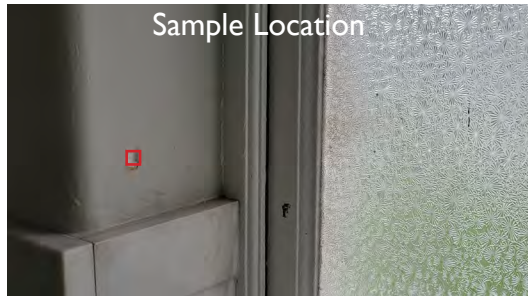
Window sash

[illegible]

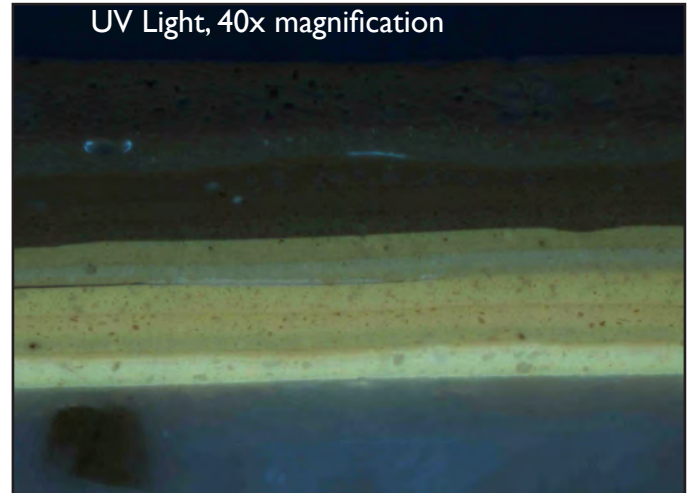
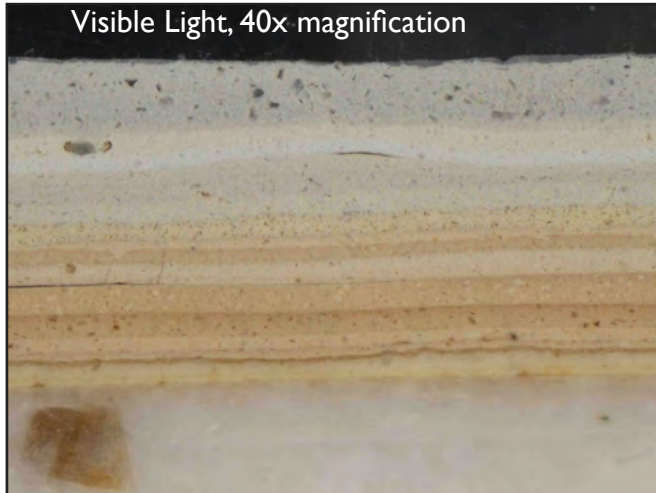
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 109.3	ROOM: 109
DESCRIPTION: Wall	

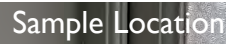


LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	dark yellow	Sealer.
2	pale yellow	Primer.
3	brownish yellow	Very thin, slightly translucent. Approximate color match: Munsell 10YR 6/4; B. Moore HC-42 Roxbury Caramel
4	light orange yellow	
5	light orange yellow	
6	light grayish yellowish brown	
7	light yellowish brown	
8	light orange yellow	
9	pale orange yellow	
10	pale orange yellow	
11	light orange yellow	
12	light yellow	
13	light yellow	
14	pale grayish green	
15	pale yellowish pink	
16	pale yellowish pink	
17	white	
18	light yellow	
19	light yellowish gray	

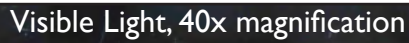
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis

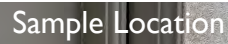


Window sash

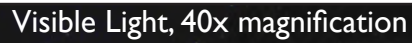
[illegible]

Bold denotes known presentation layer.

Finishes Analysis



Window trim

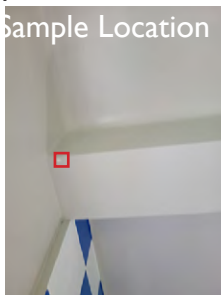
[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



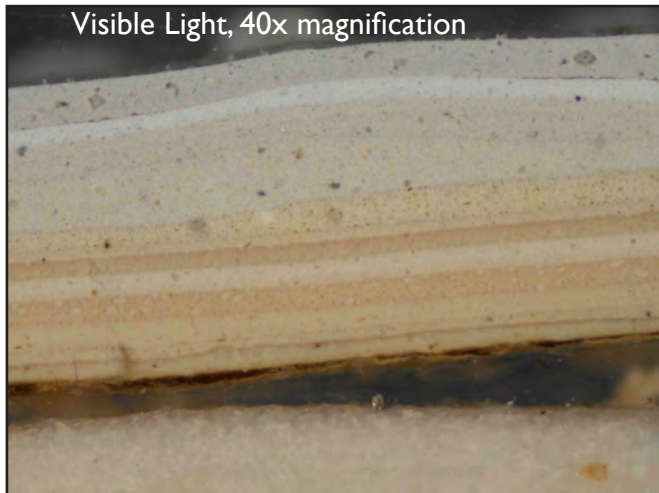
SAMPLE #: BB. 109.7

ROOM: 109

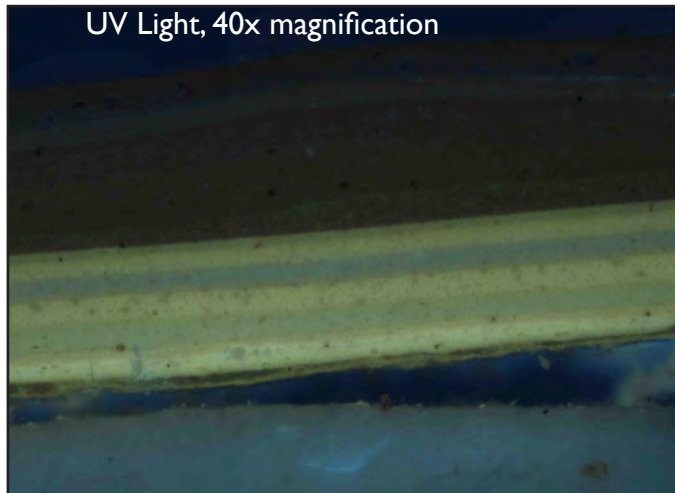
DESCRIPTION:

Ceiling beam

Visible Light, 40x magnification



UV Light, 40x magnification

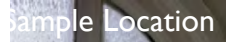


LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
//		
1	dark yellow	sealer
2	deep yellowish brown	Translucent, glossy.
3	pale yellow	Primer
4	brownish yellow	Very thin, slightly translucent. Approximate color match: Munsell 10YR 6/4; B. Moore HC-42 Roxbury Caramel
4	light orange yellow	
5	light orange yellow	
6	light grayish yellowish brown	
7	light yellowish brown	
8	light orange yellow	
9	pale orange yellow	
10	pale orange yellow	
11	light orange yellow	
12	light yellow	
13	light yellow	
14	pale grayish green	
15	pale yellowish pink	
16	pale yellowish pink	
17	white	
18	light yellow	

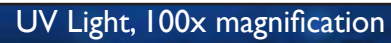
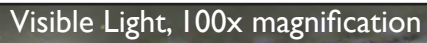
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. 109.8	ROOM: 109
DESCRIPTION: Window fan lite	

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



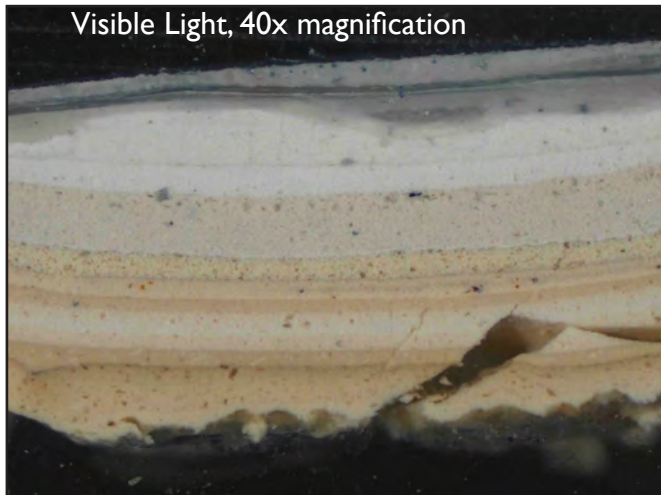
SAMPLE #: BB. 109.9

ROOM: 109

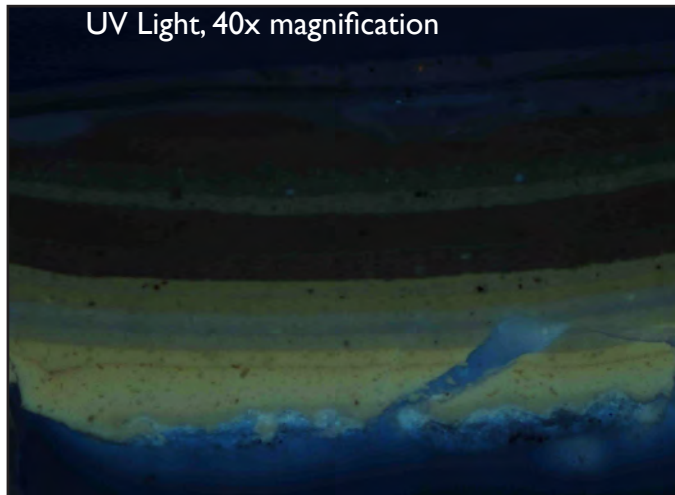
DESCRIPTION:

Window mullion

Visible Light, 40x magnification



UV Light, 40x magnification



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	metal	
1	yellow	Not present in cross-section.
2	pale yellow	Not present in cross-section.
3	grayish yellowish white	Not present in cross-section. Potentially original. Color match: Munsell 2.5Y 8.5/2; B. Moore OC-15 Baby Fawn
4	pale yellow	
5	light orange yellow	
6	light yellowish gray	
7	light grayish yellow	
8	pale orange yellow	
9	white	
10	orange yellow	
11	light orange yellow	
12	light yellow	
13	pale yellowish pink	
14	pale yellowish pink	
15	white	
16	yellowish white	

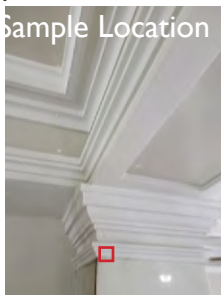
// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



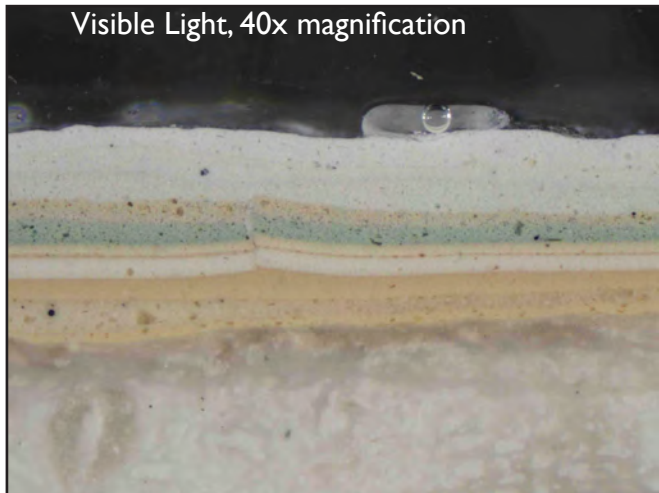
SAMPLE #: BB. 200.1

ROOM: 200

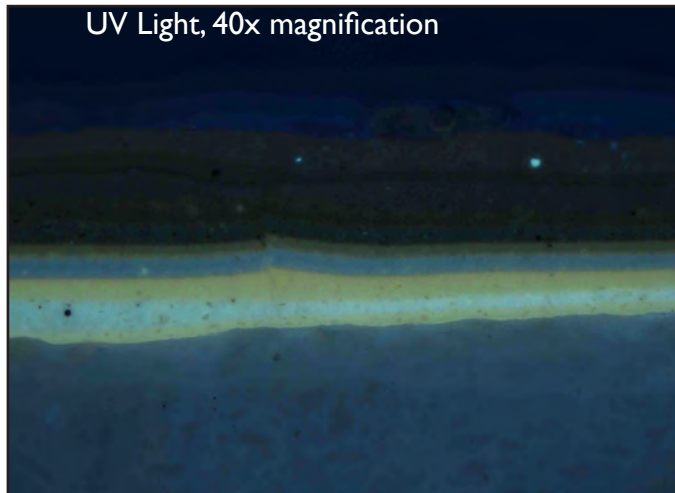
DESCRIPTION:

Pilaster capital

Visible Light, 40x magnification



UV Light, 40x magnification



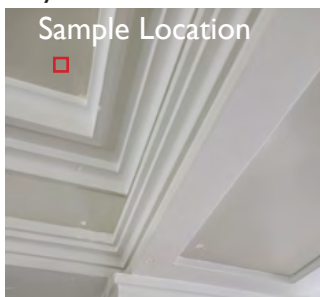
LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	dark yellow	Translucent, sealer.
2	pale grayish yellow	Potentially original. Color match: Munsell 2.5Y 8/2; B. Moore HC-35 Powell Buff
3	brownish white	
4	light orange yellow	
5	light orange yellow	
6	white	
7	light orange yellow	
8	light yellow	
9	light green	
10	moderate yellowish pink	
11	grayish white	
12	yellowish white	
13	white	

// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

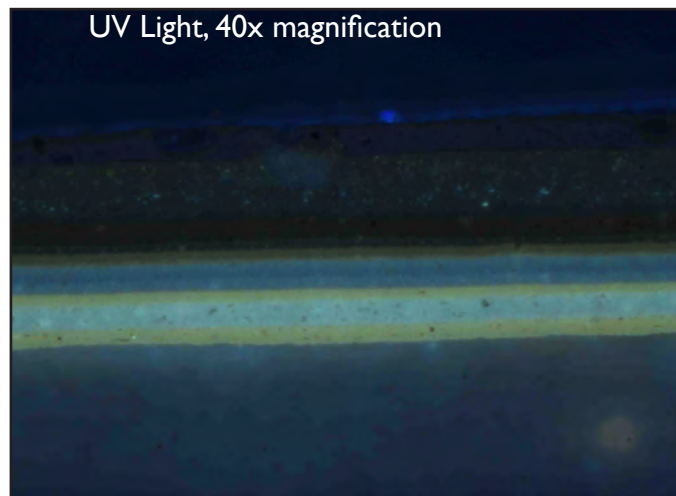
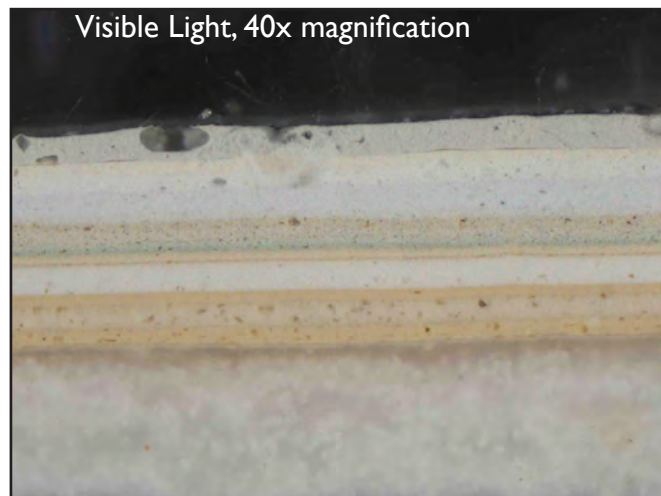


SAMPLE #: BB. 200.6

ROOM: 200

DESCRIPTION:

Ceiling



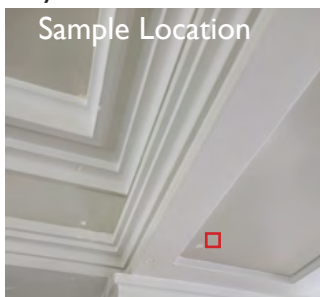
LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	pale grayish yellow	Potentially original. Color match: Munsell 2.5Y 8/2; B. Moore HC-35 Powell Buff
2	light yellow	
3	light orange yellow	
4	light orange yellow	
5	white	
6	light orange yellow	
7	light yellow	
8	light green	
9	moderate yellowish pink	
10	grayish white	
11	pale yellow	
12	light yellowish gray	

// denotes a break in the sample.

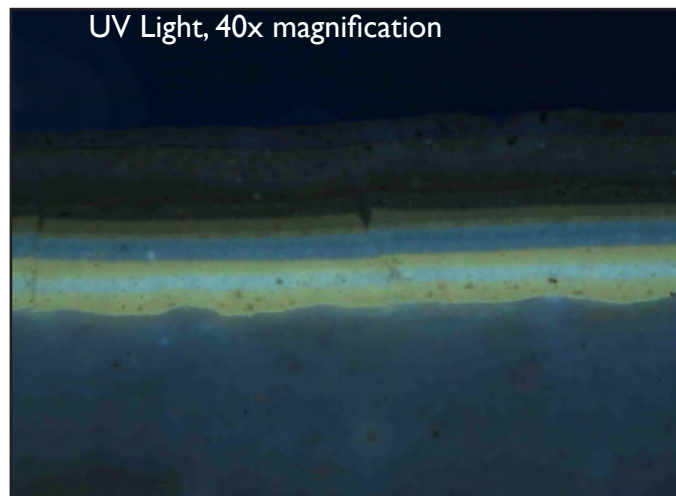
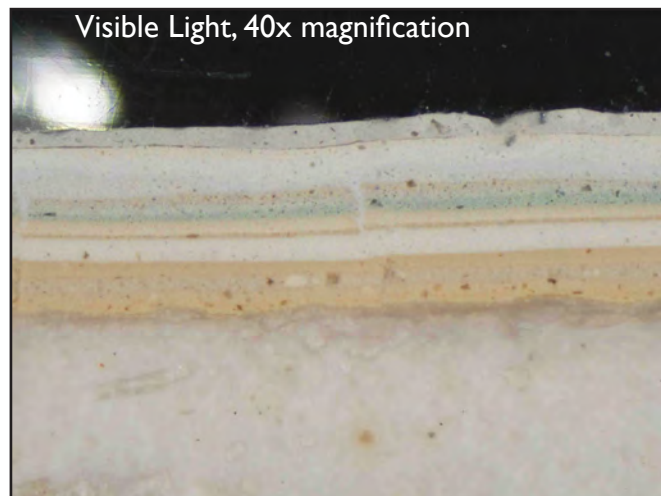
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 200.8	ROOM: 200
DESCRIPTION: Ceiling beam center	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	pale grayish yellow	Potentially original. Color match: Munsell 2.5Y 8/2; B. Moore HC-35 Powell Buff
2	brownish white	
3	light orange yellow	
4	white	
5	light orange yellow	
6	light yellow	
7	light green	
8	moderate yellowish pink	
9	grayish white	
10	pale yellow	
11	light yellowish gray	

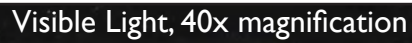
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



Window mullion

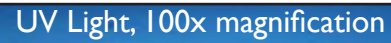
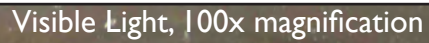
[illegible]

Bold denotes known presentation layer.

Finishes Analysis



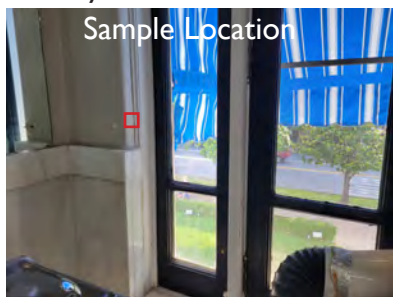
Window sash

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



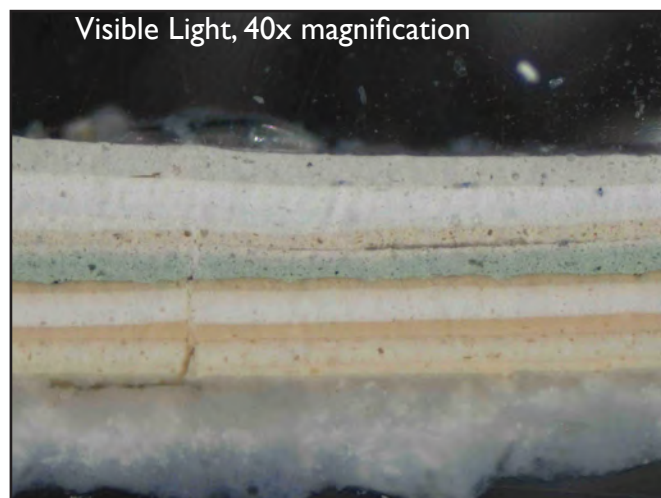
Sample Location

SAMPLE #: BB. 200.11

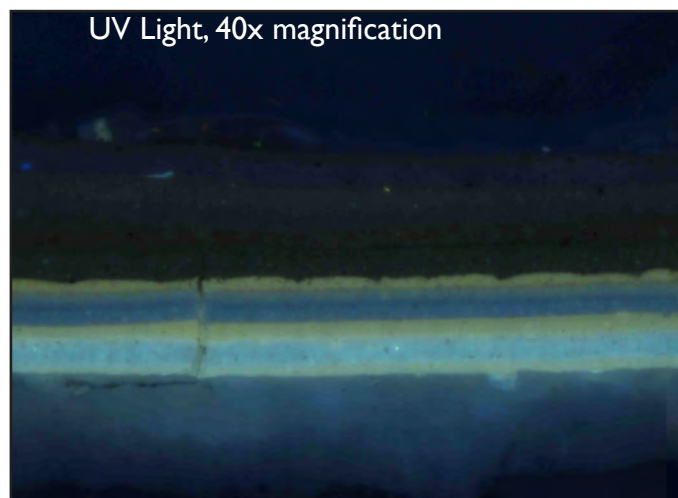
ROOM: 200

DESCRIPTION:

Wall return



Visible Light, 40x magnification



UV Light, 40x magnification

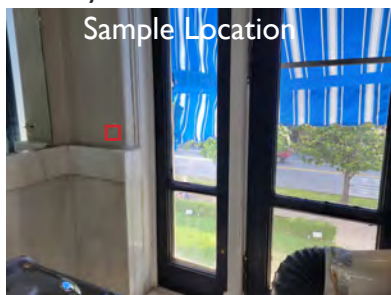
LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	pale grayish yellow	Potentially original. Color match: Munsell 2.5Y 8/2; B. Moore HC-35 Powell Buff
2	brownish white	
3	light orange yellow	
4	light orange yellow	
5	white	
6	light orange yellow	
7	light green	
8	yellowish white	
9	moderate yellowish pink	
10	yellowish white	
11	yellowish white	
12	yellowish white	
13	light yellowish gray	

// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



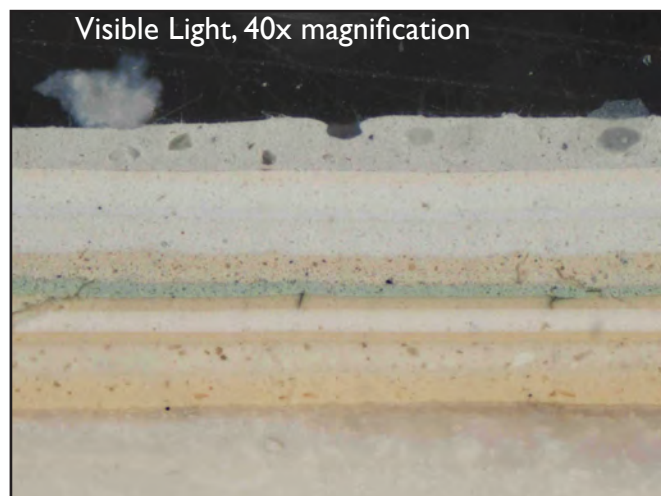
Sample Location

SAMPLE #: BB. 200.12

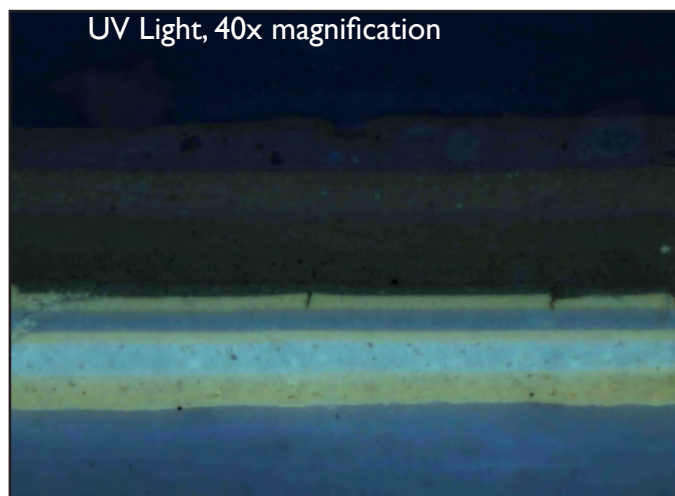
ROOM: 200

DESCRIPTION:

Wall



Visible Light, 40x magnification



UV Light, 40x magnification

LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	pale grayish yellow	Potentially original. Color match: Munsell 2.5Y 8/2; B. Moore HC-35 Powell Buff
2	brownish white	
3	light orange yellow	
4	white	
5	light orange yellow	
6	light green	
7	moderate yellowish pink	
8	grayish white	
9	yellowish white	
10	pale yellow	
11	light yellowish gray	

// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis

ROOM: 200

Wall partition

Visible Light, 40x magnification

UV Light, 40x magnification



This image shows a cross-section of a material under UV light at 40x magnification. A bright, horizontal band of fluorescence is visible in the center, indicating a specific layer or interface. The surrounding areas are dark, with some faint, scattered fluorescence spots.

[illegible]

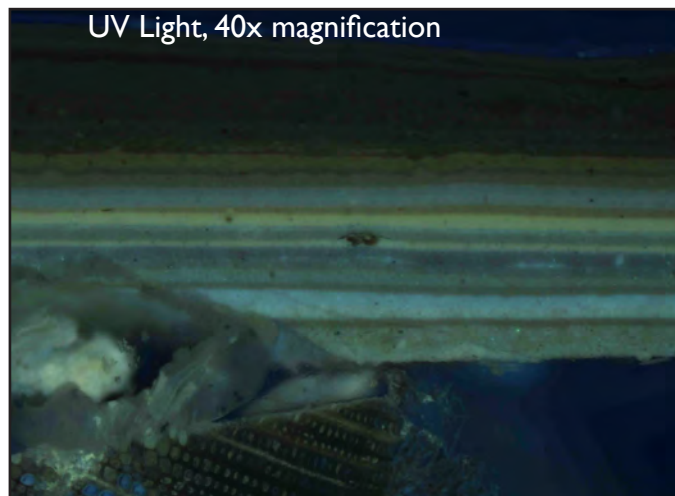
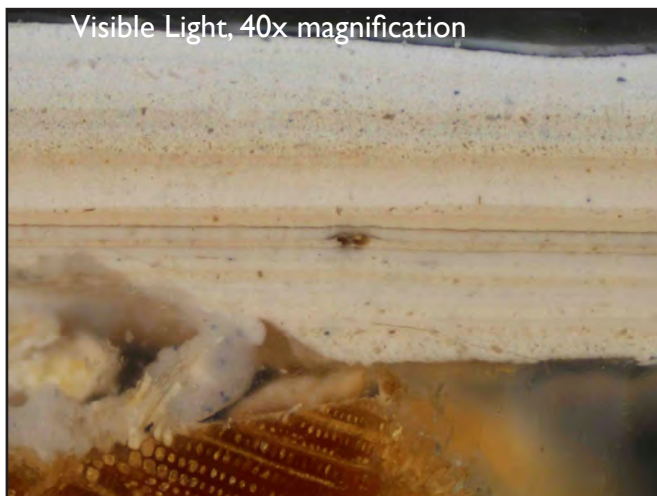
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 200.14	ROOM: 200
DESCRIPTION: Door frame	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
//		
1	off-white	Primer
2	grayish yellowish white	Potentially original. Color match: Munsell 2.5Y 8.5/2; B. Moore OC-15 Baby Fawn
3	yellowish white	
4	off-white	
5	pale orange yellow	
6	yellowish white	
7	grayish white	
8	pale orange yellow	
9	grayish white	
10	pale orange yellow	
11	pale orange yellow	
12	white	
13	pale orange yellow	
14	pale yellow	
15	pale yellowish pink	
16	yellowish white	
17	yellowish white	

// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis

ROOM: 200

Door

Visible Light, 100x magnification

UV Light, 100x magnification

This UV fluorescence micrograph shows a histological section. A large, dark, irregular mass is visible in the center, surrounded by lighter, wavy bands of tissue. The image is labeled 'UV Light, 100x magnification'.

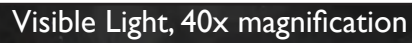
[illegible]

Bold denotes known presentation layer.

Finishes Analysis



Wall

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



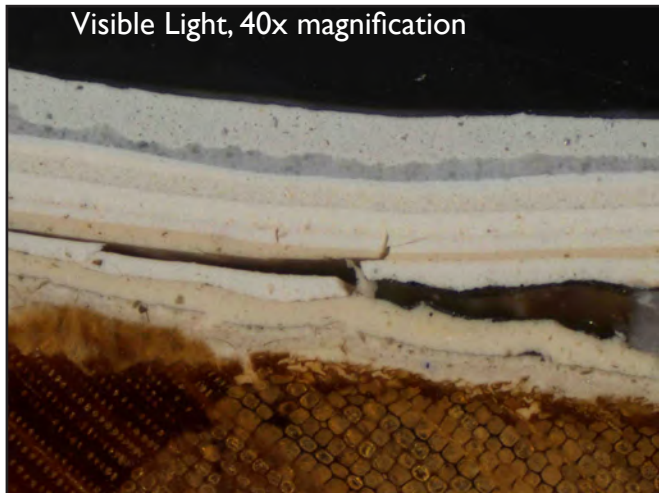
SAMPLE #: BB. 212.2

ROOM: 212

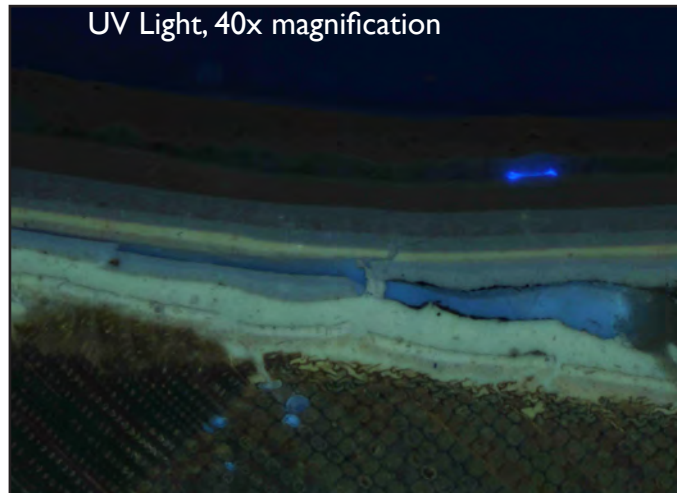
DESCRIPTION:

Window sash

Visible Light, 40x magnification



UV Light, 40x magnification



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
1	pale grayish yellow	Primer.
2	pale grayish yellow	Potentially original. Color match: Munsell 5Y 8.5/2; B. Moore OC-48 Hazy Skies
3	pale yellow	
4	grayish greenish white	
5	pale orange yellow	
6	yellowish white	
7	yellowish white	
8	grayish white	
9	yellowish white	
10	pale gray	
11	light yellowish gray	

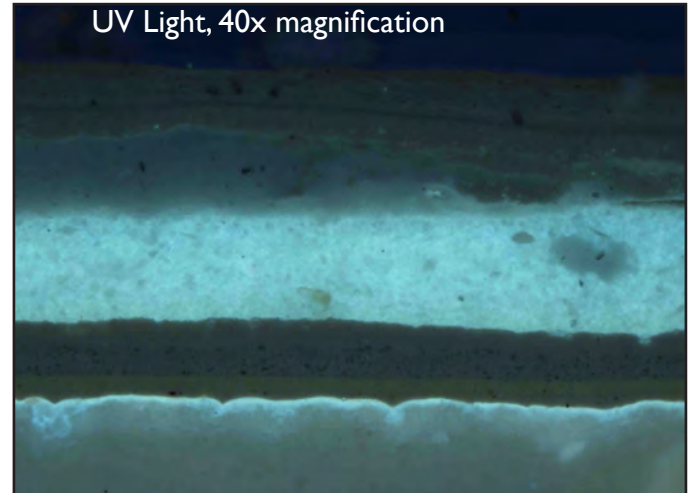
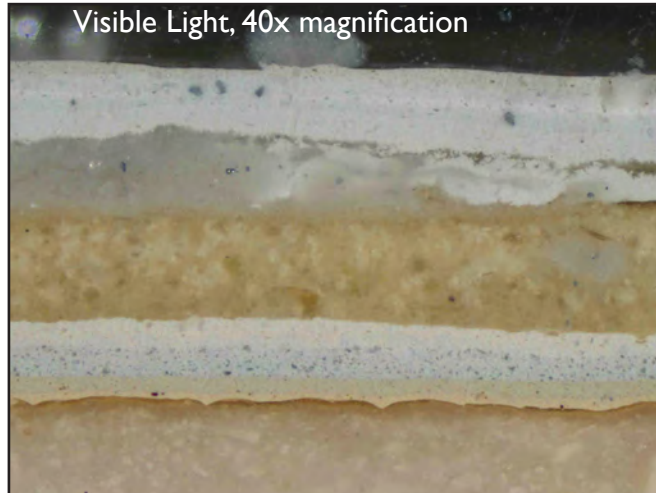
// denotes a break in the sample.

Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB.212.4	ROOM: 212
DESCRIPTION: Ceiling beam	

[illegible]

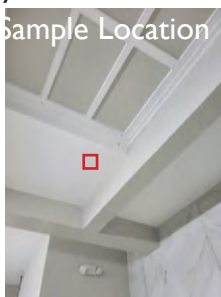
// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



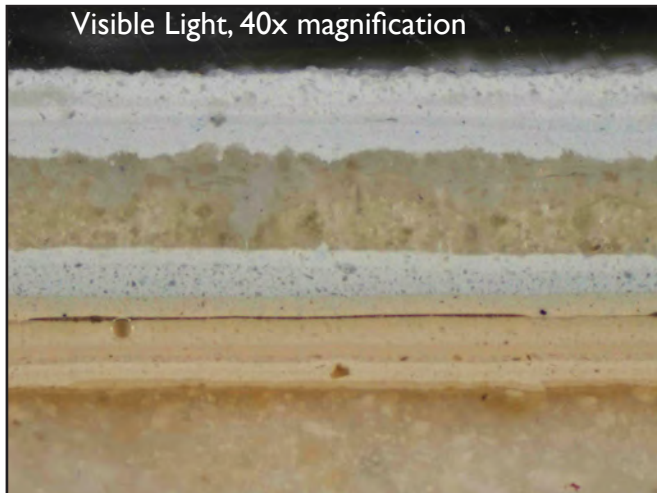
SAMPLE #: BB. 212.5

ROOM: 212

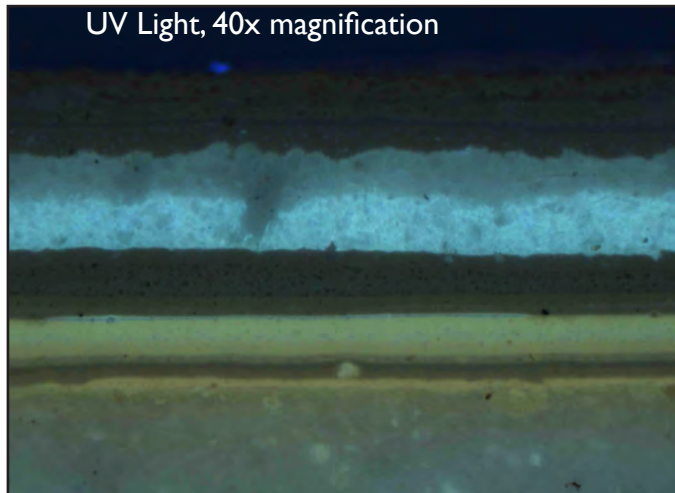
DESCRIPTION:

Ceiling

Visible Light, 40x magnification



UV Light, 40x magnification



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate		
1	pale yellow	Sealer.
2	grayish yellow	Potentially original. Color match: 2.5Y 7/4; B. Moore 1101 Fennel Seed
3	light yellow	
4	light yellow	
5	grayish yellow	
6	light yellow	
7	light yellow	
8	light yellow	
9	light yellowish green	
10	pale blue	
11	yellowish white	
12	grayish yellow	Skim coat or patching material.
13	grayish white	
14	grayish white	
15	white	

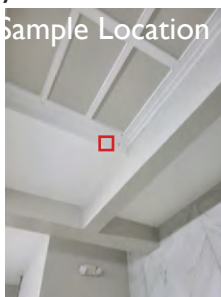
// denotes a break in the sample.

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis

Sample Location



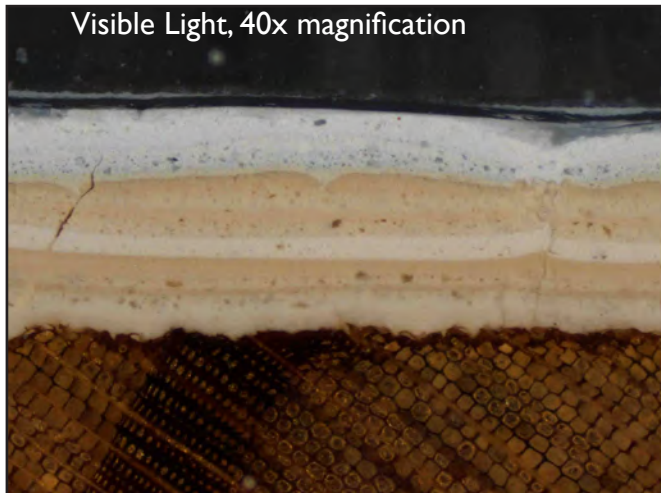
SAMPLE #: BB. 212.6

ROOM: 212

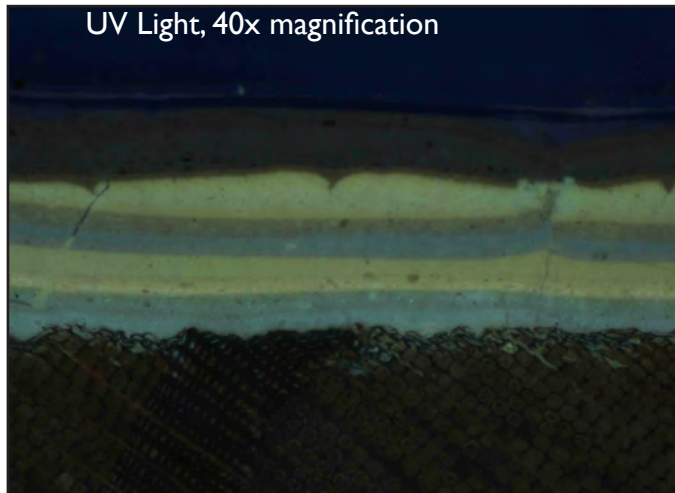
DESCRIPTION:

Skylight frame

Visible Light, 40x magnification



UV Light, 40x magnification



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
1	off-white	Primer
2	grayish yellowish white	Potentially original. Color match: Munsell 2.5Y 8.5/2; B. Moore OC-15 Baby Fawn
3	pale orange yellow	
4	light grayish yellow	
5	light orange yellow	
6	moderate orange yellow	
7	pinkish white	
8	light yellow	
9	light orangish yellow	
10	light yellow	
11	light orangish yellow	
12	light yellowish green	
13	pale blue	
14	white	
15	white	

// denotes a break in the sample.

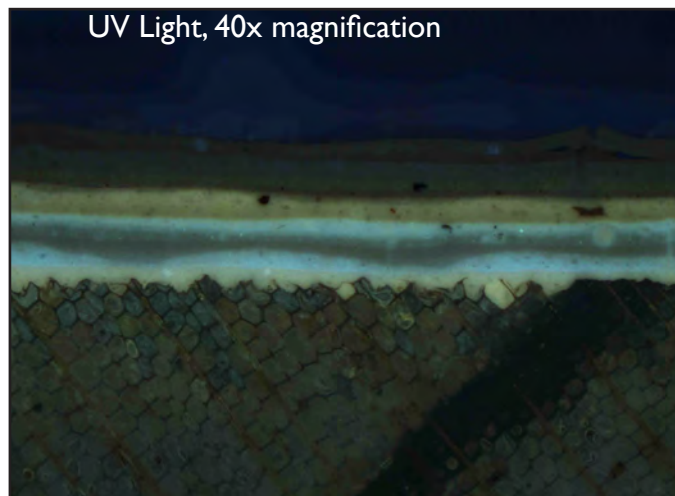
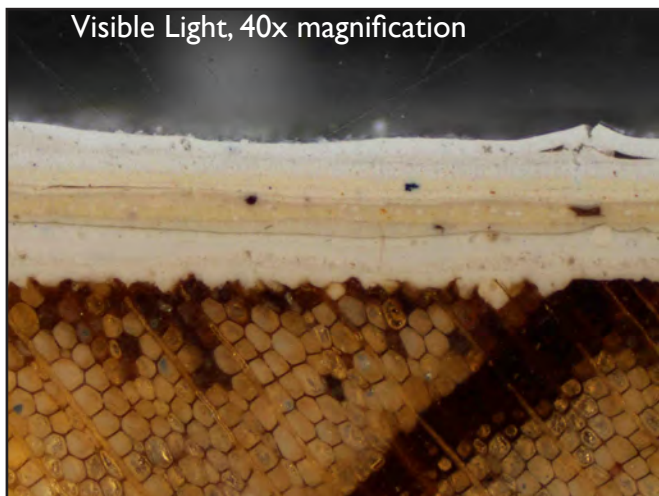
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 300.I	ROOM: 300
DESCRIPTION: Window frame	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
I	grayish yellowish white	Potentially original. Color match: Munsell 5Y 8.5/2; B. Moore OC-48 Hazy Skies
2	grayish yellowish white	
3	yellowish white	
4	yellowish greenish white	
5	grayish yellow	
6	light yellow	
7	moderate orange yellow	
8	pale orange yellow	
9	pale yellow	
10	grayish white	
II	grayish white	

// denotes a break in the sample.

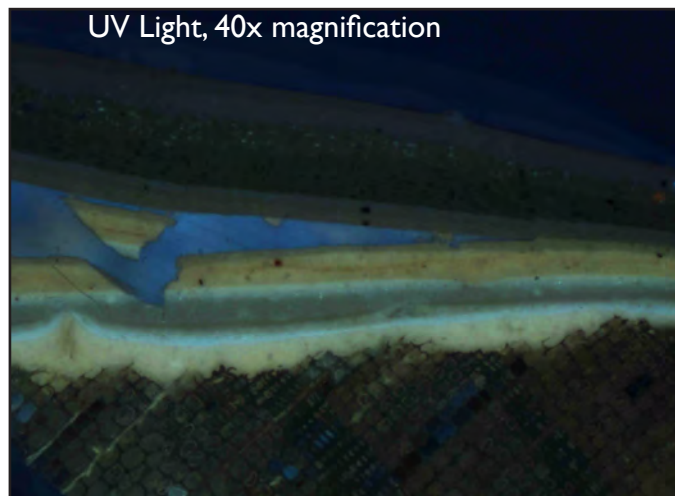
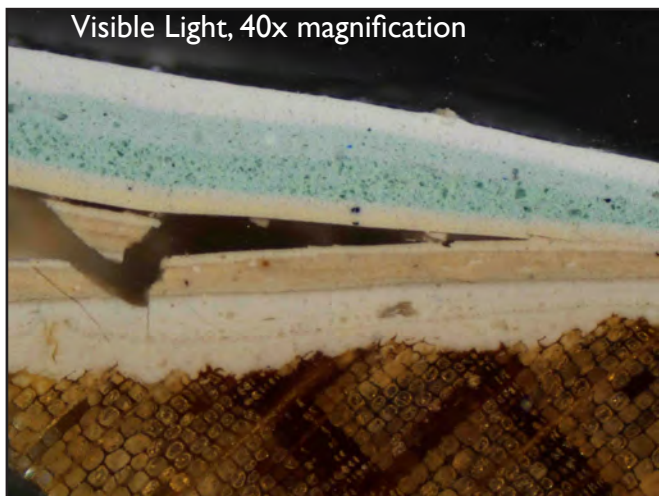
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 300.2	ROOM: 300
DESCRIPTION: Window trim	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
1	grayish yellowish white	Potentially original. Color match: Munsell 5Y 8.5/2; B. Moore OC-48 Hazy Skies
2	yellowish white	
3	yellowish greenish white	
4	grayish yellow	
5	light yellow	
6	moderate orange yellow	
7	light yellow	
8	light yellow	
9	vivid bluish green	
10	very light bluish green	
11	grayish white	

// denotes a break in the sample.

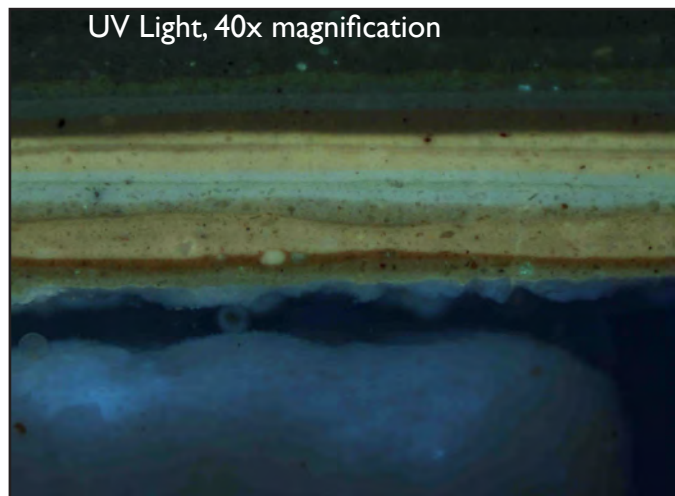
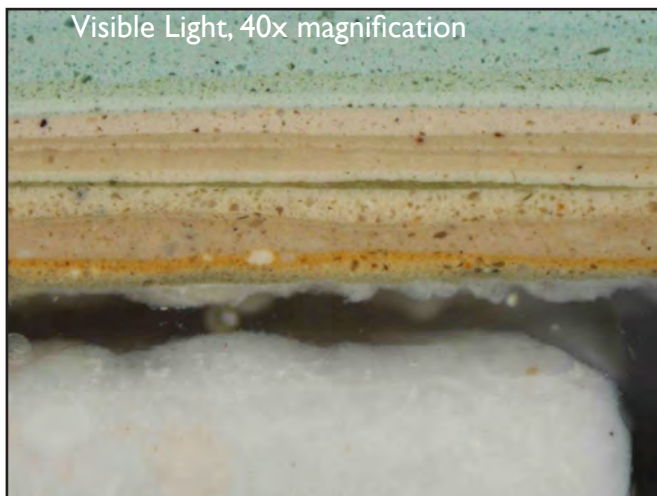
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 300.3	ROOM: 300
DESCRIPTION: Wall return	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
//		
1	grayish yellow green	Potentially original. Color match: Munsell 5GY 6/2; 474 Mistletoe
2	moderate orange yellow	
3	strong orange yellow	
4	moderate yellowish pink	
5	moderate yellowish pink	
6	light yellow	
7	light yellow	
8	moderate olive	
9	light yellow	
10	moderate yellow	
11	light yellow	
12	grayish yellow	
13	pale orange yellow	
14	very light green	
15	moderate yellowish green	
16	very light bluish green	
17	moderate yellowish green	
		See next page for more recent layers.

// denotes a break in the sample.

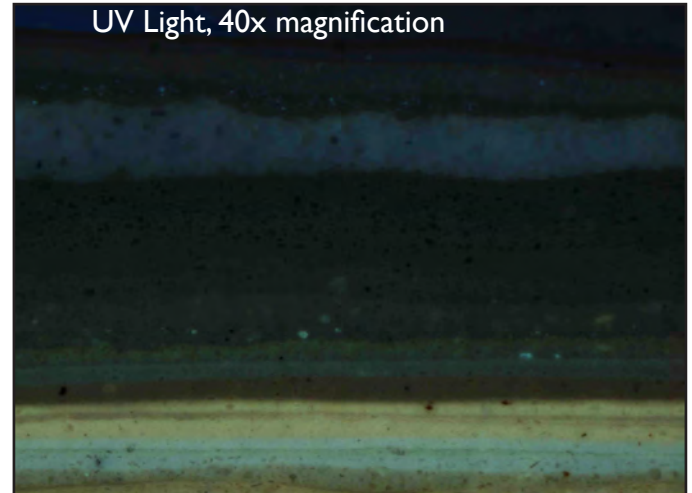
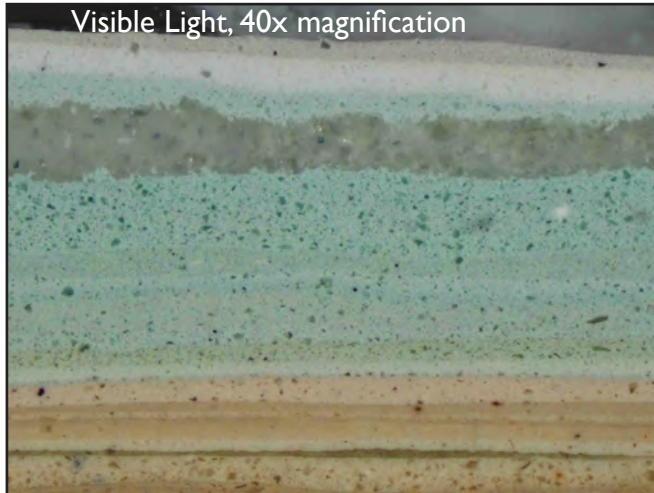
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 300.3	ROOM: 300
DESCRIPTION: Wall return	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	See previous page for early layers.
7	light yellow	
8	moderate olive	
9	light yellow	
10	moderate yellow	
11	light yellow	
12	grayish yellow	
13	pale orange yellow	
14	very light green	
15	moderate yellowish green	
16	very light bluish green	
17	very light bluish green	
18	very light bluish green	
19	very light bluish green	
20	very light bluish green	
21	grayish white	Skim coat or patching material.
22	very light bluish green	
23	white	
24	light yellowish gray	

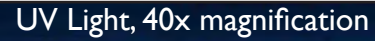
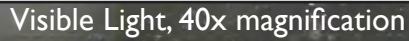
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Bold denotes known presentation layer.

Finishes Analysis



Door stile

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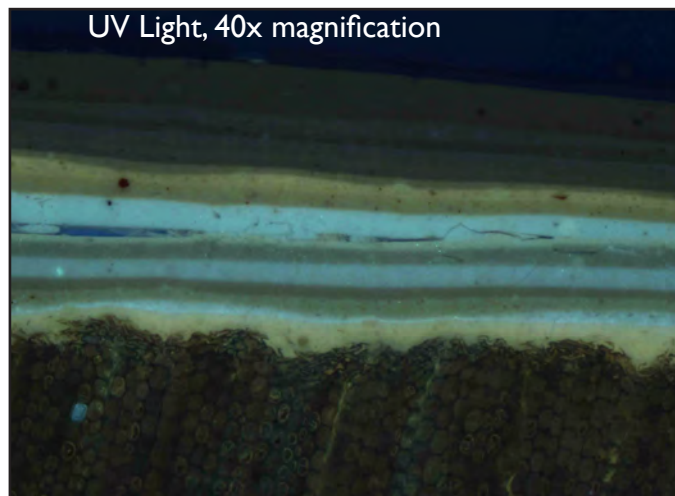
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 300.6	ROOM: 300
DESCRIPTION: Door surround	



LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	wood	
1	grayish yellowish white	Potentially original. Color match: Munsell 5Y 8.5/2; B. Moore OC-48 Hazy Skies
2	grayish yellowish white	
3	pale yellow	
4	pale yellow	
5	pale yellow	
6	moderate orange yellow	
7	pale orange yellow	
8	pale orange yellow	
9	white	
10	grayish white	
11	pinkish white	
12	yellowish white	

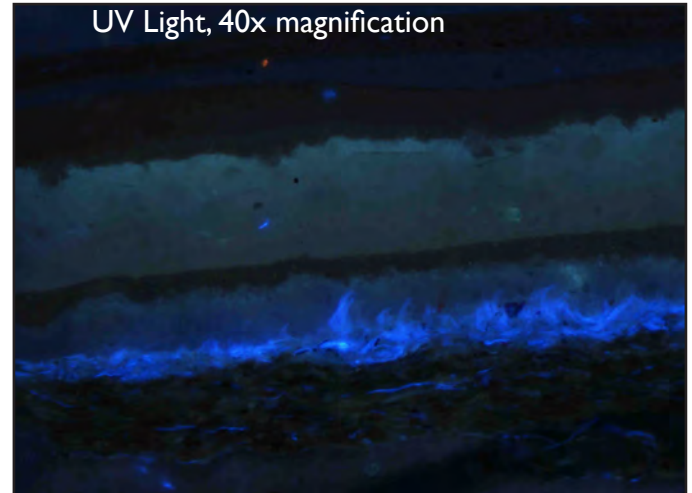
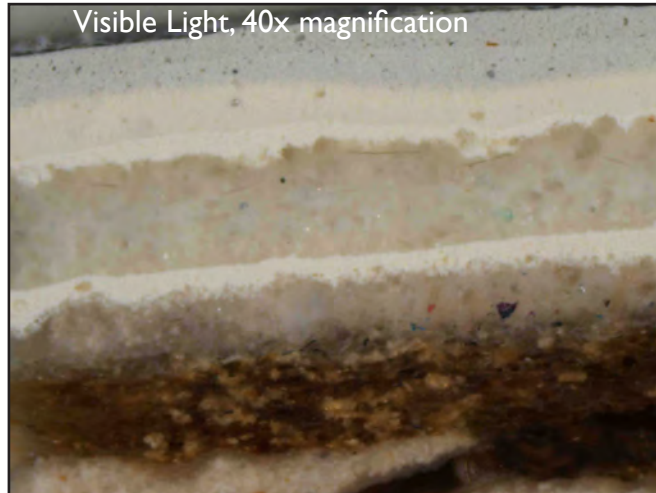
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Bold denotes known presentation layer.

Finishes Analysis



SAMPLE #: BB. 300.7	ROOM: 300
DESCRIPTION: Partition wall	

[illegible]

Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



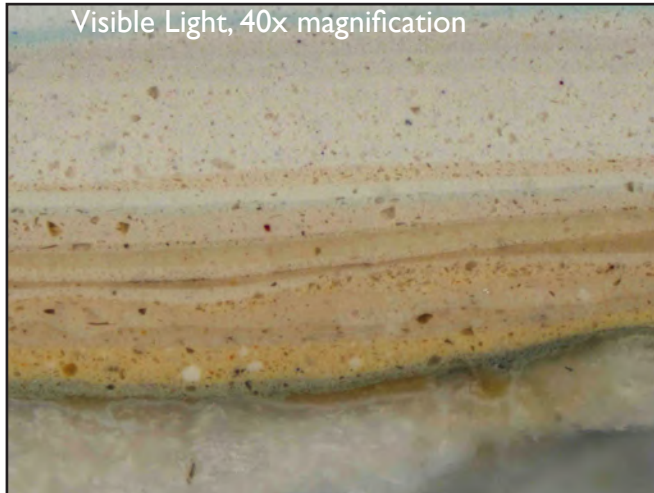
Sample Location

SAMPLE #: BB. 300.8

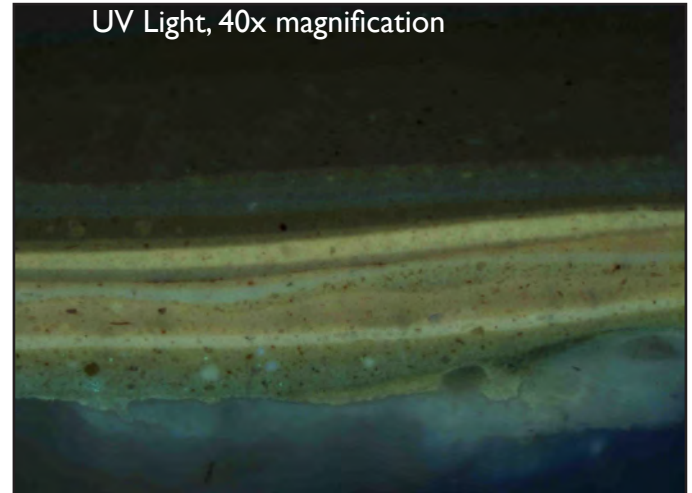
ROOM: 300

DESCRIPTION:

Pilaster



Visible Light, 40x magnification



UV Light, 40x magnification

LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	light olive	Sealer/prep layer.
2	grayish yellow green	Potentially original. Color match: Munsell 5GY 6/2; 474 Mistletoe
3	moderate orange yellow	
4	moderate yellowish pink	
5	light yellow	
6	light orange yellow	
7	light yellow	
8	moderate yellowish pink	
9	light yellow	
10	light yellow	
11	pale pink	
12	pale yellowish pink	
13	pale greenish blue	
14	yellowish white	
15	pale orange yellow	
16	yellowish white	
17	yellowish white	
18	yellowish white	
19	very light bluish green	
20	white	See next page for more recent layers

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Bold denotes known presentation layer.

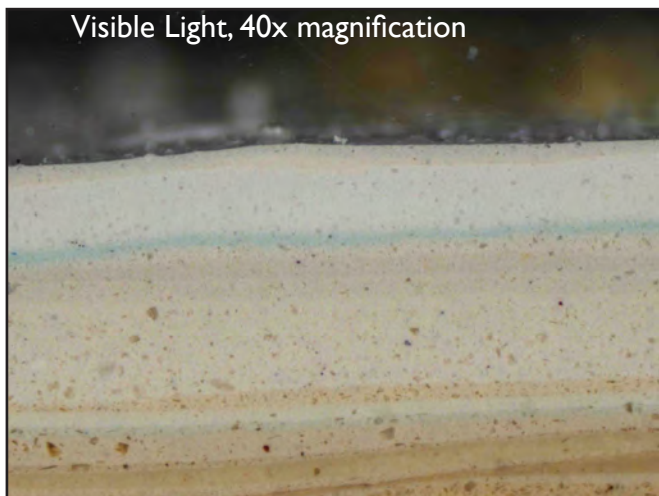
Buckstaff Bathhouse

Finishes Analysis

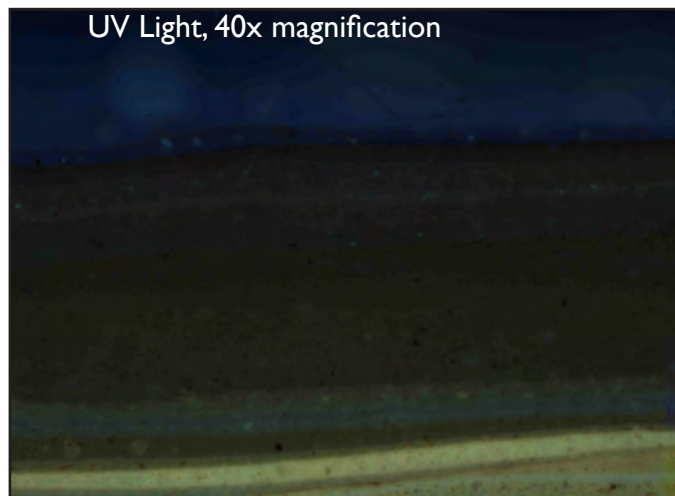


Sample Location

SAMPLE #: BB. 300.8	ROOM: 300
DESCRIPTION: Pilaster	



Visible Light, 40x magnification



UV Light, 40x magnification

LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
		See previous page for early layers
9	light yellow	
10	light yellow	
11	pale pink	
12	pale yellowish pink	
13	pale greenish blue	
14	yellowish white	
15	pale orange yellow	
16	yellowish white	
17	yellowish white	
18	yellowish white	
19	very light bluish green	
20	white	
21	white	
22	white	
23	pale orange yellow	
24	light yellowish gray	

// denotes a break in the sample.

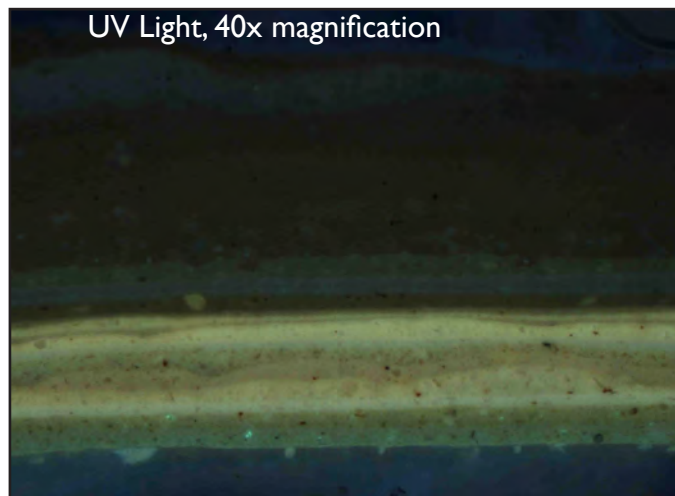
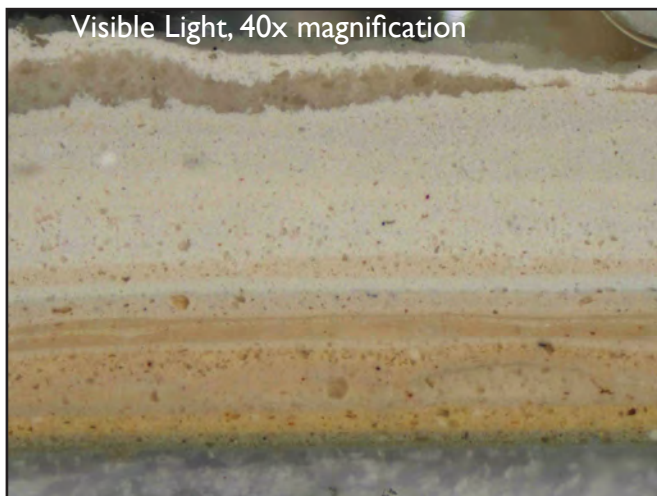
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 300.9	ROOM: 300
DESCRIPTION: Ceiling beam	



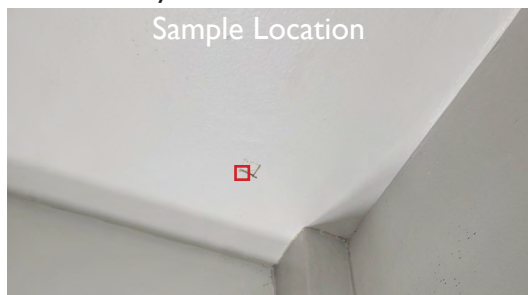
LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster`	
1	grayish yellow green	Potentially original. Color match: Munsell 5GY 6/2; 474 Mistletoe
2	moderate orange yellow	
3	moderate yellowish pink	
4	light yellow	
5	light orange yellow	
6	light yellow	
7	moderate yellowish pink	
8	light yellow	
9	light yellow	
10	pale pink	
11	yellowish white	
12	light orange yellow	
13	yellowish white	
14	yellowish white	
15	yellowish white	
16	grayish white	
17	grayish white	Skim coat or patching material
18	yellowish white	

// denotes a break in the sample.

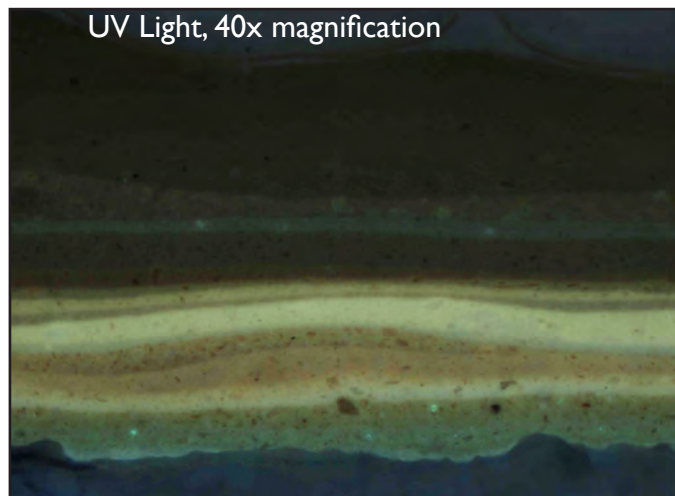
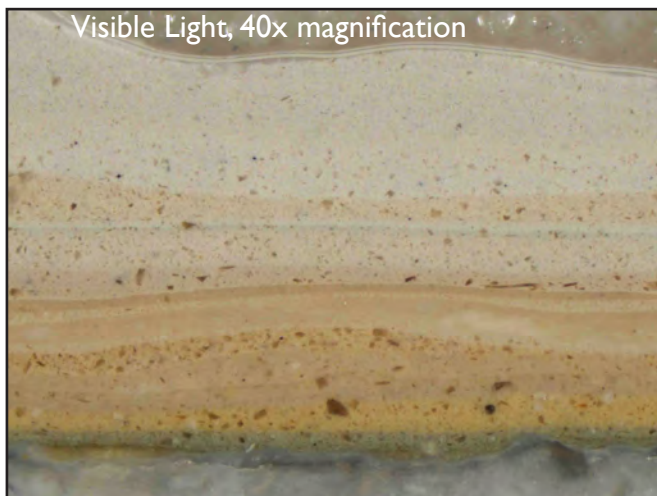
Bold denotes known presentation layer.

Buckstaff Bathhouse

Finishes Analysis



SAMPLE #: BB. 300.10	ROOM: 300
DESCRIPTION: Ceiling	

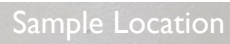


LAYER	REFLECTED LIGHT COLOR	NOTES
Substrate	plaster	
1	light olive	Sealer/prep layer.
2	grayish yellow green	Potentially original. Color match: Munsell 5GY 6/2; 474 Mistletoe
3	moderate orange yellow	
4	moderate yellowish pink	
5	moderate yellowish pink	
6	light orange yellow	
7	light yellow	
8	moderate yellowish pink	
9	light yellow	
10	moderate yellowish pink	
11	pale pink	
12	pale yellowish pink	
13	pale greenish blue	
14	yellowish white	
15	pale orange yellow	
16	yellowish white	
17	yellowish white	
18	yellowish white	
19	white	Skim coat or patching material
		See next page for more recent layers.

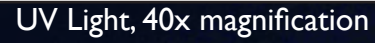
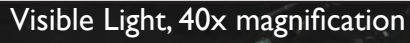
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Bold denotes known presentation layer.

Finishes Analysis



Ceiling

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ELEVATOR ASSESSMENT

APPENDIX E

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Elevator Assessment

at

Buckstaff Bathhouse

509 Central Ave.
Hot Springs, Arkansas 71901



Field Assessment and Report by **Sean McLaughlin, Consultant, QEI**
ATIS Elevator Inspections, LLC
June 6, 2025

*This report is confidential and intended solely for the use and
information of the company to whom it is addressed.*

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EXECUTIVE SUMMARY

Bodwe Group commissioned ATIS to provide an assessment and review of the elevator located in the Buckstaff Bathhouse located in Hot Springs, AR. On May 12, 2025 our survey team conducted an onsite review of the elevator equipment in this building, and reviewed compliance of the elevator to applicable safety and building codes. We then evaluated the equipment to determine:

- ✓ General condition
- ✓ Lifecycle stages of components,
- ✓ Remaining system service life expectancies, and
- ✓ Pricing estimates for system modernizations.

In conducting this review and analysis, we developed a scoring rubric, located in Appendix A, that allows us to objectively identify, formulate, and prioritize a resolution for equipment condition assessment and replacement. Using this scoring rubric, the elevator is evaluated according to the following criteria:

- ✓ Equipment age, condition, and accumulated wear
- ✓ Original design and inherent quality of each system and system components
- ✓ Overall usage and facility impact factor
- ✓ Environmental conditions in each building
- ✓ Parts availability, repair support, or obsolescence
- ✓ Callbacks and reliability

Although these factors are important for determining future capital planning and individual building needs, our recommendations are also based on industry standards and applicable safety code requirements.

The Buckstaff Bathhouse elevator was manufactured and installed by Otis in approximately 1912 with the construction of the building. The elevator has a capacity of 2,000 lbs. and travels at a full load contract speed of 175 fpm. The drive machine is a basement-set winding drum traction type. The elevator serves three (3) landings with front openings at Floors 1, 2, and 3, with a total travel of approximately 26'-0".

The elevator is very old, in poor condition due to its age, and has very few remaining people who have knowledge to work on the equipment. None of the components are manufactured today and therefore, when something breaks, there could be substantial down time for repair or reconstruction of a particular part. The elevator has very minimal safety features as compared to present day elevators. Present elevators have so many redundant, safety circuits, the probability of an accident due to the elevator's fault is minimal. The elevator has no fireman's service operation and no emergency phone.

The elevator does not meet many areas of present day code. It has no form of fireman's emergency service operation, and does not meet any requirements in regards to ADA and accessibility code. The elevators do not even meet State of Arkansas minimum requirements for existing elevators, as adopted by ASME A17.3-2005 Safety Code for Existing Elevators. Some areas that are not met include:

- 2.6.1: Hoistway Entrances: "Hoistway-landing openings for passenger elevators shall be provided with entrances that guard the full width of the height of the opening."
- 3.4.1: "Cars shall be fully enclosed on all non-entrance sides and on top."
- 3.4.4.1: "Cars shall be provided with a car top emergency exit..."
- 3.11.1: "Elevators shall be provided with..."
 - An audible signaling device, ... from a switch marked "ALARM"
 - Means of two-way conversation between the car and a readily accessible point outside the hoistway that is available to emergency personnel (telephone, intercom, etc.)."

The NPS staff indicated that a major desire with the renovation is to retain the historic nature of the elevator cab interior and entrances. While the cab and entrances may be able to be retained, they will need to be fully enclosed. At a minimum, this would require the open hoistway gates to be fully enclosed (they may need to be replaced if required to be fire-rated). The openwork portions of the cab would also need to be fully enclosed. The elevator cab could possibly be retained with an elevator renovation but would be replaced with an elevator replacement. At a minimum, the elevator machine, controls, and fixtures will be recommended to be replaced with a renovation. When the machine and controller are replaced, the existing manual car-switch operation will be replaced with automatic operation. An elevator operator will no longer be required to run the elevator, and the manual switch will no longer be operable. The switch can be retained for aesthetic purposes, but a new car operating panel will be provided for passenger operation. Consideration should be given to providing new fixtures from the CJ Anderson "Classic Antique Fixture" line to match the aesthetic of the cab.

Below, three options for upgrading the elevator have been identified. Unfortunately, retaining the existing machine, controls, and fixtures is not a viable option due to the unreliable nature of the existing system, obsolescence of the machine and controls, and not meeting certain safety requirements.

Option 1: Base Elevator Modernization: This scope would include replacement of the existing basement-set winding drum elevator machine with a new basement-set geared traction elevator machine. It would also include replacement of the relay logic elevator controller with a new solid-state controller. The modernization would include all new fixtures in the cab and hall along with new wiring. The motor, governor, and hoist and governor ropes would be replaced with the new machine. Option 1 would include retaining the existing elevator cab structure and interior, with additions to full enclose the existing cab to meet minimum requirements. It would also include retaining the manual hoistway door equipment. The hoistway entrance jambs, doors, sills, headers, tracks, and hangers would be retained. The hoistway doors would need to be fully enclosed at a minimum, and could need to be replaced.

Option 2: Elevator Modernization with Automatic Doors: This scope and cost would be in addition to the above base elevator modernization. Option 2 would replace the existing collapsible car gate and manual hoistway doors with new, automatic doors. The entrance jambs and sills would be retained. All other hoistway door equipment (door panels, tracks, hangers, etc.) would be replaced with new and an automatic door operator would be provided. The cab could be retained but would need to be significantly modified at the front to allow room for the new cab and hoistway door equipment. *A renovation similar to Option 2 was provided at the nearby Fordyce Bathhouse, which is also under the NPS, so that would be a good reference project in terms of scope.*

Option 3: Complete Elevator Replacement: This scope and cost would be in addition to the above Options 1 and 2. Option 3 would be a complete replacement of the existing elevator system. The existing elevator machine, controller, fixtures, door equipment, cab structure, car interior, rails, counterweight, buffers, etc. would all completely removed. A brand new elevator would be provided in the existing hoistway space. The most likely option for an elevator replacement would be to provide a new machine room-less (MRL) traction elevator in which a new gearless traction elevator machine is located at the top of the hoistway. Another option could be to provide a hydraulic elevator (holed or holeless). A holed hydraulic elevator would require a jack to be drilled into the ground at a distance roughly equal to the elevator travel, while a holeless hydraulic elevator would not require drilling. Due to the drilling complications, a holeless option would be recommended, but either hydraulic elevator option would utilize the existing basement machine room. This option for elevator replacement would require the elevator to comply with modern elevator codes in all areas, including hoistway enclosure, machine room fire rating, electrical clearances, etc. This option would also require retaining a Structural Engineer and Architect to verify all items can be brought up to the necessary codes.

CAPITAL PLAN

This section includes recommendations and probable costs for modernizing the vertical transportation equipment at the Buckstaff Bathhouse. The tables below indicates the recommended upgrade options for the elevator system:

Capital Plan

Option	Building Name / Units	Scope of Upgrade	Score Percentile to Upgrade	Total Price for Modernization	Comments
1.	Buckstaff Bathhouse	Elevator Modernization: Keep Manual Doors	95%	\$275,000	Modernize Elevator (2025-2028)
2.	Buckstaff Bathhouse	Elevator Modernization: New Automatic Doors	95%	\$325,000	Modernize Elevator (2025-2028)
3.	Buckstaff Bathhouse	Complete Elevator Replacement	95%	\$300,000-\$500,000	Provide New Elevator (2025-2028)
Elevator Modernization Total:				TBD	

These estimated costs include the elevator renovation work but do not include pricing for the associated building work, such as electrical, fire alarm, patching, HVAC, structural, machine room re-construction, hoistway re-construction, etc. ATIS is not an expert in these other trades but, once an option is chosen, could provide a detailed listing of these associated building work requirements that would need to be completed with a renovation or replacement. While the associated building work requirements will be significant even for the elevator modernization options 1 or 2, they are much more significant and stringent for the elevator replacement option 3, as the elevator would be treated as a new elevator and therefore, required to comply with modern elevator codes in all areas.

End of Capital Plan.

MODERNIZATION PLANNING

Elevator Modernization Planning

Buckstaff Bathhouse - Elevator Assessment

Item/Task - Timeline (Typical)	Timeline
Prepare RFP Specifications	6 weeks
Bidding Period	4 weeks
Contract/Bid Review and Award	2 Weeks
Shop Drawing Preparation & Approval	5 Weeks
Equipment Fabrication	18 Weeks
Equipment Delivery	2 Weeks
Modernization of the Elevator (Varies)	
• Option 1: Base Elevator Modernization Traction (3-stop)	10 Weeks
• Option 2: Automatic Doors Additional Time	3 Weeks
• Option 3: Complete Replacement with MRL	1 Week
Final Adjusting and Testing	2 Weeks
Total Elapsed Time for The Project	49-53 Weeks

All comprehensive modernizations recommended would typically be planned to execute and ensure an additional 20-25 years of useful life and reliable service. Modernization plans should be developed and sent out in a solicitation in the next 12 months. Specifications should be developed to include all the equipment system components to be replaced or refurbished, alternates and related building work items.

The planning for complete and comprehensive elevator modernization projects includes furnished and installed elevator equipment, twelve months of warranty maintenance and all features and operations for the equipment to comply with the current elevator code, ASME A17.1, the Code for existing elevators, A17.3 (with State of Arkansas minimum requirements), and American Disability Act (ADA) / Accessibility (A117.1) standards. Recommendations do not include an opinion of probable cost for building-related work items. Building-related work, or work by others must be completed in conjunction with the elevator modernization projects to pass the final inspection and may include hoistway/machine upgrades, electrical, mechanical, or general construction work. When changing the controller of an elevator, elevator and building codes recognize the modernization as an alteration.

Modernization Objectives

A comprehensive elevator modernization should consider the following objectives:

1. Improved system reliability and elimination of obsolescence issues.
2. Improved stopping accuracy and ride quality.
3. Improved door operation.
4. Compliance with current Fire Recall Requirements.
5. Compliance with existing elevator and building code requirements.
6. Improved aesthetics while retaining the historical aesthetics.

End Modernization Planning section.

METHODOLOGY

A. SUMMARY

To complete the scope of work included in the agreement with Bodwe Group, ATIS took the following specific steps. These activities have formed the analysis and the opinions offered herein:

- ✓ A site visit to the property was conducted.
 - Physical inspection of the VT equipment
- ✓ Visual evaluation of the elevator equipment in each area to determine the level of preventive maintenance and operation:
 - Hoistway,
 - Car top, and
 - Pit
 - Machine room
 - Elevator Lobbies.
- ✓ These visual evaluations included observation of the operation of equipment including:
 - Hoistway doors,
 - Interlocks,
 - Hangers, and
 - Door gibbs.
 - Machinery (machine, controller, governor, deflector sheaves, governor tail sheave, door operators, etc.)
- ✓ An evaluation of the quality of the following was performed:
 - Housekeeping,
 - Level of lubrication, and
 - State of repair.
- ✓ In addition to visual evaluations, a review of the inspection records and historical callback data were reviewed. Not all of this information was available or was incomplete.

Recommendations are based on field observations while onsite, accumulative industry experience, and knowledge about various systems and system components support. In conjunction with stakeholder feedback, the scoring and reporting is based on the following criteria.

B. CRITERIA

In order to evaluate the life span of the vertical transportation equipment and to prioritize the equipment upgrades or modernization sequence for capital planning purposes, ATIS evaluated seven critical areas for criteria. Each of these criteria was assigned a numerical score based upon our evaluation. Each criterion was also weighted as to its impact on the modernization sequence. For example, two of the criteria, "Parts Availability" and "Reliability" are weighted most heavily due to their potential to detrimentally impact the overall system reliability and uptime in each building. A detailed description of each criterion follows:

Methodology continues on next page.

Methodology Continued.

1. Age: Weighted Factor 2.0

Age criterion is a numerical expression of the age of the equipment. It is axiomatic that mechanical equipment is subject to deterioration as it ages. This criterion is an expression of that deterioration related to age. It is important to note that this criterion is weighted relatively lower than other criterion because it is only an expression of chronological age. It does not consider the usage of the equipment during its lifetime. The following numerical ranges are employed:

1. Equipment Age	
1-5 years	1
5-10 yrs.	2-3
10-15 yrs.	3-4
15-20 yrs.	4-5

2. Current Condition/Accumulated wear: Weighted Factor 1.0

Equipment Condition/Wear criterion evaluates the observed condition of the equipment in its current state. Factors influencing this criterion include the quality of preventative maintenance performed on the equipment including housekeeping and lubrication. The following numerical ranges are employed:

2. Equipment Condition/Wear	
Excellent	1
Good	2
Poor	3
Rebuild/refurbish	4
Replace	5

3. Design / Inherent Quality: Weighted Factor 1.0

Design/Inherent Quality criterion evaluates the known quality and overall original manufacturer's inherent design. Several designs over the past years have proven to be poor quality or bad design. Some have been excellent and run reliably for many years. The following numerical ranges are employed:

3. Design / Inherent Quality	
Premium quality	1
Improved quality	2
Average/industry standard	3
Below average, short life cycle	4
Poor	5

Methodology continues on next page.

Methodology Continued.

4. Facility Usage Factor: Weighted Factor 2.0

Facility Usage criterion evaluates the usage from a visual onsite review of vertical transportation equipment in operation and the transportation effectiveness of the elevator. Owner feedback also plays an important role in determining which elevators are more heavily used. This criterion is an expression of the impact that property occupants would experience should the piece of equipment be out of service. For example, boiler elevators that serve critical areas or the plant are given the highest numerical score. The following numerical ranges are employed:

4. Facility Usage	
Low use	1
Below average use	2
Average Use	3
Above average use, early wear	4
High usage, more than designed for	5

5. Environmental Conditions: Weighted Factor 2.0

Environmental Conditions criterion is based upon a review of the environmental conditions in each building. Environmental conditions affect the overall lifecycle duration for elevator equipment. For example, machine rooms with heavy moisture and inoperable HVAC, or ventilation, will degrade more rapidly than equipment stored in cool dry areas. The following numerical ranges are employed:

5. Environmental Conditions	
Excellent; clean with HVAC	1
Good environment; cool and dry	2
Average environment, ventilated machine room, etc.	3
Poor environmental conditions	4
No HVAC, humidity condensing	5

Methodology continues on next page.

Methodology Continued.

6. Parts Availability: Weighted Factor 3.0

Correlating to the "Age" criterion, Parts Support & Availability / Obsolescence reflects the fact that as equipment ages, Original Equipment Manufacturers (OEMs) and after-market providers maintain a diminishing stock of spare parts. The unavailability of spare parts results in longer periods in which equipment is out of service while parts are searched for or shipped from differing geographic locations. Ultimately, older equipment will eventually be declared "obsolete" by the service provider. Obsolete equipment is equipment for which replacement components are no longer widely available by either the OEM or aftermarket providers. Some obsolete components can be sent out for repair but will often have no warranty on repaired components. The following numerical ranges are employed:

6. Parts Support & Availability / Obsolescence	
Readily available	1
6 - 10 years	2
1 - 5 years	3
Repair only	4
Obsolete	5

7. Reliability: Weighted Factor 3.0

Callbacks / Reliability is based upon a review of the number of "callbacks" and "entrapments". Callbacks are an industry term describing a piece of equipment which has experienced an unplanned stoppage in service and for which an elevator mechanic was required to visit the property to restart or troubleshoot the equipment. An entrapment is a callback in which a person or persons were using the elevator at the time it stopped working and in which the people were unable to evacuate the elevator without the assistance of an elevator mechanic or first responder. The following numerical ranges are employed:

7. Callbacks / Reliability	
3 - 5/unit/year	1
6 - 8/unit/year	2
9 - 11/unit/year	3
12 - 14/unit/year	4
15+/unit/year	5

Methodology continues on next page.

Methodology Continued.

8. Key Stakeholder Impact: Weighted Factor 6.0

This is the most important of the eight-criterion evaluated and, accordingly, this factor is weighted most heavily in the modernization sequence due to how critical the individual elevator is to the facility's needs. This criterion is an expression of the impact that the facility experiences should the piece of equipment be out of service.

8. Key Stakeholder Impact	
Non-essential	1
Required	3
Critical	5

Weighted Factors

Based upon stakeholder feedback, the following numerical ranges were employed:

Scoring Weight			
1. Age	2	5. Environmental Conditions	2
2. Condition / Wear	1	6. Parts Support & Availability / Obsolescence	3
3. Design / Inherent Quality	1	7. Current reliability	3
4. Facility Impact / Usage	2	8. Key Stakeholder Impact	6
			Total: 20

End Methodology Section

SUPPORTING DOCUMENTATION

Elevator Information & Capital Planning Analyses

Buckstaff Bathhouse Elevator Equipment Information

State IDs	Device Information			
	Use	Type	Openings	Floors
605	Passenger	Geared Traction- Basement Set	3 Front	1, 2, 3
	Speed (fpm)	Capacity (lbs.)	Gate Size (in.)	Door Type
	175	2000	36 x 81	Collapsible Gate
	Equipment Information			
	Original Manufacturer	Controller	Machine, Governor	Door Operator
	Otis (1912)	Otis (1912)	Otis (1912)	Manual
	Scoring			
	Equipment Age	Equipment Condition / Wear	Design / Inherent Quality	Facility Usage Factor
	5	5	5	4
	Environmental Conditions	Parts Support & Availability / Obsolescence	Callbacks / Reliability	Key Stakeholder Impact
	5	5	4	5
	Total Score			95%

Notes:

1. See Appendix A – Scoring Rubric for information regarding scoring methodology.

Buckstaff Bathhouse Elevator Machine Room Photos

1.



Otis basement-set winding drum machine

2.



Otis basement-set winding drum machine

3.



Elevator machine room

4.



Elevator relay logic controller components

5.



Elevator relay logic controller components

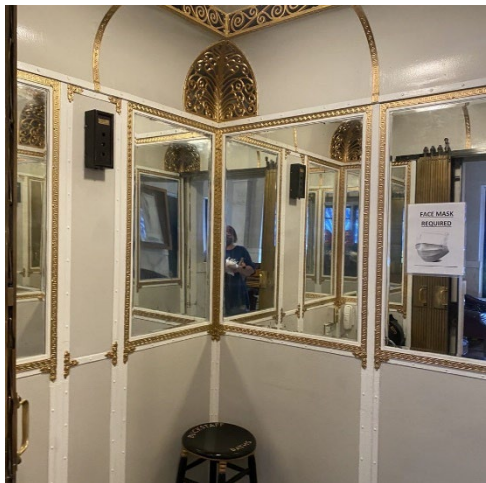
6.



Space below Elevator Pit

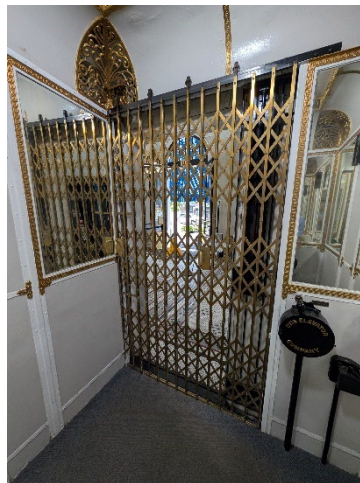
Buckstaff Bathhouse Elevator Cab/Entrance Photos

1.



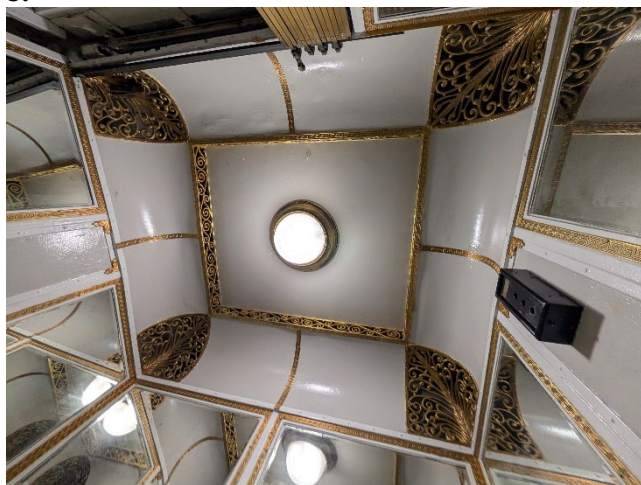
Elevator Cab

2.



Elevator Cab- Front

3.



Elevator Cab Ceiling

4.



Certificate of Operation

5.



Elevator Cab

6.



Elevator Pit

Buckstaff Bathhouse Elevator Photos

1.



Floor 1 Hoistway Entrance

2.



Elevator Push Button

3.



Top of Hoistway Access

4.



Top of Hoistway Sheaves

5.



Otis Flyball Governor

6.



Top of Elevator Car

CODE AND LIFE SAFETY ASESMENT

APPENDIX F

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March 10, 2026

**Buckstaff Bathhouse
Hot Springs National Park - Hot Springs, Arkansas
Code Considerations**



Introduction

This report is a high-level building code analysis of the existing structure to be included as an appendix to the Historic Structure Report commissioned by the National Park Service (NPS). The Report documents history and existing conditions of the structure, and explores options for preservation and enhancement of the existing structure.

The structure, located at 509 Central Avenue in Hot Springs, Arkansas, is part of Bathhouse Row, a series of eight historic twentieth century bathhouses along Central Avenue. The structure remains in operation in accordance with its original function as a mineral water bathhouse. The building is 3 stories in height, plus a basement and has approximately 22,791 sq ft of total floor area. The building was listed in the National Register of Historic Places in 1974. The NPS designated Bathhouse Row a National Historic Landmark in 1987.

Construction Features and Building Functions

Buckstaff Bathhouse was constructed in 1911, and opened in January 1912. It is the only structure in Bathhouse Row which retains its historic interior character. The building is steel-reinforced concrete and steel construction. Exterior finishes include painted stone cladding and brick cladding.

The basement, accessed only from two exterior stairs, contains mechanical spaces, a maintenance shop, storage, and the laundry facility. Walls and ceilings are of exposed concrete, with concrete floor. Some interior partitions are painted. The first floor contains the building lobby, office, main staircase, and elevator. The first floor also includes north and south men's dressing rooms, as well as the north and south men's cooling rooms, rest rooms, and massage room. The rear wing includes the men's bath hall, the largest room in the building. Finishes include marble and plaster. The second floor is similar to the first floor, containing women's facilities. The third floor extends above only the center part of the front wing, containing the original lounging room with access to separate sun decks for men and women, as well as original gymnasium rooms.

Potential Scope of Work

Recommendations include exterior and interior repairs to existing building elements. These repairs range from minor to structural repairs of exterior walls, doors and windows and interior elements including floors and interior partitions. The assessment includes recommendations for the building's mechanical, plumbing and electrical systems.

The major building configuration recommended change is to move the women's functions to the first floor, and men's functions to the second floor so that the demographic trend of predominant female use of the facilities can be accommodated by the larger floor plate on the first floor. This reconfiguration would entail rest room renovations and other more minor alterations. A report on the existing elevator recommends a complete modernization or replacement due to the age and poor condition of the elevator and relative inability to maintain and replace parts due to age.

Code Compliance Considerations

The State of Arkansas currently adopts the 2012 edition of the International Existing Building Code (IEBC), which regulates repair, alteration, and change of occupancy of existing buildings. In consideration of the potential scope of work, we have the following comments relative to application of code requirements:

1. A fundamental IEBC consideration is that repairs and replacement of existing building elements and features are permitted without having to comply with current building code requirements. This is particularly the case based upon key exceptions in Chapter governing Historic Buildings. The Buckstaff Bathhouse qualifies for exceptions and considerations in Chapter 12, IEBC based upon designation in the National Register.
2. The requirements for “Alterations” of existing buildings are more complex depending upon the scope of proposed alterations. However, the trigger for requiring major compliance is when the proposed alteration rises to a “Level 3” designation - which will not be reached based upon reconfiguration of existing spaces comprising less than 50% of the total building area.
3. Construction work associated with the swap of the first and second floors by gender usage will at most be classified as a Level 2 alteration, which localizes any application of code requirements for new construction. There are also some mitigating considerations for Historic Buildings in Chapter 12 with regard to alterations.
4. Based upon the proposed scope of alterations, there will be no requirement to provide either a sprinkler or fire alarm system in the building, as the IEBC does not mandate installation of these systems for limited Level 2 alterations, nor for MEP upgrades to the building.
5. Under some circumstances, the lack of a 2nd egress stair for the third floor would be a concern. However, so long as there is no reconfiguration of spaces on this floor level or increased occupant load based upon reprogramming of use, this will remain a grandfathered feature of the building.

RTM Consultants, Inc.

Edwin L. Rensink

Edwin L. Rensink, Principal
elr

2025 HVAC IMPROVEMENT PROJECT REVIEW

APPENDIX G

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HVAC Project Review

D30: HVAC

- The existing HVAC system at Buckstaff Bathhouse remains in place currently until the HVAC renovation project design, which was completed in February 2024, is bid. This appendix is provided as a description of the future system and review comments from this team regarding that system replacement.
- It should be noted that this review was performed with very limited history of decision making made during the design from the NPS. Responses provided as comments by the EoR are included below.
- All HVAC descriptions related to currently existing systems have been removed from this section.

D3010 Energy Supply

- One of the building's three water services also supply heating energy to the building. Hot thermal water which is about 135°F is used for building heating. Natural gas will be used as a supplemental heating energy source when thermal water input is insufficient to meet demand.

D3020 Heat Generating Systems

- The system will utilize the existing 135°F hot thermal water feed into the building as the primary heating source. This water will be brought through a plate and frame heat exchanger (D3040) to preheat the building hot water loop to 100°F. This will then be the return water to two gas-fired boilers which will raise the heating water temperature to 160°F for use at coils in the new equipment. The documents indicate a 45°F delta across the heating loop. The boilers are noted to be condensing boilers,

however the 160°F fixed design supply temperature does not support condensing operation. The boilers are to be provided with individual primary pumps.

D3030 Cooling Generating Systems

- A new 60-ton air-cooled chiller with indoor refrigerant to water heat exchanger supplies the coiling coils with chilled water.

D3040 Distribution Systems

- Both the chilled water and hot water system have duty/standby, variable speed, secondary pumping with distribution to the various equipment coils throughout the building.
- Building ventilation will be provided by a dedicated outdoor air system in the basement, supplying 5300 cfm of air, with a total energy recovery wheel, cooling and heating coils, filters and fans. The documents show new exhaust air being brought back to the DOAS unit for energy recovery from the Men's Bath Hall only. However, all the original relief air grilles and ducts to vents on the roof remain throughout spaces in the building. These gravity relief vents are the only exhaust air provided from toilet rooms and have no means of balancing relief with the exhaust air to be returned to the DOAS unit - there is a 300 cfm difference. The ventilation air is delivered through the original uninsulated supply duct system in the unconditioned basement and wall construction. Control sequences may clarify if the reheat coil is to be utilized during cooling season to temper the supply air or if only to boost the discharge temperature to 85°F in heating season.

- Fan coils are used on the first and second floors for space conditioning and a gas-fired/dx furnace is proposed to serve the third floor. The reason that the chilled and hot water loops are not used for the third floor level is unclear.
- The HVAC renovation project appears to be well coordinated on the documents. In reality the documents completely ignore many of the existing conditions that are not part of the project's scope. The documents show no attempt to coordinate with the extensive existing plumbing system piping in any areas and in particular throughout the basement. They also place CHW and HW piping over the existing elevator equipment, architecturally are replacing a door to the mechanical room with a 6'-4" new door that if coordinated with the relief duct could at best be 5'-0". These concerns point to the need to take a holistic approach to significantly challenging renovations, one which cannot ignore the systems that serve the primary purpose of the Buckstaff Bathhouse.

D3050 Terminal and Package Units

- A gas-fired/dx furnace with roof mounted condensing unit is proposed to serve the third floor. The reason that the chilled and hot water loops are not used for fan coils at the third floor level is unclear.

D3060 Controls and Instrumentation

- A BAS system for control of all new equipment and systems is included in the new design.

D3070 Systems Testing and Balancing

- Air and Water systems TAB is included in the renovation project.

D3090 Other HVAC Systems and Equipment

- The third floor will include new air purifications systems for the pedicure and manicure stations.

Comment Responses

Note that since this section of information has been moved from its original location in 03_HSR PART I - 1D Physical Description the the Review Comment Page number and line numbers are no longer applicable. They will simply be referenced by the Comment number.

- 19. Response from Alvine HVAC engineer
- The boilers only operate to provide back-up heat if and when the thermal water system heat exchanger is unavailable for heating which from what we understand, is not very often. If no thermal water is available, the return water temperature from the fan coil unit system to the boilers would be approximately 105-115 deg F. The boiler discharge temperature would be adjusted by based on outside temperature as the boilers will have outside air temperature reset. In another words, if it is warmer outside, the discharge water temperature of the boilers is reset lower automatically. The boilers are specified with 10:1 turndown therefore the discharge water can be reset to something down around 120-130 deg F if need be allowing for condensing boiler operation. It is true that the boilers will not be able to operate in a condensing mode when the water loop temperature is high (160 deg F) but when conditions outside are right and conducive for lower water temperatures, the efficient condensing boiler operation takes over.
- 20. Response from Alvine HVAC engineer
- As the Men's bath floor was the closest space to draw air from for the DOAS unit to provide tempering of the outside air at the DOAS unit via the energy wheel in the unit, air from the men's bath hall was the primary source of exhaust air. Any air from the men's floor restrooms was felt to be unaffected as these restrooms were still connected to the roof exhaust/relief air

outlets and building pressure would not change or affect them. The total of 5,300 CFM was what was needed to achieve the required ventilation air for the occupants therefore that is all that was removed from the Men's bath floor.

The reheat coil was provided to allow the discharge air temperature to be set anywhere between 55 and 85 deg F from the DOAS unit through the existing ducts/wall grilles. The temperature can be set to deliver 85 deg F in the winter and summer as the discharge temperature is adjustable through the BMS.

- 22. Response from Alvine HVAC engineer - This was discussed with NPS staff during design and while at the site and the consensus was that this floor did not want to have fan coil units but instead would use some sort of stand-alone system. A high-efficiency, two-stage heating furnace was specified to serve this floor along with an overhead duct system. An exterior roof mounted air-cooled condensing unit provides heat rejection for the furnace DX coil. This floor can operate independently of the other bath floors in the building with this arrangement.
- 23. Response from Alvine HVAC engineer - The mechanical drawings are diagrammatic in nature and many of the areas in the building like the basement (beyond the laundry and west mechanical spaces) were inaccessible during the design as they are basically crawl-spaces. In areas where there is existing plumbing piping, the contractor has some discretion where the new piping can be routed/installed to avoid conflicts as long as the installation meets with the intent of the design.
- 24. Response from Alvine HVAC engineer - We would agree that there is a small space at the NW corner of the elevator equipment space where the chilled water and heating hot water needs to enter and exit the mechanical space. If it is possible, a sheet metal pan can be provided under the piping to protect any existing elevator equipment allowing the piping to route overhead. A drain from the pan can be provided back into the adjacent mechanical space where it can discharge over one of the floordrains. There is a dashed line

shown outlining the area on the large scale HVAC Piping Plan on sheet M4-1 indicating where the sheet metal pan might be located.

- 25. Response from Alvine HVAC engineer - At the door location in question, B102, there are existing conduits on a unistrut trapeze (toremain) just under the concrete deck above. The bottom of the trapeze is just over 7'-11" A.F.F. The conduits and trapeze can be cinched up to 8'-0" (96") clear. A 6" steam line, 3" thermal line and a 3/4" water line currently below the trapeze are to be removed (notes 6, 15 & 24/M1-1). A new 30 x 18 relief air duct is to be installed immediately below the unistrut trapeze. 96" - 18" = 78" (6'-6") The new door and frame are to be installed immediately below the new duct. (6'-4" door plus 2" frame = 6'-6"). The infill construction at the door frame will require 1 hour fire rating. The installation will be tight but doable. Refer to detail 5/A1 and keynote note 7 on A1.

Architectural Comments on proposed HVAC project

The following comments are based on review of the construction documents for the mechanical, electrical, and plumbing drawings dated February 22, 2024. These comments attempt to address potential adverse effects on the historic fabric and architectural character of the building.

- Proposed vertical pipe chases should be installed over the top of the existing marble or tile wainscoting in a manner that their installation and future removal will leave the wainscoting unaltered. The proposed solid surface wainscot on the vertical pipe chases should be of a color similar to the marble or tile wainscot in each room.
- Proposed ceiling bulkheads (fascia and soffit) around new systems appear to be minimally intrusive in general.
- Proposed bulkheads around duct chases in room 300A are intrusive and should be eliminated if possible to reduce their adverse effect on the building's architectural character. These bulkheads interrupt

the spatial volume of one of the historic lobbies and limit daylight access to the corridor portion of room 300. Consider replacing the intrusive chase between rooms 303 and 300C with a chase running across the ceiling of the landing of stair S1 between rooms 301 and 303. A bulkhead across the stair ceiling would be less visible and minimally intrusive. The duct chase and bulkhead between rooms 301 and 300D is not ideal but is less intrusive than the chase between 303 and 300C. If possible, hold the ductwork closer to the ceiling and raise the height of the bulkhead as high as possible to minimize the adverse effect.

- Proposed reuse of existing grilles and ductwork in the primary spaces of the first and second floors is ideal from an architectural perspective.
- The installation of small FCUs in most spaces should be minimally intrusive. These units should be installed in a manner that minimizes damage to existing marble and tile so that these historic materials are intact in the future, when these FCUs are removed at the end of their service life.
- The proposed light fixtures in the basement and in rooms 300C, 300D, 300E, and 301 have no adverse effect on the historic fabric of the building.

CLASS C COST ESTIMATE

APPENDIX H

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Basis of Estimate and Cost Summary - Project Information

Park Management Information System (PMIS) Number:	Park Acronym:	HOSP
	Park Name:	Hot Springs National Park
	Project Title:	Buckstaff Bathhouse HSR
	Design Phase:	Schematic Design
	State:	Arkansas
	County work location:	Garland County
	Database Name:	RSMeans, KVP Historical
	Database Year:	2025
	Estimate Type:	Class A Template was used for the Class C Estimate
	Current Estimate Date:	3/9/2026
	Construction Start Date:	5/1/2030
	Project Period of Performance (Months):	8 Months
	Architect/Engineer (A/E) Company:	Seven Generations AE
	Estimating Company:	Kirk Value Planners
	Estimator Name:	Steve Garrett
	Estimate Reviewed By:	Steve Kirk
	Estimate Reviewed Date:	3/9/2026
	Estimator Phone:	248-240-9605
Project Description (Scope of Work):		This project will make improvements to the existing Buckstaff Bathhouse based on the Historic Structures Report 50% Draft Report.
Estimate Assumptions:		The following scope items are not included in this cost estimate: - No Hazardous material removal is required. Discussions with potential material suppliers and installers based their quotes on the following assumptions: - Standard building products are available to meet this demand in the region. - Normal work shifts are anticipated, no premium for double shift or after hours work is included. - The structure will remain closed during the construction. - Materials will come from the region and be trucked to the location. The current construction market in the region is anticipated to be very busy with low competition and unit prices reflect this condition. It is believed the construction economy has resulted in a series of shortages in specific trades / materials and some markets are experiencing rapid prices increases. Escalation has been included to cover a reasonable increase but the market may rise faster than anticipated which could produce a high bid cost. Minimum of three qualified bidders are assumed, if this is not the case the bid costs are anticipated to be much higher than estimate.
Source of Cost Data:		Kirk VP incorporates unit costs from 3 different sources: - Source 1 = Quotes received subcontractors; - Source 2 = Means 2025 Building Construction Cost Data; and - Source 3 = KVP historical data on trades in region that leverages bid related costs. KVP confirms material pricing by tracking national sources, such as Engineering News and Reports - ENR. Regional vendors or construction sources are contacted to confirm market conditions that are reflected in unit pricing and include subcontractor general conditions, overhead and profit. Quantities are taken from the available drawings or reports. Proposed scope, quantities and unit costs have been reviewed by the current project team and adjusted per their recommendations.
Schedule Clarification:		The project team is developing a schedule but the following are the assumptions for this estimate: - The project is expected to go out for bids in January 2029. - Construction to start May 2029 and be completed in a single phase.
Other Clarifications or Exclusions:		• No loose furniture or wiring for IT or security.
Documentation:		• Current budgeted amount for project is to be determined.
Standard Clarifications:		Drop all Subcontractor, supplier, phone quotes, etc. required by the FAR (Federal Acquisition Regulation) into this area for review. • This estimate is the NET Construction costs of the project which includes direct cost of construction, location factor, remoteness factor, federal wage rate factor, historic preservation factor, design contingency, permitting, contracting method of procurement, testing, general conditions, bonds, permits and contractor overhead, profit, & escalation. • This estimate does NOT include Gross costs which Includes Construction Contingency and NPS Construction management. • This estimate does NOT include the Total costs of compliance, predesign, design, and supplemental services.

Project Specific Markups & Tax Allocations

Tax Allocations

- After verifying with the local tax jurisdictions and NPS tax requirements, enter **X** in fields which require project taxes. This will populate the appropriate taxes throughout the estimate.

Material	Labor	Equipment	Other
X			

Project Specific Markups

- Refer to **Cost Estimating Requirements Handbook > Chapter 4 Estimate Markups for guidance on this section.**
- This chart shows how markups are applied at different phases of design.
- Add required markups in column **C** and specific descriptions in column **D**. These entries will populate throughout the estimate.
- Re-evaluate markups at each phase of design as details develop and added to the estimate. Adjust percentage as appropriate in individual CLINs.
- If no **X** is shown in a field, costs previously applied in the percentage need to be fully applied within the direct costs, either as actual activities or increases to individual unit costs and a 0% shown in the markups.

Markups		Percent %	Description <i>Overwrite instructions to provide detailed description for each markup and how it was determined.</i>	Class C Conceptual	Class C Schematic	Class B Design Development	Class A Construction Documents
A	Park Location Factor (PLF):	-16.30%	A combination of the city cost index and remoteness to the Park Visitor Center. The Park Location Factor (PLF) is automatically inputted when the park acronym is inserted on the Price Schedule.	X	X	X	
B	Project Specific Remoteness:	0.00%	Small additional premium to bring labor and material to the park VC.	X	X	X	
C	Federal Wage Rate Factor:	0.00%	Using the attached Wage Rate Calculator (see Wage Factor worksheet/tab), determine if additional costs are needed. This factor applies to Labor only. (Adjust formula in total column of Federal Wage Rate Factor as appropriate)	X	X	X	
D	State & Local Taxes:	9.50%	Hot Springs, Arkansas has a state sales tax of 6.5%, county sales tax of 2.5%, and local sales tax of 1.5%.	X	X	X	
E	Historic Preservation Factor:	3.00%	Minor changes will occur to the historic fabric of this structure.	X	X	X	
F	Design Contingency:	10.00%	Design Contingency for this level of estimate can range from 5-10%. Since this is a replacement project there are still some unforeseen design needs. Construction contingencies relative to unforeseen conditions is addressed in the NPS Gross Project Budget.	X	X	X	X
TOTAL DIRECT CONSTRUCTION COSTS							
G	Standard General Conditions:	22.50%	Material placement is limited but not much area is needed. This area in general has a high amount of work so higher conditions for historical fees are expected. A higher percentage for GC was used as this is a smaller project with different work areas with more temporary protection and access equipment required. Worksheet used to confirm the GC required.	X	X		
H	Government General Conditions:	5.00%	Premium costs, above Standard General Conditions, associated with NPS contract requirements and is applied equally to the cost estimate.	X	X		
I	Testing & Inspections:	4.00%	Structural, mechanical, electrical, and plumbing system testing are anticipated.	X	X	X	
J	Permits & Fees:	1.75%	1.25% for insurance, 0.5% for permit fees have been included.	X	X	X	
SUBTOTAL NET CONSTRUCTION COST							
K	Home Office Overhead:	9.00%	The normal amount of office support staff used to support the effort is anticipated.	X	X	X	X
L	Profit:	9.00%	Kirk VP believes this should reflect normal market conditions in the area	X	X	X	X
M	Performance Bond:	1.75%	1.75% for bonds is anticipated for a small company that will do this work.	X	X	X	X
ESTIMATED NET CONSTRUCTION COST							
N	Contracting Method Adjustment:	5.00%	Verify with project team which contracting method is to be used. Recommendations are 2 step Best Value Full and Open 5%; Hub Zone Competitive 7%; Hub Zone Negotiated 9%; 8A Competitive 12%; (8A Negotiated 15% < 4.5 million).	X	X	X	X
O	Inflation Escalation Annual Rate:	5.50%	NPS recommended rate based on historical rates.	X	X	X	X
CURRENT DATE TO MIDPOINT OF CONSTRUCTION (Months):				54	Assumes start of construction May 2030, with completion of construction in January 2027. A single phase would be used to complete the work.		

10 2026
12 2027
12 2028
12 2029
8 2030

Summary NET Cost Schedule

Park Acronym: HOSP

Park Name: Hot Springs National Park

Project Title: Buckstaff Bathhouse HSR

Park Management Information System (PMIS) Number: 323237

Current Estimate Date: 3/9/2026

- Estimator to start estimate by completing gray cells with initial project information and CLIN titles per line item designated by NPS for the project.
- Information added on this worksheet will populated the rest of the template.
- Click on the CLIN number to route to corresponding CLIN worksheet/tab.

Contract Line Item Number (CLIN) & Option Number	Contract Line Item Title	Quantity	Unit of Measure	Unit Price	Total Price
CLIN 1	Base Scope - including Reusing Historic Plumbing Fixtures, Option 1 Elevator	18,522	Square Feet (SF)	99	\$1,826,084.98
TOTAL BASE PRICE (CLINs 1):					\$1,826,084.98
Option 1	Replacing Historic Plumbing Fixtures with New Fixtures	1	Lump Sum (LS)	92,791	\$92,790.59
Option 2	Elevator Option 2 - Modernization with Automatic Doors	1	Lump Sum (LS)	114,904	\$114,903.74
Option 3	Elevator Option 3 - Complete Elevator Replacement	1	Lump Sum (LS)	594,505	\$594,505.39
TOTAL PRICE FOR ALL OPTIONS (1-3):					\$802,199.72
TOTAL PROPOSED PRICE - BASE PLUS ALL OPTIONS (CLINs 1 + Options):					\$2,628,284.69

Total Cost Summary

• Use this worksheet/tab for overall cost verification and historical cost collection only.

TOTAL PROJECT COSTS WITH ALL CLIN'S & OPTIONS				
All division costs include both CLIN and Option dollars.				
Total Project Overall Quantity:		2853	Sq Ft	
MasterFormat Identification (ID)	Activity Name	Budgeted Total Cost	Unit Cost	Unit
Division 1	0100.0000 TOTAL GENERAL REQUIREMENTS	\$0	\$0.00	Sq Ft
Division 2	0200.0000 TOTAL EXISTING CONDITIONS	\$87,891	\$30.81	Sq Ft
Division 3	0300.0000 TOTAL CONCRETE	\$56,696	\$19.87	Sq Ft
Division 4	0400.0000 TOTAL MASONRY	\$0	\$0.00	Sq Ft
Division 5	0500.0000 TOTAL METALS	\$0	\$0.00	Sq Ft
Division 6	0600.0000 TOTAL WOOD, PLASTIC, & COMPOSITES	\$0	\$0.00	Sq Ft
Division 7	0700.0000 TOTAL THERMAL & MOISTURE PROTECTION	\$18,109	\$6.35	Sq Ft
Division 8	0800.0000 TOTAL OPENINGS	\$0	\$0.00	Sq Ft
Division 9	0900.0000 TOTAL FINISHES	\$369,983	\$129.68	Sq Ft
Division 10	1000.0000 TOTAL SPECIALTIES	\$0	\$0.00	Sq Ft
Division 11	1100.0000 TOTAL EQUIPMENT	\$0	\$0.00	Sq Ft
Division 12	1200.0000 TOTAL FURNISHINGS	\$0	\$0.00	Sq Ft
Division 13	1300.0000 TOTAL SPECIAL CONSTRUCTION	\$0	\$0.00	Sq Ft
Division 14	1400.0000 TOTAL CONVEYING EQUIPMENT	\$1,281,850	\$449.30	Sq Ft
Division 21	2100.0000 TOTAL FIRE SUPPRESSION	\$0	\$0.00	Sq Ft
Division 22	2200.0000 TOTAL PLUMBING	\$739,449	\$259.18	Sq Ft
Division 23	2300.0000 TOTAL HEATING, VENTING, & AIR CONDITIONING	\$0	\$0.00	Sq Ft
Division 26	2600.0000 TOTAL ELECTRICAL	\$27,355	\$9.59	Sq Ft
Division 27	2700.0000 TOTAL COMMUNICATIONS	\$0	\$0.00	Sq Ft
Division 28	2800.0000 TOTAL ELECTRONIC SAFETY & SECURITY	\$0	\$0.00	Sq Ft
Division 31	3100.0000 TOTAL EARTHWORK	\$0	\$0.00	Sq Ft
Division 32	3200.0000 TOTAL EXTERIOR IMPROVEMENTS	\$46,950	\$16.46	Sq Ft
Division 33	3300.0000 TOTAL UTILITIES	\$0	\$0.00	Sq Ft
Division 34	3400.0000 TOTAL TRANSPORTATION	\$0	\$0.00	Sq Ft
Division 35	3500.0000 TOTAL WATERWAY & MARINE	\$0	\$0.00	Sq Ft
Division 41	4100.0000 TOTAL MATERIAL PROCESSING & HANDLING EQUIP	\$0	\$0.00	Sq Ft
Division 42	4200.0000 PROCESS HEATING/COOLING EQUIPMENT	\$0	\$0.00	Sq Ft
Division 44	4400.0000 TOTAL POLLUTION & WASTEWATER CONTROL EQUIP	\$0	\$0.00	Sq Ft
Division 46	4600.0000 TOTAL WATER & WASTEWATER EQUIPMENT	\$0	\$0.00	Sq Ft
Division 48	4800.0000 TOTAL ELECTRICAL POWER GENERATION	\$0	\$0.00	Sq Ft
Grand Total:		\$2,628,285	\$921.24	Sq Ft

CLIN NET Cost Summary

Project Title: Buckstaff Bathhouse HSR
Park Name: Hot Springs National Park

Park Management Information System (PMIS) Number: 323237
Park Acronym: HOSP

Bid Item Number	Bid Item Description	Overall Quantity	Unit of Measure	Total Material Cost	Total Labor Cost	Total Equipment Cost	Total Other Cost	Total Direct Construction Costs	Total Markups	NET Bid Item Total
CLIN 1	Base Scope - including Reusing Historic Plumbing Fixtures, Option 1 Elevator	18,522	Square Feet (SF)	\$ 466,696	\$ 359,539	\$ 9,100	\$ -	\$ 835,335	\$ 990,750	\$ 1,826,085
Total CLIN Items:				\$ 466,696	\$ 359,539	\$ 9,100	\$ -	\$ 835,335	\$ 990,750	\$ 1,826,085
Option 1	Replacing Historic Plumbing Fixtures with New Fixtures	1	Lump Sum (LS)	\$ 30,960	\$ 10,775	\$ -	\$ -	\$ 41,735	\$ 51,056	\$ 92,791
Option 2	Elevator Option 2 - Modernization with Automatic Doors	1	Lump Sum (LS)	\$ 30,000	\$ 20,000	\$ 2,500	\$ -	\$ 52,500	\$ 62,404	\$ 114,904
Option 3	Elevator Option 3 - Complete Elevator Replacement	1	Lump Sum (LS)	\$ 155,375	\$ 108,092	\$ 8,150	\$ -	\$ 271,617	\$ 322,889	\$ 594,505
Total Option Items:				\$ 216,335	\$ 138,867	\$ 10,650	\$ -	\$ 365,852	\$ 436,348	\$ 802,200
Total Base and Option Costs:										\$ 2,628,285

Market Survey Report

Current Estimate Date:	3/9/2026
Park Acronym:	HOSP
Park Name:	Hot Springs National Park
Project Title:	Buckstaff Bathhouse HSR
Estimate Type:	Class A Template was used for the Class C Estimate

- Complete and submit as required within NPS Estimating Requirements Handbook.
- Along with this template, label and submit any separate pricing documents acquired from Construction Contractors, Subcontractors, and Suppliers.

CALL LOG									
Row Number	Construction Contractor	Trade	Name	Phone Number	Office Location	Date	Cost	Description	Check if Document Included
1	Plumbing contractor #1								
2	Plumbing contractor #2								
3	Elevator report from ATIS								
4	Electrical supplier								
5	HVAC supplier #1								
6	HVAC supplier #2								
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
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21									
22									
23									
24									
25									

Summary Assessment with Specific Recommendations / Comments:

Estimate Type: Class A Template was used for the Class C Estimate

CLIN Number:	CLIN 1
CLIN Title:	Base Scope - including Reusing Historic Plumbing Fixtures, Option 1 Elevator
Plan Name:	12/25/20
PMIS Number:	223237

Overall Period of Performance: 8 Months

Individual CLIN Period of Performance (as needed):

Overall Quantity:	18,522
Unit of Measure:	Square Feet (SF)
Asset Code:	1100 000000
Facility Type:	1129 Lodging/Other Institutional Uses

Estimator Name:	Steve Garrett
Current Estimate Date:	3/9/2020
Estimate Reviewed By:	Steve JCT
Estimate Reviewed Date:	3/9/2020

Go to
[Step 3 Cost Schedule](#)

- * No Allowances or Lump Sums can be used with Class B or Class A estimates. Estimate will be rejected if used.
- * Paving or Paving numbers are not accepted. Estimate will be rejected if used.
- * To the left of the MasterFormat WBS Codes (Work Breakdown Structure), click outline symbol * (plus) to show/expand groups required for the IGE and begin entering details. For full use of worksheet, unprotect the sheet in the Review ribbon.

MasterFormat WBS Code	Activity Descriptions	Quantity	Unit	MATERIAL	LABOR	EQUIPMENT	OTHER	NET CONSTRUCTION
Level 1	MasterFormat WBS Code Level 2			Material Cost/Unit	Total Labor Cost/Unit	Total Labor Cost/Unit	Total Equipment Cost/Unit	Total Cost/Unit
DIVISION 1	0100.0000 TOTAL GENERAL REQUIREMENTS	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 2	0240.0000 DEMOLITIONS/STRUCTURE MOV	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Ground Floor	Remove historic water closet plumbing fixtures, store for reinstallation - urinals, lavatories, sinks, and tubs to remain in place - includes opening walls, ceilings, and floors to update plumbing	4	Each	\$ -	\$0 \$ 587.28	\$2,340 \$ -	\$0 \$ -	\$0 \$ 587.28
Second Floor	Remove existing historic urinals to make room for new water closet stalls - includes opening walls, ceilings, and floors to update plumbing	3	Each	\$ -	\$0 \$ 627.78	\$1,883 \$ -	\$0 \$ -	\$0 \$ 627.78
Second Floor	Remove historic water closet plumbing fixtures, store for reinstallation - urinals, lavatories, sinks, and tubs to remain in place - includes opening walls, ceilings, and floors to update plumbing	5	Each	\$ -	\$0 \$ 587.28	\$2,036 \$ -	\$0 \$ -	\$0 \$ 587.28
Shower	Remove needle point showers and plumbing	3	Each	\$ -	\$0 \$ 283.51	\$80 \$ -	\$0 \$ -	\$0 \$ 283.51
Water Cooler	Remove water cooler and plumbing	2	Each	\$ -	\$0 \$ 222.76	\$465 \$ -	\$0 \$ -	\$0 \$ 222.76
Basement	Remove existing sanitary and vent piping and connections	760	Lin Ft	\$ -	\$0 \$ 5.06	\$3,649 \$ -	\$0 \$ -	\$0 \$ 5.06
Basement	Remove existing domestic water piping and connections	1,640	Lin Ft	\$ -	\$0 \$ 6.56	\$10,729 \$ -	\$0 \$ -	\$0 \$ 6.56
Basement	Remove gas piping	18,522	SF	\$ -	\$0 \$ 6.18	\$1,174 \$ -	\$0 \$ -	\$0 \$ 6.18
Elevator	Remove key elevator components for modernization	1	Each	\$ -	\$0 \$ 2,430.12	\$2,430 \$ 800.00	\$0 \$ -	\$0 \$ 2,830.12
Site	Remove dead ledge	1	Each	\$ -	\$0 \$ 405.92	\$405 \$ -	\$0 \$ -	\$0 \$ 405.92
Site	Remove shrubs	1	Each	\$ -	\$0 \$ 607.53	\$607 \$ -	\$0 \$ -	\$0 \$ 607.53
Site	Remove existing sidewalk	200	Sq Ft	\$ -	\$0 \$ 4.05	\$810 \$ 2.00	\$400 \$ -	\$0 \$ 6.05
Site	Haul away and dispose of removed material	1	Load	\$ -	\$0 \$ 362.10	\$1,100 \$ -	\$0 \$ -	\$0 \$ 1,512.10
Subtotal	0240.0000 DEMOLITIONS/STRUCTURE MOV	18,522	SF	\$ -	\$0 \$ 1.62	\$28,237 \$ 6.11	\$2,060 \$ -	\$0 \$ 1.64
DIVISION 3	0310.0000 CAST-IN-PLACE CONCRETE	18,522	SF	\$ -	\$0 \$ 1.62	\$28,237 \$ 6.11	\$2,060 \$ -	\$0 \$ 1.64
Structural	Remove loose concrete in the bottom of the 1st floor slab - patch with cementitious based patching material	20.0	Sq Ft	\$ 244.00	\$4,880 \$ 412.91	\$8,756 \$ 35.00	\$700 \$ -	\$0 \$ 691.91
Structural	Remove loose concrete in the perimeter basement concrete walls	100.0	Lin Ft	\$ 31.00	\$3,100 \$ 44.27	\$4,427 \$ 5.00	\$300 \$ -	\$0 \$ 80.27
Structural	Remove loose concrete in the interior walls of the crawlspace	20.0	Lin Ft	\$ 31.00	\$620 \$ 44.27	\$880 \$ 5.00	\$100 \$ -	\$0 \$ 80.27
Structural	Install a steel support bracket beneath the end of the girder	1.0	Each	\$ 121.00	\$121 \$ 154.24	\$154 \$ -	\$0 \$ -	\$0 \$ 285.24
Structural	Remove loose concrete in the perimeter concrete walls of the porch and ramp on the west building elevation	90.0	Sq Ft	\$ 14.00	\$1,260 \$ 24.00	\$1,220 \$ 5.00	\$200 \$ -	\$0 \$ 42.00
Subtotal	0310.0000 CAST-IN-PLACE CONCRETE	18,522	SF	\$ 0.51	\$9,421 \$ 0.81	\$14,965 \$ 0.88	\$1,560 \$ -	\$0 \$ 1.40
DIVISION 3	0360.0000 TOTAL CONCRETE	18,522	SF	\$ 0.51	\$9,421 \$ 0.81	\$14,965 \$ 0.88	\$1,560 \$ -	\$0 \$ 1.40
DIVISION 4	0400.0000 TOTAL MASONRY	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 5	0500.0000 TOTAL METALS	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 6	0600.0000 TOTAL WOOD/PLASTIC & COMPOSITES	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 7	0731.0000 SHINGLES AND SHAKES	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Ground Floor	Replace broken downspouts on the east elevation - aluminum	100	Lin Ft	\$ 22.00	\$2,200 \$ 9.08	\$908 \$ -	\$0 \$ -	\$0 \$ 31.08
Ground Floor	Inspect and repair remaining gutters and downspouts at the building - aluminum	200	Lin Ft	\$ 5.50	\$1,100 \$ 7.43	\$1,480 \$ -	\$0 \$ -	\$0 \$ 12.93
Ground Floor	Replace deteriorated metal pipes whenever sheet metal counterflashing terminates into the brick masonry	100	Lin Ft	\$ 2.10	\$210 \$ 3.30	\$330 \$ -	\$0 \$ -	\$0 \$ 4.60
Ground Floor	Inspect and seal gaps or other breaches in the sheet metal flashings that cover the limestone cornices at the upper roof level and below the 3rd floor windows	200	Lin Ft	\$ 2.10	\$420 \$ 3.30	\$660 \$ 2.50	\$0 \$ -	\$0 \$ 7.90
Ground Floor	Repair the parapet where the fugate and make water/gutter	1	Each	\$ 190.00	\$190 \$ 280.58	\$280 \$ -	\$0 \$ -	\$0 \$ 470.58
Subtotal	0731.0000 SHINGLES AND SHAKES	18,522	SF	\$ 0.22	\$4,120 \$ 0.20	\$3,664 \$ 0.83	\$960 \$ -	\$0 \$ 0.45
DIVISION 7	0760.0000 TOTAL THERMAL & MOISTURE PROTECTION	18,522	SF	\$ 0.22	\$4,120 \$ 0.20	\$3,664 \$ 0.83	\$960 \$ -	\$0 \$ 0.45
DIVISION 8	0800.0000 TOTAL CEILINGING	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 9	0900.0000 PLASTER AND GYPSUM BOARD	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Ground Floor	Repair plaster walls after elevator modernization scope has been completed	360	Wall Sd	\$ 20.40	\$6,960 \$ 19.53	\$3,158 \$ -	\$0 \$ -	\$0 \$ 30.93
Ground Floor	Repair plaster ceiling from visible water damage	200	Wall Sd	\$ 20.40	\$4,080 \$ 19.53	\$3,158 \$ -	\$0 \$ -	\$0 \$ 30.93
Ground Floor	Repair plaster walls from visible water damage	560	Wall Sd	\$ 20.40	\$11,200 \$ 19.53	\$5,264 \$ -	\$0 \$ -	\$0 \$ 30.93
Second Floor	Repair plaster ceiling from visible water damage	200	Wall Sd	\$ 20.40	\$4,080 \$ 19.53	\$3,158 \$ -	\$0 \$ -	\$0 \$ 30.93
Second Floor	Repair plaster walls from visible water damage	1,050	Wall Sd	\$ 20.40	\$20,400 \$ 19.53	\$10,025 \$ -	\$0 \$ -	\$0 \$ 30.93
Third Floor	Repair plaster ceiling from visible water damage	1,050	Wall Sd	\$ 20.40	\$20,400 \$ 19.53	\$10,025 \$ -	\$0 \$ -	\$0 \$ 30.93
Third Floor	Repair plaster walls from visible water damage	1,050	Wall Sd	\$ 20.40	\$20,400 \$ 19.53	\$10,025 \$ -	\$0 \$ -	\$0 \$ 30.93
Third Floor	Repair beams and joists, and surrounding plaster from visible water damage	180	Sq Ft	\$ 32.10	\$5,778 \$ 18.03	\$2,744 \$ -	\$0 \$ -	\$0 \$ 50.73
Subtotal	0900.0000 PLASTER AND GYPSUM BOARD	18,522	SF	\$ 4.28	\$79,278 \$ 2.34	\$43,381 \$ -	\$0 \$ -	\$0 \$ 6.62
DIVISION 9	0930.0000 TILING	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Ground Floor	Remove portion of historic walls and floor finishes, store for reinstallation, and reinstall after new fixtures are installed	7	Each	\$ 222.00	\$1,554 \$ 997.80	\$6,980 \$ -	\$0 \$ -	\$0 \$ 1,210.80
Second Floor	Remove portion of historic walls and floor finishes, store for reinstallation, and reinstall after new fixtures are installed	5	Each	\$ 222.00	\$1,110 \$ 997.80	\$4,980 \$ -	\$0 \$ -	\$0 \$ 1,210.80
Subtotal	0930.0000 TILING	18,522	SF	\$ 0.14	\$2,664 \$ 0.65	\$11,974 \$ -	\$0 \$ -	\$0 \$ 0.79
DIVISION 9	0950.0000 CEILING	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Ground Floor	Remove portion of historic plaster ceilings, repair openings to match existing after new fixtures are installed	7	Each	\$ 155.00	\$1,085 \$ 529.00	\$3,703 \$ -	\$0 \$ -	\$0 \$ 684.00
Second Floor	Remove portion of historic plaster ceilings, repair openings to match existing after new fixtures are installed	5	Each	\$ 155.00	\$775 \$ 529.00	\$2,645 \$ -	\$0 \$ -	\$0 \$ 684.00
Subtotal	0950.0000 CEILING	18,522	SF	\$ 0.10	\$1,860 \$ 0.34	\$6,348 \$ -	\$0 \$ -	\$0 \$ 0.44
DIVISION 9	0990.0000 PAINTING AND COATING	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Interior	Paint repaired ceiling	2,800	Sq Ft	\$ 1.10	\$3,080 \$ 1.13	\$3,176 \$ -	\$0 \$ -	\$0 \$ 2.23
Interior	Paint remainder of ceilings in changed areas	1,200	Sq Ft	\$ 1.10	\$1,320 \$ 1.13	\$1,381 \$ -	\$0 \$ -	\$0 \$ 2.23
Interior	Paint repaired walls	1,000	Wall Sd	\$ 1.10	\$1,100 \$ 0.81	\$810 \$ -	\$0 \$ -	\$0 \$ 1,910
Interior	Paint remainder of walls in changed areas	2,800	Wall Sd	\$ 1.10	\$3,080 \$ 0.81	\$2,703 \$ -	\$0 \$ -	\$0 \$ 1,910
Subtotal	0990.0000 PAINTING AND COATING	18,522	SF	\$ 0.45	\$9,260 \$ 0.40	\$7,372 \$ -	\$0 \$ -	\$0 \$ 0.84
DIVISION 9	0990.0000 TOTAL FINISHES	18,522	SF	\$ 0.45	\$9,260 \$ 0.40	\$7,372 \$ -	\$0 \$ -	\$0 \$ 0.84
DIVISION 10	1000.0000 TOTAL SPECIALTIES	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 11	1100.0000 TOTAL EQUIPMENT	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 12	1200.0000 TOTAL FURNISHINGS	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 13	1300.0000 TOTAL SPECIAL CONSTRUCTION	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 14	1400.0000 ELEVATORS	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Option 1	Modernize existing 1st floor manual doors	1	Each	\$ 175,000.00	\$175,000 \$ 100,000.00	\$100,000 \$ 5,000.00	\$5,000 \$ -	\$0 \$ 280,000.00
Subtotal	1400.0000 ELEVATORS	18,522	SF	\$ 9.45	\$175,000 \$ 5.40	\$100,000 \$ 0.27	\$5,000 \$ -	\$0 \$ 15.12
DIVISION 14	1400.0000 TOTAL CONVEYING EQUIPMENT	18,522	SF	\$ 9.45	\$175,000 \$ 5.40	\$100,000 \$ 0.27	\$5,000 \$ -	\$0 \$ 15.12
DIVISION 24	2100.0000 TOTAL FIRE SUPPRESSION	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 22	2207.0000 PLUMBING INSULATION	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Ground Floor	Add piping insulation to copper pipe	1,540	Unit	\$ 2.20	\$3,388 \$ 2.03	\$3,131 \$ -	\$0 \$ -	\$0 \$ 4.23
Subtotal	2207.0000 PLUMBING INSULATION	18,522	SF	\$ 0.18	\$3,388 \$ 0.17	\$3,131 \$ -	\$0 \$ -	\$0 \$ 0.35
DIVISION 22	2216.0000 PLUMBING PIPING AND PUMPS	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Ground Floor	Replace existing connection to the water closet, reinstall the existing historic water closet	4	Each	\$ 480.00	\$1,920 \$ 426.93	\$1,708 \$ -	\$0 \$ -	\$0 \$ 906.93
Ground Floor	Add new water closet and install existing restrooms, includes plumbing and connections	2	Each	\$ 2,400.00	\$4,800 \$ 1,219.80	\$2,400 \$ -	\$0 \$ -	\$0 \$ 3,669.80
Second Floor	Replace existing connection to the water closet, reinstall the existing historic water closet	5	Each	\$ 480.00	\$2,400 \$ 426.93	\$2,135 \$ -	\$0 \$ -	\$0 \$ 906.93
Second Floor	Add new plumbing for the urinal, reinstall existing historic urinal, includes plumbing connections	2	Each	\$ 1,480.00	\$2,960 \$ 711.55	\$1,423 \$ -	\$0 \$ -	\$0 \$ 2,191.55
Shower	Add new showers and associated plumbing	3	Each	\$ 2,600.00	\$6,670 \$ 853.86	\$2,562 \$ -	\$0 \$ -	\$0 \$ 7,433.86
Water Cooler	Add new water cooler and associated plumbing	2	Each	\$ 1,480.00	\$2,960 \$ 711.55	\$1,423 \$ -	\$0 \$ -	\$0 \$ 2,191.55
Basement	Add new 2" copper piping with fittings and valves - does not include water meters	980	Lin Ft	\$ 68.00	\$66,840 \$ 45.74	\$44,829 \$ -	\$0 \$ -	\$0 \$ 101,669
Basement	Add new under 2" copper piping with fittings and valves	560	Lin Ft	\$ 51.00	\$28,560 \$ 49.66	\$22,770 \$ -	\$0 \$ -	\$0 \$ 91,330
Subtotal	2216.0000 PLUMBING PIPING AND PUMPS	18,522	SF	\$ 6.82	\$108,230 \$ 4.25	\$78,781 \$ -	\$0 \$ -	\$0 \$ 16.15
DIVISION 22	2213.0000 FACILITY SANITARY SEWERAGE	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Basement	Add new 3/4" sanitary and vent piping with fittings (cast iron or PVC)	760	Lin Ft	\$ 61.00	\$46,360 \$ 44.24	\$33,619 \$ -	\$0 \$ -	\$0 \$ 105.24
Basement	Add new natural gas piping with fittings	190	Lin Ft	\$ 68.00	\$12,920 \$ 44.24	\$8,405 \$ -	\$0 \$ -	\$0 \$ 112.24
Subtotal	2213.0000 FACILITY SANITARY SEWERAGE	18,522	SF	\$ 3.29	\$59,280 \$ 2.27	\$42,024 \$ -	\$0 \$ -	\$0 \$ 97.47
DIVISION 22	2220.0000 TOTAL PLUMBING	18,522	SF	\$ 9.28	\$177,280 \$ 6.69	\$122,803 \$ -	\$0 \$ -	\$0 \$ 15.97
DIVISION 23	2300.0000 TOTAL HEATING, VENTING, & AIR CONDITIONING	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 26	2624.0000 SWITCHGEAR AND PANELBOARDS	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Subtotal	2624.0000 SWITCHGEAR AND PANELBOARDS	18,522	SF	\$ 0.30	\$5,500 \$ 0.34	\$4,454 \$ -	\$0 \$ -	\$0 \$ 0.54
DIVISION 26	2627.0000 LOW VOLTAGE DISTRIBUTION EQUIPMENT	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Ground Floor	Remove and replace existing duplex receptacles with new GFCI receptacles, existing wiring and conduit to remain	17	Each	\$ 22.20	\$377 \$ 73.73	\$1,263 \$ -	\$0 \$ -	\$0 \$ 95.93
Second Floor	Remove and replace existing duplex receptacles with new GFCI receptacles, existing wiring and conduit to remain	10	Each	\$ 22.20	\$222 \$ 73.73	\$737 \$ -	\$0 \$ -	\$0 \$ 95.93
Subtotal	2627.0000 LOW VOLTAGE DISTRIBUTION EQUIPMENT	18,522	SF	\$ 0.63	\$399 \$ 0.11	\$1,991 \$ -	\$0 \$ -	\$0 \$ 0.14
DIVISION 27	2700.0000 TOTAL COMMUNICATIONS	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 28	2800.0000 TOTAL ELECTRICAL SAFETY & SECURITY	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 31	3100.0000 TOTAL EARTHWORK	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 32	3216.0000 CURBS, GUTTERS, SIDEWALKS, AND DRIVEWAYS	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Site	Add new concrete driveway with exposed aggregate, with compacted subgrade	220	Sq Ft	\$ 21.50	\$4,730 \$ 26.72	\$5,878 \$ -	\$0 \$ -	\$0 \$ 48.22
Subtotal	3216.0000 CURBS, GUTTERS, SIDEWALKS, AND DRIVEWAYS	18,522	SF	\$ 0.26	\$4,730 \$ 0.32	\$5,878 \$ -	\$0 \$ -	\$0 \$ 0.67
DIVISION 32	3260.0000 PLANTING	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
Site	Plant area and add holly/decid	3,580	Sq Ft	\$ 0.68	\$2,434 \$ 1.75	\$6,965 \$ -	\$0 \$ -	\$0 \$ 2.40
Subtotal	3260.0000 PLANTING	18,522	SF	\$ 0.18	\$2,434 \$ 0.40	\$6,965 \$ -	\$0 \$ -	\$0 \$ 0.58
DIVISION 32	3300.0000 TOTAL EXTERIOR IMPROVEMENTS	18,522	SF	\$ 0.44	\$10,169 \$ 0.72	\$13,368 \$ -	\$0 \$ -	\$0 \$ 1.61
DIVISION 33	3300.0000 TOTAL EXTERIOR IMPROVEMENTS	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 34	3400.0000 TOTAL TRANSPORTATION	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 35	3500.0000 TOTAL WATERWAY & MARINE	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 41	4100.0000 TOTAL MATERIAL PROCESSING & HANDLING EQUIPMENT	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 42	4200.0000 PROCESS HEATING/COOLING EQUIPMENT	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 44	4400.0000 TOTAL POLLUTION & WASTEWATER CONTROL EQUIPMENT	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 45	4500.0000 TOTAL WATER & WASTEWATER EQUIPMENT	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIVISION 48	4800.0000 TOTAL ELECTRICAL POWER GENERATION	18,522	SF	\$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -	\$0 \$ -
DIRECT COSTS				\$46,696	\$39,639	\$9,100	\$0	\$93,335
TAXES				\$44,336	\$0	\$0	\$0	\$44,336

Estimate Type: Class A Template was used for the Class C Estimate

Option Number: Option 1
Option Title: Replacing Historic Plumbing Fixtures with New Fixtures
Plan Alpha: 12/25/
PLHS Number: 229237

Overall Period of Performance: **8 Months**

Individual CLIN Period of Performance (as needed):

Overall Quantity: 1
Unit of Measure: Lump-Sum (L.S.)
Asset Code: 3100 Building
Facility Type: 2129 Lodging/Other Institutional Uses

Estimator Name: Steve Garrett
Current Estimate Date: 3/9/2026
Estimate Reviewed By: Steve JCT
Estimate Reviewed Date: 3/9/2026

[Go to Step 3 Cost Schedule](#)

- * No Allowances or Lump Sums can be used with Class B or Class A estimates. Estimate will be rejected if used.
- * Rounding or Plug numbers are not acceptable. Estimate will be rejected if used.
- * To the left of the MasterFormat WBS Codes (Work Breakdown Structure), click outline symbol * (plus) to show/expand groups required for the IGE and begin entering details. For full use of worksheet, unprotect the sheet in the Review ribbon.

MasterFormat WBS Code Level 1	Activity Descriptions MasterFormat WBS Code Level 2	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		OTHER		DIRECT CONSTRUCTION		NET CONSTRUCTION	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Other Cost/Unit	Total Other Cost	Total Cost/Unit	Total Cost	Total Cost/Unit	Total Cost
DIVISION 1	0100.0000 TOTAL GENERAL REQUIREMENTS	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 2	0240.0000 DEMOLITION/STRUCTURE MOV	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
	Removal of existing historic fixtures - covered in base scope.	0	Unit	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
	Subtotal	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 2	0300.0000 TOTAL EXISTING CONDITIONS	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 3	0300.0000 TOTAL CONCRETE	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 4	0400.0000 TOTAL MASONRY	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 5	0500.0000 TOTAL METALS	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 5	0600.0000 TOTAL WOOD/PLASTIC & COMPOSITES	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 7	0700.0000 TOTAL THERMAL & MOISTURE PROTECTION	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 8	0800.0000 TOTAL OPENINGS	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 8	0900.0000 TOTAL FINISHES	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 10	1000.0000 TOTAL SPECIALTIES	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 11	1100.0000 TOTAL EQUIPMENT	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 12	1200.0000 TOTAL FURNISHINGS	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 13	1300.0000 TOTAL SPECIAL CONSTRUCTION	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 14	1400.0000 TOTAL CONTINUING EQUIPMENT	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 21	2100.0000 TOTAL FIRE SUPPRESSION	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 22	2210.0000 PLUMBING PIPING AND PUMPS	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Ground Floor	Add new water closet and replace existing plumbing connection	4	Each	\$ 2,940.00	\$11,760 \$	\$ 1,016.50	\$4,066 \$	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$0 \$ 3,956.50	\$15,826	\$ -	\$15,826
Second Floor	Replace existing connection to the water closet, reinstall the existing historic water closet	5	Each	\$ 2,940.00	\$14,700 \$	\$ 1,016.50	\$5,082 \$	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$0 \$ 3,956.50	\$19,732	\$ -	\$19,732
Second Floor	Add new plumbing for the urinal, install new urinal, includes plumbing connections	4	Each	\$ 2,950.00	\$11,800 \$	\$ 819.50	\$3,278 \$	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$0 \$ 3,063.50	\$14,878	\$ -	\$14,878
Subtotal	2210.0000 PLUMBING PIPING AND PUMPS	1	L.S.	\$ 30,940.00	\$30,940 \$	\$ 10,774.50	\$42,778 \$	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$0 \$ 41,734.50	\$44,735	\$ 92,790.50	\$92,791
DIVISION 22	2300.0000 TOTAL HEATING, VENTING, & AIR CONDITIONING	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 26	2600.0000 TOTAL ELECTRICAL	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 27	2700.0000 TOTAL COMMUNICATIONS	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 28	2800.0000 TOTAL ELECTRONIC SAFETY & SECURITY	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 31	3100.0000 TOTAL EARTHWORK	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 32	3200.0000 TOTAL EXTERIOR IMPROVEMENTS	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 33	3300.0000 TOTAL UTILITIES	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 34	3400.0000 TOTAL TRANSPORTATION	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 35	3500.0000 TOTAL WATERWAY & MARINE	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 41	4100.0000 TOTAL MATERIAL PROCESSING & HANDLING EQUIPMENT	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 42	4200.0000 PROCESS HEATING/COOLING EQUIPMENT	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 44	4400.0000 TOTAL POLLUTION & WASTEWATER CONTROL EQUIPMENT	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 46	4600.0000 TOTAL WATER & WASTEWATER EQUIPMENT	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIVISION 48	4800.0000 TOTAL ELECTRICAL POWER GENERATION	1	L.S.	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIRECT COSTS				\$30,940	\$11,778	\$0	\$0	\$0	\$0	\$0	\$0	\$41,735	\$41,735	\$ -	\$41,735
TAXES				\$2,841	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ -	\$2,841

* MARKUP PRECENTAGES will initially be populated from the Markups worksheettab but can be overwritten as the design is developed or for changing requirements of the individual CLIN.

Markup ALLOWED		MARKUP TYPES		Markups and Factors DESCRIPTION						TOTALS				
A	Class C,B	Park Location Factor (PLF):	-16.30%	A combination of the city cost index and remoteness to the Park Visitor Center. The Park Location Factor (PLF) is automatically inputted when the park acronym is inserted on the Price Schedule.						\$6,802.78				
B	Class C,B	Project Specific Remoteness:	0.00%	Small additional premium to bring labor and material to the park VC.						\$0.00				
C	Class C,B	Federal Wage Rate Factor:	0.00%	Using the attached Wage Rate Calculator (see Wage Factor worksheettab), determine if additional costs are needed. This factor applies to Labor only. (Adjust formula in total column of Federal Wage Rate Factor as appropriate.)						\$0.00				
D	Class C,B	State & Local Taxes:	9.50%	Material:	X	Labor:	0	Equipment:	0	Other:	0	\$2,941.20		
E	Class C,B	Historic Preservation Factor:	3.00%	Minor changes will occur to the historic fabric of this structure.						\$1,252.00				
F	Class C,B,A	Design Contingency:	10.00%	Design Contingency for this level of estimate can range from 5-10%. Since this is a replacement project there are still some unforeseen design needs. Construction contingencies relative to unforeseen conditions is addressed.						\$4,173.49				
				Total Direct Construction Costs:						\$43,298.86				
G	Class C	Standard General Conditions:	22.50%	Material placement is limited but not much area is needed. This area in general has a high amount of work so higher conditions for historical fees are expected. A higher percentage for GC was used as this is a smaller project.						\$9,742.24				
H	Class C	Government General Conditions:	0.00%	Premium costs, above Standard General Conditions, associated with NPS contract requirements and is applied equally to the cost estimate.						\$2,564.94				
I	Class C,B	Testing & Inspections:	4.00%	Structural, mechanical, electrical, and plumbing system testing are anticipated.						\$1,731.95				
J	Class C,B	Permits & Fees:	1.75%	1.25% for Insurance, 0.5% for permit fees have been included.						\$757.73				
				Subtotal NET Construction Cost:						\$57,696.71				
K	Class C,B,A	Home Office Overhead:	9.00%	The normal amount of office support staff used to support the effort is anticipated.						\$5,192.61				
L	Class C,B,A	Profit:	9.00%	Kirk VP believes this should reflect normal market conditions in the area.						\$5,192.61				
M	Class C,B,A	Performance Bond:	1.75%	1.75% for bonds is anticipated for a small company that will do this work.						\$1,009.68				
				Subtotal NET Construction Cost:						\$69,090.62				
N	Class C,B,A	Contracting Method Adjustment:	0.00%	Verify with project team which contracting method is to be used. Recommendations are 2 step Best Value Full and Open 5%; Hub-Zone Competitive 7%; Hub-Zone Negotiated 9%; BA Competitive 12%; BA Negotiated 15%.						\$3,454.53				
O	Class C,B,A	Inflation Escalation Annual Rate:	5.50%	NPS recommended rate based on historical rates.						\$20,245.44				
CURRENT DATE TO MIDPOINT OF CONSTRUCTION (Months):				54 Assumes start of construction May 2030, with completion of construction in January 2027. A single phase would be used to complete the work.										
Total Estimated NET Cost of Construction:												\$92,791	22%	Total percentage on
Variance Check:												\$ -	95.79%	(Check for formula errors if cell is RED)

TOTAL NET CONSTRUCTION

Total Direct Construction: \$41,735

Variance Check: \$ -

Total percentage markup 22%

Estimate Type: **Class A Template was used for the Class C Estimate**

Option Number:	Option 2
Option Title:	Elevator Option 2 - Modernization with Automatic Doors
Park Name:	12345
PMIS Number:	223237

Overall Period of Performance: 8 Months

Individual CLIN Period of Performance (as needed):

Overall Quantity:	1
Unit of Measure:	Lump-Sum (LS)
Asset Code:	1100 Building
Facility Type:	2129 Lodging/Other Institutional Uses

Estimator Name:	Steve Garrett
Current Estimate Date:	3/9/2026
Estimate Reviewed By:	Steve JCT
Estimate Reviewed Date:	3/9/2026

[Go to Step 3 Cost Schedule](#)

- * No Allowances or Lump Sums can be used with Class B or Class A estimates. Estimate will be rejected if used.
- * Rounding or Plug numbers are not acceptable. Estimate will be rejected if used.
- * To the left of the MasterFormat WBS Codes (Work Breakdown Structure), click outline symbol * (plus) to show/expand groups required for the IGE and begin entering details. For full use of worksheet, unprotect the sheet in the Review ribbon.

MasterFormat WBS Code	Activity Descriptions	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		OTHER		DIRECT CONSTRUCTION		NET CONSTRUCTION	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Other Cost/Unit	Total Other Cost	Total Cost/Unit	Total Cost	Total Cost/Unit	Total Cost
Division 1	0100.0000 TOTAL GENERAL REQUIREMENTS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 2	0240.0000 DEMOLITION/STRUCTURE MOV	0	Unit	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
	Elevator	0	Unit	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
	Subtotal	0	Unit	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 2	0240.0000 DEMOLITION/STRUCTURE MOV	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 3	0300.0000 TOTAL CONCRETE	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 3	0300.0000 TOTAL CONCRETE	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 4	0400.0000 TOTAL MASONRY	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 5	0500.0000 TOTAL METALS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 5	0500.0000 TOTAL METALS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 5	0600.0000 TOTAL WOOD/PLASTIC & COMPOSITES	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 7	0700.0000 TOTAL THERMAL & MOISTURE PROTECTION	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 8	0800.0000 TOTAL OPENINGS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 9	0920.0000 PLASTER AND GYPSUM BOARD	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
	Elevator	0	Unit	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
	Subtotal	0	Unit	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 9	0920.0000 PLASTER AND GYPSUM BOARD	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 9	0900.0000 TOTAL FINISHES	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 10	1000.0000 TOTAL SPECIALTIES	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 11	1100.0000 TOTAL EQUIPMENT	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 12	1200.0000 TOTAL FURNISHINGS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 13	1300.0000 TOTAL SPECIAL CONSTRUCTION	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 14	1420.0000 ELEVATORS	1	Each	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
	Option 1	1	Each	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
	Option 2	1	Each	\$ 30,000.00	\$30,000.00	\$ 20,000.00	\$20,000.00	\$ 2,500.00	\$2,500.00	\$ -	\$0 \$ -	\$0 \$ 52,500.00	\$52,500.00	\$ -	\$52,500.00
	Subtotal	1	LS	\$ 30,000.00	\$30,000.00	\$ 20,000.00	\$20,000.00	\$ 2,500.00	\$2,500.00	\$ -	\$0 \$ -	\$0 \$ 52,500.00	\$52,500.00	\$ -	\$52,500.00
Division 14	1420.0000 ELEVATORS	1	LS	\$ 30,000.00	\$30,000.00	\$ 20,000.00	\$20,000.00	\$ 2,500.00	\$2,500.00	\$ -	\$0 \$ -	\$0 \$ 52,500.00	\$52,500.00	\$ 114,903.74	\$114,904.00
Division 14	1400.0000 TOTAL CONVEYING EQUIPMENT	1	LS	\$ 30,000.00	\$30,000.00	\$ 20,000.00	\$20,000.00	\$ 2,500.00	\$2,500.00	\$ -	\$0 \$ -	\$0 \$ 52,500.00	\$52,500.00	\$ -	\$52,500.00
Division 21	2100.0000 TOTAL FIRE SUPPRESSION	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 22	2200.0000 TOTAL PLUMBING	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 23	2300.0000 TOTAL HEATING, VENTING & AIR CONDITIONING	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 26	2600.0000 TOTAL ELECTRICAL	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 27	2700.0000 TOTAL COMMUNICATIONS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 28	2800.0000 TOTAL ELECTRONIC SAFETY & SECURITY	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 31	3100.0000 TOTAL EARTHWORK	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 32	3200.0000 TOTAL EXTERIOR IMPROVEMENTS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 33	3300.0000 TOTAL UTILITIES	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 34	3400.0000 TOTAL TRANSPORTATION	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 35	3500.0000 TOTAL WATERWAY & MARINE	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 41	4100.0000 TOTAL MATERIAL PROCESSING & HANDLING EQUIPMENT	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 42	4200.0000 PROCESS HEATING/COOLING EQUIPMENT	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 44	4400.0000 TOTAL POLLUTION & WASTEWATER CONTROL EQUIPMENT	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 46	4600.0000 TOTAL WATER & WASTEWATER EQUIPMENT	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
Division 48	4800.0000 TOTAL ELECTRICAL POWER GENERATION	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -
DIRECT COSTS				\$30,000	\$30,000	\$20,000	\$20,000	\$2,500	\$2,500	\$ -	\$0	\$0	\$52,500	\$ -	\$52,500
TAXES				\$2,850	\$2,850	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$2,850	\$ -	\$2,850

- * MARKUP PERCENTAGES will initially be populated from the Markups worksheettab but can be overwritten as the design is developed or for changing requirements of the individual CLIN.

Markup ALLOWED			Markups and Factors DESCRIPTION							TOTALS		
A	Class C,B	Park Location Factor (PLF):	-16.30%	A combination of the city cost index and remoteness to the Park Visitor Center. The Park Location Factor (PLF) is automatically inputted when the park acronym is inserted on the Price Schedule.							-\$8,557.50	
B	Class C,B	Project Specific Remoteness:	0.00%	Small additional premium to bring labor and material to the park VC.							\$0.00	
C	Class C,B	Federal Wage Rate Factor:	0.00%	Using the attached Wage Rate Calculator (see Wage Factor worksheettab), determine if additional costs are needed. This factor applies to Labor only. (Adjust formula in total column of Federal Wage Rate Factor as appropriate.)							\$0.00	
D	Class C,B	State & Local Taxes:	9.50%	Material:	X	Labor:	0	Equipment:	0	Other:	0	\$2,850.00
E	Class C,B	Historic Preservation Factor:	3.00%	Minor changes will occur to the historic fabric of this structure.							\$1,575.00	
F	Class C,B,A	Design Contingency:	10.00%	Design Contingency for this level of estimate can range from 5-10%. Since this is a replacement project there are still some unforeseen design needs. Construction contingencies relative to unforeseen conditions is addressed.							\$5,250.00	
Total Direct Construction Costs:												\$55,617.50
G	Class C	Standard General Conditions:	22.50%	Material placement is limited but not much area is needed. This area in general has a high amount of work so higher conditions for historical fees are expected. A higher percentage for GIC was used as this is a smaller project.							\$12,023.94	
H	Class C	Government General Conditions:	0.00%	Premium costs, above Standard General Conditions, associated with NPS contract requirements and is applied equally to the cost estimate.							\$2,680.88	
I	Class C,B	Testing & Inspections:	4.00%	Structural, mechanical, electrical, and plumbing system testing are anticipated.							\$2,144.70	
J	Class C,B	Permits & Fees:	1.75%	1.25% for Insurance, 0.5% for permit fees have been included.							\$938.31	
Subtotal NET Construction Cost:												\$71,445.32
K	Class C,B,A	Home Office Overhead:	9.00%	The normal amount of office support staff used to support the effort is anticipated.							\$6,430.08	
L	Class C,B,A	Profit:	9.00%	KSA VP believes this should reflect normal market conditions in the area.							\$6,430.08	
M	Class C,B,A	Performance Bond:	1.75%	1.75% for bonds is anticipated for a small company that will do this work.							\$1,250.29	
Subtotal NET Construction Cost:												\$85,555.77
N	Class C,B,A	Contracting Method Adjustment:	0.00%	Verify with project team which contracting method is to be used. Recommendations are 2 step Best Value Full and Open 5%; Hub Zone Competitive 7%; Hub Zone Negotiated 9%; BA Competitive 12%; BA Negotiated 15%.							\$4,277.79	
O	Class C,B,A	Inflation Escalation Annual Rate:	0.50%	NPS recommended rate based on historical rates.							\$25,070.16	
CURRENT DATE TO MIDPOINT OF CONSTRUCTION (Months):												54
Assumes start of construction May 2030, with completion of construction in January 2027. A single phase would be used to complete the work.												
Total Estimated NET Cost of Construction:												\$114,904
Variance Check:												\$ -
Total percentage markup:												219%

Estimate Type: **Class A Template was used for the Class C Estimate**

Option Number:	Option 3
Option Title:	Elevator Option 3 - Complete Elevator Replacement
Pack Name:	12/25/
PLMS Number:	223237

Overall Period of Performance: 8 Months

Individual CLM Period of Performance (as needed):

Overall Quantity:	1
Unit of Measure:	Lump-Sum (L.S.)
Asset Code:	4100 Building
Facility Type:	2129 Lodging/Other Institutional Uses

Estimator Name:	Steve Garrett
Current Estimate Date:	3/9/2026
Estimate Reviewed By:	Steve JCT
Estimate Reviewed Date:	3/9/2026

[Go to Step 3 Cost Schedule](#)

- * No Allowances or Lump Sums can be used with Class B or Class A estimates. Estimate will be rejected if used.
- * Pounding or Plug numbers are not acceptable. Estimate will be rejected if used.
- * To the left of the MasterFormat WBS Codes (Work Breakdown Structure), click outline symbol * (plus) to show/expand groups required for the IGE and begin entering details. For full use of worksheet, unprotect the sheet in the Review ribbon.

MasterFormat WBS Code	Activity Descriptions	Quantity	Unit	MATERIAL		LABOR		EQUIPMENT		OTHER		DIRECT CONSTRUCTION		NET CONSTRUCTION	
				Material Cost/Unit	Total Material Cost	Labor Cost/Unit	Total Labor Cost	Equipment Cost/Unit	Total Equipment Cost	Other Cost/Unit	Total Other Cost	Total Cost/Unit	Total Cost	Total Cost/Unit	Total Cost
Division 1	0100.0000 TOTAL GENERAL REQUIREMENTS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0
Division 2	0240.0000 DEMOLITION/STRUCTURE MOV	1	Each	\$ -	\$0 \$ -	4,860.23	\$4,860.23	\$3,500.00	\$3,500.00	\$ -	\$ -	\$8,360.23	\$8,360.23	\$ -	\$0
Division 2	0240.0000 DEMOLITION/STRUCTURE MOV	1	Lead	\$ -	\$0 \$ -	396.35	\$396.35	\$1,100.00	\$1,100.00	\$ -	\$ -	\$1,496.35	\$1,496.35	\$ -	\$0
Division 2	0240.0000 DEMOLITION/STRUCTURE MOV	1	LS	\$ -	\$0 \$ -	6,256.59	\$6,256.59	4,600.00	\$4,600.00	\$ -	\$ -	\$10,856.59	\$10,856.59	\$21,683.21	\$21,683.21
Division 3	0300.0000 TOTAL EXISTING CONSTRUCTION	1	LS	\$ -	\$0 \$ -	2,254.19	\$2,254.19	\$4,400.00	\$4,400.00	\$ -	\$ -	\$6,654.19	\$6,654.19	\$ -	\$0
Division 3	0300.0000 TOTAL CONCRETE	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 4	0400.0000 TOTAL MASONRY	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 5	0500.0000 TOTAL METALS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 6	0600.0000 TOTAL WOOD PLASTIC, & COMPOSITES	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 7	0700.0000 TOTAL THERMAL & MOISTURE PROTECTION	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 8	0800.0000 TOTAL OPENINGS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 9	0920.0000 PLASTER AND GYPSUM BOARD	250	Wall Sq	\$ 20.40	\$5,100.00	10.53	\$2,632.50	\$ -	\$ -	\$ -	\$ -	\$26,922.50	\$26,922.50	\$ -	\$0
Division 9	0920.0000 PLASTER AND GYPSUM BOARD	1	LS	\$ 5,100.00	\$5,100.00	2,632.50	\$2,632.50	\$ -	\$ -	\$ -	\$ -	\$7,732.50	\$7,732.50	\$ -	\$0
Division 9	0990.0000 PAINTING AND COATING	250	Wall Sq	\$ 1.10	\$275.00	0.81	\$203.55	\$ -	\$ -	\$ -	\$ -	\$1,911.55	\$1,911.55	\$ -	\$0
Division 9	0990.0000 PAINTING AND COATING	1	LS	\$ 275.00	\$275.00	203.55	\$203.55	\$ -	\$ -	\$ -	\$ -	\$478.55	\$478.55	\$ -	\$0
Division 9	0900.0000 TOTAL FINISHES	1	LS	\$ 5,375.00	\$5,375.00	2,836.05	\$2,836.05	\$ -	\$ -	\$ -	\$ -	\$8,211.05	\$8,211.05	\$17,969.83	\$17,969.83
Division 10	1000.0000 TOTAL SPECIALTIES	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 11	1100.0000 TOTAL EQUIPMENT	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 12	1200.0000 TOTAL FURNISHINGS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 13	1300.0000 TOTAL SPECIAL CONSTRUCTION	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 14	1420.0000 ELEVATORS	0	Unit	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Option 1	Mid-rise elevator - keep manual doors - included in base scope	1	Each	\$ 150,000.00	\$150,000.00	100.0000	\$100,000.00	\$100,000.00	\$3,500.00	\$ -	\$ -	\$253,500.00	\$253,500.00	\$ -	\$0
Option 3	Complete elevator replacement - premium	1	Each	\$ 150,000.00	\$150,000.00	100.0000	\$100,000.00	\$100,000.00	\$3,500.00	\$ -	\$ -	\$253,500.00	\$253,500.00	\$ -	\$0
Division 14	1420.0000 ELEVATORS	1	LS	\$ 150,000.00	\$150,000.00	100.0000	\$100,000.00	\$100,000.00	\$3,500.00	\$ -	\$ -	\$253,500.00	\$253,500.00	\$554,852.36	\$554,852.36
Division 14	1400.0000 TOTAL CONVEYING EQUIPMENT	1	LS	\$ 150,000.00	\$150,000.00	100.0000	\$100,000.00	\$100,000.00	\$3,500.00	\$ -	\$ -	\$253,500.00	\$253,500.00	\$ -	\$0
Division 21	2100.0000 TOTAL FIRE SUPPRESSION	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 22	2200.0000 TOTAL PLUMBING	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 23	2300.0000 TOTAL HEATING, VENTING, & AIR CONDITIONING	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 26	2600.0000 TOTAL ELECTRICAL	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 27	2700.0000 TOTAL COMMUNICATIONS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 28	2800.0000 TOTAL ELECTRONIC SAFETY & SECURITY	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 31	3100.0000 TOTAL EARTHWORK	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 32	3200.0000 TOTAL EXTERIOR IMPROVEMENTS	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 33	3300.0000 TOTAL UTILITIES	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 34	3400.0000 TOTAL TRANSPORTATION	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 35	3500.0000 TOTAL WATERWAY & MARINE	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 41	4100.0000 TOTAL MATERIAL PROCESSING & HANDLING EQUIPMENT	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 42	4200.0000 PROCESS HEATING/COOLING EQUIPMENT	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 44	4400.0000 TOTAL POLLUTION & WASTEWATER CONTROL EQUIPMENT	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 46	4600.0000 TOTAL WATER & WASTEWATER EQUIPMENT	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
Division 48	4800.0000 TOTAL ELECTRICAL POWER GENERATION	1	LS	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
DIRECT COSTS				\$156,375		\$108,092		\$8,150		\$0		\$271,617		\$271,617	
TAXES				\$14,761		\$0		\$0		\$0		\$14,761		\$14,761	

* MARKUP PERCENTAGES will initially be populated from the Markups worksheet but can be overwritten as the design is developed or for changing requirements of the individual CLIN.

Markup ALLOWED	MARKUP TYPES	DESCRIPTION	TOTALS
A	Class C.B	Park Location Factor (PLF): -16.30%	A combination of the city cost index and remoteness to the Park Visitor Center. The Park Location Factor (PLF) is automatically inputted when the park acronym is inserted on the Price Schedule.
B	Class C.B	Project Specific Remoteness: 0.00%	Small additional premium to bring labor and material to the park VIC.
C	Class C.B	Federal Wage Rate Factor: 0.00%	Using the attached Wage Rate Calculator (see Wage Factor worksheet), determine if additional costs are needed. This factor applies to Labor only. (Adjust formula in total column of Federal Wage Rate Factor as appropriate.)
D	Class C.B	State & Local Taxes: 9.50%	Material: X Labor: 0 Equipment: 0 Other: 0
E	Class C.B	Historic Preservation Factor: 3.00%	Minor changes will occur to the historic fabric of this structure.
F	Class C.B.A	Design Contingency: 10.00%	Design Contingency for this level of estimate can range from 5-10%. Since this is a replacement project there are still some unforeseen design needs. Construction contingencies relative to unforeseen conditions is advised.
G	Class C	Standard General Conditions: 22.00%	Material placement is limited but not much area is needed. This area in general has a high amount of work so higher conditions for historical fees are expected. A higher percentage for GC was used as this is a smaller project.
H	Class C	Government General Conditions: 5.00%	Premium costs, above Standard General Conditions, associated with NPS contract requirements and is applied equally to the cost estimate.
I	Class C.B	Testing & Inspections: 4.00%	Structural, mechanical, electrical, and plumbing system testing are anticipated.
J	Class C.B	Permits & Fees: 1.75%	1.25% for Insurance, 0.5% for permit fees have been included.
Subtotal NET Construction Cost:			\$269,654.00
K	Class C.B.A	Home Office Overhead: 9.00%	The normal amount of office support staff used to support the effort is anticipated.
L	Class C.B.A	Profit: 9.00%	K&L VP believes this should reflect normal market conditions in the area.
M	Class C.B.A	Performance Bond: 1.75%	1.75% for bonds is anticipated for a small company that will do this work.
Subtotal NET Construction Cost:			\$442,660.47
N	Class C.B.A	Contracting Method Adjustment: 5.00%	Verify with project team which contracting method is to be used. Recommendations are 2 step Best Value Full and Open 5%; Hub Zone Competitive 7%; Hub Zone Negotiated 9%; BA Competitive 12%; BA Negotiated 15%.
O	Class C.B.A	Inflation Escalation Annual Rate: 5.50%	NPS recommended rate based on historical rates.
CURRENT DATE TO MIDPOINT OF CONSTRUCTION (Months): 54			Assumes start of construction May 2030, with completion of construction in January 2027. A single phase would be used to complete the work.
Total Estimated NET Cost of Construction:			\$554,655
Variance Check:			\$ -
Total percentage markup			219%

General Conditions General Requirements (GCGR)

Provided as a tool only. Add all costs to each CLIN, as needed.

Project Title: Buckstaff Bathhouse HSR	Start Date: 5/1/2030	Duration: Days	Weeks	Months	Total GCs
Estimate Type: Class A Template was used for the Class C Estimate		Count: 240	34	8	
Current Estimate Date: 3/9/2026	Finish Date: 12/27/2030	\$/Per Unit: \$670	\$4,691	\$20,105	\$160,842

			QUANTITY		LABOR			UNIT COSTS		TOTALS			
Description	Quantity	UOM (Unit of Measure)	Hour per Week	Cost per Man Hour	Total Man Hours	Material Cost	Equipment	Labor	Material	Equipment	Total		
General Conditions (GCs)													
STAFFING								\$104,489	\$0	\$343	\$104,832		
PROJECT MANAGER	34	week	16.00	\$38.00	549.0	\$0.00	\$10.00	\$20,862	\$0	\$343	\$21,205		
SUPERINTENDENT	34	week	40.00	\$34.00	1371.0	\$0.00	\$0.00	\$46,614	\$0	\$0	\$46,614		
ASSISTANT SUPERINTENDENT	34	week	24.00	\$23.00	823.0	\$0.00	\$0.00	\$18,929	\$0	\$0	\$18,929		
FIELD ENGINEER	34	week	0.00	\$31.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PROJECT ENGINEER	34	week	12.00	\$44.00	411.0	\$0.00	\$0.00	\$18,084	\$0	\$0	\$18,084		
QUALITY CONTROL	34	week	0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
SAFETY OFFICER	34	week	0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PROJECT ADMINISTRATOR	34	week	0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
FOREMAN	34	week	0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
LABORER	34	week	0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
ACCOMMODATIONS								\$0	\$0	\$0	\$0		
TOLL COSTS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
LODGING	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
OUT OF TOWN EXPENSES	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PARKING FEES	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PER DIEM	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
STAFFING REMOTE COSTS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TRADES REMOTE COSTS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TRANSPORTATION								\$0	\$36,960	\$0	\$36,960		
AIRFARE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
BARGES	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
FERRY CHARGES	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
MILEAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TRANSPORTATION REIMBURSEMENT	1280	Trips	0.00	\$0.00	0.0	\$24.50	\$0.00	\$0	\$31,360	\$0	\$31,360		
STAFF PICKUPS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
REMOTE TRUCKING COSTS	4	Loads	0.00	\$0.00	0.0	\$1,400.00	\$0.00	\$0	\$5,600	\$0	\$5,600		
DELIVERY PREMIUMS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
REMOTE OFFICE COSTS								\$0	\$3,000	\$7,700	\$10,700		
ARCHITECT'S FIELD OFFICE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
CONSUMABLE SUPPLIES	8	Months	0.00	\$0.00	0.0	\$0.00	\$300.00	\$0	\$0	\$2,400	\$2,400		
CONTRACTOR'S FIELD OFFICE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
COURIER EXPENSES	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
DESKTOP COMPUTER LEASE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
DRINKING WATER TRAILOR	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
FAX MACHINE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
FAX, COPIER, PRINTER	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
FIELD OFFICE SETUPS AND KNOCKDOWN	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
FIELD TRAILER FURNISHINGS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
INFORMATION TECHNOLOGY (IT) SETUP	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
INFORMATION TECHNOLOGY (IT) USAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
INITIAL PROGRESS SCHEDULE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
JOB TRAILER YARD	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
LAPTOP COMPUTER LEASE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
MAILING EXPENSES	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
MOBILE PHONE EQUIPMENT	8	Months	0.00	\$0.00	0.0	\$150.00	1.00	\$0	\$1,200	\$0	\$1,200		
MOBILE PHONE USAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
MONTHLY PROGRESS SCHEDULES	8	Months	0.00	\$0.00	0.0	\$0.00	\$250.00	\$0	\$0	\$2,000	\$2,000		
OFFICE TRAILER ALARM	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
OWNER'S FIELD OFFICE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PETTY CASH	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PHONE HANSET	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PLANS AND SPECIFICATION REPRODUCTION	1	Sum	0.00	\$0.00	0.0	\$0.00	\$500.00	\$0	\$0	\$500	\$500		
RECORD DOCUMENTS/AS-BUILTS	1	Sum	0.00	\$0.00	0.0	\$1,800.00	\$0.00	\$0	\$1,800	\$0	\$1,800		
REMOTE TRAILER ALARM	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
SUBMITTAL MATERIAL COSTS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY PHONE EQUIPMENT	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY PHONE SERVICE SETUP	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY PHONE USAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY RAILINGS AND DECK AT TRAILER	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY SERVICE SETUP (toilet)	8	Months	0.00	\$0.00	0.0	\$0.00	\$350.00	\$0	\$0	\$2,800	\$2,800		
TRAILER MAINTENANCE AND CLEANING	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TRAILER SANITARY AND WATER SETUP	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
VOICE AND DATA SETUP	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
MISCELLANEOUS GENERAL CONDITIONS								\$0	\$4,750	\$3,600	\$8,350		
BACKGROUND AND SECURITY CHECKS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
DRINKING WATER JOBSITE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
DUMPSTERS (30 CUBIC YARDS (CY))	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
EQUIPMENT RENTAL	8	Months	0.00	\$0.00	0.0	\$500.00	\$0.00	\$0	\$4,000	\$0	\$4,000		
FINAL PHOTOGRAPHS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
FIRST AID STATIONS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PERMANENT POWER USAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PERSONAL PROTECTIVE EQUIPMENT (PPE)	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PORTABLES	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PROJECT IDENTIFICATION SIGNAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PROJECT SIGN	1	Each	0.00	\$0.00	0.0	\$750.00	\$0.00	\$0	\$750	\$0	\$750		
SMALL TOOLS	8	Months	0.00	\$0.00	0.0	\$0.00	\$450.00	\$0	\$0	\$3,600	\$3,600		
SUPT. MOBILE PHONE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY ELECTRICAL USAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY FENCING & PRIVACY SCREENING	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY FIRE EXTINGUISHERS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY GENERATOR POWER	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY WATER USAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TWO WAY RADIOS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
SUBTOTAL								\$104,489	\$44,710	\$11,643	\$160,842		
								Check Number: \$160,842					
General Requirements - Include with direct construction costs.													
MATERIAL PERSONNEL PROCESSING								\$27,865	\$0	\$14,400	\$42,265		
ALL TERRAIN (AT) VEHICLE	0		0.00	\$2.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
CONVEYOR	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
CRANE	8	Weeks	32.00	\$108.85	256.0	\$0.00	\$1,800.00	\$27,865	\$0	\$14,400	\$42,265		
BARGES	0		0.00	\$1.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
HELICOPTER	0		0.00	\$2.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
FORKLIFT	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
GAS & FUEL	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
SKID LOADER	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMP ELEVATOR	0		0.00	\$1.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TRASH CHUTE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
SITE GENERAL REQUIREMENTS								\$0	\$0	\$0	\$0		
ACCESS ROADS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
BARRICADES	0		0.00	\$0.00	0.0	\$0.00	\$12.00	\$0	\$0	\$0	\$0		
DAILY CLEANUP	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
DEBRIS FALL PROTECTION & CONTAINMENT	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
DIRECTIONAL AND SAFETY SIGNAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
PROJECT SIGN	1	Each	0.00	\$0.00	0.0	\$750.00	\$0.00	\$0	\$750	\$0	\$750		
SMALL TOOLS	8	Months	0.00	\$0.00	0.0	\$0.00	\$450.00	\$0	\$0	\$3,600	\$3,600		
SUPT. MOBILE PHONE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY ELECTRICAL USAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY FENCING & PRIVACY SCREENING	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY FIRE EXTINGUISHERS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY GENERATOR POWER	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TEMPORARY WATER USAGE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		
TWO WAY RADIOS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0		

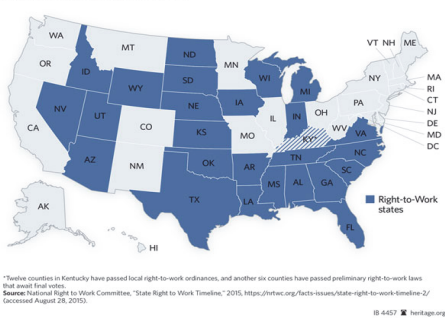
SCAFFOLDING (INSIDE)	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
SCAFFOLDING (OUTSIDE)	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
SECURITY GUARD SERVICE	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
SIDEWALK BRIDGES	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
STREET SWEEPING	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
SURVEYING	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
TEMPORARY ENCLOSURES	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
TEMPORARY LIGHTING	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
TEMPORARY PARKING AREAS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
TEMPORARY STAIRS AND LADDERS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
TEMPORARY STORAGE TRAILERS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
TEMPORARY VENTILATION	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
TEMPORARY WALLS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
TRAFFIC CONTROL	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
TRUCK RENTAL	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
WEATHER PROTECTION								\$0	\$0	\$0	\$0
SUMPS & PUMPS	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
PLASTIC PROTECTION	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
SNOW REMOVAL	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
TEMPORARY HEAT	0		0.00	\$0.00	0.0	\$0.00	\$0.00	\$0	\$0	\$0	\$0
SUBTOTAL								\$27,865	\$0	\$14,400	\$42,265
										Check Number: \$42,265	

WAGE RATE CALCULATIONS																				
TRADE	COMPARE								SELECT	ADJUST								USE		
	Davis Bacon Base Rate (wdol.gov)	Davis Bacon Fringes (wdol.gov)	Davis Bacon Base With Fringes	2025 RS Means Labor Rate With Fringe		RS Means Location Index	RS Means Non-Union Rate With Fringe	RS Means Union Rate With Fringe	Recommended Base Rate to Use in Estimate (NON-UNION RATES)	Add Labor Burden							Total Burdened Labor Rate To Use in Estimate (Without OH&P or Bond)	Crew Configurations		
								Workers' Comp.		Federal Unemployment	State Unemployment	Social Security Tax	Builder's risk insurance	Public liability costs	Sub OH&P plus Market Premium	Total Burden %		2 Man crew	3 Man Crew	
								Choose State ▼												
					Non-Union National Average	Union National Average		Buckhouse Bathhouse - HOSP, Arkansas	NON-UNION	AR	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%				
Asbestos & Insulation Worker	\$ 39.12	\$ 20.67	\$ 59.79	\$ 67.10		82.60	\$ 55.42	\$ -	\$ 59.79	8.42%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	97%	\$ 117.84	\$ 95.82	\$ 88.48
Mason - Stone	\$ 20.33	\$ 13.77	\$ 34.10	\$ 57.30		79.60	\$ 45.61	\$ -	\$ 45.61	14.63%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	103%	\$ 92.73	\$ 83.26	\$ 80.11
Cement Finisher	\$ 19.71	\$ 13.93	\$ 33.64	\$ 56.80		79.90	\$ 45.38	\$ -	\$ 45.38	5.52%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	94%	\$ 88.13	\$ 80.96	\$ 78.57
Bricklayer	\$ 20.33	\$ 13.77	\$ 34.10	\$ 56.65		79.60	\$ 45.09	\$ -	\$ 45.09	8.42%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	97%	\$ 88.87	\$ 81.34	\$ 78.82
Common Building Laborer	\$ 16.44	\$ 7.70	\$ 24.14	\$ 48.50		75.10	\$ 36.42	\$ -	\$ 36.42	13.94%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	103%	\$ 73.80	\$ 73.80	\$ 73.80
Drywall Finisher / Taper	\$ 16.25	\$ 13.91	\$ 30.16	\$ 55.20		82.80	\$ 45.71	\$ -	\$ 45.71	4.23%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	93%	\$ 88.17	\$ 80.98	\$ 78.59
Structural Steel Worker	\$ 29.53	\$ 15.86	\$ 45.39	\$ 67.05		91.40	\$ 61.28	\$ -	\$ 61.28	19.86%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	109%	\$ 127.79	\$ 100.80	\$ 91.80
Carpenter	\$ 16.25	\$ 13.91	\$ 30.16	\$ 60.55		82.00	\$ 49.65	\$ -	\$ 49.65	10.90%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	100%	\$ 99.09	\$ 86.44	\$ 82.23
Roofer, Composition	\$ 16.25	\$ 13.91	\$ 30.16	\$ 53.70		82.00	\$ 44.03	\$ -	\$ 44.03	18.55%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	107%	\$ 91.25	\$ 82.52	\$ 79.61
Glazier	\$ 16.25	\$ 13.91	\$ 30.16	\$ 58.20		82.00	\$ 47.72	\$ -	\$ 47.72	7.80%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	96%	\$ 93.76	\$ 83.78	\$ 80.45
Tile Layer	\$ 16.25	\$ 13.91	\$ 30.16	\$ 57.30		82.80	\$ 47.44	\$ -	\$ 47.44	6.30%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	95%	\$ 92.50	\$ 83.15	\$ 80.03
Painting, Ordinary	\$ 16.25	\$ 10.42	\$ 26.67	\$ 51.70		79.90	\$ 41.31	\$ -	\$ 41.31	7.44%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	96%	\$ 81.01	\$ 77.40	\$ 76.20
Painter, Structural Steel	\$ 16.25	\$ 10.42	\$ 26.67	\$ 53.00		79.90	\$ 42.35	\$ -	\$ 42.35	19.86%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	109%	\$ 88.31	\$ 81.05	\$ 78.63
Tile Setter	\$ 24.15	\$ 13.94	\$ 38.09	\$ 57.30		82.00	\$ 46.99	\$ -	\$ 46.99	6.30%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	95%	\$ 91.61	\$ 82.70	\$ 79.73
Elevator Mechanic	\$ 54.77	\$ 39.89	\$ 94.66	\$ 100.00		95.30	\$ 95.30	\$ -	\$ 95.30	19.86%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	109%	\$ 198.73	\$ 136.26	\$ 115.44
Fire Sprinkler	\$ 38.37	\$ 28.21	\$ 66.58	\$ 74.65		88.70	\$ 66.21	\$ -	\$ 66.58	4.58%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	93%	\$ 128.67	\$ 101.23	\$ 92.09
Steamfitter or Pipefitter	\$ 33.08	\$ 13.56	\$ 46.64	\$ 75.55		88.70	\$ 67.01	\$ -	\$ 67.01	4.58%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	93%	\$ 129.50	\$ 101.65	\$ 92.37
HVAC / Sheet Metal Worker	\$ 26.99	\$ 15.67	\$ 42.66	\$ 72.55		88.70	\$ 64.35	\$ -	\$ 64.35	5.18%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	94%	\$ 124.75	\$ 99.27	\$ 90.78
Electrician	\$ 28.94	\$ 14.95	\$ 43.89	\$ 71.70		88.70	\$ 63.60	\$ -	\$ 63.60	4.54%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	93%	\$ 122.88	\$ 98.34	\$ 90.16
Pile Driver	\$ 27.57	\$ 16.27	\$ 43.84	\$ 62.75		81.10	\$ 50.89	\$ -	\$ 50.89	9.52%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	98%	\$ 100.86	\$ 87.33	\$ 82.82
Equipment Operator, Heavy	\$ 27.57	\$ 16.27	\$ 43.84	\$ 68.60		81.10	\$ 55.63	\$ -	\$ 55.63	6.98%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	96%	\$ 108.85	\$ 91.32	\$ 85.48
Equipment Operator, Light	\$ 17.52	\$ 16.27	\$ 33.79	\$ 62.00		81.10	\$ 50.28	\$ -	\$ 50.28	6.98%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	96%	\$ 98.38	\$ 86.09	\$ 81.99
Truck Driver, Heavy	\$ 14.66	\$ 16.27	\$ 30.93	\$ 57.25		81.10	\$ 46.43	\$ -	\$ 46.43	6.30%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	95%	\$ 90.52	\$ 82.16	\$ 79.37
Skilled Worker	\$ 14.77	\$ 14.70	\$ 29.47	\$ 63.50		79.90	\$ 50.74	\$ -	\$ 50.74	10.90%	6.00%	3.00%	7.65%	0.50%	2.02%	69.50%	100%	\$ 101.25	\$ 87.53	\$ 82.95

INSTRUCTIONS:

- RED FONT INDICATES USER DATA ENTRY. DON'T EDIT BLACK FONT.
- SELECT STATE IN CELL K6.
- DETERMINE IF PROJECT IS UNION OR NON UNION. REFER TO RIGHT TO WORK STATE MAP SHOWN TO THE RIGHT.
- ENTER "UNION" OR "NON-UNION" FROM DROP DOWN LIST IN COLUMN J6.
- ENTER CITY & STATE OR 3 DIGIT ZIP FROM RS MEANS IN CELL G5.
- ENTER RS MEANS LOCATION INDEX FOR EACH TRADE IN COLUMN G. ENTER AS A WHOLE NUMBER, NOT A PERCENTAGE.
- ENTER COUNTY & STATE IN CELL B5.
- FIND DAVIS BACON PREVAILING WAGE RATE DETERMINATION AT "HTTP://WDOL.GOV".
- COPY & PASTE DAVIS BACON PREVAILING WAGE RATE DETERMINATION BELOW.
- SPLIT WINDOWS SCREEN WITH WAGE RATE CALCULATIONS TABLE IN UPPER HALF & DAVIS BACON IN LOWER HALF.
- ENTER THE DAVIS BACON BASE & FRINGE RATES IN COLUMNS B & C.
- COLUMN J WILL AUTOMATICALLY SELECT THE HIGHER OF THE DAVIS BACON RATE OR THE UNION OR NON UNION RATE.
- COLUMN R WILL AUTOMATCALLY CALCULATE TO INCLUDE THE RATES IN COLUMN J WITH PAYROLL BURDEN ADDED.
- COLUMNS S & T AUTOMATICALLY CALCULATE CREW RATES.
- ALTERNATIVELY, COLUMN U AUTOMATICALLY CALCULATES THE DAVIS BACON BASE RATE DIVIDED BY THE RS MEANS BASE RATE TO USE TO EDIT RS MEANS TOTAL LABOR COSTS DIRECT FROM RS MEANS WHEN DAVIS BACON IS HIGHER.
- TYPICALLY, NEVER USE A DAVIS BACON RATE WHEN IT IS LOWER THAN AN RS MEANS RATE, AS DAVIS BACON IS ONLY INTENDED TO BE THE "MINIMUM LEGALLY REQUIRED RATE ON FEDERAL FUNDED PROJECTS" AND THE MARKET MAY ACTUALLY PAY "MORE" THAN DAVIS BACON.

MAP1
25 States Have Right-to-Work Laws



*Twelve counties in Kentucky have passed local right-to-work ordinances, and another six counties have passed preliminary right-to-work laws that await final votes.
Source: National Right to Work Committee, "State Right to Work Timeline," 2015, <https://nrtwc.org/facts/issues/state-right-to-work-timeline-2/> (accessed August 28, 2015).

IB 4457 | heritage.org

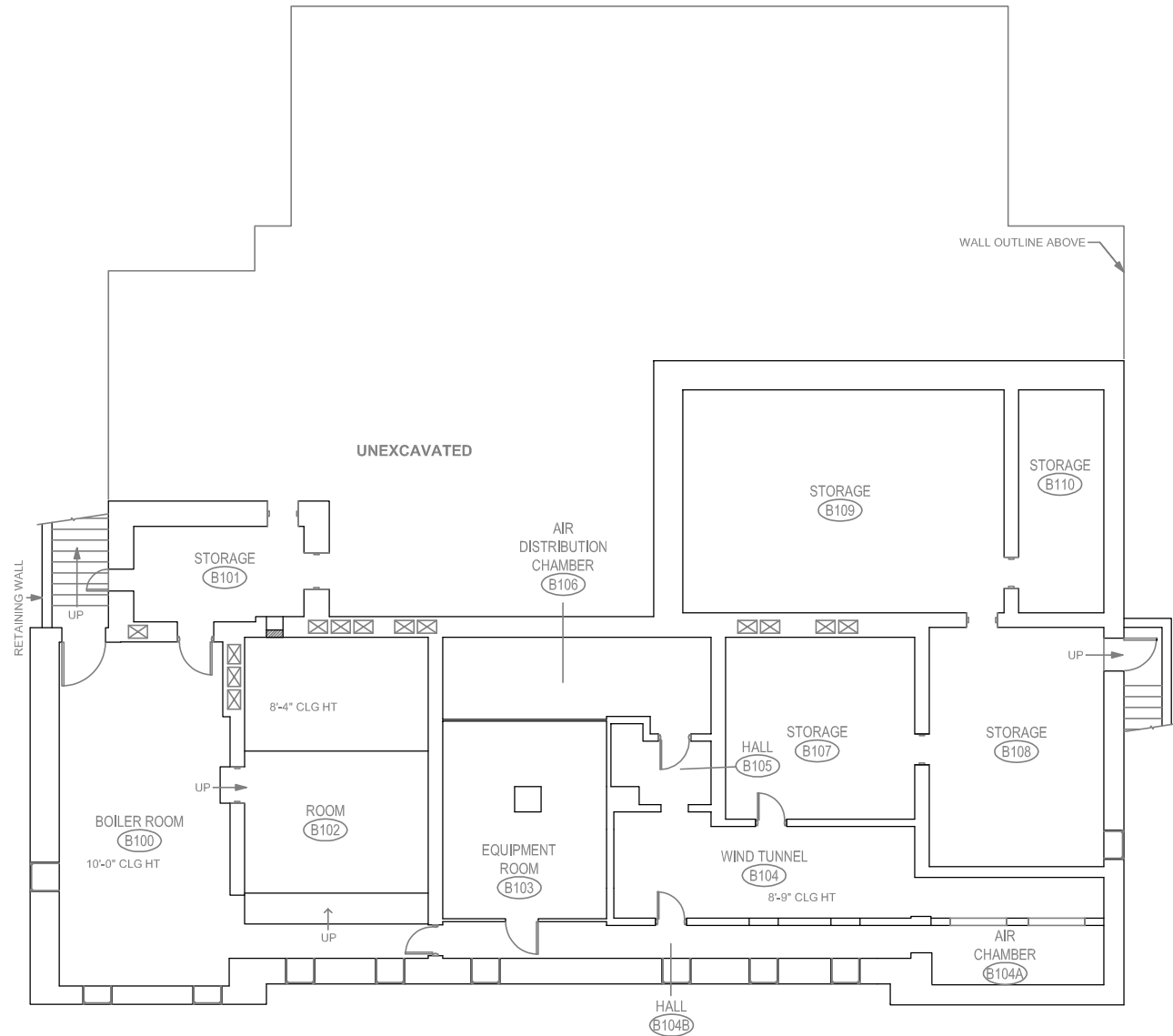
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CHRONOLOGY DRAWINGS

APPENDIX I

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May 22, 2025 - 9:48am C:\Users\Nikuraman\OneDrive - Bodwe - Local\LC041222 NPS HQSP Buckstaff Bathhouse HSR - New CAD Plans\DWG - 241252 NPS Buckstaff Bathhouse - Bodwe BASEMENT FLDwg - USER Nikuraman

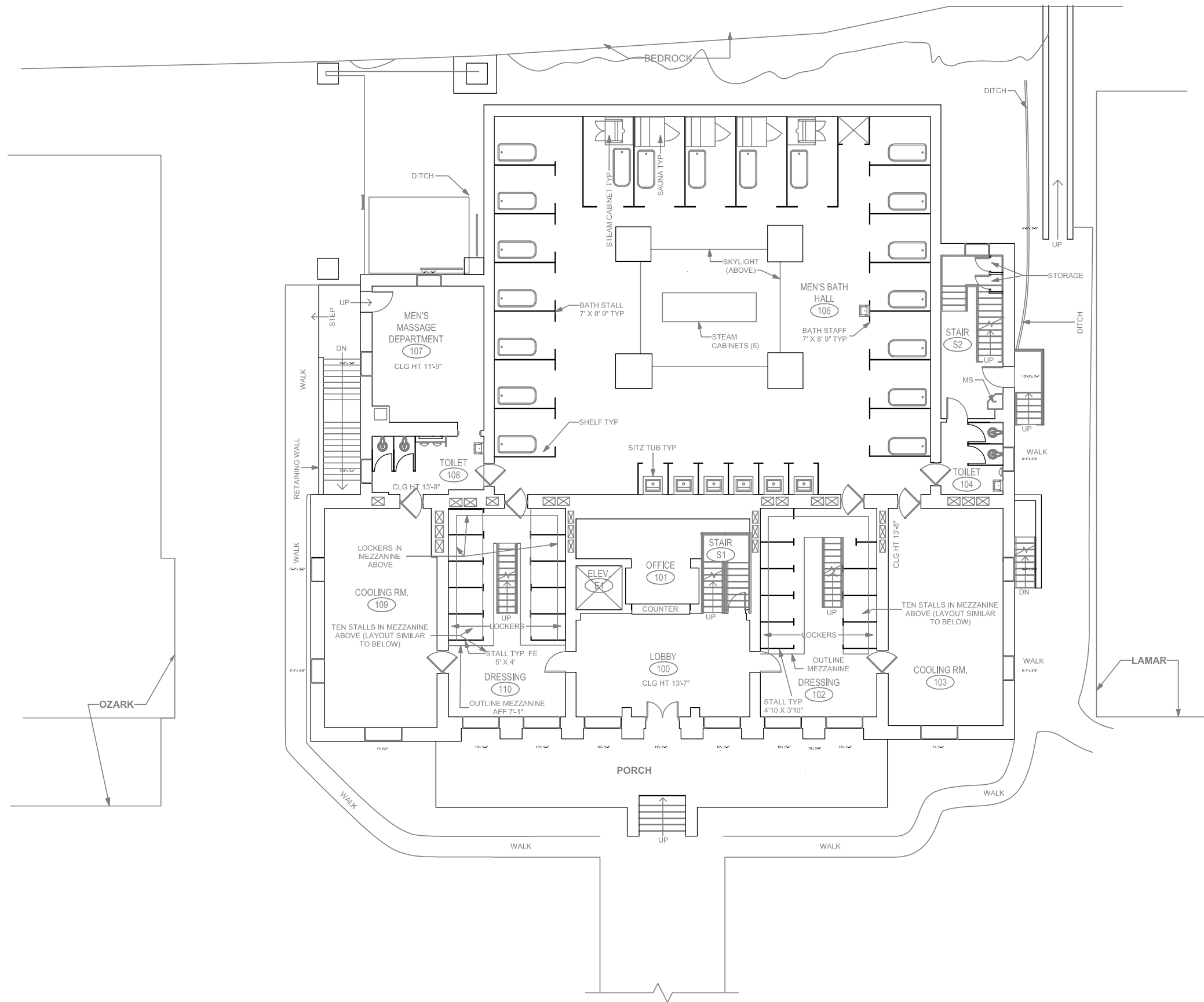


CHRONOLOGY DRAWINGS

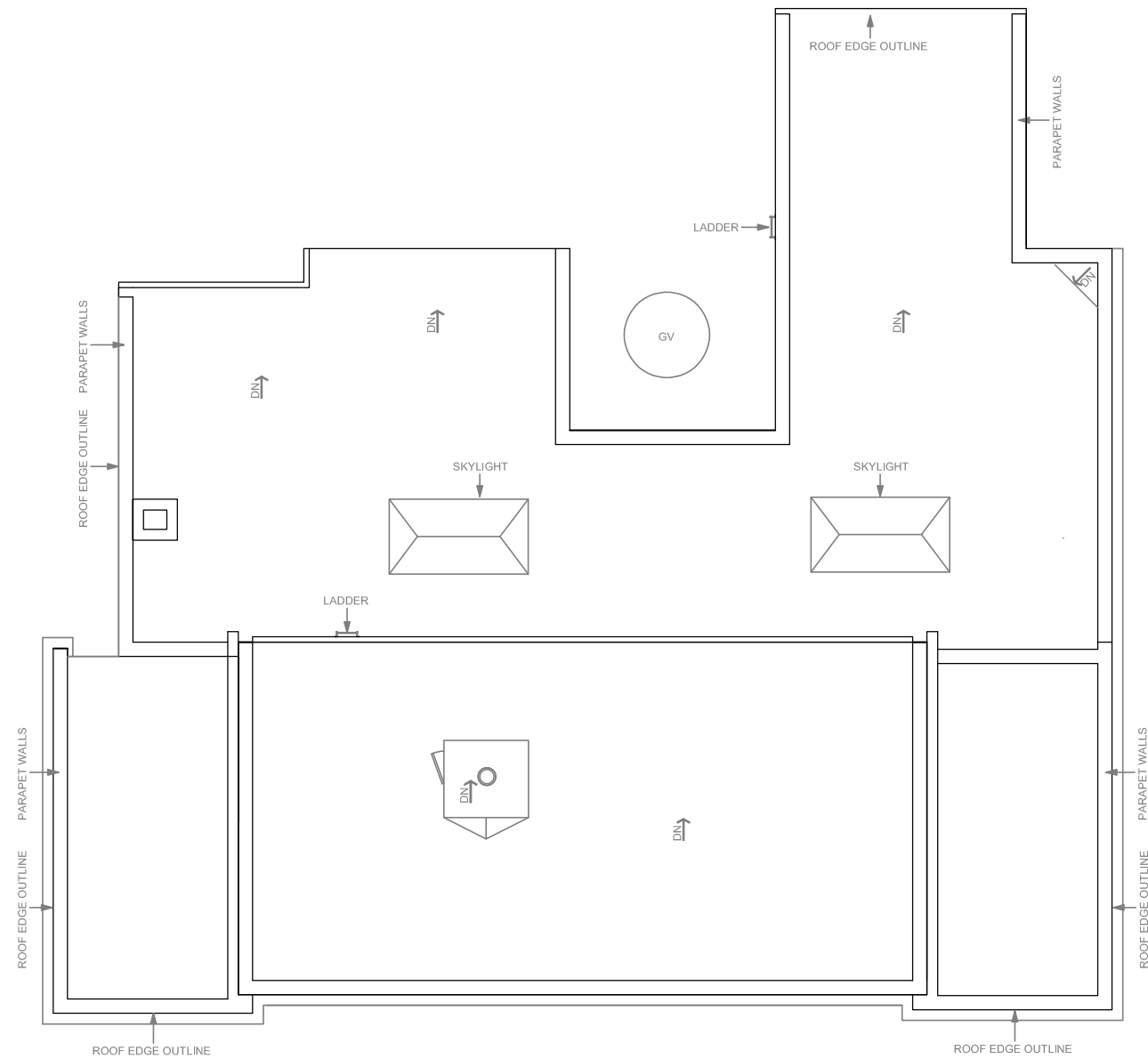
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	DRAWN BY: NSL			PMIS NO. 177425?
	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60

BUCKSTAFF BATHHOUSE HSR
HOT SPRINGS NATIONAL PARK
HOT SPRINGS, AK

May 22, 2026 - 9:56am C:\Users\Nikolaev\OneDrive - Bodwe\LC0341222 NPS HOSP Buckstaff Bathhouse HSR - New CAD Plant\DWG\ 241252 NPS Buckstaff Bathhouse - Bodwe FIRST FLOOR PLAN - USER Nikolaev

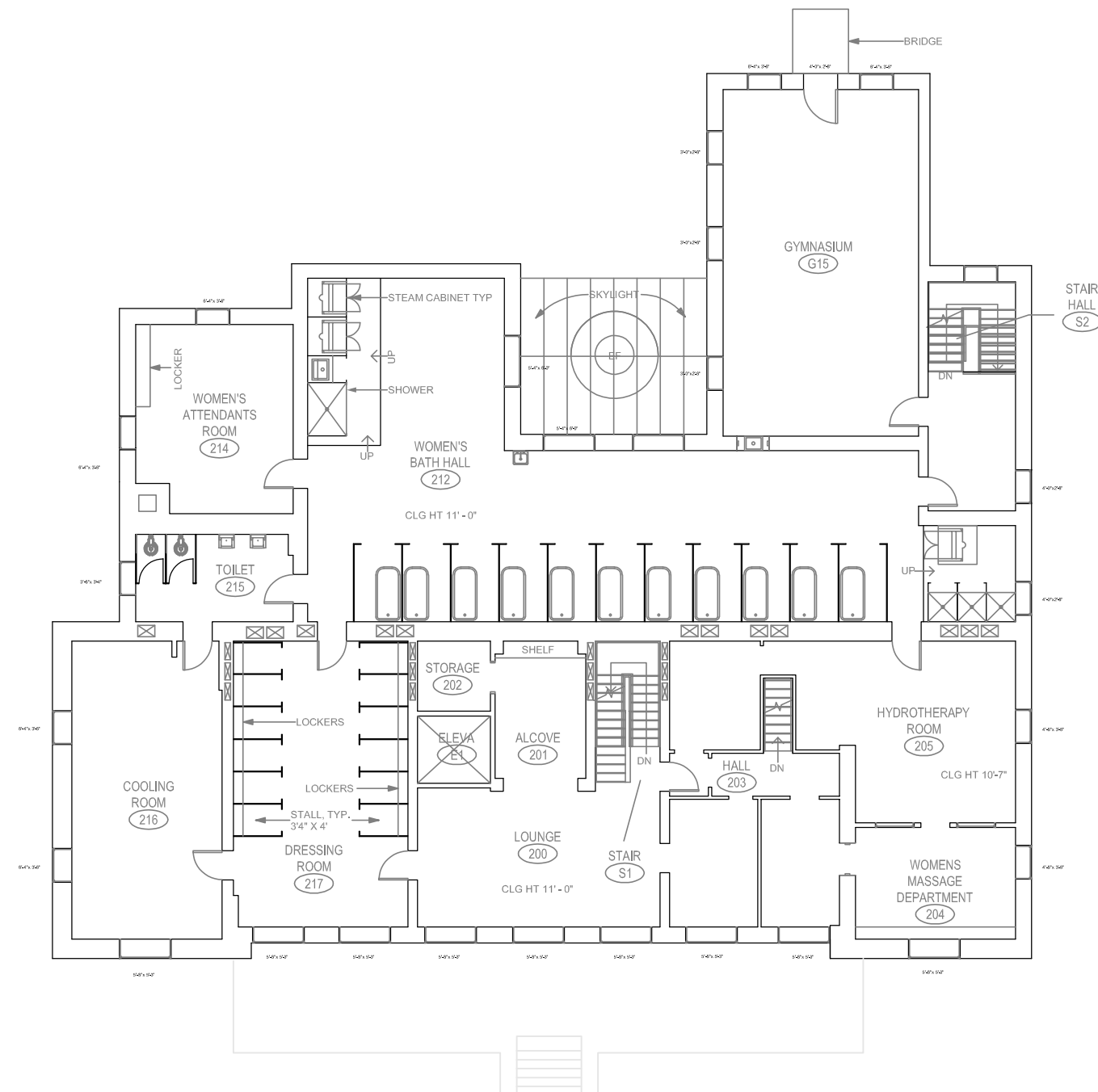


CHRONOLOGY DRAWINGS				
A/E FIRM	DESIGNED:	SUB SHEET NO.	1912 FIRST FLOOR PLAN	DRAWING NO.
PRIME:	XXX			XXX/XXXX
BODWE GROUP KALAMAZOO, MI.	DRAWN BY:			PMIS NO.
	NSL			177425?
	TECH. REVIEW:		BUCKSTAFF BATHHOUSE HSR HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK	SHEET
SUBCONTRACTOR:	XXX			OF 60
RATIO ARCHITECTS INDIANAPOLIS, IN.	DATE:	2/19/2026		



CHRONOLOGY DRAWINGS

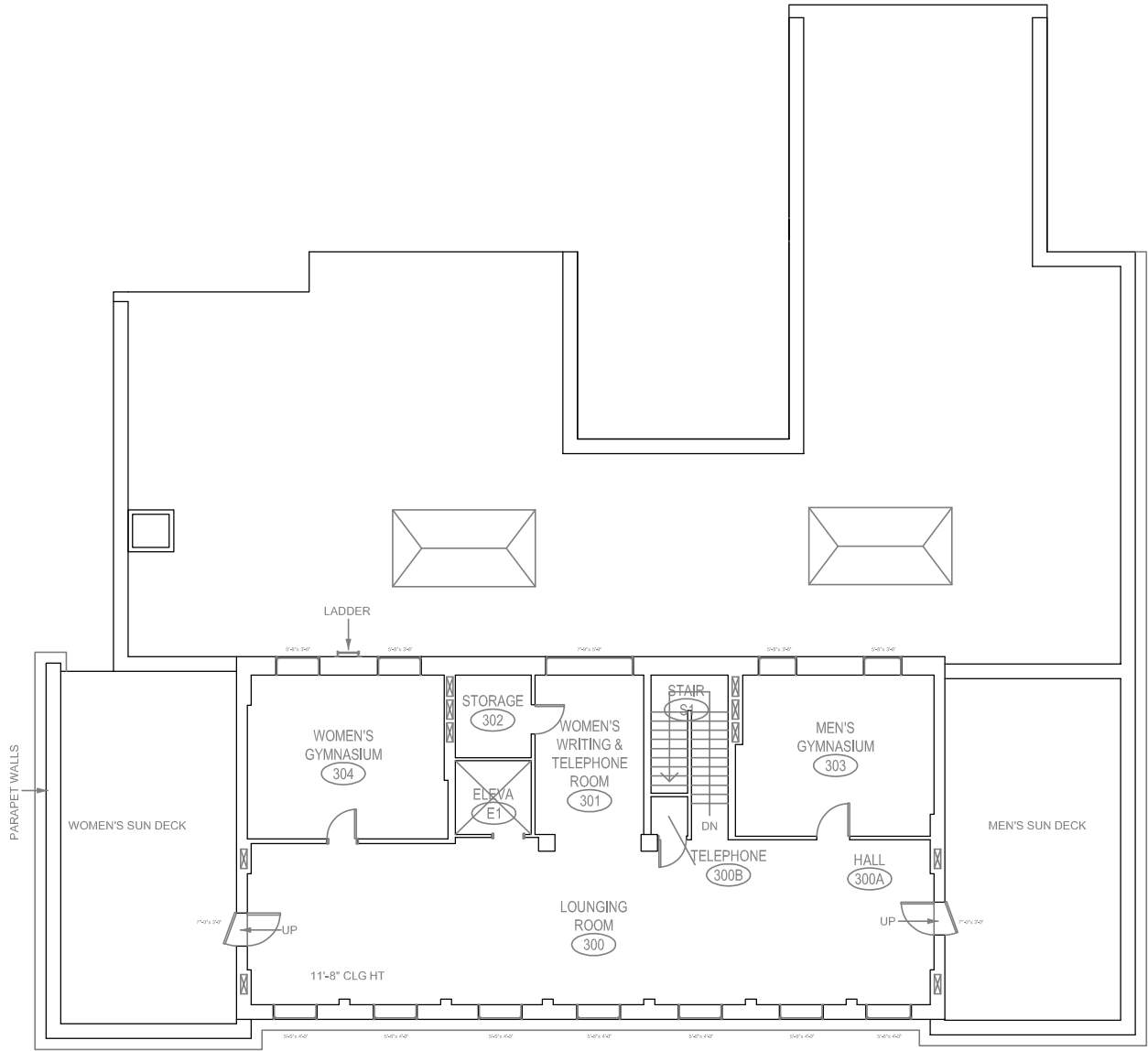
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	DRAWN BY: NSL			PMIS NO. 177425?
	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60



CHRONOLOGY DRAWINGS

A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO DESIGN INDIANAPOLIS, IN.	DESIGNED:	SUB SHEET NO.	1912 SECOND FLOOR PLAN BUCKSTAFF BATHHOUSE HSR HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK	DRAWING NO.
	XXX			XXX/XXX
	DRAWN BY:			PMS NO.
	NSL			177425?
	TECH. REVIEW:			SHEET
	XXX			OF 60
	DATE:			
	2/19/2026			

May 22, 2025 - 1:39pm C:\Users\Nolan\OneDrive - Bodwell LLC\1221\222 NPS HOSP Buckstaff Bathhouse HSR - New CAD Plans\DWG - 247252 NPS Buckstaff Bathhouse - Below Third Floor and Roof Plan.dwg - USER: Nkulanman

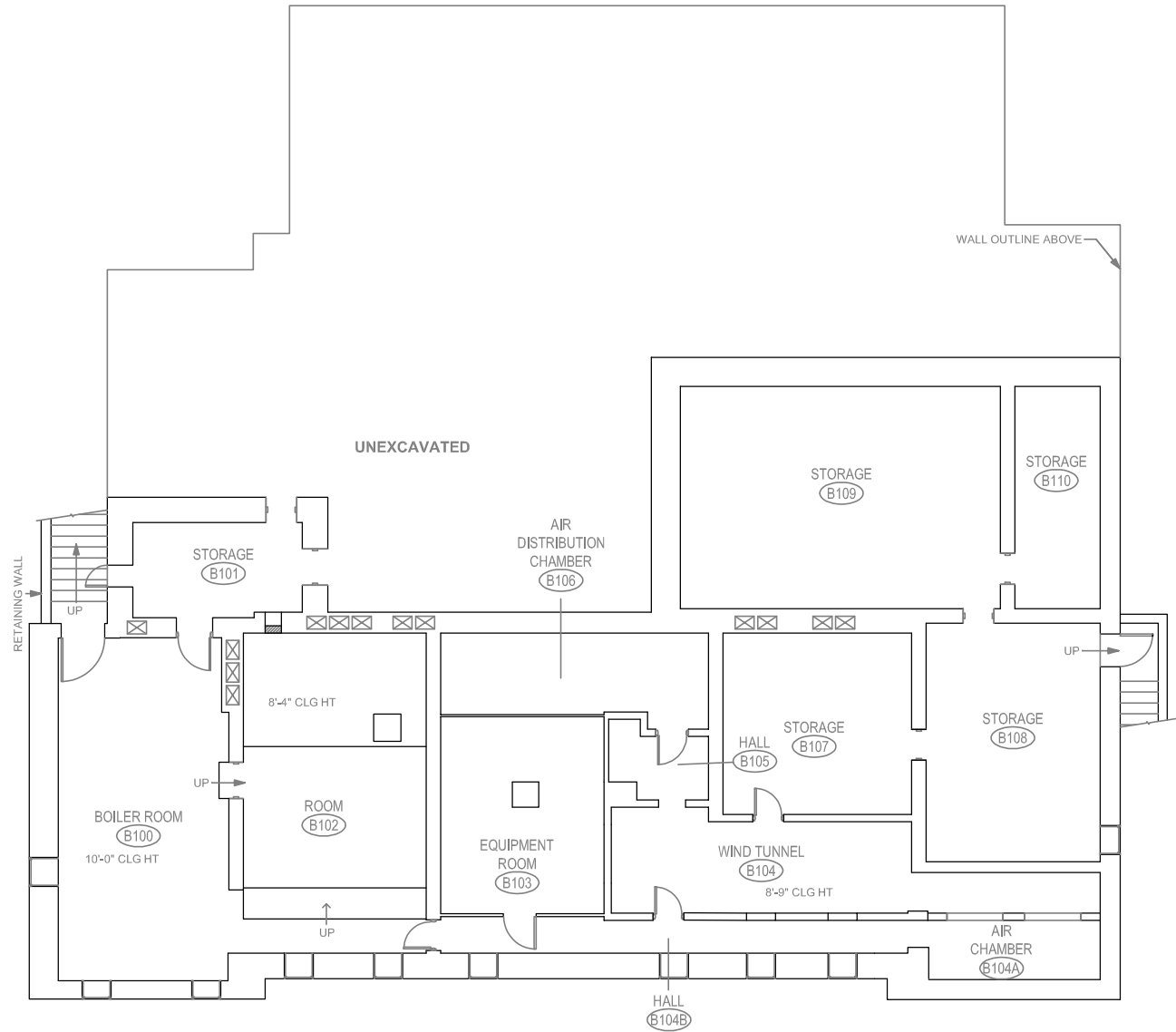


CHRONOLOGY DRAWINGS

A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	1912 THIRD FLOOR PLAN	DRAWING NO. XXX/XXXX
	DRAWN BY: NSL			PMIS NO. 177425?
	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60

BUCKSTAFF BATHHOUSE HVAC
HOT SPRINGS NATIONAL PARK
HOT SPRINGS, AK

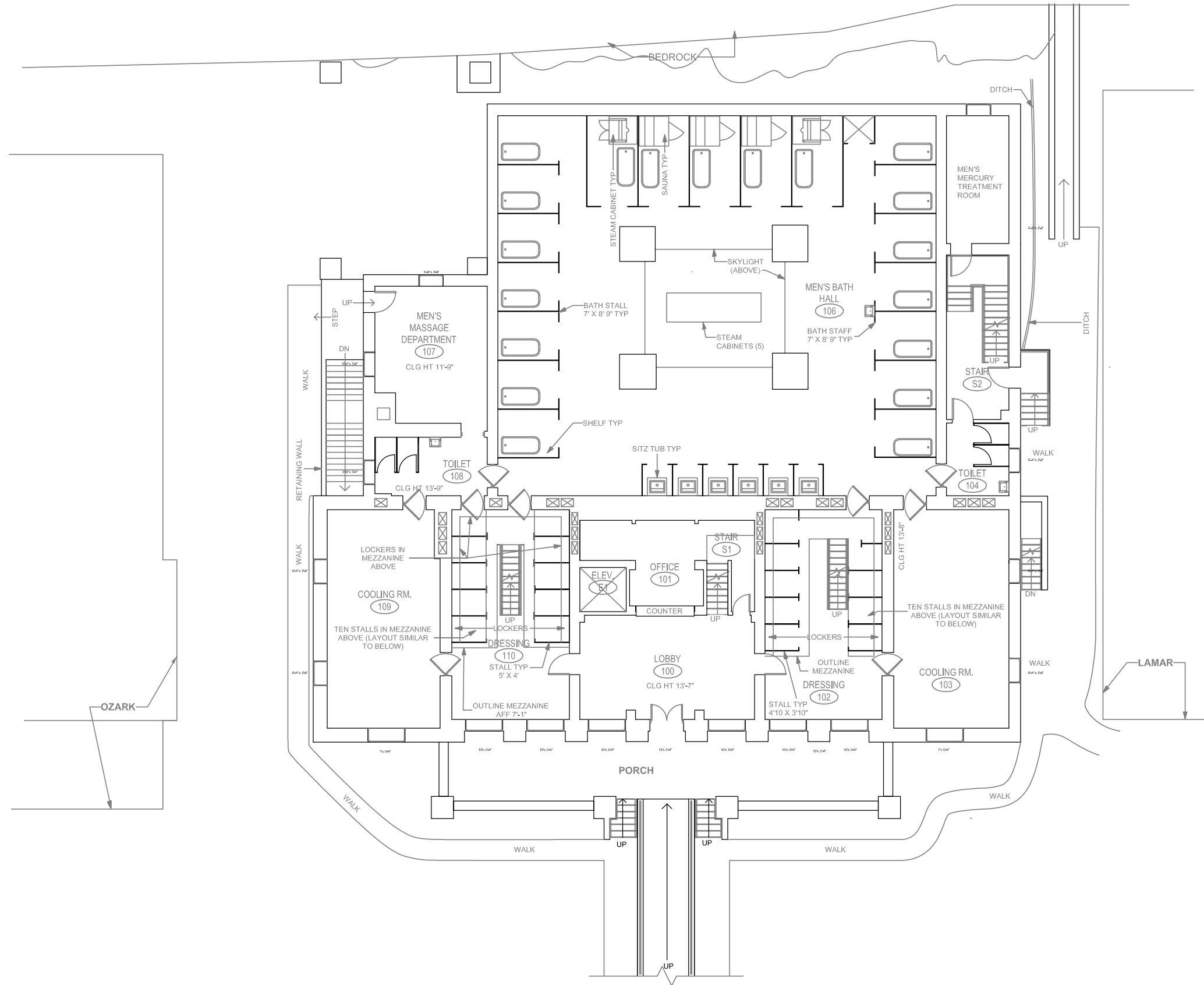
May 22, 2026 - 9:42am C:\Users\Nikuraman\OneDrive - Bodwe LLC\1221 1221 NPS HQSP NPS HQSP Buckstaff Bathhouse HSR - New CAD Plans\DWG - 247252 NPS Buckstaff Bathhouse - Bodwe BASEMENT FLDwg - USER Nikuraman



CHRONOLOGY DRAWINGS

A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	1922 BASEMENT PLAN	DRAWING NO. XXX/XXXX
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	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60

May 22, 2025 - 9:56am C:\Users\Nikolas\OneDrive - Bodwe LLC\1221\1221 NPS HOSP Buckstaff Bathhouse HSR - New CAD Plans\DWG\ 241252 NPS HOSP Buckstaff Bathhouse - Bodwe FIRST FLOOR PLAN - USER Nikolas



CHRONOLOGY DRAWINGS

A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	1922 FIRST FLOOR PLAN	DRAWING NO. XXX/XXXX
	DRAWN BY: NSL			PMIS NO. 177425?
	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60

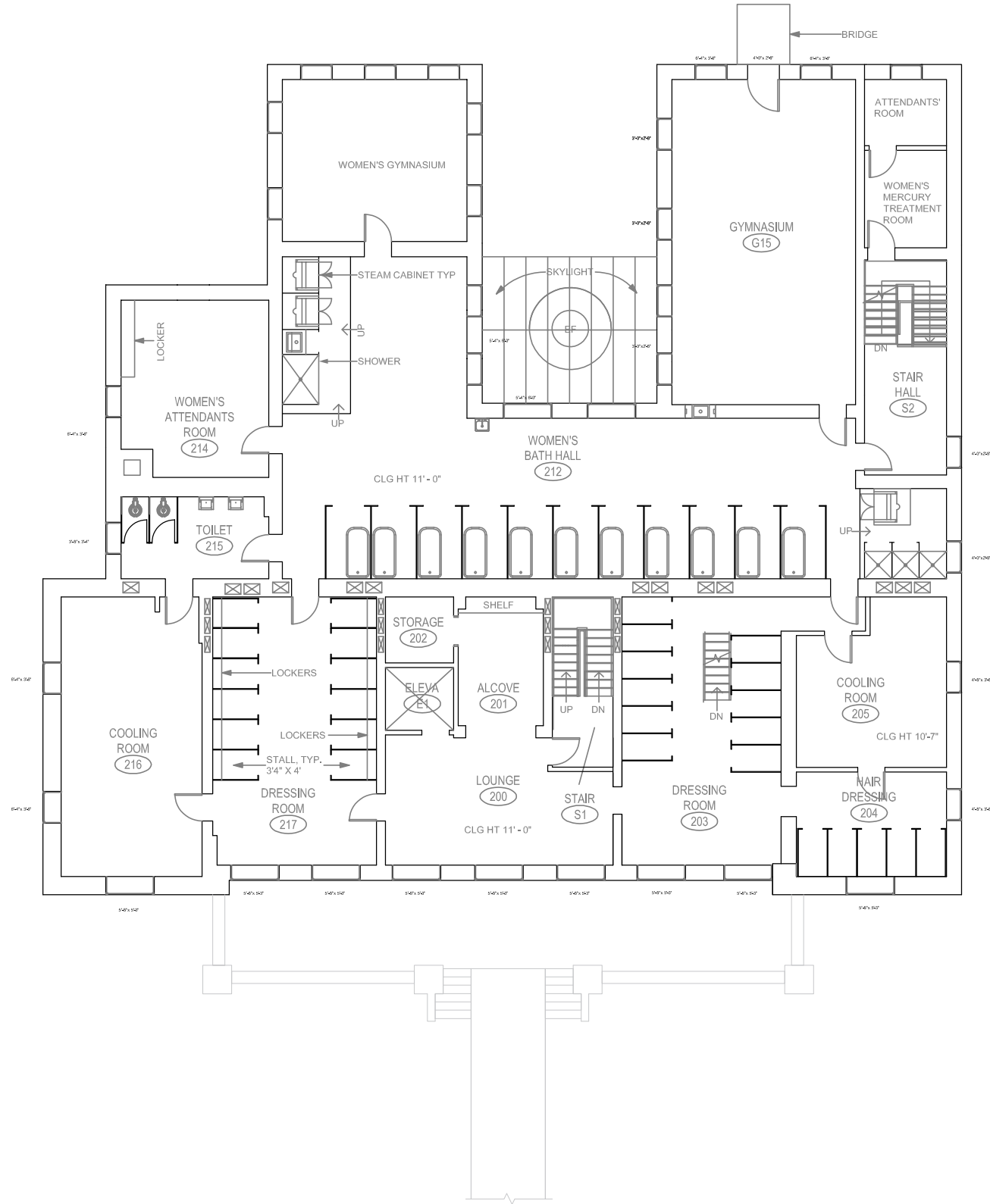
BUCKSTAFF BATHHOUSE HSR
HOT SPRINGS NATIONAL PARK
HOT SPRINGS, AK

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CHRONOLOGY DRAWINGS				
A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	1922 ROOF PLAN BUCKSTAFF BATHHOUSE HVAC HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK	DRAWING NO. XXX/XXXX
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	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60

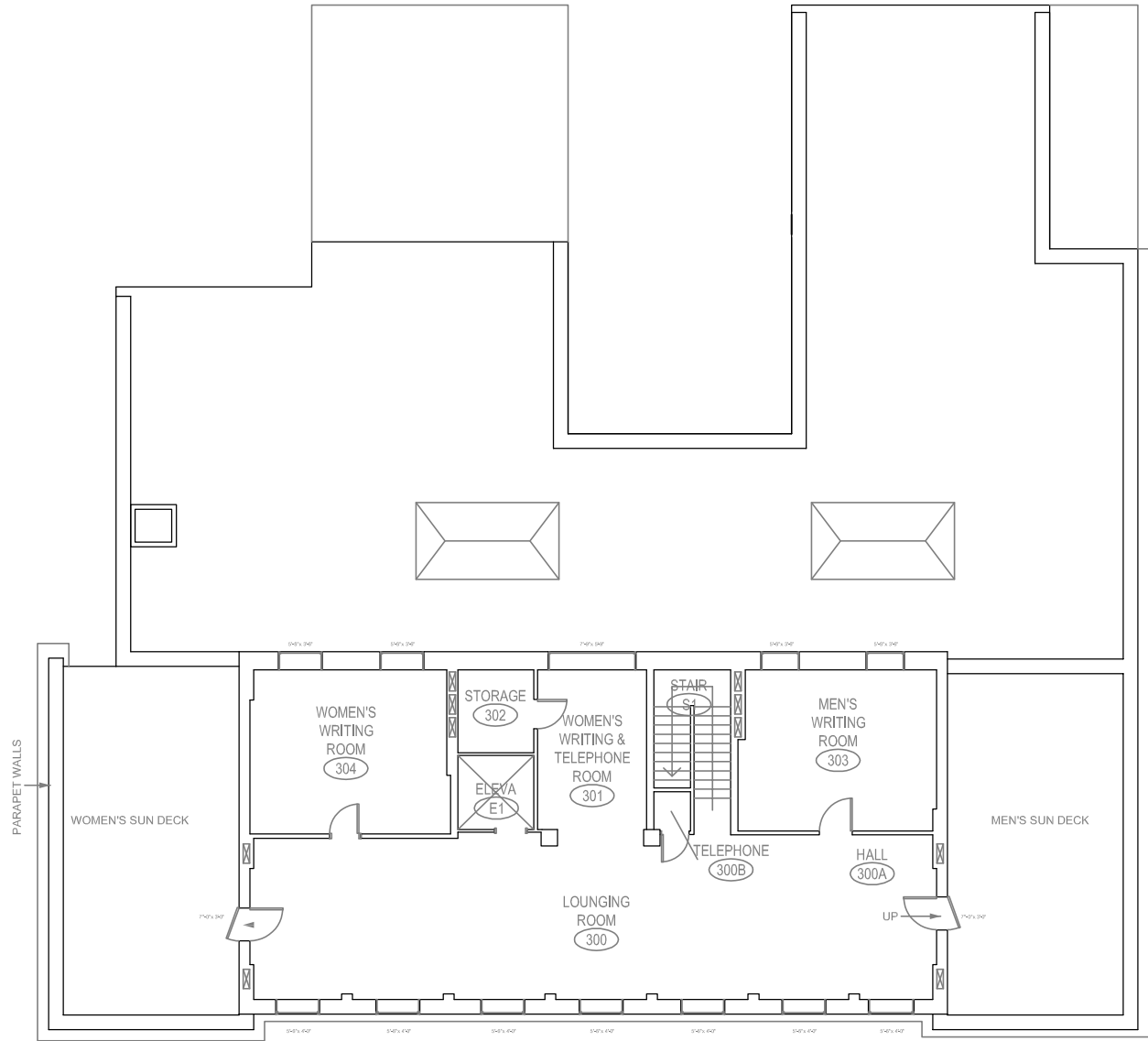
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CHRONOLOGY DRAWINGS

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PRIME:	DRAWN BY: NSL			PMIS NO. 177425?
BODWE GROUP KALAMAZOO, MI.	TECH. REVIEW: XXX			SHEET OF 60
SUBCONTRACTOR:	DATE: 2/19/2026			
RATIO DESIGN INDIANAPOLIS, IN.			BUCKSTAFF BATHHOUSE HSR HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK	

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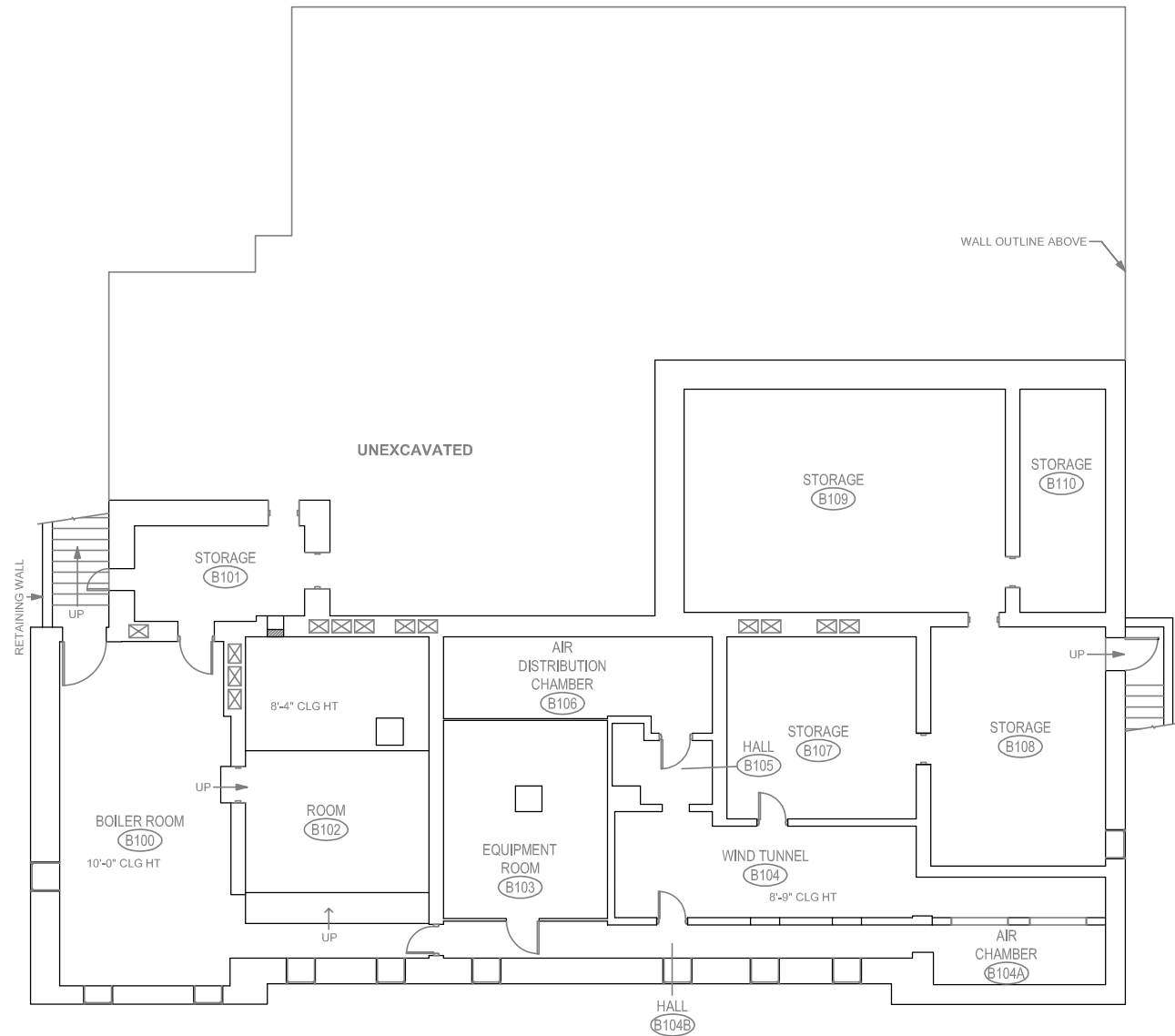


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	NSL			177425?
	TECH. REVIEW:		BUCKSTAFF BATHHOUSE HVAC HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK	SHEET
SUBCONTRACTOR:	XXX			OF 60
RATIO ARCHITECTS INDIANAPOLIS, IN.	DATE:	2/19/2026		

TREATMENT DRAWINGS

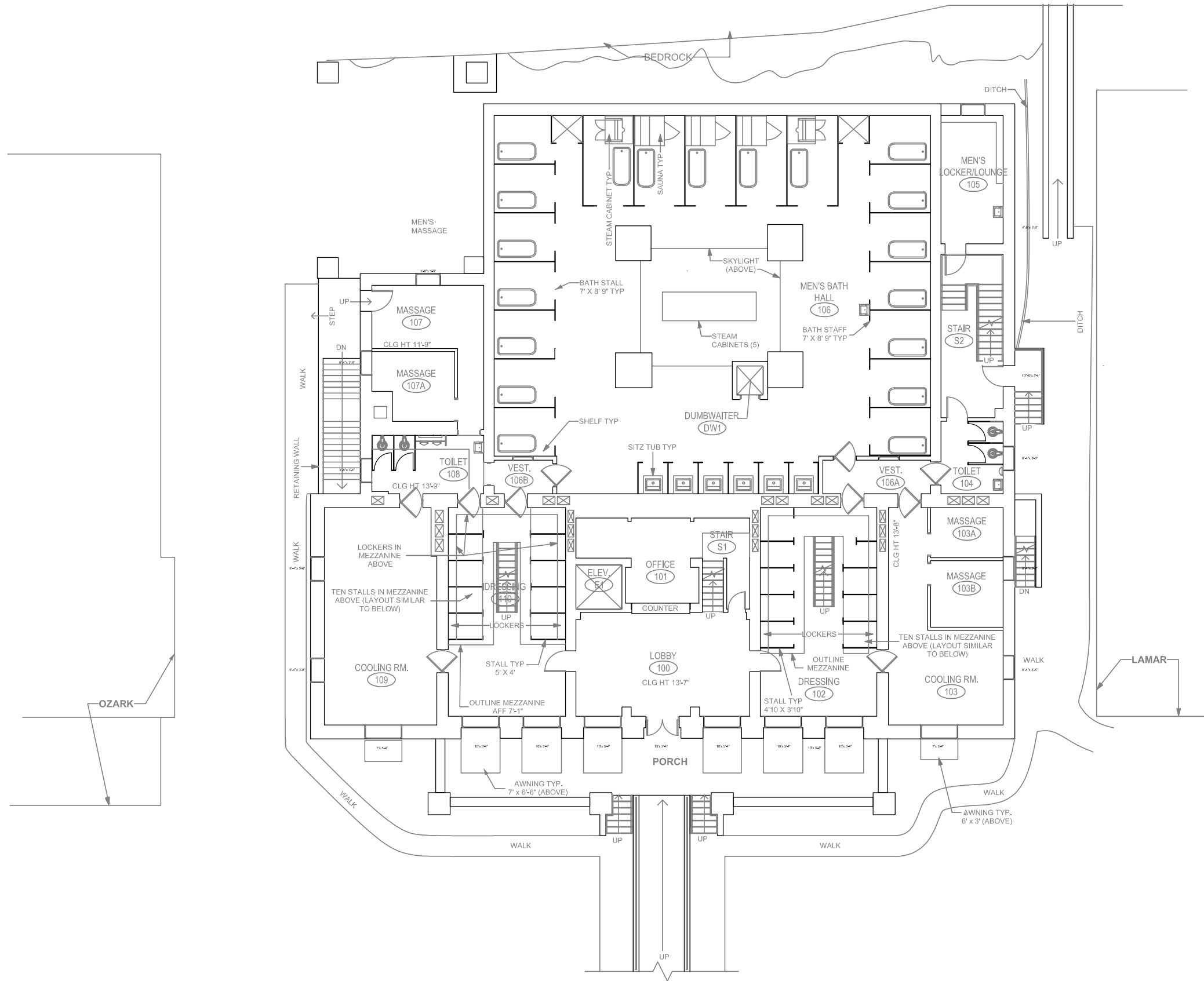
APPENDIX J

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A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	EXISTING BASEMENT PLAN	DRAWING NO. XXX/XXXX
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BUCKSTAFF BATHHOUSE HSR HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK				

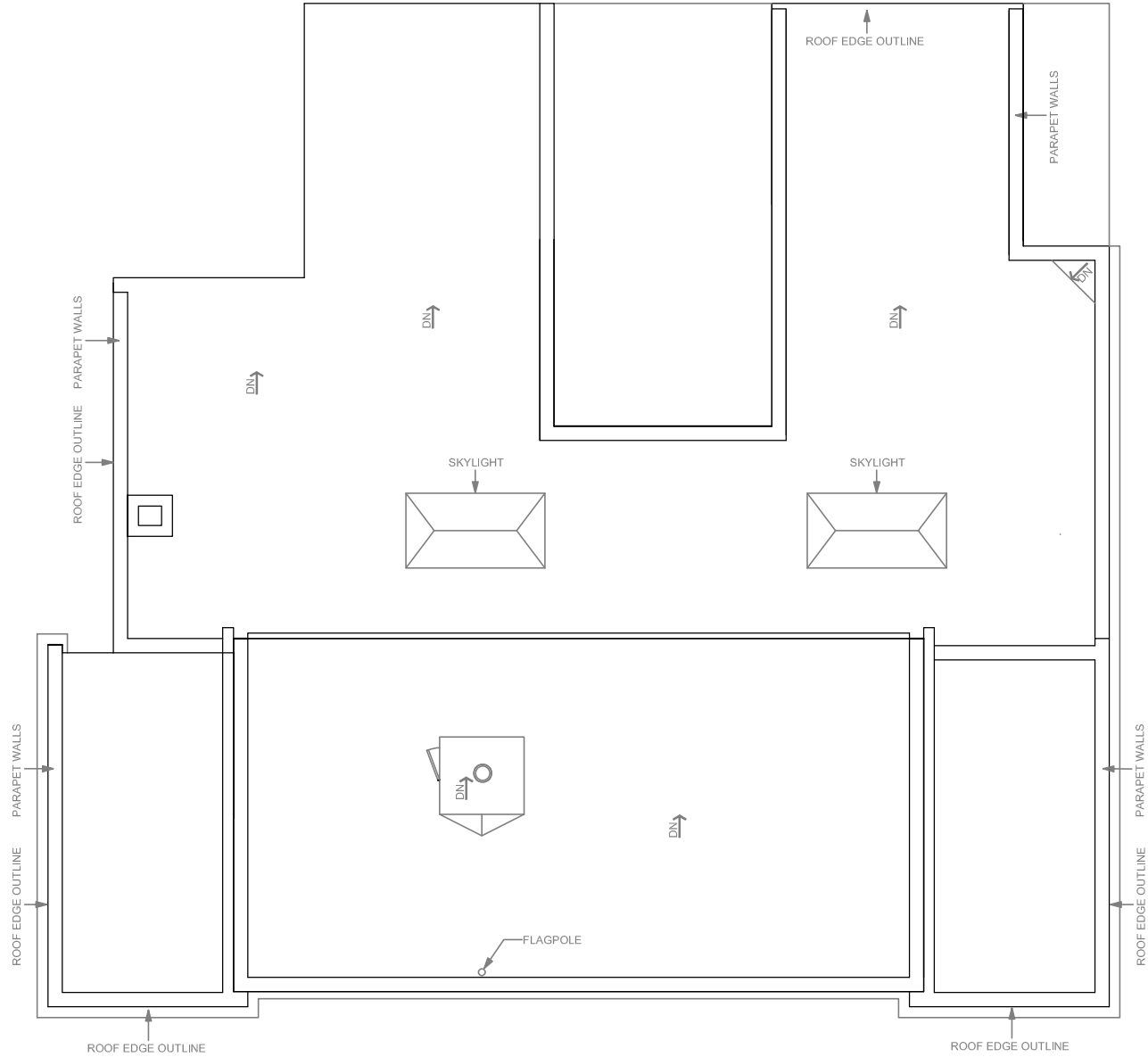
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A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	EXISTING FIRST FLOOR PLAN	DRAWING NO. XXX/XXXX
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	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60

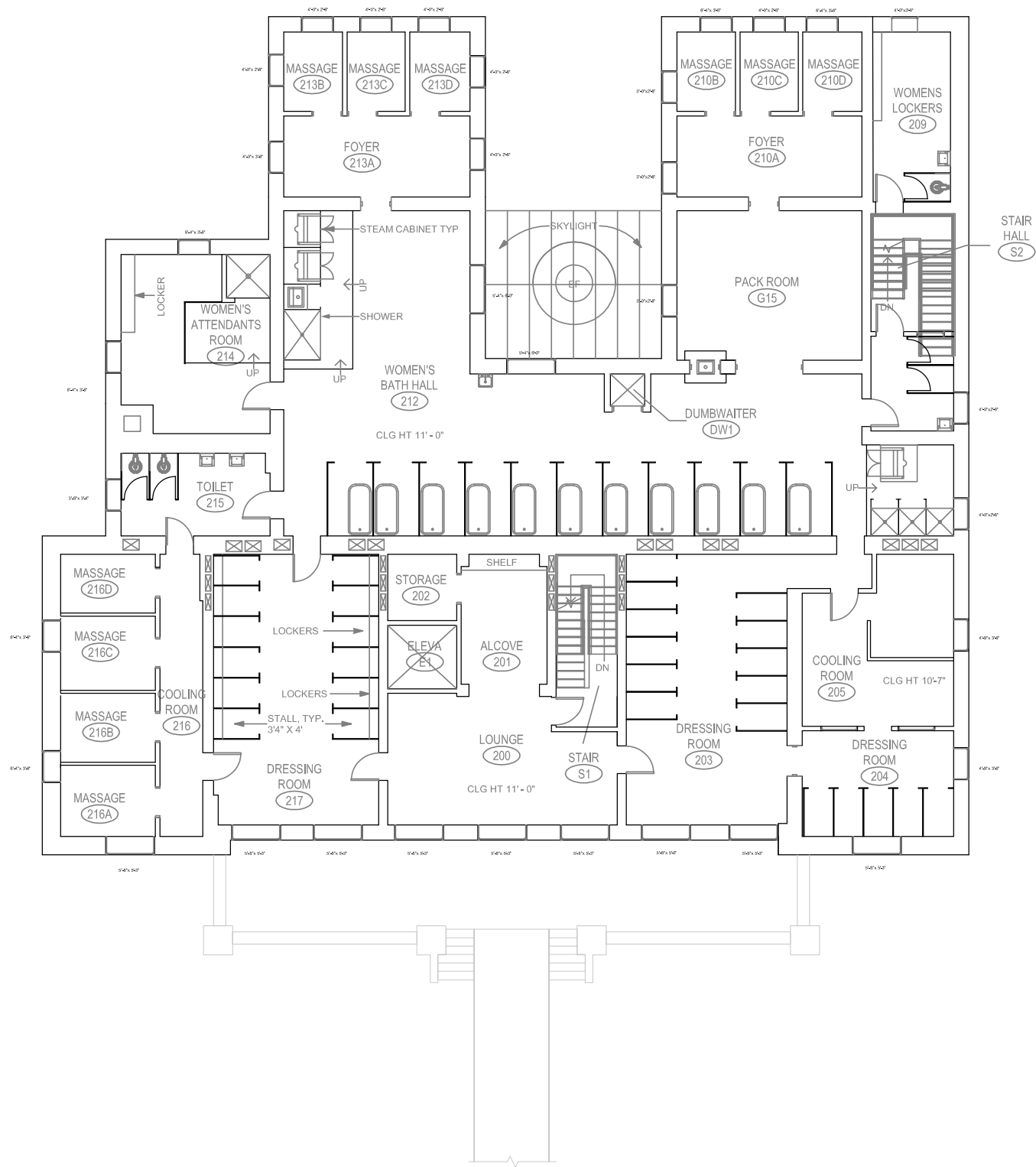
BUCKSTAFF BATHHOUSE HSR
HOT SPRINGS NATIONAL PARK
HOT SPRINGS, AK

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A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	EXISTING ROOF PLAN	DRAWING NO. XXX/XXXX
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	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60
BUCKSTAFF BATHHOUSE HVAC HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK				

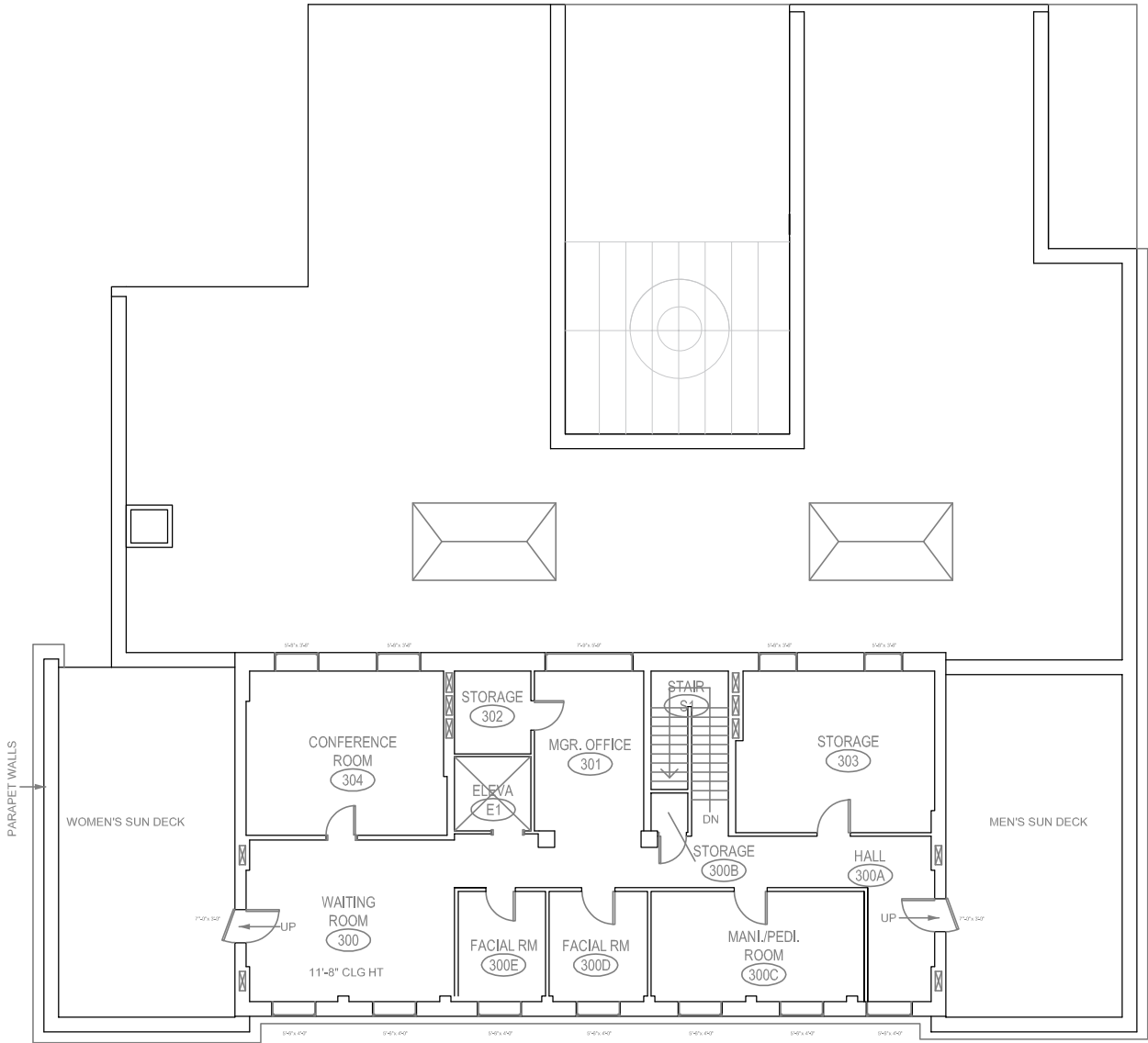
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A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO DESIGN INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	EXISTING SECOND FLOOR PLAN	DRAWING NO. XXX/XXXX
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	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60

BUCKSTAFF BATHHOUSE HSR
HOT SPRINGS NATIONAL PARK
HOT SPRINGS, AK

May 22, 2025 - 1:46pm C:\Users\Nolan\OneDrive - Bodwell LLC\1221\1221 NPS HQSP Buckstaff Bathhouse HSR - New CAD Plans\DWG - 241252 NPS Buckstaff Bathhouse - Below Third Floor and Roof Plan.dwg - USER: Nolanman



A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	EXISTING THIRD FLOOR PLAN	DRAWING NO. XXX/XXXX
	DRAWN BY: NSL			PMIS NO. 177425?
	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60

BUCKSTAFF BATHHOUSE HVAC
HOT SPRINGS NATIONAL PARK
HOT SPRINGS, AK

The floor plan of the second floor of the Lamar Hotel is a complex layout with numerous rooms and corridors. The plan is oriented with the street (Lamar) at the bottom. The central area is a large, open space with many small rooms, likely for guest use. To the left of this central area is a large room labeled 'MASSAGE' (107) and 'COOKING RM.' (108). To the right is another large room labeled 'MASSAGE' (109) and 'COOKING RM.' (110). The central area also includes a 'LOBBY' (105) and an 'OFFICE' (106). The plan shows various corridors, stairs, and service areas, including a 'MEN'S BATH' (102), 'BATH STAFF' (103), and 'MEN'S LOCKER DRESS' (101). The plan also shows the building's exterior, including the porch and the surrounding streets.

PARROT WALLS

WOMEN'S SUN DECK

CONFERENCE ROOM (304)

STORAGE (302)

EXTRA (E)

MGR. OFFICE (301)

STORAGE (303)

STORAGE (300B)

HALL (300A)

WAITING ROOM (300)

11'-8" CLG HT

FACIAL RM (300E)

FACIAL RM (300D)

MANIPUL. ROOM (300C)

UP

DOWN

UP

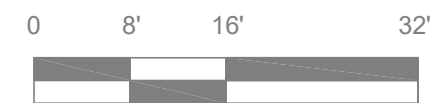
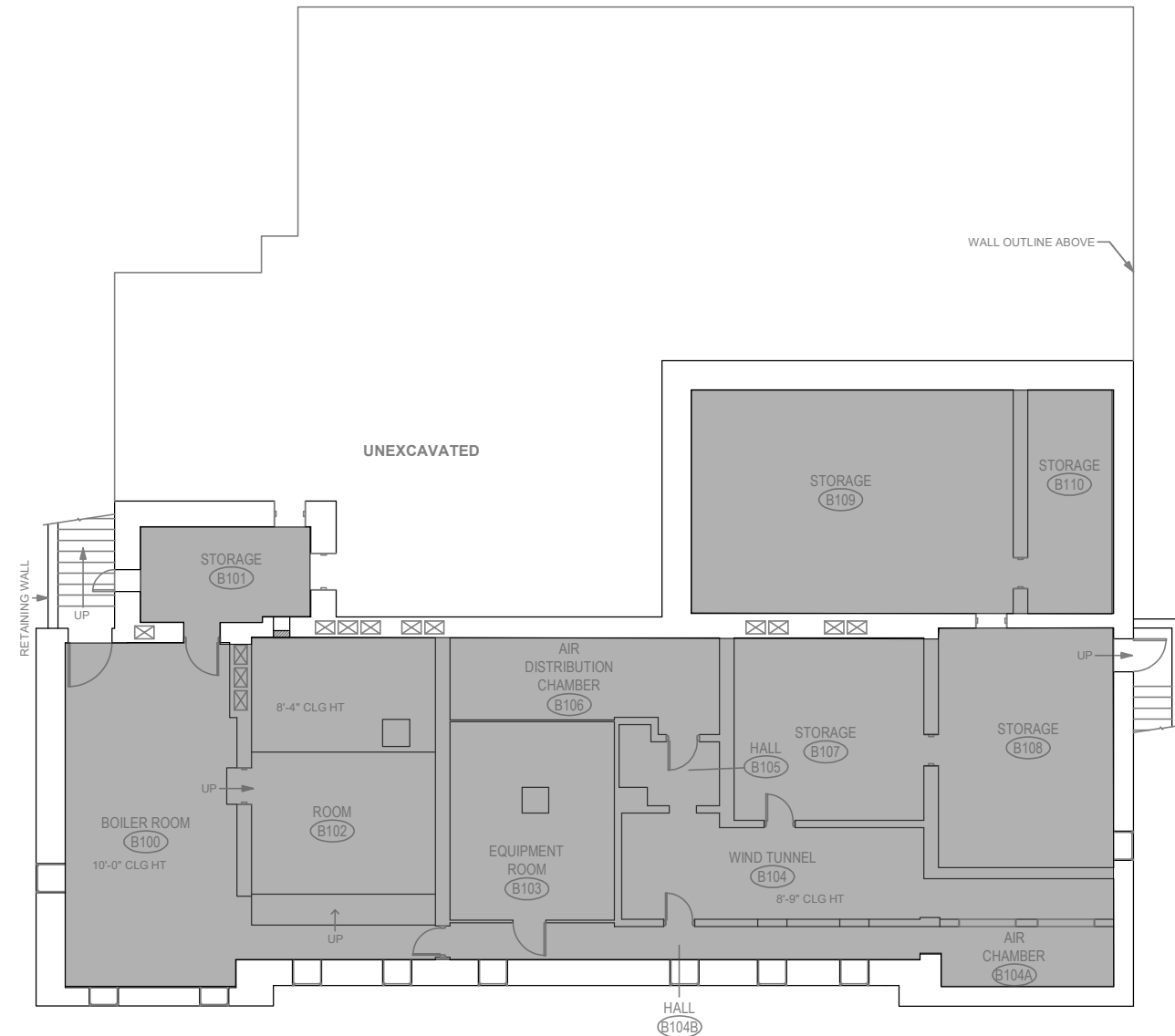
DOWN

MEN'S SUN DECK

OCCUPANCY KEY

	STAFF
	COMMON
	WOMEN
	MEN
	SINGLE-OCCUPANCY

A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	OCCUPANCY PLANS BUCKSTAFF BATHHOUSE HSR HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK	DRAWING NO. XXX/XXXX
	DRAWN BY: NSL			PMIS NO. 177425?
	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60



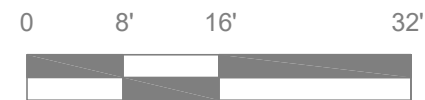
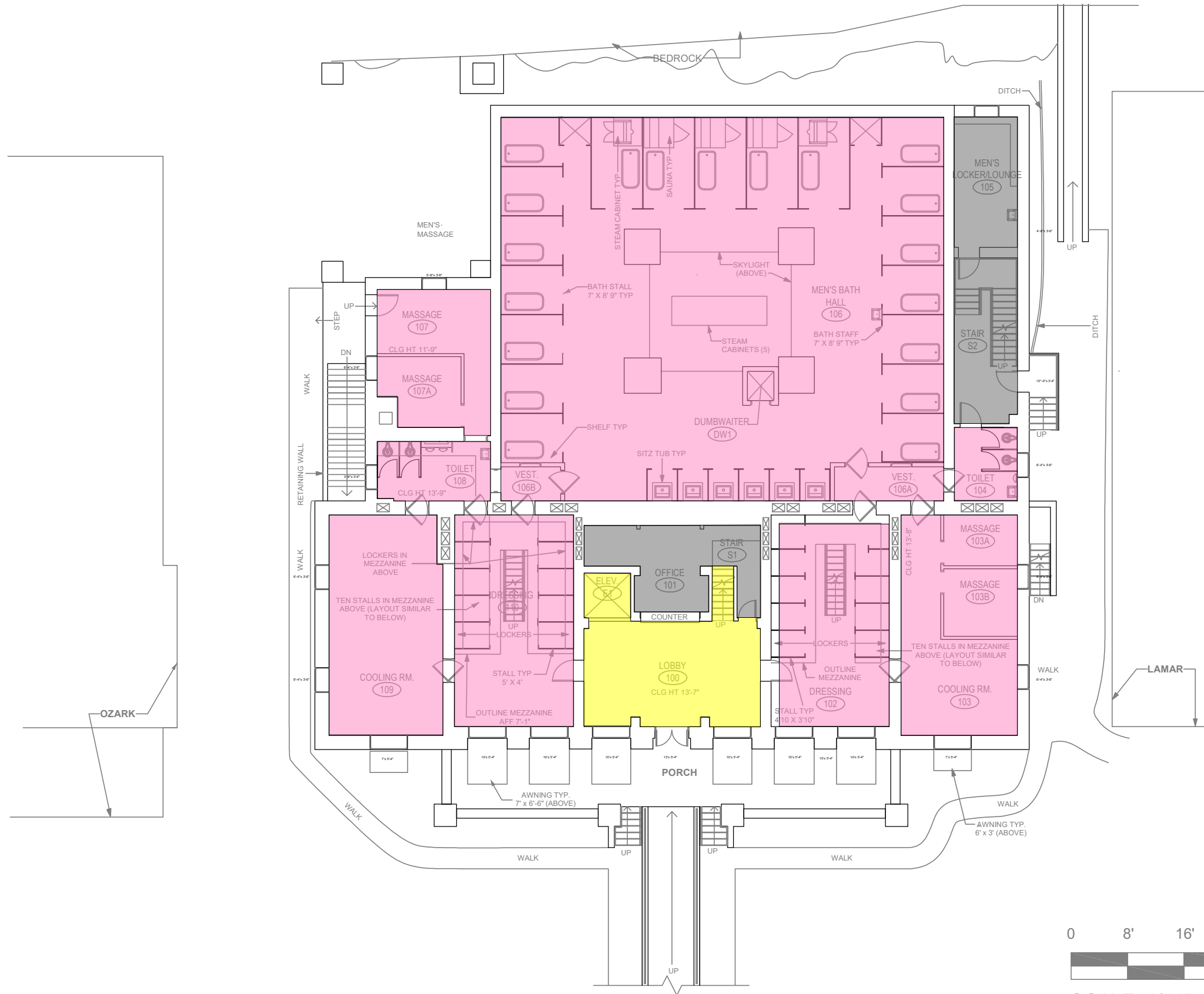
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OCCUPANCY KEY

	STAFF
	COMMON
	WOMEN
	MEN
	SINGLE-OCCUPANCY

A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	BASEMENT OCCUPANCY PLAN BUCKSTAFF BATHHOUSE HSR HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK	DRAWING NO. XXX/XXXX
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	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60

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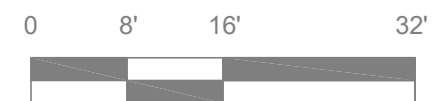


SCALE: 1/16" = 1'-0"

OCCUPANCY KEY	
	STAFF
	COMMON
	WOMEN
	MEN
	SINGLE-OCCUPANCY

A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	FIRST FLOOR OCCUPANCY PLAN	DRAWING NO. XXX/XXXX
	DRAWN BY: NSL			PMIS NO. 177425?
	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60
BUCKSTAFF BATHHOUSE HSR HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK				

A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI.		DESIGNED: XXX	SUB SHEET NO.	SECOND FLOOR OCCUPANCY PLAN	DRAWING NO. XXX/XXXX
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DATE: 2/19/2026		TECH. REVIEW: XXX			SHEET OF 60
					BUCKSTAFF BATHHOUSE HSR HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK



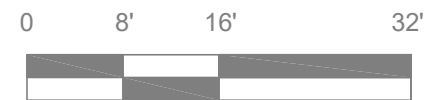
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OCCUPANCY KEY

	STAFF
	COMMON
	WOMEN
	MEN
	SINGLE-OCCUPANCY

A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	THIRD FLOOR OCCUPANCY PLAN BUCKSTAFF BATHHOUSE HVAC HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK	DRAWING NO. XXX/XXXX
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	DATE: 2/19/2026			OF 60

Jun 30, 2026 - 8:58pm C:\Users\NMcLennan\OneDrive - Bodine LLC\11252 NPS HOSP BUCKSTAFF Bathhouse HSR - New CAD Plans\11252 NPS HOSP BUCKSTAFF Bathhouse - Bodine THIRD FLR AND ROOF PLAN.dwg - USER: NMcLennan



SCALE: 1/16" = 1'-0"

OCCUPANCY KEY	
	STAFF
	COMMON
	WOMEN
	MEN
	SINGLE-OCCUPANCY

A/E FIRM PRIME: BODWE GROUP KALAMAZOO, MI. SUBCONTRACTOR: RATIO ARCHITECTS INDIANAPOLIS, IN.	DESIGNED: XXX	SUB SHEET NO.	THIRD FLOOR OCCUPANCY PLAN BUCKSTAFF BATHHOUSE HVAC HOT SPRINGS NATIONAL PARK HOT SPRINGS, AK	DRAWING NO. XXX/XXXX
	DRAWN BY: NSL			PMIS NO. 177425?
	TECH. REVIEW: XXX			SHEET
	DATE: 2/19/2026			OF 60

