Frank Hughes Memorial Library

Building Preservation Plan

LIBERTY, MISSOURI



May 29, 2020

STRATA
ARCHITECTURE + PRESERVATION

Cover Photo:
View looking northwest at the Frank Hughes Memorial Library. (STRATA 2020)

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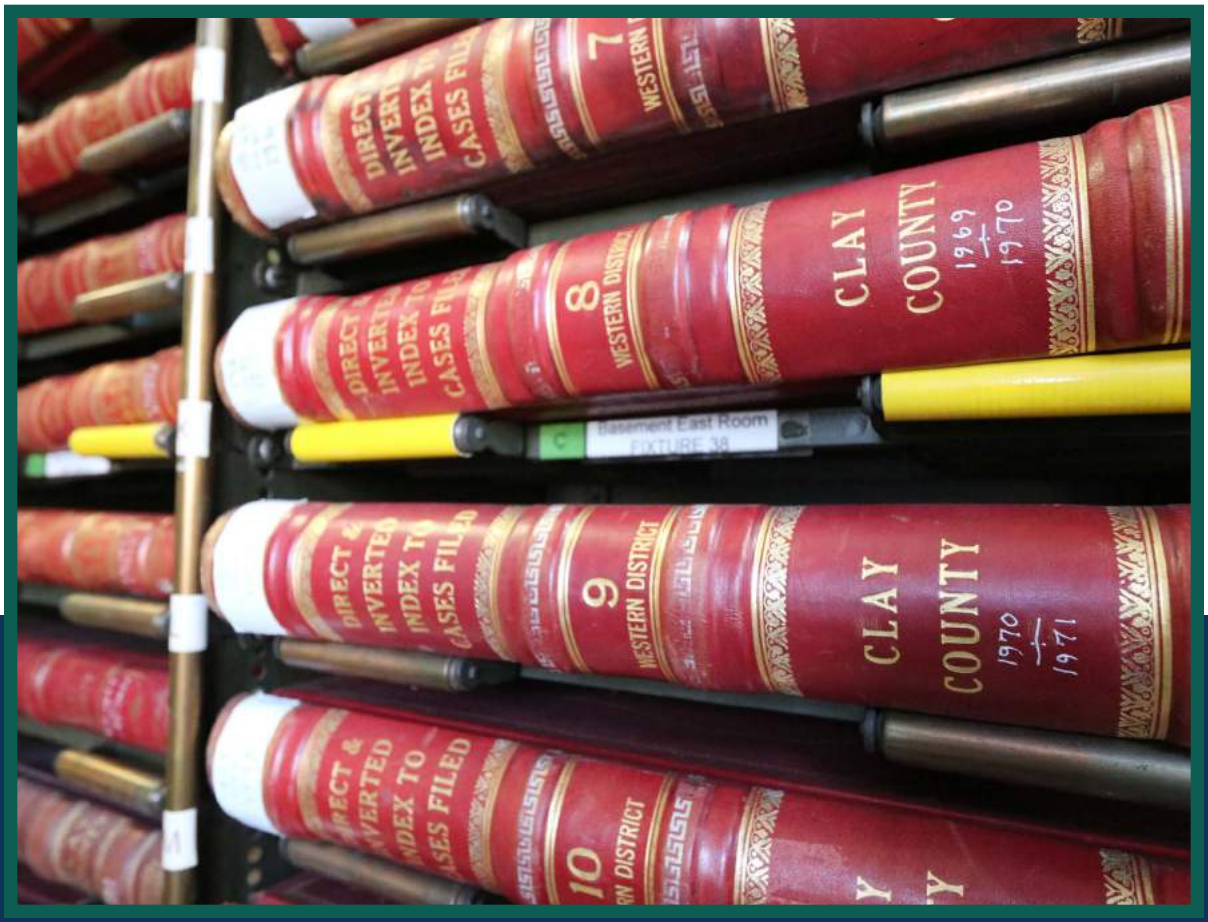
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View of some of the Clay County records in the Frank Hughes Memorial Library. (STRATA 2020)

1 INTRODUCTION

Chapter 1 | Introduction



Figure 1.1. View of the front (south elevation) of the Frank Hughes Memorial Library. (STRATA 2020)

Introduction

The Frank Hughes Memorial Library is located at 210 East Franklin Street in Liberty, Missouri. Constructed in 1940 as the first public library in Liberty, the building is still owned by the City of Liberty serving as the home for the Clay County Archives since the mid-1980s. The Frank Hughes Memorial Library is individually listed on the National Register of Historic Places under Criterion A for Social History and Criterion C for Architecture.

STRATA Architecture + Preservation (STRATA) and their Design Team were hired by the City of Liberty to conduct a Preservation Plan for the Frank Hughes Memorial Library. The plan assessed all major visible components of the building and documented their existing conditions. Based on the information compiled through the assessment and from conversations with the city and representatives from the archives, immediate, short-term, and long-term treatment recommendations were developed. A maintenance schedule was also created to help with the future maintenance of the building. It is located in Appendix A.

This material was produced with assistance from the Historic Preservation Fund, administered by the National Park Service, Department of the Interior and Missouri Department of Natural Resources, State Historic Preservation Office. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Department of the Interior or the Department of Natural Resources, State Historic Preservation Office, nor does the mention of trade names or commercial products constitute endorsement or recommendation. Federal laws prohibit discrimination on the grounds of race, color, sexual orientation, national origin, disabilities, religion, age, or sex. For more information, write to the Office of Equal Opportunity, U.S. Department of the Interior, Washington D.C. 20240.

Report Purpose and Report Organization

The goal of this Preservation Plan is to provide baseline existing conditions documentation of the historic building and serve as a guide for long-term care. This is a planning document that will help the City of Liberty and the Clay County Archives with the general maintenance of the building along with proposed future rehabilitation and upgrades. The assessment included field study, which was used to identify issues that require maintenance or repairs to preserve the structure. No destructive physical investigation or testing was included as part of this scope of work. Conversations with the City of Liberty and the Clay County Archives were used to identify modifications that are needed or desired to meet the Archive's long-term building use. The treatment recommendations are prioritized into immediate, short-term, and long-term treatment recommendations with an itemized cost estimate for the identified repairs and potential rehabilitations.

This Preservation Plan is organized into three parts.

- Chapter 1 includes this introduction and historical background.
- Chapter 2 documents the assessment of the existing conditions of the Frank Hughes Library.
- Chapter 3 includes treatment recommendations for the building. These are prioritized by immediate, short-term, and long-term treatment recommendations.
    - Immediate maintenance and repairs are required to correct life safety issues and prevent potential future failures.
    - The short-term treatment recommendations should be completed within 1 to 5 years to stabilize the building and address on-going issues.

- The long-term treatment recommendations should be completed within 5 to 10 years. These recommendations address more significant maintenance and repair issues and upgrades or renovations desired by the Owner.

A maintenance schedule was developed as part of this report. The maintenance schedule is based on the assessment of the building, current recommendations for historic buildings, and the National Parks Service Preservation Brief 47: *Maintaining the Exterior of Small and Medium Size Historic Buildings* by Sharon C. Park, FAIA. The Maintenance schedule is located in Appendix A.

Pre-Planning

Useful preservation and maintenance plans require the investment of time and money. It is recommended that a maintenance schedule and budget be developed on an annual basis.

Additional assistance may be needed in order to investigate and assess the building and site conditions on a defined cyclical schedule or as more specialized maintenance and repair issues arise. Qualified professionals, including architects and engineers (for example civil engineers, structural engineers, mechanical engineers, and electrical engineers) may be needed to assist with investigating current conditions, defining a scope of work for a project, developing repair and improvement alternatives, preparing specifications, and assisting with bidding and construction oversight for both minor and major repairs for the building.

It is highly recommended to hire professionals who meet the National Park Service Professional Qualification Standards, which is outlined in the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* published in the Code of Federal Regulations, 36 CFR Part 61. These qualifications define minimum education and experience required to perform identification, evaluation, registration, and treatment activities to work on historic buildings.

General contractors and skilled subcontractors may also be required to assist with investigation activities and also to perform specialized and/or large scale rehabilitation projects. It is also highly recommended that contractor qualifications and examples of past experience on projects of similar scope on historic structures be evaluated along with their bid.

Planning for on-going maintenance projects and large scale projects can ensure that the projects can be funded and move forward as a schedule to ensure that the projects are not deferred, which can lead to additional work in the future and possibly damage original fabric within the building.

Historical Background

Before the Frank Hughes Memorial Library was constructed in 1940, the City of Liberty did not have a public library. The origins of the library started in the 1930s when Ellen Hughes, along with several of her friends, started the "Fortnightly Study Club." This reading and discussion club formed a small library with a few bookcases and donated books. When Ellen Hughes's husband died in 1937, he left the funds necessary to start the first public library in the City of Liberty.[1]

Frank Hughes was a local businessman and philanthropist. Upon his death, his will established a $57,000 trust fund to create and operate a library and reading room in Liberty, Missouri, which would be free to the public. Hughes also gave a lot, approximately 100-feet by 100-feet at the northwest corner of East Franklin Street and Leonard Street, to the city as the site for the new library and reading room.[2]

The fund for the library and the reading room was the largest single bequest in Hughes's estate. This bequest was the first donation in Liberty's history, which resulted in a use or building that was open to the general public. Prior to this project, other philanthropic donations were made to special causes, churches, or private universities, such as William Jewell College. The city still considers the gift a visible and enduring example of public philanthropy in the Clay County Community.[3]

$37,000 of the $57,000 that Hughes placed in the trust fund for the library and reading room were to be used for the construction of the library and its furnishings. In Hughes's will, he specified that the exterior of the building should be brick and "insofar as practicable some colonial design." It was Hughes's desire that the building be "representative of the early day colonial type of building in Clay county, Mo." The trustees hired the well-known Kansas City architecture firm Wight and Wight to design the library because they were known for their classical designs.[4]

Thomas Wight (1847-1949) and Willian Drewin Wight (1882-1947) were born in Halifax, Nova Scotia. In 1891, Thomas traveled to Boston to search for employment within an architecture firm. While he had no formal training, Thomas was hired by McKim, Mead, and White. By 1892, he was a draftsman on the Boston Public Library project, and when the project was completed, he was offered a position within the New York office of McKim, Mead and White. While at the firm, he spent a year studying at the American Academy in Rome. In 1904, he resigned from his position to establish his own architecture firm. He had several prospective businesses offers but

[1] 'Liberty, February 1992," *Mid-Continent Public Library*, 1965-2018, access February 6, 2020, https://www.tiki-toki.com/timeline/entry/428473/Mid-Continent-Public-Library-1965-2018/.
[2] Deon K. Wolfenbarger, "Frank Hughes Memorial Library," National Register of Historic Places Nomination Form, National Register Information System ID: 92001676 December 28, 1992.
[3] Deon K. Wolfenbarger, "Frank Hughes Memorial Library," National Register of Historic Places Nomination Form, National Register Information System ID: 92001676 December 28, 1992.
[4] Deon K. Wolfenbarger, "Frank Hughes Memorial Library," National Register of Historic Places Nomination Form, National Register Information System ID: 92001676 December 28, 1992.

ultimately chose to partner with his friend Edward T, Wilder, in Kansas City. The two created the architecture firm of Wilder and Wight that year.[5]

William Drewin Wight followed in his brother's footsteps. He traveled to Boston and worked for McKim, Mead, and White. He spent ten years with the firm and during that time he spent a year studying in Europe. In 1911, William purchased all of Edward Wilder's shares and joined his brother's firm. In 1916, the firm was renamed, Wight and Wight. The firm designed some of Kansas City's most iconic buildings. Their work included:[6]

- Kansas City Life Insurance Company Building (1923)
- Pickwick Hotel (1930)
- Nelson-Atkins Museum of Art (1933)
- Jackson County Courthouse (1934)
- Kansas City, Missouri City Hall (1937)
- Kansas City Police Headquarters (1938)
- United States Courthouse and Post Office in Kansas City (1939)

The Frank Hughes Memorial Library was constructed in the Neo-Classical architectural style. The building is a one-story, symmetrical, rectangular brick structure on a concrete foundation. On the south elevation (primary elevation), there is a full-height, central bay portico with two engaged square pilasters and four square columns, and at the roofline, there is a wide elaborate cornice.

The Frank Hughes Memorial Library was independently operated until December 1981 when it merged with the Mid-Continent Public Library system.[7] In November 1982, the library moved out of the Frank Hughes Memorial Library building to a new building in Liberty at 1000 Kent Street.[8] The Frank Hughes Memorial Library building was used by the city's park and recreation as a community center for a few years until the mid-1980s when the Clay County Archives moved into the building.[9]

[5] "Wight and Wight Architectural Records, 1904-1952," The State Historical Society of Missouri – Research Center, Kansas City, accessed February 5, 2020, https://collections.shsmo.org/manuscripts/kansascity/k0825.pdf.
[6] "Wight and Wight Architectural Records, 1904-1952," The State Historical Society of Missouri – Research Center, Kansas City, accessed February 5, 2020, https://collections.shsmo.org/manuscripts/kansascity/k0825.pdf.
[7] 'Mid-Continent Public Library, 10th November 1965" and Consolidations, 27th December 1978," *Mid-Continent Public Library*, 1965-2018, access February 6, 2020, https://www.tiki-toki.com/timeline/entry/428473/Mid-Continent-Public-Library-1965-2018/.
[8] Liberty, February 1992," *Mid-Continent Public Library*, 1965-2018, access February 6, 2020, https://www.tiki-toki.com/timeline/entry/428473/Mid-Continent-Public-Library-1965-2018/.
[9] "About Us: In the Beginning…," *Clay County Archives*, access February 6, 2020, https://claycountyarchives.org/j3x/index.php/about-us.

The Clay County Archives was incorporated in 1979 following a meeting where the Clay County Circuit Clerk voiced concerns about the plans for the preservation of original court records. The older records were being poorly stored, which was making it difficult to extract research information. There was also a court order which authorized the disposal of the original records after they had been microfilmed. Following the meeting, a committee was formed to determine the best location for the records and to create a group that would care for the records. The Clay County Archives was formed and moved all of the records to a room in the Odd Fellows Administration building. The group moved into the Frank Hughes Library in April 1985, and today, the Frank Hughes Memorial Library still houses the ever-growing collection for the Clay County Archives.[10]

Recommendations for Future Research

The scope of work for this project was limited to a visual assessment of the building. No destructive testing was completed. The scope of work also did not include extensive archival research. Research and analysis conducted for this report revealed opportunities to learn more about the property. The following list summarizes areas of future research:

- Search archival collections for information related to Frank Hughes and the Wight and Wight architecture firm archives for information related to the construction of the Library. This would include but is not limited to, historic drawings, historic specifications, and descriptions of the building. Drawings found in the Clay County Archives did not include a full set of original design drawings.

- Conduct a paint analysis of original finishes throughout the Frank Hughes Memorial Library. This includes but is not limited to plaster walls, decorative crown molding, plaster ceilings, wood trim (painted and stained), wood windows (painted and stained), and original stained shelving.

- Hazardous materials survey to review and test all potential asbestos-containing materials and to identify lead-based paint on the interior and exterior of the building.

- Inspect downspout sub-grade drains for efficacy.

[10] "About Us: In the Beginning…," *Clay County Archives*, access February 6, 2020, https://claycountyarchives.org/j3x/index.php/about-us.

Project Team

The following team members participated in the Frank Hughes Memorial Library Building Preservation Plan.

Project Manager and Architect
STRATA Architecture + Preservation (STRATA)
1701 Oak Street, Suite 100
Kansas City, Missouri 64108
Ph: 816-474-0900
Contact: Angie Gaebler, AIA | angie@strata-arch.com
Amanda E. Moore, AIA | amanda@strata-arch.com

Mechanical, Plumbing, and Electrical Engineer
Farris Engineering
6004 Central Street
Kansas City, Missouri 64113
Ph: 573-202-9766
Contact: Danny VanDoren, PE, QCxP, LEED AP+ | dvandoren@farris-usa.com

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Frank Hughes Memorial Library, detail view of the railing on the south portico. (STRATA 2020)

2 EXISTING CONDITIONS

Chapter 2 | Existing Conditions



Figure 2.1. View looking northwest toward the Frank Hughes Memorial Library. (STRATA 2020)

The Frank Hughes Memorial Library has been continuously used since it opened in 1940 and has remained relativity unchanged. The building has retained most of its original character-defining features and original finishes. The building is in overall good condition, except for the finishes in Computer Room 205, Work Room 206, and Stair A, which have suffered significant water damage following prolonged roof leaks (the roof has since been repaired).

This chapter is subdivided into five sections: the immediate site, the exterior of the building, the interior of the building, the building systems (mechanical, plumbing, electrical, and fire protection), and an accessibility assessment. Within each section, there is a description of the existing materials or system and documentation of their current condition.

For this report, the basement will be called the first floor, and the first floor will be called the second floor. This is because building code notes that a basement is considered a story if the finished floor surface of the floor above the basement, is more than 6-feet above grade. In the Frank Hughes Memorial Library, the first floor is more than 6-geet above grade, so the basement is considered a story. By noting the stories, as the first and second floor, this will prevent confusion with the drawings.

No original construction drawings or specifications have been found for this building. The Clay County Archives does have an extensive collection of the original shop drawings from the building construction, which were used to better understand what was originally installed within the building.

Existing as-built floor plans and photograph elevations, along with drawings noting the existing conditions, are provided following this section of the report.

No hazardous materials testing was done as part of the assessment and report. It should be assumed that all of the paint is lead-based. Building from this period also often include asbestos-containing materials. Prior to any renovation work, a comprehensive hazardous materials survey and testing project should be undertaken by a specialty environmental testing company.

Existing Physical Description Terminology

The following terminology is used to describe the general conditions of existing features. The terms are based upon the following criteria:

> ***Good***: Indicates no clear or visible evidence of major deterioration or structural failure. The integrity of the feature is well maintained and preserved, given the exposure to existing environmental conditions. No immediate treatment is required.
>
> ***Fair***: Indicates visible evidence of minor disturbances and deterioration. The integrity of the feature is preserved, given the exposure to existing environmental conditions and human interaction. Some level of intervention for corrective measures is required.
>
> ***Poor***: Indicates visible evidence of major disturbances and significant deterioration. The integrity of the feature is rapidly worsening, given the exposure to existing environmental conditions and human interaction. Immediate intervention for corrective measures is required to preserve the remaining historic character resource and integrity of the element
>
> ***Unknown***: Indicates missing, inaccessible, or unclear evidence contributing to the identification of an appropriate solution to protect and preserve the historic integrity of the site feature.

Site and Building Access Existing Conditions

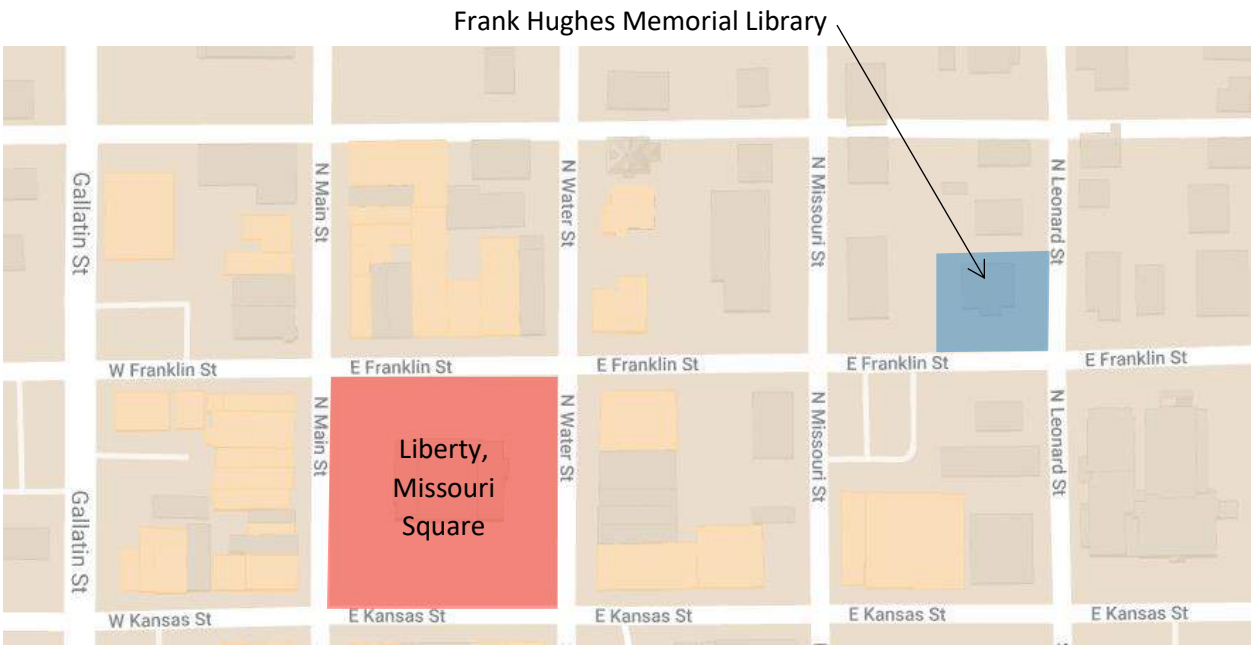


Figure 2.2. Location Map of the Frank Hughes Memorial Library. (STRATA 2020)

The Frank Hughes Memorial Library, in downtown Liberty, Missouri, is located two blocks east of the square, at the northwest corner of the intersection East Franklin and North Leonard Streets. East Franklin Street is one way west, and North Leonard Street is one way north.

Immediately west of the Frank Hughes Memorial Library is an empty lot owned by the city for future economic development. A three-story apartment building on a raised first floor is west of the park. To the north of the Frank Hughes Memorial Library is a two-story apartment building. East of the library is a residential neighborhood with single-family houses and the Second Baptist Church located at the southeast corner of East Franklin and North Leonard Streets.

The Frank Hughes Memorial Library site is generally flat with a slight incline to the north.

Parking

Parking for volunteers and visitors to the Frank Hughes Memorial Library is located on the street. There are three designated ADA parking spots directly in front of the building along East Franklin Street. These parking spots do not meet accessibility requirements. Accessible parallel parking spaces are allowed as long as there is a 60-inch minimum access aisle along the length of vehicular at street level, and the vehicular travel lane does not encroach the access aisle.

There is additional non-accessible on-street parking along the north and south sides of East Franklin Street and along the east side of North Leonard Street. This parking meets the needs of the volunteers and visitors to the building.



Figure 2.3. View looking northwest toward the Frank Hughes Memorial Library site with the on-street parking along East Franklin Street and North Leonard Street. (STRATA 2020)

Sidewalks

There are public sidewalks that run along both sides of East Franklin and North Leonard Streets. The concrete sidewalks provide access to the building from the on-street parking. The 5-foot wide concrete public sidewalk along East Franklin Street (along the south edge of the site) is in good condition. Sections of the sidewalk, closer to the vacant lot to the west of the building, have been recently replaced.

The 5-foot wide concrete public sidewalk along North Leonard Street (along the east edge of the site) is in good condition. There is one area that is cracked and starting to become displaced. This could become a tripping hazard.

At the corner of East Franklin and North Leonard Streets, a relatively new ADA curb cut ramp has been installed to provide an accessible access point to the site. The ADA curb cut ramp is in good condition.





Figures 2.4 and 2.5. View of the public sidewalks along the edges of the site. Left: View of the sidewalk along East Franklin Street, looking west. Right: View of the sidewalk along North Leonard Street, looking south. (STRATA 2020)





Figures 2.6 and 2.7. Left: View of the ADA compliant curb cut at the corner of East Franklin and North Leonard Streets. Right: View of the non-ADA compliant curb cut in front of the Frank Hughes Memorial Library. (STRATA 2020)

Building Access

South (Primary) Entrance

Volunteers and visitors to the Frank Hughes Memorial Library enter the building through the main entrance on the south elevation. The second floor of the library is raised significantly above grade. The single door entrance is located at the top of the south grand stair under the south portico. This is the original entrance into the building.



Figure 2.8. View looking at the south (main) entrance and the south grand stairs. (STRATA 2020)

At this entrance, the public sidewalk flares slightly and connects to the south grand stairs. The bottom run of the stairs is over 17-feet wide with concrete low-height side walls and only a central decorative metal railing. At the top of the bottom run of stairs, there is a landing with concrete pavers. The top run of stairs is over 8-feet wide with decorative metal railings along each side.

The concrete stairs are in poor condition. The nosing on most of the treads has been chipped, which has led to some larger missing sections. There is also some spider web cracking that is filled with a paste or gel-like substance, which is a symptom of a few types of concrete deterioration. It is most typically associated with alkali silica reactivity (ASR). The paste or gel substance absorbs water and increases in volume, which puts an expansive pressure in the aggregate. This can cause spalling and loss of strength in the concrete. The actual cause of the deterioration can only be determined by taking samples and performing a petrographic examination.



Figure 2.9. View of potential ASR on the south grand stairs. (STRATA 2020)

The concrete low-height sidewalls along the edges of the stairs are in poor conditions, and it seems that they have been in poor condition for a while, as there are previous repairs along the bottom run of stairs. At the landing, the low-height concrete wall has a significant amount of delamination and spalling. There are also gel-filled spider web cracks, which could be ASR. The low-height walls along the bottom run of stairs have been previously repaired with a cementitious parge-coating. This coating is failing and has a significant amount of cracking.





Figures 2.10 and 2.11. View of the damage and the potential ASR on the south grand stair low-height walls. (STRATA 2020)

The concrete pavers at the landing are in very poor condition. Of the thirty pavers, only thirteen are in fair condition. The pavers are divided with metal divider strips with no expansion joints. So, as the metal dividing strips and concrete pavers move differently during expansion and contraction, there is no location that can accommodate the growth. This is leading to a significant amount of cracking, chipping, spalling, and large missing sections at the corners. One paver at the center of the landing is lower the remainder of the pavers, which allows water to pool in this location, and it is a life-safety tripping hazard.

The construction methodology of this section of landing is unknown. There appears to be a large void under the concrete pavers. This structure, including the metal divider strips, may require further destructive testing and investigation.



Figure 2.12. View of the condition of the pavers on the landing on the south grand stairs. (STRATA 2020)

The decorative metal railings at the stairs are original. They are in poor condition with the paint on the railings peeling or missing. The exposed raw metal is exposed to water, which is causing the metal to rust.

East Entrance

There are two additional entrances to the building. One is located on the east elevation and provides direct access into the first floor into the current Archival Storage Room 103. It is believed that this room was originally an assembly room, so this door would have originally been an additional primary entrance. This single wood door with sidelights and transom is located at the bottom of a set of concrete stairs.



Figure 2.13. View looking at the east side entrance and the stairs to the first floor. (STRATA 2020)

This entrance is accessed by a walkway off of the sidewalk along North Leonard Street. The concrete walkway is in fair condition with one area where the concrete has delaminated, with a section of the top layer missing.

The concrete stairs on the east elevation have full-height concrete walls that tie into two window wells. The concrete stairs are in fair condition, with only minor chipping on the nosing. The full-height concrete walls and window wells are in poor condition. There is biological growth on the concrete walls. At many of the handrail embedments, the concrete is cracking, causing spalling and deterioration. At one location, a large section of the concrete has delaminated, leaving a

portion of the handrail embedment exposed. In addition, there are some horizontal cracking approximately 1-inch below the top of the walls. It is believed that the cracking aligns with the reinforcing in the concrete wall, which is deteriorated and has started to rust jack.

Rust jacking is caused when metal oxidizes and expands up to seven times its original size. The expanded metal puts a significant amount of pressure on the surrounding materials and causes them to crack, spall, and displace.







Figures 2.14, 2.15, and 2.16. View of the typical condition of the east concrete stair walls. (STRATA 2020)

There is a simple metal pipe railing along the stairs. The wall flange at the bottom of the railing is no longer fully attached, which is exposing the railing embedment. At the top of the full-height concrete wall, there is a decorative metal railing and metal posts that support an awning. The railings and the posts are in poor condition. The paint on the railings is peeling or missing. The raw metal is exposed to water, which is causing the metal to rust.

The fabric awning has recently been replaced. It has a significant amount of biological growth and staining. The fabric awning component is not historic.



Figure 2.17. View looking at the east side entrance railing and awning. (STRATA 2020)

At the bottom of the concrete stairs, the is a sump pump that pumps water out of the areaway. The sump pump is partially covered with a trash can, and the areaway is full of leaves, rocks, and other debris. The sump pump was not tested as part of this scope of work.



Figure 2.18. View of the east side entrance areaway. (STRATA 2020)

North Entrance

The third entrance into the building is located on the north elevation. This door is primarily used for exiting. The single door is located at the bottom of a set of concrete stairs.



Figure 2.19. View looking at the north entrance and the stairs to the first floor. (STRATA 2020)

The stairs are accessed by a concrete walkway off of the sidewalk along North Leonard Street. The concrete walkway has had some significant uneven settlement, which is a tripping hazard. There is also some spalling and delamination of some of the top surface of the concrete.

This walkway has been replaced at some point and was reinstalled at a lower elevation. At the stairs, there is now a step up to the top tread instead of the top tread being aligned with the walkway. Along the south wall of the building, there is also ghosting, which indicates that the walkway was originally higher in this location.

At the joints between the stairs and the walkway, there is a hole in the concrete walkway, and it appears that there is a void under the walkway. Additional investigation is required to determine the extent of the void. This void is likely due to the significant water infiltration and may lead to complete failure of this section of the walkway.



Figure 2.20. View of the step down at the top riser of the north stairs and the hole in the concrete walkway. (STRATA 2020)

The concrete stairs have full-height concrete walls along their north and west sides. There is a simple metal pipe railing along the stairs and a decorative metal railing along the top of the wall. The decorative railing has been covered with wood paneling. The concrete stairs and full-height concrete walls are in good condition. There are minor chips on the stair nosing and biological growth and staining on the concrete wall.

The metal pipe railing and the decorative guardrail at the top of the wall are in poor condition. The paint on the railings is peeling or missing. The exposed raw metal is exposed to water, which is causing the metal to rust.

The contemporary wood paneling attached to the railing is in poor condition. The bottom 8-inches of the wood has a significant amount of biological growth and wood rot. The wood paneling obscured the original guardrail and is unsightly.

At the bottom of the stairs, there is a sump pump to pump water out of the areaway. The areaway is full of leaves, a CMU block, and other debris, which is blocking the drain.



Figure 2.21. View of the guardrail, wood panel cover infill, and areaway at the north stairs. (STRATA 2020)

Building Exterior Existing Conditions



Figure 2.22. View of the front approach of the Frank Hughes Memorial Library. (STRATA 2020)

Concrete Foundation

The reinforced concrete foundation is original to the building. The original concrete mixture is unknown, but the steel reinforcing shop drawings by Truscon Steel Products, dated December 14, 1939 provides a great deal of information about the concrete foundation plan, elevations of the foundation, and foundation wall sections. The concrete foundation walls sit on a concrete spread footing. The height of the foundation walls varies depending on the elevation and steps down at window and door openings. There is a ledge at the top of the concrete foundation to support the brick, which not only supports the bricks but hides the concrete foundation from the exterior. The concrete stairs and side walls on north, south, and east elevations and window wells are all original to the building and were designed to have the steel reinforcing tied into the main foundation wall and poured as monolithic units.

The foundation is only partially visible from the exterior of the building. A small section of the concrete foundation is visible at the northeast corner of the building. At this corner, it appears that something hit the corner, resulting in the concrete to chip off of the building. The remainder of the concrete foundation is not visible from the exterior of the building, and it is only visible on the interior in Mechanical Room 109, which is in good condition. Typically, concrete foundations from this period do not include exterior waterproofing.



Figure 2.23. View of the damaged concrete foundation at the northeast corner. (STRATA 2020)

The condition of the concrete foundation should continue to be monitored for the following issues:

- Significant cracking in the exterior brick and interior plaster. This could be a sign of settlement or cracking in the foundation.
- Bowing in the concrete foundation wall. This could indicate soil movement under the foundation, hydrostatic pressure, or poor water drainage.
- Uneven or sagging floors. This could be a sign of shifting soils under the foundation.
- Water damage on the interior plaster of the first floor. This could be a sign of cracks in the concrete foundation water drainage issue, or rising damp.

Masonry

The exterior walls of the Frank Hughes Memorial Library are load-bearing brick, multi-wythe, masonry, which sit on the concrete foundation. Throughout the building facades, there are limestone accent details that highlight certain features or provide detailing.

Brick

The exterior walls of the building are constructed of multiple wythes of brick. The brick was laid in a traditional running bond pattern with five stretcher courses followed by a row of alternating header and stretcher bricks. The bricks laid in the header position help tie the exterior wythe of brick to the interior wythes. The brick exterior walls are original and have not been changed since they were originally constructed. Typically, the exterior wythe of bricks are much harder than the interior wythes of bricks



Figure 2.24. Detail view of the brick on the Frank Hughes Memorial Library. (STRATA 2020)

The exterior brick is in overall good condition, with most of the bricks void of any defects. There are a few common deficiencies that can be seen throughout the building. In general, there are two main culprits to blame for brick deficiencies: time and water. The surface of the brick is very hard and heavily textured and vertically scored, but it is susceptible to the elements. Water, in particular, can cause problems, and one of the best ways to prevent brick deterioration is to drain water away from the building and prevent water from infiltrating through the walls and from above. Common brick deficiencies seen throughout the exterior bricks are as follows:

- Inappropriate Brick Patching

  Over time, as wall penetrations are no longer needed, bricks are chipped, or pieces of bricks have fallen out, the areas are sometimes patched. Patches should be able to “breathe,” to be permeable to air and moisture, and be softer than the brick. If the patches are not breathable, water is trapped in the brick, and as the moisture expands with the freeze/thaw cycle, the brick begins to crack, which caused internal damage to the brick. If the patch is too hard, the brick substrate becomes the sacrificial material instead of the patch. This means that if there is movement within the masonry wall, the brick will crack and fail before the patch.

  On the north elevation at the northwest corner, there is an unused wall penetration. The hole has been filled with sealant. The sealant was not properly installed within the hole and covers most of the surrounding brick. The sealant is not a permanent, long-lasting repair and is not breathable, which may trap water in the brick. The hole is also not fully sealed, which can allow water and air to infiltrate the building.

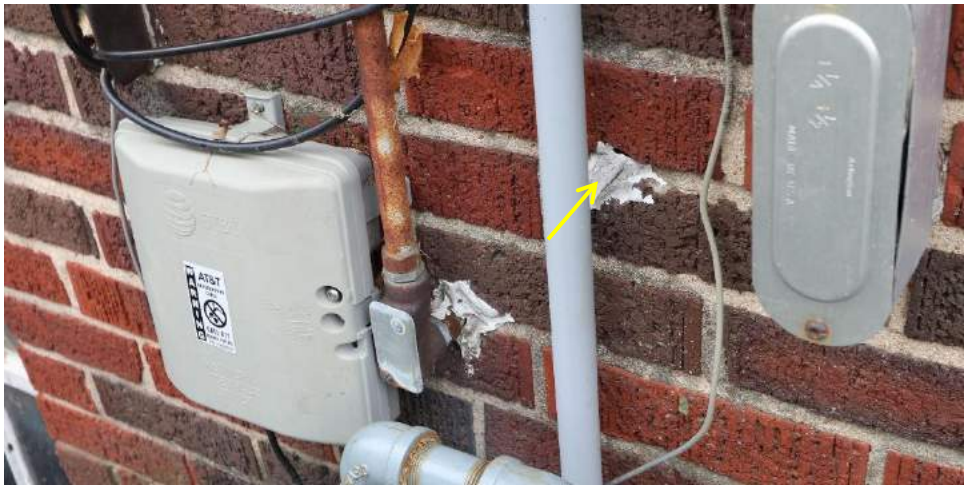


Figure 2.25. View of the sealant brick patch on the north elevation at the northwest corner. (STRATA 2020)

- Spalling

  Brick spalling occurs when moisture from rain, snow, or even wet soil saturates and penetrates the brick. The moisture inside the brick expands and contracts with the freeze/thaw cycles, and when the moisture expands, it begins to crack the brick. With the repeated freezing and thawing, the cracks widen until the exterior face of the brick falls off, exposing the softer interior of the brick.

  This is only happening in one location on the south elevation of the south portico.



Figure 2.26. View of the spalled brick on the south elevation of the south portico. (STRATA 2020)

- Unused Anchors in Brick

  Over time, metal anchors and screws were installed through the brick or the mortar to attach electrical conduit, piping, and/or data cables. When the anchors are no longer used, the metal anchors can detract from the overall appearance of

the building. The steel anchors can deteriorate and expand to damage the brick, and the small holes can allow water to infiltrate into the brick wall.

At the northwest corner of the building, the electrical and gas service enters the building. Several anchors and screws were attached to the building in this location. Many of the anchors are attaching conduit and equipment to the building. Some of the conduits are no longer in use, and there are some unused anchors and screws remaining in the brick.



Figure 2.27. View of the unused anchors in the brick on the north elevation at the northwest corner. (STRATA 2020)

- Moisture in Exterior Walls

  The main culprit for brick deterioration is water. Water can infiltrate masonry walls in several ways: from above through holes in roofing or damaged and deteriorated flashing; through deteriorated mortar joints; from below through rising damp; or through the wall itself as water vapor moves through the wall. Once the water is in the wall, it can lead to an assortment of issues from biological growth and efflorescence, spalling, brick loss, and damage to interior finishes.

  Following a rainstorm, three very wet areas were able to be observed on the exterior of the building. The first is on the east elevation, where the building steps-back. This darkened area of the masonry is full height and expands approximately 18-inches south from the step-back to the south edge of Window 208 and indicate prolonged moisture infiltration. This area is located at a transition from the gable roof to the flat roof. There is also a concealed gutter and

downspout in this location. Additional investigation is required to determine the cause of the water infiltration.

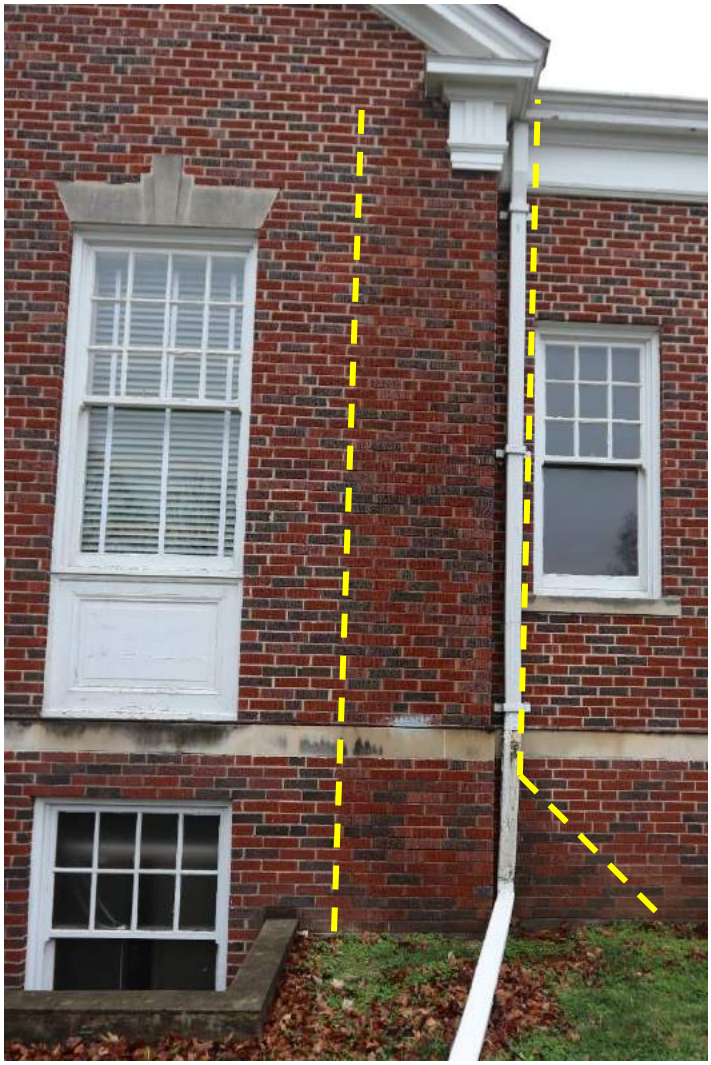


Figure 2.28. View of the wet area on the east elevation. The yellow lines denote the extent of the moisture infiltration. (STRATA 2020)

The second and third locations of noted moisture infiltration are both on the north elevation, where the building plan projects. The easternmost area showing signs of moisture infiltrations is full height and expands approximately 12-inches in both directions of the projection. This area is located at the transition from the hip roof to the flat roof. There is also a concealed gutter. Additional investigation is required to determine the cause of the water infiltration.

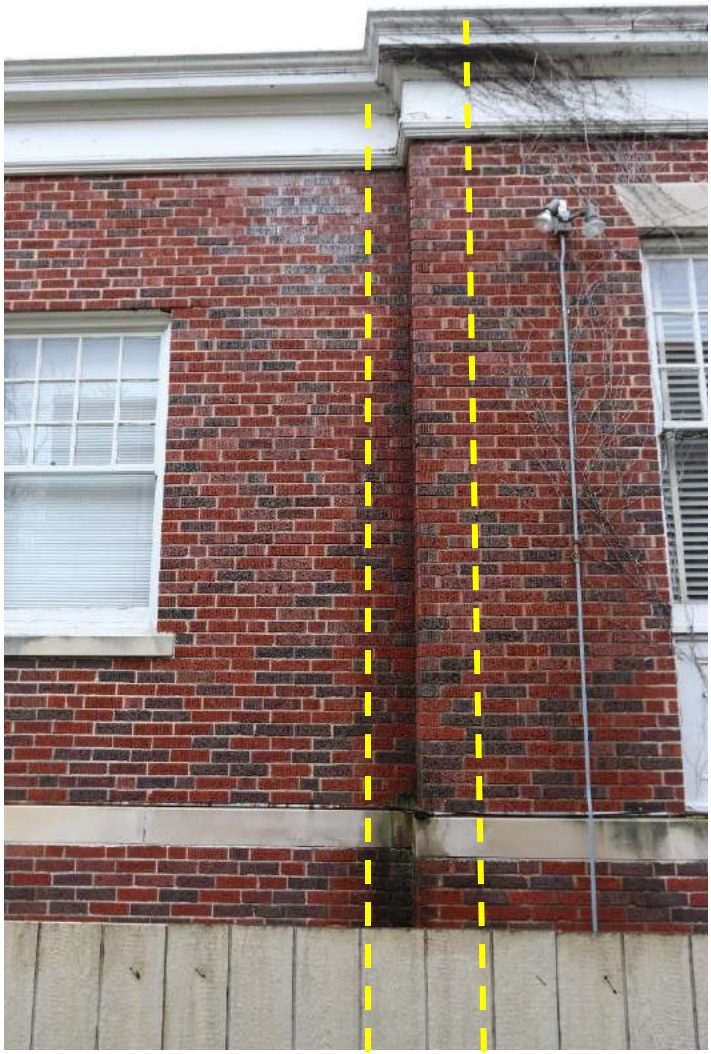


Figure 2.29. View of the wet area on the north elevation at the east projection. The yellow lines denote the extent of the moisture infiltration. (STRATA 2020)

The westernmost area on the north elevation is subdivided into two sections. The brick wall is wet at the top 2-feet of the wall and the bottom of the wall below the water table. This area is located at a transition from the hip roof to the flat roof. There is also a concealed gutter and downspout in this location. The grade also appears to be sloping toward the wall. Additional investigation is required to determine the cause of the water infiltration.

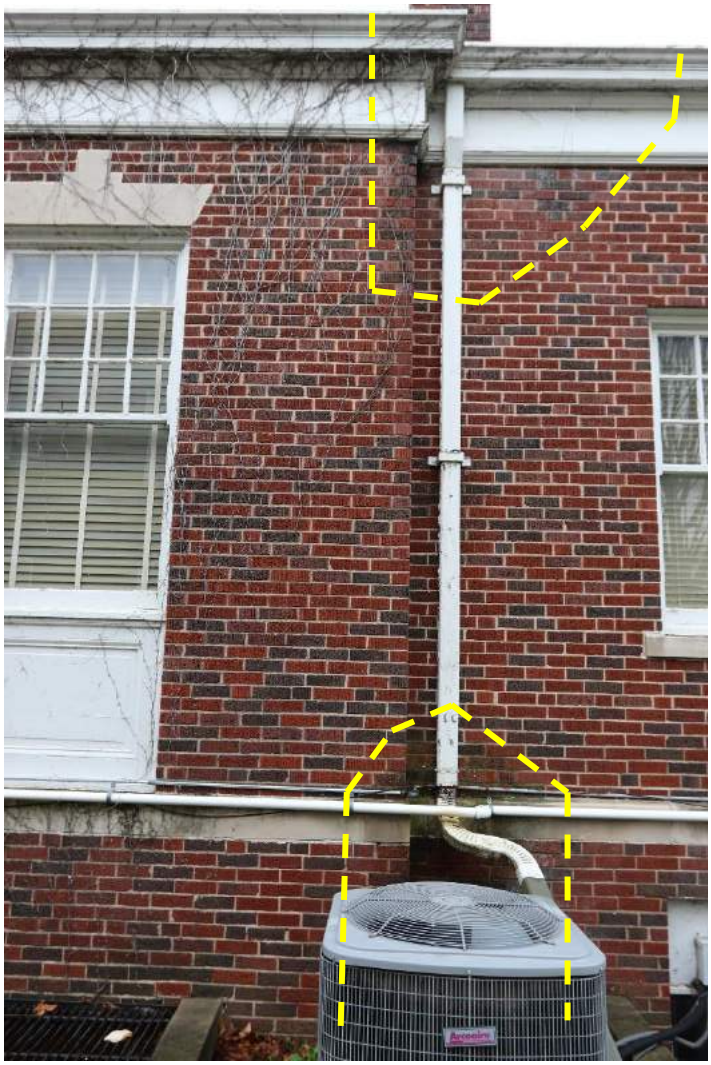


Figure 2.30. View of the wet area on the north elevation at the west projection. The yellow lines denote the extent of the moisture infiltration. (STRATA 2020)

- Biological Growth

  When brick is continuously damp or wet and not allowed to completely dry out between wet cycles, it is prone to biological growth and deterioration. Biological growth can be in many colors and types. The porosity of the brick can allow for the accumulation of air and waterborne pollutants (soils, algae, mildew, lichens), which enables the biological growth to grow. Biological growth is not only visually unappealing, but in the long-term, may result in accelerated deterioration of the brick.

  Biological growth is prevalent on the north elevation at the east and west building projections. This area is continuously wet and not exposed to direct sunlight.

There is minor biological growth on the brick under the awning on the east elevation. This area is also not allowed to fully dry because it is not exposed to direct sunlight.




Figures 2.31 and 2.32. View of typical biological growth on the north elevation. (STRATA 2020)

- Efflorescence

  Efflorescence is typically characterized by a whitish, loose powdery salt deposit on the face of the brick or its adjacent mortar, which disappears when the area is wet and may reappear as drying continues. These salts are typically deposited on the face of the brick when water moves through the brick and evaporates on the surface. Efflorescence can also be caused by the brick absorbing groundwater high in salt content, improper mortar installation, or from air-born pollutants. Improper washing, cleaning, and rinsing of masonry can also lead to efflorescence. The efflorescence itself is not usually detrimental to the brick. Still, it is indicative that moisture is moving through the brick, which may lead to deterioration.

  Efflorescence has developed on the north elevation at the projection on the east side of the building. As previously described, this area is continuously damp.



Figure 2.33. View of the efflorescence on the north elevation. (STRATA 2020)

- Mud/Dirt Staining

  Mud and dirt can stain the surface of the brick when water is splashing back on the brick after it hits the ground. The mud or dirt staining itself is not usually detrimental to the brick, but it is indicative that moisture may enter into the wall.

  There is mud and dirt staining along the bottom of the west elevation near the middle of the building.



Figure 2.34. View of the mud/dirty staining on the west elevation. (STRATA 2020)

- Vines on the brick

  Vines have been typically allowed to grow on brick walls to add visual interest and a feeling of stateliness. Some vines climb by attaching tendrils to a support, such as a brick wall. The tendrils can then become embedded in the mortar and brick. This weakens the mortar and may result in deterioration or cracks at the mortar joints. The tendrils also make the vines difficult to remove.

  There are several dead vines attached to the north elevation. It is unknown if the vines are still allowed to grow on the wall or if the vines are dead and have not been removed from the wall.

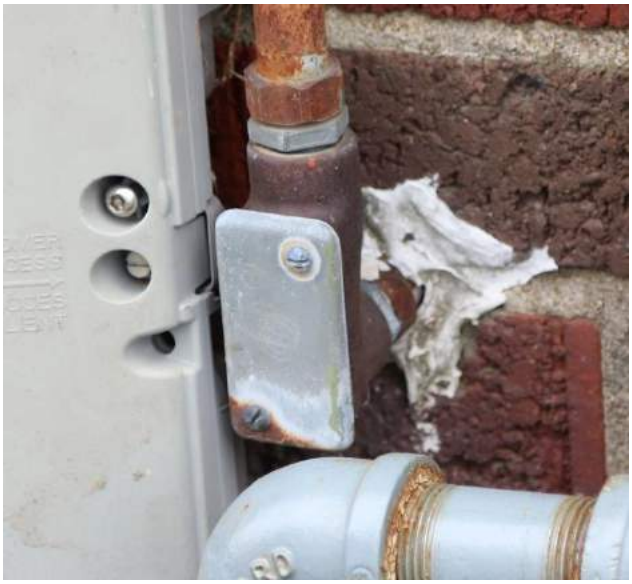
  There are also some dead vines on the western end of the south elevation and on the southern end of the west elevation.



Figures 2.35 and 2.36. View of vine growth on the building. Left: View of the vine growth on the north elevation. Right: View of the vine growth on the west elevation. (STRATA 2020)

- Wall Penetrations

  At the northwest corner, on both the north and west elevations, piping and conduit have been installed through the brick walls. To run the piping and conduit, the brick wall was core drilled. The wall penetration in the west elevation is open, which can allow water and air to infiltrate the building. The wall penetration in the north wall was attempted to be sealed with sealant. The sealant was not properly installed, and the sealant was installed over most of the surrounding brick.




Figures 2.37 and 2.38. View of wall penetrations. Left: View of the wall penetration on the north elevation. Right: View of the wall penetration on the west elevation that is not sealed. (STRATA 2020)

Other common deficiencies in brick that the building should be assessed for include:

- Brick Displacement/Settlement

  Brick displacement is caused by structural movement; settlement; failure of the masonry back-up structure; expansion and contraction; or cyclical freezing and thawing. Displacement of brick may also result in the deterioration of the brick and surrounding mortar joints which can lead to additional water infiltration and deterioration of the masonry assembly.

- Cracking

  Cracks in brick, both large and small fissures, typically result from structural movement; incompatible (too hard), or deteriorated mortar; thermal expansion and contraction; or a flaw in the manufacturing. This condition is manifested by the appearance of fissures or cracks in the brick, which can range from narrow (1/16-inch) to wide (1/4-inch or greater).

- Chipping

  Chipping of brick typically occurs from external forces. For example, the sides of bricks at the joints are chipped from prior restoration activities where mortar was improperly or not carefully removed. Chipping may also occur due to a mortar being harder than the brick or from an impact.

Brick Chimney

There is one brick chimney located close to the north elevation at the transition between the hipped roof and the flat roof. The chimney is in fair condition. Approximately 25% of the mortar joints are open. There are four bricks that are spalling and deteriorated. It is unknown if the chimney is capped. If the chimney is not capped, water can infiltrate the building. If there is no protective screening at the top of the chimney, birds and pests could enter the flue. It is unknown if the chimney is currently used for venting any appliances or equipment.



Figure 2.39. View of the brick chimney. The yellow arrow notes the spalled bricks. (STRATA 2020)

Cut Limestone Masonry Details

Cut limestone masonry was used as accent details throughout the building as the water table, window heads and sills, door sills, and the gable end louver jambs. The limestone is buff Indiana limestone originally supplied by A. Sutermeister Stone Company from Kansas City, Missouri.

The limestone is in good overall condition. The only issues observed in the limestone is biological staining. Similar to brick, when stone is continuously damp or not allowed to completely dry out between wet cycles is prone to biological growth. The porosity of stone, specifically limestone, allows for the accumulation of air and waterborne pollutants (soils, algae,

mildew, lichens) that enables them to grow. Continued growth is not only visually unappealing, but in the long-term, can cause accelerated deterioration of the stone.



Figure 2.40. View of the limestone water table. Note the biological growth on the stone. (STRATA 2020)





Figures 2.41 and 2.42. Left: View of the typical gable end limestone louver surround. Right: View of a typical limestone header and sill. (STRATA 2020)

Resources

Preservation Brief 1: Cleaning and Water-Repellent Treatments for Historic Masonry Building, Robert C. Mack, FAIA and Anne E. Grimmer, National Park Service.

Preservation Brief 5: Dangers of Abrasive Cleaning of Historic Buildings, Anne E. Grimmer, National Park Service.

Mortar

Mortar is one of the primary components in the overall construction of a masonry wall. It is used to bind masonry units together to create a watertight wall assembly. Modern mortar consists of Portland cement/lime mixture, aggregates, and water. Mortar is considered to be the sacrificial material within the overall masonry wall. It is not intended to be permanent and should be maintained and replaced periodically. The mortar allows the wall system to "breathe" to allow concentrated moisture inside the wall to slowly and naturally evaporated from within the wall.

- *Tuckpointing* – the installation of mortar during the original construction.

- *Repointing* – refers to the removal of existing mortar and the installation of new mortar within a masonry assembly. Varying mortar types are used when tuckpointing or repointing. Pointing mortar should be softer than the adjacent masonry units. Expansion and contraction or slight movements of the brick are cushioned or absorbed by the mortar composition. When mortar is installed that is harder than the adjacent masonry material, the installation can cause the surrounding masonry to take on physical stresses, which lead to deterioration of the masonry units and their subsequent failure. Mortar that is too hard does not breathe well, thus trapping water and vapors within the masonry wall system. Both issues can lead to accelerated deterioration of the masonry and interior finish materials. Hard mortar can also confine softer bricks during varied thermal movements between the mortar and brick.

All mortar should be designed and correctly specified for each specific type of application. Mortar types refer to the composition of the mixtures, which result in the mortar's overall structural capacity and hardness or softness. For instance, a Type 'S' Mortar is very hard and typically used for horizontal walk surfaces and foundations, whereas Type 'O' Mortar is much softer, typically used for repointing historic masonry. Type 'N' mortar is the typical mortar for contemporary masonry installation. Therefore, prior to the initiation of a rehabilitation or restoration project, a mortar analysis test of the existing and/or historic mortar is highly recommended.

Other factors that affect the aesthetics of the mortar are the aggregate and binder mixtures. The types and proportions of these mixtures vary and greatly, which can change the color, texture, and overall characteristics of each individual mortar type. When testing historic mortars, it is important to determine not only the chemical composition but also the amounts and distribution of each particle size of the aggregate and their coloring.

The mortar at the Frank Hughes Memorial Library is in overall good condition. There are only a few joints throughout the entire building that are cracked or have sections of loose and missing mortar. Open mortar joints can be caused by mortar weathering, mortar deterioration, water infiltration, or structural movement. There does not appear to be any structural movement within the exterior walls. Therefore, most of the open joints are caused by weathering, deterioration, and water infiltration. These open mortar joints can allow water to infiltrate the masonry wall.



Figure 2.43. View of the typical deteriorated joints in the brick and the limestone wall. (STRATA 2020)

Resource
Preservation Brief 2: Repointing Mortar Joints in Historic Masonry Building, Robert C. Mack, FAIA and John P. Speweik, National Park Service.

Roof

The current roof is a combination of two roofing types. The main roof is a gabled roof with a hipped roof on the north, and is covered with asphalt shingles. In the northeast and the northwest corners of the building (above Rooms 205 and 206), there are flat roofs covered with a two-ply modified bitumen membrane. The roofs were replaced in 2019 because they were leaking extensively into the building. The typical life expectancy is 20 years for an asphalt roof, but they should be assessed regularly to ensure there are no issues that could lead to leaks.

It appears that the new roof is in good condition, and the known leaks that were damaging the interior of the building have stopped. There are three locations where there may be a leak in the roof or flashing, which may be allowing water into the masonry wall. These locations align with the damp brick walls discussed earlier in this section, which are (1) east elevation at the projection, (2) north elevation at the east projection, and (3) north elevation at the west projection. All three locations should be investigated further to ensure that the roofs, gutters, or flashing are not leaking.

Resource
Preservation Brief 4: Roofing for Historic Buildings, Sarah M. Sweetser, National Park Service.

Gutters and Downspouts

The built-in gutters on the Frank Hughes Memorial Library were designed to blend into the cornice, so they are not visible from grade. They sit on top of the wood cornice and have a decorative sheet metal exterior. The gutters were not inspected or tested as part of this project, but the exterior paint on most of the gutters is peeling, exposing the raw metal below. There are a few locations along the north and east elevations where there is a visible leak in the gutter.

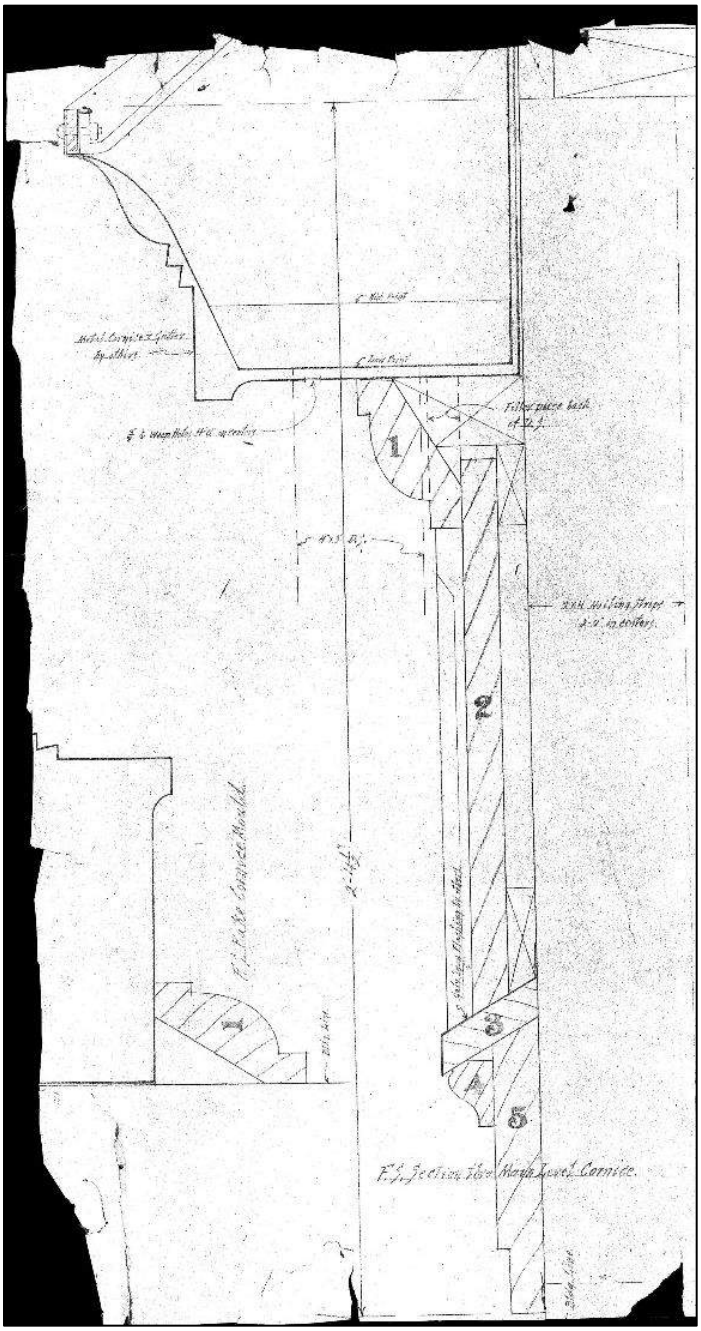


Figure 2.44. Image from the original cornice shop drawing, which shows the decorative metal gutter profile. (Clay County Archives)

There are six downspouts surrounding the exterior of the building. The downspouts are standard rectangular-shaped and painted. The downspouts originally drained into an underground drainage system. It is assumed that the underground drainage system became clogged and did not drain properly, because all of the downspouts currently have extensions installed on their ends to direct water away from the building.

The downspouts were not inspected or tested as part of this survey. All of the downspouts have peeling paint along the full extent of the downspout. The extensions on all of the downspouts have been damaged – they are either cracked and/or crushed or run over with lawnmowers. The connection between the original downspouts and the extensions are jacketed backwards. Instead of the original downspout overlapping the extension, the extension overlaps the original. The connection is also not fully sealed, which allows water to leak at the connection down the face of the building.

There are also no splash blocks at the ends of the downspouts, which causes divots in the grass or grade to collect water.




Figures 2.45 and 2.46. View of the typical condition of the downspouts. (STRATA 2020)





Figures 2.47 and 2.48. View of the typical condition of the downspouts. (STRATA 2020)

Wood Cornice

A large decorative multi-piece wood cornice is along the full length of the north and south elevations and along with the northern areas of the east and west elevations. The flat roofs. The cornice is approximately 18-inches tall. The cornice on the north elevation is slightly different than those on the other elevations and has an additional 4-1/2-inch trim piece on the bottom and triglyphs within the frieze (Reference Figure 2.44). The wood species is unknown, as it was not noted on the shop drawings.

The wood cornice is in fair condition. The majority of the cornice has peeling paint and open joints, which is exposing the raw wood below.

On the north elevation, at both the east and west building projections, the wood cornice is showing evidence of wood rot. This is caused by the extensive amount of water infiltration into the wall. The water is also causing the cornice to pull away from the wall.



Figure 2.49. View of the cornice on the south elevation. (STRATA 2020)



Figure 2.50. View of the wood rot on cornice at the west building projection on the north elevation. (STRATA 2020)

Resource
Preservation Brief 10: Exterior Paint Problems on Historic Woodwork, Kay D. Weeks and David W. Look, FAIA, National Park Service.

Metal Fascia and Soffit
Along the east and west gable ends of the building, there is a decorative metal fascia and metal soffit. The fascia matches the profile of the decorative metal gutters. The fascia and soffits are in overall fair condition. The majority of the fascias and soffits have peeling paint, which is exposing the raw metal to elements.



Figures 2.51 and 2.52. View of the typical conditions of the metal fascia and soffit. (STRATA 2020)

South Portico
The central feature of the south elevation is the 20’-8” x 7’-0” single-story portico. The portico is approximately 7-feet above grade and is accessed by the south grand stairs. The roof of the portico is supported by four square wood columns and two square wood pilasters. Between the columns, there are decorative metal railings. Directly under the roof, is a decorative wood entablature with the name of the building. The roof is flat, and along the edge of the roof, there is a wood balustrade.



Figure 2.53. View of the south portico. (STRATA 2020)

The columns and the entablature are in good condition. There is minor peeling and worn paint. The bases of all of the columns have minor wood rot caused by their direct contact with the concrete landing.



Figure 2.54. View of the typical condition of the south portico column bases. (STRATA 2020)

The decorative metal railings are in poor condition. The paint on the railings is peeling or is missing. The exposed raw metal is exposed to water, which is causing the metal to rust. The rust is staining the wood columns. The attachments to the columns are also rusted and should be further inspected for their hiding capacity to meet building code.



Figure 2.55. View of the typical condition of the south portico decorative metal railings. (STRATA 2020)

The condition of the flat roof above the portico is unknown, but there are some ongoing leaks. It is assumed that there is some damage or deterioration in the roofing material and/or the flashing at the balustrade. There is also some cracking in the plaster ceiling.



Figure 2.56. View of the cracks in the plaster ceiling of the south portico. (STRATA 2020)

The balustrade on the edge of the portico roof is in poor condition. There is an extensive amount of peeling and worn paint, which is exposing raw wood. All of the column bases and bottom rail has a significant amount of wood rot. The flashing detail at the roof requires further inspection.



Figure 2.57. View of the south portico balustrade. (STRATA 2020)

Windows and Exterior Trim

The majority of the windows date to the original construction. The five windows on the west elevation were replaced in the early 2000s. None of the windows have storms.

The original windows are a combination of wood and steel windows. The wood windows are double-hung with decorative lugs. All of the windows on the second floor are 12/1, except for Window 206, which is 9/1 and Windows 212 and 213, which are 4/1. There are also two different styles of windows on the first floor. In the original shop drawings, they are noted as "D.H. [double-hung] Box Windows" and "Window with Panel Under." The first floor windows are all 8/1 "D.H. Box Windows."





Figures 2.58 and 2.59. Left: View of an original double-hung "box window" on the second floor (10 total) Right: View of an original window with a wood panel under on the second floor (6 total). (STRATA 2020)

The original wood windows are in poor condition. The window frames and trim have peeling paint, and, in several locations, there is wood rot. There are locations on most of the windows where the glazing putty is cracked or completely missing. The sealant joint between the window frame and the brick is "alligatoring" or is torn, creating an open joint. Window 106 is missing one pane of glass.

There are only two steel windows in the building in Mechanical Room 109. The windows are subdivided into sixteen panes and are embedded into the brick. The steel windows are in fair condition. The paint is peeling, exposing the raw steel frame and sash, which are rusting. The glazing putty in many locations is cracked or completely missing. Window 100 is also missing one pane of glass.



Figure 2.60. View of the steel window on the north elevation. (STRATA 2020)

The five replacement windows on the west elevation are single-hung wood-clad aluminum windows. All of the windows are 12/1, with the exception of Window 219, which is 1/1. The windows are in good condition.




Figures 2.61 and 2.62. View of the typical replacement windows on the west elevation with the original trim. Left: Replacement “box windows” (2 total). Right: Replacement windows with panel under (3 total). (STRATA 2020)

When the replacement windows were installed, the original trim was left in place. Similar to the original windows, the paint is peeling, and there is wood rot in several locations. The sealant joint between the window frame and the brick is “alligatoring” or is torn, creating an open joint.

All of the second floor box windows and the first floor windows have steel lintels. The lintels are in good condition, with only minor locations of peeling paint. If the steel continues to be exposed to the elements, the steel could start to rust jack. Only Windows 103 and 204 are currently showing significant signs of this lintel deterioration.



Figure 2.63. View of the steel lintel at Window 103 with rust jacking. (STRATA 2020)

At all of the first floor windows, there are concrete window wells. The concrete window wells were designed to be a part of the concrete foundation. It is unknown if the window wells have drains, as none were visible due to the debris. The bottom of all of the window wells is full of gravel, as well as leaves, rocks, and other debris. The concrete window well walls themselves are in good condition. The window wells could also be a safety hazard as someone could fall into the window wells.



Figure 2.64. View of the typical conditions for the window wells. (STRATA 2020)

Resources

Preservation Brief 9: The Repair of Historic Wood Window, John H. Myers, National Park Service.

Preservation Brief 10: Exterior Paint Problems on Historic Woodwork, Kay D. Weeks and David W. Look, FAIA, National Park Service.

Preservation Brief 13: The Repair and Thermal Upgrading of Historic Steel Windows, Sharron C. Park, AIA, National Park Service.

Exterior Doors and Trim

There are three exterior doors. All of the doors are in the original openings, but only two of the doors are original. The front (main entry) door on the south elevation (Door 200/A) is 3-feet wide with a nine-paned window and a single flat wood panel below. On each side of the door, there is an original sidelight and three transom units above. The trim is highly decorative with fluted detail along the top and bottom. The door, frame, sidelights, transoms, and trim are in good condition. There is minor peeling paint and wood rot at the bottom of the door frame. Overall, it appears that the door, frame, and trim were not property prepped during a previous repainting, which has caused the overall surface to be uneven. There is a hairline vertical crack in the flat panel of each of the sidelights. The sealant joint between the door trim and the brick is "alligatoring" or is torn, creating an open joint. The interior of the door, trim, sidelights, and transom are stained. The stain is worn and showing signs of overexposure to UV sunlight.



Figure 2.65. View of the main entrance door (Door 200/A). (STRATA 2020)

Another original exterior door is Door 103/A, located on the east elevation on the first floor. Per the original shop drawings, this opening was originally planned to be a pair of doors with a transom above. This is not what was installed. The door more closely matches the front door with a nine paned window and a flat panel below. On each side of the door, there is an original six-paned sidelight and a six-paned transom above. The frame on this door consists of a simple brick mold. The door, frame, sidelights, transom, and trim are in good condition with minor peeling paint. The bottom rail of the south sidelight is deteriorated. The bottom rail of the north sidelight is covered with duct tape, but it is assumed that the bottom rail is also deteriorated condition. The interior of the door, trim, sidelights, and transom are stained. The stain is worn and showing signs of overexposure to UV sunlight.



Figure 2.66. View of the east side entrance door (Door 103/A). (STRATA 2020)

The only non-original exterior door is Door 100/A on the north elevation of the first floor. The original door was 3'-8" wide and designed to closely match the other two doors with a subdivided window and a raised panel below. This door was replaced at some point with a solid flat wood door, but the original trim remains in place. The non-original door is in poor condition. There is a significant amount of peeling paint on the door. There are biological growth and mold on the bottom of the door, along with significant deterioration. There is a steel lintel at this door, which has peeling paint, and it is beginning to rust jack.



Figure 2.67. View of the north exit door (Door 100/A). (STRATA 2020)

Resource

Preservation Brief 10: Exterior Paint Problems on Historic Woodwork, Kay D. Weeks and David W. Look, FAIA, National Park Service.

Louvers

There are three louvers on the exterior of the building. Two in the gables and one in the west wall in the mechanical room. The louvers at the gable ends appear to be in good condition from grade. It is assumed that these louvers provide air ventilation for the attic. The louver at the mechanical room is in fair condition due to the significant peeling paint. Further investigation should confirm there is insect screening installed on the interior of these louvers. A screen would prevent birds and pests from entering the building.





Figures 2.68 and 2.69. Left: View of the louver in the west gable end. Right: View of the mechanical room louver. (STRATA 2020)

Utilities

All of the utilities for the building, enter into the building at the northwest corner. On the north elevation, there are gas and electrical meters and several conduits connected to the building. On the west elevation, there is non-original fresh air intake through an original louver and piping connecting two condensing units. Some of the piping and conduits are no longer in use.

The phone and data service for the building is installed along the exterior walls along the top of the water table, sometimes in conduit and sometimes not. The wires along the west elevation were not installed tightly against the building, so they hang off the building.



Figure 2.70. View of the utilities on the north elevation at the northwest corner. (STRATA 2020)

Building Interior Existing Conditions



Figure 2.71. View of the Lobby 201. (STRATA 2020)

The interior of the Frank Hughes Memorial Library remains relatively unchanged since its construction in 1940. The only significant changes that have taken place are the installation of new finishes, such as carpeting and new paint.

The assessment of the interior only included what as visible. Many of the walls and floors are concealed with casework and other finishes.

Flooring

The original floors on the second floor of the building were either wood or linoleum. The original flooring throughout the first floor is unknown.

Wood Floors

The original wood floors are only exposed on the stairs and Closet 206A. It is believed that the original are 2-1/2-inch by 1-inch thick oak, tongue and groove wood floors are still in place throughout the second floor.

The wood floors in the stairs are in poor condition. They exhibit signs of significant wear and tear. There are several scratches in the wood, and in many locations, the raw wood is exposed.

The floor has also been overly exposed to UV sunlight, which is bleaching the wood and drying it out.

The wood floor in Closet 206A is in fair condition. It exhibits signs of typical wear and tear with several scratches on the floors.
The condition of the wood floors throughout the remainder of the second floor is unknown as they are concealed by carpeting.



Figures 2.72 and 2.73. Left: View of the original hardwood floor in Closet 206A. Right: View of the hardwood floor at the top of the Stairs. (STRATA 2020)

Carpet

The wood floors on the second floor are currently covered by carpet. The date of the current carpet installation is unknown. There was a project in 1978 that included the installation of carpet in the building.

The current carpet is a broadloom Berber carpet. Broadloom is carpet that is woven on a wide loom and is generally installed wall to wall. Berber carpets are loop carpet that is sewn or tufted into the backing and left uncut.

The carpet is in poor condition, especially in the high traffic areas. There are several places where the carpet is unraveling, which is exposing the backing. The carpet is generally dirty and has reached the end of its life.




Figures 2.74 and 2.75. View of the typical condition of the second floor carpet. (STRATA 2020)

Linoleum

Linoleum is an all-natural flooring made from linseed oil, cork dust, wood flour, tree resins, ground limestone, and pigments, which is pressed onto a jute backing. It is smooth and water-resistant, which makes it easy to clean. It was used in locations like restrooms, where clean floors were important. Linoleum floors can typically last twenty to forty years or longer, depending on the traffic, location, and upkeep.

The original linoleum floor remains in Restroom 208. It is in fair to poor condition and is well past its useful life. The seam between the two rolls is separating, creating a gap between the two rolls. There are also several chips in the linoleum along the seam. Under the sink and around the toilet, there is water damage. The holes and open seams can allow water to infiltrate into the flowing below.




Figures 2.76 and 2.77. View of the typical condition of the linoleum in Restroom 208. (STRATA 2020)

The linoleum floor was turned up the wall creating a linoleum base. The continuous surface with a coved edge created an easily cleanable surface.
The linoleum base is in fair to poor condition. Similar to the flooring, the seam between the two rolls is separating, creating a gap between the two rolls. The base is also separating from the wall in this location on the west wall.



Figure 2.78. View of the linoleum base in Restroom 208. (STRATA 2020)

Concrete

The original floor finish on the first floor is unknown. In the 1978 drawings, the flooring is noted as carpet. It is unknown when the flooring was removed. It has been noted that the first floor previously flooded regularly, so it is believed that the flooring was removed to prevent continual damage to the flooring. The floors are currently painted concrete.

The concrete is in good condition. There are some minor cracks in the floor of Archival Storage 103. The painted finish is in fair to poor condition with several locations with peeling or missing paint. Below the sink in Restroom 102, there are signs of water damage. This might be an indication that there is a leak, or there was previously a leak in this location.



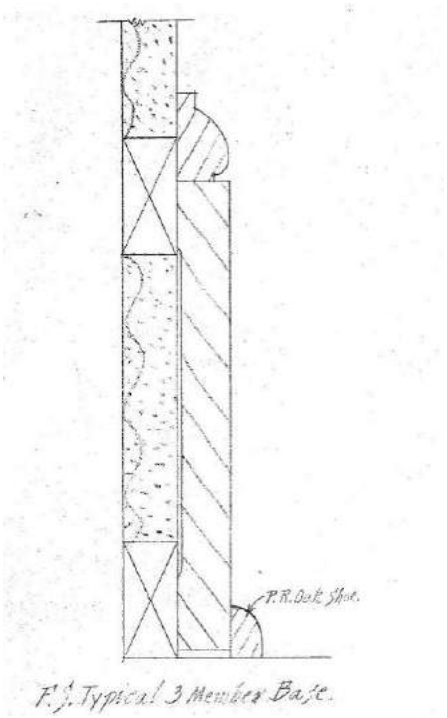

Figures 2.79 and 2.80. View of the typical condition of the concrete floor on the first floor. (STRATA 2020)

Baseboards

Wood Baseboard

A decorative 8-inch wood baseboard was originally installed in current rooms Archival Storage 202, Microfilm Room 203, Computer Room 205, and Work Room 206. The wood base is stained in all of the rooms except for Archival Storage 202 in which it is painted. The original base is still intact in all of these rooms.

The original wood baseboard is in good condition with just signs of standard wear and tear.





Figures 2.81 and 2.82. Left: The standard 8-inch wood base profile from the original shop drawings. (Clay County Archives). Right: View of the standard 8-inch wood base in Computer Room 205. (STRATA 2020)

Cement Base

A 6-inch high cement base, as noted in the original shop drawings, was installed throughout several rooms on the first floor, including current rooms Corridor 100, Janitors 101, Restroom 102, Corridor 107, Archival Storage 110, and Archival Storage 111. It is believed that the concrete floor wrapped up the wall to create a continuous surface that is easy to clean. It also keeps the wood door trim off of the floor to prevent the wood from absorbing water and rotting.

The cement base is in good overall condition. There are two locations on the east wall of Corridor 100 in which the base is cracked. The remainder of the cement base has minor signs of wear and tear.




Figures 2.83 and 2.84. View of the typical 6-inch cement base on the first floor. (STRATA 2020)

Wainscoting

Throughout the Library, there are five different styles of wainscoting; all of them are original. They vary in the degree of ornamentation, with the most decorative being in Lobby 201 to the least decorative in Vestibule 200. The different designs help distinguish the rooms and different functions.

Vestibule 200 Wainscot

The original wood wainscoting in Vestibule 200 is 36-inches tall. It includes the standard 8-inch wood base with a small decorative cap with a smooth wood between. The wainscot in stained.

The wainscoting in Vestibule 200 is in good condition with only minor signs of wear and tear.



Figure 2.85. View of the stained wood wainscot in Vestibule 200. (STRATA 2020)

Lobby 201 Wainscot

The wainscot within the Lobby is the most decorative in the building. It is 39-inch tall and painted. The wainscot is made of the standard 8-inch wood base and decorative cap with recessed molded panels.

The wainscoting in Lobby 201 is in good condition, with only minor areas with peeling or missing paint.



Figure 2.86. View of the wainscot in Lobby 201. (STRATA 2020)

User Study Area 204 Wainscot
(Noted as the Children's Reading Room in the Shop Drawings)

The wainscot within the User Study Area 204 is 34-inches tall and similar in design to the Lobby 201 wainscot. This wainscot has the standard 8-inch wood base with the same decorative cap as the Lobby wainscot with beadboard walls. This wainscot is stained and constructed of knotty pine.

The wainscoting in User Study Area 204 is in good condition with only minor signs of wear and tear.

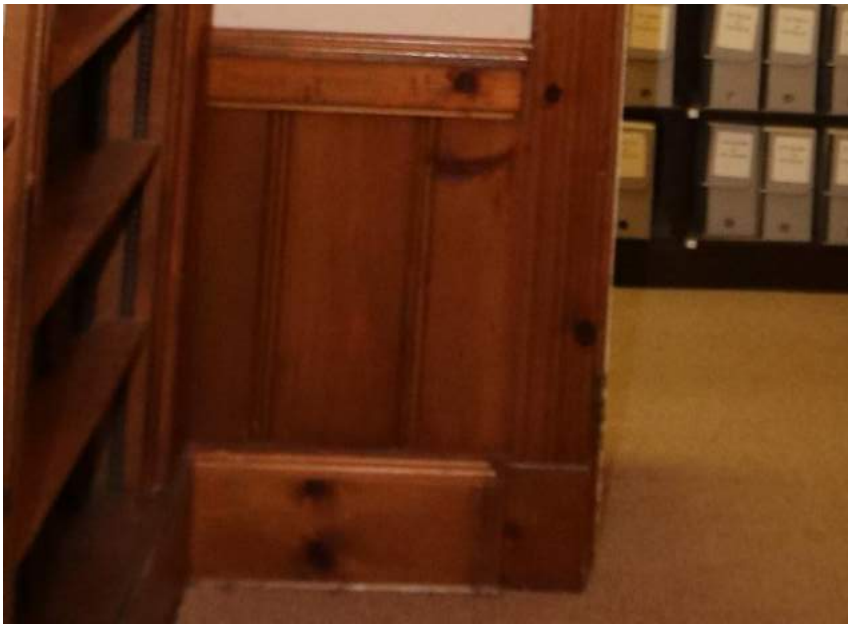


Figure 2.87. View of the wainscot in User Study Area 204. (STRATA 2020)

User Study Area 207 Wainscot
(Noted as the Adult Reading Room in the Shop Drawings)

The wainscot within the User Study Area 207 is painted, 34-inches tall and similar in design to the Lobby 201 wainscot. This wainscot has the standard 8-inch wood base with the same decorative cap as the Lobby wainscot with a flat board wall.

The wainscoting in User Study Area 207 is in good condition, with only minor areas with peeling or missing paint.



Figure 2.88. View of the wainscot in User Study Area 207. (STRATA 2020)

First Floor Wainscot

Archival Storage 103, Corridor 104, Archival Storage 105, and Archival Storage 106, have a 26-inch tall, stained wood wainscot. The wainscot has a simple cap with a horizontal beadboard panel\r. The base is the 6-inch cement base used throughout the remainder of the first floor. Instead of being continuous with the floor, the 6-inch cement base is applied to the wall. These still would have allowed for easier cleaning and protecting the wood portions of the wainscot from absorbing water and rising damp from the concrete floor.

The first floor wainscoting is in good condition with only minor signs of wear and tear. The top cap of the wainscot in Archival Storage 106 is no longer fully attached.



Figure 2.89. View of the wainscot on the first floor. (STRATA 2020)

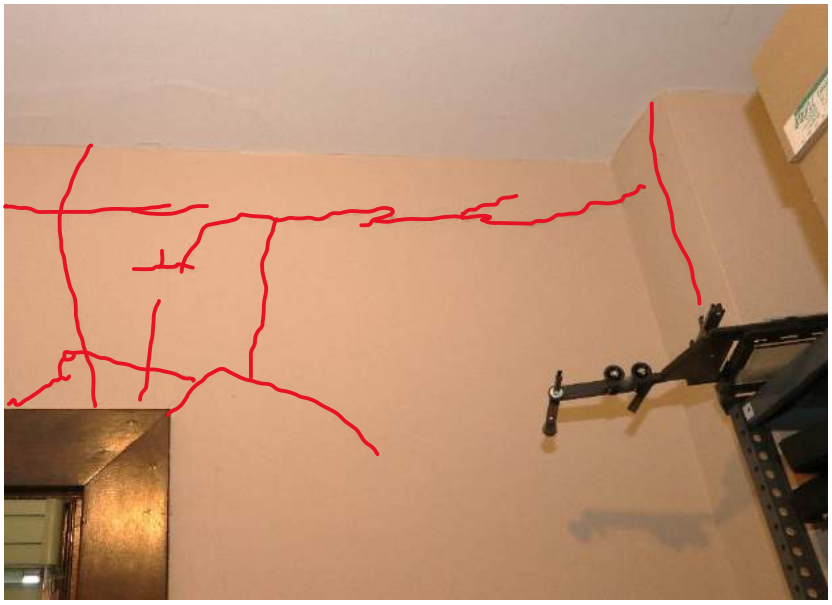
Walls

The majority of the walls throughout the building are plaster. The only exception to this is the interior wall of Mechanical Room 109, which is exposed structural clay tile and three of the walls in Corridor 104, which are gypsum board.

Plaster Walls

The plaster on the walls is either applied directly over the masonry wall or on metal lath. The plaster walls are in varying conditions, with most being in sound and good condition.

There are several locations throughout the second floor where the plaster is cracking, both horizontally and vertically. The cracking is more extensive on the south wall of Microfilm Room 203. All of the cracks throughout the building are minor (under an 1/8-inch) and most likely due to minor settlement.





Figures 2.90 and 2.91. View of the areas with the most cracking. Left: South wall of microfilm Room 203. Right: Southeast corner of User Study Area 204. (STRATA 2020)

In addition to the cracking, there is some minor damage caused by the continual use of the building. There are some unused holes in the north wall of Corridor 104 (5 total), in the south wall of Archival Storage 105 (2 total), in the north and west walls of Archival Storage Room 106 (6 total) and south of Door 205/A in Archival Storage 202 (1 total). There is some tape on the north wall of Microfilm Room 203. There is also a significant amount of adhesive on the south wall of Archival Storage 105.




Figures 2.92 and 2.93. View of the holes and adhesive on the south wall of Archival Storage Room 205. Left: View of the hole west of Door 104/A. (STRATA 2020)

The plaster walls have also been previously patched in a few locations, including the north and south wall Restroom 102 and the south wall of Archival Storage 111. The plaster was patched to repair locations where something has been removed or where a repair has had to happen, which caused damage to the wall. The plaster patches were not done appropriately. They were done with either the wrong patching material or not appropriately finished to create a level surface to match the surrounding plaster.




Figures 2.94 and 2.95. Left: View of an improper plaster patch in Restroom 102. Right: View of an improper plaster patch in Archival Storage 111. (STRATA 2020)

Two rooms throughout the first floor and three rooms on the second floor have significant plaster damage caused by previous roof leaks. The most significant of the damage is on the north wall of Room 101, the north wall of Room 110, northwest corner of Room 205, along the north wall of Room 206, and along the east wall of Stair A. It has been reported that the roof leaks have stopped following the 2019 roof replacement. This should be investigated to ensure that the leak is not active because the exterior bricks walls at these locations are still damp following a rain event.



Figure 2.96. View of the water damage in the northeast corner of Computer Room 205. (STRATA 2020)



Figure 2.97. View of the water damage in the northwest corner of Work Room 206. (STRATA 2020)



Figure 2.98. View of the water damage on the east wall of the Stairs. (STRATA 2020)

Resource
Preservation Brief 21: Repairing Historic Flat Plaster Walls and Ceilings, Mary Lee MacDonald, National Park Service.

Gypsum Board (Dry Wall) Walls

Gypsum Board was installed on the east, south, and west walls of Corridor 104. These walls were not original or had extensive damage and were replaced with gypsum board or cover deteriorated plaster. The gypsum board is in fair condition. There are several locations where the walls have nicks, scrapes, and unused anchors. There is one location north of Door 103/B where the gypsum board is torn.




Figures 2.99 and 2.100. View of the typical condition of the gypsum board in Corridor 104. (STRATA 2020)

Structural Clay Tile Walls

Structural clay tile was used to construct the interior walls of Mechanical Room 109. Structural clay tile is a fired-clay building material that is known for its fire resistance. Preventing building fires was emphasized during the beginning of the twentieth-century, so utilizing structural clay tile for the interior walls of the mechanical room along with a fire door and concrete foundation wall assembly would have created a fire rating between the room and the remainder of the interior spaces.

The structural clay tile is in good condition.



Figure 2.101. View of the structural clay tile wall in Mechanical Room 109. (STRATA 2020)

Ceilings

There are a variety of ceiling types throughout the building. Plaster over metal lath was the primary ceiling type, but over time as the plaster became damaged, the plaster was covered or replaced.

Plaster Ceilings

Original plaster remains throughout most of the first floor and second floor ceilings. For the ceilings, the plaster was applied over metal lath.

The visible plaster ceilings are in good condition, with only a few minor cracks. There is one (1) location in Lobby 201, above the opening to User Study Area 204, where there is some minor plaster damage. There are two locations in the ceiling of the Archival Storage 103, where there appears to be some water damage around a metal plate. The paint on the plaster is starting to peel in a few locations on the second floor. There are a few locations in Archival Storage 103 where a device was replaced, but the ceiling was not repainted around the device.

There have been some previous roof leaks in Computer Room 205, Work Room 206, and Stair A, which has led to significant water damage in the rooms. The ceilings in all of the rooms have been covered, so the extent of the damage is unknown.




Figures 2.102 and 2.103. View of the typical condition of the plaster ceiling throughout the second floor. (STRATA 2020)

Resource

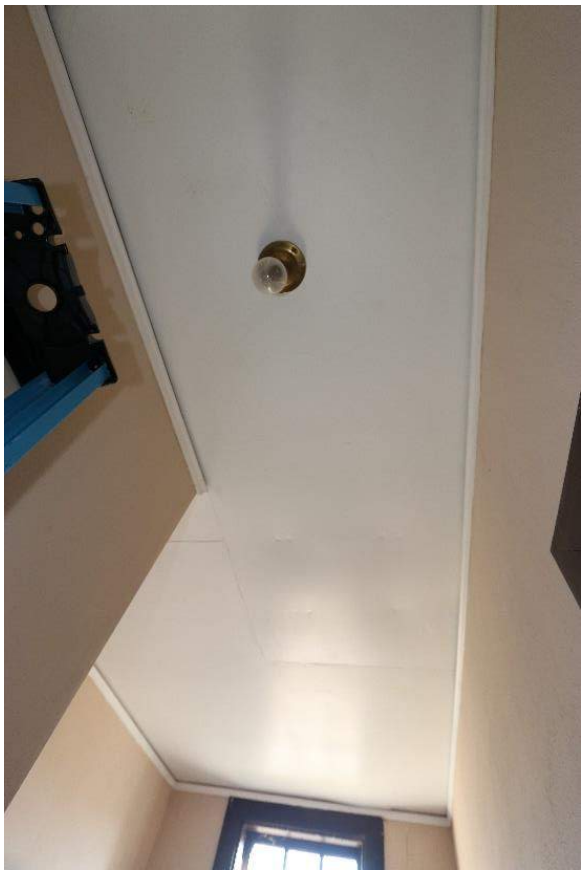
Preservation Brief 21: Repairing Historic Flat Plaster Walls and Ceilings, Mary Lee MacDonald, National Park Service.

Gypsum Board (Dry Wall) Ceilings

Gypsum Board was used to cover or replace the water damaged plaster in Computer Room 205 and in Stair A. It is believed that this is a recent installation.

The gypsum board ceilings are in good condition. The gypsum board ceiling in Stair A appears to have not been fully finished as the seams between the boards are still visible. The ceilings in both rooms appear only to have one (1) coat of paint, so the gypsum board is ghosting through.





Figures 2.104 and 2.105. Left: View of the gypsum board ceiling in Computer Room 205. Right: View of the gypsum board ceiling in the Stairs. (STRATA 2020)

Wood Paneling Ceiling

Wood beadboard paneling was used to cover or replace the water damaged plaster in Work Room 206. It is believed that this is a relatively recent installation.

The wood beadboard ceiling is in fair condition. There is water staining along most of the seams. Additional investigation is needed to determine if there is an ongoing leak in this location as the exterior brick walls remain damp following a rain event.



Figure 2.106. View of the water damaged beadboard ceiling in Work Room 206. (STRATA 2020)

Suspended Ceiling

A 2‘-0” by 4’-0” suspended, lay-in acoustical ceiling was installed in three rooms on the first floor – Corridor 104, Archival Storage 105, and Archival Storage 106. It is believed that these ceilings were installed during a previous renovation, as the lay-in ceilings do not appear new. Suspended ceilings are typically installed to allow for mechanical ducts to be run above the ceiling, conceal deteriorated ceiling finishes, install new ceiling lights, upgrade the ceiling finish throughout the space, and/or increase the acoustical properties within the space.

The suspended ceilings are in fair condition. The metal grids are in good condition, but the tiles are showing signs of typical wear and tear as many of the tiles are dirty. A few of the tiles in Room 105 were painted black at some point.

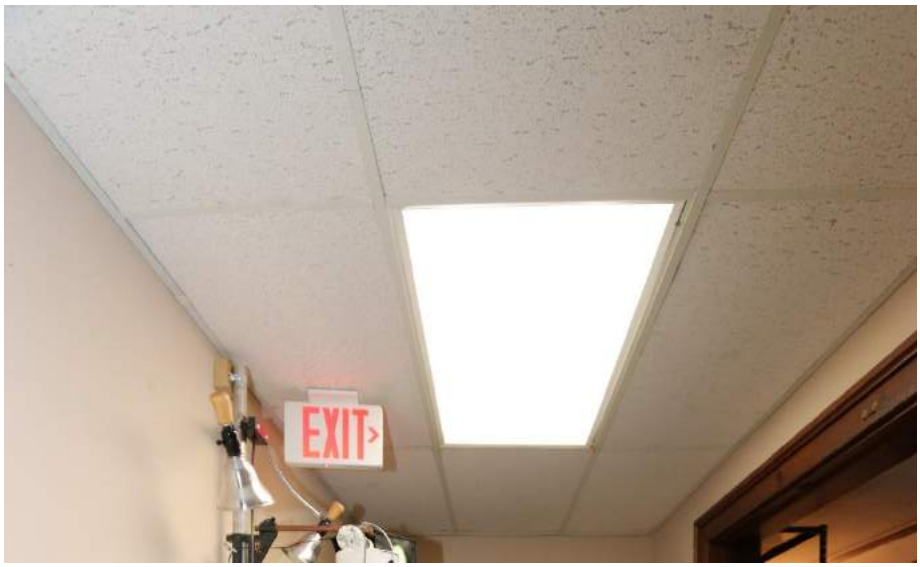


Figure 2.107. View of the typical condition of the lay-in ceiling. (STRATA 2020)

Exposed Concrete Floor Structure

The concrete structure was left exposed in Mechanical Room 109. As this has always been used as a mechanical room, there would have been no need to install finishes throughout the room. This is the only room where the condition of the concrete structure can be seen.

As a whole, the concrete structure appears to be in good condition. Within Room 109, there are signs of water damage in the northeast corner. This is consistent with the water damage seen on the second floor and the exterior. Additional investigation is needed to determine the source of the water, and if it is ongoing.



Figure 2.108. View of the water damage in the northeast corner of Mechanical Room 109. (STRATA 2020)

Decorative Plaster Crown Molding

To show their importance, several of the spaces on the second floor, a decorative plaster crown molding, was originally installed in Vestibule 200, Lobby 201, Archival Storage 202, User Study Area 204, and in User Study Area 207. These remain the most important rooms within the building. The crown molding in Room 201 is more decorative than the crown molding used in the other spaces. This elevates this room as the most important room within the building. The original crown molding remains in place in all of the rooms.

The decorative plaster crown molding is in good overall condition. There are a few locations where there is a gap between the plaster wall and the crown molding. This happens in a few locations along the west wall of Room 202, the west wall of Room 204, the east wall of Room 207. In one location along the west wall of Room 201, there appears to have been a smoke detector or other round device which has damaged the paint on the crown molding. There are a few additional locations where the paint on the crown molding is peeling.




Figures 2.109 and 2.110. View of the typical condition of the decorative plaster crown molding. (STRATA 2020)

Resource

Preservation Brief 23: Preserving Historic Ornamental Plaster, David Flahaty, National Park Service.

Interior Doors, Frames, and Trim

There were originally nineteen interior doors through the building, in eight different styles. All of the original doors are wood, with the exception of the door to Mechanical Room 209, which is a metal fire door. Over time the original doors have been removed, so only eight of the original nineteen remain, including the fire door. There are several of the original doors being stored in Mechanical Room 109.

The remaining original wood doors are paneled in three different styles and constructed of red birch.

Type A - Door 200/B at the vestibule is a pair of 2’-6” doors with an eight-pane glass window and single recessed panel below. These doors are in good condition. The door stain is showing signs of UV exposure signs of typical wear and tear.



Figure 2.111. View of the Door 200/B Type A door. (STRATA 2020)

Type B – Typical second floor door. This door has three molded recessed flat panels, a 10-inch panel at the top with a larger central panel, and a 13-inch panel at the bottom. This door type is still installed at Door 206/A (Work Room), Room 207/A (Stair A), and Door 208/A (Restroom). These doors are in good condition, with only signs of typical wear and tear. Door 207/A has some tape on the door from the hanging of a previous sign.



Figure 2.112. View of an example of the Type B door. (STRATA 2020)

Type C – Door with the small grille at the bottom was originally used at the janitor's closet, first floor restrooms, stairs, and storage room. This door has three molded recessed panels. The larger top panel and the 11-1/4-inch tall center panel are both are wood. The bottom 6-7/8-inches tall panel contains a 4-3/4-inch stall stamped steel grille. This door type is still installed at Door 100/B (Stair A), Door 102/A (restroom), and Door 108/A (Storage). These doors are in good condition, with only signs of typical wear and tear. Door 102/A has some tape residue on the door from the hanging of a previous sign, and a section of the veneer is missing from within the larger top panel.



Figure 2.113. View of an example of the Type B door. (STRATA 2020)

The original metal fire door remains in place. On the original shop drawings, the door is noted to be a “#2 – Class ‘A’ Fire Door” and was constructed by Standard Steel Works. The door is a solid steel door and frame and is in fair condition. The metal door and frame have several areas with peeling or missing paint and scratches. The door itself is difficult to operate.



Figure 2.114. View of fire Door 109/A at the mechanical room. (STRATA 2020)

The door trim styles vary throughout the building, and in many locations, the door trim is different on opposite sides of the door. This change in style helps signify the importance of the room that the trim is installed in. There are four different types of trim. They are all constructed of wood and are either stained or painted depending on the other trim in the room. All of the original door trim remains throughout the building.

Type 1 – This trim is highly decorative and is only used on the Lobby 201 side of Door 200/B. The side casing for this trim type is a decorative profile with an entablature above the door. This design is repeated at the large opening between Lobby 200 and User Study Area 204 and User Study Area 207. The door trim is showing signs of typical wear and tear with some minor peeling paint.



Figure 2.115. View of the Door 200/B Type 1 door trim. (STRATA 2020)

Type 2 – This trim type is the second highest in level of decoration. The side and head casings have a decorative profile, and there are corner blocks. This trim type is used throughout Lobby 201, Archival Storage 202, User Study Are 204, and User Study Area 207. The trim type is in good condition, with only signs of wear and tear.

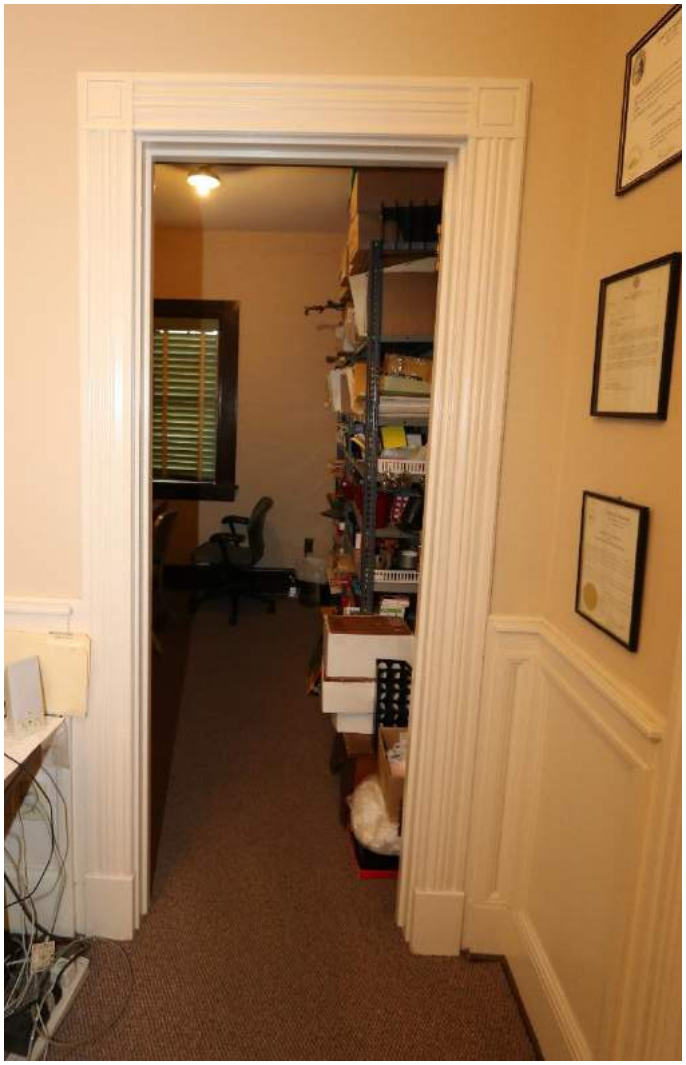


Figure 2.116. View of an example of the Type 2 door trim. (STRATA 2020)

Type 3 – This trim type is the third highest in level of decoration. This trim is a simple flat trim with a decorative backband profile. This trim is used in Archival Storage 103, Corridor 104, Archival Storage 106, and Microfilm Room 203. This trim is in good condition, with only signs of typical wear and tear. The trim on Door 203/A has tape from a previously removed sign. The trim on Door 104/A has few holes from previously attached hardware.



Figure 2.117. View of an example of the Type 3 door trim. (STRATA 2020)

Type 4 – This trim type is the lowest in level of decoration. This trim is a simple flat trim with no decoration. This trim is used in Corridor 100, Janitor 101, Restroom 102, Corridor 107, Archival Storage 110, Archival Storage 111, Computer Room 205, Work Room 206, Restroom 208, and Stair A. This trim type is in fair to good condition. The trim on the second floor has typical signs of wear and tear. The trim on the first floor has slightly more damage with nicks and holes from removed hardware in addition to the typical wear and tear. There is paint splatter on the door trim at Doors 101/A and 111/A.



Figure 2.118. View of an example of the Type 3 door trim. (STRATA 2020)

Hardware

The majority of the hardware dates to the original construction of the building. The original hardware consists of hinges, doorknobs, door latches, push plates, door pulls, crash bars, deadbolt locksets, and closers. A cursory review of the original hardware was done as part of this study. A more comprehensive hardware inventory with a list of the required repair work should be completed to establish a budget. The majority of the original hardware is in good condition, with only signs of typical wear and tear.





Figures 2.119 and 2.120. Left: View of an example of a typical original door hinge. Right: View of an example of an original door hinge at bathrooms. (STRATA 2020)



Figures 2.121. View of an example of an original doorknob and mortise latch. (STRATA 2020)




Figures 2.122 and 2.123. Left: View of an example of an original push plate with a non-original pull. Right: View of an example of an original door pull with a non-original push plate. (STRATA 2020)



Figure 2.124. View of an example of an original crash bar. (STRATA 2020)



Figure 2.125. View of an example of an original door closer. (STRATA 2020)

Windows and Interior Trim

The majority of the windows date to the original construction. The five windows on the west elevation were replaced in the early 2000s. Reference the window section in the exterior section for a description of the windows and the condition of the exterior of the windows.

The original windows are a combination of wood and steel windows. The interior of the wood windows is a combination of stained or painted finishes depending on the finish of the other trim in the room. The interior window finish is in poor condition. The painted finish is peeling, and in several locations, there is wood rot. The stained finish is worn and, in several areas, show signs of UV exposure. Several of the windows also show signs of water damage, which is typically caused when the windows are no longer properly sealed. Window 101 (Archival Storage 110) is covered from the interior.

The early 2000s replacement windows are in good condition.




Figures 2.126 and 2.127. View of the typical interior condition of the windows (STRATA 2020).

The windows throughout Lobby 201, Archival Storage 202, User Study Area 204, and User Study Area 207 have original window blinds installed. The original thick wood blinds have fabric tape spacers and ladder strings. The ends of the painted blades are held within tracks along the edges of the window. The original blinds have been repaired several times. The archive volunteers noted that it is getting increasingly harder to repair the blinds, as there are very few repair companies and they are very expensive, Accessing the supplies to do in-house repairs is getting harder. The blinds are in fair to poor condition. The fabric is fraying. The paint on the blades is very worn. The paint on the tracks is peeling, exposing the raw metal.




Figures 2.128 and 2.129. View of the typical condition of the window blinds. (STRATA 2020)

All the window trim is original to the building. There are two different types of window trim, and similar to the door trim, the different types of window trim help signify the importance of the room. The window trim is constructed of wood and is either stained or painted depending on the other trim in the room.

The window trim with the highest level of decoration was used within Archival Storage 202, User Study Area 204, and User Study Area 207. The window trim matches the door trim used within these rooms (Door Trim Type 2). The side and head casing have a decorative profile, and there are corner blocks. This window trim type is in good condition, with only signs of typical wear and tear.



Figure 2.130. View of the window trim in User Study Area 207. (STRATA 2020)

The window trim on the remainder of the window throughout the building (both first and second floors) is a simple flat trim with no decoration. This window trim type is in good condition, with only signs of typical wear and tear. Window 101 (Archival Storage 110) has some staining on the window trim and sill. There are holes in the apron of Window 104 (Restroom 102) and some wood rot on the trim. Window 200 (Computer Room 205), Window 204 (Work Room 206), and Window 206 (Stair A) have a significant amount of water staining on the trim.



Figure 2.131. View of the typical window trim through the building. Note the wood rot on the lower sash Window104 in Restroom 102. (STRATA 2020)

Stairs and Railing

There is one staircase between the first and second floors. The original shop drawings noted these as “Fright Stairs.” The treads and risers are P.W. Oak with a knotty white pine stringer. The bottom riser on the first floor is cement to match the base throughout the first floor. The base at the top and bottom of the stair on the second floor is the standard 8-inch wood base. There is a 2-inch diameter round, 30-1/2-inches tall railing along both sides of the stairs made of birch. The decorative cap along the low-height center wall is cypress.

The wood treads and risers are in a similar condition as the wood floors in this space. They are in poor condition and exhibit signs of significant wear and tear. There are several scratches in the wood, and in many locations, the finished are worn, exposing the raw wood. The tread and risers have also been overly exposed to UV sunlight, which is bleaching the wood and drying it out.



Figure 2.132. View of the typical condition of the treads and risers on the stairs. (STRATA 2020)

The railing is in fair condition with significant signs of wear and tear. The finish in several locations of the railing has worn away.



Figure 2.133. View of the typical condition of the railing on the stairs. (STRATA 2020)

The decorative wood cap on the low-height center wall is in poor condition and exhibits signs of significant wear and tear. There are several scratches in the wood, and in many locations, the raw wood is exposed. The cap has also been overly exposed to UV sunlight, which is bleaching the wood and drying it out.

The wood base at the bottom of the stairs has become detached on both sides.



Figure 2.134. View of the typical condition of the decorative wood cap on the low-height wall between the two runs for the stairs. (STRATA 2020)





Figures 2.135 and 2.136. View of the detached base at the bottom of the Stairs. (STRATA 2020)

Original Casework

The American Sash and Door Company constructed several custom pieces of casework for the building, including the service desk, wood railings, and bookshelves. The majority of this custom original casework remains in the building, with only minor changes.

Service Deck and Railing

The service deck or “charging desk” was the centerpiece of Lobby 201. The large desk remains the hub of the library. It was constructed of red birch with large recessed panels along the front and sides. The top is linoleum. The desk remains intact and is in good condition.



Figure 2.137. View of the service desk. (STRATA 2020)

On either side of the wood-paneled service desk, railings with bi-swinging gates were designed to prevent the public from accessing the space behind the service desk. The railing and gates were constructed of red birch panels to match the desk. Over time the gates have been removed, but the railing is still intact. The remaining railing is in good condition.

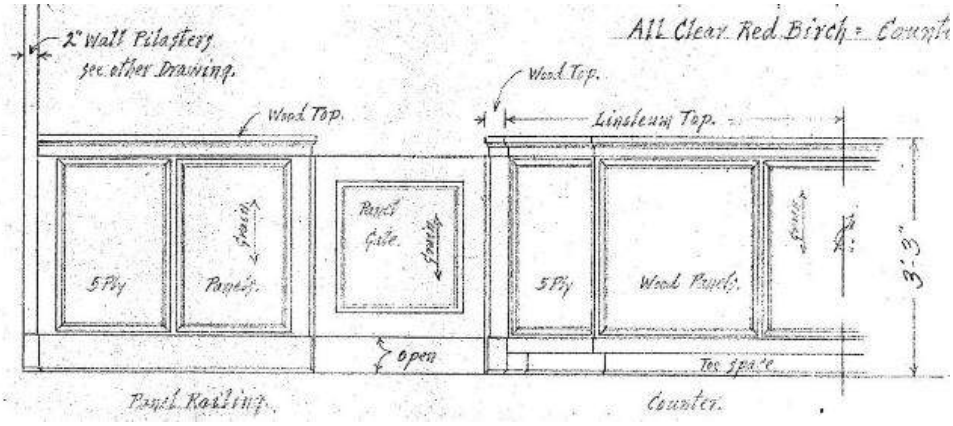


Figure 2.138. Elevation of the railing and gate from the original shop drawings. The gate is no longer installed, and the railing is blocked by furniture. (Clay County Archives)

The railing ends at both the east and west wall at the decorative wood pilaster. The pilasters remain intact and are in good condition. There is a crack between the pilaster and the wall on the north side of each pilaster.



Figure 2.139. View of the pilasters at the end of the railing and the gap on the north side at the plaster wall. (STRATA 2020)

Bookshelves

Custom built-in wood bookshelves were constructed for User Study Room Area 204 and User Study Area 207. They were constructed of a combination of white pine and knotty pine. Smaller bookshelves were installed between the windows along the east and west walls of User Study Area 204 and 207 and some longer bookshelves for the north and east walls of User Study Area 204. The majority of these bookshelves remain in place. There are a few original wood bookshelves installed throughout the building in non-original locations. The original locations of these bookshelves are unknown. The bookshelves are in good condition but are showing signs of typical wear and tear. The interior of many of the shelves were retrofitted to receive adjustable shelves.




Figures 2.140 and 2.141. View of the custom built-in bookshelves in User Study Rooms 204 and 207. (STRATA 2020)

Original Restroom Fixtures and Toilet Room Partitions

The original restroom fixtures and toilet room partitions remain in place in two of the three restrooms. Archival Storage Room 111 was originally a restroom, but all of the plumbing fixtures have been removed. Restrooms 102 and 208 are virtually unchanged. Both have the original toilet and sink installed, and Restroom 102 has the original urinal. Both have the original wood toilet partitions constructed of cypress with birch doors.

The plumbing fixtures and the original toilet partitions are in good condition. Neither restroom is accessible.



Figure 2.142. View of the original wooden toilet partition and sink in Restroom 208. (STRATA 2020)





Figures 2.143 and 2.144. Left: View of the urinal in Restroom 102. Right: View of the toilet in Restroom 102. (STRATA 2020)

Lighting

Most of the original light fixtures remain throughout the building in varying conditions. The light fixtures have never undergone restoration and may utilize original cloth wiring. There are several different color temperatures of the bulbs used throughout the building, resulting in a range of colors from whiter light to a yellowy light.

Original Pendant Light Fixtures

Throughout Lobby 201, User Study Area 204, and User Study Area 207, the original decorative pendant light fixtures are installed. These lights are in good condition, but the shades are dirty.



Figure 2.145. View of the original pendant light fixtures. (STRATA 2020)

Original Wall Sconces

Original decorative wall sconces are installed along the exterior wall of User Study Area 204 and User Study Area 207. These sconces are in good condition, but the shades are dirty. Two of the sconces were not working at the time of the assessment – one on the west wall of Room 204 and one on the east wall of Room 207. The light bulbs should be changed to ensure that the wall sconces are working. The shade on the wall sconces in the southeast corner of Room 204 has been replaced. The replacement shade does not match the texture of the original shades.



Figures 2.146 and 2.147. Left: View of the original decorative wall sconces. Right: View of the original decorative wall sconce with the replacement shade. (STRATA 2020)

There are two additional wall sconces one in Work Room 206 and one in the Stairs. These are they as decorative at the others. The one in Room 206 has a half globe that directs light up. The one in the Stairs is a bare bulb sconce. This may have had a shade that is now missing. They are both in good condition, but the shades are dirty.




Figures 2.148 and 2.149. Left: View of the original wall sconce in Work Rook 206. Right: View of the original wall sconce in the stairs. (STRATA 2020)

Original School House Lights Fixtures

Original school house style light fixtures are installed in Microfilm Room 203 and Restroom 208. The light fixture in Room 203 is missing its original glass globe, but the lamp base is in good condition. The light fixture in Room 208 remains intact, but the globe is dirty, and the lamp bases show some signs of deterioration.




Figures 2.150 and 2.151. Left: View of the original school house light in Restroom 208. Right: View of the original school house light with the missing globe in Microfilm Room 203. (STRATA 2020)

Original Ceiling Mounted Globe Lights

There are two original ceiling mounted globe lights – one in Vestibule 200 and one in the Stairs. The design of both of these lights is different from the light in the vestibule, which is more decorative. These lights are in good condition, but the globes are dirty.




Figures 2.152 and 2.153. Left: View of the original ceiling mounted light in Vestibule 200. Right: View of the original ceiling mounted light in the Stairs. (STRATA 2020)

First Floor Lighting

The original lighting that remains throughout the first floor is a simple lamp base. It is believed that these light fixtures originally were bare bulb fixtures as none of them have a globe, and they do not have a fitter to connect a globe to the lamp base. These original light fixtures are still installed in Corridor 100, Restroom 102, Corridor 107, Archival Storage 110, and Archival Storage 111. The metal lamp bases are in good condition with only minor signs of deterioration on the lamp base. All of the bulbs have been replaced with a variety of incandescent and fluorescent bulbs.




Figures 2.154 and 2.155. View of the original ceiling mounted light fixtures on the first floor. (STRATA 2020)

Replacement Lights

The original light fixtures have been removed from several rooms throughout the building. The original lights within Archival Storage 202 were removed to increase the light levels within the shelving area. It appears that the lighting layout has changed several times as there are several unused junction boxes and wiremold on the ceiling. The current pendant light fixtures do not match the style of the original lights. Above the service desk, contemporary track lighting was installed to provide additional lighting in Lobby 201. The track lighting does not currently work, nor do the volunteers feel that the lighting is needed.



Figure 2.156. View of the non-original pendant lights and track lighting in the ceiling on Archival Storage 202. Note the unused junction boxes and wiremold in the ceiling. (STRATA 2020)

It is believed that the lights within Computer Room 205 and Work Room 206 were replaced due to water damage to the original lights. The replacement school house lights are in keeping with the feel and design of the original lights but are different from the original school house lights, which shows that these are not original.



Figure 2.157. View of the non-original school house light fixtures in Computer Room 205. Note the different the light color between the three lights. (STRATA 2020)

It is unknown why the original light fixtures were removed from Archival Storage 103, but it is believed that they were replaced to increase the light levels in the room. The current lights are ceiling mounted linear fluorescent fixtures. The design of the original light fixtures is unknown.



Figure 2.158. View of the non-original ceiling mounted linear light fixtures in Archival Storage 103. (STRATA 2020)

When the suspended ceilings were installed in Corridor 104, Archival Storage 105, and Archival Storage 106, 2’-0”x4’-0” lay-in fluorescent light fixtures were installed. The design of the original light fixture for these rooms is unknown. They may remain installed above the ceilings.



Figure 2.159. View of the typical non-original 2’-0” X4’-0” lay-in fluorescent light fixtures. (STRATA 2020)

Building Systems

Mechanical

The mechanical systems for the Frank Hughes Memorial Library consist of three split system heating/cooling units to condition the first and second floors. Supply and return air is ducted to grilles in the walls or ceiling on the first floor and is routed to wall or floor grilles on the second floor. Many of the existing grilles appear to be aged and dirty (Figure 2.160). The three indoor furnaces/coils (Figure 2.161) are all located on the first floor mechanical room in the northwest corner of the building. The associated condensing units (Figure 2.162) are located outside the building, along the exterior walls of the northwest corner of the building. These systems are approximately twelve years old and are standard efficiency equipment.

The thermostat (Figure 2.163) on the first floor is a non-programmable thermostat and appears to be controlling the space to 70˚F year round, throughout the day, regardless of occupancy. There is currently no mechanical ventilation provided into this building and no exhaust provided for the restrooms and janitor's closet. Two dehumidifiers (Figure 2.164) are provided in the large archive rooms (Room 103 and Room 106) on the first floor.

The gas meter is located on the exterior wall near the northwest corner of the building, and a 2-inch gas line is routed into the first floor mechanical room to serve the three furnaces.

During discussions with the Clay County Archives volunteers and City staff, it did not appear that there were any major heating/cooling issues in the building.

<u>HVAC Equipment</u>

Split System #1

- Furnace/Coil
    - Manufacturer: Intl. Comfort Products - Comfortmaker
    - Model Number: EDD4X60JA2
    - Serial Number: X064150891
    - Purchase Date: January 2008
    - Cooling Source: R410a Refrigerant
    - Heat Source: Natural Gas
    - Estimated Heating Capacity: 125 Btu/h (input) – 100 Btu/h (output)
    - Estimated Heating Efficiency: 80%

- Outdoor Condensing Unit
    - Manufacturer: Intl. Comfort Products - Arcoaire
    - Model Number: N4A360GKA100
    - Serial Number: E060813217
    - Purchase Date: January 2008
    - Electrical: 208v/1ø MCA-34.2amps MOCP-50amps

  - Cooling Capacity: 60,000 Btu/h
  - System Efficiency: 11 EER

- Condition
  - These units are in fair condition. There is no visible damage. It is likely that this equipment has about 8 years of life remaining. The equipment is standard efficiency.

Split System #2

- Furnace/Coil
  - Manufacturer: Intl. Comfort Products - Comfortmaker
  - Model Number: EDD4X60JA2
  - Serial Number: X080458861
  - Purchase Date: January 2008
  - Cooling Source: R410a Refrigerant
  - Heat Source: Natural Gas
  - Estimated Heating Capacity: 125 Btu/h (input) – 100 Btu/h (output)
  - Estimated Heating Efficiency: 80%

- Outdoor Condensing Unit
  - Manufacturer: Intl. Comfort Products - Arcoaire
  - Model Number: N4A360GKA100
  - Serial Number: n/a
  - Purchase Date: January 2008
  - Electrical: 208v/1ø MCA-34.2amps MOCP-50amps
  - Cooling Capacity: 60,000 Btu/h
  - System Efficiency: 11 EER

- Condition
  - These units are in fair condition. There is no visible damage. It is likely that this equipment has about 8 years of life remaining. The equipment is standard efficiency.

Split System #3

- Furnace/Coil
  - Manufacturer: Intl. Comfort Products - Comfortmaker
  - Model Number: EDD4X60JA2
  - Serial Number: X080458852
  - Purchase Date: January 2008
  - Cooling Source: R410a Refrigerant
  - Heat Source: Natural Gas
  - Estimated Heating Capacity: 125 Btu/h (input) – 100 Btu/h (output)
  - Estimated Heating Efficiency: 80%

- Outdoor Condensing Unit
    - Manufacturer: Intl. Comfort Products - Arcoaire
    - Model Number: N4A360GKA100
    - Serial Number:
    - Purchase Date: January 2008
    - Electrical: 208v/1ø MCA-34.2amps MOCP-50amps
    - Cooling Capacity: 60,000 Btu/h
    - System Efficiency: 11 EER

- Condition
    - These units are in fair condition. There is no visible damage. It is likely that this equipment has about 8 years of life remaining. The equipment is standard efficiency.

Dehumidifiers

- Manufacturer: Frigidaire
- Capacity: 70 pints
- These units appear to be in good condition.



Figure 2.160. Example of typical existing wall grille. (Farris 2020)



Figure 2.161. Furnaces/coils located in Mechanical Room 109. (Farris 2020)



Figure 2.162. Condensing units located near the northwest corner of the building. (Farris 2020)



Figure 2.163. Thermostat used for the First Floor HVAC system. (Farris 2020)



Figure 2.164. Example of one of the dehumidifiers in Rooms 103 and 106. (Farris 2020)

Plumbing

The plumbing system consists of domestic cold/hot water piping, waste/vent piping, restroom fixtures, and sump pumps. There is an existing electric water heater (Figure 2.165) in the first floor mechanical room (Room 109). However, the building occupants discussed that the hot water heater has not been operational for several years due to its inefficiency. A 1-inch domestic water line (Figure 2.166) enters the building in the northwest corner of the first floor mechanical room. The water entry includes a shutoff valve but does not have any type of backflow device that would be required by current building code. The visible piping appears to be copper, but some galvanized steel piping is believed to be used throughout the building as well. The existing plumbing fixtures (Figures 2.167 through 2.170) are operational other than the lack of hot water. The first floor lavatory faucet does not work properly, and water sprays out of the faucet when it is turned on. Some of the domestic water piping on the first floor is missing insulation (Figure 2.171).

Each of the stairwells to the first floor level have an exterior sump pump (Figure 2.172) that pumps out rainwater from the stairwell to the nearby yard.

The drinking fountain on the first floor was removed, so there is currently no drinking fountain or bottle filler on site.

<u>Plumbing Equipment</u>

Water Heater

- Manufacturer: Rheem-Richmond
- Model Number: 8VP20-1
- Serial Number: RM 0299310625
- Purchase Date: February 1999
- Heat Source: Electric 120v/1ø
- Heating Capacity: 2,000 Watts
- Storage Capacity: 19.9 Gallons
- Condition
    - This unit is in fair condition. While there is no visible damage, the water heater had been disabled due to its inefficiency.



Figure 2.165. Non-functioning hot water heater in Room 109. (Farris 2020)



Figure 2.166. Domestic water entry point in Room 109. (Farris 2020)



Figure 2.167. Lavatory located in Room 208. (Farris 2020)



Figure 2.168. Urinal located in Room 102. (Farris 2020)



Figure 2.169. Water closet located in Room 208. (Farris 2020)



Figure 2.170. Janitor's sink located in Room 101. (Farris 2020)

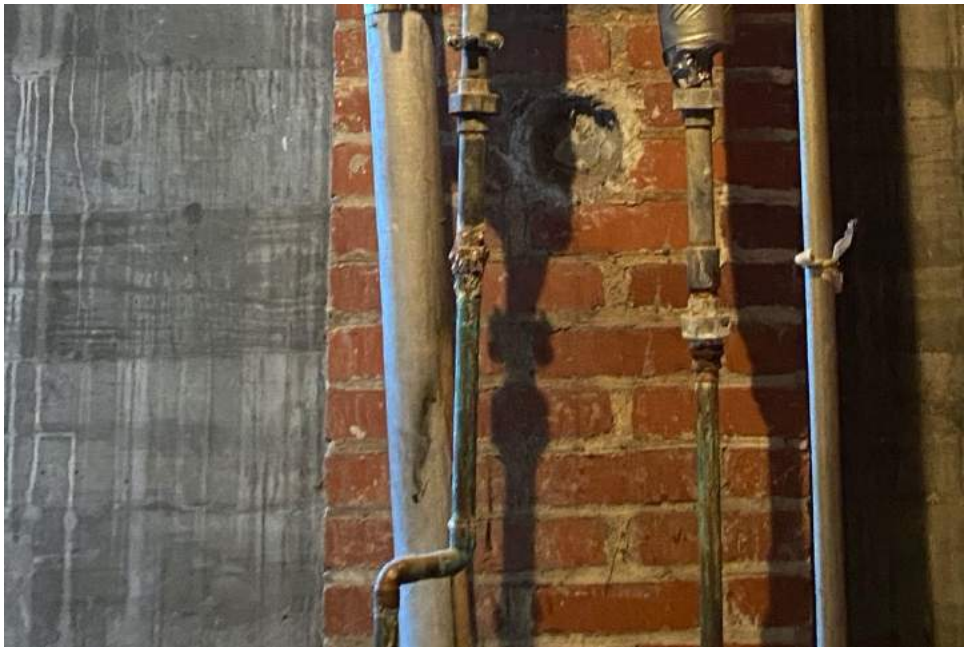


Figure 2.171. Missing pipe insulation located in Room 109. (Farris 2020)



Figure 2.172. View of the sump pump at the bottom of the exterior stair well on the north elevation of the building. (STRATA 2020)

Electrical

Power Distribution

The electrical service for the building originates in the Northwest corner of the building and distributes to sub-panels located on the first floor and second floor of the building. The service is 120/208v(or 240v),1ph,3w (Challenger brand panel), and is not the original service entrance equipment. The meter number is 18-103-486.

The main service panel serves the furnaces and air conditioning, sub-panels, and other miscellaneous loads.



Figure 2.173. Electrical service entrance and meter at the Northwest corner of the building. (Farris 2020)

The only panel which was original to the building is located in the corridor of the first floor. This panel is a Frank Adams panel and contains screw in fuses and breakers. The current second floor panel is located behind a wall panel on the northwest corner in Room 202.



Figure 2.174. Original panel in first floor corridor. (Farris 2020)



Figure 2.175. Electrical panel on second floor located behind a white wall panel in Archival Storage 202. (Farris 2020)



Figure 2.176. Panel behind white wall panel. (Farris 2020)



Figure 2.177. Broken, rusty conduit on the exterior of the building. (Farris 2020)

There is broken conduit and exposed conductors on the exterior of the building (Reference Figure 2.173). The conduit was probably not galvanized when it was installed, and it has now rusted, is broken, and the junction box is exposed, which is a life-safety issue.

All of the existing panels are relatively new and from visual inspection seem to be in good condition, with the exception of the existing original panel located on the first floor (Reference Figure 2.174). The first floor panel is in poor condition and should be replaced.

A dedicated grounding conductor to receptacles and lighting fixtures were not required for the original construction.

Lighting

The existing lighting is a mixture of incandescent, fluorescent, and screw in LED lamps. The first floor has some screw-in incandescent lamps in the utility rooms and newer wrap fluorescent fixtures in the record rooms (Rooms 103, 105, and106).

The second floor has fluorescents behind the counter were installed at a later period than the original building. These fluorescent fixtures have yellow lenses, are of no historical value, and should be replaced.

The public areas have wall and ceiling mounted historical fixtures that are in working condition (with the exception of one wall mounted sconce which is inoperable). These original fixtures may utilize original wiring from 1940.



Figure 2.178. Historical pendant fixtures and wall mounted sconces on the second floor Room 204. (Farris 2020)



Figure 2.179. Historical pendant fixture Room 207. (Farris 2020)



Figure 2.180. Original Lamp base with screw-in fluorescent located in Stair A. (Farris 2020)



Figure 2.181. Second floor non-original pendant mounted fluorescents Room 202. (Farris 2020)



Figure 2.182. Non-original wrap fluorescent fixtures in first floor storage Room 103. (Farris 2020)



Figure 2.183. Non-original lay in fluorescent fixtures in first floor, room 106. (Farris 2020)

Exit Lighting and Egress Lighting

Exit lighting is obtained from self-contained exit lights, and emergency lighting is handled via self-contained batteries “Bug Eyes.” The devices seem to be newer and in working condition. There is a distinct lack of sufficient/code required egress (emergency) lighting on the first and second floors.



Figure 2.184. Exit light at first floor exit Room 103. (Farris 2020)

Fire Alarm System

Stand alone detectors were observed in several locations throughout space as there is no central fire alarm system. A code study will have to be performed to determine what kind of fire alarm system would be required, but there should be some consideration of a fire alarm system simply for life safety of the public.

Security System

A security system with two keypads and ceiling mounted motion detectors were observed on the first and second floors. The power supply is located on the second floor, northwest corner office. The condition of the system and whether it is operational is unknown, but visual inspection suggests it is in working condition and is used by the facility.



Figure 2.185. Security system power supply above door, Northwest office Room 205. (Farris 2020)

Accessibility

Resource: Preservation Brief 32: Making Historic Properties Accessible, Thomas C. Jester and Sharron C. Park, AIA, National Park Service.

This section of the report provides an assessment of the current accessibility of the Frank Hughes Memorial Library. This includes an assessment of the immediately surrounding site access into the building and the building's public spaces.

The building was constructed during a time when buildings open to the public did not have to be accessible. The first nationally recognized accessible design standards were not released until 1961. In 1968, the Architectural Barriers Act was passed, and the federal government began taking steps to address accessibility and its enforcement in facilities designed, built, altered, or leased using certain federal funds. It was not until the passing of the Americans with Disabilities Act (ADA) in 1990 that accessibility measures were required for all new buildings open to the public.[11]

There have been two previous accessibility studies of the building, and one updated study proposed an elevator addition on the north elevation and one in 1995, which proposed installing an elevator within the existing building footprint in Janitor 101, Restroom 102, and Work Room 206.

Accessibility Standards

The City of Liberty, Missouri, utilizes the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and the American National Standards Institute (ANSI) A117.1. ANSI A117.1 Accessible and Useable Buildings and Facilities.[12] The 1990 Americans with Disabilities Act (ADA) was a comprehensive measure to protect the rights of people with disabilities. The United States Access Board published the ADA Accessibility Guidelines (ADAAG) on July 26, 1991, which provides detailed requirements for accessibility in new construction and alterations.[13] In September 1996, the ADAAG Review Advisory Committee recommended reconciling the differences between ADAAG and other national standards so that the standards continued to meet the needs of persons with disabilities and to improve the format to make it more useable. During the process of updating ADAAG, the advisory committee coordinately closely with the ANSI A117.1 Committee. The two committees worked together to reconcile the difference

[11] "History of Accessible Facility Design," *Whole Building Design Guide*, July 18, 2019, https://www.wbdg.org/design-objectives/accessible/history-accessible-facility-design.
[12] "History of Accessible Facility Design," *Whole Building Design Guide*, July 18, 2019, https://www.wbdg.org/design-objectives/accessible/history-accessible-facility-design.
[13] "History of the Access Board," *United States Access Board*, accessed December 13, 2019, https://www.access-board.gov/the-board/board-history.

between ADAAG and ASI A117.1.[14] In September 2010, the U.S. Department of Justice adopted and published the 2010 ADA Standards for Accessible Design.[15]

Summary of Applicable ANSI A117.1 Accessibility Requirements

- The maximum vertical level change in floor surfaces is ¼-inch. A ½-inch level change is allowed, but the edge must be beveled with a slop of 1:2.
- An existing threshold shall be permitted to be ¾-inch maximum in height provided that the threshold has a beveled edge on each side with a maximum slope of 1:2 for the height exceeding ¼-inch.
- Turning space shall be 60-inches in diameter.
- The clear width of an accessible route shall be 36-inches minimum.
- Doorways shall have a clear opening width of 32-inches minimum. The clear opening width of doorways with swinging doors shall be measured between the face of the door and the stop at the jamb with the door open 90-degrees.
- Ramps shall have a slope greater than 1:20 and not steeper than 1:12. In existing buildings, ramps are permitted to have a slope steeper than 1:12 where necessary due to space limitations. The allowable ramp slopes for existing sites and buildings must comply with the following table.

Allowable Ramps Slopes

Slope	Maximum Rise
New Construction	
Steep than 1:20, but no steeper than 1:12	30-inches maximum, before a landing is required
Existing Buildings	
Steeper than 1:10 but not steeper than 1:8	3-inches
Steeper than 1:12 but not steeper than 1:10	6-inches

- Ramps shall have a clear width of 36-inch and rise for a maximum of 30-inches before a landing is required.

Context of Accessibility Design within Historic Properties

Historic properties are not exempt from accessibility requirements. All alternations and additions should be designed and constructed to meet ADAAG and ANSI A117.1. All existing buildings that offer public accommodations are required to remove barriers in existing places to meet a certain level of accessibility, where it is readily achievable.

[14] "Background," *United States Access Board*, accessed December 13, 2019, https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/background/ada-aba-accessibility-guidelines-2004/background.
[15] "A History of Accessibility Requirements," *PlaySudbury*, accessed December 13, 2019, http://www.playsudbury.com/a-history-of-accessibility-requriements.html.

ADA provides special considerations for existing buildings that are listed in or eligible for listing in the National Register of Historic Places. The ADA requires that historic buildings be made accessible to the maximum extent possible, as long as the proposed changes do not "threaten or destroy" the historic character of the building, as determined by the State Historic Preservation Office. The following is a list of "alternative requirements," which may apply to historic preservation work. These expectations generally apply to accessible routes, entrances, and toilet rooms:

- Only one accessible path of travel to an accessible entrance is required.
- One entrance door, instead of all, may be made accessible. If no public entrance can be made accessible without negatively affecting the historic integratory, then a secondary entrance may be made accessible, as long as there are directional signs at the non-accessible entrance.
- Access to stories above or below the accessible story is not required if the installation of accessible vertical circulation (an elevator) would compromise the historic character of the building.

The Frank Hughes Memorial Library is listed in the National Register Historic Places, so these provisions apply.

Current Accessibility Assessment

The Frank Hughes Memorial Library is currently not accessible. There is no accessible route into the building due to stairs at all of the entrances into the building, and there are several barriers within the building which possess challenges for accessibility within the public spaces.

Exterior Accessible Route

Currently, there are three designated ADA parking spots for the building, which are clearly marked with the International Symbol of Accessibility but do not meet current accessibility regulations. ANSI requires accessible car and van parking spaces. Accessible parallel parking spaces are allowed as long as there is a 60-inch minimum access aisle along the length of vehicular at street level, and the vehicular travel lane does not encroach on the access aisle. There is currently only car parking with no access aisle.

For the street to the sidewalk, there is a curb cut at the designated ADA parking sport. The curb cut meets the requirements for slope, but it does not have a detectable walking surface. At the northwest corner of East Franklin and North Leonard Streets, there is a fully ADA- complaint corner with a properly sloped curb cut and detectable walking surface.

The sidewalks and walkways that provide access to and into the building are in good condition and relatively flat. Still, there are a few locations where there are spalled sections of settlement between the concrete section, which create an uneven walking surface or potentially a tripping hazards, which is a safety and accessibility issue. If the vertical level change between the pieces are greater than ¼-inch, this does not meet accessibility requirements.

Of the three entrance into the building, none of them are accessible. There are many steps up or down to all of the doors that prevent people with mobility issues from entering into the building.

The exterior stairs to the second floor consist of an over 17-feet wide run of stairs with a landing and an 8'-4" wide run of stairs. The riser height is not consistent and is approximately 7-inches. IBC 2012 requires that stairs have a uniform riser height with a maximum height of 7-inches. The tread depth varies between 12-inches and 14-inches, which does not meet the IBC 2012 requirement that stairs are to have a uniform tread depth of at least 11-inches deep. The nosing on each step does not have a visual contrast from the remainder of the tread, which does not meet ANSI requirements.

The bottom run of stairs only has a railing in the center, and the top run has railings on both sides. Stairs are required to have handrails on both sides of the stairs, which is required by ANSI Section 505.2. The top of the handrail is 31-inches high above the stair nosing. ANSI requires that handrails be 34-inches minimum and 38-inches maximum, so the current handrail does not meet ANSI requirements. ANSI also requires that the handrail extends beyond the top and bottom riser. The handrail is to extend 12-inches beyond the top riser, and at the bottom riser, the handrail is to extend the horizontal distance equal to one tread depth beyond the bottom tread nosing. The current handrail does not extend past the top and bottom treads.

The east exterior stairs to the first floor do not meet IBC and ANSI requirements. The riser height is not consistent and varies between 6-inches and 7-inches. The tread depth is 12-inches. The nosing on each step does not have a visual contrast from the remainder of the tread. There is only one handrail on the north side of the stairs. The top of the handrail is 31-inches high above the stair nosing and does not extend beyond the top and bottom riser as required. There are handrails on both sides of the stairs. The top of the handrail is 31-inches high above the stair nosing and does not extend beyond the top and bottom riser as required.

The north exterior stairs to the first floor also do not meet IBC and ANSI requirements. While the riser height is consistent at 7-inches, the tread depth varies between 10-inches and 10-½-inches. The nosing on each step does not have a visual contrast from the remainder of the tread. There is only one handrail on the north side of the stairs. The top of the handrail is 31-inches high above the stair nosing and does not extend beyond the top and bottom riser as required.



Figure 2.186. View of the designated ADA parking in front of the Frank Hugh Memorial Library and the non-compliant curb cut at the parking. (STRATA 2020)

- Door 200/A (Main Entrance)
  - The door opening is 36-inches in width, and the clear door opening is at least 32-inches. The door width does meet ANSI requirements.
  - The threshold at the door exceeds the allowable threshold height requirements.
  - There is a 4-inch step on the exterior of the door, which causes the door not to be accessible.
  - The only way to access the door is to go up the south grand stairs, which also makes this entrance non-accessible.

- Door 103/A (East Side Entrance)
  - The door opening is 36-inches in width, and the clear door opening is at least 32-inches. The door width does meet ANSI requirements.
  - The threshold at the door exceeds the allowable threshold height requirements.
  - There is a 4-inch step on the exterior of the door, which causes the door not to be accessible.
  - The only way to access the door is to go down the side stairs on the east elevation, which also makes this entrance non-accessible.





Figures 2.187 and 2.188. Left: View of the main entrance into the building (Door 200/A). Note the grand stairs that make this entrance non-accessible. Right: View of the east side entrance (Door 103/A). Note the stairs leading to the door, which make this entrance non-accessible. (STRATA 2020)

- Door 100/A (North Entrance)
  - The door opening is 42-¾ -inches in width, and the clear door opening is more than 32-inches. The door width does meet ANSI requirements.
  - The threshold at the door exceeds the allowable threshold height requirements.
  - There is a 4-inch step on the exterior of the door, which causes the door not to be accessible.
  - There is also a 4-inch step on the interior of the door, which causes the door not to be accessible.
  - The only way to access the door is to go down the back stairs on the north elevation, which also makes this entrance non-accessible.



Figure 2.189. View of the north entrance (Door 100/A). Note the stairs leading to the door, which make this entrance non-accessible. (STRATA 2020)

Interior Accessible Route

There are two stories within the Frank Hughes Memorial Library. The second floor is the only story that is open to the public and should be as fully accessible as feasible. While there is not a fully accessible route to access the second floor, and there are barriers that would prevent the second floor from being fully accessible.

Identification of Accessibility Barriers

- Vestibule 200
    - The distance between the two hinged doors in series is 54-½-inches plus the 30-inches for the width of the door. This is more than the 48-inch minimum that is required.
    - Interior Doors
        - Door 100/B (to Lobb 201)
            - The pair of doors have an opening 60-inches and a clear opening on 56-½-inches. This door does not have an active door that meets the ANSI A117.1 requirement of a doorway with a clear opening width of 32-inches.
            - The pair of doors is typically held open, which would eliminate the requirements for the active door that meets ANSI's requirements.

- Lobby 201
    - Service Desk
        - ADA and ANSI require that service counter have an accessible counter that is at least 36-inches long and no more than 36-inches above the floor (34-inches is preferred). A 30-inch by 48-inch space is required in front of the service counter to accommodate the wheelchair. The current service desk does not meet these requirements.

- User Study Areas 204 and 207
    - There is an accessible route into both User Study Areas 204 and 207.
    - The tops of the tables are between 28-inches and 34-inches, have the required knee space under the table, and have a 30-inch by 48-inch clear space on at least one side of the table.
    - The seating at all of the tables is flexible and can be moved to accommodate a wheelchair.

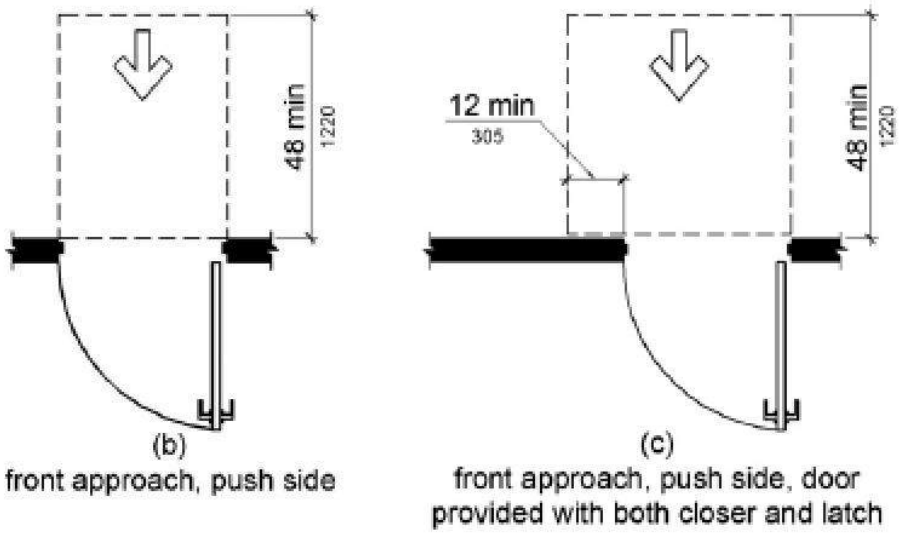


Figure 2.190. View of Lobby 201 with the service desk and archival storage shelving on the left side of the photograph and User Study Area 207 in the background. Note the volunteer staff researching and accessing research materials for patrons. (STRATA 2020)

- Archival Storage
    - The top row of the archival storage shelving is higher than 48-inches in most locations, which makes the shelving not accessible.
    - Between the shelves, there is not a 36-inch aisle, which also makes the shelving not accessible.

- The volunteers at the archives typically access all materials for patrons and bring them to the study tables; this allows all of the archival material to be accessible to all. If a volunteer is disabled, the non-accessible shelving would prevent them from accessing archival material for the patrons.

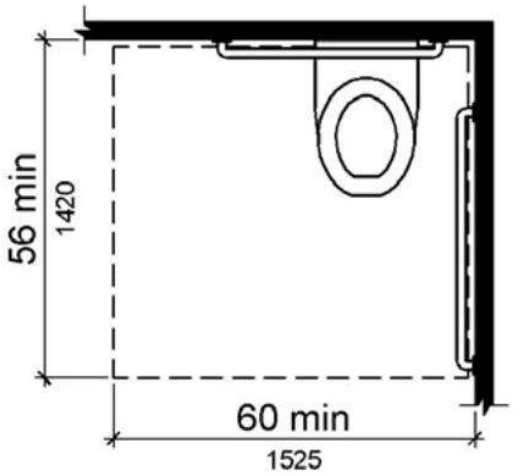
- Restroom 208
  - Door
    - The door opening is 30-inches in width. This does meet ANSI width requirements.
    - The threshold at the door is less than ¼-inch high, which meets ANSI threshold requirements.
    - Door Maneuvering Clearance (Reference Figures 2.191 and 2.192)
      - On the exterior of the door (Lobby 201), the door maneuvering clearance meets ANSI requirements.
      - On the interior of the door (Restroom 208), there is only 39-inches from the face of the wall to the bookshelf storage unit. ANSI requires a 48-inch clear space. The bookshelf storage unit would need to be removed to be in compliance.



Figures 2.191 and 2.192. Left: Required door maneuvering clearance for the exterior approach. Right: Required door maneuvering clearance for the interior approach. (ANSI A117.1)

  - There is currently not a 60-inch turning radius within the restroom, which is required by ANSI Section 304.
    - If the original toilet partition was removed, the 60-inch turning radius could be achieved.

- Toilet clearance (Reference Figure 2.193)
  - Width - A minimum of 60-inches is required, measured perpendicular from the sidewall. There is currently only a 33-inch clear space in the toilet stall. This does not comply with ANSI Section 604.3.1.
  - Depth – ANSI Section 604.3.2 requires a minimum of 56-inches in-depth, measured perpendicular from the rear wall. There is currently more than this available in the stall.



Figures 2.193. Required toilet clearances. (ANSI A117.1)

- Grab Bars – non-compliant with ANSI Section 604.5 (Reference Figure 2.194)
  - There are no grab bars installed at the toilet. They are required per the standards below:
    - Fixed Side Wall Grab Bars – Fixed sidewall grab bars are required to be 42-inches minimum in length, located 12-inches maximum from the rear wall, and extending 54-inches minimum from the rear wall. In addition, a vertical grab bar 18-inches minimum in length shall be mounted with the bottom of the bar located 39-inches minimum and 41-inches above the floor, and with the centerline of the bar located 39-inches minimum and 41-inches maximum from the rear wall.
    - Rear Wall Grab Bars – There is currently not a rear grab bar. A rear wall grab bar is required to be 36-inches minimum in length and extend from the centerline of the water closet 12-inches minimum of the side closest to the wall, and 24-inches minimum on the transfer side.

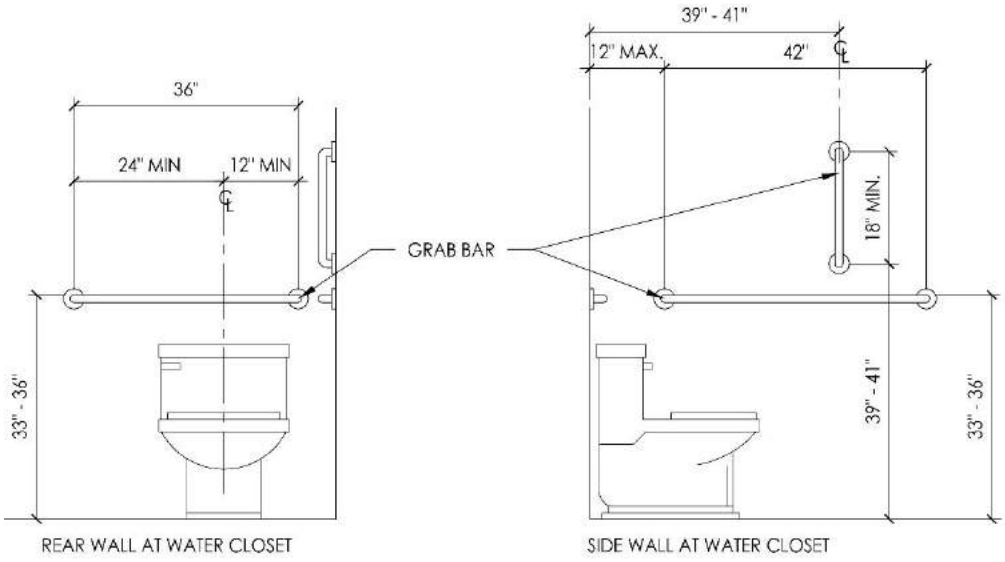


Figure 2.194. Diagrams of the ANSI required grab bars. (STRATA 2019)

- Lavatory
  - Clear Floor Space – The forward approach clear space (35-inches by 62-inches) meets the ANSI requirements per Section 604.3.3 of 30-inch by 48-inches clear space.
  - Knee and Toe Clearance –The required knee and toe clearance at the lavatory meets the ANSI required clearances, which allows for a person in a wheelchair to pull up to the sink.
  - The piping under the lavatory is exposed, which does not meet the ANSI requirement that all water supply and drainpipes be insulated or conceals to protect again contact. This helps prevent burns or other injuries to people who may have decreased sensation in their legs.
  - Lavatory Height – The existing lavatory height is below the 34-inch maximum per ANSI Section 606.3 and therefore meets ANSI requirements.
  - Faucets – The current faucets meet ANSI Section 309 requirements. They can be operated with one hand and do not require tight grasping, pinching, or twisting of the wrist.

First Floor

The first floor is not accessible to the public and is only used as archival storage and is only accessed by archive volunteers. Access to all stories above or below the main, public story is not required by ADAAG because of the installation of accessible vertical circulation, such as an elevator, would compromise the historic character of the building.

The interior stairs to the first floor are located between Work Room 206 and User Study Area 207. The stairs can currently only be accessed through Door 207/A, which is only 30-inches wide. The stairs are 27-½-inches wide. The riser height is not consistent and varies between 7-

½-inches and 7-¾-inches. IBC 2012 requires that stairs have a uniform riser height with a maximum height of 7-inches. The tread depth on the stairs is 11-inches with a 1-inch nose, which meets the IBC 2012 requires that stairs have a uniform tread depth of at least 11-inches deep. The nosing on each step does not have a visual contrast from the remainder of the tread, which does not meet ANSI requirements.

The stairs have handrails on both sides of the stairs, which is required by ANSI Section 505.2. The top of the handrail is 30-½-inches high above the stair nosing. ANSI requires that handrails be 34-inches minimum and 38-inches maximum, so the current handrail does not meet ANSI requirements. ANSI also requires that the handrail extends beyond the top and bottom riser. The handrail is to extend 12-inches beyond the top riser, and at the bottom riser, the handrail is to extend the horizontal distance equal to one tread depth beyond the bottom tread nosing. The current handrail does extend past the top and bottom treads but does not extend the required amount to the meet ANSI requirements.

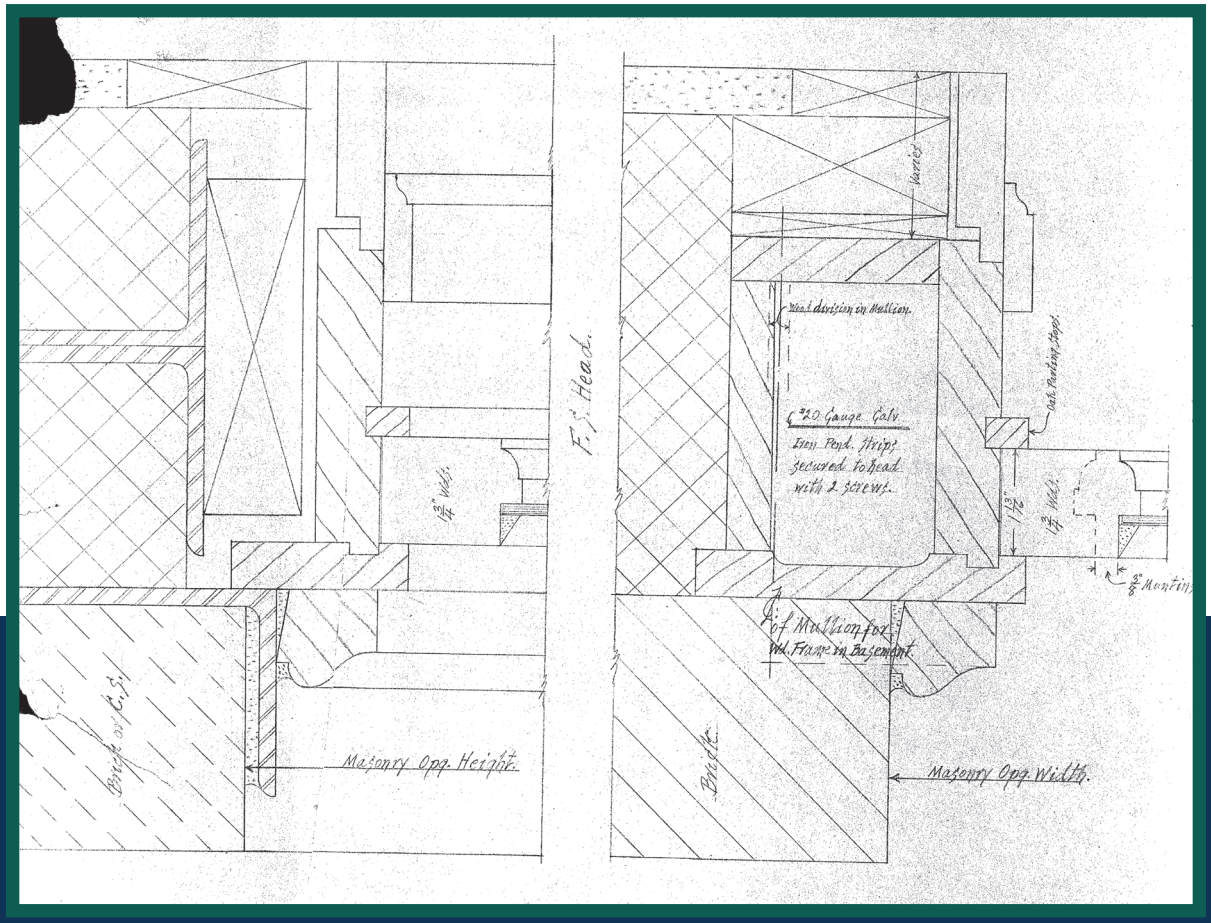
Fire Alarm

- ANSI Section 702 requires that all public use areas have permanently installed audible and visible fire alarms. The building currently only has a smoke detection system, which provides an audible alarm only. There are currently no visible alarms, such as a strobe.

Signage

- None of the current signage meets ANSI Section 703.

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Frank Hughes Memorial Library, window detail, 1939 (Clay County Archives)

2 EXISTING CONDITIONS DRAWINGS

FRANK HUGHES MEMORIAL LIBRARY

AS-BUILT DRAWINGS AND EXISTING CONDITIONS

210 EAST FRANKLIN STREET
LIBERTY, MISSOURI 64068

MAY 29, 2020

OWNER:	ARCHITECT OF RECORD:	MEP ENGINEER
CITY OF LIBERTY PARKS AND RECREATION 1600 SOUTH WITHERS ROAD LIBERTY, MISSOURI 64068 T: 816-439-4360 CONTACT: TOM GARLAND, CPRP	STRATA ARCHITECTURE INC. 1701 OAK STREET, SUITE 100 KANSAS CITY, MISSOURI 64108 T: 816-474-0900 CONTACT: ANGIE GAEBLER, AIA AMANDA E. MOORE, AIA	FARRIS ENGINEERING 6004 CENTRAL STREET KANSAS CITY, MISSOURI 64113 T: 573-202-9766 CONTACT: DANNY VANDOREN, PE, QCxP, LEED AP+



SHEET INDEX:

GENERAL:
G000 COVER

ARCHITECTURAL:
A050-A ARCHITECTURAL SITE PLAN - AS-BUILT DRAWING
A050-B ARCHITECTURAL SITE PLAN - EXISTING CONDITIONS

A100-A FIRST FLOOR PLAN - AS-BUILT DRAWING
A100-B FIRST FLOOR PLAN - EXISTING CONDITIONS

A101-A SECOND FLOOR PLAN - AS-BUILT DRAWING
A101-B SECOND FLOOR PLAN - EXISTING CONDITIONS

A200-A EXTERIOR ELEVATIONS - AS-BUILT DRAWING
A200-B EXTERIOR ELEVATIONS - EXISTING CONDITIONS



SITE VICINITY MAP

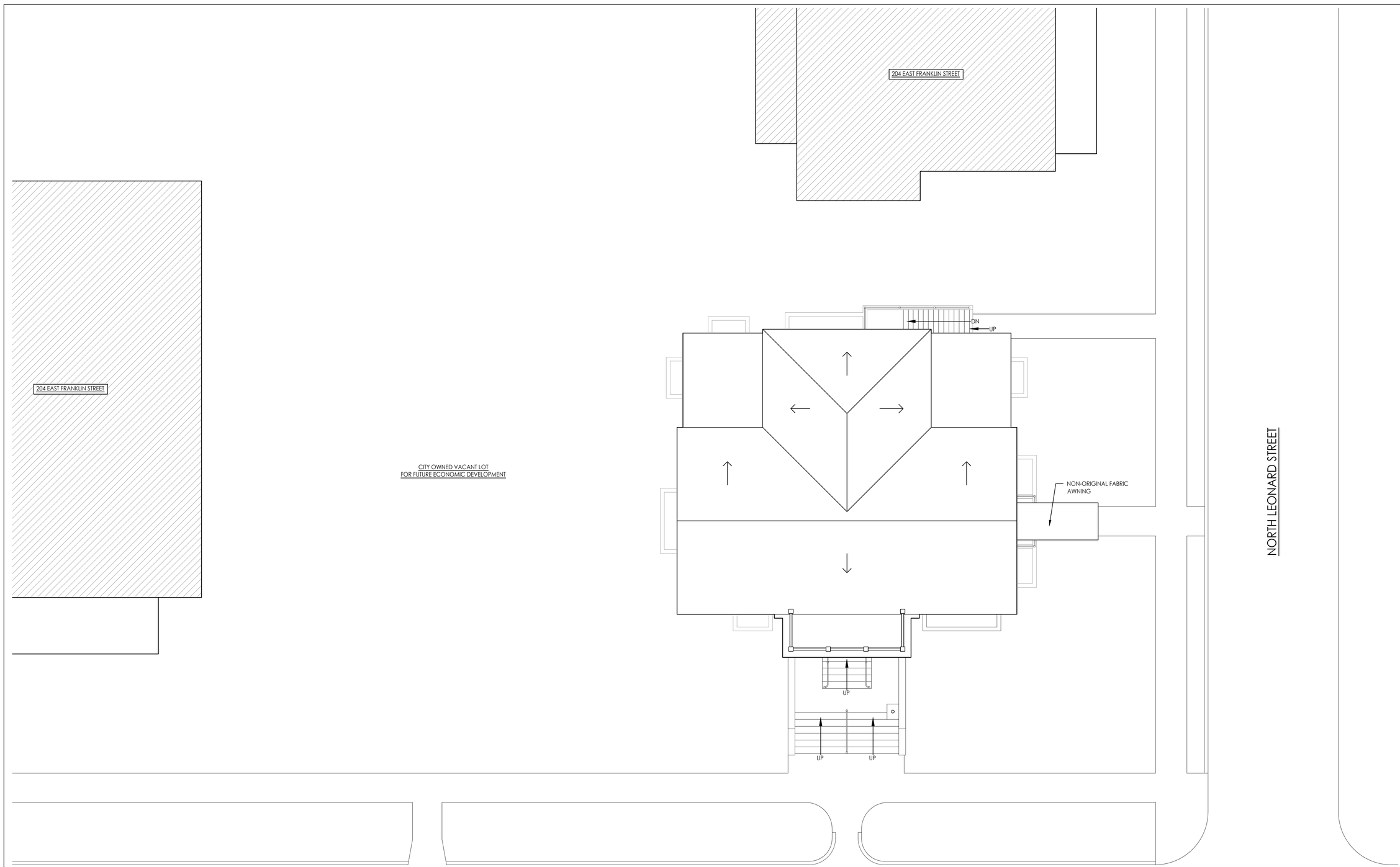
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COVER EXISTING CONDITIONS	
SHEET NUMBER:	G000



1 SITE PLAN - AS-BUILT DRAWING

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8 0 8 16

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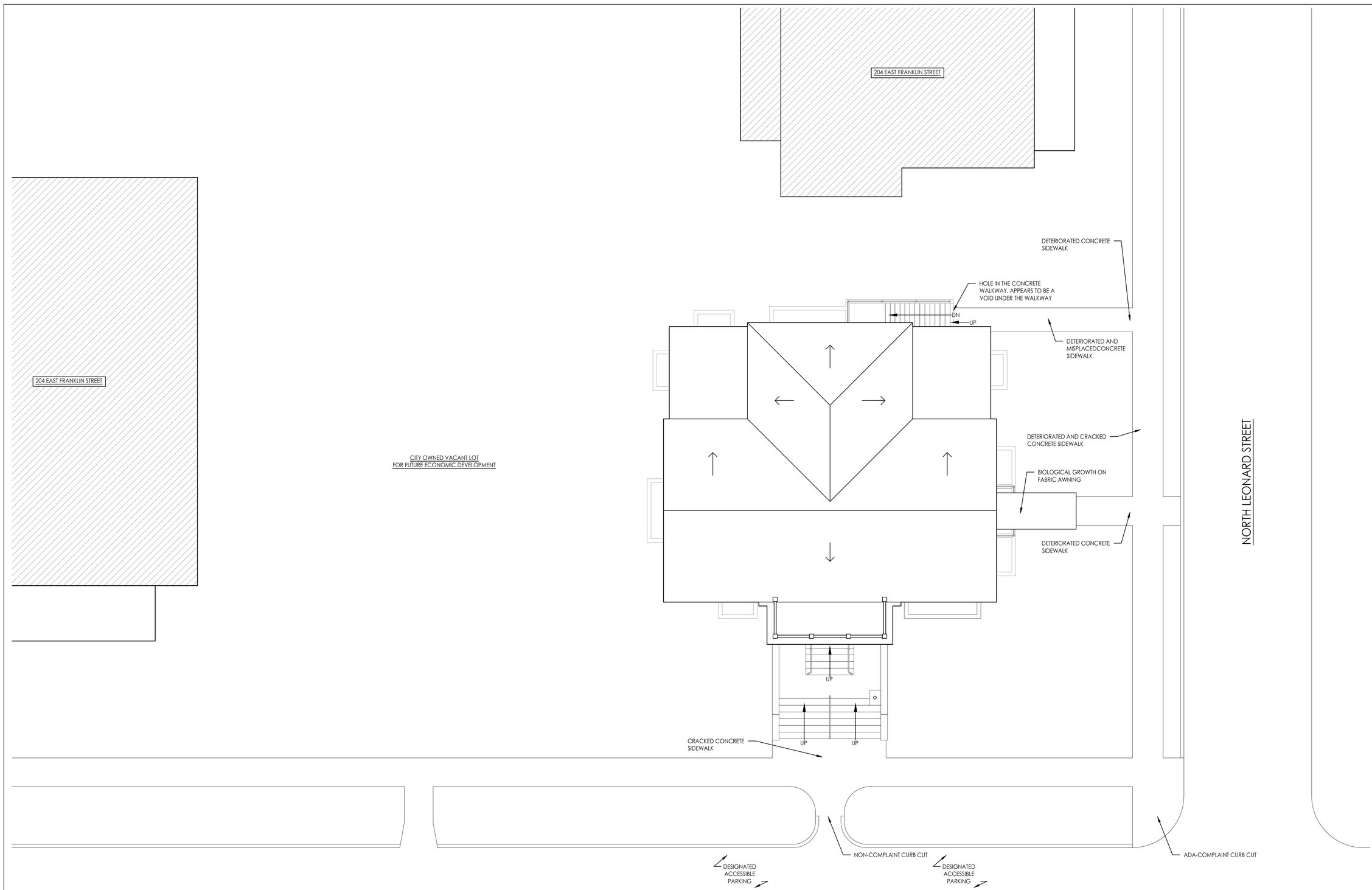
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SITE PLAN
AS-BUILT DRAWING
SHEET NUMBER:

A050-A



1 SITE PLAN - EXISTING CONDITIONS

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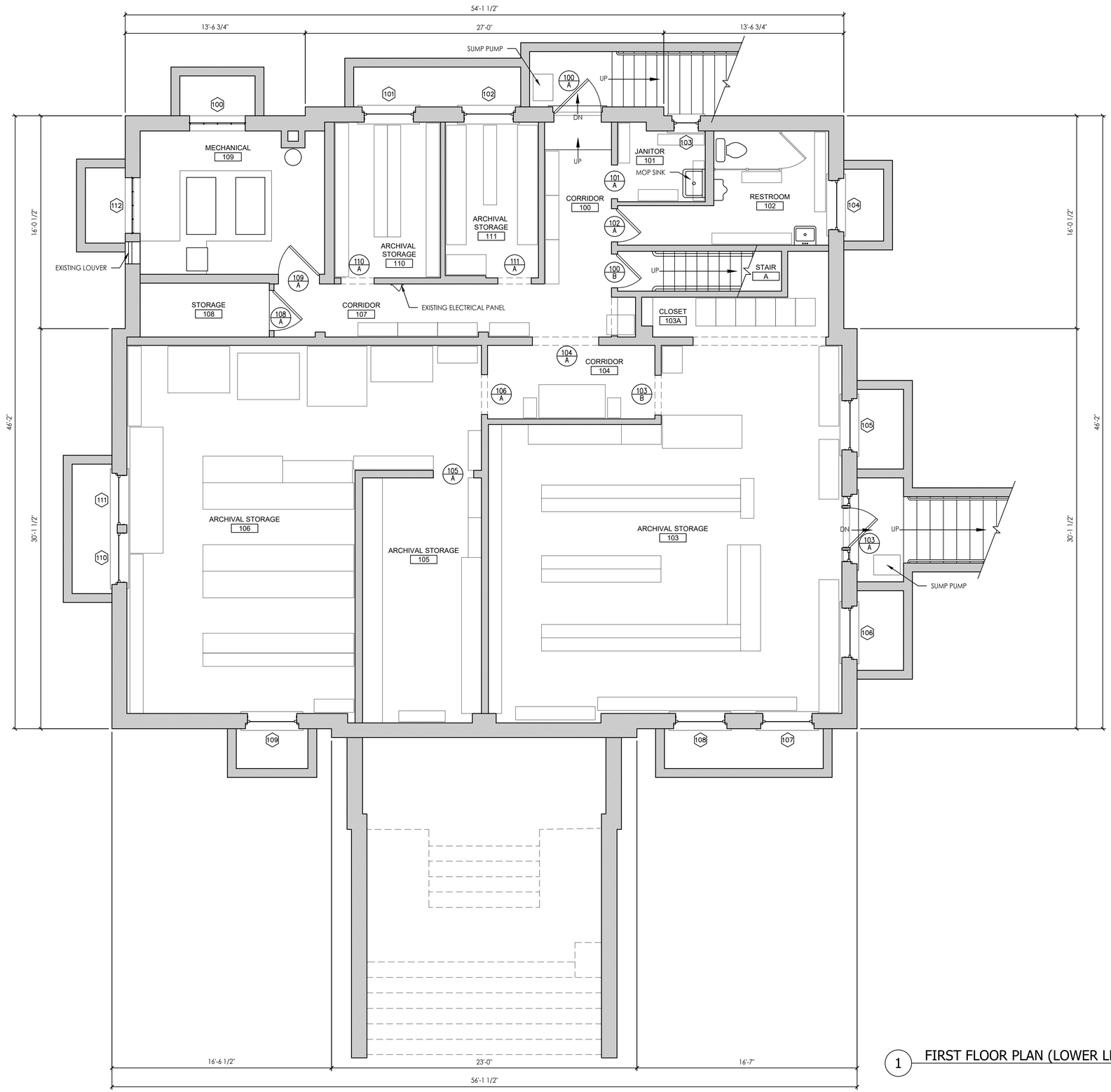
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SITE PLAN
EXISTING CONDITIONS
SHEET NUMBER:

A050-B



1 FIRST FLOOR PLAN (LOWER LEVEL) - AS-BUILT DRAWING

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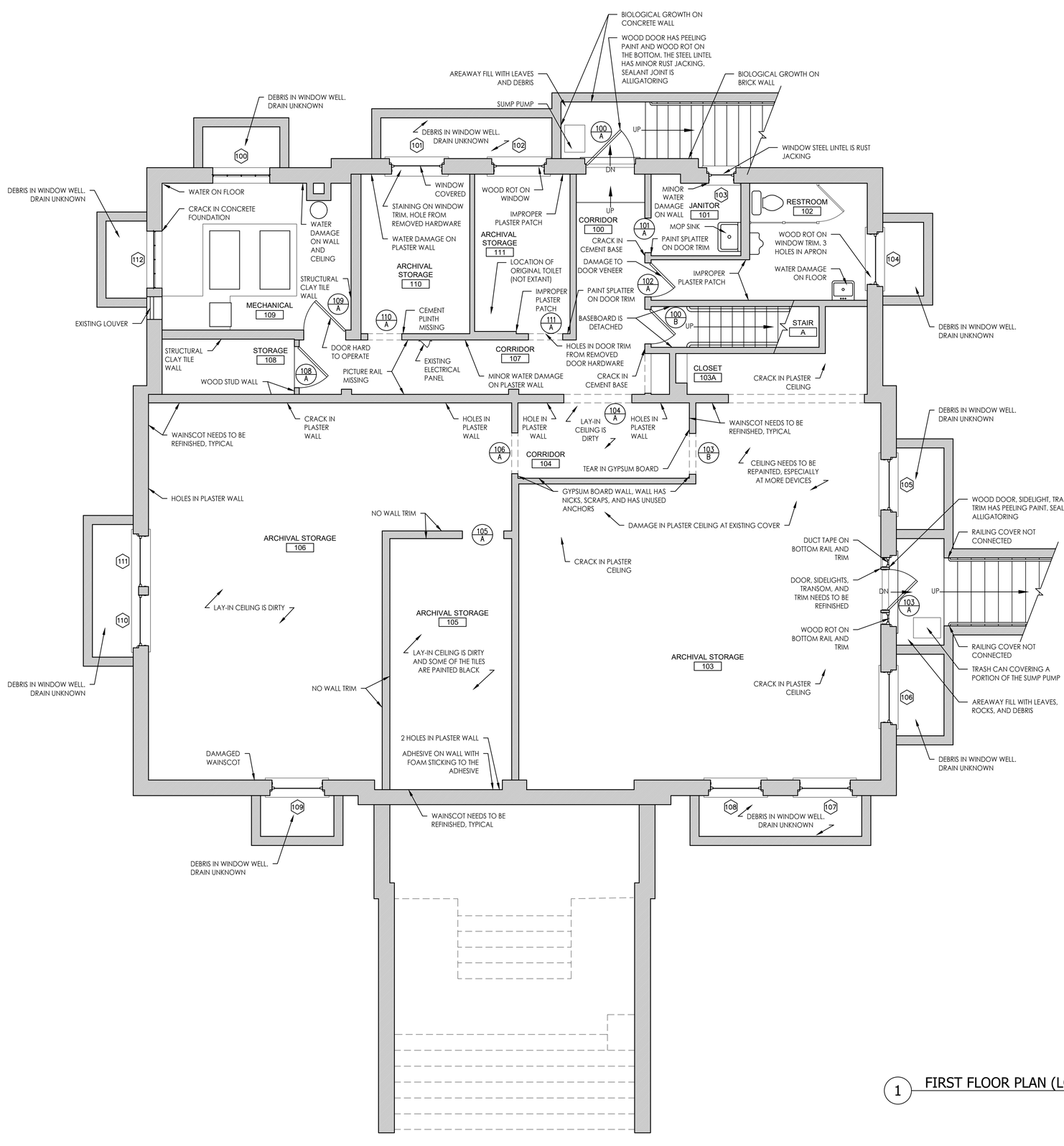
DATE: MAY 29, 2020

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FIRST FLOOR PLAN AS-BUILT DRAWING

SHEET NUMBER:

A100-A



1 FIRST FLOOR PLAN (LOWER LEVEL) - EXISTING CONDITIONS

Scale: 1/4" = 1'-0"

4 0 4 8

NORTH

GENERAL NOTES:

- ALL INTERIOR DOORS HAVE MINOR DAMAGE, SUCH AS NICKS AND WORN AREAS. THE INTERIOR DOORS NEED TO BE REFINISHED.
- ALL DOOR FRAMES AND TRIM HAVE MINOR DAMAGE, SUCH AS NICKS AND SCRAPES. PAINTED DOOR TRIM HAS MINOR AREAS WITH PEELING PAINT. STAINED DOOR TRIM NEED TO BE REFINISHED.
- THE INTERIOR SURFACE OF ALL THE WINDOWS AND TRIM HAVE WATER DAMAGE AND WOOD ROT. PAINTED WINDOWS HAVE AREAS WITH PEELING PAINT. STAINED WINDOWS HAVE A WORN SURFACE.
- REPLACEMENT WINDOWS ARE IN GOOD CONDITION.
- WINDOW BLINDS ARE IN POOR CONDITION. THE PAINT ON THE BLADES AND TRACKS ARE WORN AND PEELING PAINT. THE FABRIC IS FRAYED.
- THE PAINT ON THE CONCRETE FLOORS IS PEELING AND IS WORN IN SEVERAL LOCATIONS.
- ALL OF THE CARPET IS WORN AND FRAYED. IT IS PAST ITS USEFUL LIFE.
- BOOKSHELVES NEED TO BE REFINISHED.
- SERVICE DESK AND RAILINGS NEED TO BE REFINISHED.

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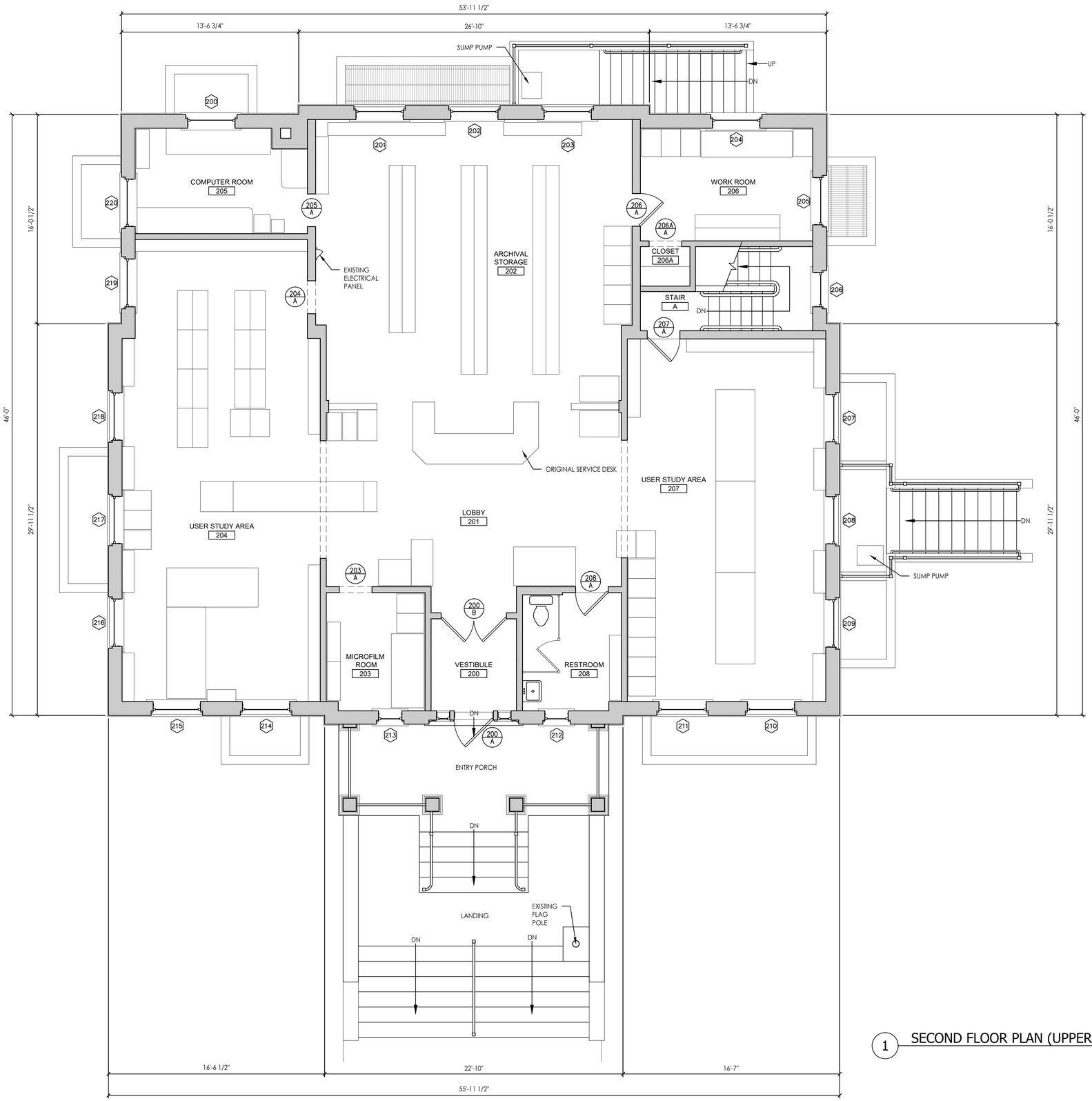
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FIRST FLOOR PLAN EXISTING CONDITIONS

SHEET NUMBER:

A100-B



1 SECOND FLOOR PLAN (UPPER LEVEL) - AS-BUILT DRAWING

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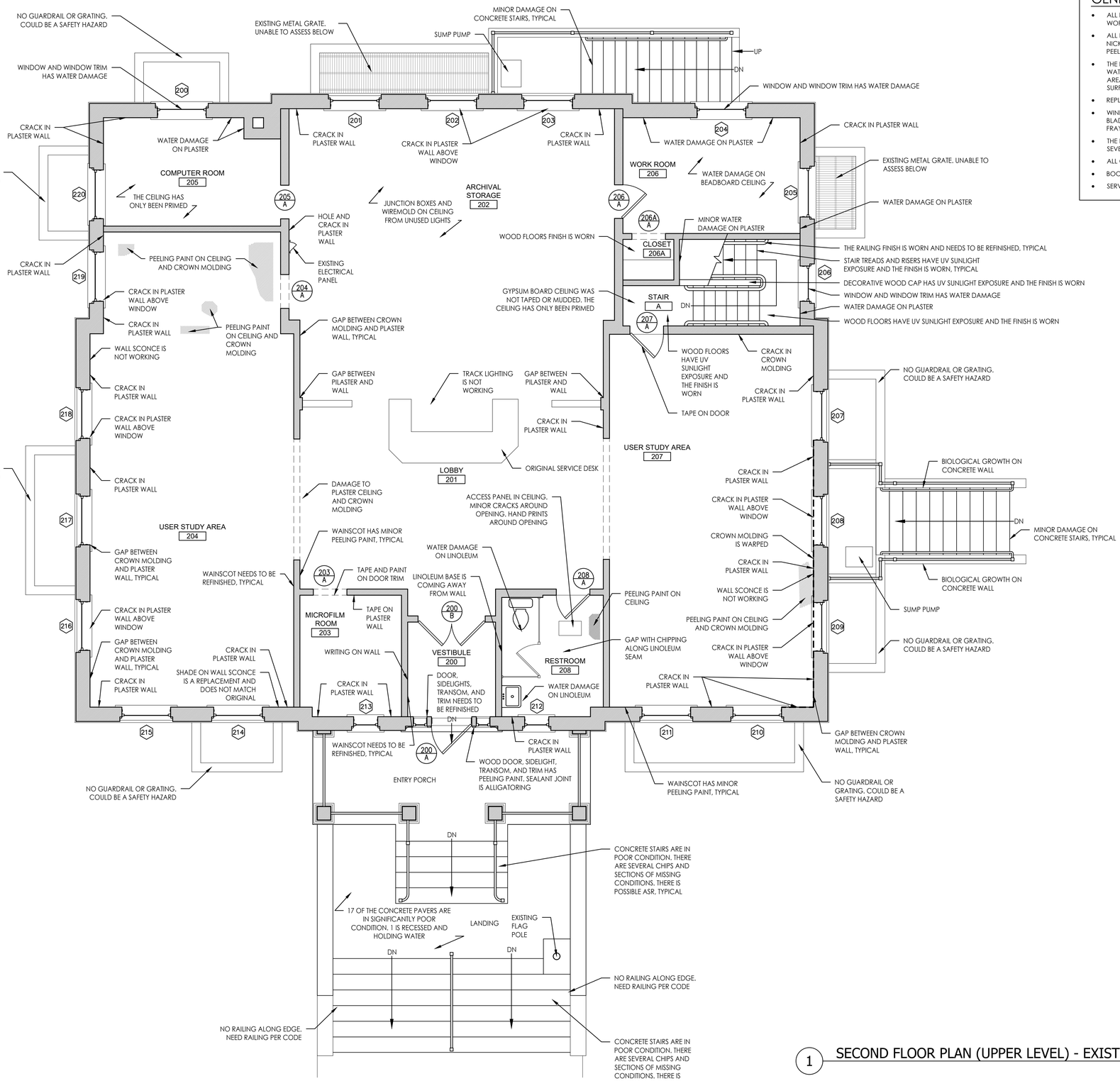
SECOND FLOOR
AS-BUILT DRAWING

SHEET NUMBER:

A101-A

GENERAL NOTES:

- ALL INTERIOR DOORS HAVE MINOR DAMAGE, SUCH AS NICKS AND WORN AREAS. THE INTERIOR DOORS NEED TO BE REFINISHED.
- ALL DOOR FRAMES AND TRIM HAVE MINOR DAMAGE, SUCH AS NICKS AND SCRAPES. PAINTED DOOR TRIM HAS MINOR AREAS WITH PEELING PAINT. STAINED DOOR TRIM NEED TO BE REFINISHED.
- THE INTERIOR SURFACE OF ALL THE WINDOWS AND TRIM HAVE WATER DAMAGE AND WOOD ROT. PAINTED WINDOWS HAVE AREAS WITH PEELING PAINT. STAINED WINDOWS HAVE A WORN SURFACE.
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- ALL OF THE CARPET IS WORN AND FRAYED. IT IS PAST ITS USEFUL LIFE.
- BOOKSHELVES NEED TO BE REFINISHED.
- SERVICE DESK AND RAILINGS NEED TO BE REFINISHED.



1 SECOND FLOOR PLAN (UPPER LEVEL) - EXISTING CONDITIONS

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A101-B



4 EAST ELEVATION - AS-BUILT DRAWING

Scale: N.T.S.



3 NORTH ELEVATION - AS-BUILT DRAWING

Scale: N.T.S.



2 WEST ELEVATION - AS-BUILT DRAWING

Scale: N.T.S.



1 SOUTH ELEVATION - AS-BUILT DRAWING

Scale: N.T.S.

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EXTERIOR ELEVATIONS
AS-BUILT DRAWING
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A200-A

GENERAL ELEVATION NOTES:

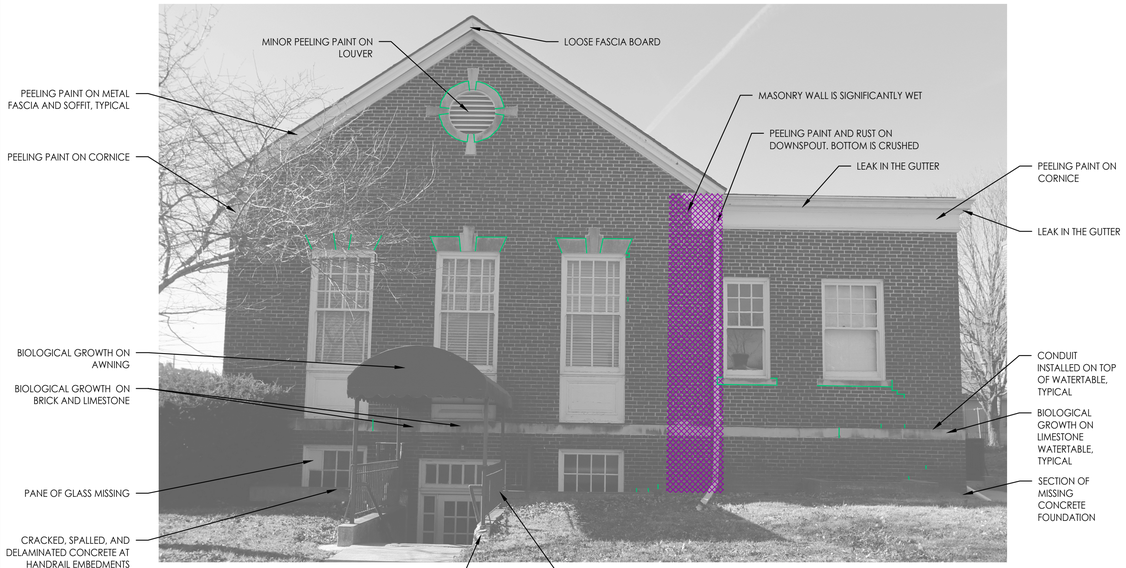
- ALL WINDOWS HAVE PEELING PAINT, SECTIONS OF MISSING GLAZING PUTTY, AND WOOD ROT.
- THE WINDOW TRIM AND PANELING HAS PEELING PAINT AND WOOD ROT. SEALANT AT JOINT BETWEEN WINDOW AND MASONRY IS ALLIGATORING.
- REPLACEMENT WINDOWS ARE IN GOOD CONDITION.
- ALL PIPE METAL RAILINGS AND DECORATIVE METAL RAILINGS HAVE PEELING PAINT AND THE METAL IS RUSTING.

ELEVATION EXISTING CONDITIONS LEGEND:

MISSING OR CRACKED MORTAR

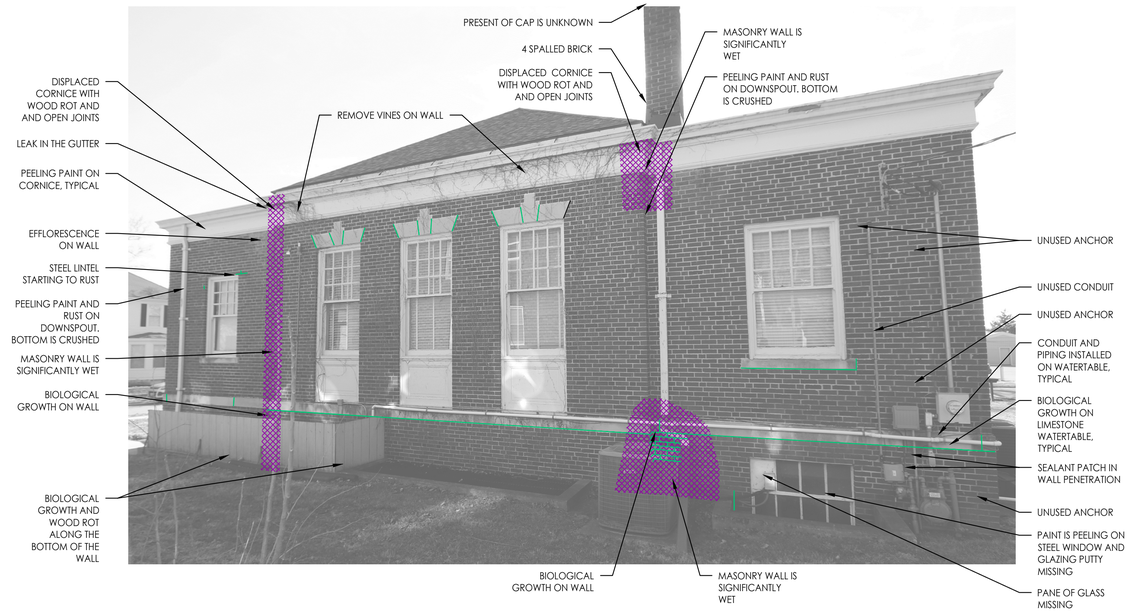
WET MASONRY WALL

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4 EAST ELEVATION - EXISTING CONDITIONS

Scale: N.T.S.



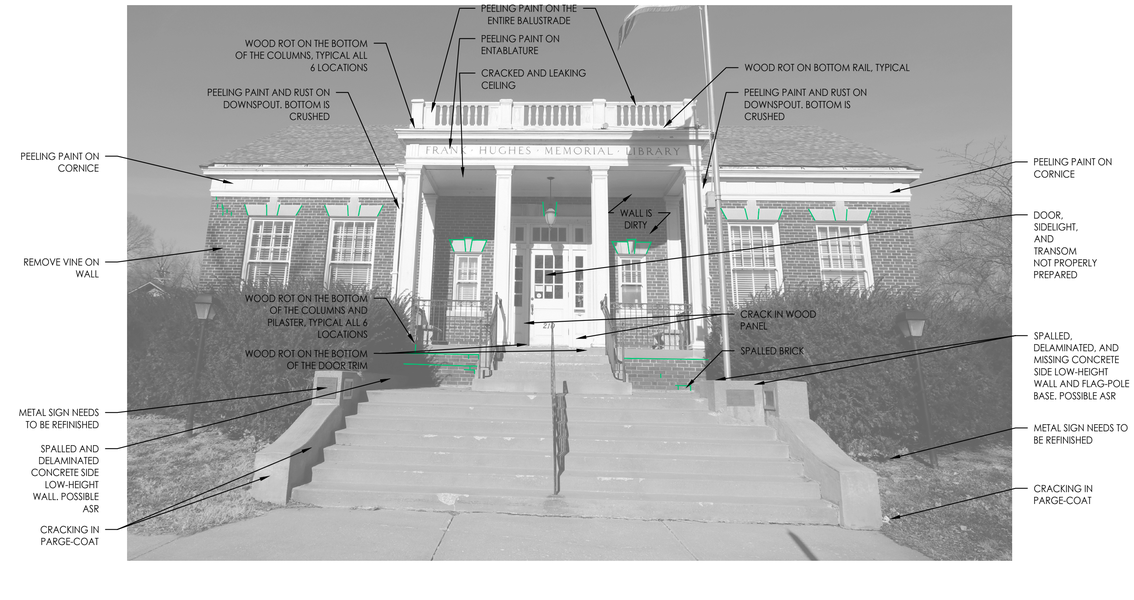
3 NORTH ELEVATION - EXISTING CONDITIONS

Scale: N.T.S.



2 WEST ELEVATION - EXISTING CONDITIONS

Scale: N.T.S.



1 SOUTH ELEVATION - EXISTING CONDITIONS

Scale: N.T.S.

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A200-B



Frank Hughes Memorial Library, view looking northeast in Lobby 100. (STRATA 2020)

3 TREATMENT RECOMMENDATIONS

Chapter 3 | Treatment Recommendations

Introduction

This Preservation Plan for the Frank Hughes Memorial Library should serve as the primary supporting document for the recommended treatments and renovations to the historic building. This section of the report provides a prioritized outline of the treatment recommendations for the immediate life-safety repair and preservation needs of the existing building and to establish short-term and long-term maintenance, repair, and rehabilitation needs. The treatment recommendations were developed following the physical assessment of the visible portion of the building.

Historic Treatment Approach

The Secretary of the Interior's Standards for the Treatment of Historic Properties provides the framework to guide the process of adopting a treatment approach. The adoption of a treatment approach is necessary for the proper management and repair and renovation projects of a historic building. The Standards define four different treatment options – Preservation, Rehabilitation, Restoration, and Reconstruction:

1. **Preservation** is the act or process of sustaining the existing form, features, and materials of an historic property through the conservation, maintenance, and repair of the historic materials. It preserves the physical record of the property over time, place, and use.[16]

2. **Rehabilitation** is the act or process of making the property usable for a compatible new use but still retaining the historic forms, features, and materials that give the building character. With this treatment option, there is more latitude than with preservation.[17]

3. **Restoration** is the act or process of returning a property's forms, features, and characteristics to a particular period in its history by means of the removal of features from other periods and the reconstruction of missing features.[18]

[16] "Preserving," *The Secretary of the Interior's Standards for Treatment of Historic Property*, United States Department of the Interior, National Park Service, accessed March 20, 2020, http://www.cr.nps.gov/hps/tps/standguide/preserve/preserve_index.htm.
[17] "Rehabilitating," *The Secretary of the Interior's Standards for Treatment of Historic Property*, United States Department of the Interior, National Park Service, accessed March 20, 2020. http://www.cr.nps.gov/hps/tps/standguide/rehab/rehab_index.htm.
[18] "Restoring," *The Secretary of the Interior's Standards for Treatment of Historic Property*, United States Department of the Interior, National Park Service, accessed March 20, 2020, http://www.cr.nps.gov/hps/tps/standguide/restore/restore_index.htm.

4. **Reconstruction** is the act or process of recreating a form, feature, or detail of a non-surviving site, landscape, building, structure, or object to replicate a specific period of time by means of new construction.[19]

Treatments may have a different approach for the exterior and the interior of the building. To establish the appropriate treatment approach, a careful examination must be conducted focusing on the building's historical significance and integrity, its existing conditions, its relative importance in history, its future use, and the mandated building code requirements.

Exterior and Interior Historic Treatment Approach

The exterior and the interior of the Frank Hughes Memorial Library have retained a significant amount of historic fabric and finishes and the building in an overall good condition. A pure "preservation" approach for the exterior and the interior would not be appropriate in this case because the building is in continuous operation as a library and archives, and contemporary amenities and updates are required for the building to function. These include updated lighting, electrical and mechanical systems, new data installation, a potential elevator addition, and life-safety equipment installation to meet the twenty-first century demands for the building. A "restoration" approach would also not be appropriate because the building has retained most of its character-defining features with very few changes to the building. Therefore, the recommended approach for the exterior and interior of the building is *Rehabilitation.*

Rehabilitation was selected as the treatment approach to encourage the retention of the historic building fabric and character-defining elements while allowing for the installation of the modern amenities to keep the library running and to assist with the maintenance and repairs to the property. All future alterations or rehabilitation of the building should be designed to meet the *Secretary of the Interior's Standards for Rehabilitation*, which will provide guidance for the installation of new utilities, mechanical systems, electrical systems, fire protection systems, and upgrades to address ADA accessibility. Great care should be taken to respect the existing historic fabric of the building by not removing any historical fabric and ensuring the changes that are made are reversible without damaging the historic building.

Maintaining the exterior envelope of the Frank Hughes Memorial Library is the most important objective in preserving the integrity of the historic structure. Regular inspections will help to discover deficiencies as they occur. Water infiltration is the number one source of deterioration for building materials and structure. Preventing water infiltration, allowing for proper ventilation, and protecting the historic materials will keep the building safe and secure for the future.

[19] "Reconstructing," *The Secretary of the Interior's Standards for Treatment of Historic Property*, United States Department of the Interior, National Park Service, accessed March 20, 2020, http://www.cr.nps.gov/hps/tps/standguide/reconstruct/reconstruct_index.htm.

Secretary of the Interior's Standards for Rehabilitation[20]

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

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

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

[20] "Secretary's Standards for Rehabilitation," *Technical Preservation Services*, United States Department of the Interior, National Park Service, accessed March 20, 2020, https://www.nps.gov/tps/standards/rehabilitation.htm.

Building Code and Life Safety

Applicable Building Codes

2012 International Existing Building Code (IEBC)
2012 International Building Code (IBC)
2011 National Electric Code (NEC)
2012 International Mechanical Code (IMC)
2012 International Plumbing Code (IPC)
2012 International Fuel Gas Code
2012 International Energy Conservation Code
2012 International Fire Code (IFC)
The Americans with Disabilities Act (ADAAG)

Existing Building Code Review

The Frank Hughes Memorial Library is currently being utilized by the Clay County Archives as a research center and library. The existing building is non-conforming to code because it is an Assembly Group A-3 occupancy classification with more than one story. Non-compliant items are highlighted in red.

Existing Building Classification

Existing Occupancy (No Change of Use Proposed)

Assembly Group A-3 (Section 303.4)

Existing Construction Type

Type V-B – Construction is the type of construction in which the structural elements, exterior walls, and interior walls are of any materials permitted by code. (Section 602.5)

Allowable Height

40-feet, 1-stories (Table 503)

Existing Height

2-stories

Allowable Area per Story

6,000 SF (Table 503)

Existing Gross Square Footage

First Floor	2,593 sf
Second Floor	2,575 sf
Total	5,138 sf

Existing Fire Protection System

The building is currently a non-sprinklered building. (Section 903.2.1.4)

- The fire area does NOT exceed 5,000 square feet.
- The fire area does NOT have an occupant load of 300 or more
- The fire area is NOT located on a floor other than a level of exit discharge serving such occupancies.

Fire Alarms with Smoke Detection are found throughout the existing building.

Fire Extinguishers

Fire extinguishers should be provided within seventy-five feet of all parts of the building.

Exterior Wall Fire Resistance Ratings

Fire Separation Distance (Table 602)

Building Code Requirements

Less than 5’-0” from exterior walls – 1-hour rating required
Greater than 10’-0” – No separation required

The building to the north of the Frank Hughes Memorial Library is 23-feet away from the building. There is not a required separation.

The building to the west of the Frank Hughes Memorial Library is 81-feet away from the building. There is no required separation.

Allowable Unprotected Opening Area in a Non-sprinklered Building (Table 705.8)

Building Code Requirements

Less than 5’-0” fire separation distance – Not Permitted
Greater than 5’-0”, but less than 10’-0” fire separation distance – 10%
Greater than 10’-0”, but less than 15’-0” fire separation distance – 15%
Greater than 15’-0”, but less than 20’-0” fire separation distance – 25%
Greater than 20’-0”, but less than 25’-0” fire separation distance – 45%
Greater than 25’-0”, but less than 30’-0” fire separation distance – 70%
Greater than 30’-0” fire separation distance – No Limit

The building to the north of the Frank Hughes Memorial Library is 23-feet away from the building, so the wall is allowed to be 45% unprotected openings. The existing wall has less than 45% unprotected openings.

The building to the west of the Frank Hughes Memorial Library is 81-feet away from the building, so there is no limit on the percentage of unprotected openings.

Means of Egress

Occupant load for the existing building, per IBC (Table 1004.1.2)

First Floor (Library – Stack): 2,075 SF at 100 GSF/occupant =	21 persons
First Floor (Acc. Storage/Mech): 257 SF at 300 GSF/occupant =	1 persons
Second Floor (Library–Reading Room): 916 SF at 50 SF/occupant =	18 persons
Second Floor (Library–Stack): 983 SF at 100 GSF/occupant =	10 persons
Second Floor (Office): 227 SF at 100 GSF/occupant =	2 persons
Total	52 persons

Existing Minimum Number of Exits

Per Table 1021.2(2), one (1) exit is required on the first floor because the occupant load is less than 49 people. The first floor of the Frank Hughes Memorial Library has two (2) exits, so it meets the code requirements. The two (2) exits are the two (2) exterior exits. The interior stairs are not considered an exit.

Two (2) exits are required on the section floor because the occupant load is more than 29 people but less than 500 people. The second floor only has one (1) exit, so the current building is non-conforming.

Exit Separation

Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit floors or exit access doorways.

Maximum Overall Diagonal = 68’-8”
One-Half of the Maximum Overall Diagonal = 34’-4”

The separation between the two (2) exterior exits on the first floor is 49’-2” which meets the requirements.

Egress Width at Stairs (Non-sprinkled)

Per Section 1005.3.1, the capacity, in inches, of means of egress stairway shall be calculated by multiplying the occupant load serves by such stairway by a means of egress capacity factor of 0.3 inch per occupant.

52 occupants x 0.3 = 15.6 inches

Per Section 1009.4, stairway widths should not be less than 44-inches.

The existing interior stairs within the Frank Hugh Memorial Library are only 36-inches wide and does not meet the requirements for an exit stair.

The existing north exterior stairs are 50-inches wide, and the existing east exterior stairs are 60-inch wide. Both stairs meet the requirements.

Egress Width at Other Egress Components (Non-sprinkled)

Per Section 1005.3.2, the capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.2. inch per occupant.

52 occupants x 0.2 = 10.4 inches

Per Table 1018.2, corridor widths should not be less than 44-inches.

The narrowest corridor in the Frank Hughes Memorial Library is 48-inches and is greater than the minimum requirements.

Dead End Corridors (Section 1018.4)

Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20-feet in length. Corridor 107 on the first floor is greater than 20-feet and is considered a non-conforming dead end corridor.

Existing Exit Signs

Per IEBC section 1203.11, where exit signs or egress path marking location would damage the historic character of the building, alternative exit signs are permitted with the approval of the code official. Alternative signs shall identify the exits and egress path.

Length of Travel (Table 1016.2)

The travel distance within the exit access portion of the means of egress system (the maximum distance that an occupant must travel before an exit is reached) for A-3 occupancy within a non-sprinklered building is 200-feet. Figure 3.1 below depicts the overall travel distance from the most remote locations on the first and second floors.

First Floor – the most remote location on the first floor is Archival Storage 106 to the exit in Archive Storage 103. This is 94’-3” which does not exceed the travel distance.

Second Floor – the most remote location on the first floor is Work Room 206 to the exit. This is 63’-6” which does not exceed the travel distance.

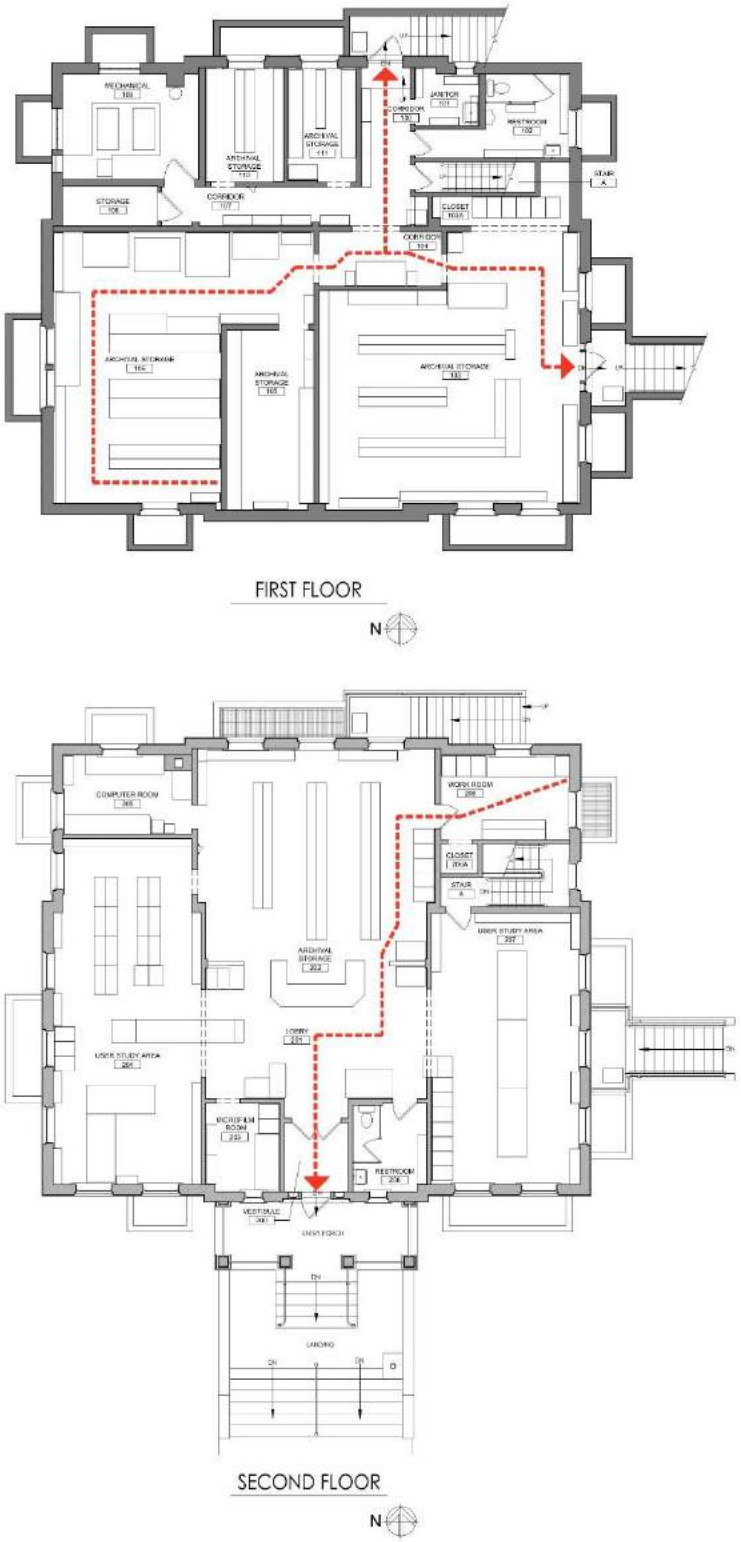


Figure 3.1. Exit Egress Path of Travel. (STRATA 2020)

Accessibility

The building is currently not ADAAG accessible. IEBC Section 705.1. a facility that is altered should comply with the applicable provisions listed in Section 705 of the IEBC and Chapter 11 of the IBC, unless it is technically infeasible. Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent that is technically feasible.

Reference Accessibility Section for a full analysis.

Minimum Number of Required Plumbing Fixtures

Occupant Load = 52
Male = 26
Female = 26

	Water Closet		Urinal		Lavatory	Drinking Fountain	Service Sink
	Male	Female	Male	Female			
Code Requirements	1 per 125	1 per 65	N/A	N/A	1 per 200	1 per 500	1 service sink
Required by Codes	1	1	N/A	N/A	1	1	1 service sink
Actual Number	1	1	N/A	1	2	None	1 service sink

The current building plumbing fixtures meet the amount required by code. There is currently no drinking fountain or bottle filler, which is required.

General Treatment and Maintenance Recommendations

General Treatment Recommendations should be applied to the on-going maintenance and repairs of the building and all future work in the Frank Hughes Memorial Library. These items are not included in the cost estimate.

- Review of the condition of the building annually to take into account the locations in need of maintenance, repair, or a larger rehabilitation project. Note the areas with recurring issues to determine the underlying problems.

- Hazardous Materials
    - No hazardous materials testing has been done in conjunction with this project.
    - Buildings from this period also often include asbestos-containing materials.
    - It should also be assumed by the maintenance staff and contractors that lead-based paint exists on many of the painted surfaces. A contractor may choose to test surfaces prior to initiating work to confirm the presence of potential lead-based paint. Contractors shall follow all guidelines for working with and handling lead-based paint. All contractors who disturb surfaces with lead-based paint must have a current RRP certification on file.
    - Prior to any renovation work, a comprehensive hazardous materials survey and testing project should be undertaken by a specialty environmental testing company.

- Ice and Snow Removal
    - While removal of snow and ice from sidewalks, walkways, and stairs is required for the operation of the building, the solution must be able to be implemented while not damaging the historic materials.

      Normal rock salt is composed of sodium chloride. Sodium chloride creates a brine when mixed with water. This brine absorbs into the concrete, and when the concrete re-freezes, the brine and water mixture expands and creates pressure in the concrete, causing damage through chips and spalls. The brine is also acidic, which can deteriorate the reinforcing steel. The salts also absorb into the concrete and will leach out over time, causing prolonged efflorescence.

      There are other chemicals available that can melt ice and not attack the concrete. Products made of calcium magnesium and urea are chemicals that typically do not negatively affect historic materials**.**

      All snow and ice melt products should be used in limited quantities, and their residue rinsed away in the spring after the winter thaw.

  - Snow removal can be undertaken using plows, snowblowers, shovels, and brushes. Care must be taken to ensure that the blades of the equipment do not scrape the pavement surface in a manner that might cause chipping. Rubber or urethane blade edges can be used, or proper blade height can be maintained above the pavement surface using guide wheels. Care should also be taken not to damage the concrete sidewalks and brick walls in the snow removal process. Any residual snow can be cleared with brushes.

- Clean debris from window wells and areaways to ensure that they are draining.

Immediate Treatment Recommendations

Immediate Treatment Recommendations address known life-safety, maintenance, and repair issues affecting the Frank Hughes Memorial Library. These recommendations do not resolve all of the on-going issues. The goal of these immediate recommendations is to protect the building users, protect the existing materials, and allow for the building to continue to operate until future repair projects can be undertaken. These recommendations should be completed immediately and are listed below. Estimated costs associated with this phase of work can be found in Appendix D. Costs do not include required design and engineering professional fees or permitting.

Site

- Grading
  - Regrade and resod along the west projection on the north elevation to create a positive grade slope away from the building.

- Building Access
  - East
    - Clean leaves and debris from the areaway at Door 103/A to ensure that water can drain to the sump pump.
    - Test the sump pump in the areaway to ensure it is working properly. Make necessary repairs. Consider installing a remote battery back-up.
    - Clean awning with a biological treatment to kill moss and biological build-up.

  - North
    - Clean leaves and debris from the areaway at Door 100/A to ensure that water can drain to the sump pump. Consider installing a remote battery back-up.
    - Test the sump pump in the areaway to ensure it is working properly. Make necessary repairs.
    - Scope under the walkway at the top of the north stairs to determine the extent of the void under the walkway and potential structural failures.

- Clean biological staining from the full-height walls at the north stair with a biological soiling remover or a biological and atmospheric stain remover (basis-of-design: Prosoco Revive or Prosoco ReKlaim).
- Prep, prime, and paint wood paneling at the north stair railing stair with a light detergent.

Exterior Work

- Masonry
  - The exterior masonry walls are damp in three locations (1 on the east elevation and 2 on the north elevation) following a rain event. This cause of the wet areas need to be investigated and repairs made as required.

  - Remove all vines and treat the prevent future growth from the building elevations (north, south, and west elevations).

  - Remove sealant at the pipe penetration on the north elevation at the northwest corner. Clean brick to remove all sealant residue to the greatest extent possible. Install closed-cell backer rod and compatible sealant around the pipe to create a water and airtight seal (1 location).

  - Remove sealant from the hole at the north elevation at the northwest corner. Clean brick to remove all sealant to the greatest extent possible. Either install new brick to match existing to infill hole or patch with a compatible patching compound (basis-of-design: Cathedral Stone Products, Inc., Jahn). Custom color to match the existing brick.

  - Install closed-cell backer rod and compatible sealant around the pipe at the wall penetration on the west elevation at the northwest corner to create a water and airtight seal (1 location).

- Gutters
  - Clean all gutters to remove all debris.

  - Test all gutters to ensure that they are not leaking. Patch damaged areas with butyl tape, as required. If in too bad of a condition, consider lining the gutters with a liquid rubber membrane.

- Downspouts
  - Clean all downspouts to remove all debris (6 total).

  - Test all downspouts to ensure that they are not leaking. Repair as required (6 total).

- Prep, prime, and paint all downspouts (6 total).

- Scope the underground drainage system to determine if it is clear and drains. If the underground drainage system is clear, consider the option to reuse the system instead of daylighting the downspouts at grade.

  If it is possible to reuse the underground drainage system, remove all existing downspout extensions, and install new downspouts extension cast-iron boots to drain water into the underground drainage system. New downspouts should match the historic. The connection between the existing and new downspouts should be watertight.

  If it is not possible to reuse the underground drainage system, remove all existing downspout extensions, and install new downspout extensions and splash blocks to drain water away from the building. New downspouts should match the historic. The connection between the existing and new downspouts should be watertight.

- Wood Cornice
  - Replace water damaged cornices in-kind with exterior grade wood (2 locations).

  - Prep, prime, and paint all wood cornices.

- Metal Fascia and Soffit
  - Prep, prime, and paint all metal fascia and soffits.

- South Portico
  - Prep, prime, and paint wood columns (4 columns), pilasters (2 pilasters), and entablatures. Spot areas of wood deterioration may be repaired with a wood epoxy such as Abatron.

  - The roof of the south portico is leaking. Investigate the source of the leak and patch the roof or flashing, as necessary.

  - Remove all damaged and deteriorated wood components from the south portico balustrade, including the column bases (6 total) and bottom railing. Replace components, in-kind with exterior grade wood, and repair all flashings. Coordinate with roofing project.

  - Remove 2 unused lights from the south portico balustrade. Patch holes in wood or install a Dutchman repair depending on the size.

  - Prep, prime, and paint the entire south portico balustrade.

- Windows and Exterior Trim
    - Provide temporary repairs to the original wood windows (27 total). Repair spot areas with wood deterioration with a wood epoxy such as Abatron. Prep, prime, and paint original wood windows.
    - Prep, prime, and paint original steel windows (2 total).
    - Prep, prime, and paint all window trim, including panels below windows (32 windows).
    - Remove sealant from the joint between window and masonry at all windows (32 total). Install closed-cell backer rod and compatible sealant
    - Wire brush to remove all rust. Recoat existing steel lintels at all of the first and second floor “box windows” (19 total).
    - Clean window wells to remove all leaves, rocks (not gravel), and debris (9 total).
    - Test window wells to ensure that water is draining in the window wells (9 total). Install drains if none exists.
- Exterior Doors
    - Door 220/A (main entry door) – Repair cracks in sidelight panels with an exterior wood filler. Prep, prime, and paint exterior of door, frame, trim, sidelights, and transom.
    - Door 103/A (east side door) – Remove and replace in-kind damage and deteriorated bottom rail and trim at the bottom of both sidelights in-kind. Prep, prime, and paint exterior of door, frame, trim, sidelights, and transom.
    - Door 100/A (north door) – Prep, prime, and paint exterior of the door, frame, and trim.
    - Remove sealant from the joint between door and masonry at all three exterior doors. Install closed-cell backer rod and compatible sealant
    - Wire brush to remove all rust. Recoat existing steel lintels at Door 100/A.
- Utilities
    - Reinstall existing data cable on the west elevation to be tight against the building. Utilize masonry joints to install anchors.

Mechanical

- Clean dirty mechanical grilles to help prevent dust from spreading and improve the aesthetics of the building. There are approximately thirty-one grilles in this facility.

Plumbing

- Install efficient water heater to provide hot water to the two lavatories and janitor's sink.
    - Option 1 – Provide an under-counter instantaneous water heater, Eemax EX3512T, or equivalent, at the second floor lavatory, to heat the water directly and remove the existing water heater in its entirety if the first floor lavatory and janitor's sink are not used.

    - Option 2 – If it was preferred to keep the hot water capability at the existing fixtures on the first floor as well, the existing hot water heater could be replaced with a similar style tank unit, A.O. Smith EJCS-20 or equivalent, or a tankless water heater, A.O. Smith R4LA-180E or equivalent. A tankless water heater would be more energy-efficient than the existing tank-style unit. If the existing unit is replaced, it would be recommended to insulate the hot water line all the way to the unit, as several feet of insulation is currently missing.

Electrical

- Egress Lighting: Battery 'bug eye' fixtures or battery packs integral to the fluorescent fixtures should be added to supplement egress lighting. Egress lighting should be installed per code.

- Exit Lighting: Exit lighting should be installed at all exits, and at locations in building such that path to exit is per code.

- Replace broken, rusty conduit on the exterior of the building.

- All incandescent lamps should be replaced with LED retrofit lamps with the same color temperature.

- All stand-alone smoke detectors should be inspected and replaced if damaged or inoperable.

- The existing Frank Adams panel located on the first floor (original to the building), should be replaced with a circuit breaker type.

- An electrician should be employed to test and inspect all electrical panels and connections.

Short-Term Treatment Recommendations

These treatment recommendations provide short-term solutions for the repair of the Frank Hughes Memorial Library. The recommendations help stabilize the building and create a watertight building envelope. These recommendations address the majority of the known needed maintenance and repair issues of the building. The recommendations do not address all of the desired upgrades to the building. The Short-Term Treatment Recommendations should be completed within 1 to 5 years from the completion of this report. The Short-Term Treatment Recommendations are list below. Estimated costs associated with this option can be found in Appendix D.

These recommendations are NOT a stand-alone project. These treatment recommendations are cumulative with the previous Immediate scope of work and recommendations and require the completion of all of the outlined work.

Site

- Sidewalks
  - Remove existing damaged sidewalk sections and replace in-kind (6 sidewalk sections).

- Building Access
  - South (main entry)
    - Remove the existing concrete paver landing at the south grand stairs. Install new reinforced concrete landing that slopes away from the south portico. Score concrete to match the existing paver pattern. More investigation for the structural support for this landing with be required.
    - Restore decorative metal handrail at the south grand stair. Scrape all loose paint and surface rust with a wire brush and steel wool. Take care not to abrade the good iron below the rust. Prime and paint railings with a high-performance coating system.

  - East
    - Remove the existing damaged walkway section and replace in-kind.
    - Repair damaged and deteriorated full-height concrete walls and concrete window wells at the east entrance.
    - Restore decorative metal guardrail at the east entry. Scrape all loose paint and surface rust with a wire brush and steel wool. Take care not to abrade the good iron below the rust. Prime and paint railings with a high-performance coating system.
    - Remove existing pipe handrail and patch concrete, as required. Replace with simple pipe handrail along both sides of the stairs. New railings to meet building code and accessibility requirements.

- North
  - Remove the existing walkway from the public sidewalk to the north entrance stairs. Install a new 5-foot wide concrete walkway. Slope the entire walkway up from the public sidewalk to the north entrance stair. The top of the surface should align with the top tread of the stairs. The walkway slope should not exceed 1:20. If it is steeper, the walkway is considered a ramp and would require railings. Regrade around walkway to slope away from walkway.
  - Remove wood paneling from the north stairs railing.
  - Restore decorative metal guardrail at the north entry. Scrape all loose paint and surface rust with a wire brush and steel wool. Take care not to abrade the good iron below the rust. Prime and paint railings with a high-performance coating system.
  - Remove existing pipe handrail and patch concrete, as required. Replace with simple pipe handrail along the stairs. New railings to meet building code and accessibility requirements.

Exterior Work

- Concrete Foundation
  - Repair foundation at the northeast corner with concrete. Patch to match the original. The new concrete should match the original in color, texture, density, and aggregate size. Pin new concrete to existing with stainless steel pins.

- Masonry
  - Repoint the following locations with appropriate mortar to match the original mortar as closely as possible. Mortar is to match the original mortar in aggregate size, texture, color, and hardness.
    - 5% of each elevation of the building
    - 25% of the brick chimney
    - 100% of all of the limestone window headers
    - 25% of the limestone water table
    - 100% of the limestone gable screen surround

  - Remove four (4) spalled and deteriorated bricks at the chimney, and one (1) spalled and deteriorated brick at the south wall of the south portico. Replace the deteriorated bricks with bricks that match the dimensions, density, color, and texture of the original brick. If suitable brick replacements cannot be located, provide custom colored mortar patch in these locations (basis-of-design: Cathedral Stone Products, Inc., Jahn).

- Remove all unused anchors from the surface of the brick and mortar joints. (1 anchor from west elevation and 4 anchors from north elevation). Patch holes in the mortar with mortar to match the original mortar as closely as possible. Patch holes in the brick with a compatible patching compound (basis-of-design: Cathedral Stone Products, Inc., Jahn). Custom color to match the existing brick.

- Provide a general clean of 100% of the masonry with a light detergent and scrubbing with warm water.

  Sandblasting is not recommended for cleaning masonry as it permanently removes the outer surface of the stone and creates a rough, uneven texture, thereby exposing the stone to further deterioration.

  A variety of masonry cleaning products, methods, and treatments are available, including water and chemical cleaners. It is important when evaluating each of these cleaning options to find a solution that is the gentlest means possible. Only increase the strength if the soiled area is not fully cleaned. All masonry cleaning and treatment products MUST be tested in an inconspicuous area on the building prior to the start of the overall cleaning. Discontinue all cleaning immediately should deterioration of the masonry surface be observed.

- Clean biological growth from brick and limestone that is not removed with a light detergent scrub with a biological soiling remover or a biological and atmospheric stain remover (basis-of-design: Prosoco Revive or Prosoco ReKlaim).

- Clean efflorescence from the surface of brick on north elevation. Brush loose powder from brick surface with a stiff brush. Rinse the surface with water (do not use a high-pressure washer). If brushing and washing do not remove all of the salt deposits, clean the area with a light acidic cleaner (basis-of-design: Prosoco Sure Kean 600)

- Clean mud/dirt staining the bottom of the west wall. With a light detergent and scrubbing with warm water. Consider installing grass along the building to reduce the mud splashes.

- Chimney
  - Investigate if the chimney is used for venting any equipment.

  - If it is no longer used, install concrete or pre-finished metal cap on brick chimney to prevent moisture infiltration, as well as to prevent heat loss. Ensure that the top is sloped to promote water drainage. If a metal cap is used, provide a formed drip edge and install per SMACNA guidelines.

- South Portico
    - Restore decorative metal guardrail at the south portico. Scrape all loose paint and surface rust with a wire brush and steel wool. Take care not to abrade the good iron below the rust. Prime and paint railings with a high-performance coating system.

- Windows
    - Restore original double-hung wood windows and install a UV storm window over the windows to protect the original wood windows. (27 windows).

    - Restore the original steel windows (2 total). The steel window restoration should be done by a qualified steel window restoration contractor. Remove non-glass infill and install a new glass pane to match the existing glass.

    - Install metal grating on top of all of the window wells, except those with current grating. New grating to match the existing window well grating (7 window wells).

- Exterior Doors
    - Door 220/A (main entry door) – Refinish interior of the door, frame, sidelights, and transom.

    - Door 103/A (east side door) – Refinish interior of the door, frame, sidelights, and transom.

    - Door 100/A (north door) – Remove deteriorated door wood. Install a new pre-finished metal door with door hardware. Original door frame to remain.

    - Install weatherstrip on Doors 103/A and 220/A doors with copper compression strips on the jambs and sweeps on the door bottoms.

- Louvers
    - Install insect screening at all three exterior louvers to prevent bird and pest infiltration into the building.

    - Prep, prime, and paint louvers in the east and west gable ends of the roof (2 total).

    - Prep, prime, and paint mechanical louver on the west elevation at Mechanical Room 109.

- Utilities
    - Remove all unused conduits, pipes, and data cables. Patch all holes in the brick and the mortar.

Interior Work

- Flooring
    - Remove the non-original carpet throughout the second floor. Consider refinishing the original hardwood floors. If that is not desired for acoustical reasons or the or the original hardwood floor is not in good condition. Install new carpet runners in areas of high traffic areas or broadloom carpet through the second floor.

    - Remove existing linoleum flooring and base within Restroom 208. Install new sheet linoleum flooring and rubber base. The linoleum should be at least 2 mm thick with a durable jute backing. Companies that make traditional linoleum are:
        - Forbo Marmoleum
        - Armstrong LinoArt
        - Tarkett Lino xf

    - Prep, prime, and paint concrete floors throughout the first floor. Test floors for lead-based paint and take all necessary pre-cautious to meet state RRP regulations.

- Baseboard
    - Repair two (2) cracks in the cement base in Corridor 100 with a hydraulic cement.

    - Prep, prime, and paint all cement bases throughout the first floor.

- Wainscot
    - Resecure the cap on the wainscot on the south wall of Archival Storage 106.

- Plaster Walls
    - Remove all tape from the plaster north wall of Microfilm Room 203.

    - After all roof leaks are complete, remove the water damaged plaster down to the metal lath in Computer Room 205, Work Room 206, and stairs. Inspect metal lath for rust, if in good condition, reuse lath. If it is rusted, replace damaged sections, in-kind. Install a three-coat plaster repair system to match existing walls.

    - Prep, prime, and paint Computer Room 205, Work Room 206, and stairs after the water damaged plaster walls are repaired.

- Gypsum Board Walls (Dry Wall)
    - Repair all nicks, scrapes, and tears in the gypsum board in Corridor 104.

    - Prep, prime, and paint gypsum board walls in Corridor 104.

- Ceilings
    - Investigate the source of the water damage around two cover plates in Archival Storage 103. Make repairs, as necessary.
    - Prep, prime, and paint the gypsum board ceiling in Computer Room 205.
    - Mud and tape the seams in the gypsum board ceiling in the Stairs. Prep, prime, and paint.
    - Remove the water damaged wood beadboard ceiling in Work Room 206. If the original plaster is present, remove all water damaged plaster ceiling down to the plaster lath. Install a new gypsum board ceiling. Prep, prime, and paint. Install small painted wood cove molding at the joint between plaster walls and new ceiling.
- Interior Doors, Frames, and Trim
    - Remove tape from Door 207/A.
    - Investigate the mechanics that allow Mechanical Room Door 109/A to open and close. Perform maintenance and repair pieces as required to allow the door to open and close properly.
- Interior Window Trim
    - Prep, prime, and paint all painted interior window trim (13 total). Project to coincide with the window restoration project.
    - Refinish all stained window trim (19 total). Project to coincide with the window restoration project.
    - Restore all of the original window blinds (16 total). Prep, prime, and paint the blades and the tracks. Replace fabric tape spacers and adder strings.
- Stair and Railing
    - Refinish the hardwood floors at the top of the stairs.
    - Refinish wood treads and risers in the stairs.
    - Refinish the wood railings.
    - Refinish the decorative wood cap on the low-height center all in the stairs.

- Original Casework
    - Fill the crack between the pilasters and the wall on the north side of both pilasters between Lobby 201 and Archival Storage 202. Prep, prime, and paint the pilasters and the immediate surrounding wall.

- Accessibility
    - Remove original toilet partition in Restroom 208 and provide it to the owner for storage.

    - Install ADA-compliant grab bars at the toilet in Restroom 208.

    - Move bookshelf within Restroom 208 to provide compliant door maneuvering clearances.

Mechanical

- Replace the existing non-programmable thermostat on the first floor with a new programmable thermostat that would be capable of adjusting the temperature setpoint during unoccupied hours. Note, due to the nature of this facility, even during unoccupied hours, the archived material likely has temperature/humidity requirements.

- Clean the existing ductwork if it has not been done in the last 10 years.

Plumbing

- Scope the sewer lines to determine if any of the lines are starting to fail. If lines are failing, they can either be replaced or potentially lined.

- Scope the domestic water lines to determine if any of the lines are showing signs of heavy corrosion. If lines are found to be failing, they should be replaced.

Electrical

- Existing conductor was not observed, but it is assumed that the conductor is original to the building and should be replaced. This would require significant re-wiring.

- Fluorescent lay in fixtures (first floor), wrap fixtures (first floor), and pendant mounted fluorescent fixtures (second floor), should be replaced with LED type fixtures to reduce energy usage.

- When existing conductor work (above) is done, the existing historical lighting fixtures should be removed, cleaned, repaired (if necessary) and re-wired
- Replace non-original shade on the wall sconce in the southeast of User Study Area 204 to most closely match the original shades.

- Install more data connections, as required.

Long-Term Treatment Recommendations

These treatment recommendations provide a long-term solution for the Frank Hughes Memorial Library. These recommendations address maintenance and repair at the building, along with the upgrades desired by the owner. Long-Term Treatment Recommendations should be completed within 5 to 10 years from the completion of this report. The Long-Term Treatment Recommendations are list below. Estimated costs associated with this option can be found in Appendix D.

These recommendations are NOT a stand-alone project. These treatment recommendations are cumulative to the previous Immediate and Short-term recommendations and require the completion of the outlined work.

Site

- Parking
    - Explore the option to install a small parking lot on the lot west of the building for off-street accessible parking spots. The parking lot should have at least 2 (2) designated accessible parking with one (1) car parking spot and one (1) van parking spot. Reference Treatment Option 2 Drawings for an optional parking layout.

- Building Access
    - South (main entry)
        - Remove the south grand stairs, including all of the stairs and the low-height walls, and replace in-kind.

    - East
        - Remove damaged and deteriorated full-height concrete walls and concrete window wells at the east entrance. Replace in-kind.

Exterior Work

- Louvers
    - Remove mechanical louver on the west elevation at Mechanical Room 109. Install new louver which incorporates the fresh air intake.

Interior Work

- Baseboard
    - Refinish stained wood baseboard throughout the second floor.

    - Prep, prime, and paint the paint wood baseboard through the second floor.

- Wainscot
    - Refinish stained wainscoting in Vestibule 200, User Study Area 204, and all first floor wainscot.

  - Prep, prime, and paint wainscoting in Lobby 201 and User Study Area 207

- Plaster Walls
  - Repair all cracks in plaster walls throughout the first and second floors. Repair cracks by widening the crack slightly and creating a v-joint. Fill the crack with a plaster patching compound.

  - Repair all holes in plaster by infilling the small holes with a plaster patching compound. Holes that are between 1-inch and 4-inches in diameter apply a plaster base coat and then create a smooth level finish with a finish coat.

  - Remove adhesive from the plaster on the south wall of Archival Storage 105. First, lightly sand the adhesive to remove the adhesive to the greatest extent possible, without damaging the plaster. If the adhesive is not fully removed, use a solvent-based adhesive to remove the adhesive.

  - Remove improper previous patches to expose the original hole or damage. Remove all unstable plaster. Properly repair the damaged areas.
    - Medium Size Damaged Areas (areas that are between 1-inch and 4-inches in diameter) – Apply a plaster base coat and then create a smooth level finish with a finish coat.
    - Large Size Damage Areas (areas larger than 4-inch in diameter) - Infill the void with gypsum board designed for plaster veneer, commonly called “blue board “ and apply a plaster skim coat to blend the patch in with the wall.

  - Prep, prime, and paint all plaster walls throughout the first floor and second floor.

  - Consider conducting a paint analysis to determine the original interior colors of the building.

- Ceilings
  - Repair all cracks in plaster ceiling through the first and second floors. Repair cracks by widening the crack slightly and creating a v-joint. Fill the crack with a plaster patching compound.

  - Investigate the plaster damage in the ceiling and the decorative plaster crown molding in Lobby 201, above the opening to User Study Are 204. Remove unstable plaster and patch ceiling in the same manner as the walls.

  - Prep, prime, and paint all plaster ceilings throughout the first floor and second floor.

  - Consider conducting a paint analysis to determine the original interior colors of the building.

  - Remove all existing 2'-0"x4'-0" acoustical ceiling tiles and install new in Archival Storage Room 104, 105, and 106. The existing grid can remain in-place. Touch-up the paint on the grid, if required.

- Decorative Plaster Crown Molding
  - Prep, prime, and paint all decorative crown molding throughout the second floor.

  - Consider conducting a paint analysis to determine the original interior colors of the building.

- Interior Doors, Frames, and Trim
  - Repair wood veneer on Door 102/A, where there is a section of veneer missing.

  - Refinish all interior wood doors (7 doors). Clean stamped steel grilles on all Type C Doors (3 doors).

  - Prep, prime, and paint Mechanical Room Door 109/A and frame with paint approved for this application.

  - Prep, prime, and paint all painted door trim.

  - Refinish all stained door trim.

- Hardware
  - Consider removing non-original push plates, door pulls, and locks with hardware that more closely matches the original.

- Original Casework
  - Restore the finish of the original service desk and railing.

  - Restore the finish of the original bookshelves.

- Accessibility
    - Install an elevator addition with egress stairs and area of refuge to provide an accessible entrance into the building. The addition should meet the *Secretary of the Interior Standard for Rehabilitation.* The addition should be able to be differentiated from the original building and be compatible with the massing, size, scale, and architectural features of the original building. It would be recommended that the addition be stepped back from the original building and not be taller than the original building. If possible, the addition should connect to the original building as minimally as possible to allow for the original form of the building to remain intact. Reference Treatment Option Drawings at the end of the chapter to proposed elevator addition options. Reference Preservation Brief 14: New Exterior Additions of Historic Buildings: Preservation Concerns, Anne E. Grimmer and Kay D. Weeks, National Park Service.

        - Treatment Option 1 – This option proposes an addition to the north elevation of the building. The addition would include a three-stop elevator to allow for a person to enter the elevator at ground level and then take it either up or down to the first and second floors. The addition would also include a code-compliant egress stair with required areas of refuge.

        - Treatment Option 2 – This option proposes an addition on the west elevation of the building. The addition would connect to the building through a glass corridor. The addition would include a three-stop elevator to allow for a person to enter the elevator at ground level and then take it either up or down to the first and second floors. The addition would also include a code-compliant egress stair with required areas of refuge. This addition would be able to be expanded in the future to add additional storage.

- Archival Storage
    - The building is close to being at capacity and will not have enough storage to take new collections. A building addition could be considered to increase the amount of storage in the building and add needed functions. Reference Treatment Option 2 for an option for a new building addition.

      This proposed building addition could be the second phase of an elevator addition. This phase would add two ADA-compliant restrooms, a breakroom for volunteers, collection accessioning, and traditional and high-density storage.

Mechanical

- Consider install new furnaces. Newer furnaces have efficiencies around 94%, and newer condensing units have efficiencies up to 14 EER, and newer heat pumps have seasonal efficiencies up to 19 SEER. Evergy (formerly KCPL) and Spire offer utility rebates that could lower the return on investment for replacing these systems.

- Provide the code required ventilation for the building and provide exhaust air for the restrooms and janitor's closet. Due to the nature of this facility, care should be taken to ensure that the temperature and humidity requirements are still met when bringing in outside air.

Plumbing

- Replace the existing water entry with a new reduced pressure backflow preventor to bring the building up to code.

- While the plumbing fixtures at this facility appear to be quite old, it is recommended that the historic plumbing fixtures only be changed out if needed. The faucets on the lavatories should be changed out to ADA style faucets.

Electrical

- It was not observed, but it is assumed that there is not a dedicated ground conductor for lighting and power. The existing branch wiring should be replaced and provided.

- Provide task lighting on desks to increase visual tasks and reading

- Remove track lighting above the service desk. Patch ceiling, as required.

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Frank Hughes Memorial Library, detail view of the metal fascia and soffit on the west elevation. (STRATA 2020)

3 TREATMENT RECOMMENDATION DRAWINGS

FRANK HUGHES MEMORIAL LIBRARY

TREATMENT OPTION 1

210 EAST FRANKLIN STREET
LIBERTY, MISSOURI 64068

MAY 29, 2020

OWNER:	ARCHITECT OF RECORD:	MEP ENGINEER
CITY OF LIBERTY PARKS AND RECREATION 1600 SOUTH WITHERS ROAD LIBERTY, MISSOURI 64068 T: 816-439-4360 CONTACT: TOM GARLAND, CPRP	STRATA ARCHITECTURE INC. 1701 OAK STREET, SUITE 100 KANSAS CITY, MISSOURI 64108 T: 816-474-0900 CONTACT: ANGIE GAEBLER, AIA AMANDA E. MOORE, AIA	FARRIS ENGINEERING 6004 CENTRAL STREET KANSAS CITY, MISSOURI 64113 T: 573-202-9766 CONTACT: DANNY VANDOREN, PE, QCxP, LEED AP+



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A050 ARCHITECTURAL SITE PLAN - TREATMENT OPTION 1

A100 FIRST FLOOR PLAN - TREATMENT OPTION 1
A101 SECOND FLOOR PLAN - TREATMENT OPTION 1



SITE VICINITY MAP

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TREATMENT OPTION 1
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LIBERTY, MISSOURI 64068

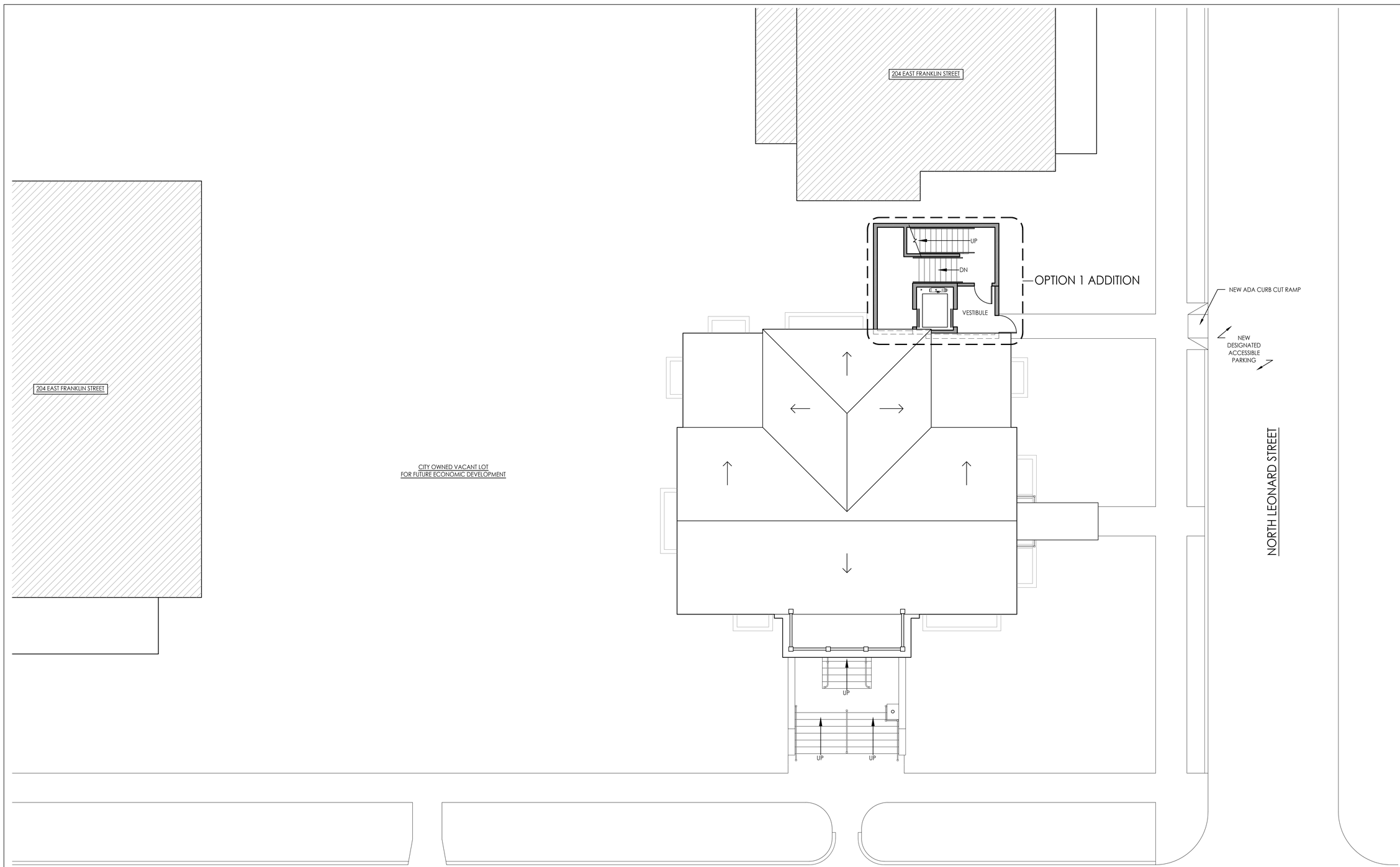
AS-BUILT DRAWINGS
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REVISION & DATE:

COVER
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SHEET NUMBER:

G000



1 SITE PLAN - TREATMENT OPTION 1

Scale: 1/8" = 1'-0"

8 0 8 16

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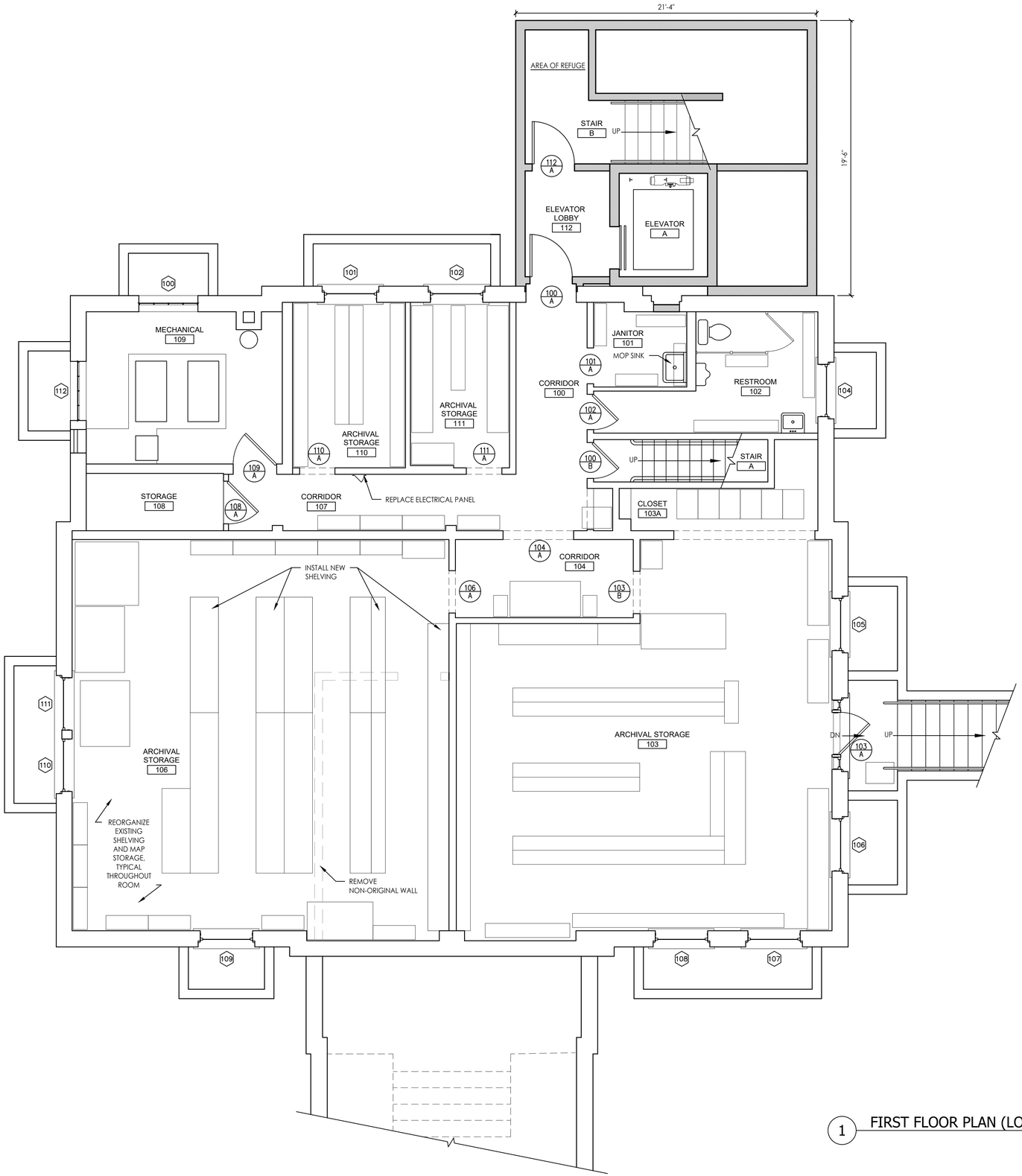
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SITE PLAN
TREATMENT OPTION 1

SHEET NUMBER:

A050



1 FIRST FLOOR PLAN (LOWER LEVEL) - TREATMENT OPTION 1

Scale: 1/4" = 1'-0"

4 0 4 8

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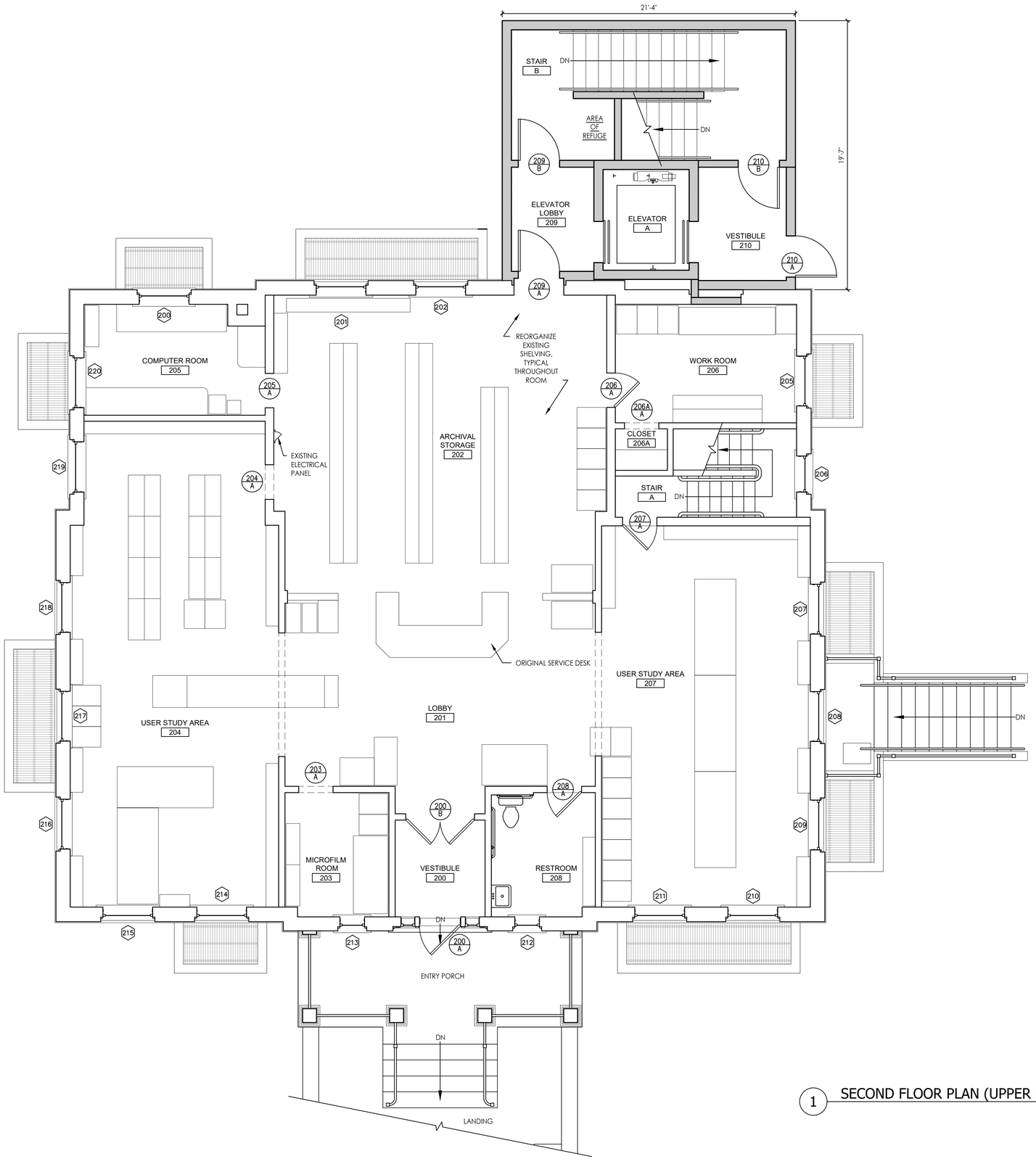
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FIRST FLOOR PLAN
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SHEET NUMBER:

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1 SECOND FLOOR PLAN (UPPER LEVEL) - TREATMENT OPTION 1

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4 0 4 8

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SECOND FLOOR
TREATMENT OPTION 1

SHEET NUMBER:

A101

FRANK HUGHES MEMORIAL LIBRARY

TREATMENT OPTION 2

210 EAST FRANKLIN STREET
LIBERTY, MISSOURI 64068

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A050 ARCHITECTURAL SITE PLAN - TREATMENT OPTION 2

A100 FIRST FLOOR PLAN - TREATMENT OPTION 2
A101 SECOND FLOOR PLAN - TREATMENT OPTION 2



SITE VICINITY MAP

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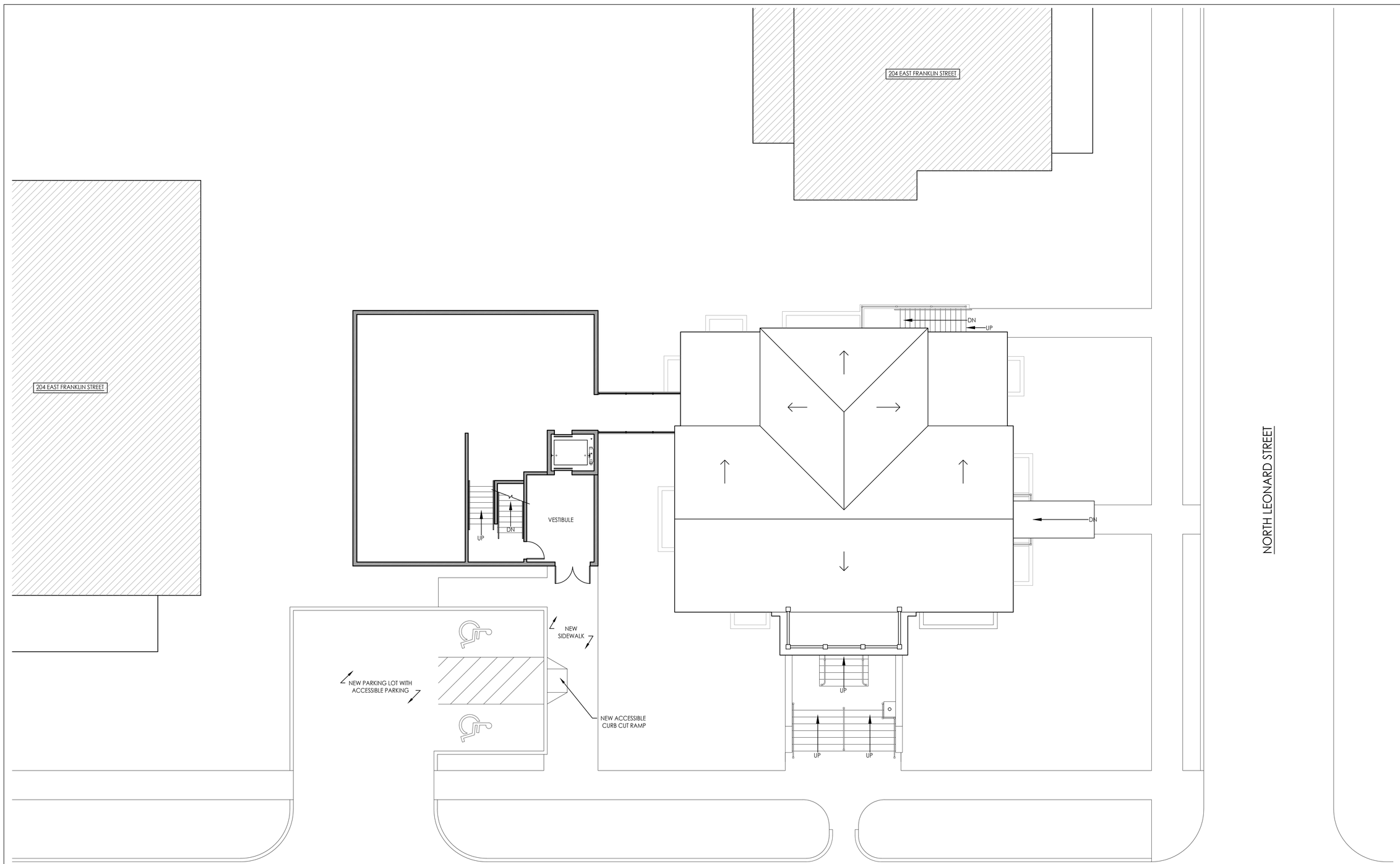
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1 SITE PLAN - EXISTING CONDITIONS

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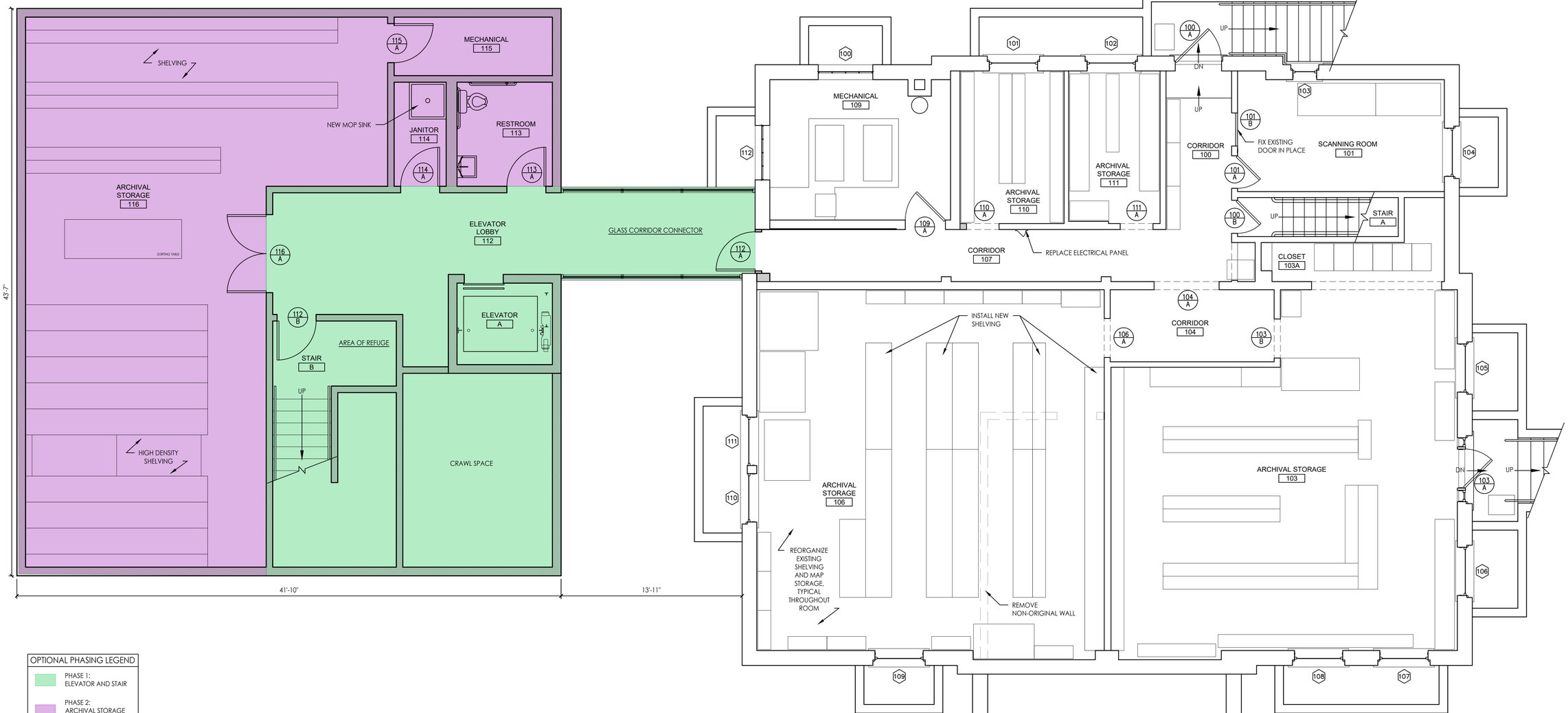
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A050



OPTIONAL PHASING LEGEND

- PHASE 1: ELEVATOR AND STAIR
- PHASE 2: ARCHIVAL STORAGE AND RESTROOMS

1 FIRST FLOOR PLAN (LOWER LEVEL) - TREATMENT OPTION 2

Scale: 1/4" = 1'-0"

NORTH

4 0 4 8

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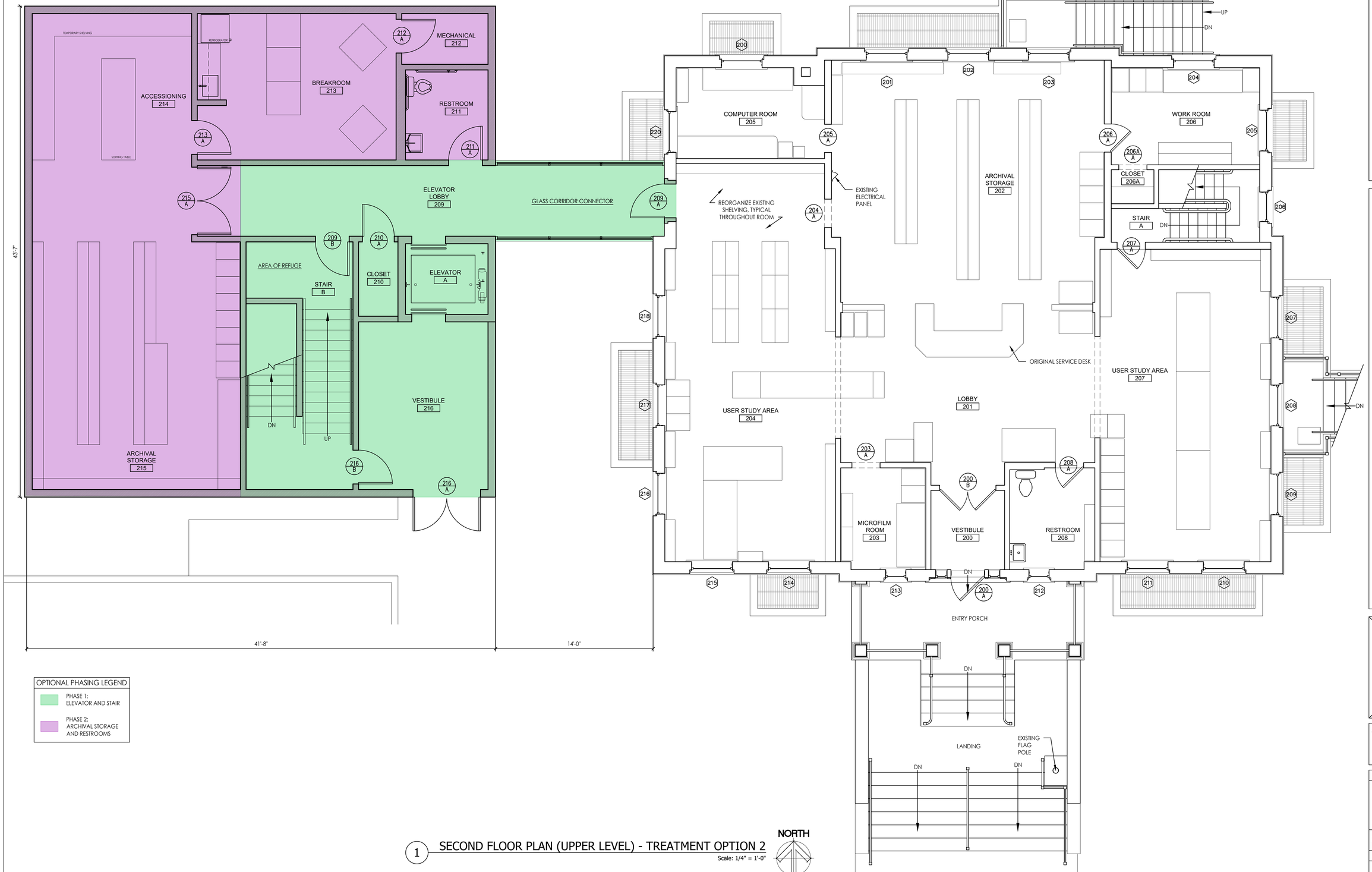
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FIRST FLOOR PLAN
TREATMENT OPTION 2

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A100



OPTIONAL PHASING LEGEND

- PHASE 1: ELEVATOR AND STAIR
- PHASE 2: ARCHIVAL STORAGE AND RESTROOMS

1 SECOND FLOOR PLAN (UPPER LEVEL) - TREATMENT OPTION 2

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SECOND FLOOR
TREATMENT OPTION 2

SHEET NUMBER:

A101



Frank Hughes Memorial Library, view looking northwest. (STRATA 2020)

A ANNUAL MAINTENANCE SCHEDULE

Frank Hughes Memorial Library

Annual Maintenance Schedule

Building Element	Maintenance Task	January	February	March	April	May	June	July	August	September	October	November	December	Notes
General Maintenance														
Snow and Ice Removal	Remove snow and ice, as required.	●	●	●							●	●	●	
Snow and Ice Removal	Rinse snow and ice melt product residue.				●									
Exterior	Remove vines from building.		●		●		●		●		●		●	
Interior	Inspect interior of building for leaks during the first heavy rain of the season at least quarterly.			●			◆			◆			◆	
Site														
Sidewalks and Walkways	Inspect for uneven surfaces, ponding and plant growth between joints.				●									
Site Grading	Check grading at foundation to ensure that water is draining away from the building.			●										
Building Access - South Grand Stair	Inspect for uneven surfaces, ponding and damaged to the concrete stairs and low-height wall.				●									
Building Access - East Stair	Inspect for uneven surfaces, ponding and damaged to the concrete stairs and full-height wall.				●									
Building Access - East Areaway	Clean areaway to remove leaves and debris.		●		●		●		●		●	●	●	
Building Access - North Stair	Inspect for uneven surfaces, ponding and damaged to the concrete stairs and full-height wall.				●									
Building Access - North Areaway	Clean areaway to remove leaves and debris.		●		●		●		●		●	●	●	
Decorative Metal and Pipe Railings	Examine railing connections and inspect for rust. Secure railings as needed. Scrape and paint with a rust inhibiting paint where deterioration occurs.				●									

● Primary Review

◆ Secondary Review

Building Element	Maintenance Task	January	February	March	April	May	June	July	August	September	October	November	December	Notes
Building Exterior														
Concrete Foundation	Inspect exterior and interior concrete foundation for any damage, movement, moisture penetration, cracks, and spalling.				●						●			
Masonry Walls and Details	Inspect masonry brick walls and mortar joints for any damage, movement, moisture penetration, cracking, and spalling. Look for continuous damp areas, staining and efflorescence.				●						●			
Brick Chimney	Inspect for structural stability, movement, cracking, and spalling.				●						●			
Asphalt Roof	Inspect roof areas for loss or damage to the roofing. Inspect for cracked, displaced, broken, or missing shingles.				●						●			Every 5 years by a Roofer
Flat Roofs	Inspect roof areas for damage to the roofing. Inspect condition of flat roof for tears, holes, and standing water.				●						●			Every 5 years by a Roofer
Roof Flashings	Inspect roof flashings for damage and a tight fit.				●									
Gutters	Clean out gutters, and inspect for damage that might have occurred during freeze/thaw cycles. Inspect for holes and fault connections				●						●			Or more frequently as needed, especially during heavy rains
Downspouts	Clean out downspouts, and inspect for damage that might have occurred during freeze/thaw cycles. Inspect for faulty connections				●						●			
Wood Cornice	Examine wood cornice for paint failure. Prep, prime, and paint as needed.				●									
Metal Fascia and Soffit	Examine metal fascia and soffit for paint failure. Prep, prime, and paint as needed.				●									
South Portico Columns and Pilasters	Inspect columns and pilasters for wood rot and paint failure. Prep, prime, and paint, as needed..				●									

● Primary Review

◆ Secondary Review

Building Element	Maintenance Task	January	February	March	April	May	June	July	August	September	October	November	December	Notes
South Portico Entablature	Inspect entablature for wood rot and paint failure. Prep, prime, and paint.				●									
South Portico Decorative Metal Railings	Examine railing connections and inspect for rust. Secure railing as needed. Scrape and paint with a rust inhibiting paint, as needed..				●									
South Portico Balustrade	Inspect south portico balustrade for wood rot and paint failure. Prep, prime, and paint.				●									
Original Wood Windows and Exterior Trim	Inspect windows for broken glass, glazing putty failures, and wood rot. Examine window and trim for paint failure. Prep, prime, and paint as needed.				●						●			
Original Steel Windows	Inspect windows for broken glass or glazing putty failures.				●						●			
Non-Original Windows and Exterior Trim	Inspect windows for broken glass or glazing putty failures. Examine window and trim for paint failure and wood rot. Prep, prime, and paint as needed.				●						●			
Window Wells	Clean window wells to remove leaves and debris. Ensure they are draining.		●		●		●		●		●		●	
Exterior Doors and Trim	Maintain weatherstripping around doors to prevent air infiltration. Examine doors and trim for wood rot and paint failure. Prep, prime, and paint as needed. Inspect hardware for operation door hardware				●						●			Heavily used entry doors may require more frequent assessments
Exterior Louvres	Examine the louvers for paint failure. Prep, prime, and paint, as needed. Inspect the condition of the screen to ensure tat it is intake, replace as necessary.				●									

● Primary Review
◆ Secondary Review

Building Element	Maintenance Task	January	February	March	April	May	June	July	August	September	October	November	December	Notes
Building Interior														
Wood Floors	Inspect for warping, excessive finish wear and damage.											●		
Carpeting	Look for excessive wear, holes, tears, and stains.											●		
Linoleum	Examine for excessive wear, holes, tears, and stains											●		
Concrete Floors	Inspect for cracks, chipping, stains, and paint failure. Prep, prime, and paint, as required.											●		
Wood Baseboards	Inspect for water damage, wood rot, cracking, and damaged.											●		
Linoleum Base	Examine for adhesion, excessive wear, tears, and stains											●		
Cement Base	Inspect for cracks, chipping, stains, and paint failure. Prep, prime, and paint, as required.											●		
Wainscot	Inspect for water damage, wood rot, cracking, and damaged.											●		
Plaster Walls	Inspect for cracks, water stains, and deterioration.											●		
Gypsum Board (Dry Wall) Walls	Inspect for water stains, flaking paint and other damage.											●		
Structural Clay Tile Walls	Inspect for cracks, chipping, and movement.											●		
Plaster Ceilings	Inspect for cracks, water stains, and deterioration.											●		
Decorative Plaster Crown Molding	Inspect for cracks, water stains, and deterioration.											●		
Gypsum Board (Dry Wall) Ceilings	Inspect for water stains, flaking paint and other damage.											●		
Lay-in Ceiling	Examine for stains, damage, missing or loose tiles.											●		
Interior Doors, Frames, and Trim	Examine doors and trim for damage and finish failure. Refinish, as needed. Inspect hardware for operation.											●		
Interior Window Trim	Examine window and trim for finish failure and wood rot. Refinish, as needed.											●		

● Primary Review

◆ Secondary Review

Building Element	Maintenance Task	January	February	March	April	May	June	July	August	September	October	November	December	Notes
Original Window Blinds	Check for damage and excessive wear and deterioration. Secure connections.											●		
Wood Stairs	Examine alignment. Look for excessive wear and deterioration.											●		
Wood Railing	Examine alignment. Look for excessive wear and deterioration.											●		
Service Deck and Railing	Examine for damage, finish failure, and operational hardware.											●		
Bookshelves	Examine for damage, finish failure, and operational hardware.											●		
Mechanical														
Furnaces	Check for accumulation on filters and replace if needed.	●	●	●	●	●	●	●	●	●	●	●	●	
Furnaces	Check fan belt tension, wear, and alignment. Replace if necessary to ensure proper operation.						●						●	
Furnaces	Check for proper operation of cooling or heating coil. Clean, restore or replace as required.						●						●	
Furnaces	Check refrigerant system pressures and/or temperatures. If outside of recommended levels, find cause, repair and adjust refrigerant to achieve optimal operating levels.												●	
Furnaces	Lubricate field serviceable bearings.												●	
Furnaces	Check drain pan, drain line and coil for biological growth. Clean as needed.												●	
Furnaces	Visually inspect areas of moisture accumulation for biological growth. If present, clean or disinfect as needed.												●	
Furnaces	Visual inspect exposed ductwork and external piping for insulation and vapor barrier for integrity. Correct as needed.												●	
Ductwork	Visually inspect grilles, registers and diffusers for dirt accumulation. Clean as needed to remove dirt build up.						●						●	

● Primary Review

◆ Secondary Review

Building Element	Maintenance Task	January	February	March	April	May	June	July	August	September	October	November	December	Notes
Ductwork	Check for proper damper operation. Repair, replace or adjust as needed.												●	
Ductwork	Visually inspect areas of moisture accumulation for biological growth. If present, clean or disinfect as needed.												●	
Condensing Units	Check fan belt tension. Check for belt wear and proper alignment. Replace if necessary to ensure proper operation.						●						●	
Condensing Units	Check fan blades for balance and particulate buildup. Clean, repair or replace as needed to ensure proper operation.												●	
Condensing Units	Inspect air-cooled condenser surfaces. Repair or clean as needed.												●	
Plumbing														
Sump Pumps	Check pumps for proper operation.				●						●			
Lavatory	Check fixture for proper operation, clean aerator												●	
Water Heater	Verify proper operation of water heater and confirm outlet temperature is at proper setpoint.						●						●	
Water/Waste Piping	Inspect domestic water and waste piping for corrosion via scoping												●	Check once every five years after initial testing.
Water Closet/Urinal	Verify proper operation of flush valve												●	
Electrical														
Outlet test for continuity and grounding													●	
Visual inspection of lighting fixtures													●	
Visual test of local occupancy sensors													●	
Test of light switches													●	
Licensed Electricians test panel lugs													●	

● Primary Review

◆ Secondary Review

Frank Hughes Memorial Library

Maintenance Schedule

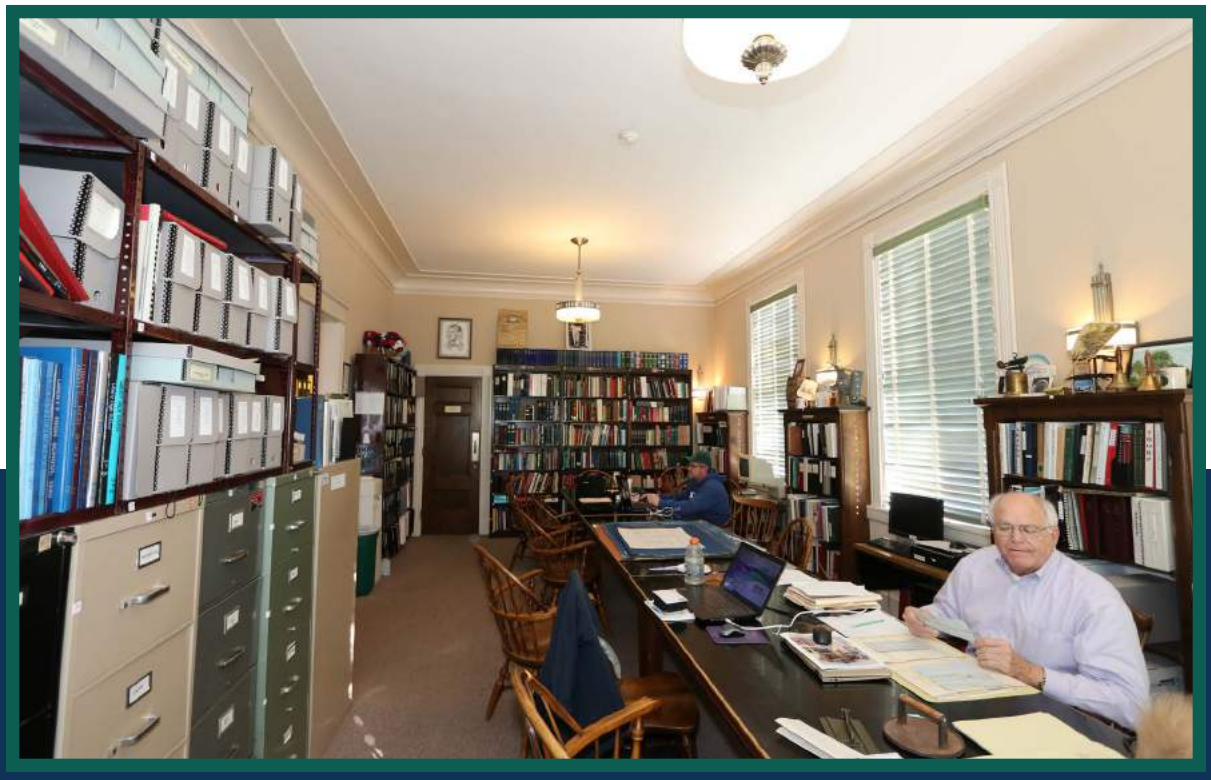
	Completed By / Date	Photos Taken	Maintenance Required	Notes
Exterior				
Concrete Foundation	AEM / 4-5-2020	x	x	No issues found.
Brick Masonry Walls	AEM / 4-5-2020	x	x	Brick cracked and spalling on south elevation of the south portico. Biological growth on the north elevation.
Brick Chimney	AEM / 4-5-2020			Open mortar joints on the north elevation. Repointing is required.
Limestone Details	AEM / 4-5-2020			Biological staining on the water table.
Mortar	AEM / 4-5-2020			There are several open mortar joints on the north elevation by Door 100/A.
Asphalt Roof	AEM / 4-5-2020			5 shingles are damaged and 1 is displaced.
Flat Roofs	AEM / 4-5-2020		x	The is a hole in the northwest corner, which is needed to be patched.
Roof Flashing	AEM / 4-5-2020	x	x	No issues found.

SAMPLE

Frank Hughes Memorial Library

Maintenance Log

	Completed By / Date	Photos Taken	Maintenance Required	Notes



Frank Hughes Memorial Library, view looking northeast in the User Study Area 207. (STRATA 2020)

B REFERENCES AND RESOURCES

Appendix B | References and Resorces

The Frank Hughes Memorial Library is listed on the National Register for Historic Places. All proposed maintenance and rehabilitation projects should be done properly so that the original materials are not damaged or removed. The following are some of the references and resources that help historic building owners recognize and resolve common issues.

National Park Service: Technical Preservation Briefs

National Park Service: Technical Preservation Briefs provide guidance on preserving, rehabilitating, and restoring historic buildings.

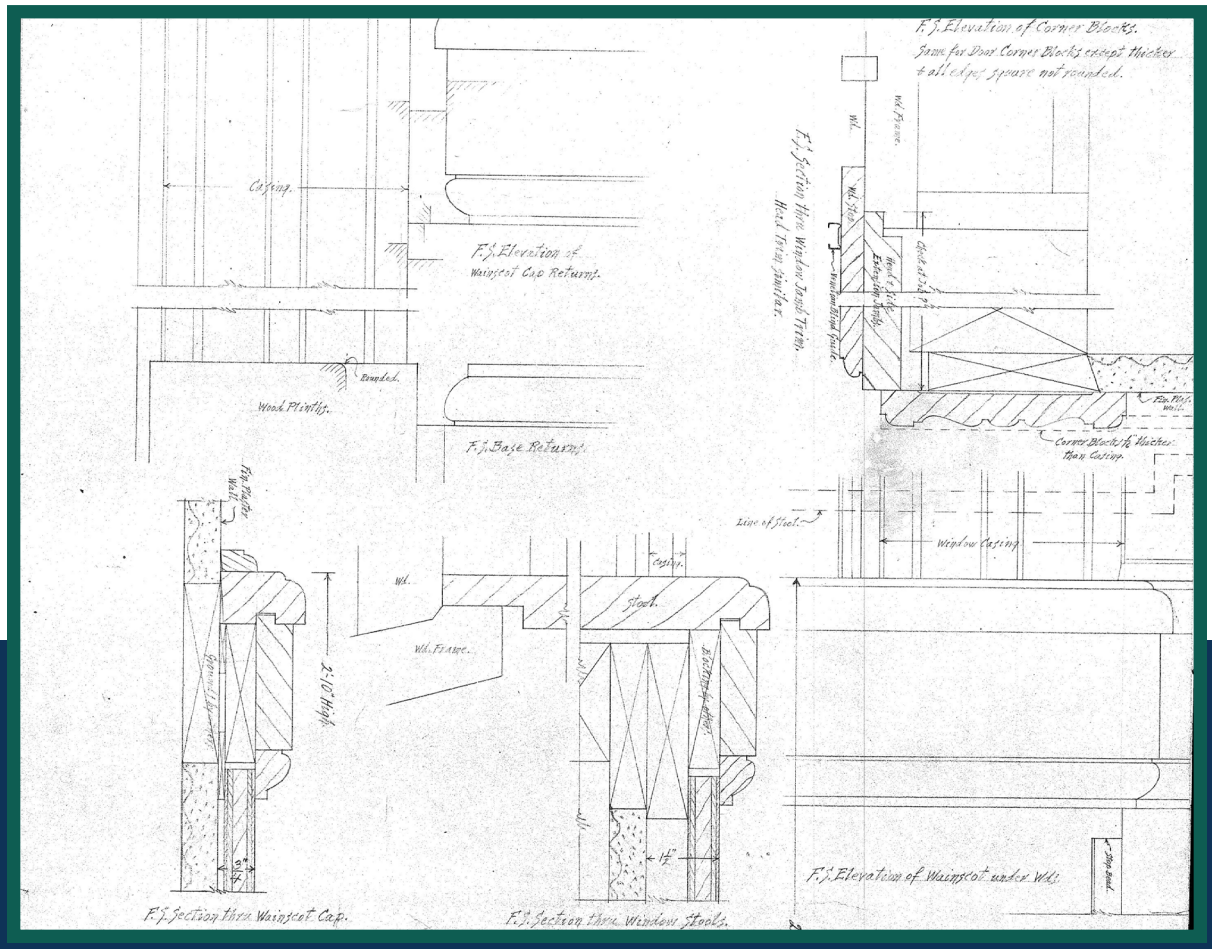
1. Cleaning and Water-Repellent Treatments for Historic Masonry Buildings
2. Repointing Mortar Joints in Historic Masonry Buildings
3. Improving Energy Efficiency in Historic Buildings
4. Roofing for Historic Buildings
5. The Preservation of Historic Adobe Buildings
6. Dangers of Abrasive Cleaning to Historic Buildings
7. The Preservation of Historic Glazed Architectural Terra-Cotta
8. Aluminum and Vinyl Siding on Historic Buildings: The Appropriateness of Substitute Materials for Resurfacing Historic Wood Frame Buildings
9. The Repair of Historic Wooden Windows
10. Exterior Paint Problems on Historic Woodwork
11. Rehabilitating Historic Storefronts
12. The Preservation of Historic Pigmented Structural Glass (Vitrolite and Carrara Glass)
13. The Repair and Thermal Upgrading of Historic Steel Windows
14. New Exterior Additions to Historic Buildings: Preservation Concerns
15. Preservation of Historic Concrete
16. The Use of Substitute Materials on Historic Building Exteriors
17. Architectural Character – Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character
18. Rehabilitating Interiors in Historic Buildings – Identifying Character-Defining Elements
19. The Repair and Replacement of Historic Wooden Shingle Roofs
20. The Preservation of Historic Barns
21. Repairing Historic Flat Plaster—Walls and Ceilings
22. The Preservation and Repair of Historic Stucco

23. Preserving Historic Ornamental Plaster
24. Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches
25. The Preservation of Historic Signs
26. The Preservation and Repair of Historic Log Buildings
27. The Maintenance and Repair of Architectural Cast Iron
28. Painting Historic Interiors
29. The Repair, Replacement, and Maintenance of Historic Slate Roofs
30. The Preservation and Repair of Historic Clay Tile Roofs
31. Mothballing Historic Buildings
32. Making Historic Properties Accessible
33. The Preservation and Repair of Historic Stained and Leaded Glass
34. Applied Decoration for Historic Interiors: Preserving Historic Composition Ornament
35. Understanding Old Buildings: The Process of Architectural Investigation
36. Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes
37. Appropriate Methods of Reducing Lead-Paint Hazards in Historic Housing
38. Removing Graffiti from Historic Masonry
39. Holding the Line: Controlling Unwanted Moisture in Historic Buildings
40. Preserving Historic Ceramic Tile Floors
41. The Seismic Retrofit of Historic Buildings: Keeping Preservation in the Forefront
42. The Maintenance, Repair and Replacement of Historic Cast Stone
43. The Preparation and Use of Historic Structure Reports
44. The Use of Awnings on Historic Buildings: Repair, Replacement and New Design
45. Preserving Historic Wooden Porches
46. The Preservation and Reuse of Historic Gas Stations
47. Maintaining the Exterior of Small and Medium Size Historic Buildings
48. Preserving Grave Markers in Historic Cemeteries
49. Historic Decorative Metal Ceilings and Walls: Use, Repair, and Replacement
50. Lightning Protection for Historic Buildings

National Park Service Preservation Technical Notes

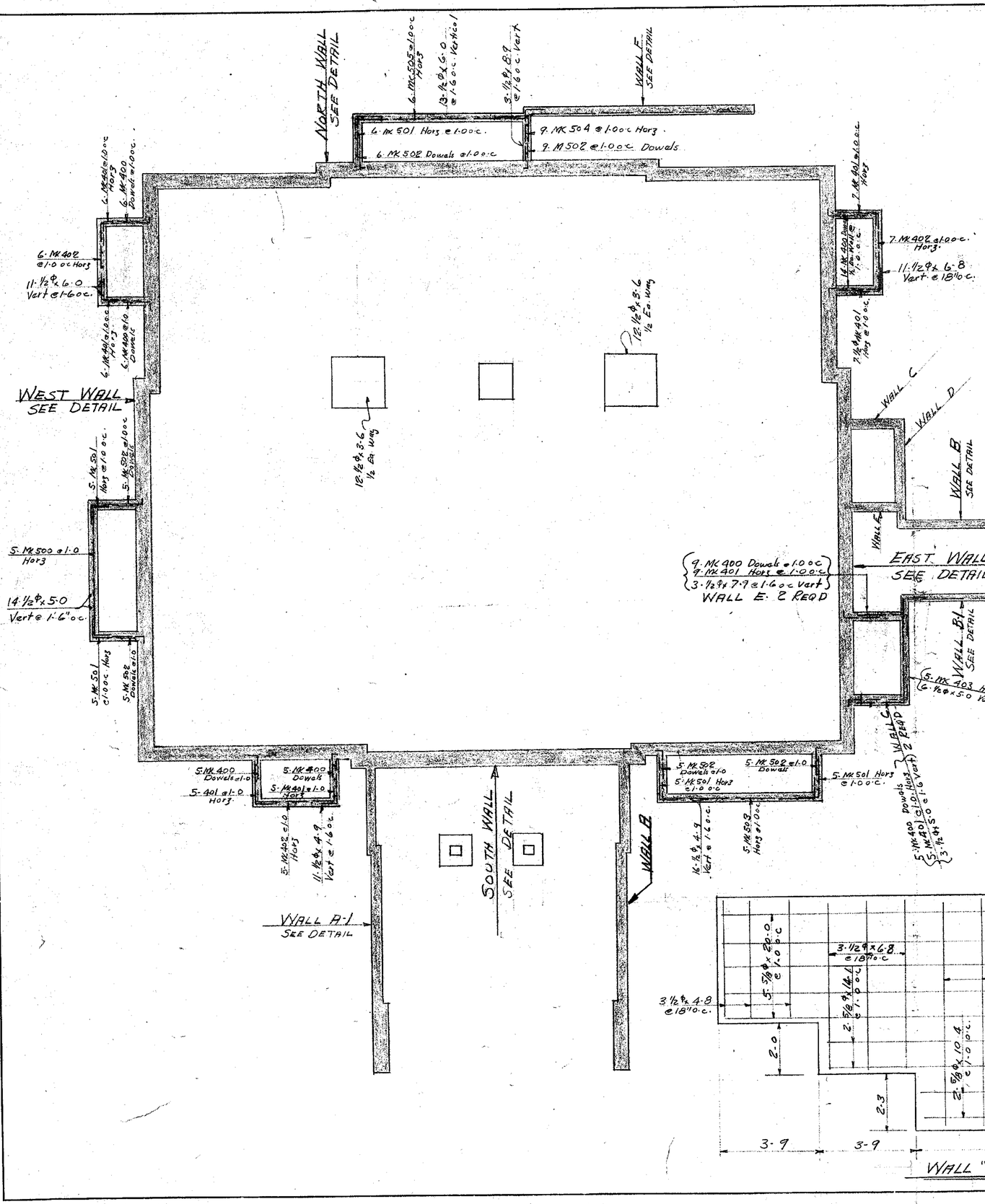
The Preservation Technical Notes provide practical information on tradition practices and innovative techniques for successfully maintaining and preserving cultural resources. For specific information regarding Preservation Technical Notes briefs visit: https://www.nps.gov/tps/how-to-preserve/tech-notes.htm

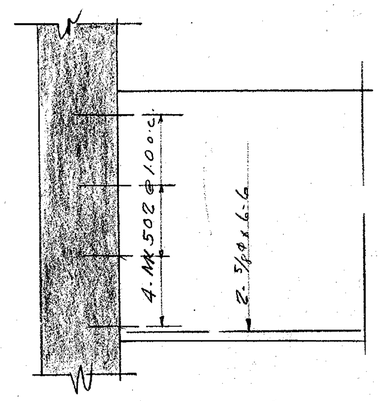
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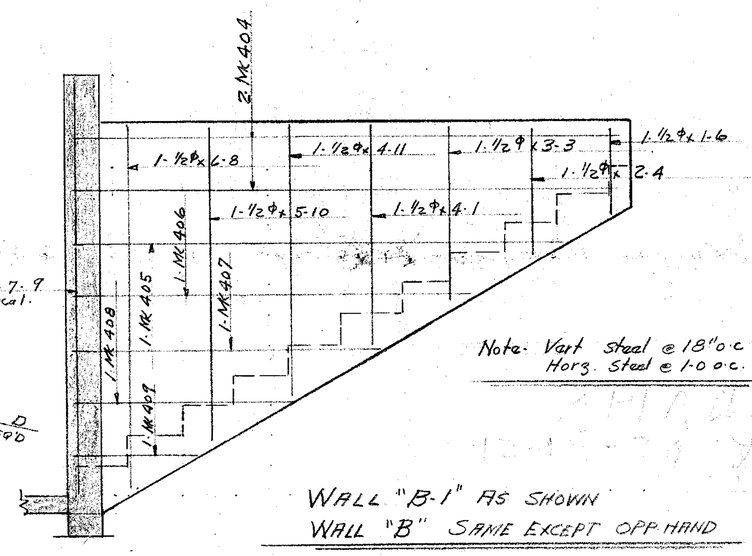
Frank Hughes Memorial Library, wainscot detail, 1939 (Clay County Archives)

C ORIGINAL SHOP DRAWINGS



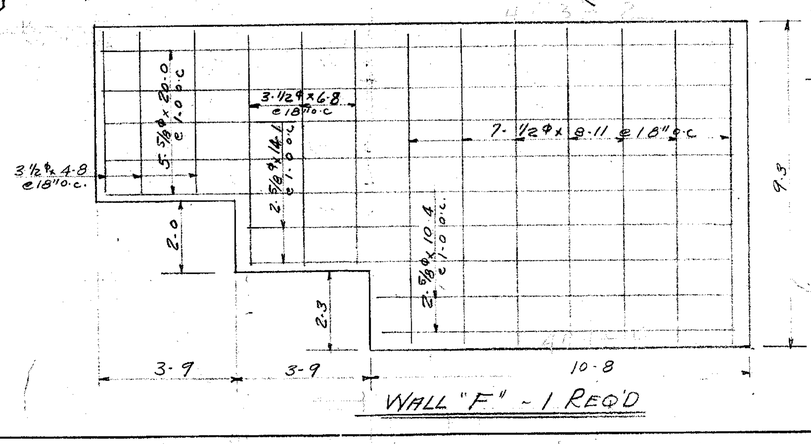


WALL "A-1" SHOWN
WALL "A" SAME EXCEPT OPP HAND



WALL "B-1" AS SHOWN
WALL "B" SAME EXCEPT OPP HAND

6-5/8Φx3-6 Dowels Rag'd @ Const Joint



WALL "F" - 1 REQ'D

NOTE - ALL MARKED BARS THIS DRWG TO HAVE PREFIX "A"

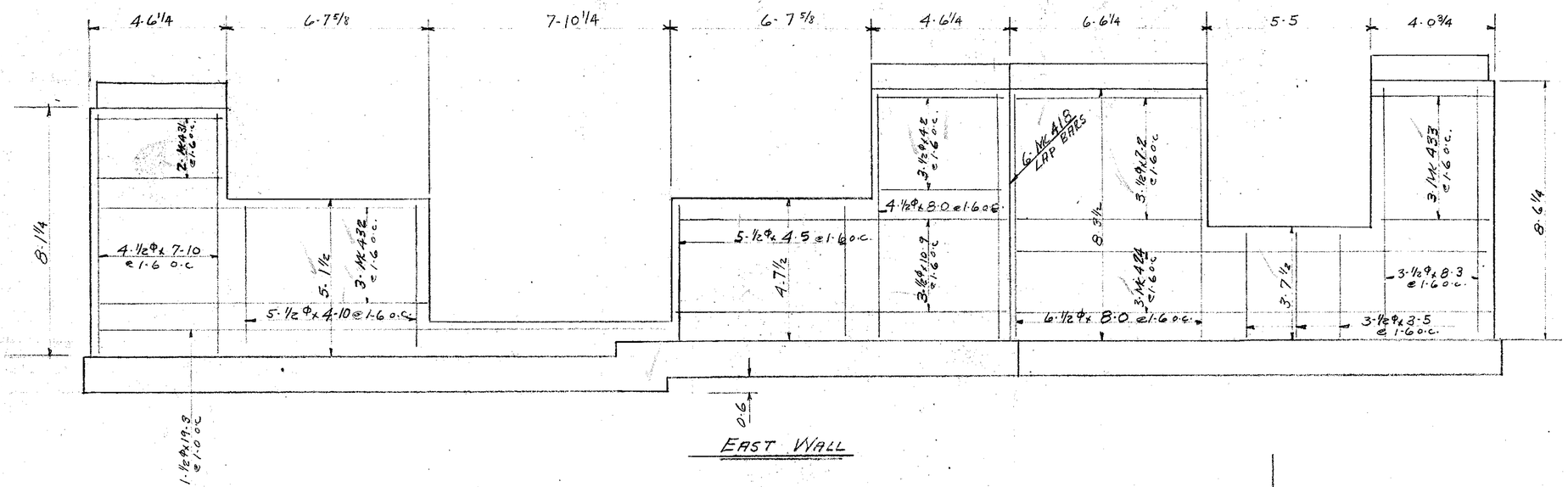
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ISSUANCE OF THIS DRAWING FOR APPROVAL DOES NOT CONSTITUTE ACCEPTANCE OF CUSTOMER'S ORDER BY THE TRUSCON STEEL COMPANY.

THIS DRAWING TO BE USED IN PLACING MATERIALS SOLD UNDER THIS CONTRACT ONLY.

CONTRACTOR TO CHECK ALL DIMENSIONS AT JOB AS TRUSCON STEEL COMPANY ASSUMES NO RESPONSIBILITY FOR GENERAL BUILDING DIMENSIONS.

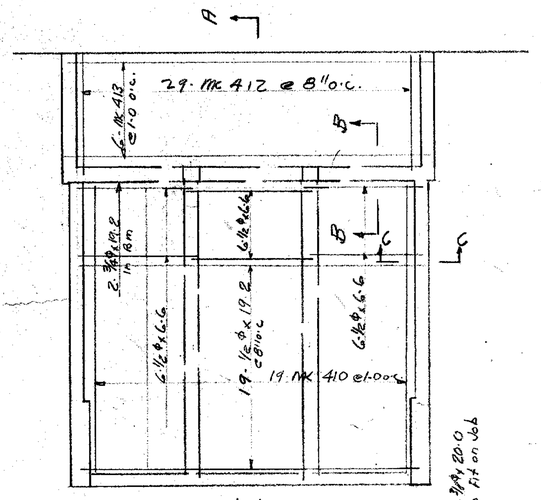
CONTRACT No. KC-5635	TRUSCON STEEL PRODUCTS
CUSTOMER'S No.	FOUNDATION WALLS — REVISED 12-14-39
SCHEDULE No.	FRANK HUGHES MEMORIAL LIBRARY LIBERTY MO — DRAWN 12-8-39
	WIGHT & WIGHT ~ ARCHITECT T. PARK HANSON ~ CONTR. — CHECKED
	TRUSCON STEEL COMPANY YOUNGSTOWN, OHIO — DRAWING NO. 5635-A

Form 1510-3M-8-39

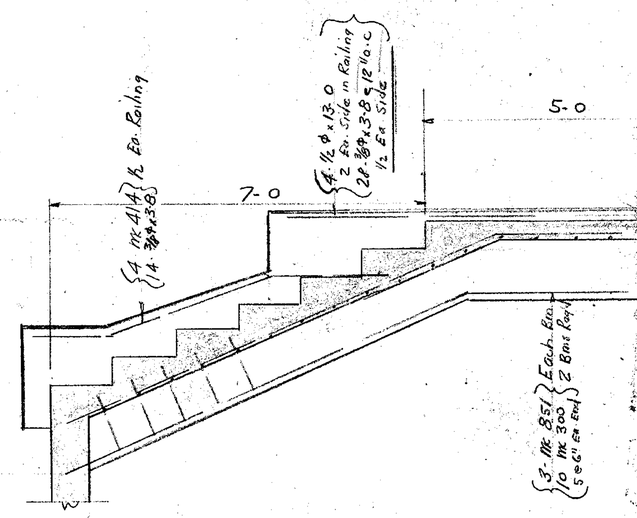


EAST WALL

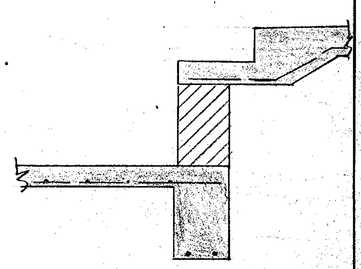
APPROVED
12-15-39



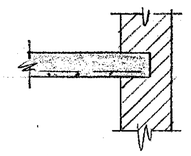
PLAN- FRONT ENTRANCE



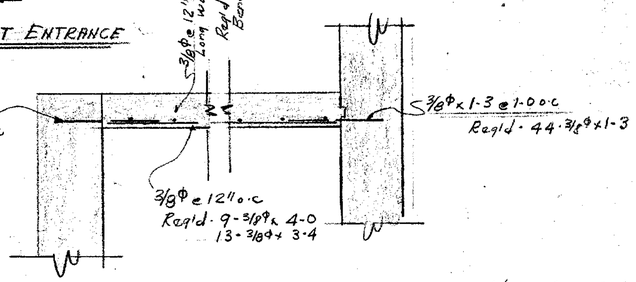
SECTION A-A



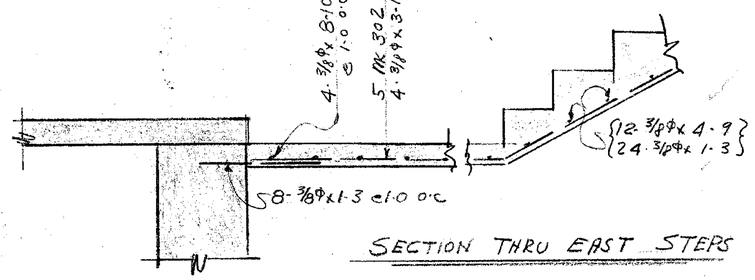
SECTION B-B



SECTION C-C



SECTION THRU STAIRS- NORTH WALL



SECTION THRU EAST STEPS

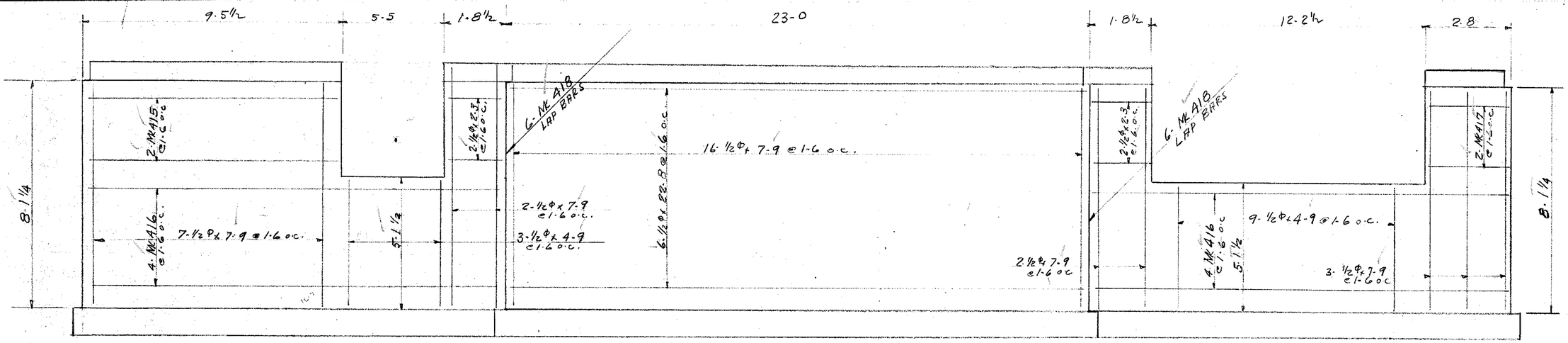
GENERAL NOTE:

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THIS DRAWING TO BE USED IN PLACING MATERIALS SOLD UNDER THIS CONTRACT ONLY.

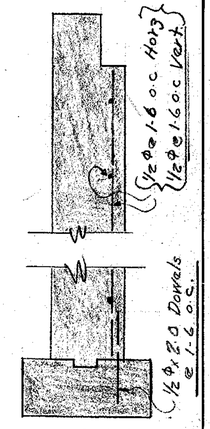
CONTRACTOR TO CHECK ALL DIMENSIONS AT JOB AS TRUSCON STEEL COMPANY ASSUMES NO RESPONSIBILITY FOR GENERAL BUILDING DIMENSIONS.

CONTRACT No. KC-5635	**TRUSCON STEEL PRODUCTS**
CUSTOMER'S No.	WALL & STEP DETAILS FRANK HUGHES MEMORIAL LIBRARY LIBERTY MISSOURI WIGHT & WIGHT ARCHTS T. PARKER HANSON- CONTR.
SCHEDULE No.	REVISED 12-14-39 DRAWN 12-11-39 CHECKED
TRUSCON STEEL COMPANY YOUNGSTOWN, OHIO	DRAWING NO. 5635-A2 Form 1518-3M 8-39

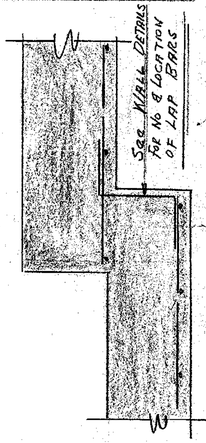


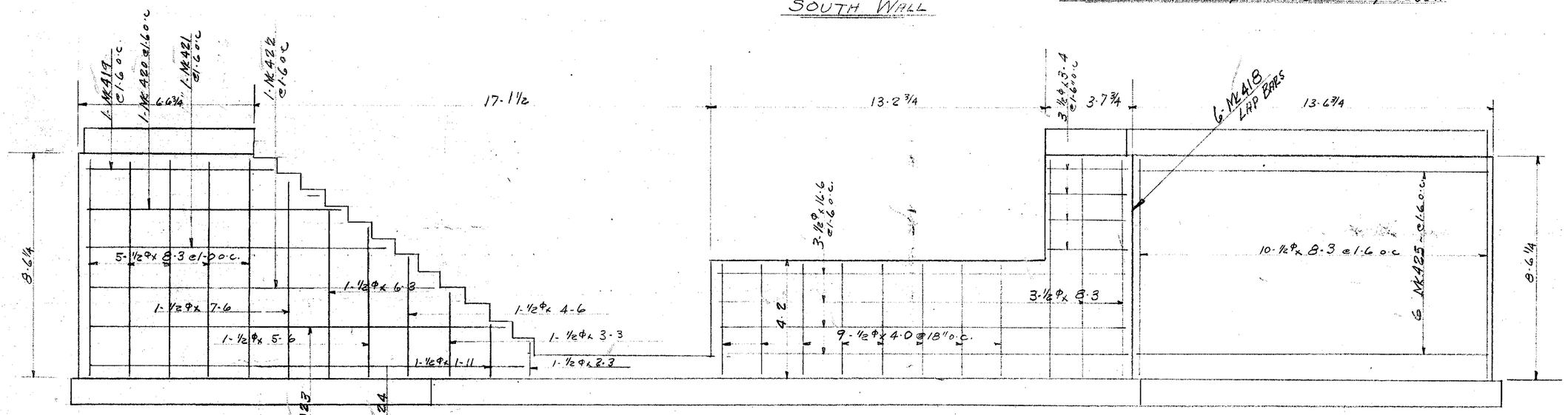
SOUTH WALL

For Reinf in Area Way walls. See Drwg 5635-A



TYPICAL WALL DETAIL

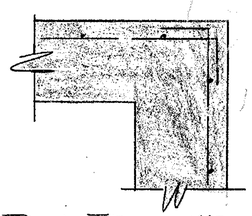




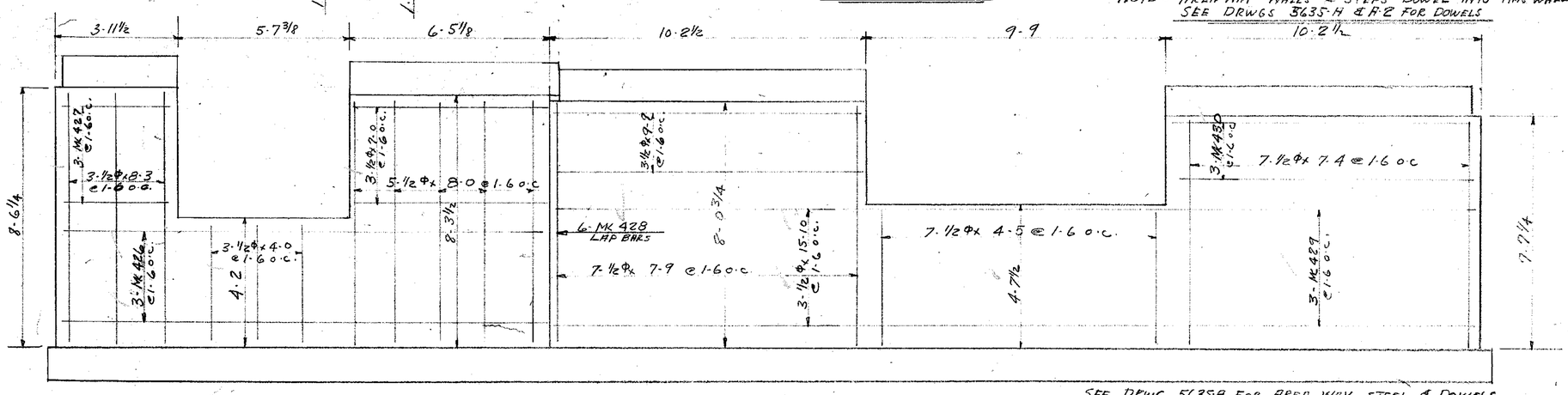
NORTH WALL

FOR REINFORCING IN AREA WAY WALLS - SEE DRWG 5635-A

NOTE- AREA WAY WALLS & STEPS DOWEL INTO THIS WALL SEE DRWGS 5635-H & A-2 FOR DOWELS



PLAN- TYPICAL WALL OFFSET



WEST WALL

SEE DRWG 5635-A FOR AREA WAY STEEL & DOWELS

PLAN - TYPICAL WALL CORNER

GENERAL NOTE:

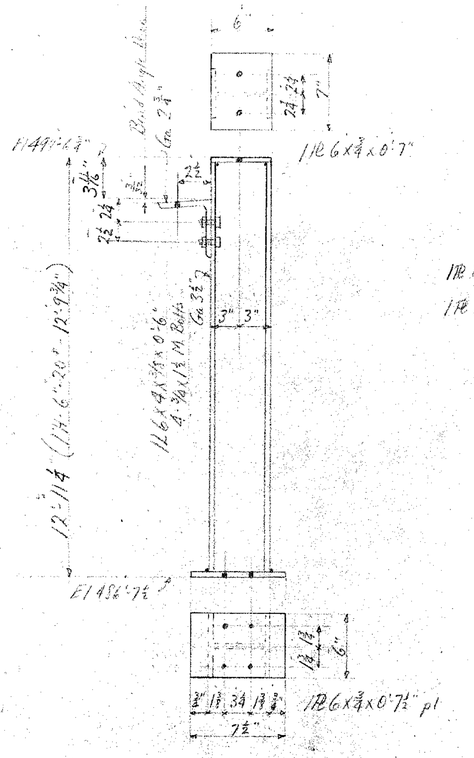
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THIS DRAWING TO BE USED IN PLACING MATERIALS SOLD UNDER THIS CONTRACT ONLY.

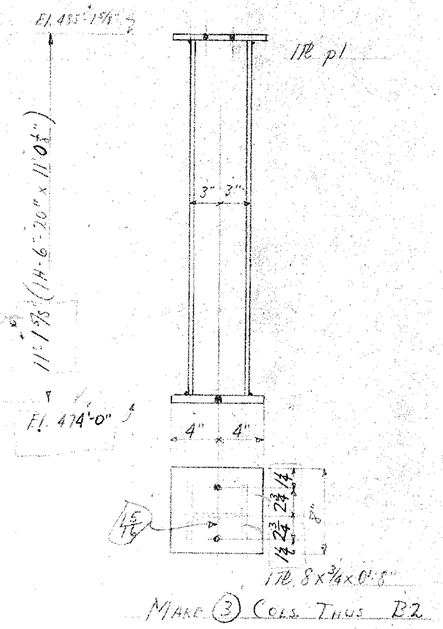
CONTRACTOR TO CHECK ALL DIMENSIONS AT JOB AS TRUSCON STEEL COMPANY ASSUMES NO RESPONSIBILITY FOR GENERAL BUILDING DIMENSIONS.

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CUSTOMER'S No.	WALL DETAILS FRANK HUGHES MEMORIAL LIBRARY LIBERTY- MO	DRAWN 12-11-39
SCHEDULE No.	WIGHT & WIGHT - ARCH'TS T. PARK HANSON - CONT'R	CHECKED
	TRUSCON STEEL COMPANY YOUNGSTOWN, OHIO	DRAWING NO. 5635-A1

Form 1518-3SE-8-39

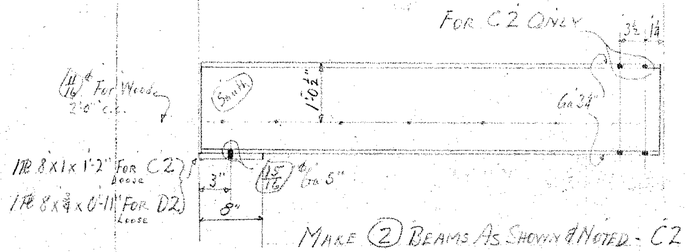


MAKE ② COLS THUS "A2"



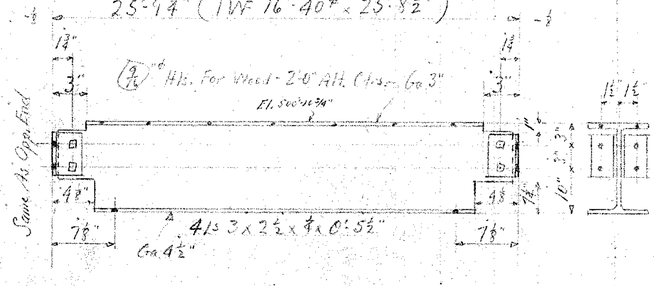
MAKE ③ COLS THUS B2

29'-5¼" (1 WF 15'-64#-29'-5¼") c to c
29'-5¼" (1 WF 15'-47#-29'-5¼") c to c
For C2
For D2



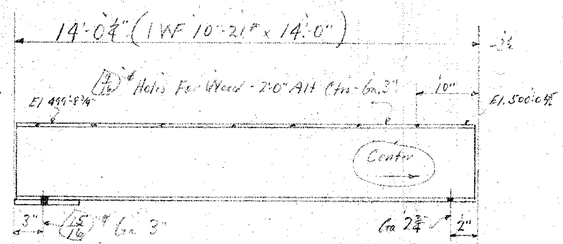
MAKE ② BEAMS AS SHOWN & NOTED - C2
MAKE ① BEAM do do - D2

25'-9¼" (1 WF 16"-40#-25'-8½")



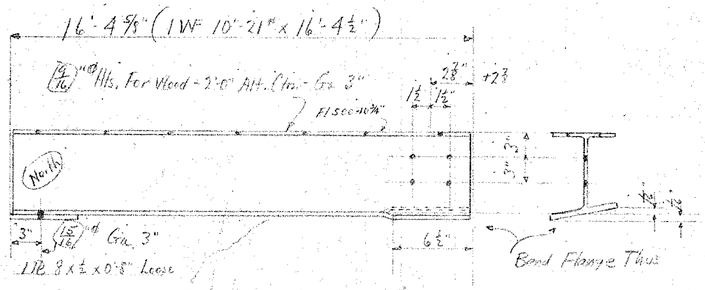
MAKE ① BEAM THUS - E2

14'-0¼" (1 WF 10"-21# x 14'-0")



MAKE ② BEAMS THUS - F2

16'-4⅝" (1 WF 10"-21# x 16'-4½")



MAKE ① BEAM THUS - MK. G1R
MAKE ① BEAM REV. - MK. G1L

All Holes 13/16" ø Unless Noted
All Bolts ¾" ø do do

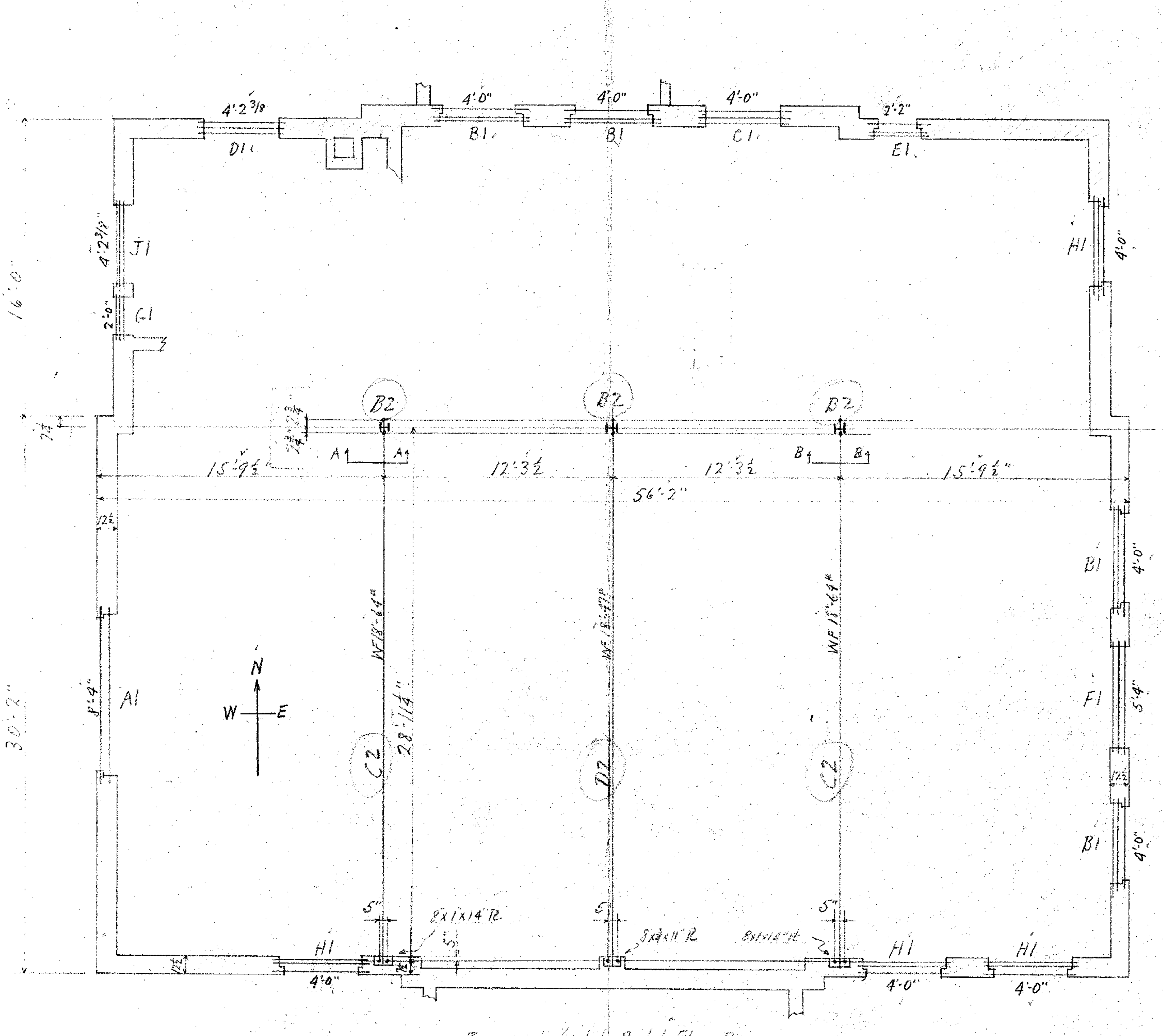
Paint - 1 Shop Coat Red Lead

WEATHER BARS

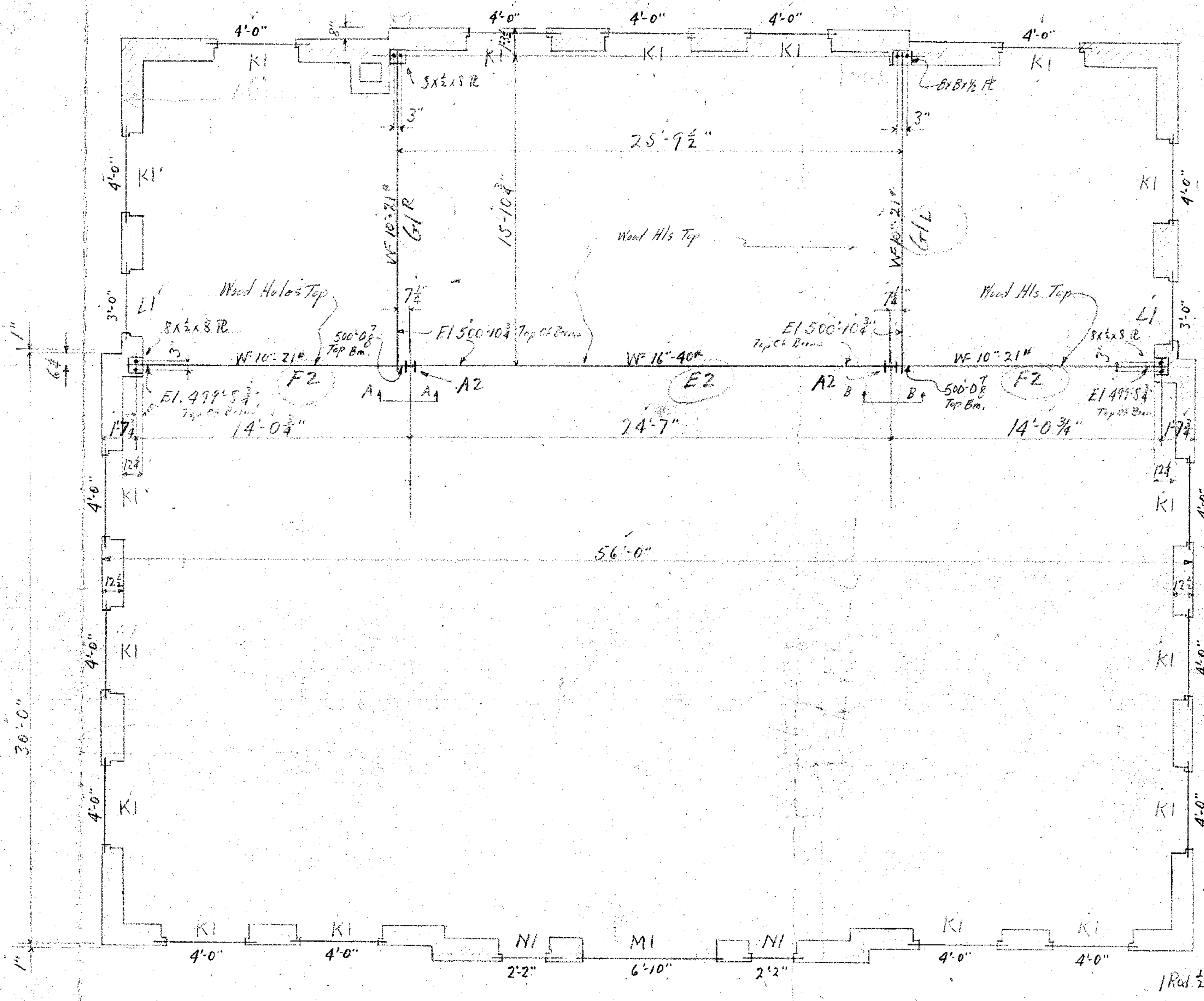
3 Bars	1⅜ x ⅜ x 2'-3"	(For 2'-2" Brick Opening)
2 Bars	do x 3'-1"	(" 3'-0" " ")
25 Bars	do x 4'-1"	(" 4'-0" " ")
2 Bars	do x 4'-1"	(For Double Windows)

DETAILS OF BEAMS & COLUMNS
FRANK HUGHES MEMORIAL LIBRARY - LIBERTY, Mo.
ARCHITECT WIGHT & WIGHT
CONTRACTOR COSTELLO LUMBER CO.
BUILDERS STEEL CO. NORTH K[illegible]
DATE RB 12-14-36 CHKD.
ORDER NO. 9069 SHEET 2 OF

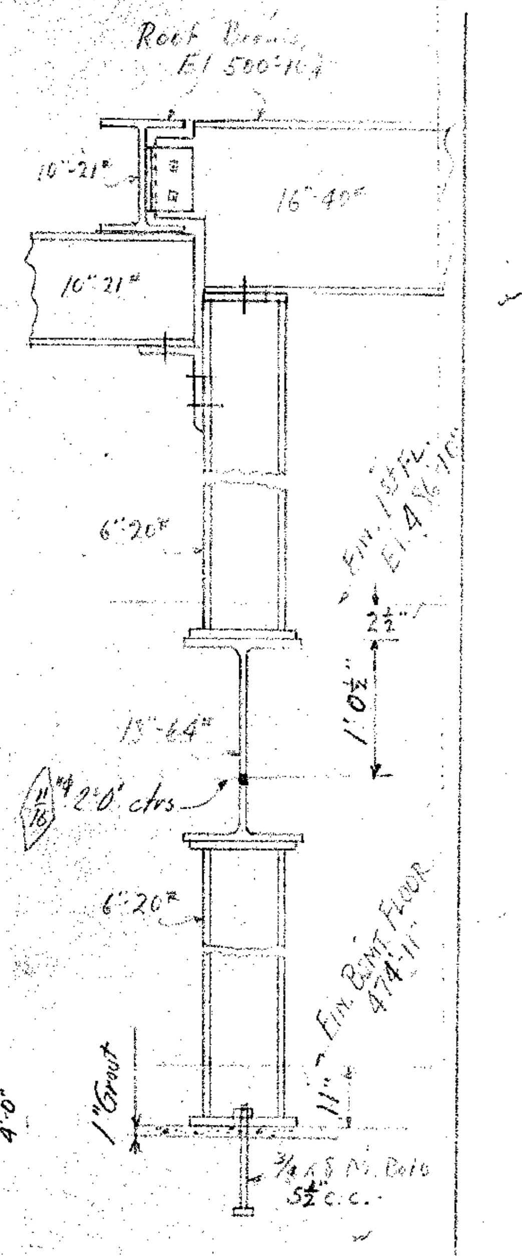
Rev. 12-22-37



Basement Lintels & 1st Floor Beams



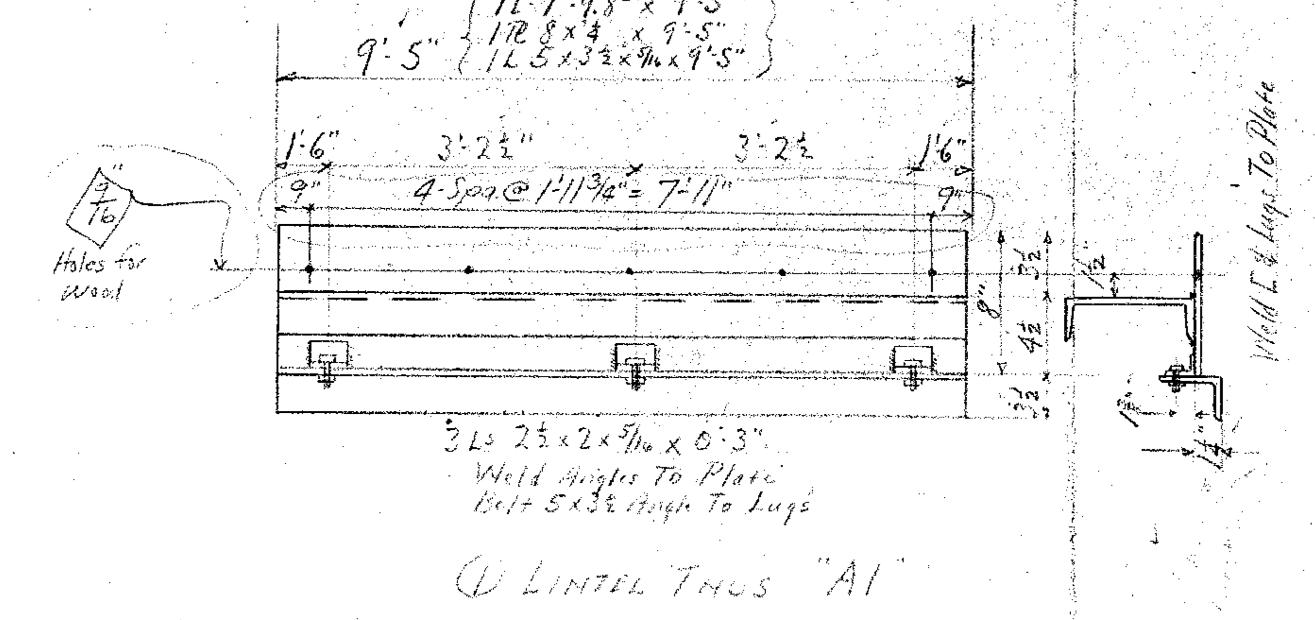
1st Floor Lintels and Roof Beams



Elev. "AA"
Elev "BB" Opp Hand

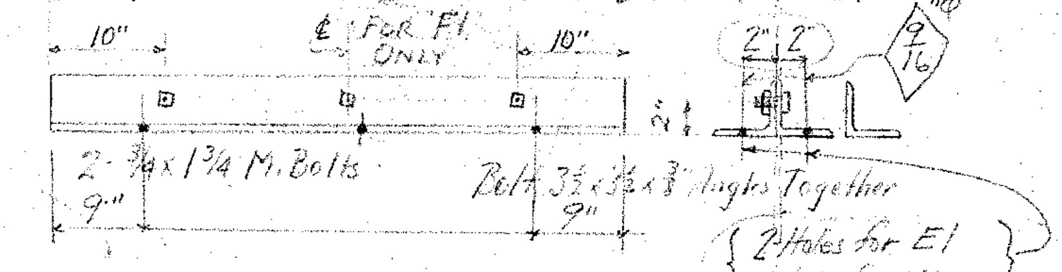


(32) Joist Anchors



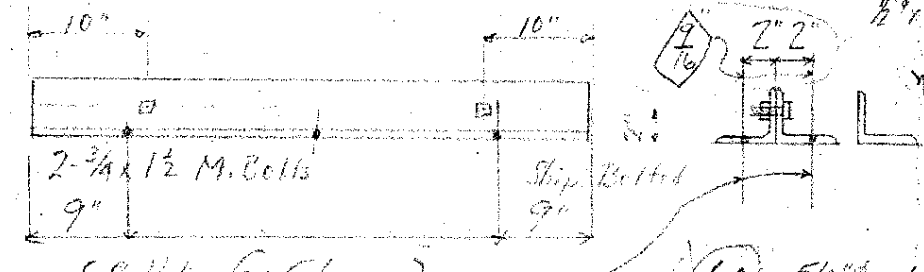
(1) Lintel Thus "A1"

- 5'1" (1L 3½ x 3½ x ¼ x 5'1" / 2L 3½ x 3½ x ⅜ x 5'1") 4 Reqd - Mk B1
- 4'9" (do 4'9") 1 Reqd - Mk C1
- 4'11½" (do 4'11½") 1 Reqd - Mk D1
- 3'3" (do 3'3") 1 Reqd - Mk E1
- 6'1" (do 6'1") 1 Reqd - Mk F1

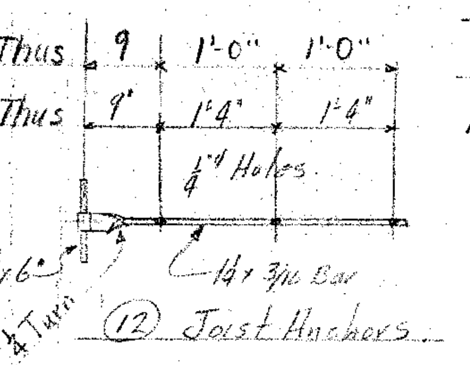


{2-Holes for E1
3-Holes for Others.}

- 2'9" (3Ls 3½ x 3½ x ¼ x 2'9") 1 Reqd - Mk G1
- 5'1" (do 5'1") 4 Reqd - Mk H1
- 4'11½" (do 4'11½") 1 Reqd - Mk J1



{2-Holes for G1
3-Holes for Others.}



(12) Joist Anchors

2nd Floor Lintels

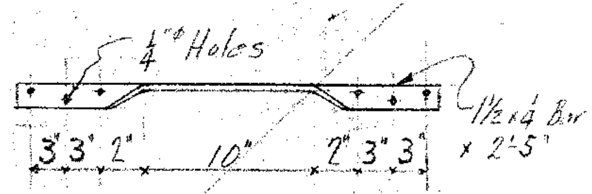
- 17 Ls - 3½ x 3½ x ¼ x 4'9" - Mk K1
- 2 Ls - do x 3'9" - Mk L1
- 1 L - 5 x 3½ x 5/16 x 7'0" Mk M1
- 2 Ls - 3½ x 3½ x ¼ x 2'11" Mk N1

Plain

2 Ls 3 x 3 x ¼ x 3'9" - Mk "Gable"

Anchor Bolts

6 - ¾x 8 M. Bolts (Col. Base)
14 - ¾ x 12 do (Beam Anchors)



(27) Joist Ties Thus.

All Holes (13/16) Unless Noted
All Bolts ¾" do do

Paint - 1 Shop Coat Red Lead
Contact Surfaces 2 Coats [illegible]

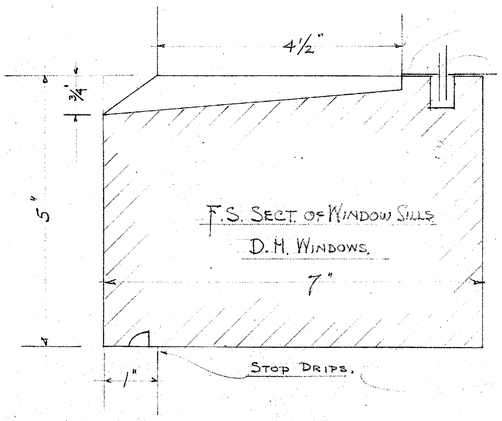
- (60) 5/8"⌀ x 17" Carriage Bolts. (Wall Plate)
- (45) 5/8 x 8" M Bolts. (Wood to 18" WF)
- (60) 7/16"⌀ x 10½ Carriage Bolts, Partitions to Walls.
- (1) 10" x 12" C.I. Cleanout Door.
- (65) ½ x 3 M. Bolts (Wood to Steel)
- (12) ¾ x 1½ do (Conn. Bolts)
- (8) ¾ x 2 do (do)
- (22) ¾ x 2½ do (do)

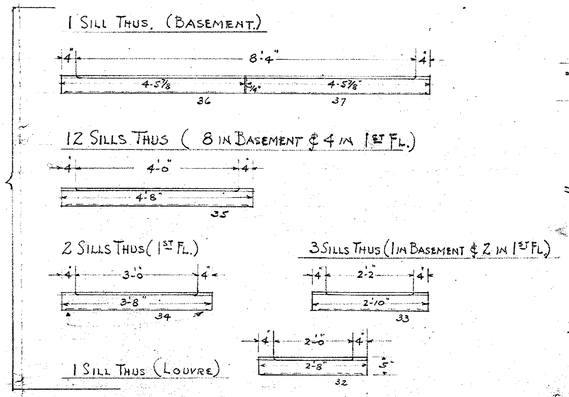
90-M. Bolts ½ x 2½" Wood [illegible]

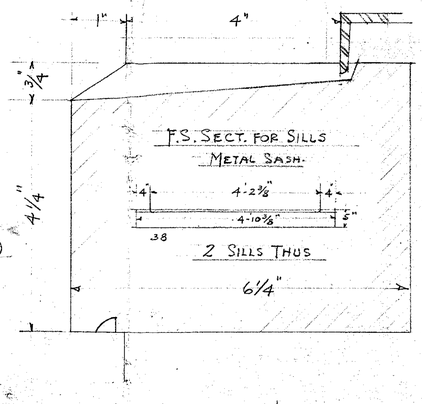
Anchor Bolts & Lintels
Frank Hughes Memorial Library [illegible]
Wight & [illegible]
Costello [illegible]
Order No. 9069 Sheet 1

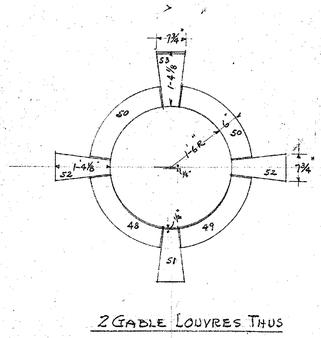
Rev. 12-19-39
Rev. 12-26-39
Rev. 1-8-40

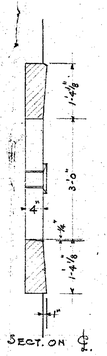
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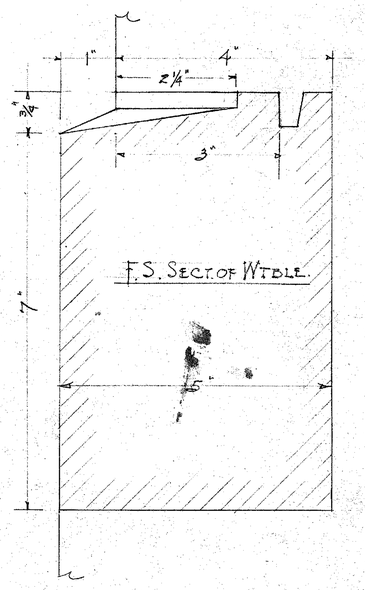


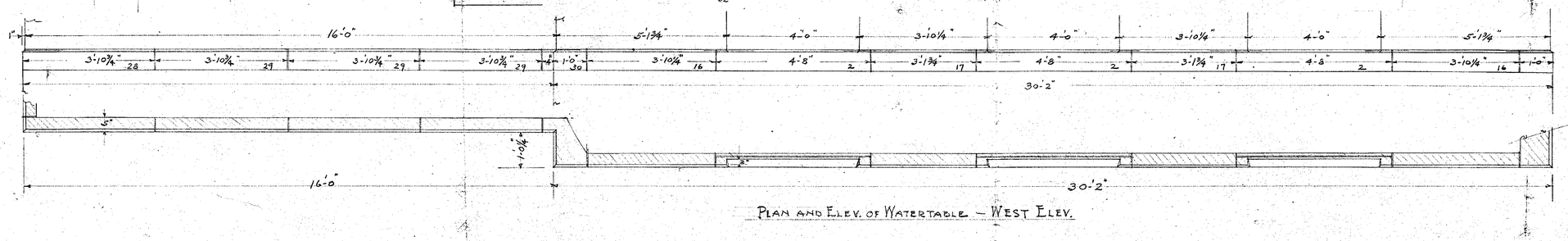




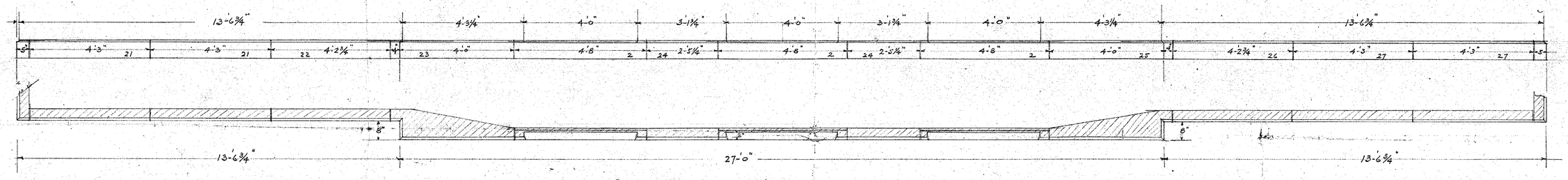




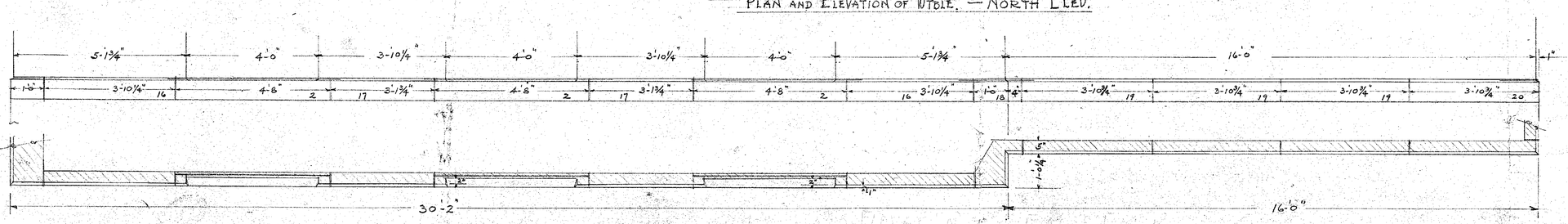


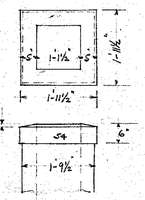


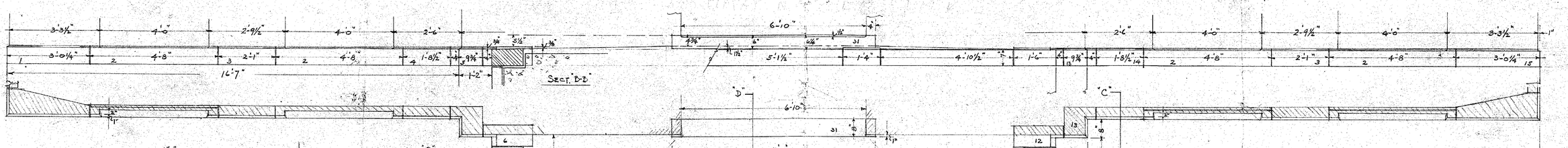
PLAN AND ELEV. OF WATERTABLE — WEST ELEV.

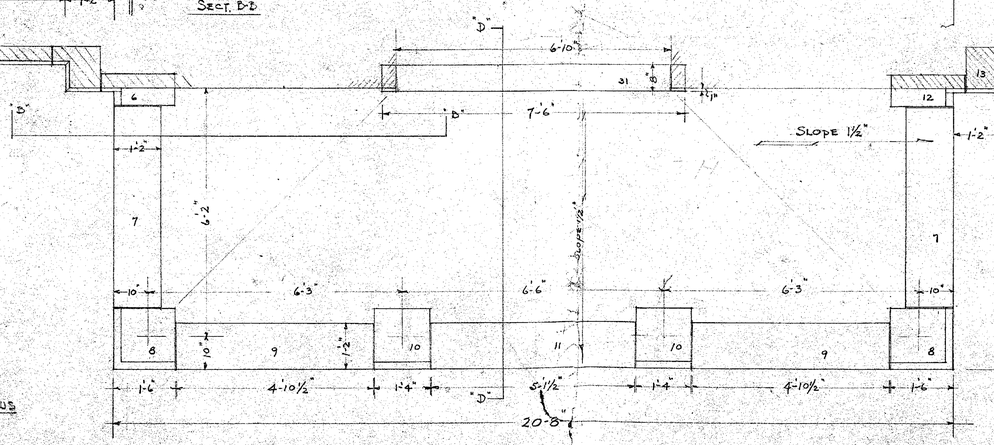


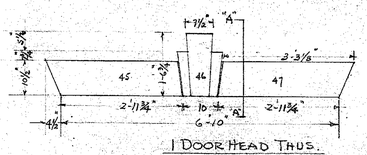
PLAN AND ELEVATION OF WTBLE. — NORTH ELEV.

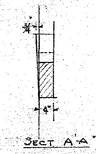


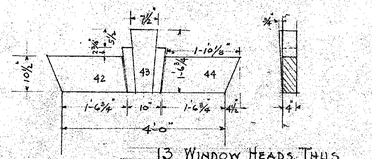


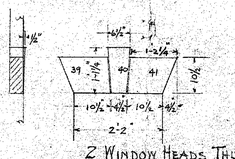


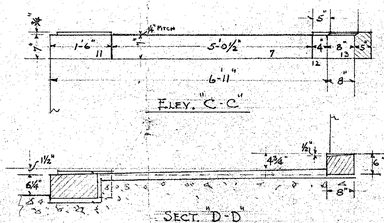














Rec. 12/19/29

ORDER 563	DATE DEC 16 1929
FRANK HUGHES MEMORIAL LIBRARY	
LIBERTY, MISSOURI	
FOR	
PARK HENSON, GEN. CONTR.	
WIGHT & WIGHT, ARCHITECTS	
FROM	
A. SUTERMEISTER STONE CO. Kansas City, Mo.	
SELECT BUFF INDIANA	DRAWING 1

F.S. KEY OVER 4'-0" OPG.

4'-0" OPG.

JOINT.

F.S. KEY SMALL OPGS.

2'-2" OPG.

JOINT.

F.S. KEY FOR CIRCLE WINDOW

1'-6" R

4½"

JT.

F.S. KEY OVER ENTR.

SECT.

JT.

SECT.

SECTION.

ORDER 563 DATE DEC 19 1939
FRANK HUGHES MEMORIAL LIBRARY
LIBERTY, MISSOURI
FOR
PARK HENSON, GEN. CONTR.
WIGHT & WIGHT, ARCHITECTS
FROM
A. SUTTER-EISTER STONE CO.
Kansas City, Mo.
DRAWING 2

Metal Cornice & Gutter by others.

℄ High Point

℄ Low Point

3/4" ϕ Weep Holes 4'-0" on centers.

Filler piece back of D.S.

4"x3" D.S.

2x4 Nailing Strips 2'-0" on centers.

1

2

F.S. Ratte Cornice Moulds.

2'-4½"

Bldg. Line.

℄ Gutter Sym. Flashing by others

3

4

5

F.S. Section thru Main Level Cornice.

Bldg. Line.

F.S. Section 7

F.S. Elevation of Triglyphs. "A" Wide

Metal Cornice & Gutter by others.

1

2

2'-0"

Bldg. Line.

3

6

4

F.S. Section thru Rear Cornice.

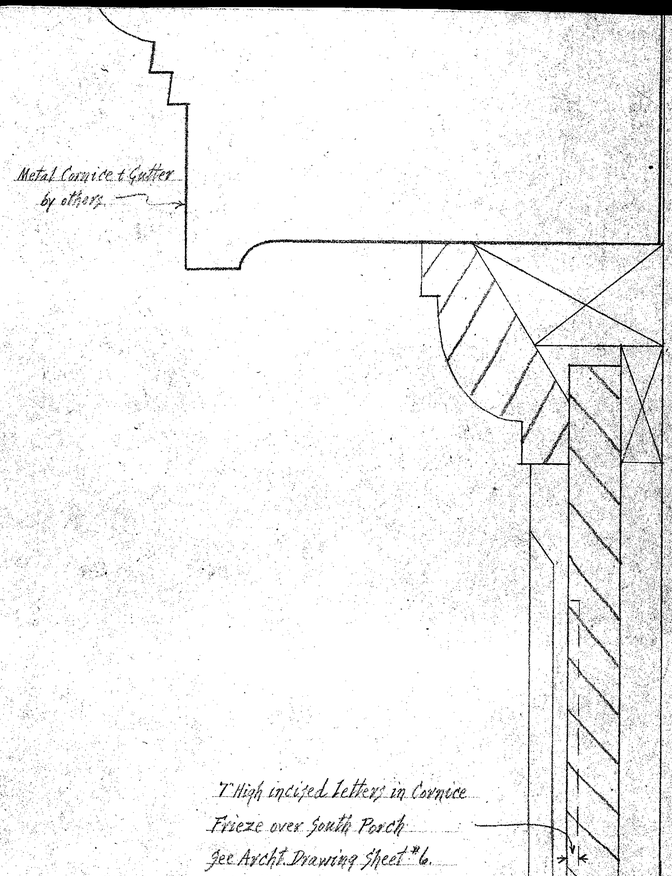
Detail of Exterior Cornices for the Frank Hughes Memorial Library - Liberty, Mo.

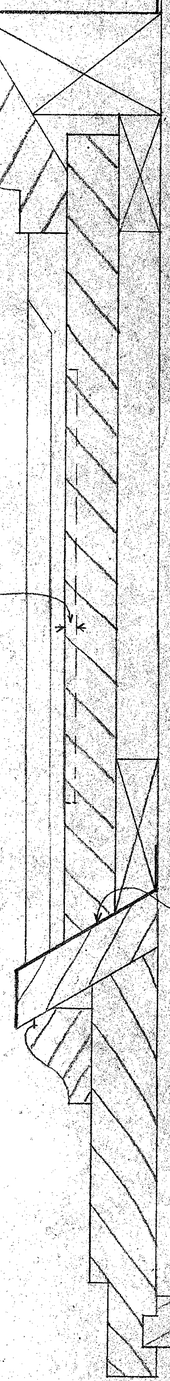
7845

AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

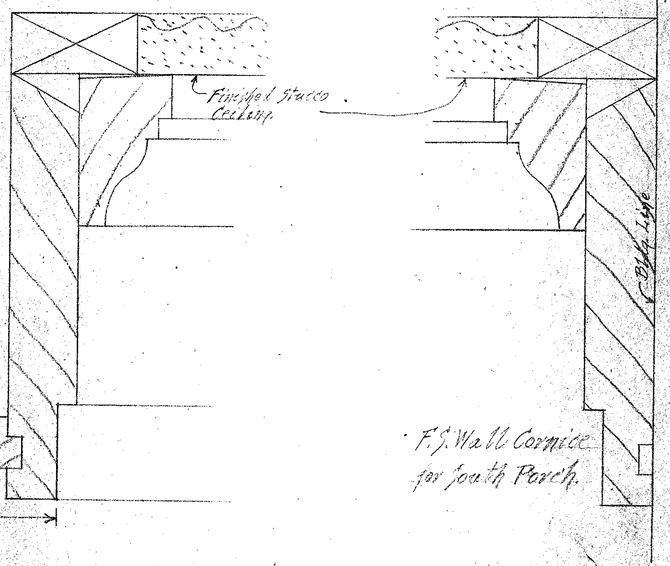
Detail of Exterior Cornices
for James Costello Lbr. Co.
Liberty, Mo.

Order No. ____ Sheets ____
Drawn by AW. Tracing No. ____
Approved by ____
Date 11-5-40 ____ 5





F.S. Section thru South Porch Cornice and Beams.



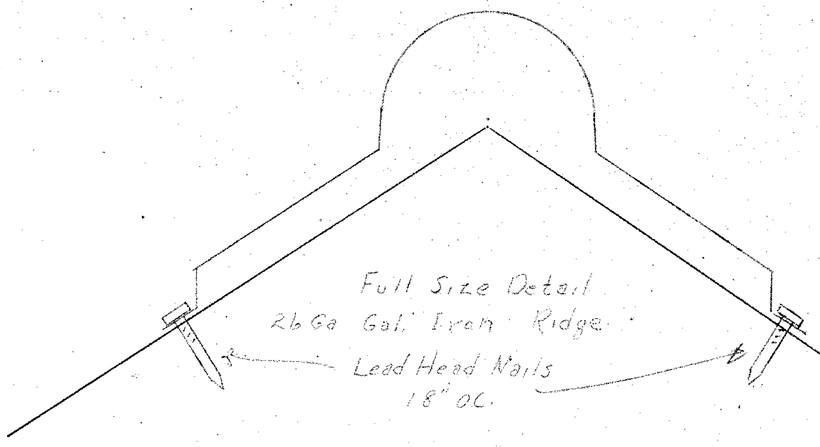
F.S. Wall Cornice
for South Porch.

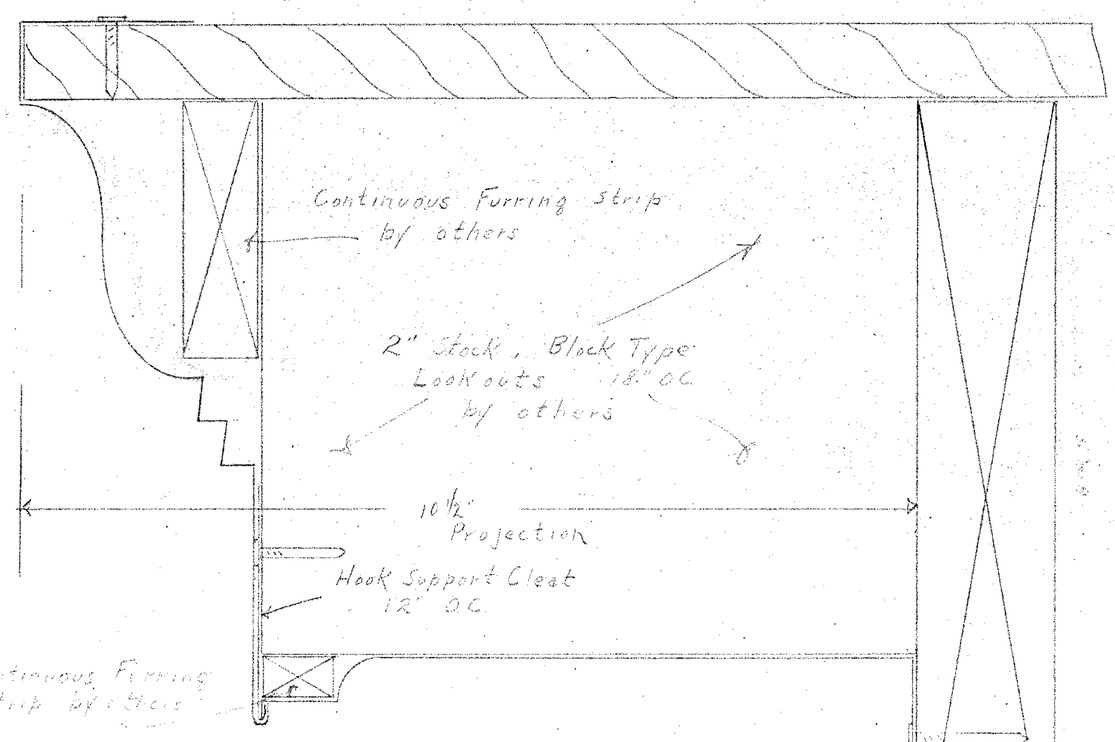
Detail of South Porch Cornice
and Beams for the Frank Hughes
Memorial Library - Liberty, Mo.

7845

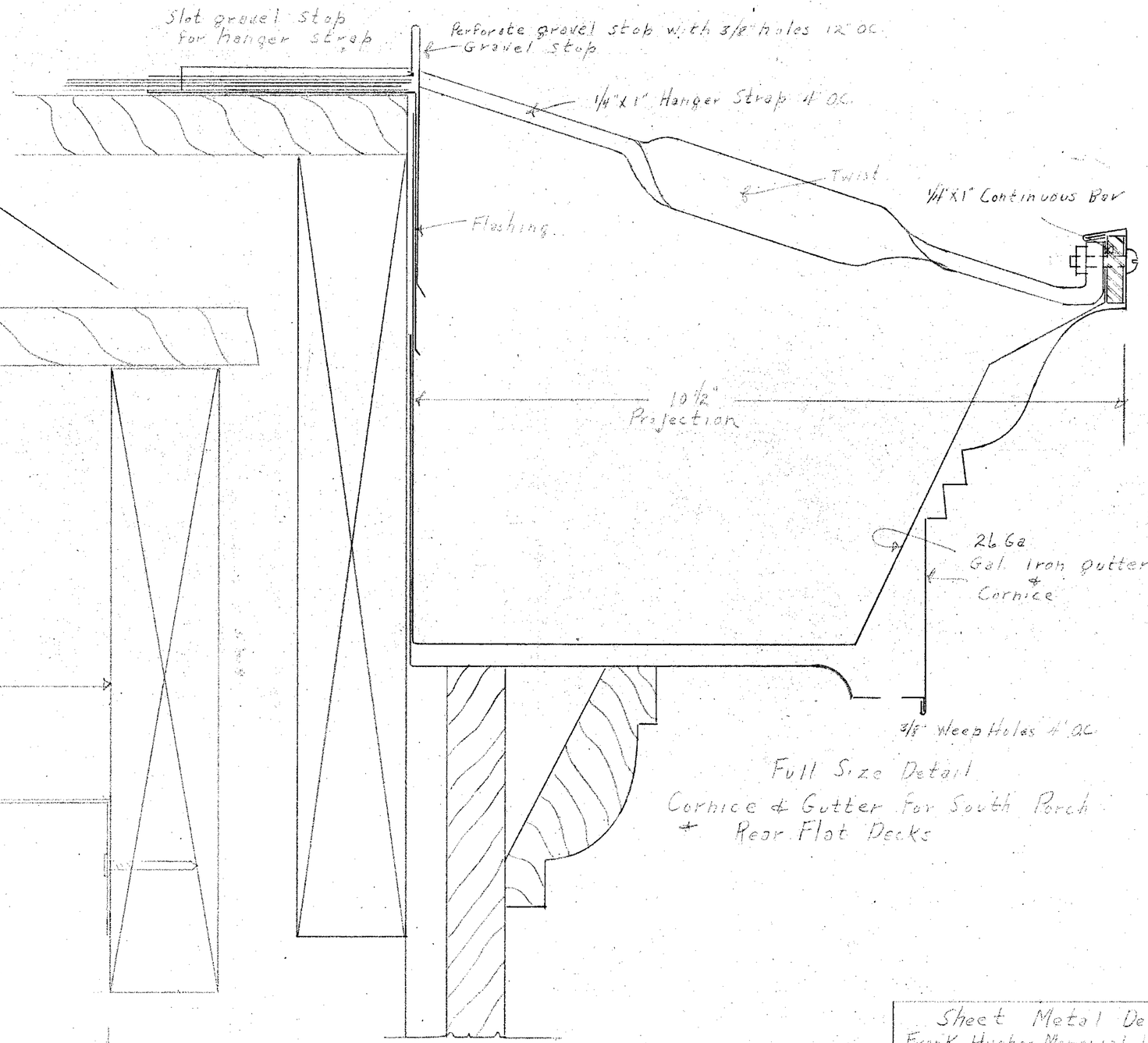
AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

Detail of South Porch Cornice
for James Costello Lbr. Co.
Liberty, Mo.
Order No. Scale
Drawn by AW. Drawing No.
Approved by
Date 4/5/40 6





Full Size Detail
Gable Cornice
Section B-B



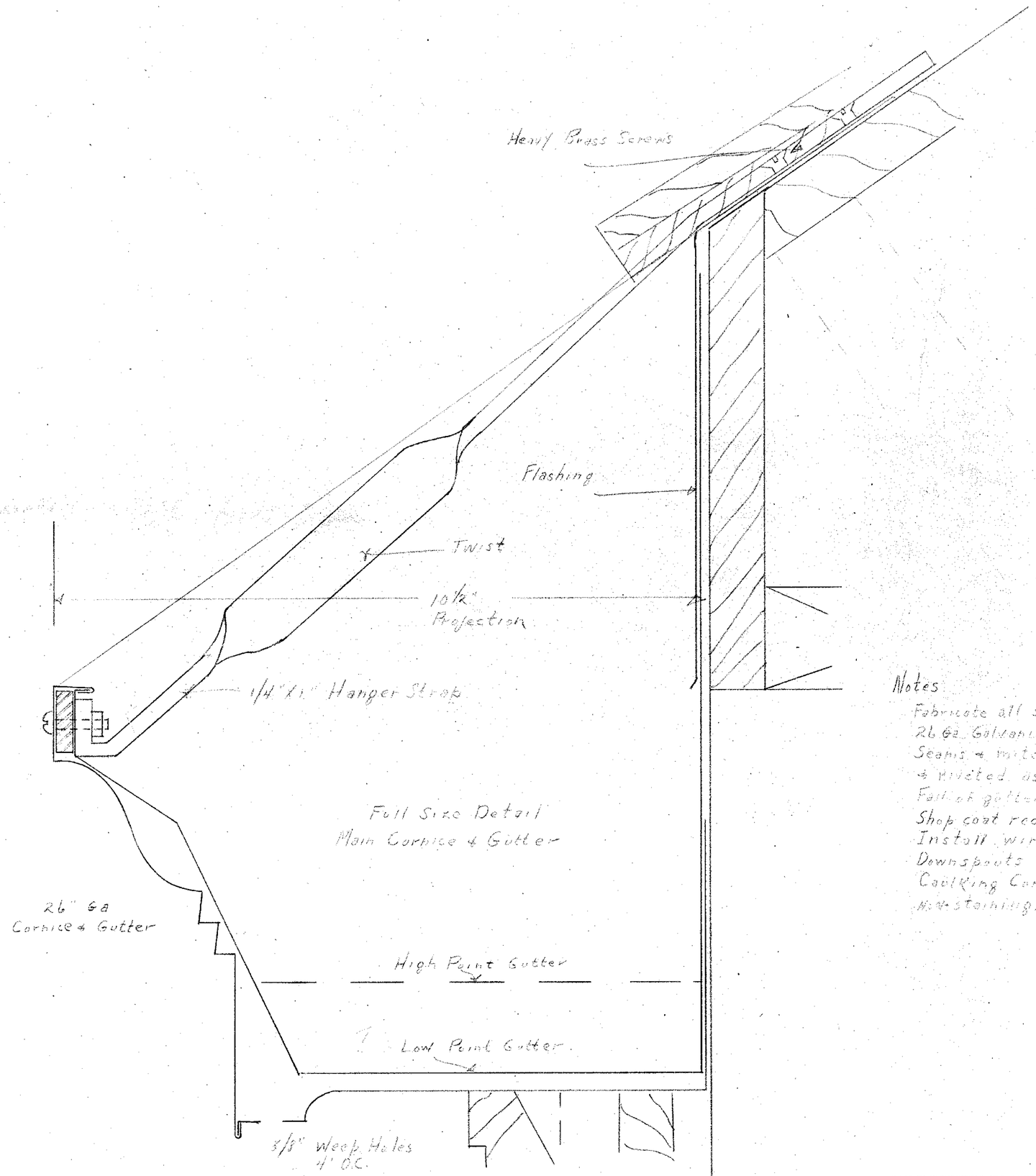
Full Size Detail
Cornice & Gutter For South Porch
& Rear Flat Decks

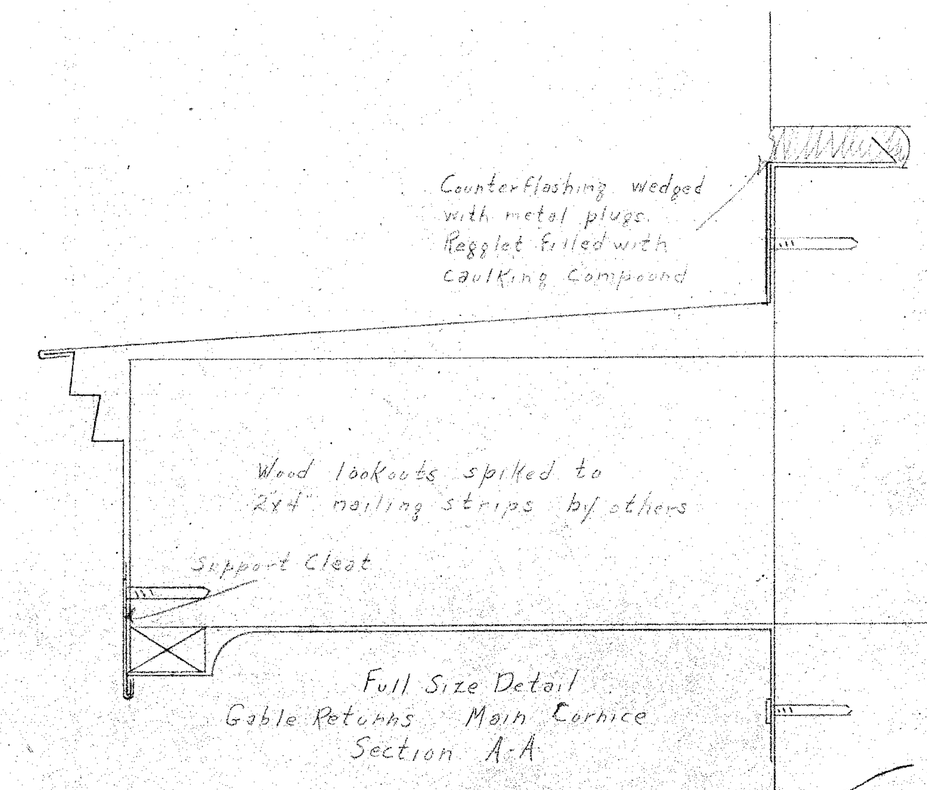
Wall Line

4/29/43

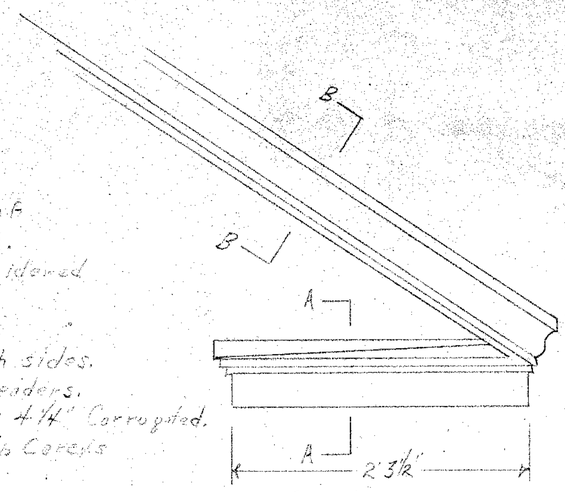
Sheet Metal Details
Frank Hughes Memorial Library
Liberty, Missouri
Wight & Wight, Architects
The Paterson Company
915 Broadway K.C. Mo.

Sheet #2 April 21 ...





Full Size Detail
Gable Returns Main Cornice
Section A-A



Elevation
Gable Cornice Return

Notes

Fabricate all sheet metal work of 26 Ga. Galvanized "Toncan" iron.
Seams & miters to be sweat soldered & riveted as required.
Fall of gutter 1" in 16'.
Shop coat red lead and oil, Both sides.
Install wire screens at leaders.
Downspouts to be 26 Ga., 2¾" x 4¼" Corrugated.
Caulking Compound to be Philip Carey's non-staining.

5/31/40

Sheet Metal Details
Frank Hughes Memorial Library
Liberty Missouri
Wight & Wight - Architects
The Peterson Company
1913 Broadway - K.C. Mo.

Sheet 1 April 27, 1940

Fill in over Cement Fdn.

12" Wide Porch Beam

Bottom of Porch Beam

12'-1¾" High Columns & Pilasters

Finished by others

F.J. Cap Elevation.

All joints put together with thick white lead.

Panel

Columns primed on inside before being built up.

12"

Panel

6X6 Posts by others and set when Columns are set.

Panel

Solid Porch

12"

Line of Base

F.J. Section thru Porch Columns.

4 Columns Required 12"X12"X12-1¾" Tidewater Red Cypress.

Bldg. Line

Grounds by others

3"

Solid Pgt.

12"

F.J. Section thru Porch Pilasters.

2 Pilasters Required 12"X3"X12-1¾" Tidewater Red Cypress.

Line of Base

Panel.

Top of Cut Stone.

Finished Porch Floor.

F.J. Side Elevation.

7845

PAN AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

Detail of Columns & Pilasters
for James Coffelt & Son Co.
Liberty, Mo.
Order No. ____ Scale ____
Drawn by A.W. Elevation No. 7
Approved by ____
Date 11/5/40

Detail of South Porch Columns & Pilasters for the Frank Hughes Memorial Library - Liberty, Mo.

9"X9" Posts built up & attached - Base cont 6 courses
Panel sections built on - Balance N.D. Tidewater
Red Cypress and all joints put together with
thick White lead.

Turned

Spruce

1⅜"x2¾" Fillet
between balusters

2'-3½" High

Panel

Sinkage Panel

Top of Rail

Panel Section

Posts 9"x9"

F.J. Corner Post

½ Sinkage Panel

10½" Wide Panel Sections

F.J. Horizontal Section thru Posts & Panel Sections.

Bldg. Line under Porch Roof

Half Plan of Porch Roof Balustrade.

Scale 3"=1'0"

Ctr. of Porch

Balusters spaced equal.

Sinkage Panels

9" 10½" 9"

Posts to center on Columns & Pilasters below.

Sinkage Panels for Posts at Bldg. Roof

Sinkage Panel

Sinkage Panel in Posts at Bldg. Roof

Bldg. Roof

Panel Section

Balusters

2'-3½"

Elev. of Porch Balustrade.

Ctr. of Post

Spiny Base at Roof Newels

Cricket Line at Roof Newels

24 Ga. Galv. Iron by Others.

Open under Rail.

Low point of composition Roof.

Elevation of Balustrade over Front Porch.

Section thru Posts.

F.J. Vertical Section thru Deck Rail.

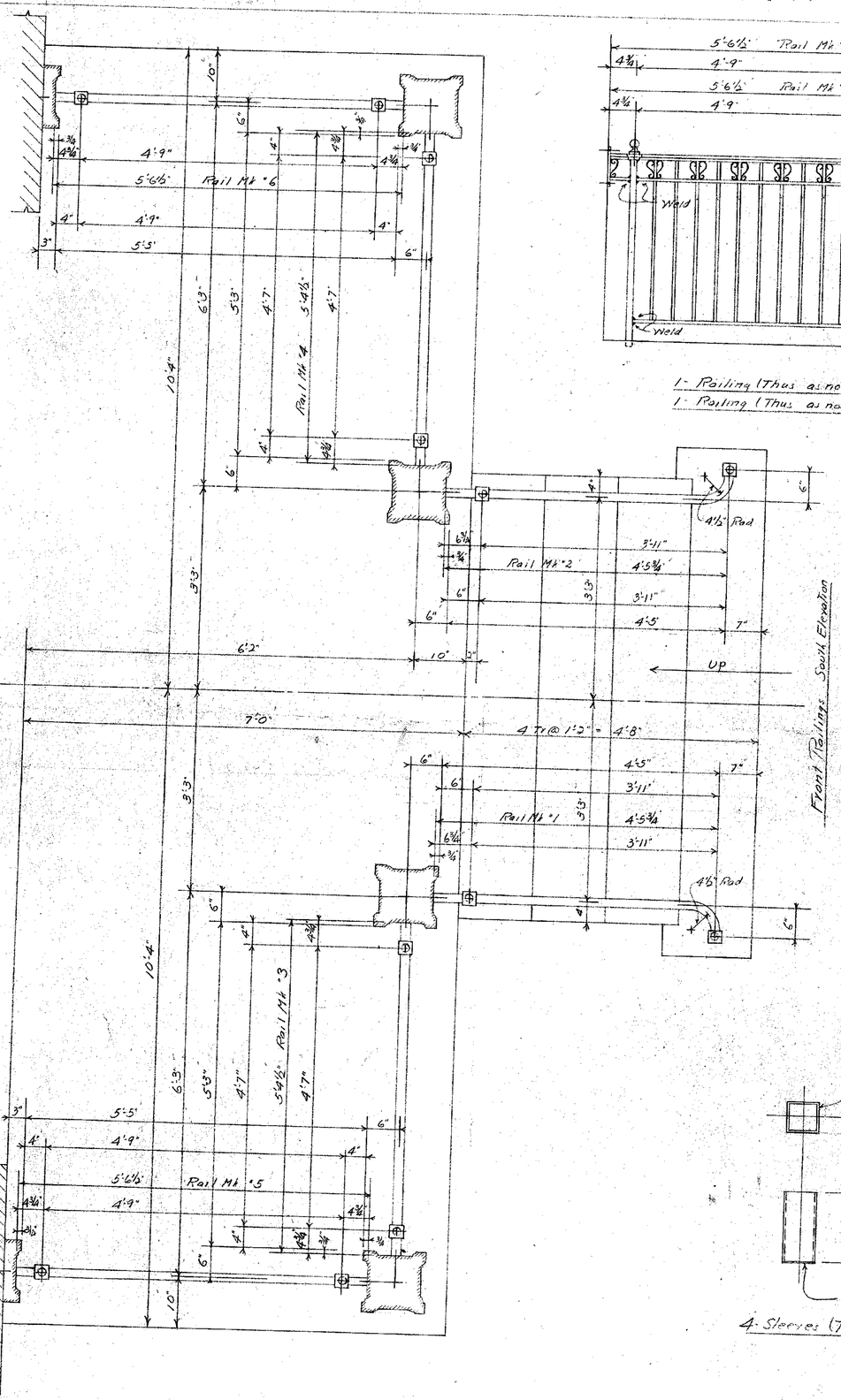
1⅜"x2¾" Fillet
between balusters

Detail of South Porch Deck Balus
for th Frank Hughes Memorial Libra
Liberty, Mo.

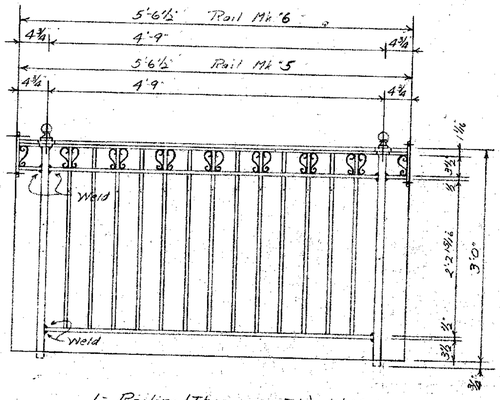
7845

AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

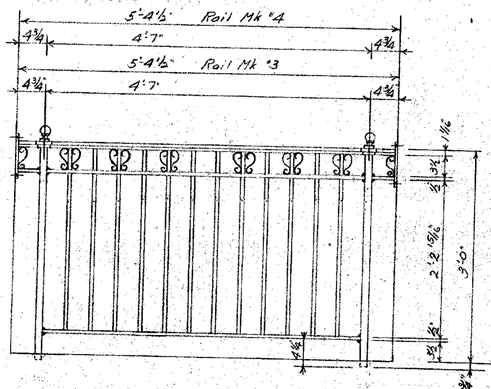
Detail of Porch Deck Balustra
James Cosgrove Lbr. Co.
Liberty, Mo.
Scale
Date
AW



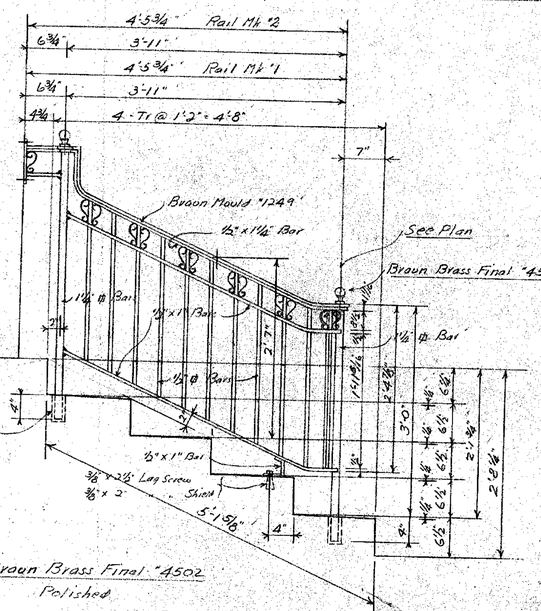
1- Railing (Thus as noted) Mk "6"
1- Railing (Thus as noted) Mk "5"

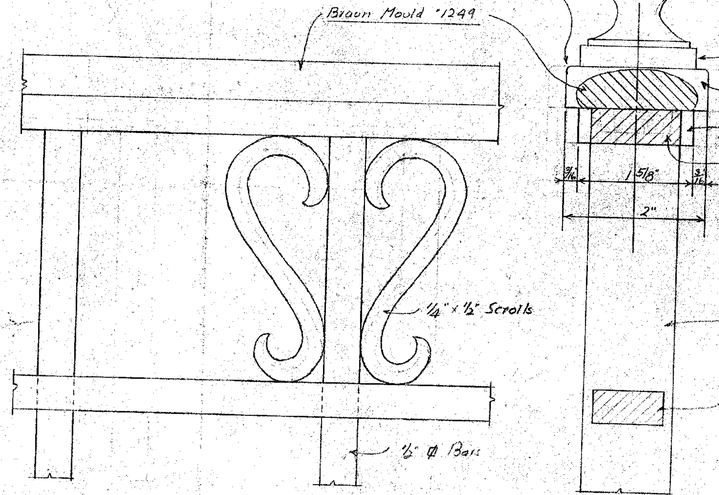


1- Railing (Thus as noted) Mk "4"
1- Railing (Thus as noted) Mk "3"

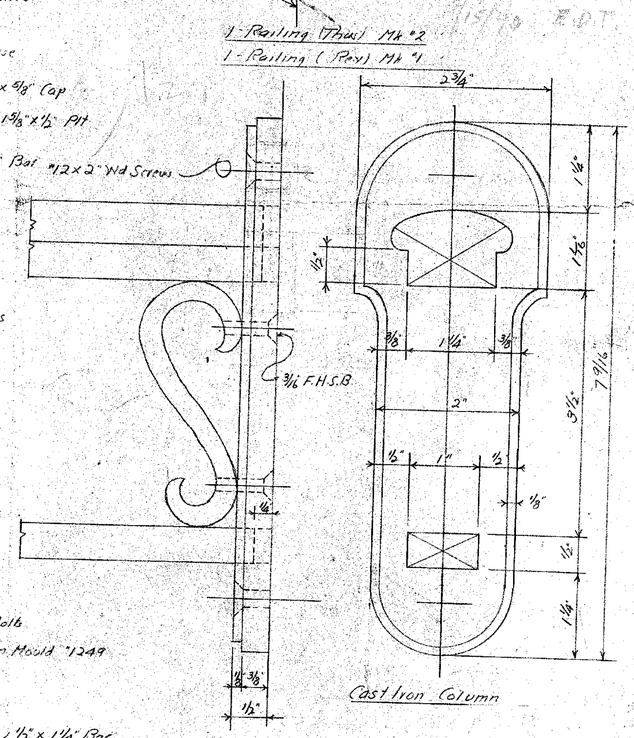


1- Railing (Thus as noted) Mk "2"
1- Railing (Thus as noted) Mk "1"

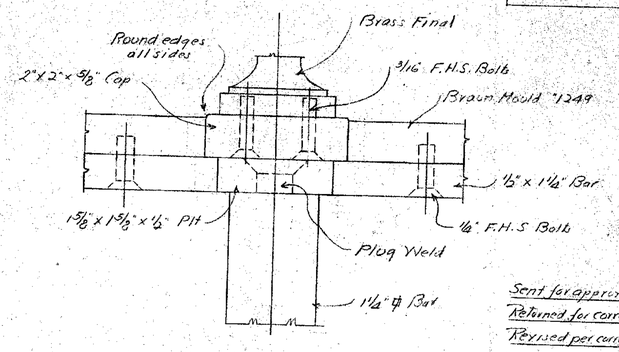




Full Size Typical Details



4- Sleeves (Thus)

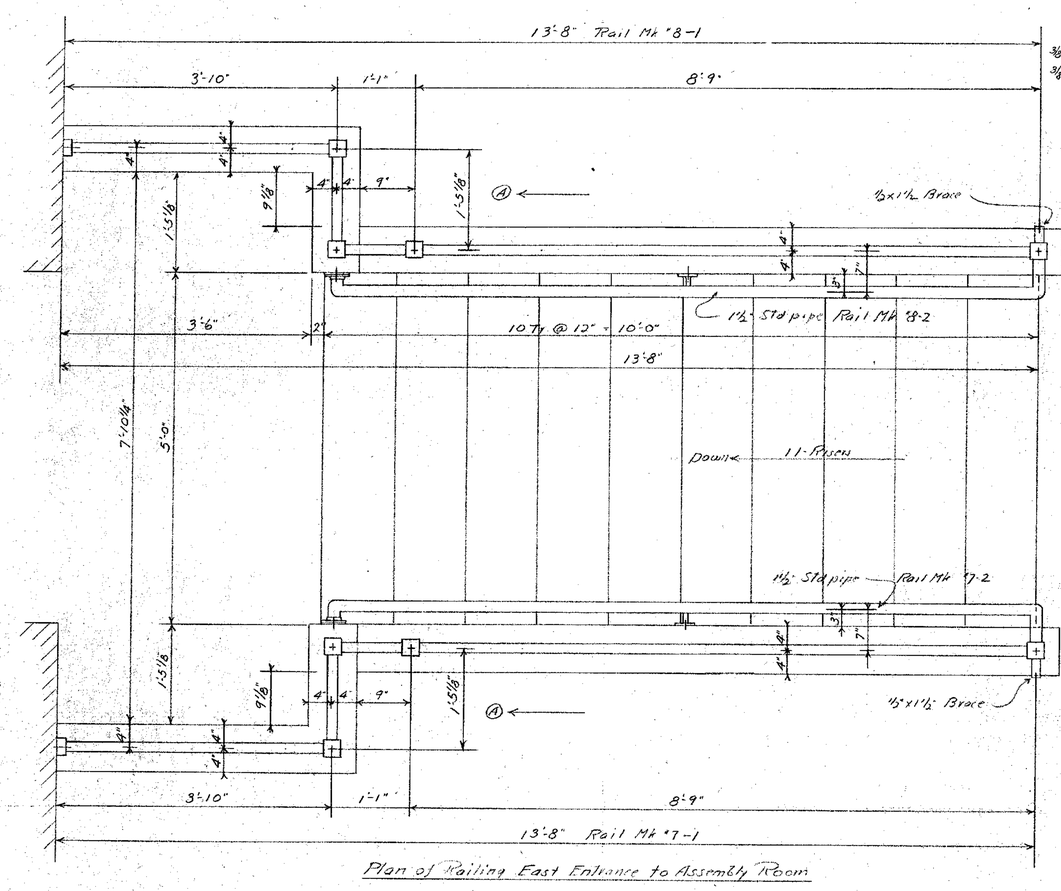


Typical Detail of Posts

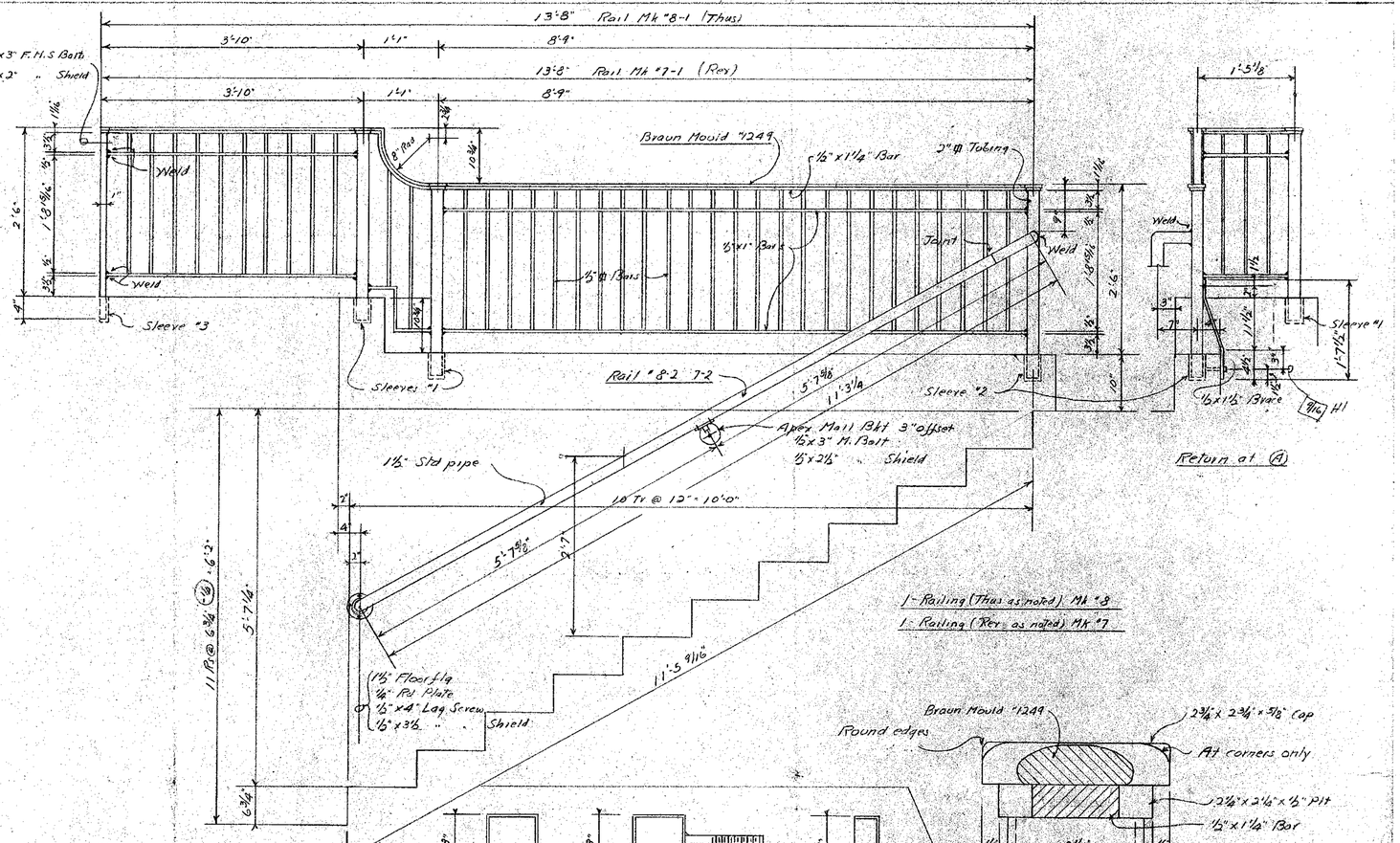
Sent for approval 11/9/40
Returned for correction 11/17/40
Revised per correction 2/6/40

Frank Hughes - Memorial Library
Liberty, Mo.
ARCHITECT Wright and Wright
CONTRACTOR Costello Lumber Co
BUILDERS STEEL CO. KANSAS CITY, MO.
DRAWN 1/4/40 CEB CHKD. 1/8/40 CEB
ORDER NO. 9069(H) SHEET #3

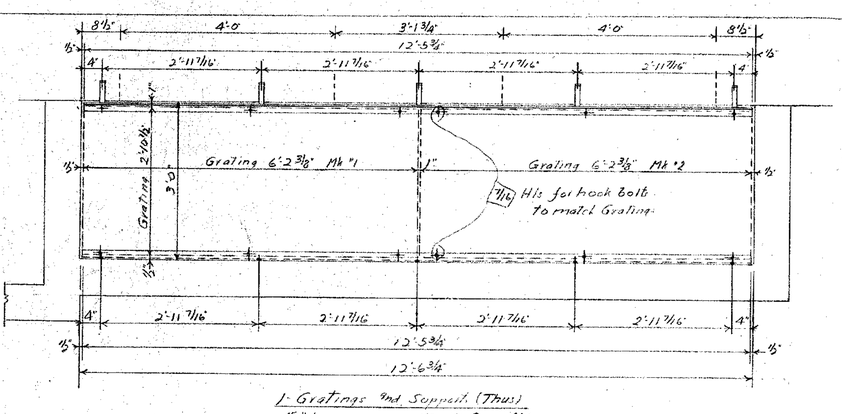
One shop coat - Red Lead (Shop inspected)



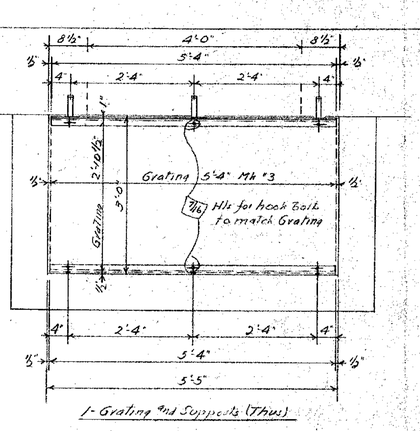
Plan of Railing East Entrance to Assembly Room



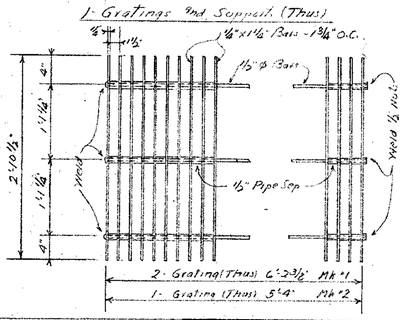
1 - Railing (Thus as noted) Mk "8
1 - Railing (Rev as noted) Mk "7

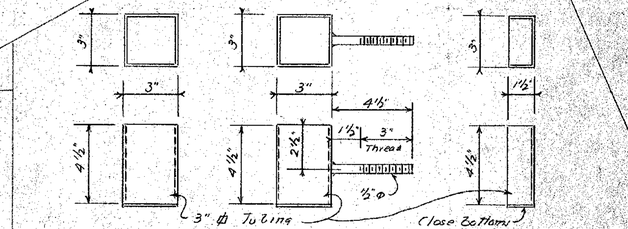


1 - Gratings and Supports (Thus)



1 - Grating and Supports (Thus)





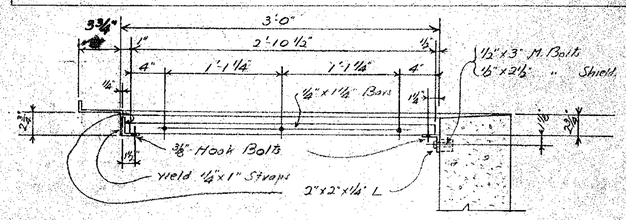
6 - Sleeves (Thus) Rails "7-8
1 - Sleeves (Thus) Rail "9
Mk "1

2 - Sleeves (Thus) Rails "7-8
3 - Sleeves (Thus) Rail "9
Mk "2

2 - Sleeves (Thus) Rails "7-8
1 - Sleeve (Thus) Rail "9
Mk "3

Typical Detail of Posts
For Sheets "4 and "5

Outcn S.O. 1/2/1940



Section A-A

Sent for approval	1/9/40
Returned for correction	1/17/40
Revised per correction	2/6/40

One shop coat - Red Lead (Shop inspected)

Frank Hughes - Memorial Library
Liberty, Mo.
ARCHITECT Wright and Wright
CONTRACTOR Costello Lumber Co
BUILDERS STEEL CO. NORTH K.C. MO.
DRAWN 1/14/40 C.L.B. CHKD. 1/16/40 C.L.B.
ORDER NO. 9069 (H) SHEET (4)

1/15/40 E.D.

3'-10" Rail Mk "9-2" | 4" | 4" | 17'-6" Rail Mk "9-1" | 10"

5'-10" | 5'-10" | 5'-10"

3/8" x 3" F.H.S. Bolt
3/8" x 2" " Shield

Braun Mould "1249

1½" x 1 1/4" Bar

2" ⌀ Tubing

1½" x 1" Bar

1½" ⌀ Bar

1½" x 1½" Brace

½" x 1½" Brace

Joint

Weld

Sleeve "3

Sleeve "1

Sleeve "2

Sleeve "2

Sleeve "2

12 Tr @ 10½" = 10'-6"

1½" Std pipe "9-3

Apex Mall Bkt.
½" x 3" M. Bolt
½" x 2½" " Shield

3" offset

6'-4 13/16"

12'-9 9/16"

12'-9"

2'-7"

7'-2¾"

13 Risers @ 7½" = 7'-10½"

1½" Floor flg
¼" Rd Plate
⅝" x 4" Lag Screws
⅝" x 3½" " " Shield

7½"

1-Railing (Thus) Mk "9

End View at (B)

1½" x 1½" Brace

7"

3"

4"

10"

13½"

9/16 H1

Braun Mould "1249

Cutoff and file smooth in field

2¾" x 2¾" x ⅝" rap

¼" F.H.S. Bolt

1½" x 1½" Bar

2¼" x 2¼" x ½" Plt

15/16 Grout Hole

Weld

2" ⌀ Tubing

1½" x 1" Bar

Pour grout to here

3" ⌀ Tubing

Close Bottoms

Typical Detail Sheet "4 and 5

One shop coat - Red Lead (Shop inspected)

18'-8"

4" | 17'-6" Rail Mk "9-1" | 10"

5'-10" | 5'-10" | 5'-10"

Sleeve "1

½" x 1½" Brace Sleeve "2

½" x 1½" Brace Sleeve "2

½" x 1½" Brace Sleeve "2

4'-2"

3'-10" Rail Mk "9-2

4" | 4" | 8"

1'-9½" | 4'-0" | 10½" | 3'-6" | 7'-0" | 10½"

17'-1½"

1½" Std pipe "9-3

12 Tr @ 10½" = 10'-6"

3'-6"

4'-2"

Down 13 Risers

8"

Sleeve "3

Plan of Railing Rear (North) Elevation

Sent for approval	11/9/40
Returned for correction	1/17/40
Revised per corrections	2/6/40

2/15/40 E.D.T.

Frank Hughes - Memorial Library
Liberty, Mo.

ARCHITECT Wight and Wight
FABRICATOR Costello Lumber Co.
BUILDERS STEEL CO. KANSAS CITY, MO.
DRAWN 1/9/40 CKB CHKD. 1/9/40 CKB
ORDER NO. 9069(H) SHEET (5) OF

Floor

3 3/4"

1 3/4" Wdg.

Wd. Opg. Height

2 1/2"

Boxing.

Building Paper.

See our Drawing Sheet "1" for balance of this Wd. Frame.

2'-11 3/4" High Panel Section.

Bldg. Line.

Finish 1st. Floor.

5 1/2"

Screw Cleats on Panel.

Solid raised panels made with three 3" Boards doweled together

Panels Rot-proof Treated.

Masonry Opg. Height.

F. S. Vertical Section thru Panel.

4'-0" M.O.

1/2 L Slanted.

1 3/4"

3'-3" Wd. Opg.

10'-7" Masonry Opg.

7'-2 1/2" Wd. Opg.

Scale 1" = 1ft.

Raised Panel.

2'-11 3/4"

Elevation of First Floor Window Frames with Panel under.

Dotted Lines show Window Frame Jamb over Panel.

Boxing

Paper

Cleats

Raised Panel

F. S. Horizontal Section thru Panel.

Wood Sill Line

Masonry Opg. Width.

Brick

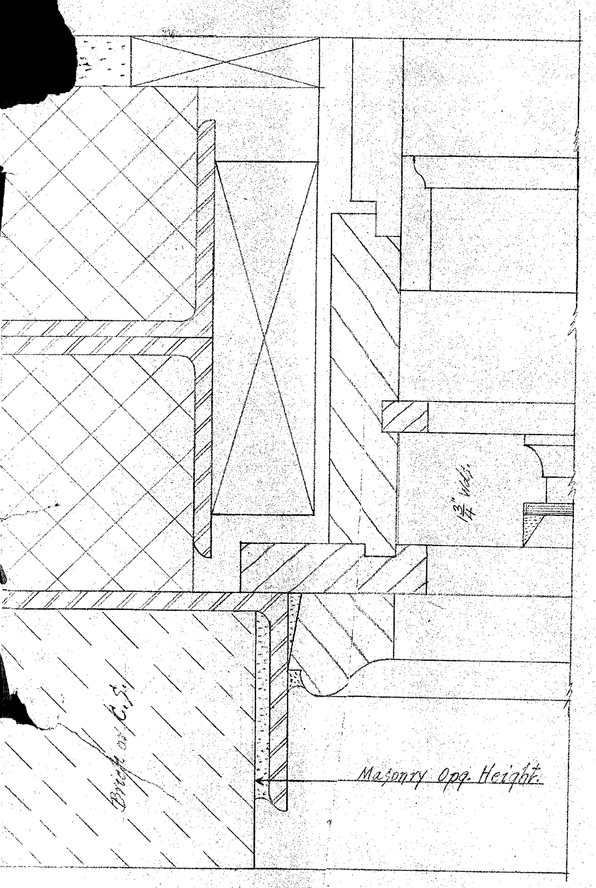
7845

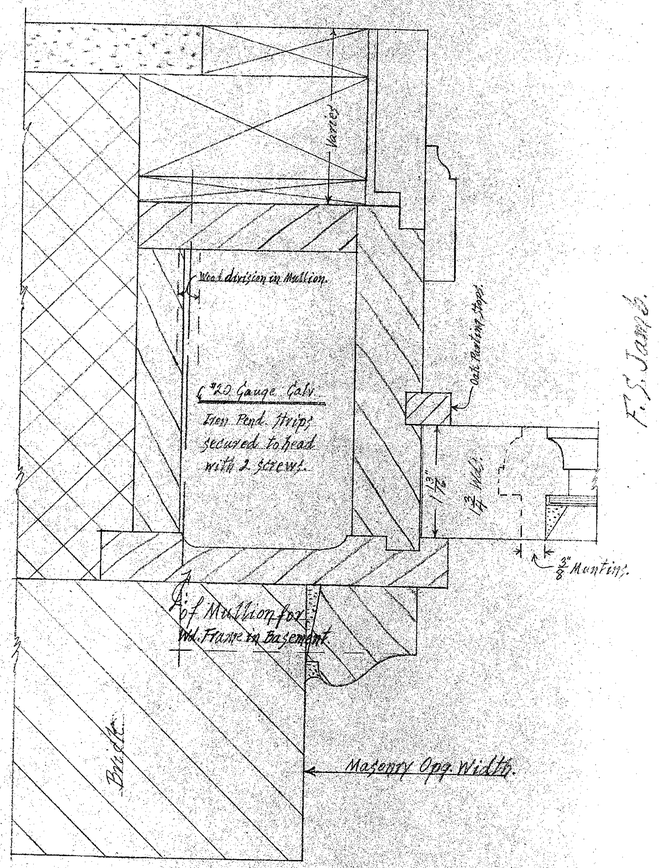
WILLIAM SIMS & CRUM
KANSAS CITY, MO.

Detail of Panel under Wd. Frame
for James Coste, Jr. Liberty, Mo.
Order No. AVC
Drawn By
Date 12/12/38

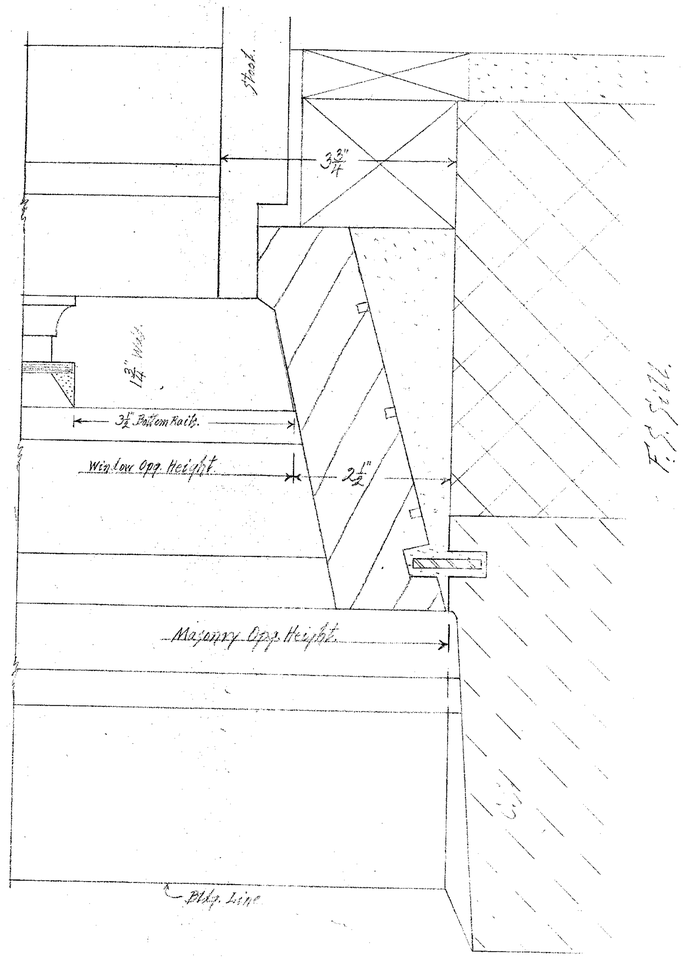
Detail of Window Frames with Panel under for the
Frank Hughes Memorial Library
Liberty, Mo.

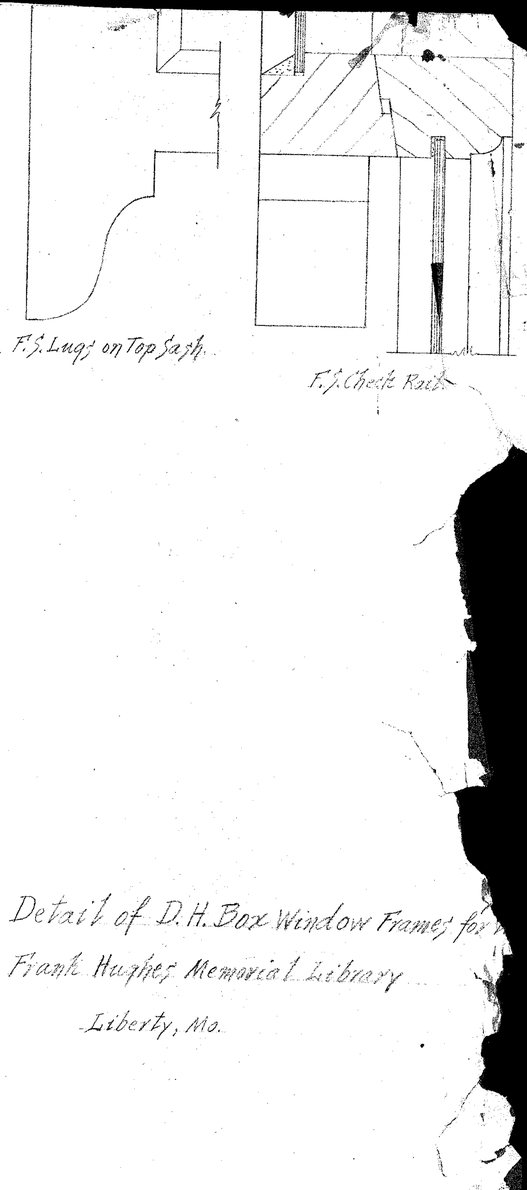
Revised 12/14/38.





½ of Mullion for Wd. Frame in Basement





Detail of D.H. Box Window Frames for
Frank Hughes Memorial Library
Liberty, Mo.

Basement Window Schedule.

5	Single Box D.H. Wd. Frames	B.O.	4-0	×	5-9½	Wd. opg.	3-8½	×	5-4½	×	1¾	Ch. rail
1	"	"	4-0	×	4-10½	"	3-8½	×	4-5½	×	1¾	"
2	"	"	4-0	×	4-2	"	3-8½	×	3-9¼	×	1¾	"
1	"	"	2-2	×	3-0½	"	1-10½	×	2-7½	×	1¾	"
1	Twin	"	8-4	×	5-9½	each Wd. opg.	3-8½	×	5-4½	×	1¾	" 7½ Mull.

First Floor Window Schedule

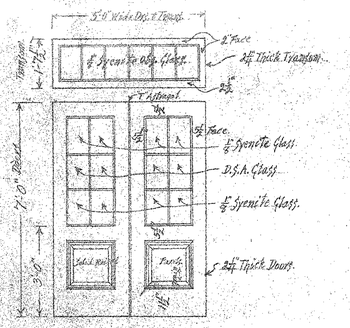
13	Single Box D.H. Wd. Frames with Panel below	B.O.	4-0	×	10-7	Wd. opg.	3-8½	×	7-2½	×	1¾	Ch. rail
	with 2-11¾ high panel section under = See our drawing sheet #2 for sections thru panels.											
4	Single Box D.H. Wd. Frames	B.O.	4-0	×	6-5½	Wd. opg.	3-8½	×	6-0¾	×	1¾	Ch. rail
2	"	"	3-0	×	6-5½	"	2-8½	×	6-0¾	×	1¾	"
2	"	"	2-2	×	4-7½	"	1-10½	×	4-2¾	×	1¾	"

All Window Frames set up exposed part Clear Tidewater Heart Red Cypress = Vertical grain Fir pulley stiles & P.R. Oak parting stops = Andersen #307 pulleys installed = pockets cut and set with screws and all outside joints put together with thick white lead.

Revised 12/11/43.

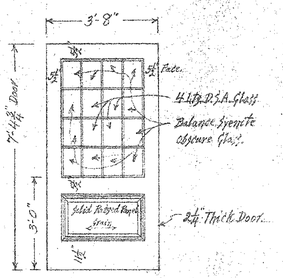
7846

AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.
Detail of Window Frames
for James Costello Lbr. Co.
Liberty, Mo.
Order No.
Drawn by AW
Checked by
Date 12/12/43
1



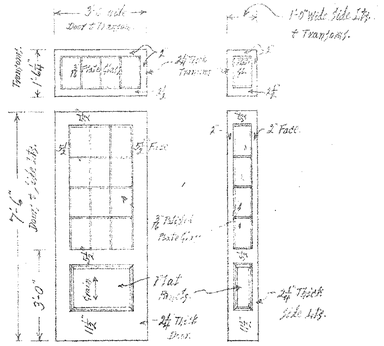
Elevation of East Basement Entrance Door & Transom

1 Pair Doors Required Idaho W. Pine.
1 Transom ✓ ✓ ✓ ✓



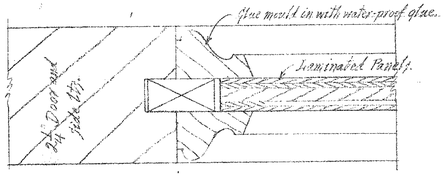
Elevation of North Basement Entrance Door.

1 Door Required Idaho W. Pine.

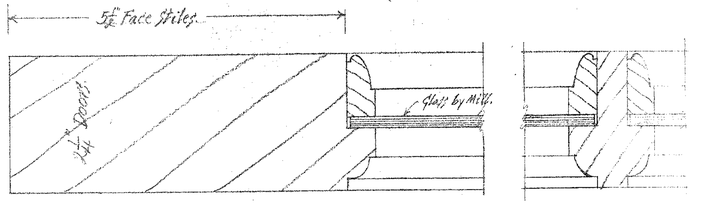


Elevation of 1st Floor Main Entrance Door & Side Lts. with Transoms over.

1 Door Required Idaho W. Pine
1 Transom ✓ ✓ ✓ ✓
2 Side Lts. ✓ ✓ ✓ ✓
2 ✓ ✓ Tr. ✓ ✓ ✓ ✓

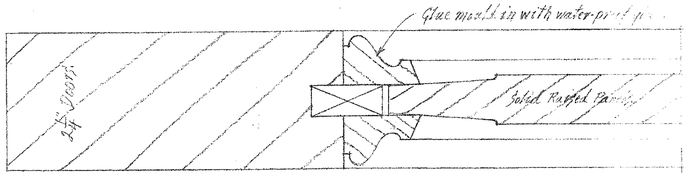


F.J. Section thru Main Ent. Door & Side Lt. Panels.

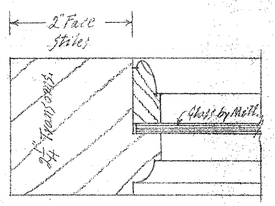


F.J. Section thru Door Stiles at Glass Panels.

Typical K.J. over Panels.



F.J. Section thru Door Stiles at Raised Panels.

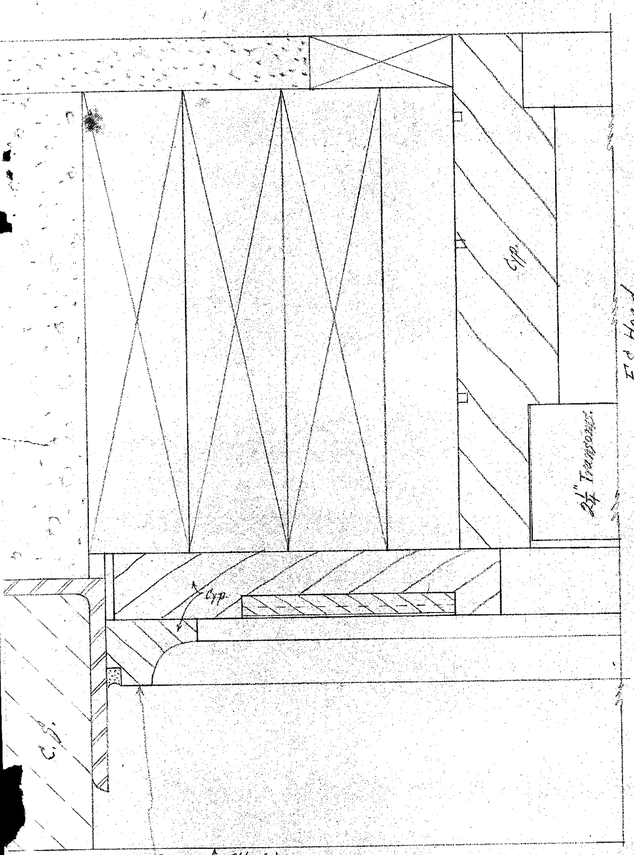


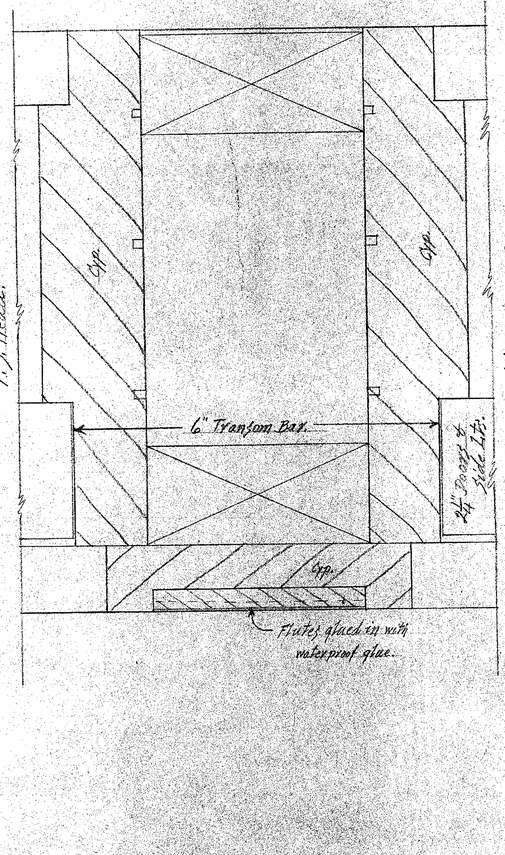
F.J. Section thru Transom Stiles.

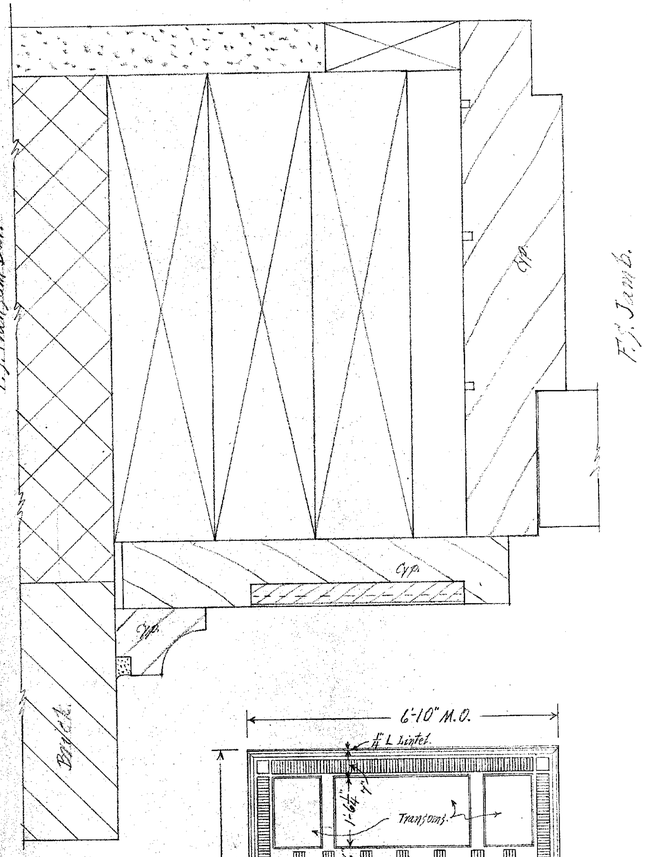
Detail of Exterior Wood Doors for the Frank Hughes Memorial Library

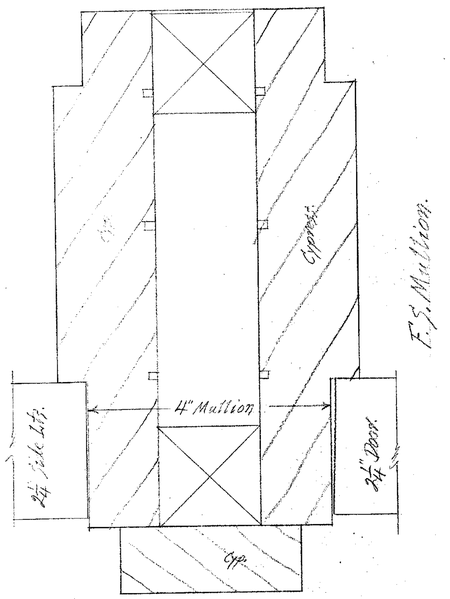
Liberty, Mo.

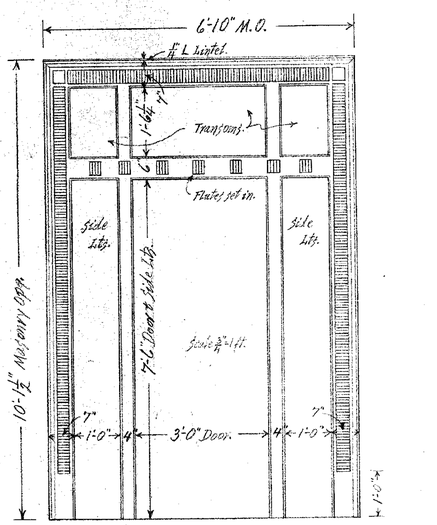
KCAB
SASH & DOOR
SAS CITY, MO
Detail of Exterior Door & Transom
Frank Hughes Memorial Library
Liberty, Mo.
Arch.
11/31/40





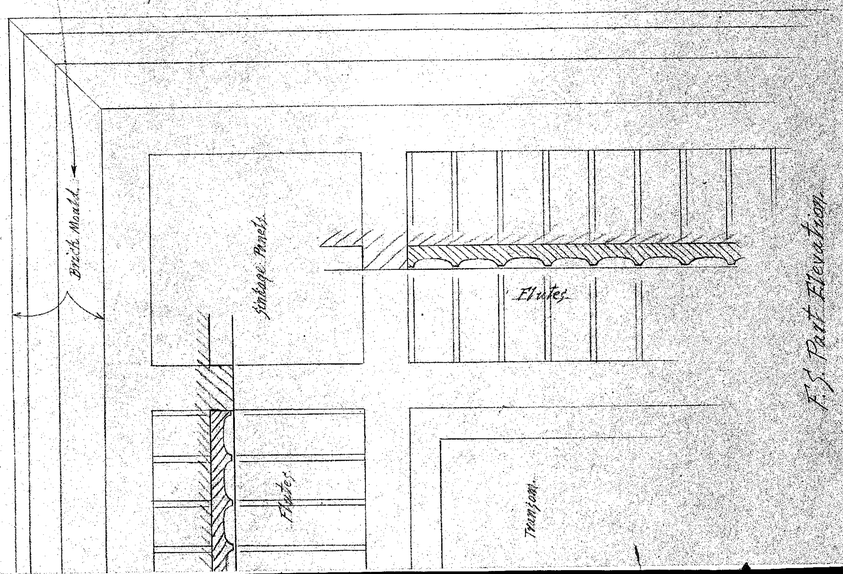






Elevation of Main Entrance Door Frame 1st. Floor

1 Frame Required Like above Tidewater Red Heart Cypress.



Detail of Front Entrance Door Frame for the

Frank Hughes Memorial Library

Liberty, Mo.

Revised 12/14/39.

7845

KANSAS CITY, MO.

Detail of Front Ent. Door Frame.

For James Castello Lbr. Co.

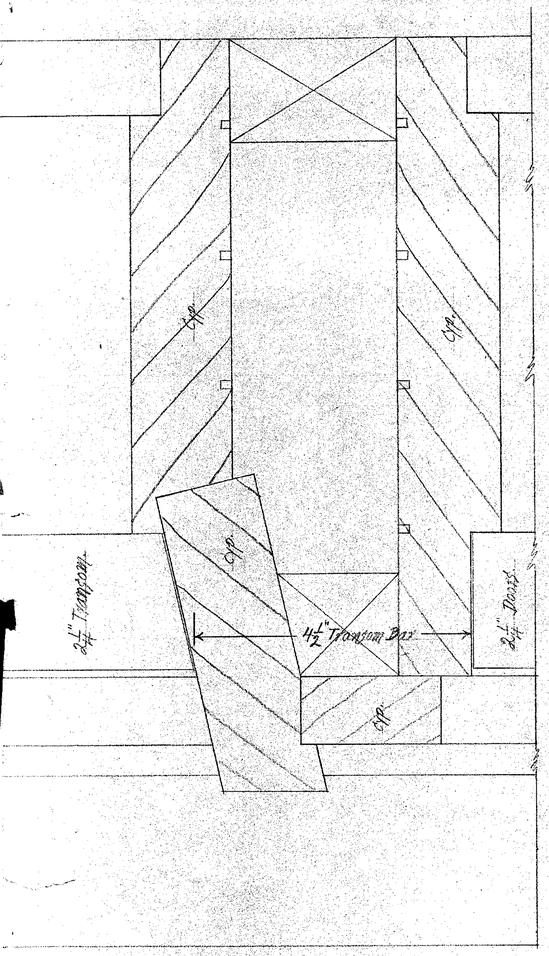
Liberty, Mo.

Scale Full Size Drawing No.

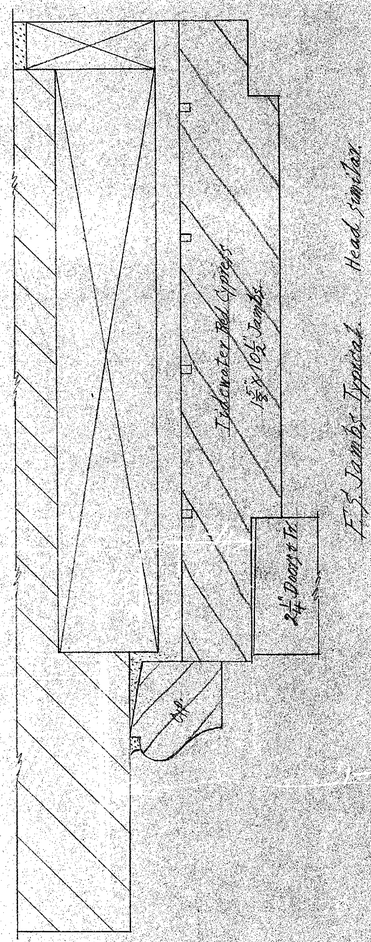
Designed by AW.

Approved by

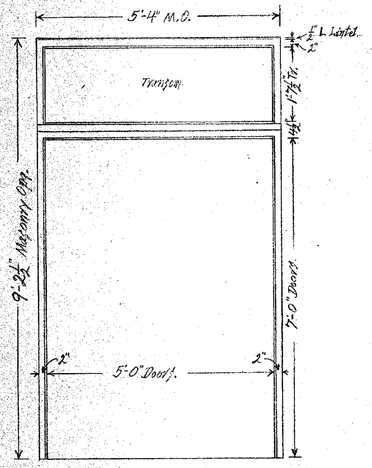
Date 12/12/39



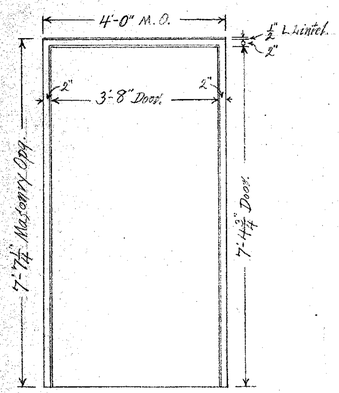
F.S. Transom Bar.



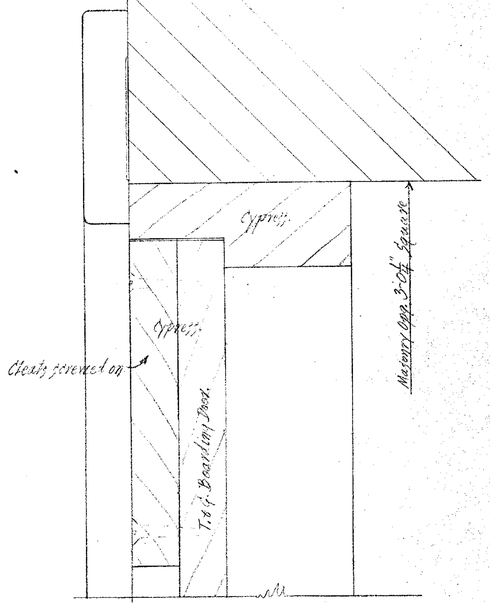
F.S. Jamb Typical. Head similar.



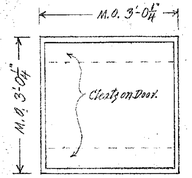
Elevation of Ext. Door Frame to Basement.
1 Frame Required like above Tidewater Red Heart Cypress.



Elevation of Ext. Door Frame to Basement.
1 Frame Required like above Tidewater Red Heart Cypress.



F.S. Section thru Head for Wood Frame behind Metal Louvre Frame.

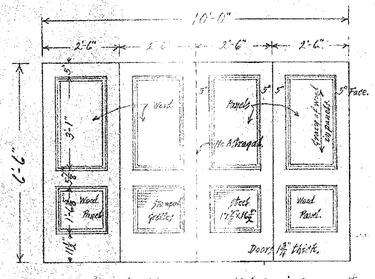


Elevation of Wood Frames behind the Metal Gable Louvre Frames.
2 Frames Required like above Tidewater Red Heart Cypress.

Detail of Wood Frames for the Frank Hughes Memorial Library - Liberty, Mo.

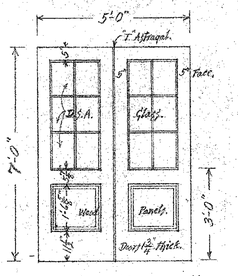
7845

HAMILTON CASE & CABINET
KANSAS CITY, MO.
Detail of Basement Dr. Frames
for James Coffelt Lbr. Co.
Liberty, Mo.
Scale
Drawn by AW.
Date 12/12/39
Drawing No.



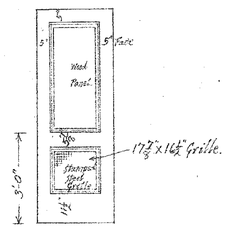
Elevation of Folding Doors, Polish Rub. in Basement.

1 Set of 4 Doors Required Red Birch.



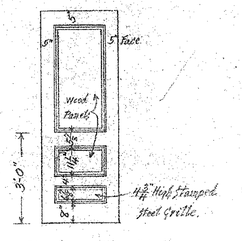
Elev. of Doors from Assembly Rm. to Corridor in Basement.

1 Pair Required Red Birch.



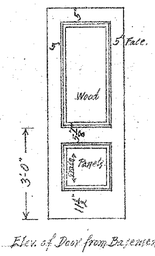
Elev. of Doors Assembly Rm. to Property Rms. Basement.

2 Doors Required 2-6 X 7-0 x 1 3/8" Red Birch.



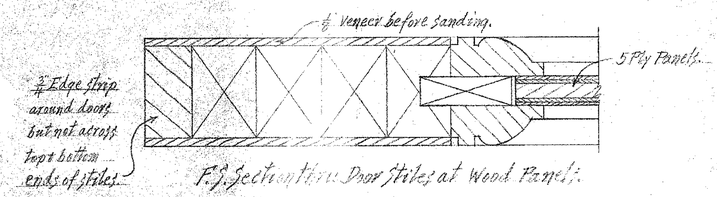
Elev. of Doors with small Grille.

1 Door Required			2-6 X 7-0 X 1 3/8	to Janitor Clos.	Basement	Red Birch		
1	✓	✓	2-6 X 7-0 X 1 3/8	" Boys Toilet	✓	✓	✓	
1	✓	✓	2-6 X 7-0 X 1 3/8	" Girls	✓	✓	✓	
1	✓	✓	2-6 X 7-0 X 1 3/8	" Corri. to Stairs	✓	✓	✓	
1	✓	✓	3-0 X 7-0 X 1 3/8	✓ ✓ Storage	✓	✓	✓	

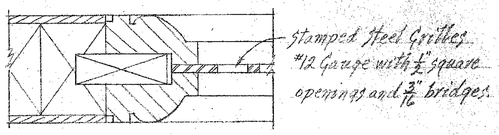


Elev. of Door from Basement Corridor to Future Kitchen.

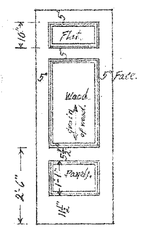
1 Door Required 2-6 X 7-0 X 1 3/8 Red Birch.



F.J. Section thru Door Stiles at Wood Panels.

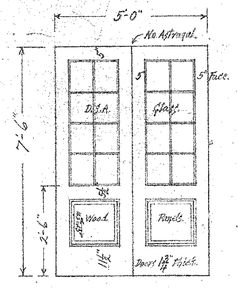


F.J. Section thru Doors at Steel Grille Panels.



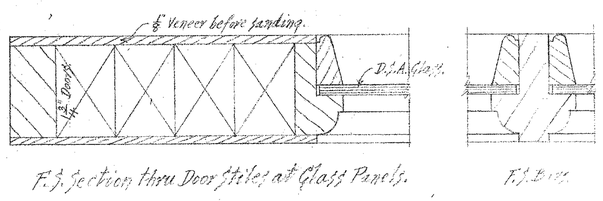
Elev. of Typical 1st Floor Doors

7 Doors Required 2-6 X 7-0 X 1 3/8 Red Birch.



Elevation of D.A. Vestibule Doors on 1st Floor.

1 Pair Required Red Birch.



F.J. Section thru Door Stiles at Glass Panels.

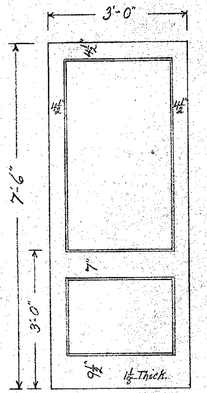
F.J. Detail

Detail of Interior Wood Doors for the Frank Hughes Memorial Library

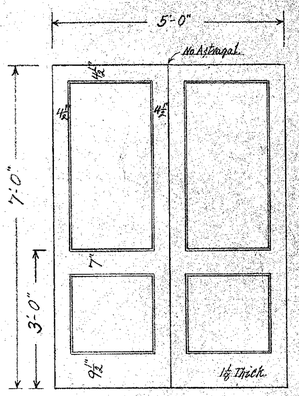
Liberty, Mo.

Revised 2/8/40

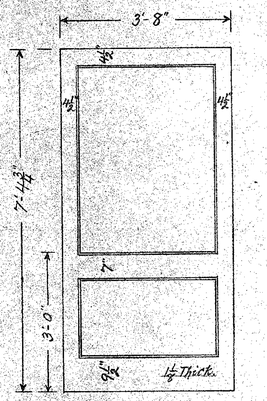
7845
FARGO SASH & DOOR
KANSAS CITY, MO
Detail of Interior Wood Doors
Junior Costello Lbr Co.
Liberty, Mo.
A.W.
1/31/40
10



Elevation of 1st. Floor Main
Entrance Screen Door.
1 Door Required Red Birch.

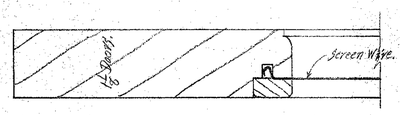


Elevation of Basement East
Entrance Screen Doors.
1 Pair Doors Required Clear W. Pine.



Elevation of Basement North
Entrance Screen Door.
1 Door Required Clear W. Pine.

Scale 3"=1ft.



F.S. Section thru Screen Door Stile.

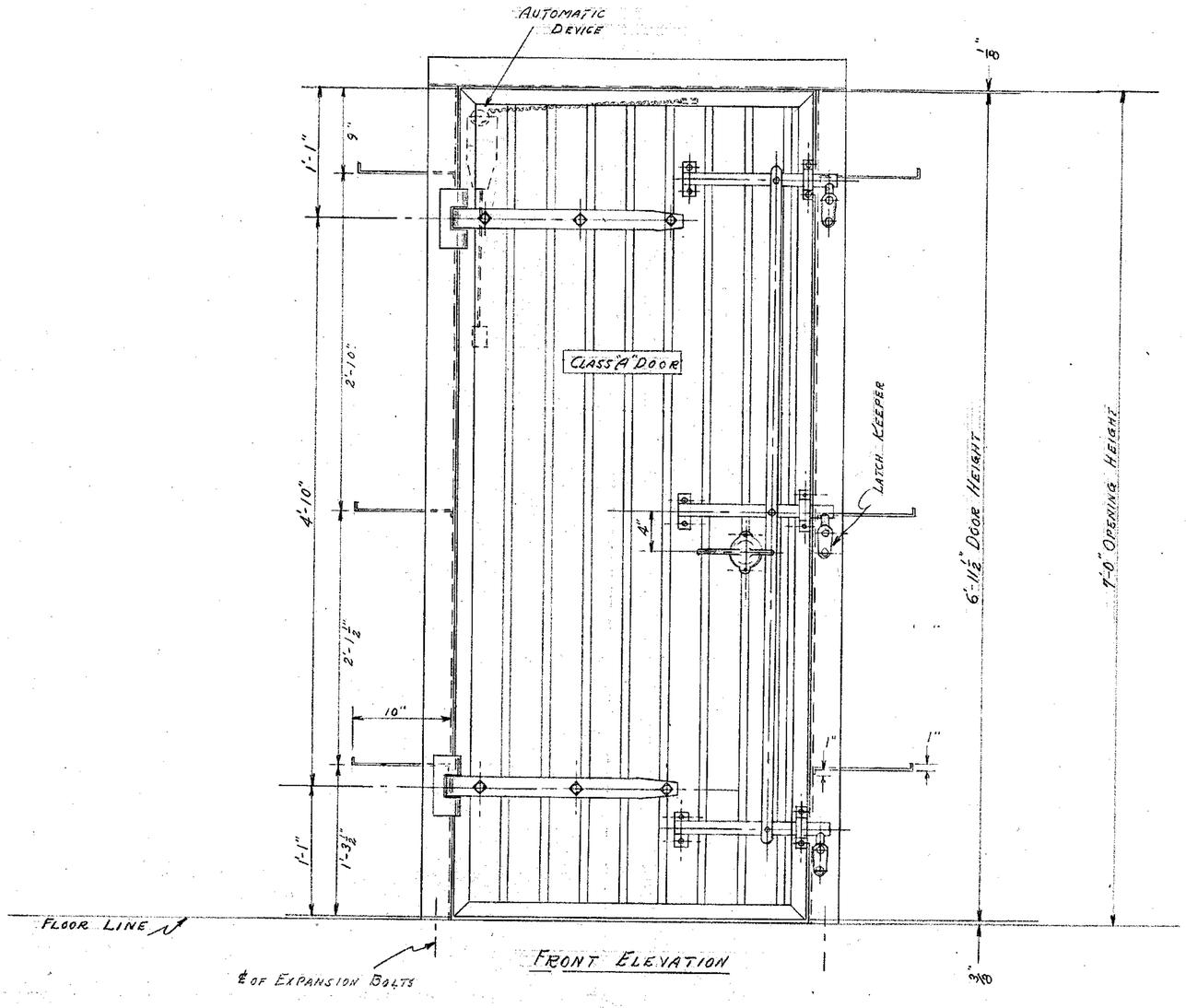
All Screen Doors shall be wired with No. 16 mesh
Copper bronze wire cloth and bottom panel shall have
guard made of 1" mesh flat copper with bronze finish.
guard grilles to go against screen cloth.

Detail of Screen Doors for the Frank Hughes
Memorial Library Bldg. - Liberty, Mo.

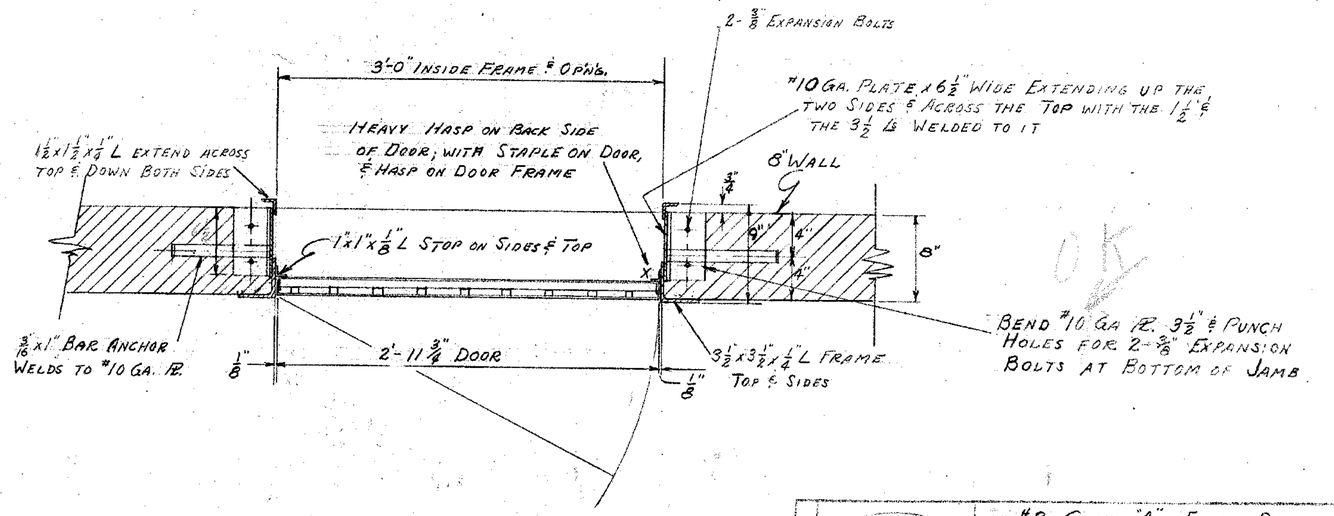
7845

AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

Detail of Screen Doors
For James Costello Lbr. Co.
Liberty, Mo.
Order No. _____ Scale _____
Drawn by AW Drawing No. 21
Approved by _____
Date 3/17/40



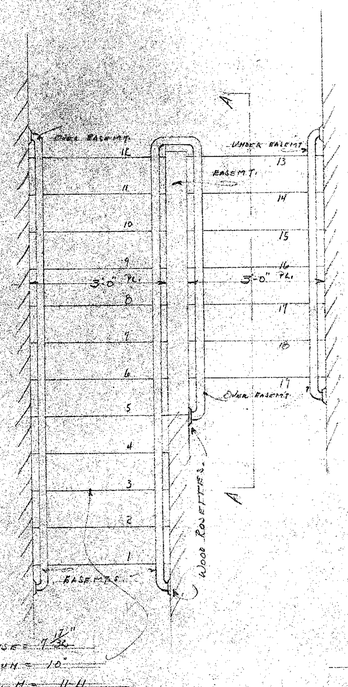
FRONT ELEVATION



PLAN SECTION
SINGLE SWING

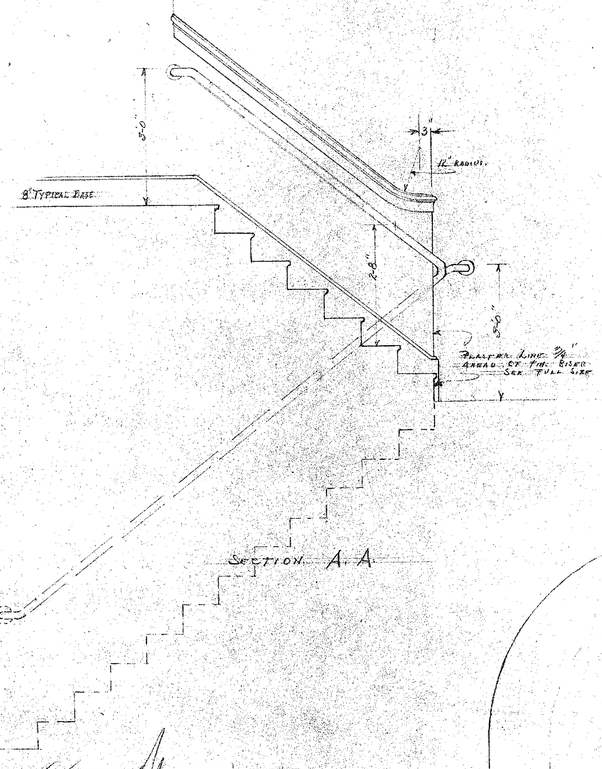
#2-CLASS "A" FIRE DOOR
LEFT SWING
P. O. 7217 LIBRARY BLDG. LIBERTY, MO.

DRAWN	CHK.	ESTIMATED	SCALE	
STEVENS		3-15-40	1½"=1'-0"	13A-3516

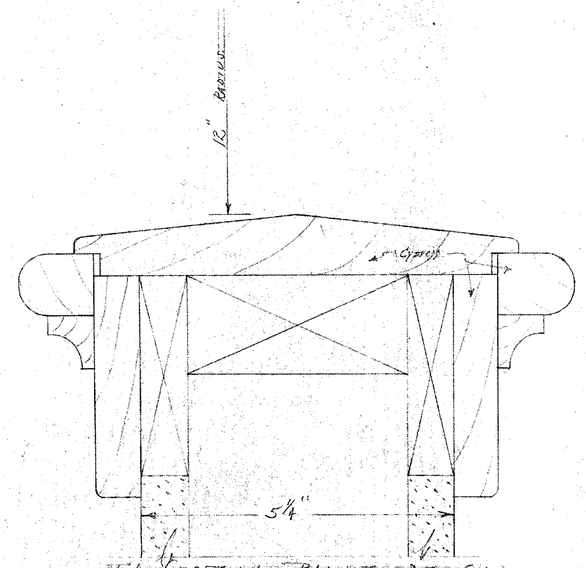


Rise = 7 1/2"
Run = 10"
Tr. H = 11-11

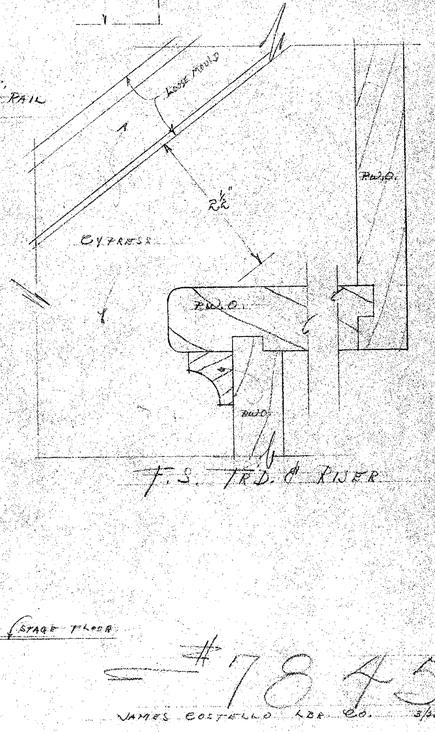
One Flight Stairs Basement to 1st Floor.
19 Risers. 1" Treads & Risers F.J. Oak - Walk Rail
1½" round. Birch. - Balance Cypress.
Balustrade Cap per Detail.
Base 6¾" square edge



Section A. A

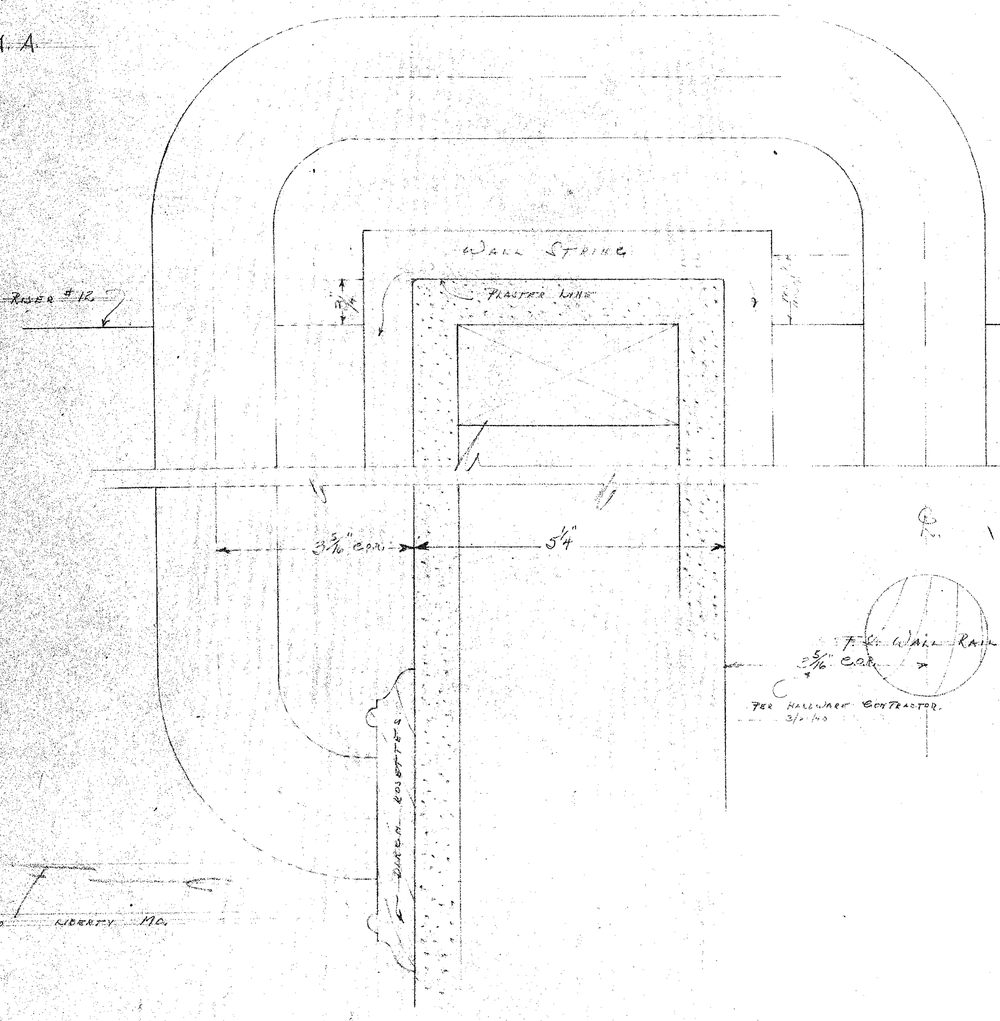


F.S. Section Balustrade Cap



One Set Steps 3 Risers to Stair Trds & Risers R.W.O.
Strings Knotty White Pine.

F.S. Trd. & Riser



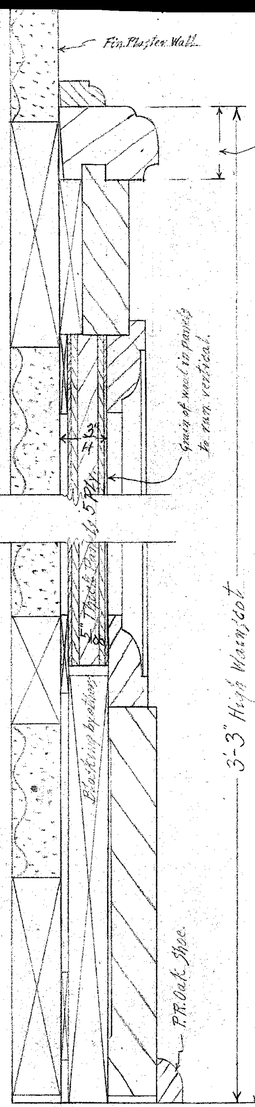
#7845

James Costello Lbr. Co. 3/21/40 Liberty Mo.

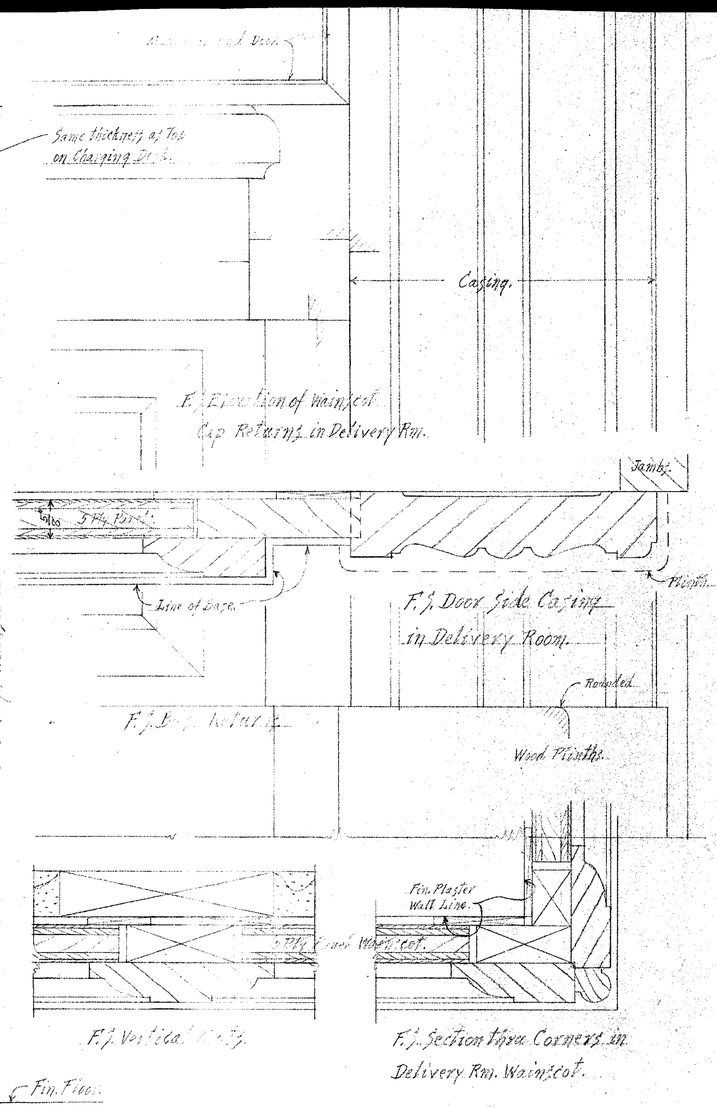
7845

AMERICAN SASH & DOOR CO
KANSAS CITY, MO.

Stair Details
James Costello Lbr. Co.
Hughes Memorial Library - Liberty, Mo.
Drwg No. _____ Scale _____
Drawn by _____ Detail No. 2
Approved by _____
Date 3/21/40



F.S. Vertical Section thru Wood Wainscot in Delivery Rm.



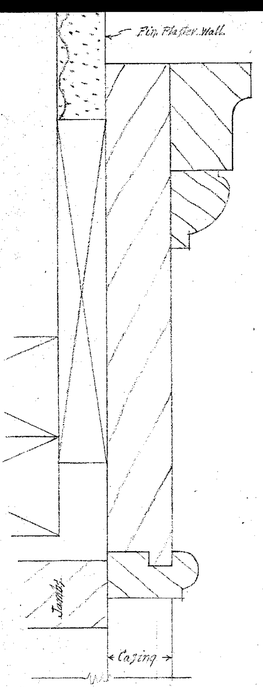
F.S. Elevation of Main Cap Returns in Delivery Rm.

F.S. Door Side Casing in Delivery Room.

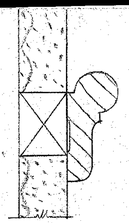
F.S. Vertical Section

F.S. Section thru Corners in Delivery Rm. Wainscot.

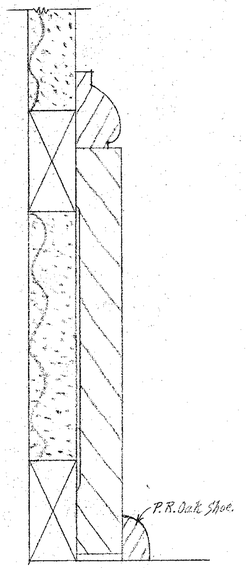
Section in Delivery Rm. Plain Gum for Paint Material K.D.



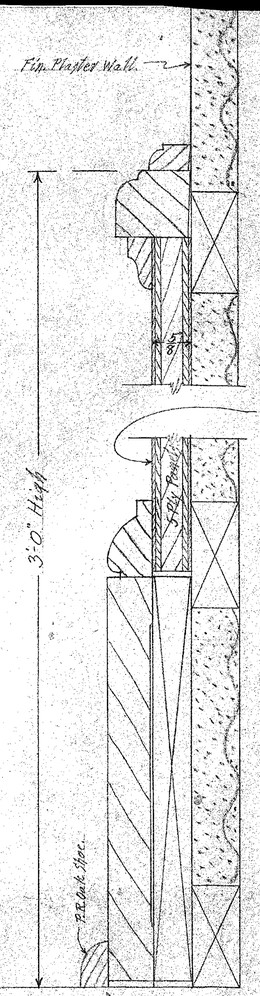
F.S. Head Casing Trim for both sides of 2 Large 9'-0" wide Cased Openings in Delivery Rm. & the Delivery Rm. side of the 5'-0" wide Vestibule Doors.



F.S. Typical Picture Mould.



F.S. Typical 3 Member Base.



F.S. Vertical Section thru Vestibule Wainscot Red Birch.

Detail of Wood Wainscot and Trim for the Frank Hughes Memorial Library, Liberty, Mo.

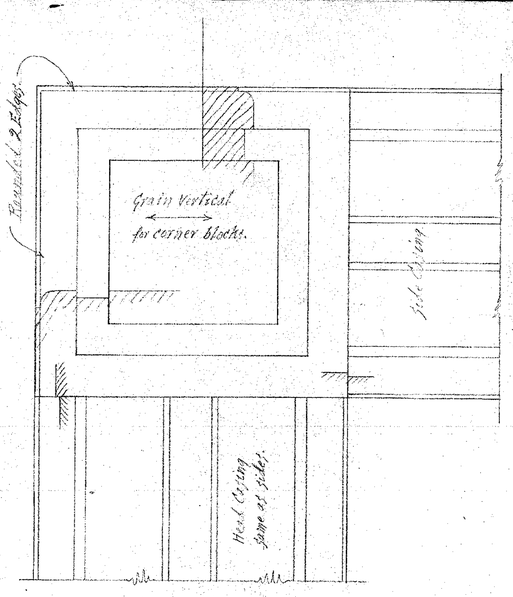
7845

AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

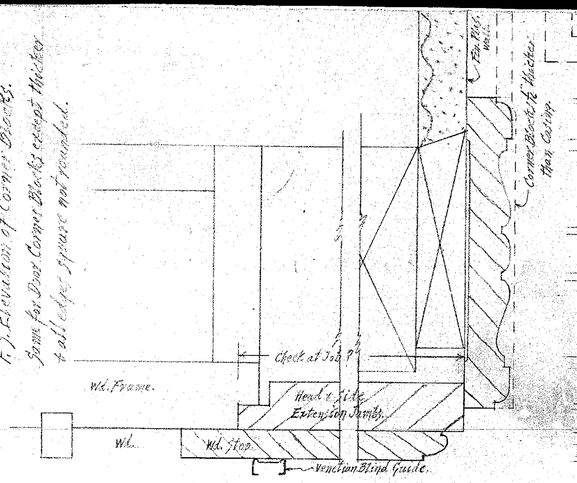
Details of Wainscot & Trim
for James Cosgrove Sons & Co.
Liberty, Mo.

Order No. _____ Scale _____
Drawn by AW Drawing No. 14
Approved by _____
Date 3/27/40

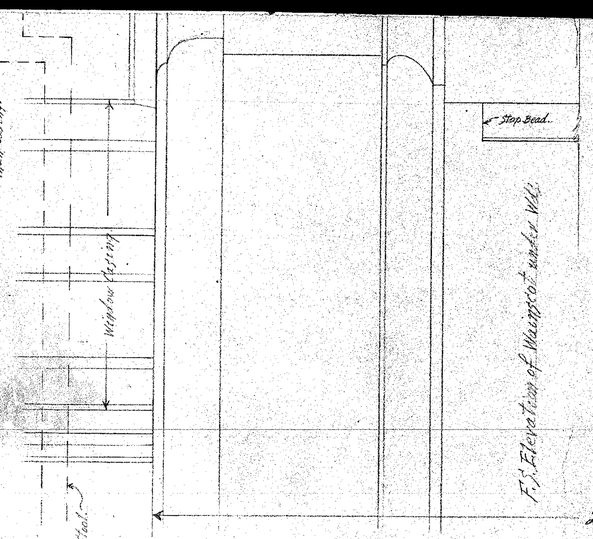
Revised 4/3/40
" 4/10/40



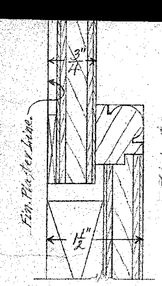
F.S. Elevation of Corner Blocks.
Same for Door Corner Blocks except Mullion
& all edges square not rounded.



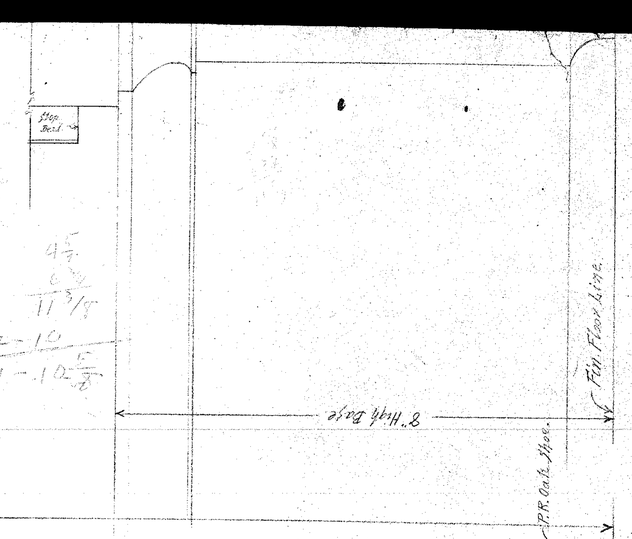
F.S. Section Thru Window Jamb Trim.
Head Trim similar.



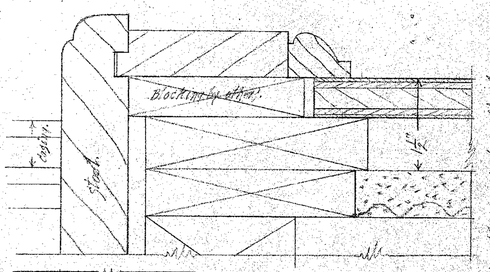
F.S. Elevation of Wainscot under Wdw.



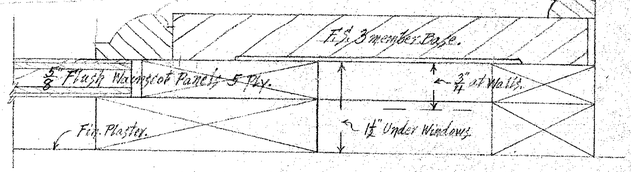
Grain of wood for Wainscot Panels to run vertical.

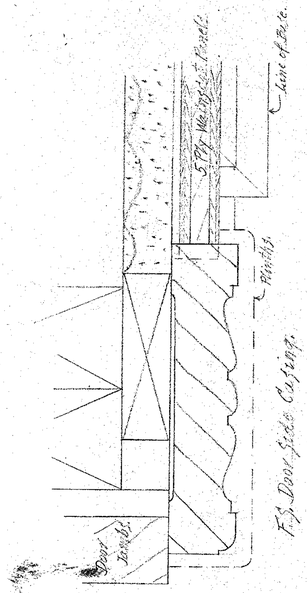


2'-10" High.

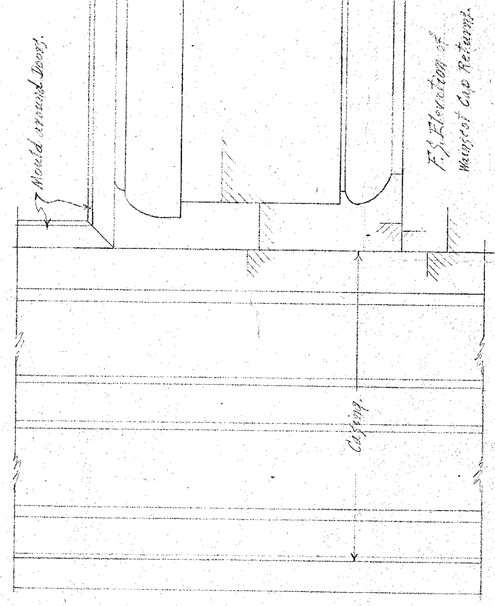


F.S. Section thru Wdw. Wainscot Stools.

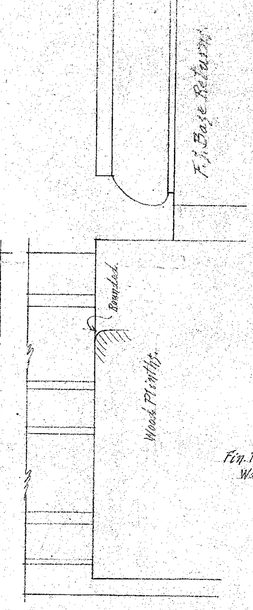


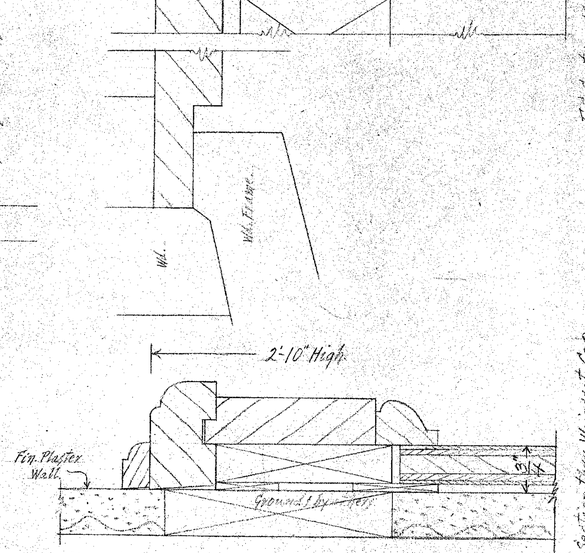


F.S. Door Side Casing.



F.S. Elevation of Wainscot Cap Returns.





F.S. Section thru Wainscot Cap.

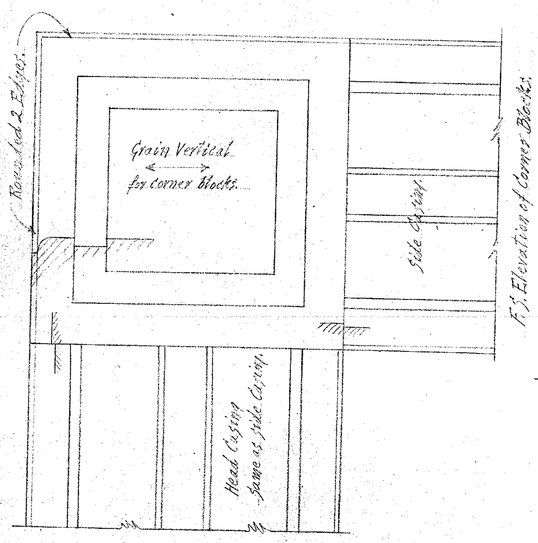
Detail of Wood Wainscot and Trim in Adult's Reading Room for the Frank Hughes Memorial Library.
Liberty, Mo.

7845

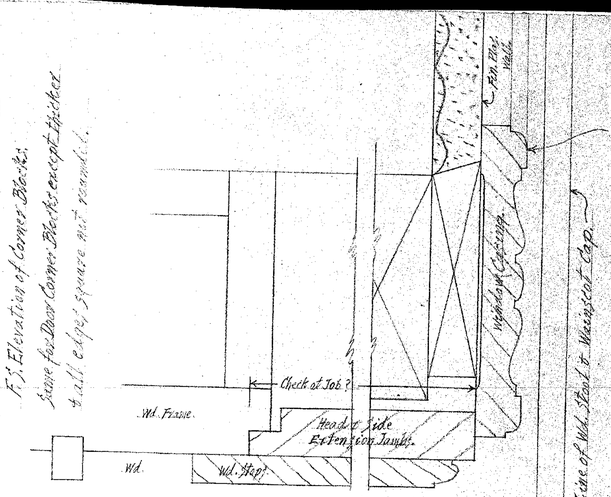
AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

Detail of Adult's Reading Rm. Wainscot
for James Costello Arch't
Liberty, Mo.
Drwg No. Scale
Drawn by AW. Drawing No.
Approved by
Date 3/18/40. 12

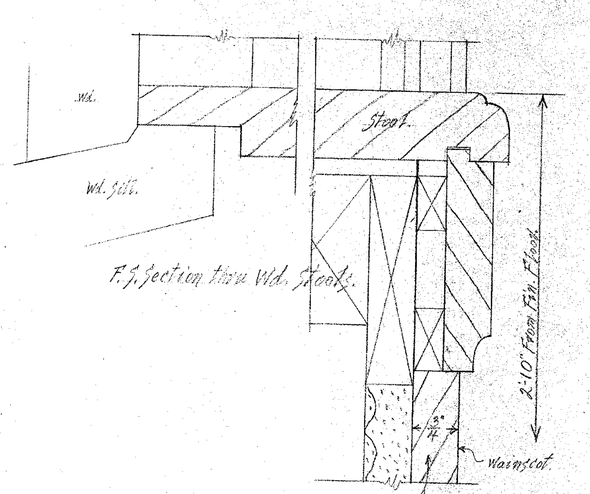
Revised 4/15/40



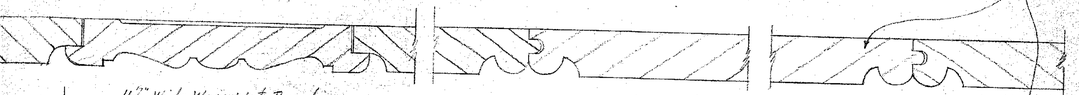
F.S. Elevation of Corner Blocks.
Same for Door Corner Blocks except thickness
1 1/2" edges square not rounded.

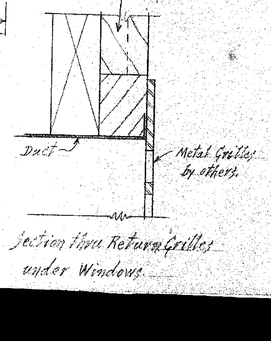


F.S. Section thru Window Jamb Trim.
Head Trim Similar.

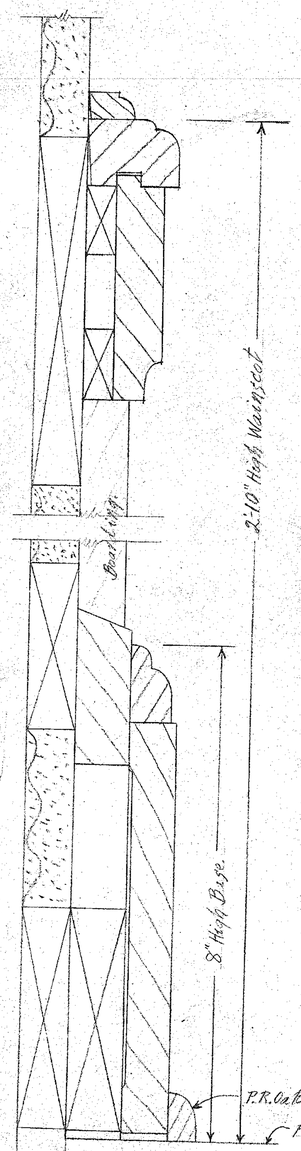


F.S. Section thru Wd. Stools.

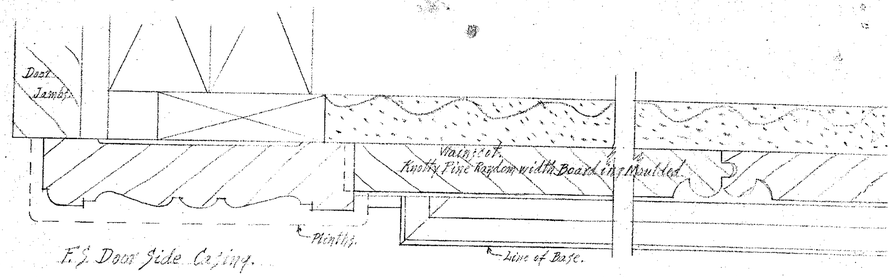




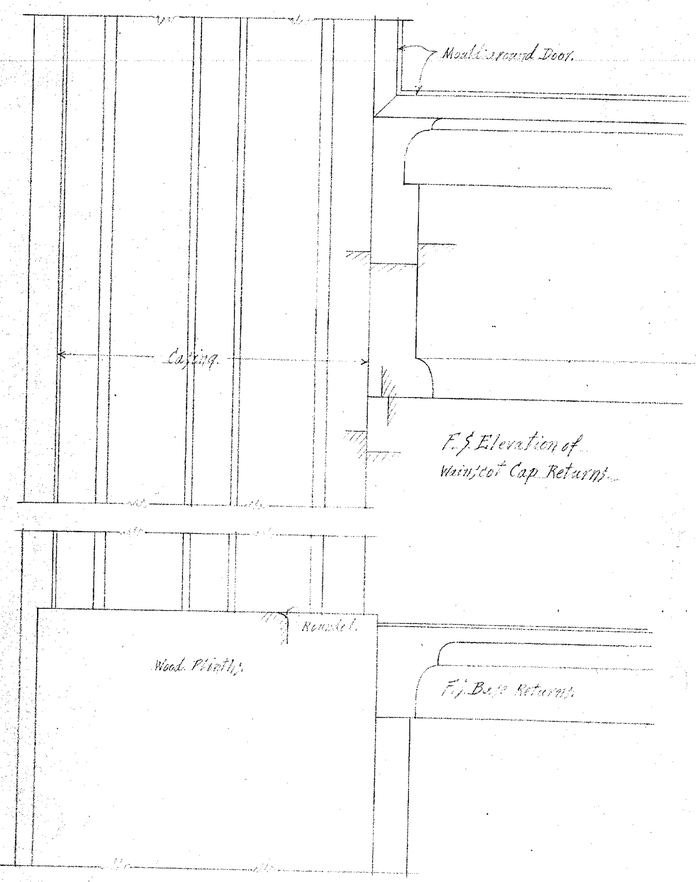
Section thru Return Grilles
under Windows.



F.S. Vertical Section thru Wood Wainscot.



F.S. Door Side Casing.



F.S. Elevation of
Wainscot Cap Returns.

Detail of Wood Wainscot and Trim in Children's Reading Room for the Frank Hupfer Memorial Library Liberty, Mo.

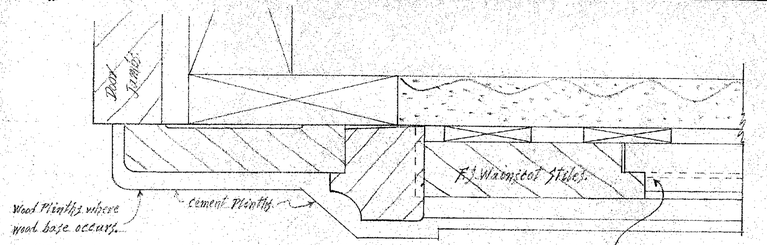
7845

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KANSAS CITY, MO.

Detail of Children's Reading Room Wainscot
for James Cecil Hupfer Est.
Liberty, Mo.

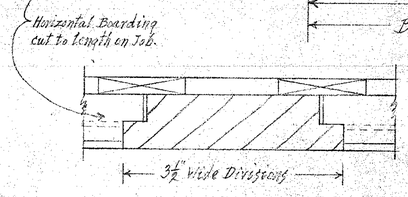
Drawn by RH
Checked by
Date 3/12/40

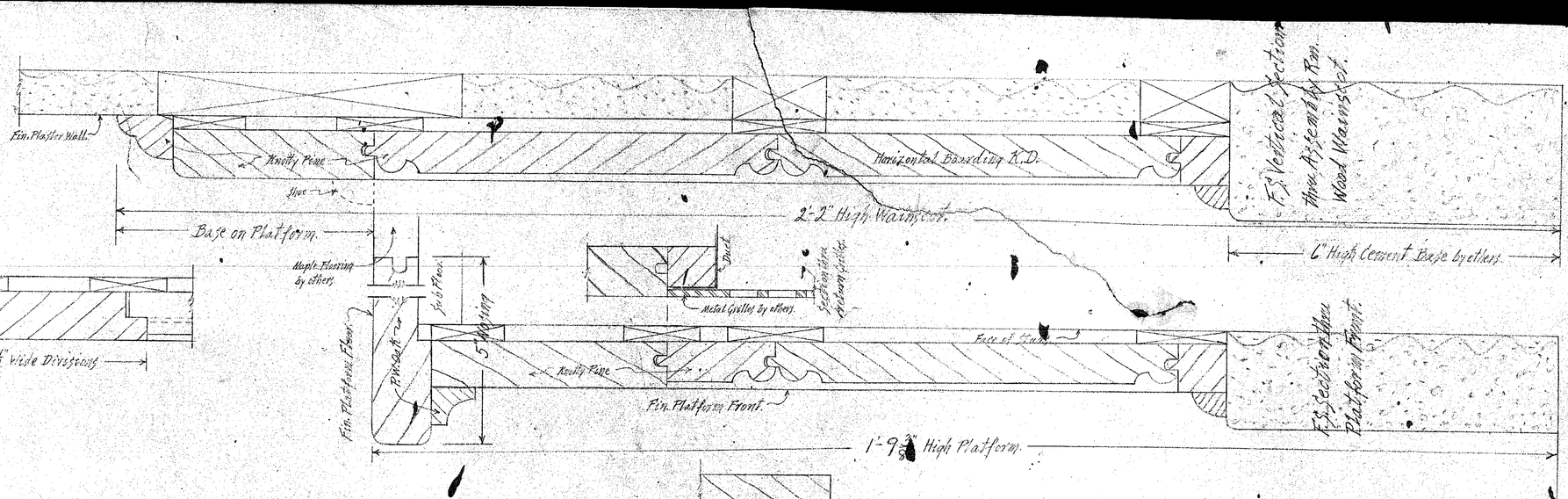
Revised 4/5/40
" 4/10/40
Return Grille Detail Added

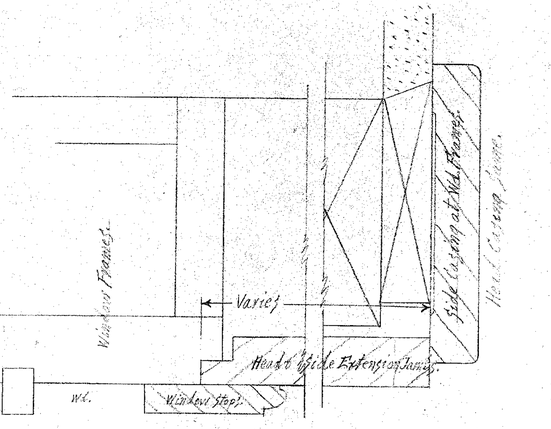


F.S. 2 Member Door Trim in Assembly Room.

Same 2 member Trim for Wd. & Doors in Vestibule and Office on 1st. Floor.

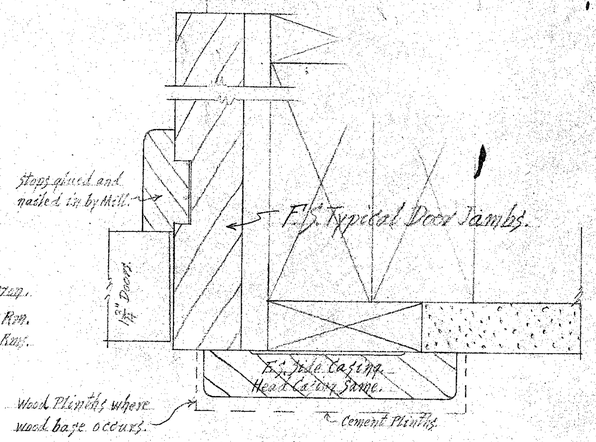




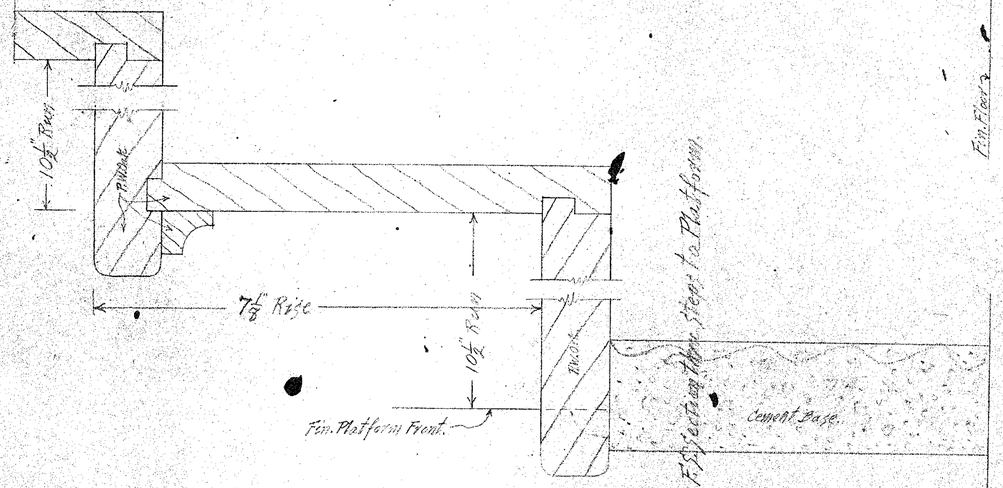


F.J. Typical Wd. Trim in Basement.

Same Trim for Wd's. in Book Storage Stair Landing & Work Rm. & Women's Toilet on 1st. Floor.



F.J. Trim for Doors in Corridor & Service Portion of Basement also for Doors in Book Storage and Work Rm. & Women's Toilet on 1st. Floor.



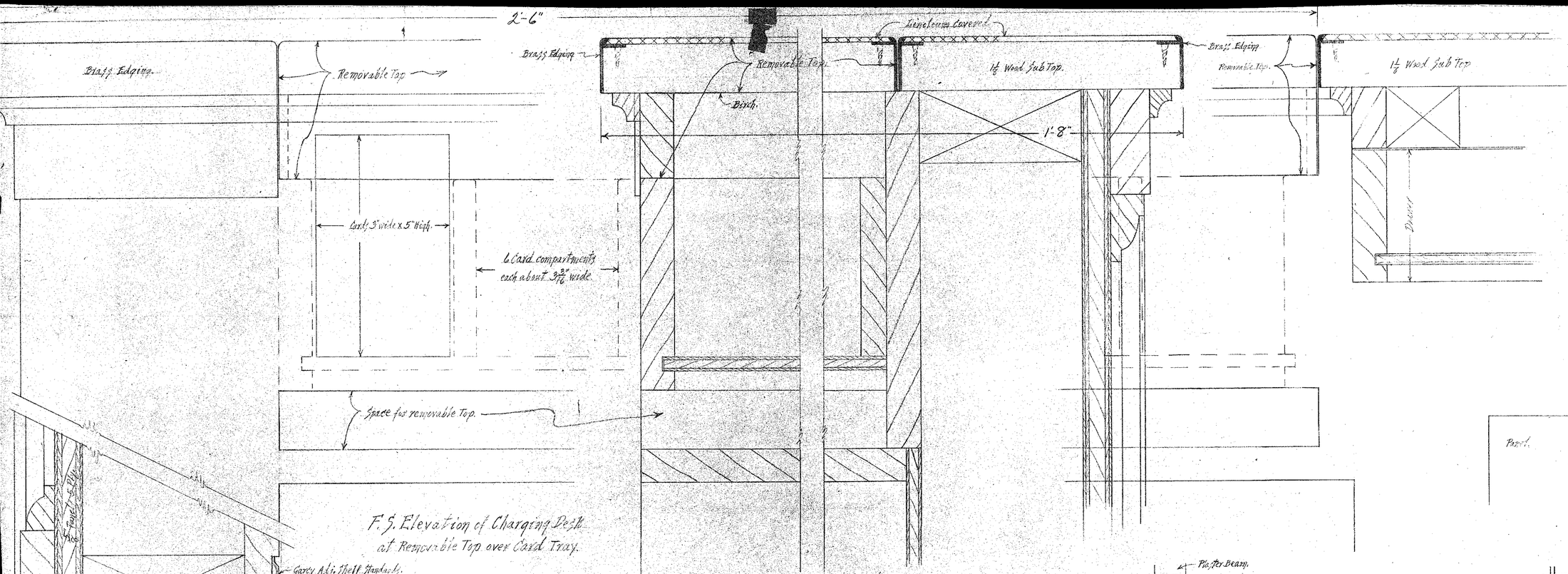
Detail of Assembly Rm. Wainscot & Typical Trim for the Frank Hughes Memorial Library Liberty, Mo.

Revised 4/5/40

7845

AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

Detail of Wainscot & Typical Trim
For James Costello Lbr. Co.
Liberty, Mo.
Order No. ____ Scale ____
Drawn by A.W. Drawing No. 11
Approved by ____
Date 3/18/40



F.S. Elevation of Charging Desk at Removable Top over Card Tray.

F.S. Section.

F.S. Section thru Pilasters at A-A.

¾" Scale Elevation of Wall Pilasters in Delivery Room.

2 Pilasters required like above Plain Gum for Paint.

Panel

See our Drawing Sheets #15 & #16 for other details of Desk & Railing.

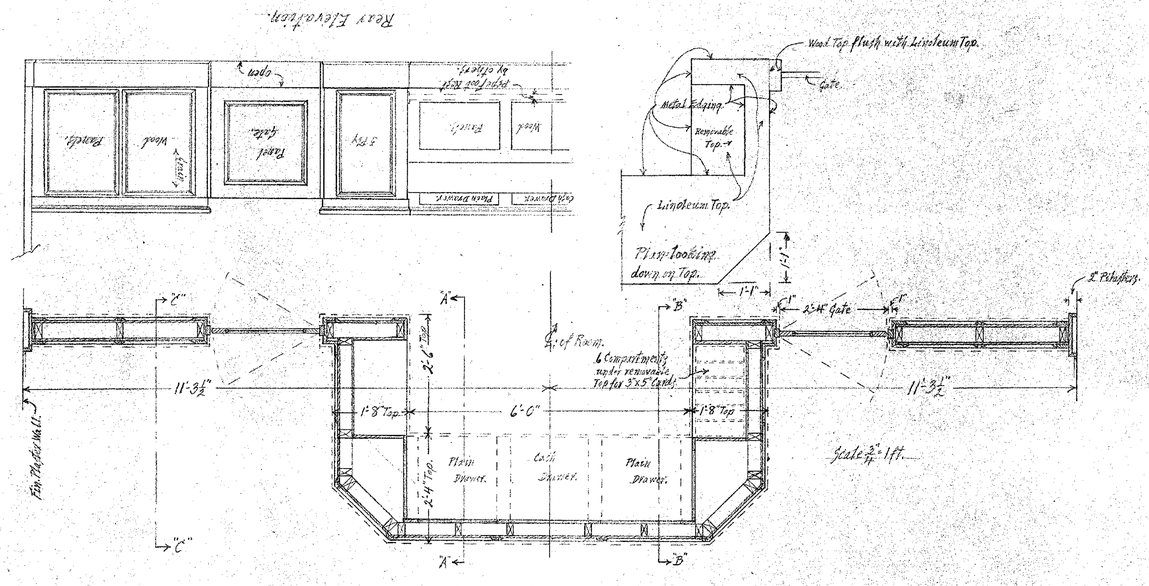
Detail of Charging Desk in Delivery Rm. for the Frank Hughes Memorial Library, Liberty, Mo.

Revised 11/3/40

7845

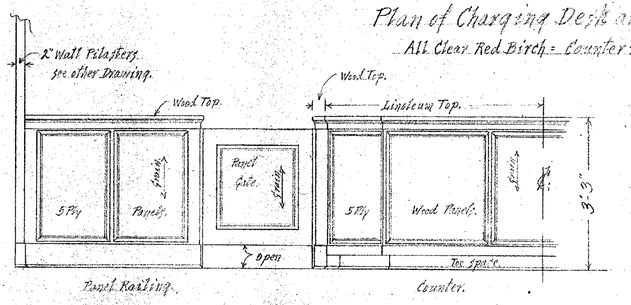
AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

Detail of Charging Desk
for James Costello Lbr. Co.
Liberty, Mo.
Order No. ____ Scale ____
Drawn by AW. Drawing No. 7
Date 3/18/40



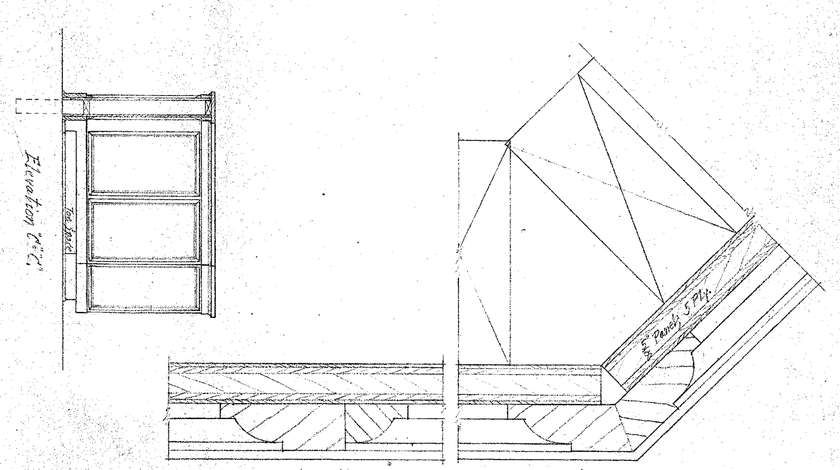
Plan of Charging Desk and Railing in Delivery Rm.

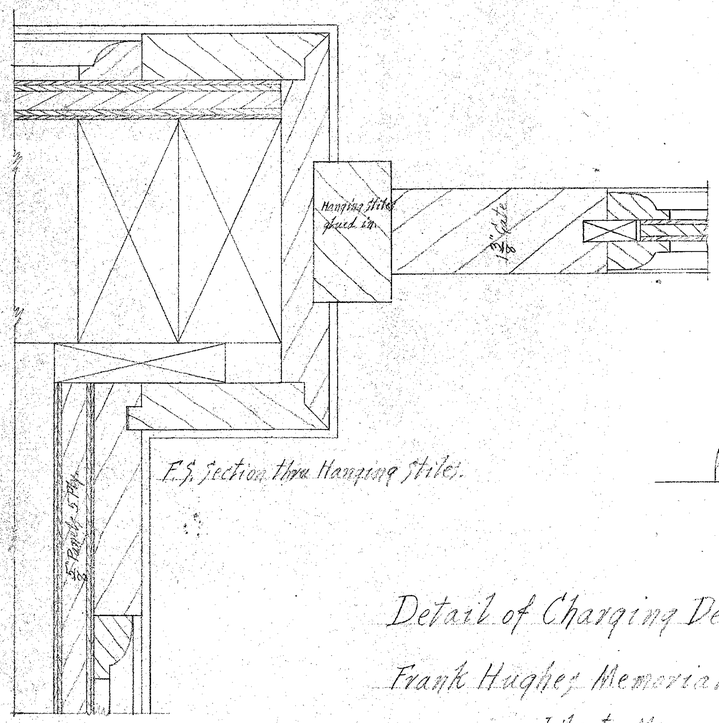
All Clear Red Birch - Counter & Railing built up - Shoe moulds loose.

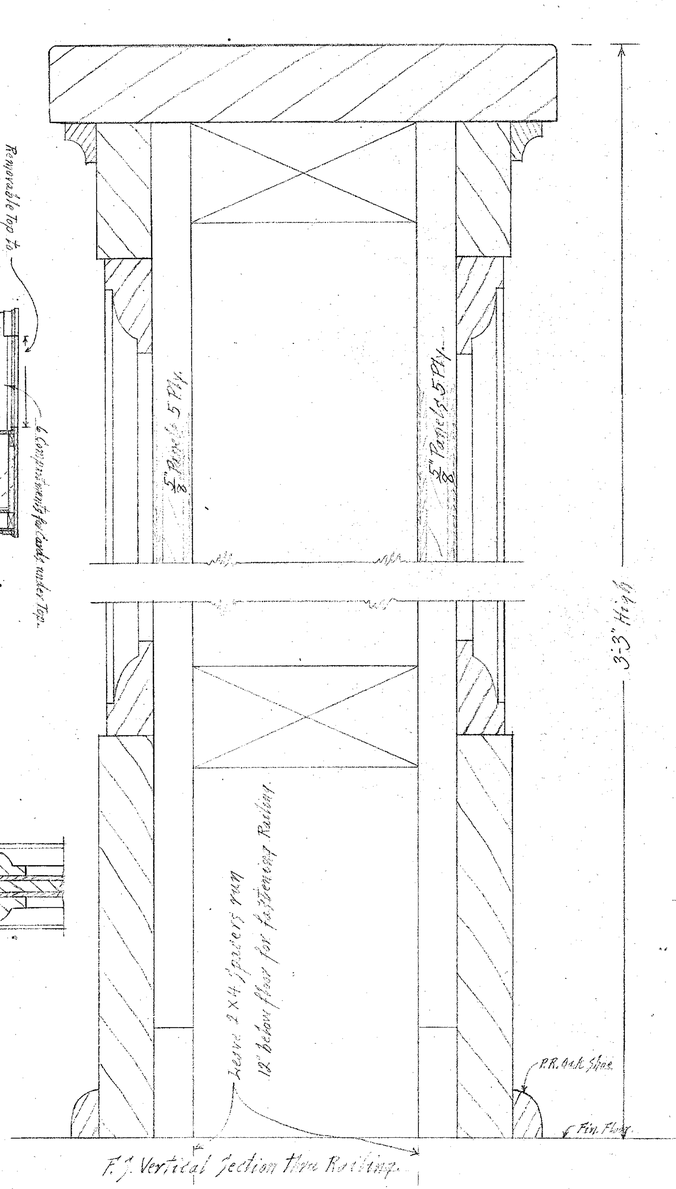


Front Elevation.

See our Drawing Sheets #16 & #17 for other details.



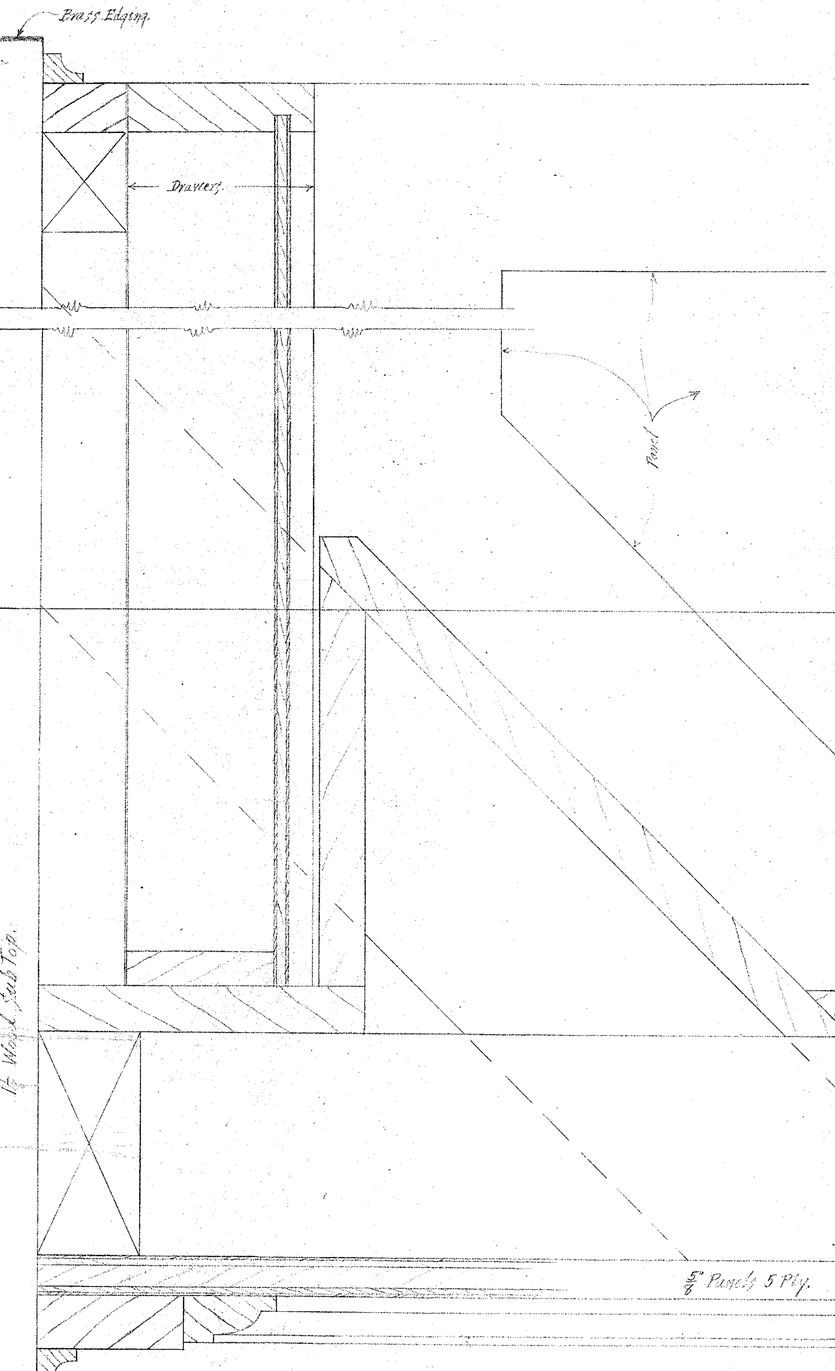


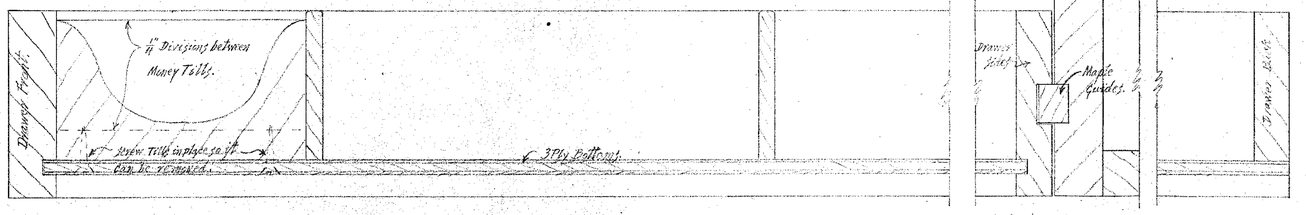


Detail of Charging Desk & Railing for the Frank Hughes Memorial Library, Liberty, Mo.

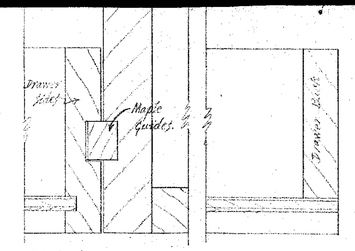
7845
AMERICAN BANK & BANK CO.
KANSAS CITY, MO.
Detail of Charging Desk & Railing
Frank Hughes Memorial Library
Liberty, Mo.
Original No. ... Scale ...
Drawn by ... AJC ... Date ...
Approved by ...
Date ... 3/11/10 ... 16

Revised 4/12/10
4/16/10

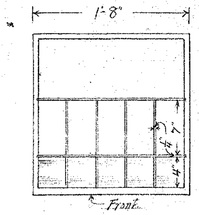




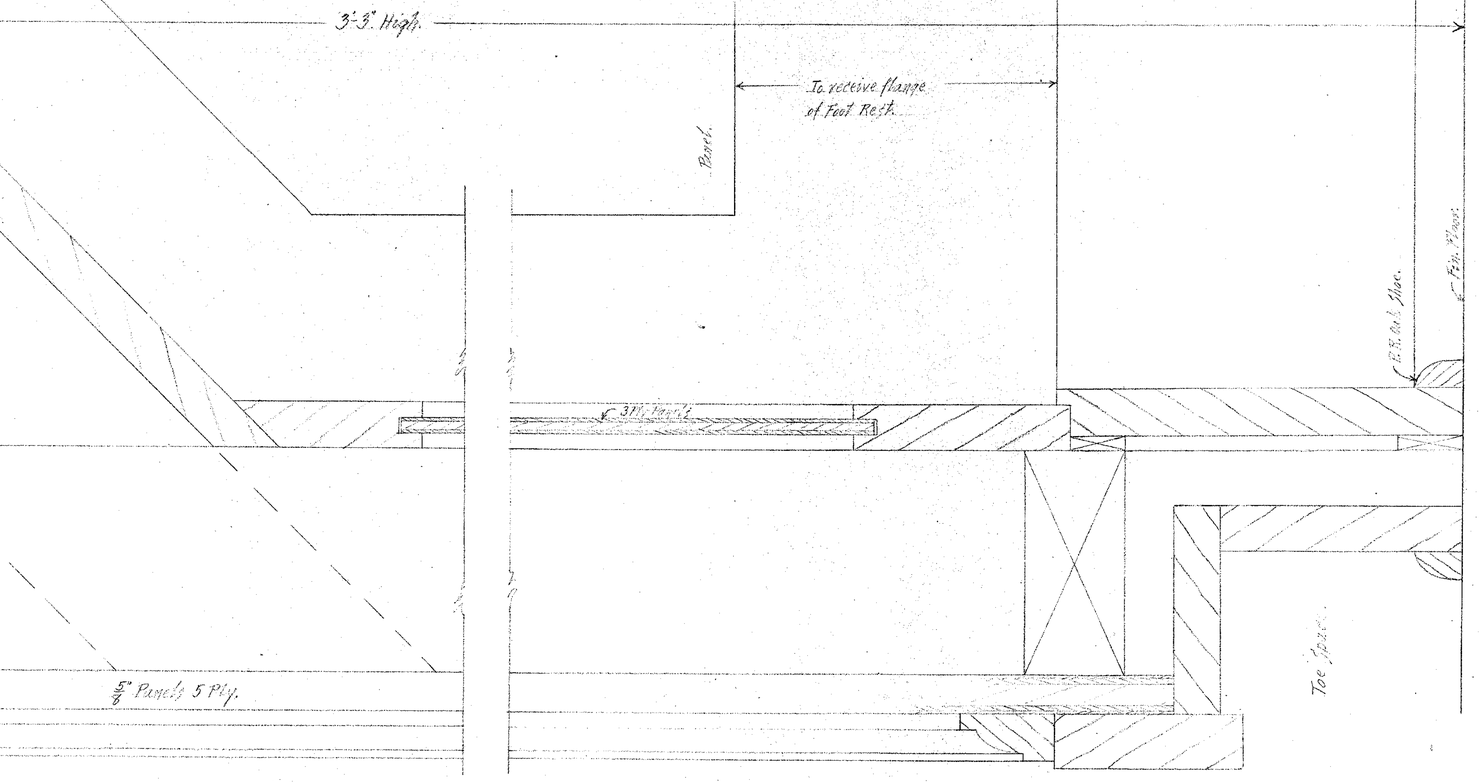
F.S. Section thru. Cash Drawer.



F.S. Section thru Drawer Sides.
All drawers to have dove-tailed corners and run on Maple Side Guides.



1½ Scale Plan of Cash Drawer.



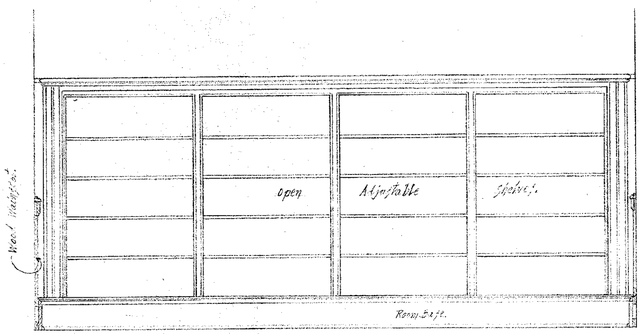
F.S. Vertical Section thru Charging Desk in Delivery Room.

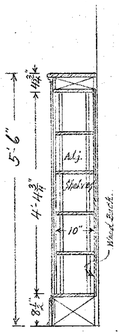
See our Drawing Sheets #15 & #17 for other details of Desk & Railing.

7845
AMERICAN BANK & DOOR CO.
KANSAS CITY, MO.
Detail of Charging Desk for James Gifford's Sons Co. Liberty, Mo.
Order No. ____ Scale ____
Drawn by APL Drawing No.
Approved
Date 3/18/40
16

Revised 4/5/40
" 4/10/40

Detail of Charging Desk in Delivery Rm. for the Frank Hughes Memorial Library, Liberty, Mo.



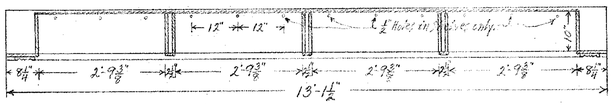


Elevation of Book-Case on North Wall in Children's Reading Rm.

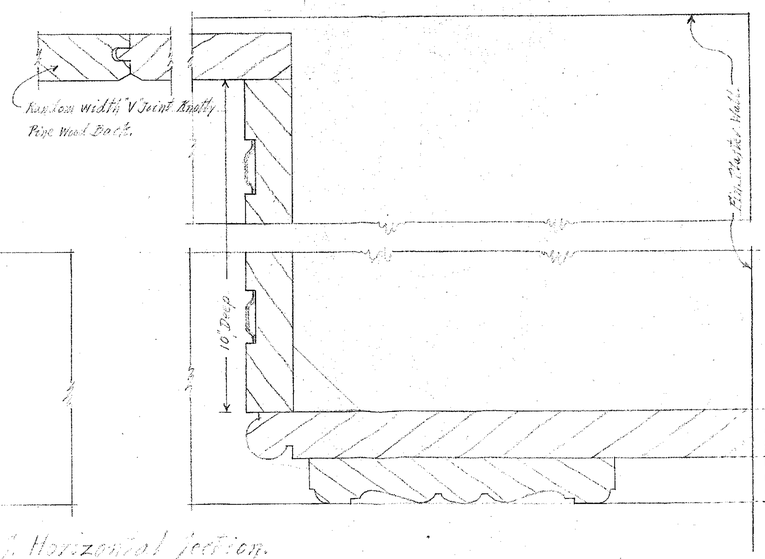
Section.

1 Book-Case Required like above Knotty Pine Fronts Shelves Ends and divisions Clear W. Pine & Knotty Pine Backs - Set up.

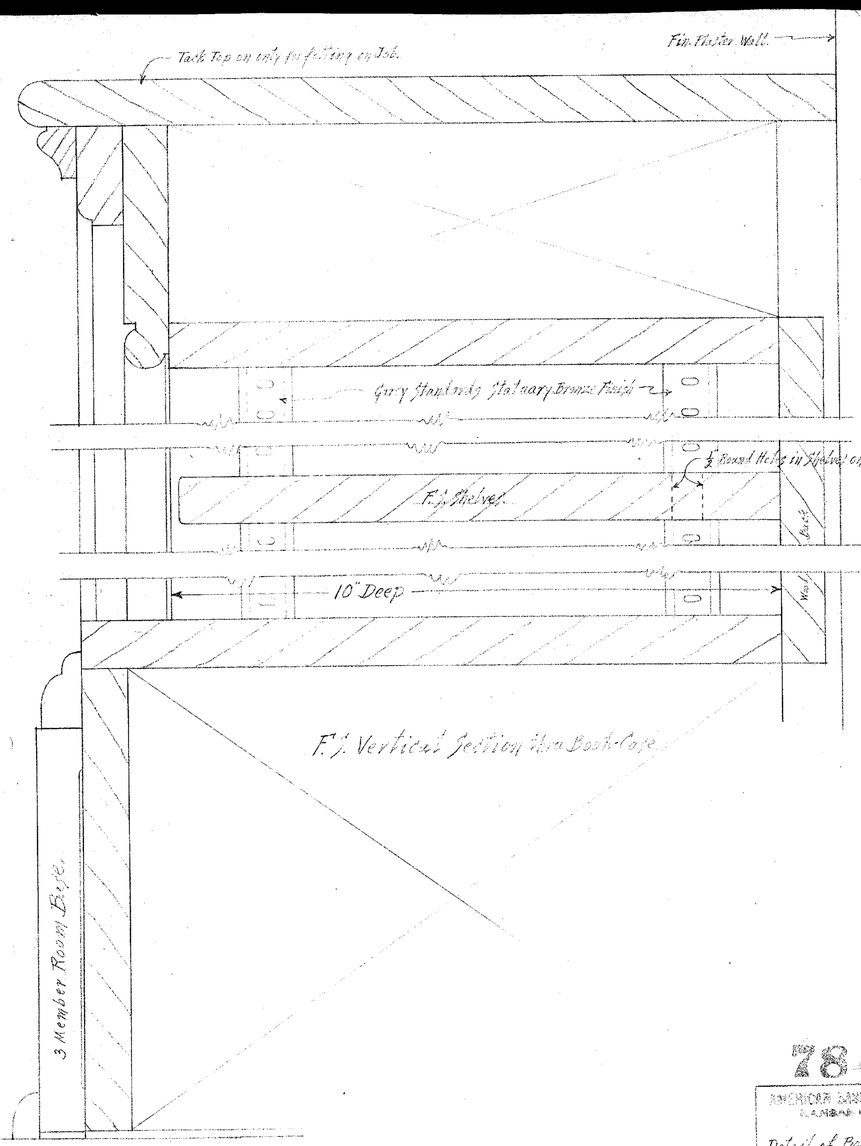
Scale 3/4" = 1 ft.



Plan.



F. J. Horizontal Section.



F. J. Vertical Section thru Book-Case.

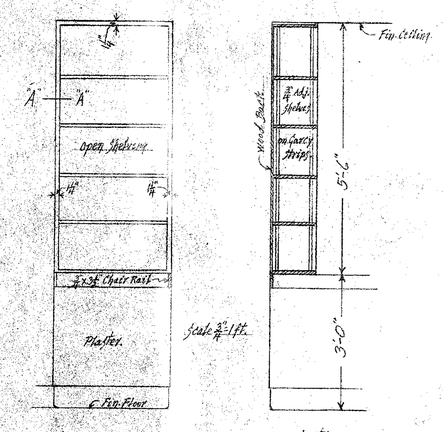
Detail of Book-Case in Children's Reading Room for the Frank Hughes Memorial Library - Liberty, Mo.

Revised 11/5/40

7845

AMERICAN SEATING CO.
CHICAGO, ILL.

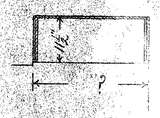
Detail of Book-Case
for James Costello Estate Co.
Liberty, Mo.
Order No. ... Basis ...
Drawn by AH Drawing No. ...
Approved by ...
Date 3/19/40 Scale 3/4"



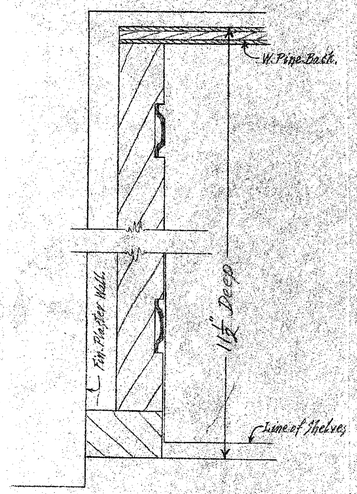
Scale 3"/4 = 1 ft.

Section.

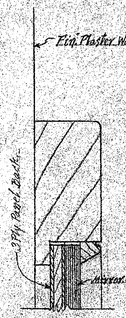
Elev. of Case in Alcove
off Assembly Rm in Basement.
1 Case Required like above Cypress
Set up



Plan.



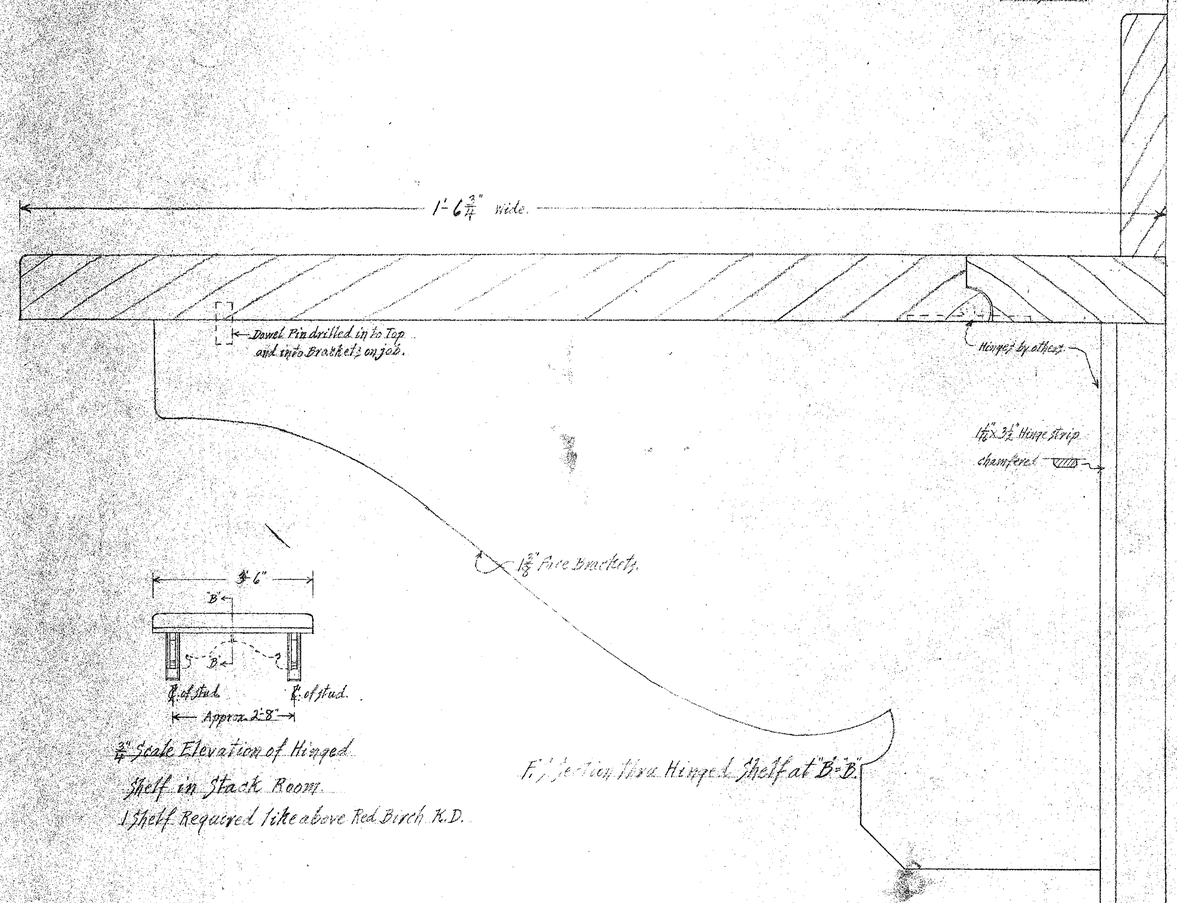
F. S. Section "A"-"A"



F. S. Section thru
Mirror Frames.

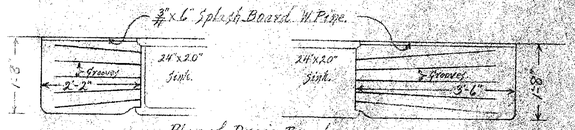


3"/4 Scale Elevation of
Toilet Rm. Mirror Frames.
3 Frames Required Like
above all Plain Gum.



3"/4 Scale Elevation of Hinged
Shelf in Stack Room.
1 Shelf Required like above Red Birch K.D.

F. S. Section thru Hinged Shelf at "B"-"B"



Plan of Drain Boards.

2 Drain Boards in pairs
required 1½"x20"x2'-2"
like above W. Pine.

1 Drain Board required
like above 1½"x20"x5'-6" W. Pine.

Note: Drain Boards made from 1 Board for width (not glued.)

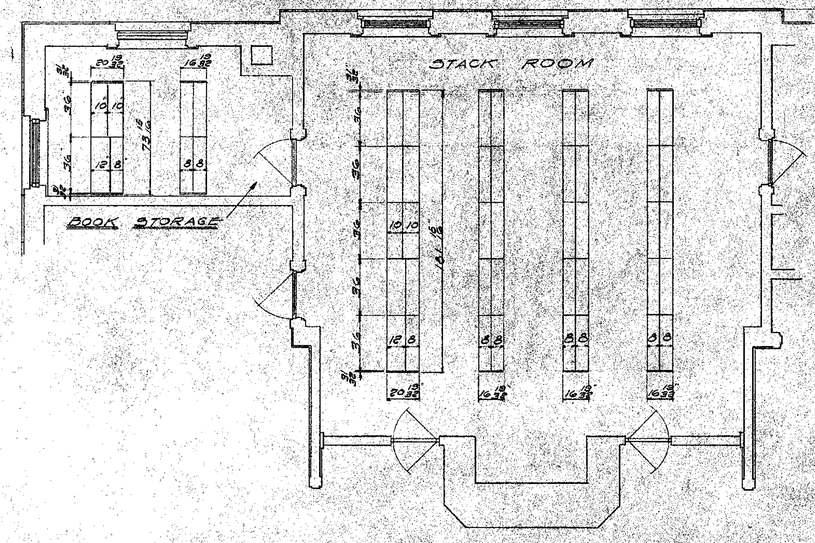
Detail of Cases for the Frank Hughes Memorial Library Bldg.

Liberty, Mo.

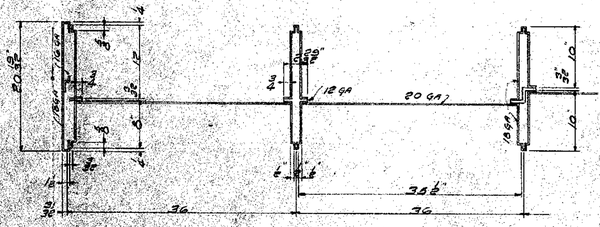
7845

AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

Detail of Cases
for James Costello Lbr Co.
Liberty, Mo.
Order No. ____ Scale ____
Drawn by AW Drawing No. 19
Approved by ____
Date 3/19/40



FLOOR PLAN



HORIZ. SECTION

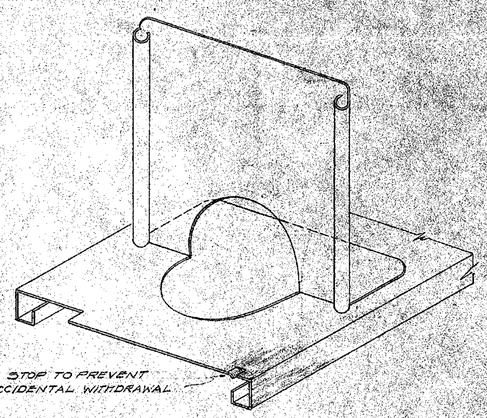
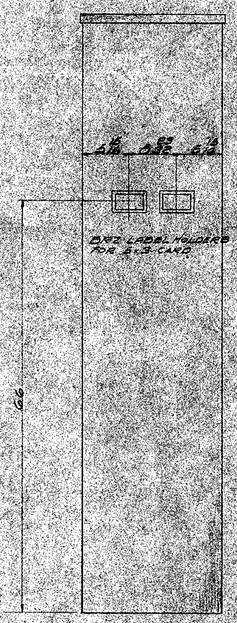
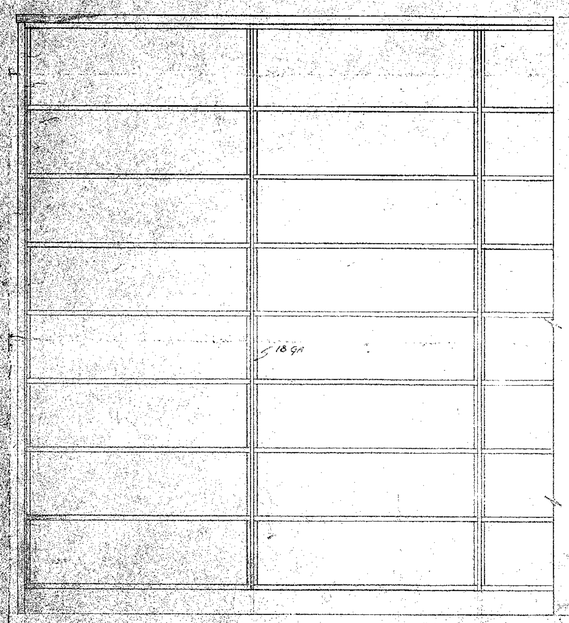
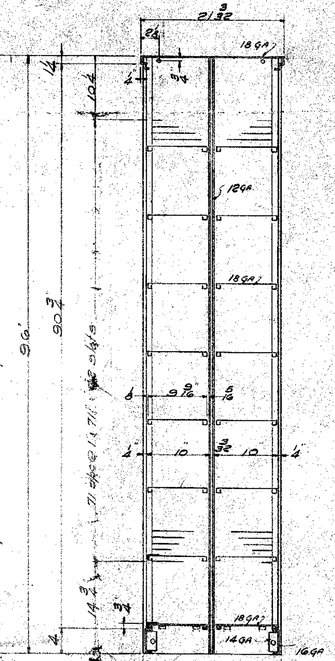


PLATE BOOK SUPPORT





TYPICAL ELEV. FOR ALL CASES



VERT. SECTION

NOTE:
FINISH TO BE "AS GRAINED"
WALNUT ON EXPOSED SURFACE OF END PANELS
UPRIGHTS, SHELVES, TOPS & BASES

BERLOY — BERGER MANUFACTURING DIVISION
REPUBLIC STEEL CORPORATION — CANTON, OHIO

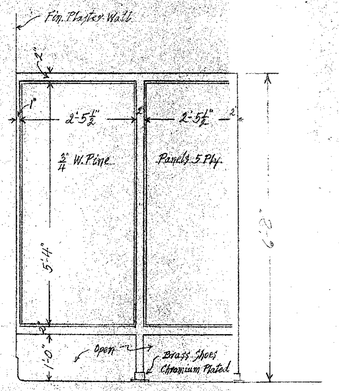
DETAIL & LAYOUT OF SLOTTED TYPE LIBRARY SHELVING FOR FRANK HUGHES MEMORIAL LIBRARY

DR. K 5/9/42
TR.
CK.
APP'D
SCALE
SHEET OF

WT.
ORDER NO. 3404
PROPOSAL NO.
DRAWING OR CODE

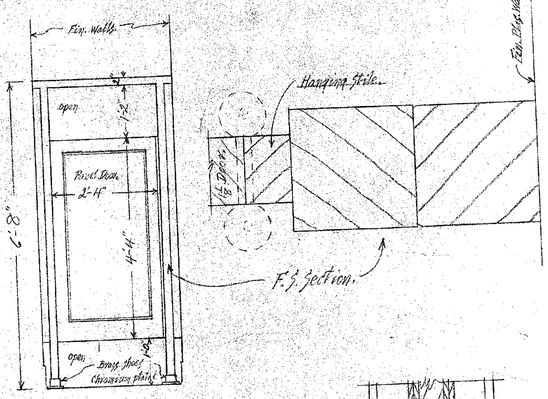
DEPT. | GAGE | CUT SIZE | MATERIAL

NO. 80103 NATIONAL TRACING PAPER B. K. ELLIOTT CO. PITTSBURGH, PA.



End Elevation.

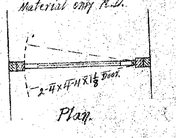
Scale ¾" = 1'-0"



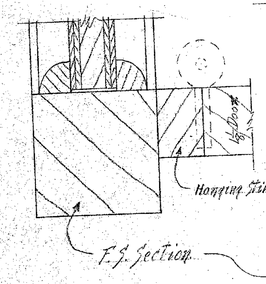
Elevation of Double Acting Flap Door in Basement Boys Toilet.

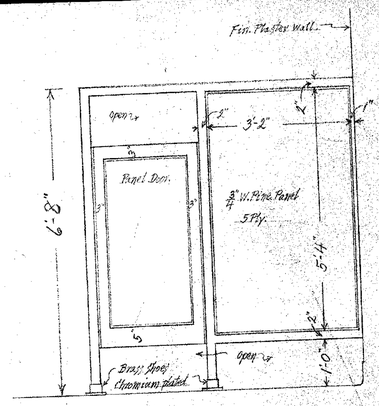
Cypress with Birch Door.

Material only K.D.

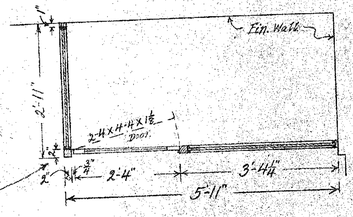


Plan.



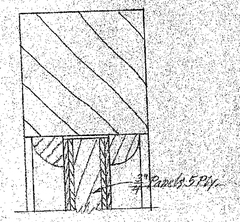


Elevation of Toilet Partition in Women's Toilet Rm. 1st. Floor.



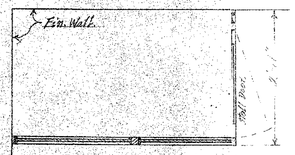
Plan.

Clear Gum with Birch Door material only K.D.



F. J. Section Thru Top Rail.

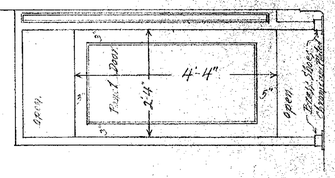
Bottom Rail Similar.

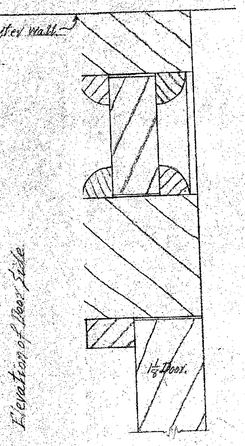


Plan of Toilet Partitions Girls and Boys Toilets in Basement.

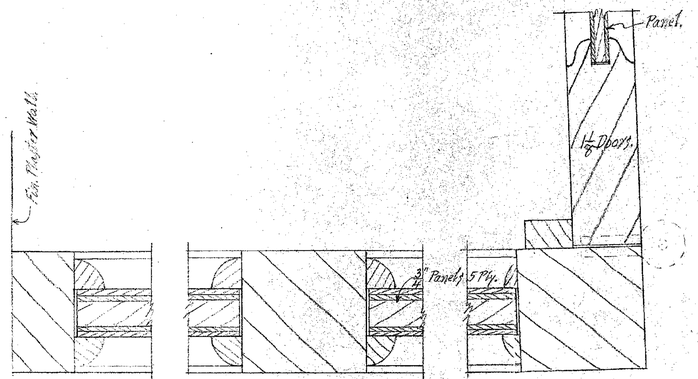
Cypress with W. Pine panels & Birch Doors for both Partitions.

Material only K.D.





Elevation of Door Side.



Typical F. J. Horizontal Section thru Toilet Partitions

Detail of Toilet Stall Partitions for the Frank Hughes Memorial Library Bldg. Liberty, Mo.

7845

AMERICAN SASH & DOOR CO.
KANSAS CITY, MO.

Detail of Toilet Stall Partitions
For James C. Petway Inc. Co.
for Liberty, Mo.
Order No. ____ Scale ____
Drawn by AW. Drawing No. 18
Approved by ____
Date 3/19/40

Revised 4/15/40

• Heating System •

Scale - 1/2" = 1'

First Floor Partitions

• Exhaust System •

Scale - 1/2" = 1'

Section A-A

Detail of Typical Stack Head • Showing Positive-Locking Damper •

Note: Position of Damper is to be Adjusted by Hand Through Grille Openings And Locked Securely in Place With the Wing-Nut •

Note: The top of these three ducts is to be 1" below the rough flooring —

• FRANK HUGHES • MEMORIAL LIBRARY —

• Liberty, Missouri •

Wight & Wight —— Architects

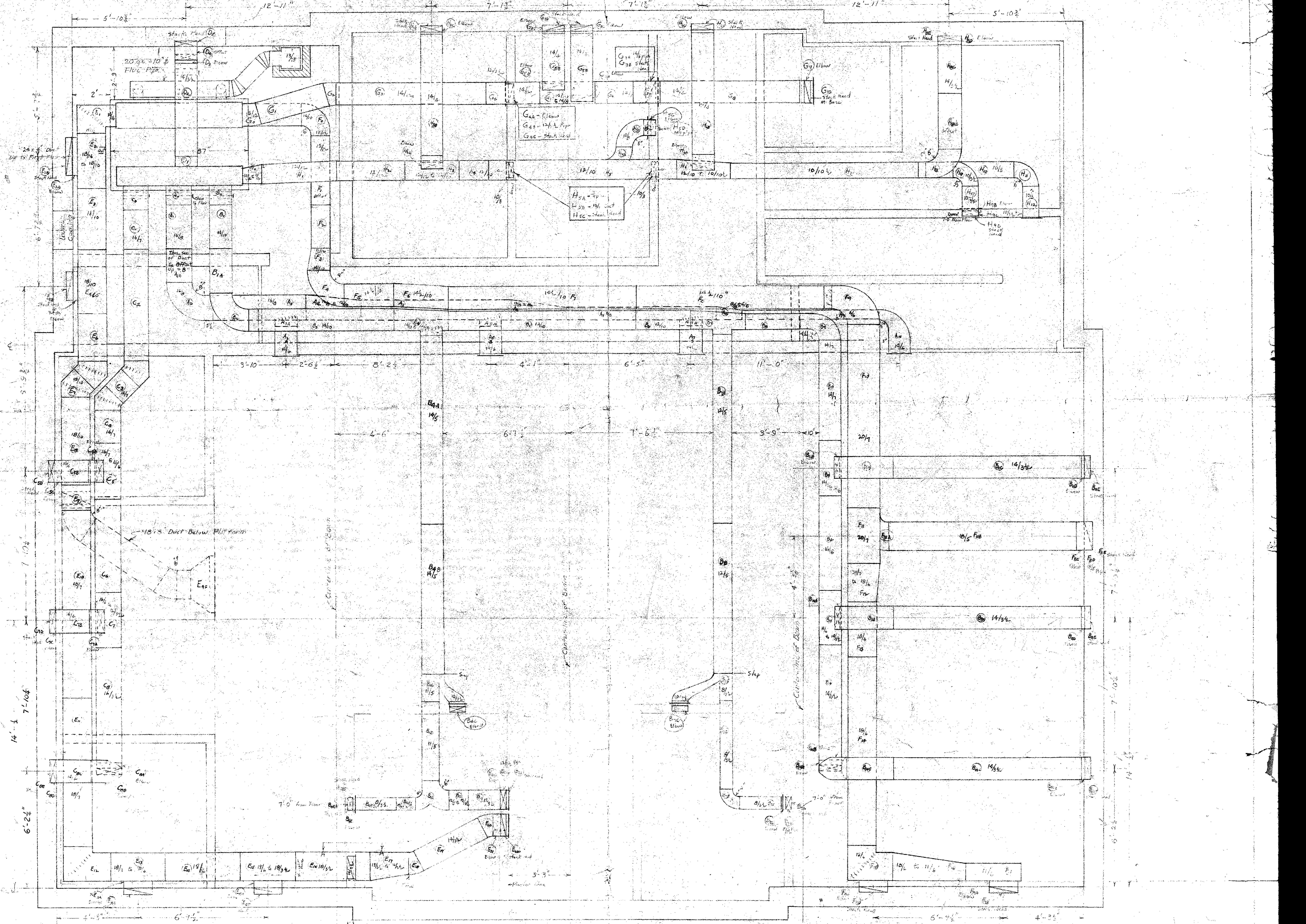
T. P. Hensen Const. Co. — General Contractor

ACME SHEET METAL COMPANY

• HEATING •

Shop Drawings

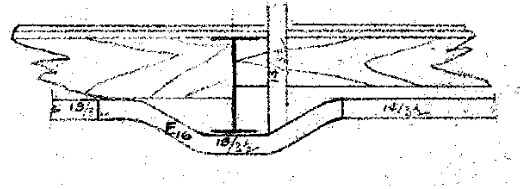
Drawn by - L.F.
Jan. 4, 1940
Revised Jan 17, 1940



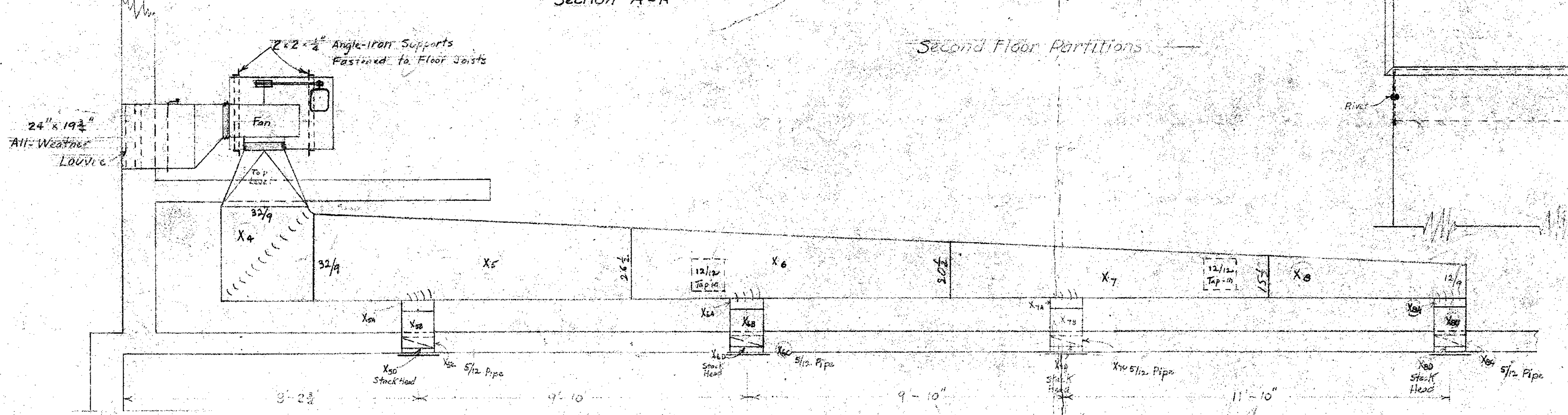
• Heating System •

Scale ½" = 1'

Second Floor Partitions

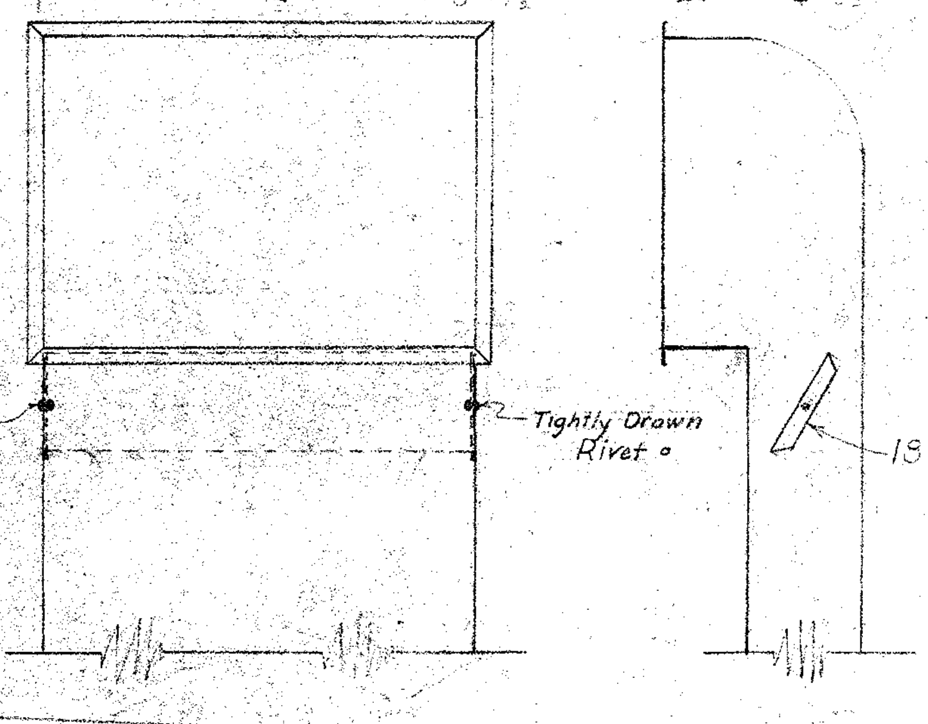


Section A-A



• Exhaust System •

Scale - ½" = 1'



Detail of

Typical Stack Head

• Showing Friction-Type Damper •

Note: Position of Damper is to be Adjusted by Hand Thru the Grille Openings.

• FRANK HUGHES •
MEMORIAL LIBRARY —
• Liberty, Missouri •

Night & Wight ———— Architects

T.P. H[illegible] Const. Co. — General Contracto

ACME SHEET METAL COMPANY
• HEATING •
◄ Shop Drawings ►

Drawn by - L.F.
Jan. [illegible]



Frank Hughes Memorial Library, view looking northwest. (STRATA 2020)

D MAGNITUDE OF COST

Frank Hughes Memorial Library
Liberty, Missouri
STRATA Architecture Inc
Feasibility Study Estimate 05/15/2020

DESCRIPTION		Immediate	Short Term	Long Term
Frank Hughes Memorial Library				
01 00 00 GENERAL CONDITIONS		$ 13,751.00	$ 41,688.60	$ 42,692.50
02 41 00 DEMOLITION		$ 3,050.00	$ 3,077.00	$ 6,200.00
02 50 00 HAZARDOUS MATERIAL ABATEMENT		$ -	$ -	$ -
03 30 00 CAST-IN-PLACE CONCRETE		$ 800.00	$ 8,910.00	$ 49,200.00
04 01 20 MASONRY RESTORATION AND CLEANING		$ 350.00	$ 9,800.00	$ -
05 12 00 STEEL		$ -	$ 9,825.00	$ -
06 20 13 EXTERIOR FINISH CARPENTRY		$ 5,050.00	$ -	$ -
06 40 16 INTERIOR ARCHITECTURAL WOODWORK		$ -	$ 380.00	$ -
07 50 00 ROOFING & FLASHINGS		$ 7,450.00	$ 950.00	$ -
07 92 00 JOINT SEALANTS		$ 3,440.00	$ -	$ -
08 11 00 DOOR & FRAMES		$ 1,600.00	$ 5,700.00	$ 6,250.00
08 15 00 WINDOWS		$ 2,700.00	$ 65,300.00	$ -
09 03 20 HISTORIC TREATMENT OF PLASTER		$ -	$ 2,930.00	$ 15,600.00
09 29 00 GYPSUM BOARD		$ -	$ 570.00	$ -
09 51 23 ACOUSTICAL TILE CEILINGS		$ -	$ -	$ 4,800.00
09 65 13 RESILIENT SHEET FLOORING		$ -	$ 952.00	$ -
09 95 00 WOOD FLOOR		$ -	$ 17,800.00	$ -
09 90 00 PAINTING		$ 20,300.00	$ 14,099.00	$ 53,000.00
10 28 00 TOILET ACCESSORIES		$ -	$ 800.00	$ -
22 00 00 PLUMBING		$ 2,550.00	$ 950.00	$ 17,700.00
23 00 00 HVAC		$ 1,085.00	$ 1,300.00	$ 41,150.00
26 00 00 ELECTRICAL & DATA		$ 12,270.00	$ 65,100.00	$ 1,350.00
31 20 00 EARTH MOVING		$ 760.00	$ -	$ 2,350.00
32 12 16 ASPHALT PAVING		$ -	$ -	$ 15,862.50
32 92 00 TURF AND GRASSES		$ 600.00	$ -	$ -
33 10 00 PERIMETER DRAINAGE		$ 6,750.00	$ -	$ -
subtotal		$ 82,506.00	$ 250,131.60	$ 256,155.00
Contractor's Fee	10%	$ 8,250.60	$ 25,013.16	$ 25,615.50
subtotal		$ 90,756.60	$ 275,144.76	$ 281,770.50
Design/Estimate Contingency	25%	$ 22,689.15	$ 68,786.19	$ 70,442.63
subtotal		$ 113,445.75	$ 343,930.95	$ 352,213.13
Escalation to Mid-Point - 11/30/2022	7.8%	$ 8,882.33	$ 26,928.37	$ 27,576.83
TOTAL		**$ 122,328.08**	**$ 370,859.32**	**$ 379,789.95**

In addition to the Long Term Treatment listed above:	
Long Term - Elevator Addition - Treatment Option 1 - ALLOWANCE	$ 203,960.00
Long Term - Archival Storage and Elevator - Treatment Option 2 - ALLOWANCE	$ 873,920.00

DESCRIPTION	QUANTITY	UNIT $	Immediate	Short Term	Long Term
Frank Hughes Memorial Library					
Long Term - Elevator Addition - Treatment Option 1 - ALLOWANCE	824 SF	165.00			203,960
Long Term - Archival Storage and Elevator - Treatment Option 2 - ALLOWANCE	3,852 SF	210.00			873,920
02 41 00 DEMOLITION					
Immediate					
Clean Canvas Awning - East Elevation	1 LS	850.00	850		
Scope Void at North Concrete Stairs - ALLOW	1 LS	400.00	400		
Clean Biological Staining North Stair Concrete Walls - ALLOW	1 LS	1,200.00	1,200		
Remove vines and treat prevent growth	1 LS	600.00	600		
Short Term					
Demo 6 sections of public sidewalk - east and south sides	6 EA	100.00		600	
Demo south portico concrete paver landing	1 EA	400.00		400	
Demo concrete walkway to building - east entry	1 EA	100.00		100	
Demo concrete walkway to building - north stair	6 EA	100.00		600	
Remove wood paneling from north exterior stairs	1 EA	100.00		100	
Remove existing carpeting from second floor	2,000 SF	0.50		1,000	
Remove existing linoleum flooring Restroom 208	68 SF	1.50		102	
Remove existing toilet partition Restroom 208	1 EA	175.00		175	
Long Term					
Remove south entry stairs and knee walls in entirety	1 LS	2,500.00			2,500
Remove east entry stairs and knee walls and window wells in entirety	1 LS	2,500.00			2,500
Haul Off Demo	1 EA	1,200.00			1,200
			3,050	3,077	6,200
02 50 00 HAZARDOUS MATERIAL ABATEMENT					
not included					0
			0	0	0
03 30 00 CAST-IN-PLACE CONCRETE					
Immediate					
Fill void under slab at top of north stairs - ALLOW	1 EA	800.00	800		
Short Term					
New sections of concrete sidewalk	6 EA	300.00		1,800	
New south portico entrance landing	1 EA	1,610.00		1,610	
ALLOW - provide strutural slab support for new south portico landing	1 LS	1,500.00		1,500	
New east walkway concrete slab	1 EA	350.00		350	
Patch/repair east concrete stair and window well walls	1 LS	1,250.00		1,250	
Install new concrete walkway to north stair	6 EA	300.00		1,800	
Repair concrete foundtion at NE corner	1 EA	400.00		400	
Repair concrete base in first floor	2 EA	100.00		200	
Long Term					
New south entry steps and knee walls - ALLOW	1 EA	29,400.00			29,400
New east entry foundation walls and window walls - ALLOW	1 EA	19,800.00			19,800
			800	8,910	49,200
04 01 20 MASONRY RESTORATION AND CLEANING					
Immediate					
Either replace or patch brick on north elevation (old pipe penetration) - clean existing sealant	1 LS	350.00	350		
Short Term					
Spot repoint building as noted on drawings - ALLOWANCE	1 LS	5,600.00		5,600	
Replace spalled with bricks with salvaged historic bricks, in kind	5 EA	200.00		1,000	
Remove anchors and conduit, pipe, etc and spot repoint and patch	1 LS	500.00		500	
Clean 100% masonry	1 LS	2,700.00		2,700	
			350	9,800	0
05 12 00 STEEL					
Short Term					
Restore decorative metal railing at south grand stair	3 EA	500.00		1,500	
Restore decorative metal guard railing at east entry	2 EA	600.00		1,200	
Remove existing and install new pipe hand rail at east entry	2 EA	700.00		1,400	
Restore decorative metal guard railing at north entry	1 EA	700.00		700	
Remove existing and install new pipe hand rail at north entry	2 EA	700.00		1,400	
Restore decorative metal guard railings at south portico	4 EA	250.00		1,000	
Install new painted metal grating at top of window wells for safety	7 EA	375.00		2,625	
			0	9,825	0
06 20 13 EXTERIOR FINISH CARPENTRY					
Immediate					
Replace water damaged cornices in-kind	6 LF	325.00	1,950		
Repair wood rot at south portico	1 LS	800.00	800		
Replace damaged wood balustrade components, south portico - coordinate with roofing	1 LS	2,000.00	2,000		
Patch holes from removed lights in south portico balustrade	2 EA	150.00	300		

DESCRIPTION	QUANTITY	UNIT $	Immediate	Short Term	Long Term
Frank Hughes Memorial Library					
			5,050	0	0
06 40 16 INTERIOR ARCHITECTURAL WOODWORK					
Short Term					
Repair Wainscot - Archival 106	1 EA	80.00		80	
Install new cove molding Room 206	1 EA	300.00		300	
			0	380	0
07 50 00 ROOFING & FLASHINGS					
Immediate					
Investigate 3 Places with Water Infiltration at Roof Transitions (East and North Elevations)	1 LS	1,500.00	1,500		
Clean Gutters	1 LS	600.00	600		
Test and Repair Gutters - ALLOWANCE	1 LS	1,200.00	1,200		
Clean and Test Downspouts to drain	1 LS	450.00	450		
Install new appropriate downspout extensions and splash blocks	6 LS	200.00	1,200		
Investigate leaking roof at south portico and repair	1 LS	2,500.00	2,500		
Short Term					
Install prefinished metal chimney cap	1 EA	950.00		950	
			7,450	950	0
07 92 00 JOINT SEALANTS					
Immediate					
Install sealant at two pipe locations at north and west elevations	1 LS	200.00	200		
Remove existing and install new sealants at all window perimeters	32 EA	90.00	2,880		
Remove existing and install new sealants at all exterior door perimeters	3 EA	120.00	360		
			3,440	0	0
08 11 00 DOOR & FRAMES					
Immediate					
Door 220/A Main Entry - Repair Cracks	1 EA	100.00	100		
Door 103/A East Entry - Replace deteriorated components on door and sidelights	1 EA	1,500.00	1,500		
Short Term					
Door 220/A Main Entry - Refinish the interior of the doors and sidelights	1 EA	1,700.00		1,700	
Door 103/A East Entry - Refinish the interior of the doors and sidelights	1 EA	1,700.00		1,700	
Replace north entry steel door	1 EA	1,400.00		1,400	
Weatherstrip main and east entry doors	2 EA	275.00		550	
Repair Door 109/A to open/close properly	1 EA	350.00		350	
Long Term					
Repair veneer on door 102/A	1 EA	400.00			400
Restore door hardware - ALLOWANCE	9 EA	650.00			5,850
			1,600	5,700	6,250
08 15 00 WINDOWS					
Immediate					
Temporary repairs for wood windows	27 EA	100.00	2,700		
Short Term					
Restore wood windows, replace deteriorated components, in kind	27 EA	1,000.00		27,000	
Install UV storm windows	27 EA	750.00		20,250	
Restore steel windows - replace glazing putty, replace missing or broken glass	2 EA	800.00		1,600	
Install insect screening at louvers (1 mechanical room and 2 attic)	3 EA	150.00		450	
Restore interior historic wood blinds - ALLOWANCE	16 EA	1,000.00		16,000	
			2,700	65,300	0
09 03 20 HISTORIC TREATMENT OF PLASTER					
Short Term					
Remove tape from plaster walls	1 LS	80.00		80	
Spot restore water damaged plaster walls Rooms 205, 206, Stairs - ALLOWANCE	1 LS	2,850.00		2,850	
Long Term					
Restore plaster walls and ceilings thorughout first and second floors	1 LS	15,600.00			15,600
			0	2,930	15,600
09 29 00 GYPSUM BOARD					
Short Term					
New gypsum board ceiling room 206	114 SF	5.00		570	
			0	570	0
09 51 23 ACOUSTICAL TILE CEILINGS					
Long Term					
Remove and replace existing acoustical tile ceilings Rooms 104, 105, 106	800 SF	6.00			4,800
			0	0	4,800

DESCRIPTION	QUANTITY	UNIT $	Immediate	Short Term	Long Term
Frank Hughes Memorial Library					
09 65 13 RESILIENT SHEET FLOORING					
Short Term					
Install new Restroom 208 flooring	68 SF	14.00		952	
			0	952	0
09 95 00 WOOD FLOOR					
Short Term					
Restore existing wood flooring (Does not include moving shelving or fixtures)	2,000 SF	8.00		16,000	
Refinish existing interior stair landing, treads and risers	18 EA	100.00		1,800	
			0	17,800	0
09 90 00 PAINTING					
Immediate					
Prep prime paint wood temporary railing at north exterior stair	1 EA	500.00	500		
Paint downspouts	6 EA	150.00	900		
Paint wood cornice and metal fascia and soffits	1 LS	5,400.00	5,400		
Paint wood columns, pilasters and entablatures at south portico	1 LS	3,100.00	3,100		
Paint repaired south portico balustrade	1 EA	700.00	700		
Paint existing wood windows	27 EA	150.00	4,050		
Paint existing steel windows	2 EA	100.00	200		
Window Lintels - wire brush, treat, prime, and paint	19 EA	125.00	2,375		
Door Lintels - wire brush, treat, prime, and paint	1 EA	125.00	125		
Paint Door 220/A and surround	1 EA	1,350.00	1,350		
Paint Door 103/A and surround	1 EA	1,350.00	1,350		
Paint Door 100/A	1 EA	250.00	250		
Short Term					
Prep prime and paint louvers	3 EA	75.00		225	
Pre prime and paint concrete flooring and base throughout first floor (Does not include moving shelving or fixtures)	2,000 SF	2.50		5,000	
Repair and paint walls and ceilings in Rooms 205, 206, and in the Stairs (Does not include moving shelving or fixtures)	3 EA	850.00		2,550	
Repair gypsum board walls and ceiling, prep, prime, and paint Corridor 104	1 EA	800.00		800	
Paint ceiling at old water damage Storage 103	1 EA	275.00		275	
Paint new ceiling at Room 206	206 SF	1.50		309	
Prep prime and paint or stain all interior window trim	32 EA	95.00		3,040	
Refinish interior stair wood cap and railings	1 EA	1,500.00		1,500	
Prep, caulk, and paint joint between pilasters and storage at surrounding walls	2 EA	200.00		400	
Long Term					
Refinish wood baseboard and wainscoting thorughout second floor, match finish	1 LS	6,500.00			6,500
ALLOWANCE for historic paint analysis of second floor	1 LS	2,075.00			2,075
Prep prime and paint all ceilings on first and second floor	4,200 SF	2.00			8,400
Prep prime and paint all walls and crown molding on first and second floor (does not include moving shelving or fixtures)	1 LS	15,600.00			15,600
Refinish interior wood doors and trim	7 EA	600.00			4,200
Paint mechanical room Door 109/A	1 EA	175.00			175
Restore circulation desk and rails	1 LS	2,550.00			2,550
Restore historic wood book shelving throughout - ALLOWANCE	1 LS	13,500.00			13,500
			20,300	14,099	53,000
10 28 00 TOILET ACCESSORIES					
Short Term					
Grab bars Restroom 208	1 LS	800.00		800	
			0	800	0
22 00 00 PLUMBING					
Immediate					
Test Sump in East & South Areaways - Repair as Necessary - ALLOWANCE	1 LS	1,200.00	1,200.00		
Install central hot water heater (25 gallon) - ALLOWANCE	1 EA	1,350.00	1,350.00		
Short Term					
Scope sewer lines/inspect for required repairs (repairs not included)	1 EA	650.00		650	
Scope domestic water lines for required repairs (repairs not included)	1 EA	300.00		300	
Long Term					
New water service and backflow preventor - ALLOWANCE	1 EA	17,700.00			17,700
			2,550	950	17,700
23 00 00 HVAC					
Immediate					
Clean dirty mechanical grilles	31 EA	35.00	1,085.00		
Short Term					
Install new programmable thermostat	1 EA	300.00		300	
Clean existing ductwork - ALLOWANCE	1 EA	1,000.00		1,000	
Long Term					
Install new louver Mech 109	1 EA	650.00			650
Remove and Install new heat pumps	3 EA	12,000.00			36,000
Ventilation air and exhaust for restrooms	1 LS	4,500.00			4,500
			1,085	1,300	41,150
26 00 00 ELECTRICAL & DATA					
Immediate					

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Frank Hughes Memorial Library					
26 00 00 ELECTRICAL & DATA					
Immediate					
Reinstall existing data cable to be tight against building. Utilize mortar mortar joints	1 EA	150.00	150.00		
Install Egress lighting	6 EA	225.00	1,350.00		
Install Exit Lighting	8 EA	450.00	3,600.00		
Replace broken, rusty conduit on exterior of building	1 LS	350.00	350.00		
Replace incandescent lamping with LED - ALLOW	1 LS	800.00	800.00		
Inspect exisitng smoke detectors - replace as required - ALLOW	1 LS	500.00	500.00		
Replace first floor basement Frank Adams panel	1 LS	4,000.00	4,000.00		
Electrician to test and inspect all electrical panels and connections - ALLOW - does not include repairs	1 LS	1,520.00	1,520.00		
Short Term					
Replace wiring and devices throughout building - ALLOWANCE	5,000 SF	6.00		30,000	
Install LED lighting throughout - ALLOWANCE	5,000 SF	4.00		20,000	
Restore historic light fixtures - replace 1 shade	15 EA	900.00		13,500	
Install data thorughout the research portions of the building	2,000 SF	0.80		1,600	
Long Term					
Miscellaneous related to new furnaces	3 EA	450.00			1,350
			12,270	65,100	1,350
31 20 00 EARTH MOVING					
Immediate					
Regrade along west side on north elevation	1 EA	760.00	760		
Long Term					
Excavate for and regrading for parking lot	1,175 SF	2.00			2,350
			760	0	2,350
32 12 16 ASPHALT PAVING					
Long Term					
New asphalt parking lot, parking curbs and striping	1,175 SF	13.50			15,863
			0	0	15,863
32 92 00 TURF AND GRASSES					
Immediate					
Install sod at re-graded areas	1 EA	600.00	600		
			600	0	0
33 10 00 PERIMETER DRAINAGE					
Immediate					
Install window well drains to daylight	9 EA	750.00	6,750		
			6,750	0	0