

National Park Service
U.S. Department of the Interior
Yellowstone National Park



Haynes Picture Shops Headquarters at Mammoth

Historic Structure Report



Haynes Picture Shops Headquarters at Mammoth Historic Structure Report



Prepared by Sievert & Sievert Cultural Resource Consultants
Great Falls and Bozeman, Montana
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With contributions by the Montana Preservation Alliance

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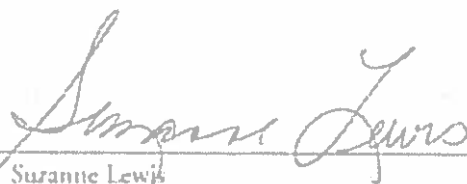


Prepared for the National Park Service

by the National Park Service
National Park Service
National Park Service

with assistance from the
National Park Service
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Executive Summary

Directive

This report was prepared under the auspices of Sievert & Sievert CRC, consultants in the fields of historical architecture and structural design. Portions of Parts 1 and 2 of the document have been prepared by the Montana Preservation Alliance under Cooperative Agreement H1233E007, which tasks the Montana Preservation Alliance to document the history, to culturally assess, and evaluate identified historic properties for use of the National Park Service (NPS) in their mission to strategically plan for management and preservation of significant historic buildings within the boundaries of Yellowstone National Park (YNP).

Documentation and assessment of the Haynes Picture Shops Headquarters will be used as part of an overall plan to enhance and continue the use of Yellowstone's historic structures that were associated with the park's core operations and visitor services, as well as to provide for visitor understanding and education of the cultural development of the park's historic built environment.

This Historic Structure Report (HSR) on the Haynes headquarters is intended to provide a detailed cultural and technical evaluation of the building, to identify and prioritize the deficiencies that exist for the structure, and to derive a plan to stabilize and preserve the building for future generations and for continued use. To accomplish these goals, this report includes a statement of the historic significance of the property, a narrative history of the building, a condition assessment of all materials, an assessment of which materials are original, and a preservation plan that outlines care of those materials based on their originality and condition.

Methodology

The following research and documentary actions were initiated in the course of reviewing the existing condition of the property:

1. Visual on-site observations were made during several trips to the site during 2007 and 2008. Generally, the observations were limited to what could be seen with minimal disturbance to the structure.
2. The facility was photographed during the trips as noted above. Many of those photos are contained within the body of this report (see Current Photographs).
3. Limited design drawings and proposed drawings for construction of the building were found on E-TIC (the Technical Information Center catalog of the NPS Denver Service Center); drawings contained in this report are from a combination of those design drawings and field measurements taken during site visits as noted above.
4. All materials were assessed on site in regard to condition (see the Physical Description section for information on the assessment methods and conclusions).
5. Limited structural evaluations were completed during the preparation of this report. Selected structural "safety checks" were made on typical structural framing members.
6. A building code "overview" is incorporated with this report; specifically to consider code related implications of permitting continued use of the building. Accessibility guidelines were included with the building code evaluation as they apply to the building.
7. Historic architectural and engineering methods and practices were reviewed and evaluated as they pertain to the construction of this building.
8. As further explained in the Evaluation/Assessment text, in-depth Mechanical and Electrical evaluations were specifically excluded from this report.
9. Existing YNP planning and National Register documents were reviewed, historic contextual information was provided by park cultural resources personnel, and additional secondary sources were consulted to supplement existing knowledge regarding the Haynes headquarters and its broader significance.

Administrative Data

The Haynes Picture Shops Headquarters is a contributing structure within the Mammoth Hot Springs Historic District, as documented within the historic sections of this report. Completed in 1928, the Mammoth Picture Shop was the headquarters for all of the Haynes picture shops in the park and the distribution point for photographs and processing for all of the Haynes Yellowstone operations.

The significance of the Haynes Picture Shop at Mammoth lies in its: (1) profound connection with the Haynes family and associations with trends of national significance relating to the perception of national parks during their formative and evolving years, and their contribution to identifying the place of Yellowstone National Park as a foremost destination-place in the minds and hearts of people the world over; and (2) architectural style as a building that is representative of the 1920s and 30s search for appropriate architectural expression of buildings within Yellowstone National Park.

In order to retain its historic integrity and the ability to convey these important associations, it is essential that the exterior appearance of this structure be maintained.

Pertinent classification data:

- Location references: Building HS-2051; LCS #10617; FMSS 85963-MA1006PH Haynes Photo Shop.
- National Register Status: Determined eligible April 17, 1980, listed March 20, 2002, as a Contributing Resource in the Mammoth Hot Springs Historic District
- Category of Significance: Category 2—Structures that individually or collectively qualify for the National Register and possess significance at the state level. (Research strongly suggests, however, that the Haynes headquarters and related activities qualify it as a property of national significance for the prominent role it played in promoting Yellowstone National Park to national and international audiences. This is the most prominent historic building remaining that represents the Haynes photo businesses and their eight decades in the park.)
- Period of Significance: 1928–1967. (*Note:* The Mammoth Hot Springs Historic District period of significance is listed as 1883–1949.)
- Significant Historic Contexts: Architecture in the National Parks (Criterion C); historical associations with the development of concessions and services in YNP and the promotion of late nineteenth- and twentieth-century tourism and recreation in the American West (Criterion A)

- New information and documentation generated during the preparation of this report will be housed with the YNP Cultural Resources records for this property.

The building is currently being used as a storage facility for numerous departments of the NPS. The last use of the building for photography was in 1967.

Context

The administrative background on this building reflects YNP's ongoing efforts to effectively administer and provide stewardship for the more than 950 historic buildings and structures within the park. A series of reports and contexts, from National Register listings to planning documents, reflects YNP managers' recognition of the historical and architectural importance of these resources and the sometimes daunting task of carrying out their federal stewardship responsibility for this large number of properties.

In 1999, YNP issued a State of the Park report, and in its Business Plan summarized the park administration's responsibilities and strategies for "preserving Yellowstone's historic structures." "As a way to enhance preservation," the authors stated, "making use of these structures is important, even when it may appear more efficient to construct a new building that meets the need."¹

In addition, the following stewardship goals were laid out for historic structures:

- Professional staff oversee an interdisciplinary program to inventory, preserve, and cyclically maintain historic structures.
- The most significant resources are evaluated and preserved according to standards for structures on the National Register of Historic Places. Visitor appreciation of park history is enhanced through interpretive efforts.
- Partners and cooperators share responsibility for managing historic structures still in use for visitor services.

Although the Haynes Picture Shops Headquarters is not specifically identified or discussed in the State of the Park report, it falls within the framework of significant properties the authors had in mind when they suggested enhancing preservation through reuse and for which additional National Register evaluation is advisable.

The May 2000 Long-Range Interpretive Plan offers a discussion of "goals and recommendations...to keep the

park meaningful, relevant, and valued to our diverse and increasingly sophisticated public." It identified a need for visitor contact facilities at Mammoth, and mentions the Haynes Picture Shops Headquarters. The section on "In-Park Visitor Center Recommendations" suggests its conversion "to a new facility to enhance visitor experiences" with potential reuse as classroom, office, housing or exhibit space. The building and a future use could potentially fit well into a scenario for partnering with outside entities whose mission is to educate the public and celebrate the wonders of Yellowstone.²

The Yellowstone Center for Resources recognized the important role of the Hayneses and other YNP concessioners when it produced a historical overview on the topic in 2003. *"For the Benefit and Enjoyment of the People: A History of Concession Development in Yellowstone National Park, 1872–1966*, by Mary Shivers Culpin, traces this history and provides a perspective on the importance of these businesses to the park and its development over time.³

With few exceptions, this building retains exterior integrity. It is an example of transitional design influences being felt in the park, and exhibits architectural styles that were being explored and gaining acceptance across America. The single greatest design influence for the Haynes Picture Shops Headquarters would be from the Crafts movement, later to evolve into Shingle and Stick styles of architecture, tempered by a studied formalism that recognizes the corner street location for the facility. This stylistic influence for the building was a departure from more traditional revival styles prevalent in Mammoth, and the exterior surfaces reflect a more organic application of natural wood materials. Although the building is unrelated to the prevalent rustic architecture throughout the park, clearly architect Fred Willson was also looking for ways to contextually relate the Haynes structure to the natural wonders of Yellowstone.

The building's interior generally retains 1928 material integrity and exhibits extensive use of Celotex, wood flooring, and late-20s era doors, windows, and accouterments. The widespread use of combustible materials in the interior results in a building that is relatively non-compliant with current building code criteria. However, this is a building that can be assigned to new uses with additional investment and continue to serve the needs of NPS and the American public within the Mammoth area.

The Haynes Picture Shops Headquarters is a contributing property within the Mammoth Hot Springs Historic District; assigning a new use for the facility will require that it be treated as a rehabilitation of a historic property

in compliance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (1995).

In addition to the documenting the identification and significance of historic materials, this HSR looked in detail at the condition of the building. The evaluation included building code comparisons, fire ratings, accessibility requirements, materials conservation, and structural adequacy of supporting members. In general, the lower level of the structure was evaluated for future assembly or exhibit use; the upper level was evaluated for continued residential use or office use. Work that would be required to bring this facility up to standard for these uses was compiled within this report and is summarized below.

Recommendations for Treatment and Use

Summary of improvements required to rehabilitate the building to full use:

The extent of change anticipated for the facility directly affects the extent to which building code requirements apply under the IEBC building code. If the building is repaired for existing uses only, building code requirements apply minimally. If the building is altered, additional requirements apply. The analysis in this report assumes that the building will be altered and that any work undertaken will be done in compliance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* and with the NPS Director's Order 28, Cultural Resources Management Guideline.

Life safety and fire safety have been assigned Priority #1. Of primary importance is the structural stabilization of at-risk supporting members to satisfy building code requirements and correct safety deficiencies. In addition, when any structure is altered, a seismic report must be completed to comply with applicable building codes and administratively satisfy the building official. Seismic criteria are far more severe today than when the structure was built in 1928, although some codification was in place at that time. Some seismic improvements are recommended for the structure (see structural section).

Providing adequate exits is another life safety and fire safety issue. The second floor currently has only one readily available interior exit plus one exterior exit and window ladders from some bedroom areas. Furthermore, the close proximity of the interior and exterior means of

egress does not meet the intent of the building code for fire safety. The addition of a second exit that complies with code requirements regarding separation of exits and the inclusion of areas of rescue assistance is warranted.

Adding alarm, detection, and suppression systems are related fire safety issues. Although it is not a requirement of the building code, a fire sprinkler system has been identified as being in accordance with NPS policy.

To provide access to the second floor, installation of an elevator is Priority #2. The elevator would benefit both ambulatory and mobility-impaired use of the facility. It has been assigned a high priority because of the impact it will have on the structure as well as on planning for a change in use of the facility. Arguably, the installation of an elevator would be inevitable for long-term rehabilitated use.

Restoration of the exterior has been identified as Priority #3. The building envelope is sound but requires maintenance and repair. Maintenance of wood surfacing materials, reconstruction of exterior stairs, and resolving treatment of sub-surface windows will be required. Exterior painting and sealing must be accomplished, and would visually enhance the building and extend the life of exterior wood materials. Documentation about landscaping features at the corner location was not found during preparation of this report; however, the appearance of the building could be improved with approved plant materi-

als. Continued maintenance of roof surfacing materials is implied.

Rehabilitation of the interior, including an up-grade of the utility systems, is Priority #4. Providing for a change in use of the building will require rehabilitation as well as space re-configuration with consideration for historic integrity. Modifications to, or replacement of, mechanical and electrical systems is required.

Rehabilitation for continued use would also trigger the need to comply with the Americans with Disability Act; therefore meeting the accessibility requirements of the ADA is Priority #5. In addition to the elevator, identified as Priority #2, at least one accessible restroom and ADA access to all rooms would be required (ADA Guidelines for Buildings and Facilities 4.1.3, Exception 1, and 4.1.7 (3)). There are also some site details related to the accessible route that would be included in this priority.

Other recommendations that are minor in nature can be found in the Preservation Plan section of this report. These include some general clean-up and maintenance activities as well as enhancements that address what might be desired for the structure as opposed to the minimum that must be done. In addition, it must be noted that a Hazardous Materials Survey was not done during the preparation of this report; if lead-based paints or asbestos materials are encountered, they will have to be surveyed and abated.

Part 1. Developmental History

Historical Background and Context

The imposing wood-framed building located three doors east of the Executive House, on the corner of Avenue A and Avenue B, the park's Grand Loop Road to Tower Junction, was built to be the Haynes headquarters and production factory in 1928–1929 by Jack E. Haynes, life-long Yellowstone photographic concessioner and son of Frank Jay Haynes, the park's original photographer.² It is now vacant but remains an important link to the documentary and promotional history of Yellowstone National Park and the role of the Hayneses' concessions in expanding western recreational travel and promoting western tourism in America and abroad. The photographs of both Hayneses, father and son, played an eminent role in gaining Yellowstone its international recognition as a natural wonder and destination spot.

F. Jay Haynes (1853–1921) was one of the West's most prolific pioneering photographers, learning the art from S.C. Graham in Beaver Dam, Wisconsin, in 1873 when the medium was in its early years. Haynes opened a photographic studio in Moorhead, Minnesota in 1876, and contracted to photograph views for the Northern Pacific Railroad. The Black Hills Stage Company also commissioned him, as did the Canadian Pacific Railway in 1881. In 1879, Haynes moved to Fargo, North Dakota, and to St. Paul, Minnesota in 1889.³

Haynes first photographed Yellowstone National Park in 1881 on his Northern Pacific travels, and it is for his work in Yellowstone National Park that he became world renowned. An artist with a savvy business sense, in 1883, Haynes applied to lease land in the park for a photographic studio and the following year was granted a lease on eight acres at Upper Geyser Basin with "permission to erect any needed building or buildings for the purpose of preparing photographic views and selling them to tourists."⁴ Haynes negotiated this lease into two 4-acre parcels, one at Geyser

Basin and the other at Mammoth. The newly designated "park photographer" and Superintendent of the Art Department for the Yellowstone Park Improvement Company, Haynes built his first photo studio and picture shop opposite Mammoth Hot Springs Hotel in 1884.

In 1885, F. Jay Haynes purchased his Haynes Palace Studio Car, a rolling gallery that traveled the Northern Pacific route for 20 years, under the arrangement that he provide the Northern Pacific Passenger department, "free of charge, with views...for illustrating purposes, of new station buildings, passenger trains in motion, views of towns, views of track, river views along the track, views of wheat fields, views of scenery, and such other pictures as [you]...may be able to make that will be suitable for illustrating purposes."⁵

From his first picture shop in Mammoth, Haynes gave much of the world its first views of the wonders of Yellowstone. Haynes took the first winter photographs of the park in 1887, and began to create and market photo and stereographic postcards of the park in 1900. In 1890, he published the first Haynes guidebook, launching what became a familiar guide to the park's many attractions. The Haynes studios printed it every year thereafter until their closure in 1962. Along with the guidebook, the Hayneses published other books and guides for the traveler and sold them in the Haynes picture shops.

During the 1890s, F. Jay Haynes added more concessions, with studios in the Upper Geyser Basin, Mammoth, the Grand Canyon Hotel, and the Log Cabin Studio at Old Faithful.⁶ The original Haynes Studio was moved to the foot of Capitol Hill in 1903, and continued to serve as a retail space and photo studio for another 25 years.

In addition to landscape, thermal features and wildlife views, Haynes also documented important historical subjects in the park. He was the official photographer when President Chester A. Arthur made the first visit by a U.S. president to the park in 1883; he also photographed a visit by President Theodore Roosevelt to the park in 1903, and the 1931–32 survey of the park boundaries.⁷

F. Jay Haynes invested in various early transportation businesses in the park, from early stagecoaches in 1885 to autobuses in 1916, along with camping and housing interests. Competition was stiff as concessioners vied for the park's growing and lucrative trade. However, following a government edict to consolidate concessions, H. C. Child's YP Transportation Co. took over transportation services park-wide in 1917, and Haynes' business in the park was limited to what he did best—photography.

F. J.'s son, Jack Ellis Haynes, joined him in the photography trade and helped out in the family business from a young age. Among his early photographic work, four views of the Mammoth Terraces are noted as "the first pictures taken by JE Haynes" in collections now held at Montana State University. Jack Ellis took over the park photographic business from his father in 1916. F. Jay retired from his other businesses the next year and died four years later in March 1921.⁸ Jack Ellis operated the Haynes businesses until his own death in 1962.

Under his direction, the Haynes photography business expanded. Jack Haynes established a Haynes Picture Shop at Tower in 1917, built a shop at Mammoth, opened a shop at Canyon, and added stands at the Old Faithful Inn and Lake Hotel. Over the years he continued with photos, guidebooks, and postcards by the hundreds of thousands, earning him the fond nicknames of "Mr. Postcard" and "Mr. Yellowstone."

In 1927, Jack proposed a Mammoth Picture Shop to serve as headquarters and factory for his entire photographic operation. Director of the National Park Service Stephen T. Mather issued the directive in 1928 that allowed Haynes to construct his new building, which Mather called a "new headquarters and sales building at Mammoth Hot Springs."⁹

The background for this occurred in 1927, when Jack Haynes petitioned the NPS for permission to erect a building and remodel for a residence the building behind his residence then used as a shop and a general office, and proposed to destroy an "old white building" nearby. He submitted drawings of the new building and listed his reasons for it. Hearing that the NPS might want to use the site for a museum, Haynes delayed his plans for a year. Learning in 1928 that the government was not planning such a building, he proceeded to plan for a building on this corner lot. Haynes's operations were "very cramped for room" in 1928, with general offices located in the parlor of the old white house while his retail shop was located in the parlor of his remodeled residence.¹⁰ Haynes called both places "inadequate and inefficient."¹¹

Haynes' letter to Albright enclosed a "tracing" of the building and listed the functions that the building would serve. The architectural renderings showing the first and second floor plans and two elevations of the building reveal that they were drawn in 1928 and designed by Bozeman architect Fred Willson (and most likely reviewed by NPS landscape architect Thomas Vint).¹² Haynes reminded the superintendent that Vint had earlier recommended the new building and that he (Albright) had "concurred" with the recommendation. The new building, wrote Haynes, would contain a photo finishing laboratory, an enlarging room, a copying room, a checking room, and a repair shop for photographic instruments. Additionally, it would house a motion picture laboratory for developing, printing, and reducing 35-mm film to 16 mm, and an "upstairs shop for overhauling photographic equipment, designing and building new equipment, and storing extra showcases, furniture...and apparatus." Further, the building was to contain an upstairs club room for men. "We operate night crews as well as day crews," explained Haynes, and thus "we require a lounging room for men off duty independent of [our] dormitory as this dormitory has to be quiet practically 24 hours of the day."¹³

The floor plans and elevations submitted to Vint for review included a warehouse which Haynes described in this letter. The warehouse, the remodeling of the original picture shop with an addition in the rear, and construction of the Haynes Picture Shops Headquarters were, according to these records, under construction simultaneously.

However, architectural investigations of the headquarters reveal that the planned layout was revised to include one relatively small darkroom, a cash-counting room, Haynes' office, and a large walk-in, built-in vault adjacent to Haynes' office and accounting room. The south wing contained a commercial kitchen and dining room, and other rooms that seem to have been designed for offices or living quarters rather than as darkrooms. On the second floor, the lounge occupies the location originally specified for the bathrooms, and the bathrooms are moved around the corner. The remainder of the second floor appears to have been dorm space.¹⁴

Large, panoramic photos taken in summers 1927 and 1928¹⁵ show that the building was not yet under construction, so actual construction had to have begun in the fall of 1928. A map drawn by NPS Landscape Architect Thomas C. Vint dated January 8, 1929, shows the new building in place as "Hayne's Studio" [*sic*].¹⁶ (The older building was razed in 1928 upon completion of the new Haynes Picture Shops Headquarters.)

A 1934 color postcard published by Jack Haynes depicts the building in its heyday, with vintage automobiles and tourists gathered out front.¹⁷ It served as Jack Haynes' Mammoth retail shop and headquarters for his park-wide photo operation until 1967. In 1927, he expanded the business to meet the growing number of automotive tourists, with campground shops at Old Faithful, Mammoth, and Fishing Bridge. Shops followed during the 1930s at West Thumb and Camp Roosevelt. In addition, Haynes operated photo finishing and production labs at Old Faithful and in Bozeman, Montana, in the historic Lehrkind Brewery building, which was outfitted with large-scale darkrooms for panoramic and other oversize views.¹⁸

Haynes died in 1962 and his widow, Isabel Nauwerth Haynes, took over operations of Haynes, Inc., and ran the business until 1967. Toward the end of that year, she sold the business to Hamilton Stores, which took over the Haynes' 17 YNP photo outlets and sales of photographic items in Yellowstone National Park.¹⁹ After 83 years, the Haynes "dynasty" had come to an end.²⁰

Chronology of Development and Use

Original Design and Style

The Haynes Picture Shops Headquarters was built in 1928–29; it was an era when America's designers were rejecting classical, period, or revival styles in favor of a new expression. It was also an era when the crafts were making a strong contribution to the built environment in the form of Craftsman, Stick, and Shingle styles of architecture—particularly in residential and residential-scale buildings. It was a time when traditional log architecture was being romanticized to add drama to the otherwise utilitarian methodology; and to lure tourists to the mystique of western landscapes, parks, and tourist "ranches." Art Deco and Art Moderne styles were in their heyday and were liberally applied to municipal, public, and other hard-surfaced structures. The Bauhaus, Verkbund, and less-is-more philosophies of architecture existed but were struggling for acceptance.

The Haynes Picture Shops Headquarters was designed by Fred Willson, the European trained Bozeman architect and former Butte office manager of the prolific Link and Haire architectural firm. As judged by the building's existing construction, it is thought that the Haynes family represented very changeable (and possibly difficult) clients. There were numerous changes made to the Willson draw-

ings during construction of the facility and assignment of spaces changed in many instances; however, the strength of the overall visual effect remained as originally created.

Willson's design of the Haynes headquarters exhibits numerous influences but arguably the Crafts movement influenced his design to the greatest extent. There is little visual evidence of the Deco or Moderne influence represented (the single exception may be the batten pattern of the ceiling of the primary retail space) and Architect Willson avoided the romantic log style. This may have been a "contextual" decision as Mammoth does not have, and did not have then, major structures designed in the romantic log style. Mammoth is generally comprised of buildings with a more studied formalism attributed to some degree to the influence of the Army and to some degree to the use of harder materials in the form of stone and concrete.

Symbiotically, the travertine of Capitol Hill seems to ask us to consider less of a tree-oriented design solution and to look for more of a "steppe" or "stone" expression.

Although Crafts influence is the major contributor to the design, there is a formalism represented by the use of pedimented walls at the corner of the structure as well as the way the building is sited in relation to the roadways and parade grounds. Clearly the architect and owner wanted to announce and respect the corner location of the facility and to reflect more formal designs in structures across the grounds. The pediments (and their symmetry) in the final analysis are derived from and are creatures of classical architecture that began in antiquity.

The third influence is reflective not of style but of social tenor. The proliferation of the automobile (and the 1920s was the decade when all segments of society suddenly had one) impacted the way designers thought about their buildings and the relationship between car, structure, and street. In the case of the Haynes headquarters, the projecting drive-thru is homage to the assertive presence of the mechanical beasts and how Willson and Haynes envisioned recognizing and capitalizing on this American revolution. The canopy (identified as a "porte-cochere" on Willson's drawings) is somewhat unique within the Mammoth Hot Springs Historic District, although there is a monumental version of a porte-cochere at the hotel. The scale of the headquarters canopy is what we would expect at a corner gas station, and is very similar to the Mammoth Hot Springs Service Station that was built during the same era. The ground plane beneath the canopy is relatively undeveloped and lacks softer or more inviting features, which suggests that there is a question as to who dominates this transition zone—car or driver?

The final influence is an over-the-shoulder bit of whimsy; there are star patterns cut into the fascia board. The inspiration (or derivation) of this celestial representation is unknown; however, it is one of the uniquenesses of the Haynes Picture Shops Headquarters. The birdhouse attached along the west elevation, which appears to be original to the construction of the facility, suggests that owner and architect recognized that they were working in the natural environment of Yellowstone National Park.

In conclusion, the predominant architectural style of the Haynes headquarters is judged to be "Shingle Style" with a hint of formalism.

Development and Use Over Time

The Haynes Picture Shops Headquarters served as the base headquarters for the Haynes enterprises for four decades, and provided a readily accessible retail facility for tourists visiting Mammoth or driving through the park. Following Jack Haynes' death in 1962 and the 1967 sale of the business by his wife Isabel to Hamilton Stores, the building continued in its original function as a retail concession space. It was alternatively known as the Christmas Store and renamed the Hamilton Nature Store in 1997. Enterprises in the building ended when the store was closed at the end of the summer season in 1999. Since then it has been used as storage.

The building has changed very little over time and retains a high degree of historic integrity; most original materials remain on site and are intact. Except for the exterior stair (added after 1983), nearly all of the exterior materials are original to the building, and interior materials are original except for changes made to finishes and fixtures in the bathrooms, kitchen, and stair (attributed

to the 1950s–70s). Outwardly, the building continues to exhibit the architectural style that was envisioned by Architect Fred Willson and owner Jack Ellis Haynes.

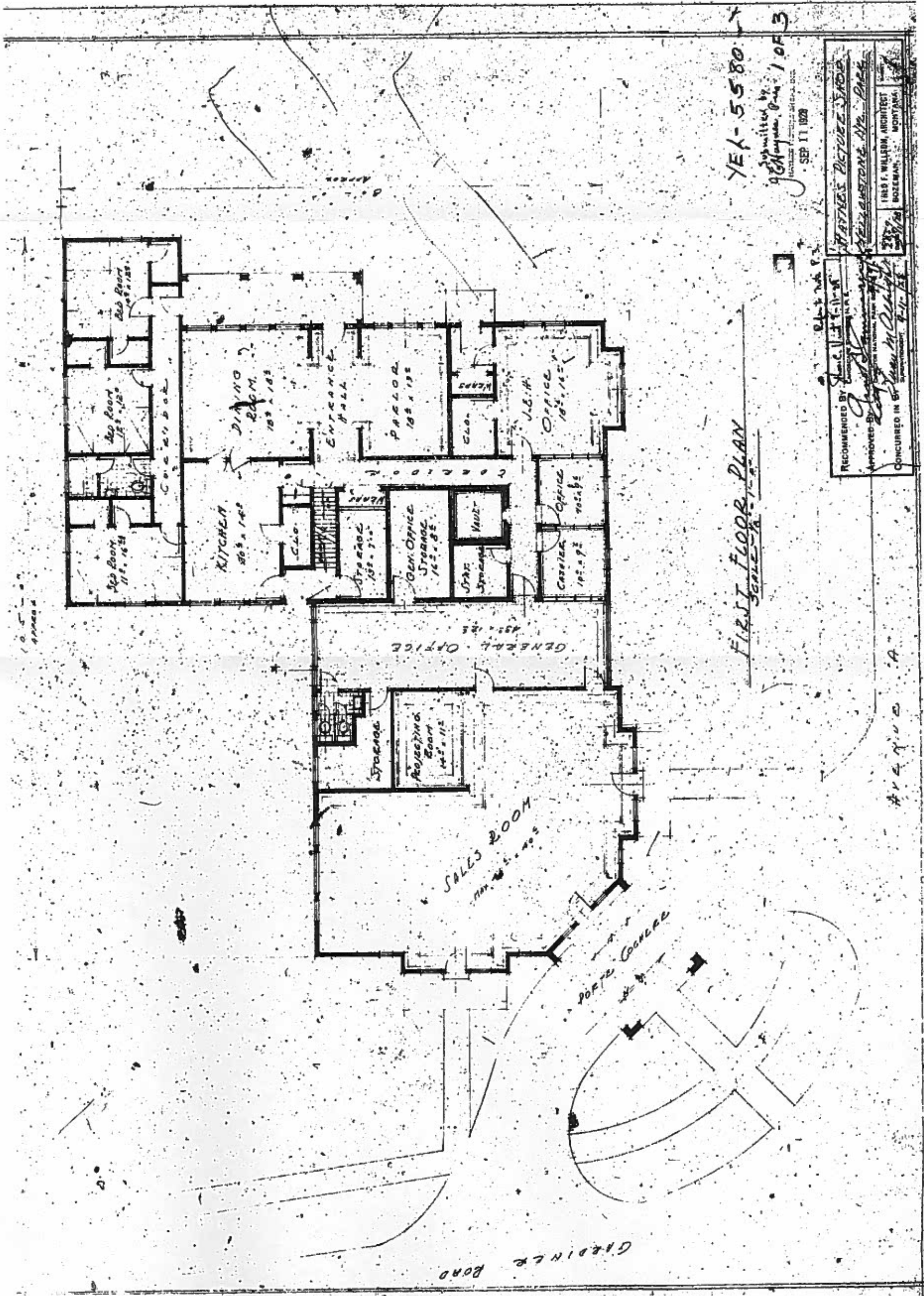
Archaeological Considerations

In addition to presenting the documented history of the Haynes Picture Shop Headquarters, this report is intended to raise awareness of cultural values and create a foundation for continued research into the building; its occupants, designers, and founders; its site or location; and the history of events surrounding the building. Although not the primary purpose of an Historic Structure Report, it must be recognized that understanding the occupation of the site over time has the potential to yield additional information that can contribute to the story of this location from both the standpoint of pre-history as well as history. For this reason it is recommended that all ground disturbing activities be observed with sensitivity regarding archaeological values.

If buried features related to pre-history are encountered or if artifacts are unearthed that are thought to have the potential to add to the history of the facility or occupation of the site prior to construction of the building, we recommend consultation with the park archaeologist, historian, or historic architect.

Historic Plans and Materials

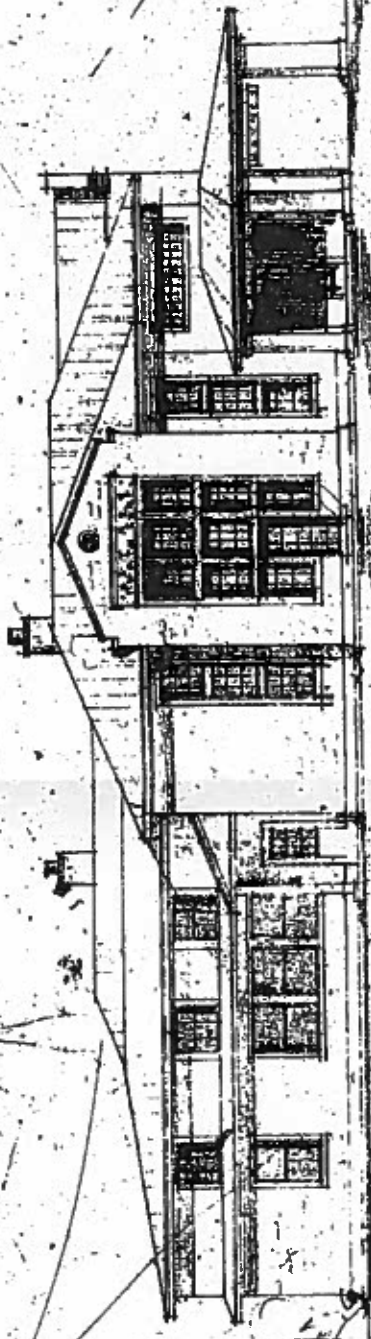
Historic plans and materials are found on pages 9–24.



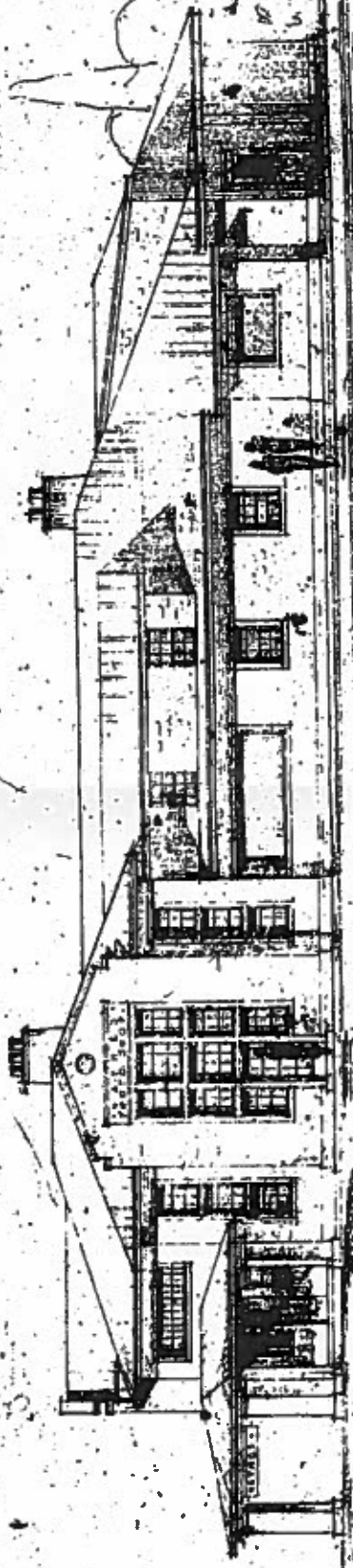
YE 5580
 Submitted by
 J. H. HAYMAN, JR.
 SEP 11 1928

FIRST FLOOR PLAN
 SCALE 1/4" = 1'-0"

RECOMMENDED BY J. H. HAYMAN, JR.	THATNES PICTURE SHOW
APPROVED BY J. H. HAYMAN, JR.	THATNES PICTURE SHOW
CONCURRED IN J. H. HAYMAN, JR.	THATNES PICTURE SHOW
DESIGNED BY J. H. HAYMAN, JR.	THATNES PICTURE SHOW
CONSTRUCTED BY J. H. HAYMAN, JR.	THATNES PICTURE SHOW
DATE SEP 11 1928	BOZEMAN, MONTANA



GARDNER ROAD ELEVATION



AVENUE "A" ELEVATION

Scale 1/4" = 1'-0"

Landings and stairs
shown in section. This
building has no basement.
Not to be used as a
dwelling.

RECOMMENDED BY
APPROVED
CONCURRED IN

MEMMOTH HOT SPRINGS
HAYNES PICTURE SHOW

YELLOWSTONE NATIONAL PARK

FRED C. WILSON, ARCHITECT
BOZEMAN, MONTANA

SEP 11 1928

YEL-5580

3 OF 3

Submitted by

J. L. Haynes, Pres.

SEP 11 1928

ALTHOUGH THIS PLAN IS IDENTIFIED AS THE HAYNES PICTURE SHOP, IT IS A PLAN OF THE RESIDENCE IMMEDIATELY WEST OF THE 1928 PICTURE SHOP. IT WAS USED AS PART OF HAYNES OPERATIONS; IT IS NOT KNOWN IF IT CONTINUED TO BE USED AFTER THE PICTURE SHOP WAS COMPLETED.

— PROPOSED ALTERATION TO HAYNES PICTURE SHOP —
— MANWORTH HOT SPRINGS - YELLOWSTONE PARK - WYO —

— 308 —

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OCT 10 1964
FBI - NEW YORK

THIS DRAWING IS BELIEVED TO BE FOR THE PRODUCTION BUILDING FOR THE HAYNES YNP OPERATION. IT WAS (PORTIONS OF IT REMAIN) LOCATED NORTH OF THE GENERAL STORE AND ACROSS THE PARADE GROUND FROM THE LOCATION OF THE 1928 HAYNES PICTURE SHOP.

Submitted by Haynes PHS:HP:2106
Recommended by W. S. Van S. Van S. Date 9/1/35
Approved by W. S. Van S. Van S. Date 9/1/35
Drawn by W. S. Van S. Van S. Date 9/1/35

STORAGE - GARAGE

~~PRESENT BUILDING~~ PRESENT BUILDING
~~PRESENT BUILDING~~ PRESENT BUILDING

FLOOR PLAN

HAYNES PICTURE SHOPS INC.
YELLOWSTONE NATIONAL PARK
Mammoth Service Group Addition

PRESENT BLDG TO BE REMOVED

WAREHOUSE

STOCK ROOM

LOADING PLATFORM

FLOOR PLAN

WAREHOUSE SHOP

PRESENT BLDG
TO BE REMOVED
TO BE REAR

AMATEUR FINISHING & MOVING PICTURE LABORATORIES

SECOND STORY - BED ROOMS & CLUBROOM
PRINCIPALLY STORAGE

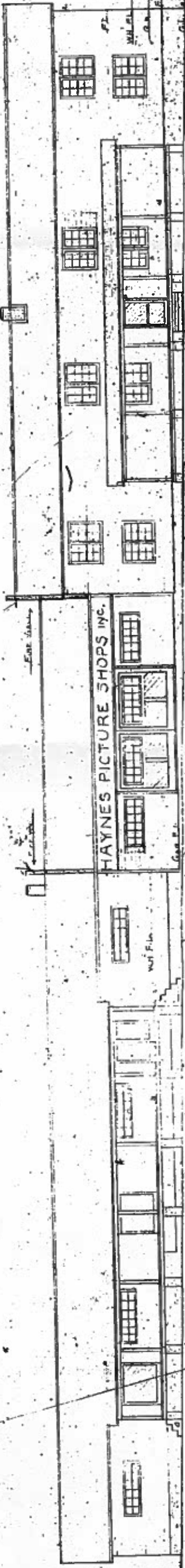
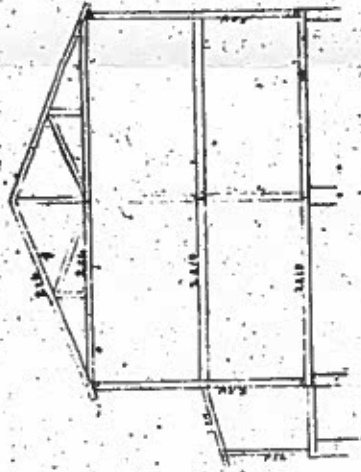
PLATFORM

YEI-5578
2 OF 2

THIS DRAWING IS BELIEVED TO BE FOR THE PRODUCTION BUILDING FOR THE HAYNES YNP OPERATION. IT WAS (PORTIONS OF IT REMAIN) LOCATED NORTH OF THE GENERAL STORE AND ACROSS THE PARADE GROUND FROM THE LOCATION OF THE 1928 HAYNES PICTURE SHOP.

FRONT ELEVATION
HAYNES PICTURE SHOPS INC.
YELLOWSTONE NATIONAL PARK
Mammoth Service Group Addition.

to
be
finished
to
be
finished
to
be
finished



FINISHING PLANT

GARAGE

WAREHOUSE - STOCKROOM

FRONT ELEVATION
HAYNES PICTURE SHOPS INC.
YELLOWSTONE PARK - WYO.

1 OF 2
YEL-5578

SUBMITTED BY: [Signature]
RECOMMENDED BY: [Signature]
CONFERRED WITH: [Signature]
APPROVED BY: [Signature]
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Celotex Standard Building Board and Celotex Lath—General Information

Description and Size of Boards

Celotex is manufactured by felting or weaving strong cane fibers into boards 12 ft. wide, 1/2 in. thick, and over 1000 ft. long. It is cut to standard sizes 4 ft. wide, 7, 8, 8 1/2, 9, 9 1/2, 10 and 12 ft. long weighing approximately 60 lb. per hundred sq. ft. and furnished in thicknesses of 1/2 and 3/4 in. Celotex has a pleasing gray-brown or tan color and an attractive semismooth fabric-like texture. It combines high thermal insulating value with considerable structural strength, having ample rigidity to fulfill all structural requirements for which it is used. Its strength is derived solely from its structure as it does not contain any adhesive.

Physical Characteristics

Thermal Conductivity—The thermal conductivity of Celotex has been established by many nationally known laboratories (U. S. Bureau of Standards, Armour Institute of Technology, and others). The average conductivity established by test in these laboratories is 0.33 B.t.u. per hour, per sq. ft., per degree F., per in. thickness.

Structural Strength—Tests made by the Armour Institute of Technology, The University of Minnesota, The R. W. Hunt Company, Columbia University, and other laboratories have shown that Celotex used as sheathing in buildings provides greater bracing against distortion of the building than is obtained with horizontal wood sheathing.

Moisture Resistance—In the manufacture of Celotex the fibers are chemically treated and waterproofed so that the entire board throughout its thickness is highly water resisting.

Fire Resistance—Celotex is slow-burning. Due to its high insulating value, light weight, and the absence of open joints it retards the spread of fires.

Vermín Resistance—In the process of manufacturing Celotex, soluble contents of the fibers are com-

pletely removed, leaving no food value whatsoever for rodents or other vermin. Celotex is a sterile product.

Permanence—Cane fibers are known to be extremely durable. With the same protection accorded to other building materials, Celotex will retain its physical characteristics for the life of the building in which it is used. It is now in place in more than 250,000 buildings.

Uniformity—The manufacture of Celotex is closely controlled by chemical and physical tests. Hourly tests are made and records kept of its strength, water-resistance, and other physical characteristics. Uniform quality is maintained and improvements made from time to time.

Practicality—Celotex is made in boards that are light in weight and of size convenient to handle on the job. It is sawed and nailed like wood.

Manufacturing Facilities

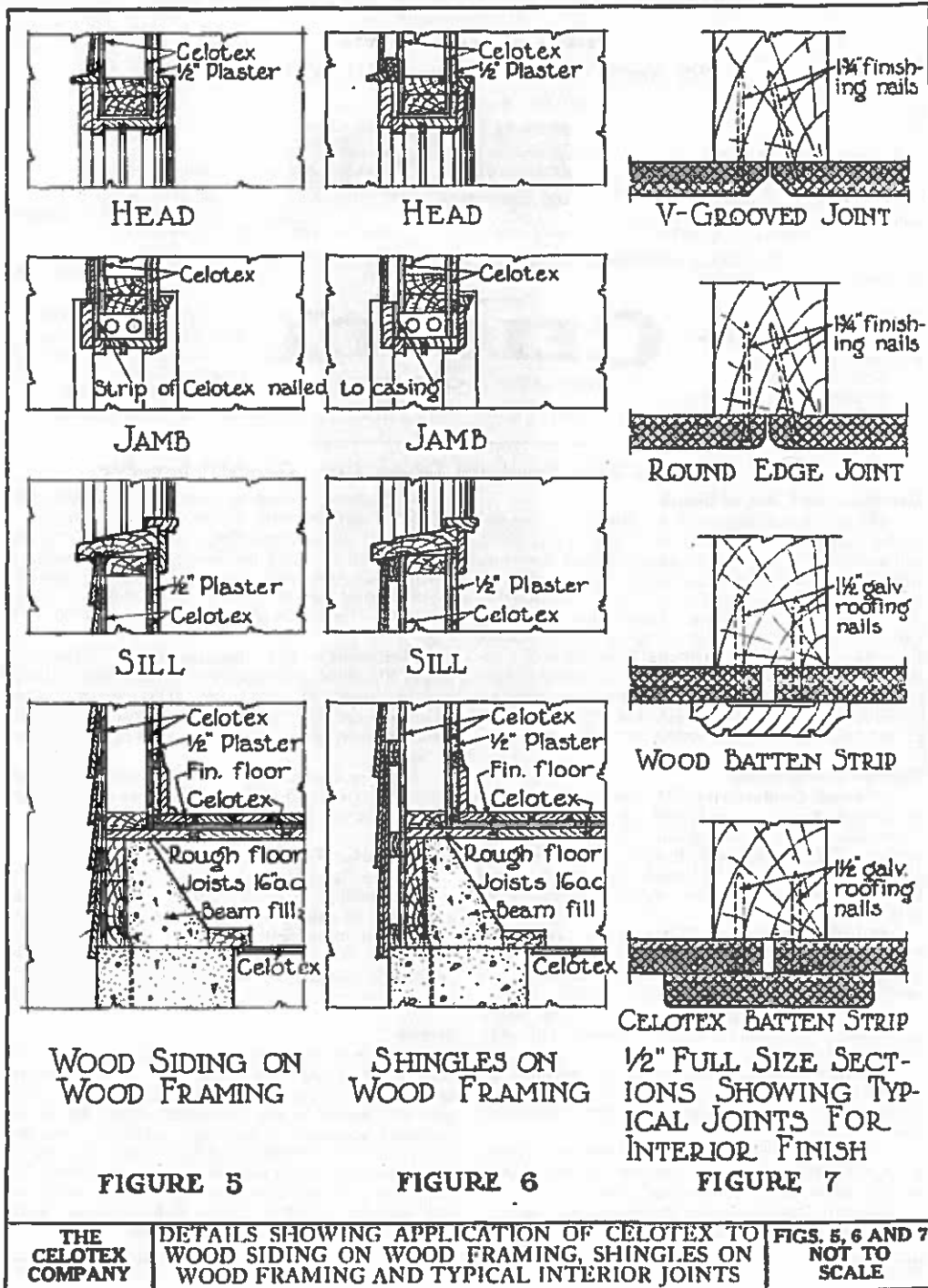
Celotex is established throughout the world as a standard building material. The Company produced in 1922 some 18 million sq. ft., in 1927 about 257 million sq. ft., and its present capacity is approximately 350 million sq. ft. per year. Production increases have been made necessary by demand and the Company will increase its production to keep abreast of the demand.

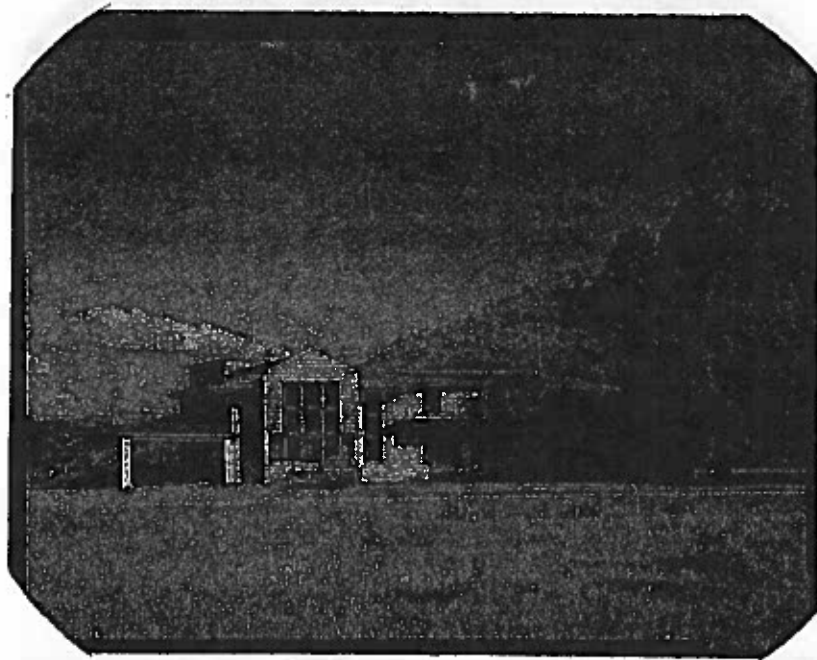
Service

THE CELOTEX COMPANY maintains a large and well equipped Research, Development and Control Department. All problems of application, decoration, and new uses are handled by this department which has an experienced personnel of engineers, architects, chemists, and decorators. Details of application are tested out by this department in the laboratories, but in addition, before issuing specifications, they are tested out on a practical scale so that only reliable, well established specifications are introduced into general use.

SWEET'S

Continued on next page

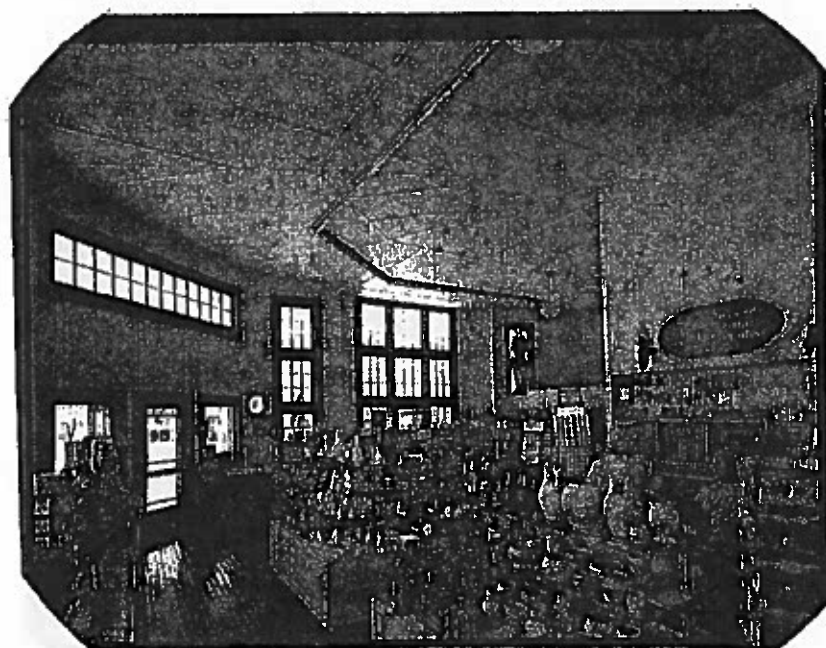




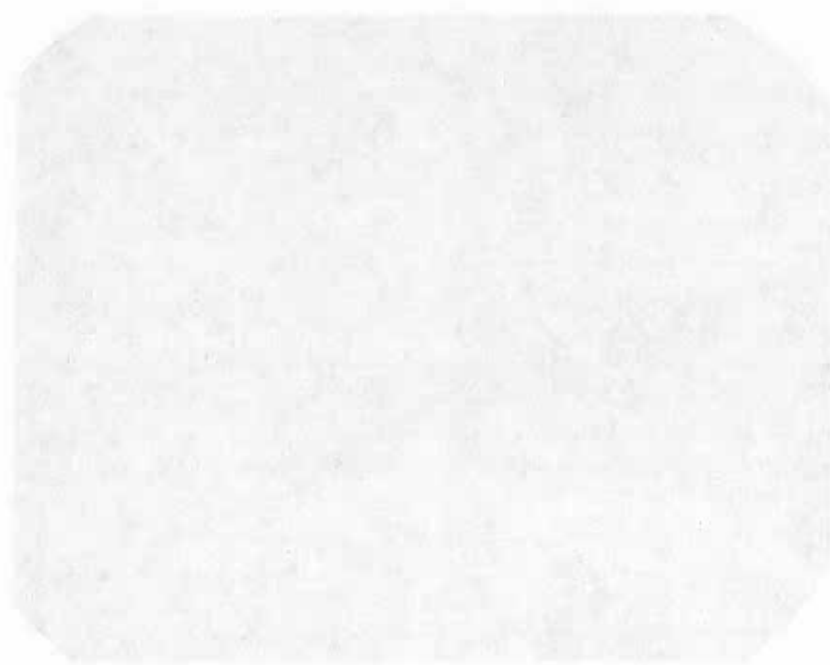
1983 photo of the north elevation.



1983 photo of the east elevation.



1983 photo of the interior of the retail sales area.



PHYSICAL DESCRIPTION: HISTORIC FABRIC

Condition Assessment

Building materials were assessed on site in regard to condition. A rating method and priority system has been used for assessing the condition of materials.

Materials Rating System

1. Historic Material—Preserve (in place)
2. Historic Material—Preserve wherever possible; replace with in-kind
3. Historic Material—Preserve wherever possible; replace with compatible
4. Preserve where there is no reason for removal
5. Remove/alter/replace (sensitively)
6. Specified treatment not required

Priority Rating System

Critical—Requires immediate action to preserve essential historic features and materials experiencing advanced deterioration, or to assure the stability of the building, or to preclude a threat to health or safety.

Serious—Materials or assemblies are approaching an advanced state of degradation, or will soon pose a threat to health or safety.

Minor—Degradation is minimal and preventive maintenance has not been followed; life expectancy of the material is reduced.

Evaluation Methodology

- The building was measured with tape measures and hand-held devices; measurements were compared with original drawings on-file with the NPS.
- Materials on site were compared with 1928 construction methods and technology as identified by preservation, architectural, and engineering disciplines.
- Historical documentation and significance of the structure was reviewed to provide a basis for evaluation and to understand the importance of on-site materials, assemblies, and systems.
- The structure was photographed in its current condition.
- Visual observations of defects were made and incorporated into this report.
- Assemblies that have failed or are approaching failure were recorded photographically.

- Representative structural calculations were done for typical supporting members to confirm their adequacy for continued use. The building was evaluated for resistance to earthquake forces.
- Building codes were reviewed to assess safety for occupancy and the general public, including consideration of both current uses and potential future uses.
- Other written material and evaluations for the building were reviewed and incorporated as they were discovered during research on the facility.

Historic Building Materials and Assemblies

Site and site elements: The hillside portion of the site associated with Haynes Picture Shops Headquarters has not been investigated as part of this Historic Structure Report; site comments are therefore limited to the immediate proximity of the building. A hillside storage bunker related to the building has not been investigated, although it is suspected that the small structure was used for functions related to the photographic operations of the headquarters (possibly chemical storage). Although the site next to the building is relatively flat, there was no evidence of negative drainage observed. The west side of the structure faces a well-maintained and manicured lawn area. Site surfaces east and north of the building (including the area beneath the canopy) consist of on-site gravel and earth intermixed with remnants of asphalt pavement. Concrete curbing (in poor condition) is visible around the corner location of the street intersection.

It is known from the historic record that other structures located near the site of the Haynes headquarters during the park's early years have been removed over time. No evidence of previous construction was noted in the immediate proximity of the building during preparation of this report; however, observations were limited.

Concrete: Concrete was used for all sub-surface supporting elements including footings and stem walls as well as for steps at the front entryways. The area-wall serving the basement windows is also constructed of concrete. The date of the concrete is attributed to 1928 when the structure was constructed.

Stone: None noted.

Brick: Limited to a chimney extending from the oil-fired heating furnace in the basement up through the structure. The brick is concealed at most locations, is smooth faced, appears to be extruded and hard-fired, and is of salmon to red coloration.

Structural clay tile: A single small room beneath the stairs accessing the basement level is constructed of structural clay tile. The walls of this room are not considered structural in nature; it is believed that the tile was used because of superior fire resistance. It is recommended that this room not be used to avoid having enclosed storage beneath a stair.

Mortar: Mortar occurs at the brick chimney related to heating appliances in the basement space as well as at the structural clay tile. It is attributed to the 1928 date when the structure was constructed; the mortar is in good condition at exposed interior locations.

Roofing material: With the exception of the retail area, the roof is surfaced with built-up roofing felts that have been coated with aluminum sealer. This segment of the roofing is not original; it is thought to be serviceable in the short term with continued maintenance. As a footnote, due to the low-slope of the roof assembly there are not many options available for covering this structure, and one section of the roof is flat (above the retail display area). The retail area (except for the flat spot noted above) is surfaced with wood shingles, is a steeper slope, and is the in-kind historic material.

Metal gutters and accessories: None noted.

Structural steel: Limited to temporary column supports beneath the kitchen cooking island that may be plumbing pipe; their metallurgy is believed to be pipe grade.

Cast iron: None noted.

Sheet metal and flashings: Flashing on site is limited to roof accessories and the heads of exterior doors and windows. The condition of the flashing is not known.

Soffit materials: Bead pattern boards with mitered corners. The wood materials are in fair condition; however, numerous locations were noted where re-nailing is required.

Roof sheathing: 1x boards (original). As viewed from the underside, the sheathing is in good condition.

Fascia: 1x6 and 1x8 whitewoods; S4S. The fascia is in fair condition but requires maintenance and coating. At one location, a whimsical star pattern is cut into the fascia.

Wood shingle siding: Exterior walls are surfaced with painted red cedar shingles (un-imbricated); they are in fair-to-poor condition. Previous coatings have left uneven and blotchy drip patterns that detract from the overall appearance and neatness of the walls; some re-nailing is required, and application of new coating is warranted along with the attendant preparation work. Shingle replacement is required at selected locations.

Exterior wood trim and casings: All exterior wood trims and casing are flat 1 x 4 S4S stock in fair condition; some members require replacement. A shaped cornice mold trims the top of the wall shingles where they intersect with the roof. It is in good condition.

Windows and Glazing

Windows: The windows (including numerous panes of glass) are believed to be original to the date of construction (1928). The windows are primarily wood 6/6 double-hung windows with some divided-lite fixed windows used to admit light into the retail display area of the facility. The windows are glazed with single pane glazing and, in most cases, the glazing is intact. Subject to a more detailed examination, many of the windows are believed to be repairable.

Exterior doors: Doors into the retail display area are vertical grain fir full-lite doors with divided lites in the glazing area. They are attributed to be original to the date of construction.

Doors into the west and south staff entrances are vertical grain fir paneled half-lite doors with divided lites over a recessed door pattern. The south staff entry recessed door pattern is a cross-buck; the second floor door accessing the exterior fire stair has divided lites over two recessed panels.

All doors could be continued in use; they require maintenance and ADA entrances will require different hardware.

Wood framing: The entire structure is of wood framing. By 1928 most framing was surfaced and it may have been milled to a 5/8" standard (2" lumber was milled to 1-5/8," etc.). Framing for the walls is concealed in nearly all locations; however, significant portions of the first floor framing are visible, and all of the roof framing can be viewed. With the exception of a localized area of floor next to the north entrance (see photos), all of the interior framing members are in good condition (refer to current photographs). Exterior framing associated with the exterior stair that has been exposed to the weather is in poor-to-very poor condition and will have to be replaced if the exterior stair is retained.

Flooring: The tongue and groove fir flooring that has been used extensively throughout both floors of the building is in relatively good condition. It could continue in service; it is recommended that it be refinished. At some first floor locations it has been painted (typical finish is stain and varnish) and the condition of the wood beneath the paint is unknown. The tongue and groove flooring

occurs at all retail, office, and sleeping room areas as well as the lounge area on the second floor.

Bathroom, kitchen, and utility areas have had resilient flooring materials introduced over time and those materials (not original) are due for replacement. The north half of the dining area utilizes resilient floor surfacing.

The resilient floor tile in the first floor office areas is not original; similar to the other resilient flooring materials in the facility it is at the end of its useful service.

The only carpet noted in the existing building is located at the south half of the dining area on the first floor. It is recommended that it be removed.

Floor covering at the interior stair is limited to partial width pre-molded rubber treads replete with an aluminum edging that is the same width as the rubber walking surface.

Ceilings: Ceilings throughout are typically painted Celotex with a square wood batten pattern appliqué; battens are painted to match the adjacent ceiling surface. These ceilings are original to the era of construction.

Exceptions to the original Celotex ceilings occur at the south staff entrance of the first floor and the ceiling of the stairwell where gypsum drywall has been installed.

Interior walls: The interior walls are predominately painted Celotex except for the stairs, part of the kitchen, and bathroom areas (those walls are surfaces with gypsum drywall materials, or combinations of the two materials). Painted bead pattern wood boards have been used as wainscot surfacing at the first floor bathroom adjacent to the south staff entry, and at portions of the kitchen.

(Note regarding Celotex: Because of fire safety, building code considerations, and durability, it is unlikely that the Celotex materials used on walls and ceilings can remain in service in the building. This material was widely used as an inherent part of rustic architecture in the 1920s and 30s (as documented within this region) and it is therefore recommended that it be interpreted in relation to the Haynes headquarters; it is further recommended that it be preserved at facilities and locations that have less restrictive fire requirements.)

Interior doors: Interior doors providing access to the bedrooms are typically vertical grain fir rail and stile doors with a single large inset panel. They are finished naturally and are original to the 1928 construction. The office suite

features a variety of natural panel doors (not original), and a flat (slab) door has been introduced more recently at the secure storage area.

Millwork: As noted for exterior elements, interior trims are of 1 x 4 flat painted whitewoods with 1 x 6s used for many of the base elements. Quarter round has been used as a base shoe in some instances. The flat 1 x 4 stock is finished to match either the walls or doors and features butted corners.

Cabinetry: Other than shelving, very little original cabinetry exists on-site. A darkroom sink, counter, and associated electrical is located centrally on the first floor; it may be related to Haynes photo operations, and it is recommended that this element be preserved or interpreted.

Hardware: Hardware associated with the doors into individual rooms (bedrooms) is original and is in good condition. It is recommended that it be retained for other than designated ADA rooms. Hardware at other locations is a mixture of original and introduced assemblies; further inventory is recommended before making specific recommendations in the office and former staff areas. Exterior hardware at public ADA entrance locations will require replacement. Retaining historic visual elements (such as escutcheons) is recommended.

Exterior painting: The exterior of the facility requires painting in its entirety.

Mechanical: Existing mechanical systems include domestic water supply and distribution, waste and vent systems, provision for an oil fired central heating appliance, limited ductwork, and a circa 1940s cabinet heater in the retail area. It is not unreasonable to assume that the heating systems are no longer viable, and that more energy-efficient heating could be introduced into the facility. Revisions to or additions of water and/or waste systems into the facility are dependant upon the uses that the building will be put to. It was noted that copper and PVC materials have been used for portions of the waste and water systems; it is not known if earlier galvanized or cast iron systems remain on site.

Electrical: It is assumed that all electrical systems would require renovation if the building is rehabilitated to new use. Several generations of electrical wiring are found within the building including knob and tube, metallic conduit, and flexible plastic (blue) conduit.

Materials Inventory

Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
Site							
Site	West side of property	Site landscaping	Lawn	4	Fair	Minor	Maintain, enhance
Site	Adj to improved area	Trees (natural)	Earth/asphalt at north and east sides	5	Poor	Serious	
Site	General	Site grading	Evergreens at Capitol Hill to south	N/A	N/A	N/A	Not on property
Site	N and E side	Curbs and curb cuts	Drainage	6	Fair	Minor	
Site	Site improvements	Site paths and walks	Segments along edges of streets	4, 5	Poor	Serious	
Site	Site improvements	Entrance steps (west)	West walk at veranda	4, 5	Fair	Minor	
Site	Building access	Entrance steps (E and NE)	Concrete-unpatterned (reinf unknown)	4	Fair	Minor	
Site	Building access	Drive-through	Concrete-unpatterned (reinf unknown)	5	Poor	Serious	
Site	Adj to improved area	North sidewalk at street	Curved asphalt service drive	5	Poor	Serious	
			Not reviewed	N/A	N/A	N/A	
Sub-Structure							
Structure	Basement	Foundation—basement area	Reinf conc foundation wall	2	Good	Minor	
Structure	General	Stem walls—remainder of structure	Reinf conc grade beam / footing	2	Good	Minor	
Structure	E side of S wing	Window areaway—bsmt wdws	Reinf conc grade beam	3	Poor	Critical	Repair
Structure	Interior	Interior concrete slab—kitchen	Thin set section	5	Fair	Minor	
General	General	Foundation ventilators	Mesh in wood frame	5	Poor	Critical	
Roof Assembly							
Roof	Retail	Roof hips and ridges	Wood shingles (Boston lap)	3	Poor to Fair	Serious	
Roof	Retail	Sloped roof surfacing	Wood shingles (sawn)	3	Poor to Fair	Serious	
Roof	Retail	Flat center roof	Roofing felt; alumination coating	4, 5	Poor to Fair	Serious	
Roof	1st floor canopies	Roof hips and ridges	Wood shingles (Boston lap)	3	Fair	Minor	
Roof	1st floor canopies	Sloped roof surfacing	Wood shingles (sawn)	3	Fair	Minor	
Roof	Other (upper level)	Roof surfacing	Roofing felt; alumination coating	4, 5	Poor to Fair	Serious	Coating poor
Roof	Entire roof	Roof sheathing	Spaced S4S boards	2	Good	No action	
Roof	Entire roof	Flashing	Various	4	Good	Minor	
Roof	Entire roof	Roof edging	Various	5	Fair	Minor	
Roof	Perimeter	Fascia	1x6; 1x8 flat	1, 2	Poor to Fair	Serious	
Roof	Perimeter	Soffit	Bead-patterned wood boards	1	Fair	Minor	
Roof	Feature	Chimney	See separate paragraph below	***	***	***	
Roof	Sloped roof	Cedar breather	Add (none at exist roof)	N/A	N/A	N/A	Add when re-roof
Roof	Sloped roof	Ice dam edge protection	Add (none at exist roof)	N/A	N/A	N/A	Add when re-roof
Roof Structure	Entire roof	Rafters	2x dimensioned lumber (S4S)	3	Excellent	No action	
Roof Structure	Entire roof	Hip rafters	2x dimensioned lumber (S4S)	3	Excellent	No action	
Roof Structure	Entire roof	Ceiling joists	2x dimensioned lumber (S4S)	3	Excellent	No action	
Roof Structure	Entire roof	Braces; misc.	2x dimensioned lumber (S4S)	3	Excellent	No action	

Priority Ratings: **Critical**—Requires immediate action to preserve essential historic features and materials experiencing advanced deterioration, or to assure the stability of the building, or to preclude a threat to health or safety; **Serious**—Materials or assemblies are approaching an advanced state of degradation, or will soon pose a threat to health or safety; **Minor**—Degradation is minimal and preventive maintenance has not been followed; life expectancy of the material is reduced.

Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
Exterior Walls							
Walls	General	Shingle surfacing	Wood shingles (sawn)	2	Fair/Poor	Serious	
Walls	General	1x sheathing	1x board sheathing	2	Good	Minor	
Walls	General	Wood framing	2x dimensioned lumber (S4S)	2	Good	Minor	
Walls	Canopy	Canopy columns	Clad with shingles	2	Fair	Minor	
Walls	Openings	Windows—typical 6/6 dbl—hung	True divided lite—single pane	2, 3	Fair/Poor	Serious	
Walls	Openings	Windows—fixed w/div.	True divided lite—single pane	2	Fair/Poor	Serious	
Walls	Openings	Windows—picture (offices)	Single pane	5	Fair/Poor	Serious	
Walls	Openings	Windows (display)	Casement—single pane	2	Fair/Poor	Serious	
Walls	General	Ext casings and trims (throughout)	Wood—flat 1x profiles	2	Fair/Poor	Serious	
Walls	Openings	Public corner door (NE)	12 lite door (4h x 3w)	1	Fair	Minor	
Walls	Openings	Public east door	12 lite door (4h x 3w)	1	Fair	Minor	
Walls	Openings	Public north door	12 lite door (4h x 3w)	1	Fair	Minor	
Walls	Openings	West staff entrance	6 lite over (2) vertical panels	2	Fair	Minor	
Walls	Openings	West dining door	9 lite over (2) vertical panels	2	Fair	Minor	
Walls	Openings	West corridor door (SW corner)	6 lite over (2) vertical panels	3	Fair	Minor	
Walls	Openings	East kitchen door	6 lite over (2) vertical panels	3	Poor	Serious	
Walls	Openings	South staff door into 105	9 lite over cross—buck pattern	2	Fair	Minor	
Walls	Openings	Access door into utility space	9 lite over single panel pattern	3	Poor	Serious	
Walls	Openings	2nd floor exterior stair door	9 lite over (2) vertical panels	3	Poor	Serious	
Walls	Porch/veranda	West porch columns	Clad with shingles	2	Fair/Poor	Serious	
Walls	Porch/veranda	West porch railing	Solid rail clad with wd shingles	2	Fair/Poor	Serious	
Walls	North entrance	Rail at north door	Solid rail clad with wd shingles	2	Poor	Serious	
Walls	East stair landing	2nd floor railing at landing (ext)	Dim lbr railing and balusters	4, 5	Poor	Serious	
Walls	General	Ladders from 2nd floor windows	Wood—mortised round rungs	5	Unknown	**	**Coordinate with occupancy
Interior—Retail Area							
Interior	Room 101	Flooring	T&G fir	2	Fair	Minor	Repair damage (N entry and at W wall)
Interior	Room 101	Base	1x8 w/quarter round	2	Fair/Poor	Minor	
Interior	Room 101	North wall	Celotex; wood battens	4	Fair/Good	Minor	
Interior	Room 101	East wall	Celotex; wood battens	4	Fair/Good	Minor	
Interior	Room 101	South wall	Celotex; wood battens	4	Fair/Good	Minor	
Interior	Room 101	West wall	Celotex; wood battens	4, 5	Fair/Good	Minor	Effects from soft drink machine
Interior	Room 101	Ceiling	Celotex; wood battens	1	Good	Minor	
Interior	Room 101	Ceiling insulation	3" perlite	6	Fair	**	**Recommend added insulation
Interior	Room 101	Vapor barrier	None	-	-	-	

Materials Rating: 1. Historic Material—Preserve (in place); 2. Historic Material—Preserve wherever possible; replace with in-kind; 3. Historic Material—Preserve wherever possible; replace with compatible; 4. Preserve where there is no reason for removal; 5. Remove/alter/replace (sensitivity); 6. Specified treatment not required.

Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
Interior—Corridors							
Interior	Room 102, 103	Flooring	T&G fir	2	Fair	Minor	
Interior	Room 102, 103	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Room 102, 103	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 102, 103	East wall	None	N/A	N/A	N/A	
Interior	Room 102, 103	South wall	Plaster	2	Good	Minor	
Interior	Room 102, 103	West wall	None	—	—	—	Electrical intrusions above door
Interior	Room 102, 103	Ceiling	Celotex; wood battens	4, 5	Fair/Good	Minor	
Interior	Room 102, 103	Ceiling insulation	None	—	—	—	
Interior	Room 102, 103	Vapor barrier	None	—	—	—	
Interior—Corridors							
Interior	Rooms 104	Flooring	T&G fir	2	Fair	Minor	
Interior	Rooms 104	Base	1x8	2	Fair	Minor	
Interior	Rooms 104	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 104	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 104	South wall	Celotex; wood battens	4, 5	Unknown	Minor	Impacted by shelving
Interior	Rooms 104	West wall	Celotex; wood battens	4, 5	Fair	Minor	Missing chair rail
Interior	Rooms 104	Ceiling	Celotex; wood battens	4, 5	Good	Minor	
Interior	Rooms 104	Ceiling insulation	None	—	—	—	
Interior	Rooms 104	Vapor barrier	None	—	—	—	
Interior—South Entrance							
Interior	Room 105	Flooring	T&G fir	2	Fair	Minor	
Interior	Room 105	Base	1x8	2	Fair	Minor	
Interior	Room 105	North wall	Celotex; wood battens	5	Fair/Poor	Minor	Areas to be repaired
Interior	Room 105	East wall	Celotex; wood battens	5	Fair/Poor	Minor	Areas to be repaired
Interior	Room 105	South wall	Celotex; wood battens	5	Fair	Minor	
Interior	Room 105	West wall	Celotex; wood battens	5	Fair	Minor	
Interior	Room 105	Ceiling	Gypsum drywall	4	Poor	Serious	GPDW non-historic, not finished
Interior	Room 105	Ceiling insulation	N/A	—	—	—	
Interior	Room 105	Vapor barrier	N/A	—	—	—	

Priority Rating: Critical—Requires immediate action to preserve essential historic features and materials experiencing advanced deterioration, or to assure the stability of the building, or to preclude a threat to health or safety; **Serious**—Materials or assemblies are approaching an advanced state of degradation, or will soon pose a threat to health or safety; **Minor**—Degradation is minimal and preventive maintenance has not been followed; life expectancy of the material is reduced.

Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
Interior—Unisex Toilet							
Interior	Room 106	Flooring	T&G fir	2	Fair/Poor	Minor	
Interior	Room 106	Base	Quarter round	5	Poor	Serious	
Interior	Room 106	North wall	Celotex	5	Fair	Minor	Remove shelving
Interior	Room 106	East wall	Celotex	5	Fair	Minor	Remove shelving
Interior	Room 106	South wall	Celotex	5	Fair	Minor	
Interior	Room 106	West wall	Celotex	5	Fair	Minor	Remove shelving
Interior	Room 106	Wainscot	Bead pattern wood boards	1	Fair	Minor	
Interior	Room 106	Ceiling	Celotex	4, 5	Fair	Minor	
Interior	Room 106	Ceiling insulation	N/A	—	—	—	
Interior	Room 106	Vapor barrier	N/A	—	—	—	
Interior—Utility							
Interior	Room 107	Flooring	Sheet vinyl	5	Poor	Serious	
Interior	Room 107	Base	Not recorded	—	—	—	
Interior	Room 107	North wall	Gypsum drywall	4	Fair	Minor	
Interior	Room 107	East wall	Gypsum drywall	4	Fair	Minor	
Interior	Room 107	South wall	Gypsum drywall	4	Fair	Minor	
Interior	Room 107	West wall	Gypsum drywall	4	Fair	Minor	
Interior	Room 107	Ceiling	Celotex; wood battens	3	Fair	Minor	
Interior	Room 107	Ceiling insulation	N/A	—	—	—	
Interior	Room 107	Vapor barrier	N/A	—	—	—	
Interior—Darkroom							
Interior	Room 108	Flooring	T&G fir	2	Poor	Serious	
Interior	Room 108	Base	Quarter round	2	Poor	Serious	
Interior	Room 108	North wall	Celotex; wood battens	3	Fair	Minor	
Interior	Room 108	East wall	Plywood	5	Poor	Serious	
Interior	Room 108	South wall	Plywood	5	Poor	Serious	
Interior	Room 108	West wall	Celotex; wood battens	3	Fair	Minor	
Interior	Room 108	Ceiling	Celotex; wood battens	2	Fair	Minor	
Interior	Room 108	Ceiling insulation	N/A	—	—	—	
Interior	Room 108	Vapor barrier	N/A	—	—	—	

Materials Rating: 1. Historic Material—Preserve (in place); 2. Historic Material—Preserve wherever possible; replace with in-kind; 3. Historic Material—Preserve wherever possible; replace with compatible; 4. Preserve where there is no reason for removal; 5. Remove/alter/replace (sensitivity); 6. Specified treatment not required.

Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
Interior—Storage & Work Room							
Interior	Rooms 109, 110	Flooring	T&G fir	2	Fair	Minor	
Interior	Rooms 109, 110	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Rooms 109, 110	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 109, 110	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 109, 110	South wall	Celotex; wood battens	4, 5	Fair	Minor	110—part of wall missing
Interior	Rooms 109, 110	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 109, 110	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 109, 110	Ceiling insulation	N/A	—	—	—	
Interior	Rooms 109, 110	Vapor barrier	N/A	—	—	—	
Interior—Offices							
Interior	Rooms 111–114	Flooring	T&G fir	2	Fair	Minor	
Interior	Rooms 111–114	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Rooms 111–114	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 111–114	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 111–114	South wall	Celotex; wood battens	4, 5	Fair	Minor	112—retain relites; 114—Dutch door
Interior	Rooms 111–114	West wall	Celotex; wood battens	4, 5	Fair	Minor	112—retain pass-through
Interior	Rooms 111–114	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 111–114	Ceiling insulation	N/A	—	—	—	
Interior	Rooms 111–114	Vapor barrier	N/A	—	—	—	
*** Note: 114 is attributed to being Jack Haynes' office							
Interior—Work Room							
Interior	Room 115	Flooring	T&G fir	2	Fair	Minor	
Interior	Room 115	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Room 115	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 115	East wall	Celotex; wood battens	4, 5	Fair	Minor	Remove shelving
Interior	Room 115	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 115	West wall	Plaster	2	Good	Minor	Remove shelving
Interior	Room 115	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 115	Ceiling insulation	N/A	—	—	—	
Interior	Room 115	Vapor barrier	N/A	—	—	—	

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Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
Interior—Vault							
Interior	Room 116-vault	Flooring	Concrete	2	Fair	Minor	
Interior	Room 116-vault	Base	None	—	—	—	
Interior	Room 116-vault	North wall	Plaster	2	Good	Minor	Retain door; plywood and elec intrusions
Interior	Room 116-vault	East wall	Plaster	2	Good	Minor	
Interior	Room 116-vault	South wall	Plaster	2	Good	Minor	
Interior	Room 116-vault	West wall	Plaster	2	Good	Minor	
Interior	Room 116-vault	Ceiling	Plaster	2	Good	Minor	
Interior	Room 116-vault	Ceiling insulation	N/A	—	—	—	
Interior	Room 116-vault	Vapor barrier	N/A	—	—	—	
Interior—West Entry							
Interior	Room 117	Flooring	T&G fir	2	Fair	Minor	
Interior	Room 117	Base	Concealed	4, 5	Unknown	—	
Interior	Room 117	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 117	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 117	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 117	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 117	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 117	Ceiling insulation	N/A	—	—	—	
Interior	Room 117	Vapor barrier	N/A	—	—	—	
Interior—Storage							
Interior	Room 118	Flooring	T&G fir	2	Fair	Minor	
Interior	Room 118	Base	1x8 w/quarter round	4, 5	Unknown	—	
Interior	Room 118	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 118	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 118	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 118	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 118	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 118	Ceiling insulation	N/A	—	—	—	
Interior	Room 118	Vapor barrier	N/A	—	—	—	

Materials Ratings: 1. Historic Material—Preserve (in place); 2. Historic Material—Preserve wherever possible; replace with in-kind; 3. Historic Material—Preserve wherever possible; replace with compatible; 4. Preserve where there is no reason for removal; 5. Remove/alter/replace (sensitive); 6. Specified treatment not required.

Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
Interior—Passage							
Interior	Room 119	Flooring	Resilient flooring	5	Poor	Serious	
Interior	Room 119	Base	1x8 w/quarter round	3	Poor	Serious	
Interior	Room 119	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 119	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 119	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 119	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 119	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 119	Ceiling insulation	N/A	—	—	—	
Interior	Room 119	Vapor barrier	N/A	—	—	—	
Interior—Telecommunications							
Interior	Room 120	Flooring	T&G fir	3	Fair/Poor	Minor	
Interior	Room 120	Base	Unknown	—	—	—	
Interior	Room 120	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 120	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 120	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 120	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 120	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 120	Ceiling insulation	N/A	—	—	—	
Interior	Room 120	Vapor barrier	N/A	—	—	—	
Interior—Stair							
Interior	Stair 121, Room 202	Flooring	Fir T&R /resilient at landing	*	Fair	Minor	* Retain wood; replace SV
Interior	Stair 121, Room 202	Base	Wood stair skirt	2	Fair	Minor	
Interior	Stair 121, Room 202	North wall	Gypsum drywall	4	Good	No action	
Interior	Stair 121, Room 202	East wall	Gypsum drywall	4	Good	No action	Replace contemporary handrail
Interior	Stair 121, Room 202	South wall	Gypsum drywall	4	Good	No action	
Interior	Stair 121, Room 202	West wall	Gypsum drywall	4	Good	No action	Replace contemporary handrail
Interior	Stair 121, Room 202	Ceiling	Gypsum drywall	4	Good	No action	
Interior	Stair 121, Room 202	Ceiling insulation	3" perlite	6	Good	**	** Recommend added insulation
Interior	Stair 121, Room 202	Vapor barrier	Add (none at exist)	—	—	—	

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Category	Location	Element	Description	Reg	Cond	Priority	Remarks
Interior—Kitchen							
Interior	Room 122-kitchen	Flooring	Resilient flooring	5	Poor	Serious	
Interior	Room 122-kitchen	Flooring	Concrete at range area	4, 5	Fair/Poor	Minor	
Interior	Room 122-kitchen	Base	Quarter round	3	Poor	Serious	
Interior	Room 122-kitchen	North wall	Bead-patterned wood	1	Fair	Minor	
Interior	Room 122-kitchen	East wall	Bead-patterned wood	1	Fair	Minor	Refrigerator alcove is not original
Interior	Room 122-kitchen	South wall	Masonite-painted	5	Poor	Serious	
Interior	Room 122-kitchen	West wall	Bead-patterned wood	1	Fair	Minor	
Interior	Room 122-kitchen	Ceiling	Gypsum drywall	4	Good	Minor	
Interior	Room 122-kitchen	Ceiling insulation	N/A	—	—	—	
Interior	Room 122-kitchen	Vapor barrier	N/A	—	—	—	
Interior—Dining							
Interior	Room 123-dining	Flooring	Carpet/resilient flooring	5	Poor	Serious	
Interior	Room 123-dining	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Room 123-dining	North wall	Celotex; wood battens	4, 5	Good	Minor	
Interior	Room 123-dining	East wall	Celotex; wood battens	4, 5	Good	Minor	
Interior	Room 123-dining	South wall	Fiberboard	4, 5	Good	Minor	
Interior	Room 123-dining	West wall	Celotex; wood battens	4, 5	Good	Minor	
Interior	Room 123-dining	Ceiling	Celotex; wood battens	4, 5	Good	Minor	
Interior	Room 123-dining	Ceiling insulation	N/A	—	—	—	
Interior	Room 123-dining	Vapor barrier	N/A	—	—	—	
Interior—South Corridor Foyer, 1st Floor							
Interior	Room 124A-foyer	Flooring	T&G fir	2	Fair	Minor	
Interior	Room 124A-foyer	Base	Quarter round	2	Fair	Minor	
Interior	Room 124A-foyer	North wall	Fiberboard	4, 5	Fair	Minor	
Interior	Room 124A-foyer	East wall	Fiberboard	4, 5	Fair	Minor	
Interior	Room 124A-foyer	South wall	None				
Interior	Room 124A-foyer	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 124A-foyer	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 124A-foyer	Ceiling insulation	N/A	—	—	—	
Interior	Room 124A-foyer	Vapor barrier	N/A	—	—	—	

Materials Rating System: 1. Historic Material—Preserve (in place); 2. Historic Material—Preserve wherever possible; replace with in-kind; 3. Historic Material—Preserve wherever possible; replace with compatible; 4. Preserve where there is no reason for removal; 5. Remove/alter/replace (sensitively); 6. Specified treatment not required.

Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
Interior—South Corridor, 1st Floor							
Interior	Room 124	Flooring	T&G fir	2	Fair	Minor	
Interior	Room 124	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Room 124	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 124	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 124	South wall	Bead Pattern wood	4, 5	Fair	Minor	
Interior	Room 124	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 124	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 124	Ceiling insulation	N/A	—	—	—	
Interior	Room 124	Vapor barrier	N/A	—	—	—	
Interior—Dorm Room							
Interior	Room 125	Flooring	T&G fir	2	Fair	Minor	Recommend strip paint from floor
Interior	Room 125	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Room 125	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 125	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 125	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 125	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 125	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 125	Ceiling insulation	N/A	—	—	—	
Interior	Room 125	Vapor barrier	N/A	—	—	—	
Interior—Dorm Bathroom, 1st Floor							
Interior	Room 126	Flooring	Resilient—vinyl tile	5	Poor	Serious	Recommend hazmat evaluation
Interior	Room 126	Base	1x8 w/quarter round	3	Poor	Serious	
Interior	Room 126	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 126	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 126	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 126	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 126	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 126	Ceiling insulation	N/A	—	—	—	
Interior	Room 126	Vapor barrier	N/A	—	—	—	

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Category	Location	Element	Description	Reg	Cond	Priority	Remarks
Interior—Dorm Rooms							
Interior	Rooms 127, 128	Flooring	T&G fir	2	Fair	Minor	
Interior	Rooms 127, 128	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Rooms 127, 128	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 127, 128	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 127, 128	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 127, 128	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 127, 128	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 127, 128	Ceiling insulation	N/A	—	—	—	
Interior	Rooms 127, 128	Vapor barrier	N/A	—	—	—	
Interior—2nd Floor Corridors							
Interior	Rooms 202–205	Flooring	T&G fir	2	Fair	Minor	
Interior	Rooms 202–205	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Rooms 202–205	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 202–205	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 202–205	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 202–205	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 202–205	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 202–205	Ceiling insulation	3" perlite	6	Good	**	** Recommend added insulation
Interior	Rooms 202–205	Vapor barrier	Add (none at exist)	—	—	—	
Interior—Dorm Rooms							
Interior	Rooms 206–212	Flooring	T&G fir	2	Fair	Minor	
Interior	Rooms 206–212	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Rooms 206–212	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 206–212	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 206–212	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 206–212	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 206–212	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 206–212	Ceiling insulation	3" perlite	6	Good	**	** Recommend added insulation
Interior	Rooms 206–212	Vapor barrier	Add (none at exist)	—	—	—	

Materials Ratings 1. Historic Material—Preserve (in place); 2. Historic Material—Preserve whenever possible; replace with in-kind; 3. Historic Material—Preserve wherever possible; replace with compatible; 4. Preserve where there is no reason for removal; 5. Remove/alter/replace (sensitively); 6. Specified treatment not required.

Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
Interior—2nd Floor Storage							
Interior	Room 213	Flooring	T&G fir	2	Fair	Minor	
Interior	Room 213	Base	None	2	Fair	Minor	
Interior	Room 213	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 213	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 213	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 213	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 213	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 213	Ceiling insulation	3" perlite	4, 5	Fair	Minor	** Recommend added insulation
Interior	Room 213	Vapor barrier	Add (none at exist)	6	Good	**	
Interior—Dorm Rooms							
Interior	Rooms 214-216	Flooring	T&G fir	2	Fair	Minor	
Interior	Rooms 214-216	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Rooms 214-216	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 214-216	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 214-216	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 214-216	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 214-216	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Rooms 214-216	Ceiling insulation	3" Perlite	4, 5	Fair	Minor	** Recommend added insulation
Interior	Rooms 214-216	Vapor barrier	Add (none at exist)	6	Good	**	
Interior—Women 217							
Interior	Room 217-women	Flooring	Resilient flooring	5	Poor	Serious	
Interior	Room 217-women	Base	1x8 w/quarter round	3	Poor	Serious	
Interior	Room 217-women	North wall	Celotex; wood battens	4, 5	Fair/Poor	Minor	GPDW at showers
Interior	Room 217-women	East wall	Celotex; wood battens	4, 5	Fair/Poor	Minor	
Interior	Room 217-women	South wall	Celotex; wood battens	4, 5	Fair/Poor	Minor	
Interior	Room 217-women	West wall	Celotex; wood battens	4, 5	Fair/Poor	Minor	
Interior	Room 217-women	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 217-women	Ceiling insulation	3" perlite	4, 5	Fair	Minor	** Recommend added insulation
Interior	Room 217-women	Vapor barrier	Add (none at exist)	6	Good	**	

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Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
Interior—Men 218							
Interior	Room 218—men	Flooring	Resilient—vinyl tile	5	Poor	Serious	
Interior	Room 218—men	Base	1x8 w/quarter round	3	Poor	Serious	
Interior	Room 218—men	North wall	Celotex; wood battens	4, 5	Fair/Poor	Minor	GIP at showers
Interior	Room 218—men	East wall	Celotex; wood battens	4, 5	Fair/Poor	Minor	
Interior	Room 218—men	South wall	Celotex; wood battens	4, 5	Fair/Poor	Minor	
Interior	Room 218—men	West wall	Celotex; wood battens	4, 5	Fair/Poor	Minor	
Interior	Room 218—men	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 218—men	Ceiling insulation	3" perlite	6	Good	**	** Recommend added insulation
Interior	Room 218—men	Vapor barrier	Add (none at exist)	—	—	—	
Interior—Lounge							
Interior	Room 219—lounge	Flooring	T&G fir	2	Fair	Minor	
Interior	Room 219—lounge	Base	1x8 w/quarter round	2	Fair	Minor	
Interior	Room 219—lounge	North wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 219—lounge	East wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 219—lounge	South wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 219—lounge	West wall	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 219—lounge	Ceiling	Celotex; wood battens	4, 5	Fair	Minor	
Interior	Room 219—lounge	Ceiling insulation	3" perlite	6	Good	**	** Recommend added insulation
Interior	Room 219—lounge	Vapor barrier	Add (none at exist)	—	—	—	
Interior Doors							
	Dorm room doors	Wood rail and stile doors	2 panel VG fir (typical)	2	Good	No action*	* See comments under Hardware
	Office doors	Wood rail and stile (typ); some replacement	Various; some doors w/lites	1, 2	Good	Minor	Replace non-historic door patterns
	Vault door	Steel	Traditional multiple mortise	1	Good	No action"	
	Utility doors	Various	Wood panel or replacement slab	2, 3	Fair	Minor	
	General	Casings and trims	1x4 wood; flat	2	Good	Minor	

Materials Rating System: 1. Historic Material—Preserve (in place); 2. Historic Material—Preserve wherever possible; replace with in-kind; 3. Historic Material—Preserve wherever possible; replace with compatible; 4. Preserve where there is no reason for removal; 5. Remove/alter/replace (sensitively); 6. Specified treatment not required.

Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
1st Floor Structure	Floor Structure	Joists—general (throughout)	S4S dimension lumber	2	Good	No action	
		Joists adj to north entry only	S4S dimension lumber	2	Very poor	Critical	
		Girders	S4S dimension lumber	2	Good	No action	Recommend add seismic clips
		Cripple columns	S4S dimension lumber	2	Good	No action	Recommend add seismic clips
2nd Floor Structure	Floor structure	Joists	S4S dimension lumber	2	Good	****	**** See structural at dining room
Lateral Force Resisting System							
Structure		(See Structural Commentary)		***	—		
Roof Structure (See Roof Assembly above)							
Hardware	Corner entrance	Mortise latch w/escutcheon	Non-ADA	3	Fair/Poor	Serious	Retain latch handles
	North public entry	Mortise latch w/escutcheon	Non-ADA	3	Fair/Poor	Serious	Retain latch handles
	East public entry	Mortise latch w/escutcheon	Non-ADA	3	Fair/Poor	Serious	Retain latch handles
	South staff door into 105	Hinges; latchset; surface lock	Non-ADA	3	Fair/Poor	Serious	
	South utility door into 107	Hinges; latchset; surface lock		5	Fair/Poor	Serious	
	East kitchen door	Not inventoried		5	—	—	Replacement hardware assumed
	West office entry	Not inventoried		3	—	—	Replacement hardware assumed
	West dining entry	Not inventoried		3	—	—	Replacement hardware assumed
	SW corridor door	Not inventoried		4, 5	—	—	Replacement hardware assumed
	2nd-floor stair dr.	Not inventoried		4, 5	—	—	Replacement hardware assumed
	Int bdrn doors	Various; numerous original sets	Mortise w/stamped tin knobs	3	Fair	Minor	

Priority Rating System: Critical—Requires immediate action to preserve essential historic features and materials experiencing advanced deterioration, or to assure the stability of the building, or to preclude a threat to health or safety; **Serious**—Materials or assemblies are approaching an advanced state of degradation, or will soon pose a threat to health or safety; **Minor**—Degradation is minimal and preventive maintenance has not been followed; life expectancy of the material is reduced.

Category	Location	Element	Description	Rtg	Cond	Priority	Remarks
	Int office doors	Various; numerous original sets	Mortise w/stamped tin knobs	3	Fair	Minor	
	Vault door	Original	Original locking mechanism	1	Good	No Action	
	Int utility doors	Various	Numerous non-historic changes	5	Varied	Serious	
	Keying	General	.				* System requires some re-keying
Mechanical							
Mech	Water supply	General	Various; primarily copper	4, 5	Fair/Poor	Serious	
	Waste and vent	General	Various materials	4, 5	Fair/Poor	Serious	
	HVAC-central	Central heating unit	1940s oil heater	5	Very poor	Critical	
	HVAC-unit	Heater in retail only	Unit heater (exposed)	5	Very poor	Critical	
Electrical							
Elec	Service	Not evaluated	—	—	—	—	Beyond the scope of this report
	Distribution	Panels and branch circuits	Many time periods represented	5	Fair/Poor	Serious	Code review recommended
	Light fixtures	General illumination	Incandescent and fluorescent	4, 5	Fair/Poor	Minor	Some original fixtures
Security							
		Security system	None	—	—	—	
Fire Detection / Extinguishing Systems							
Fire		Fire detection	None	5	—	—	
		Fire alarm	None	5	—	—	
		Fire extinguishers	Unknown	5	—	—	
		Emergency lighting	None	5	—	—	
Errata							
Chimney	Full height of building	Brick	Commons; 1/2 running bond	2	Fair/Poor	Minor	
		Brick corbelled cap	Commons; 1/2 running bond	2	Poor	Serious	
		Flue liner	Clay tile	TBD	—	—	

Materials Rating System: 1. Historic Material—Preserve (in place); 2. Historic Material—Preserve wherever possible; replace with in-kind; 3. Historic Material—Preserve wherever possible; replace with compatible; 4. Preserve where there is no reason for removal; 5. Remove/alter/replace (sensitively); 6. Specified treatment not required.

Current Photographs



North elevation of the Haynes Picture Shops Headquarters in Mammoth as viewed from across the Fort Yellowstone Parade Ground. "Capitol Hill" is seen behind the building.



East elevation; the retail sales area for the picture shop is in the foreground; the dormitory wing can be seen in the background.

West elevation; the spacious lawn separates the Haynes headquarters from residences along the avenue. Note that some windows have been protected by temporary shutters.



View of the north entrance into the retail part of the picture shop. The two flanking windows adjacent to the door are for display.





This areaway is a light-well for windows serving the small basement area below the south end of the dormitory wing; they have been covered in recent years.

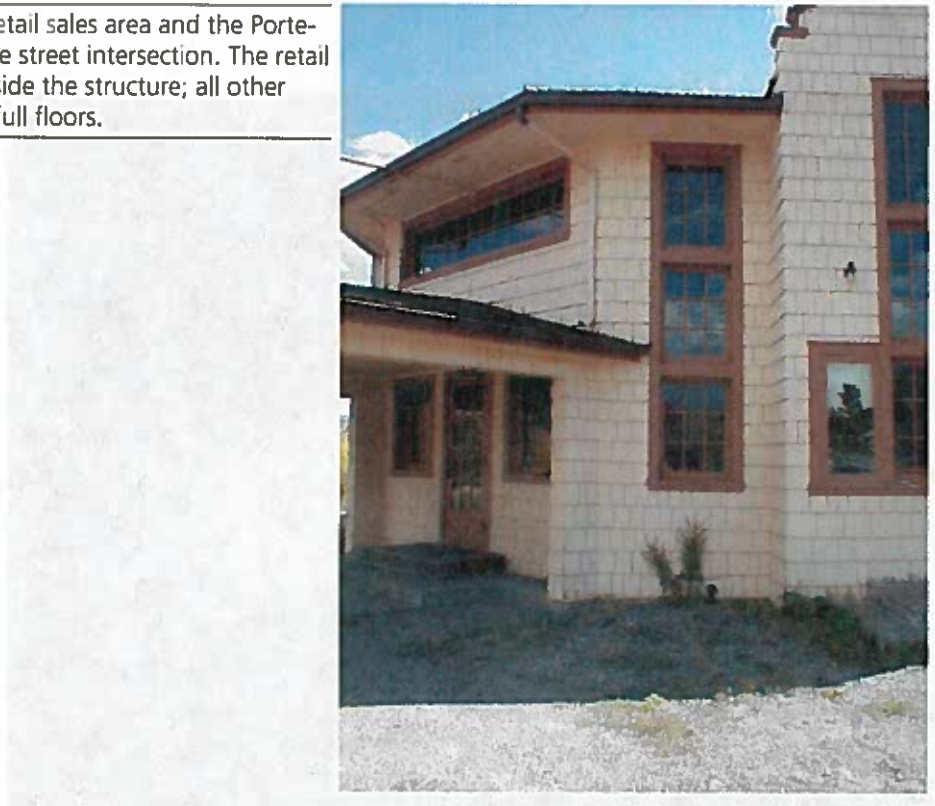


This small site structure is built into the hillside of Capitol Hill and is located near the SE corner of the dormitory wing. It is thought to have been used for storage of photographic chemicals.

This photograph was taken to show a typical ladder egress from one of the second floor dormitory rooms; there are several ladders located around the South end of the dormitory wing that are similar to this example.



Detail of the angled wall of the retail sales area and the Porte-Cochere drive-through next to the street intersection. The retail sales area is a two-story space inside the structure; all other portions of the building are two full floors.





West facing porch and veranda; offices were located immediately inside the building to the right; service rooms for employees were located below the dormitory rooms at the center and south end of this wing.

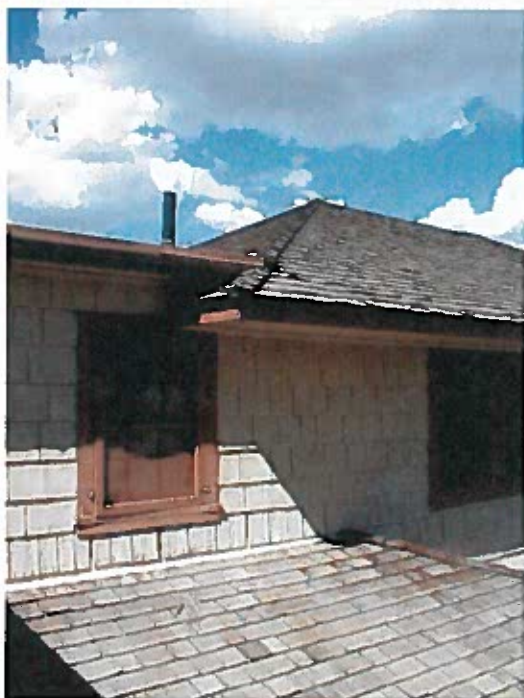


Oblique view of the north wall; structures from Fort Yellowstone and Mount Everts can be seen in the background. Note the pediment above the north wall of the retail sales shop.

Detail of the bead-patterned wood soffits that finish the edge of the roof.



Shingled railing that flanks the west edge of the north entrance into the retail area.



Intersection of the retail roof with the two-story dormitory roof at the re-entrant south corner of the L-shaped structure. (Photo taken from the 2nd floor of the dormitory wing).



Re-entrant southeast corner; the exterior stair serves as a fire exit from the 2nd floor. Note the poor condition of the top of the brick chimney.



Close-up of the end (north) structural member beneath the exterior stair shown above. This member is beyond repair.

Crawl space (foundation) ventilation. These vents can be seen around the base of the structure; not all of them are functional and some of them have been closed off. There is ventilation space beneath the structure, but it is too shallow for access for personnel in most cases.



Condition of the wall shingles at the base of the exterior wall. This particular location has suffered from the long-term effects of snow drifts or piled snow.





Example of a closed vent as referenced on the previous page.

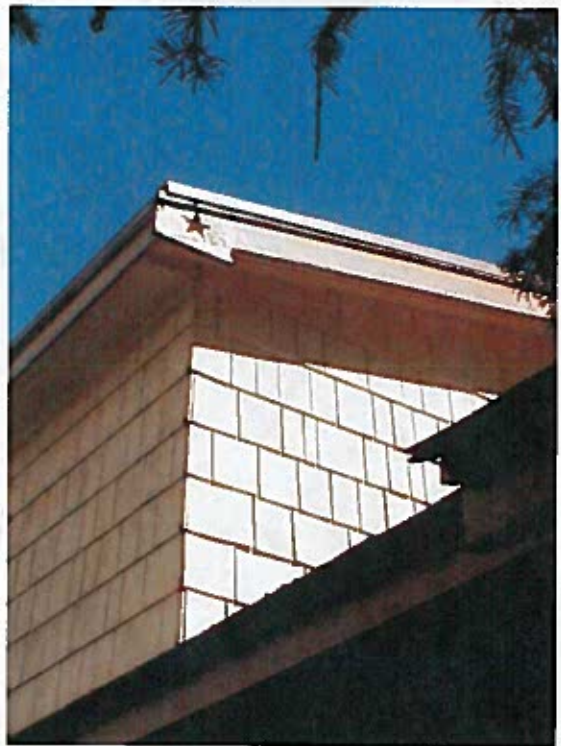


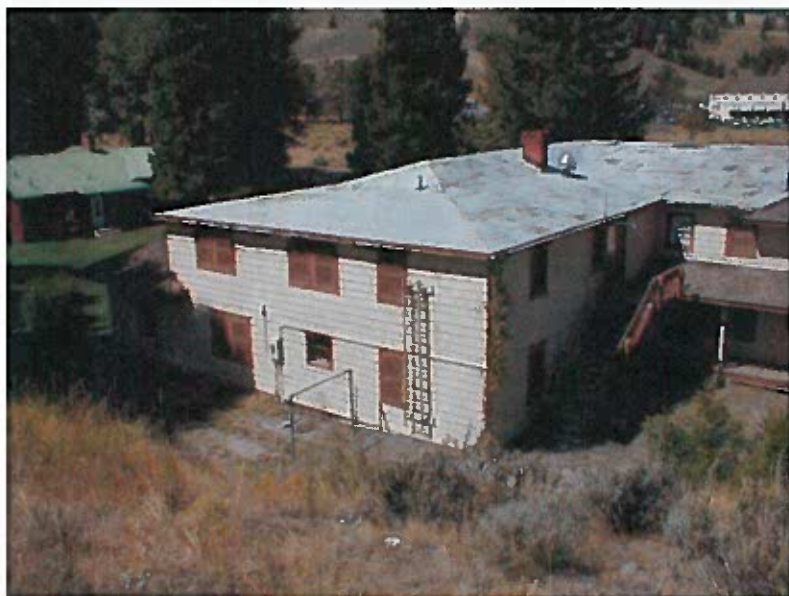
Exterior light fixture at the retail wing. It is not known if this is an original fixture; however, it is recommended that it be retained.

The birdhouse is a unique occupancy related to this historic property. Note that the columns supporting the west porch are also surfaced with shingles.



The star pattern cut into the fascia is unique to this building.





View of the dormitory roof from Capitol Hill. Note that more than one roof slope was used in its construction.

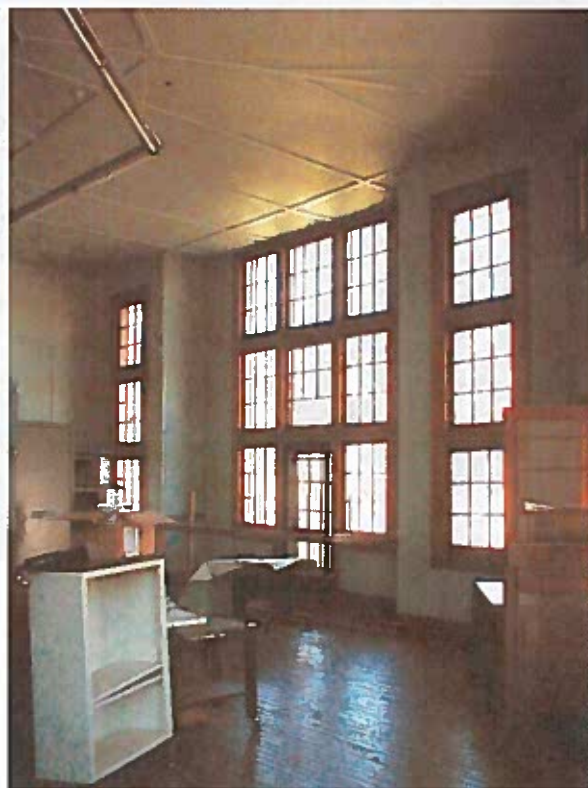


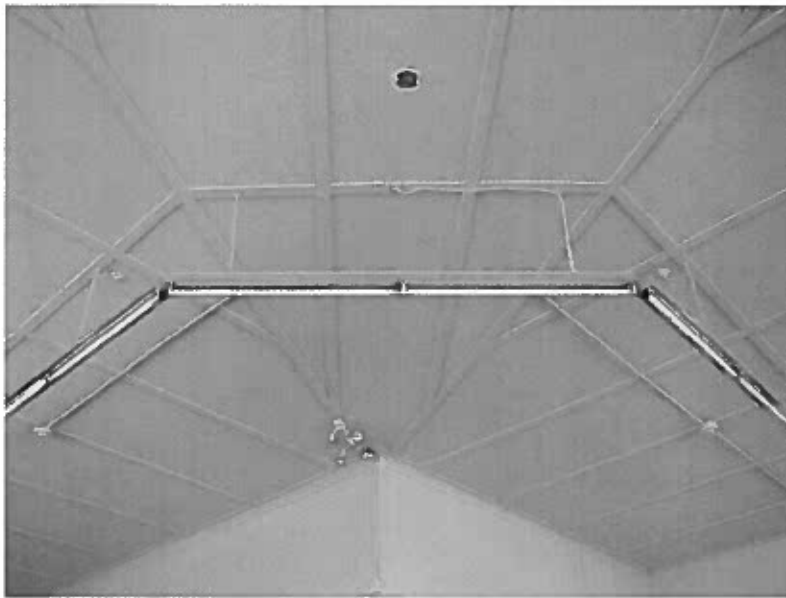
2nd view; with the exception of the truncated (flat) area at the apex, the retail sales area is surfaced with wood shingles. The hotel and visitor services buildings can be seen in the background across the Parade Ground.

Interior of the two-story retail sales area. Since the facility has been recently used for storage, reviewers are asked to see through the stored materials to envision the architectural character of the interior spaces.



The tall wood framed divided-lite walls admit a significant amount of light to this interior space. Walls (generally) and the ceiling are of painted Celotex, and the floor is surfaced with tongue and groove fir flooring.





Views of the ceiling in the retail space of the picture shop. The fan pattern mirrors to some degree the pattern of the concealed structural ceiling joists above. It also adds a hint of Art-Deco stylistic influence in the interior. Note the treatment of the fluorescent strip light fixtures.



Looking west in corridor 102 adjacent to offices. (See to floor plans in Appendix E for locations of rooms indicated by room number.)



View looking west in corridor 104. Note that fir flooring was used extensively on both levels of the facility. Although walls are typically Celotex throughout, the north wall of this corridor was surfaced with plaster.



Northeast corner of room 105; note the introduction of the contemporary door.

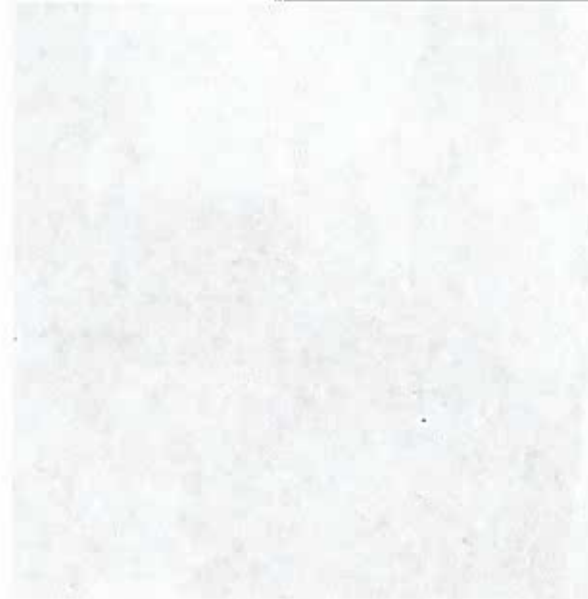


Utility bathroom 106. Beaded-wood wainscot is used throughout.



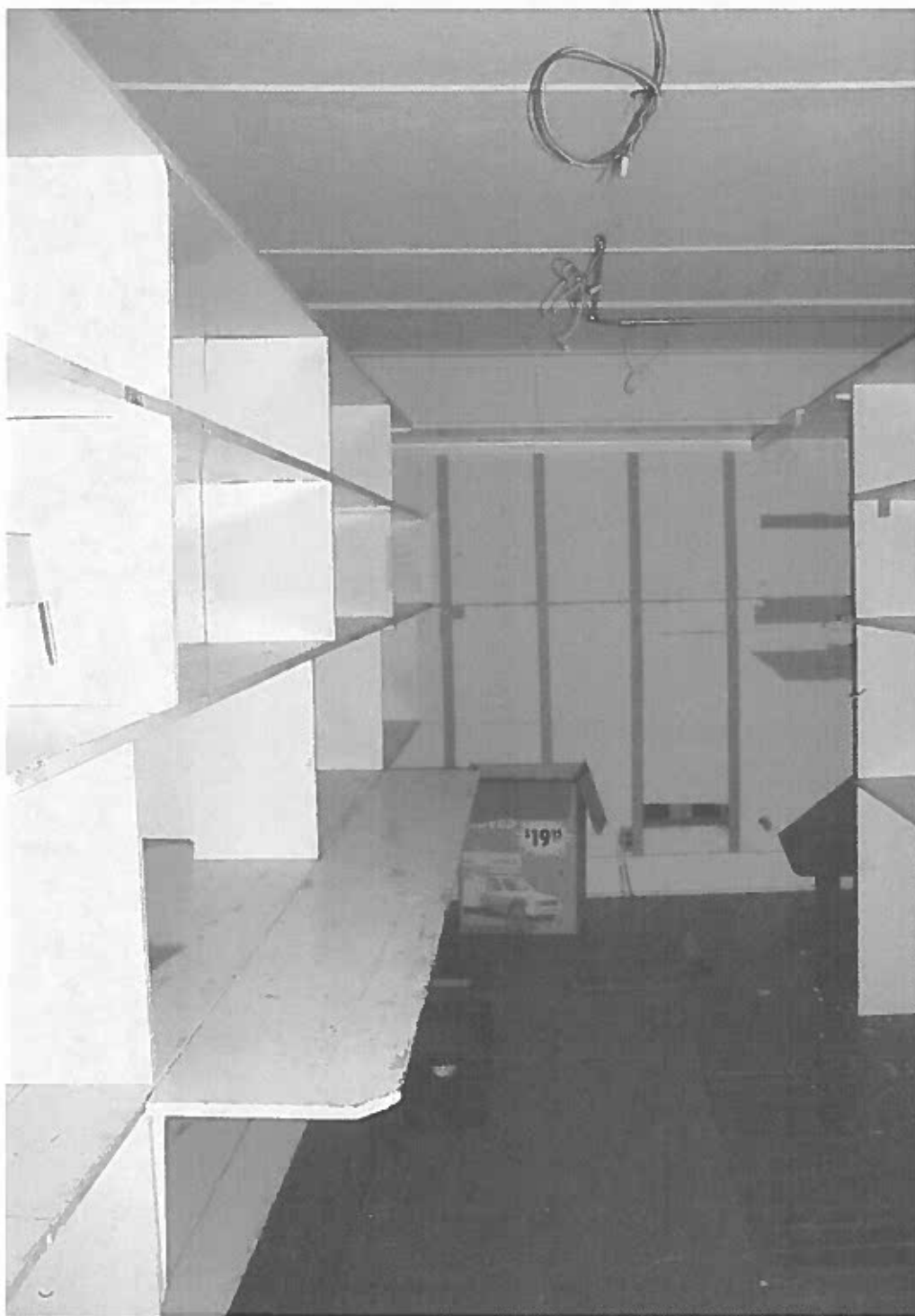
South facing windows from bathroom 106; window sills and wainscot cap heights are aligned.

The darkroom is the most visible evidence (and may be the only remaining artifact) of the use of the building for photographic purposes. It is not known if this equipment was used by the Haynes operation or if it was introduced at a later time.



Detail of safelight control at the darkroom sink.





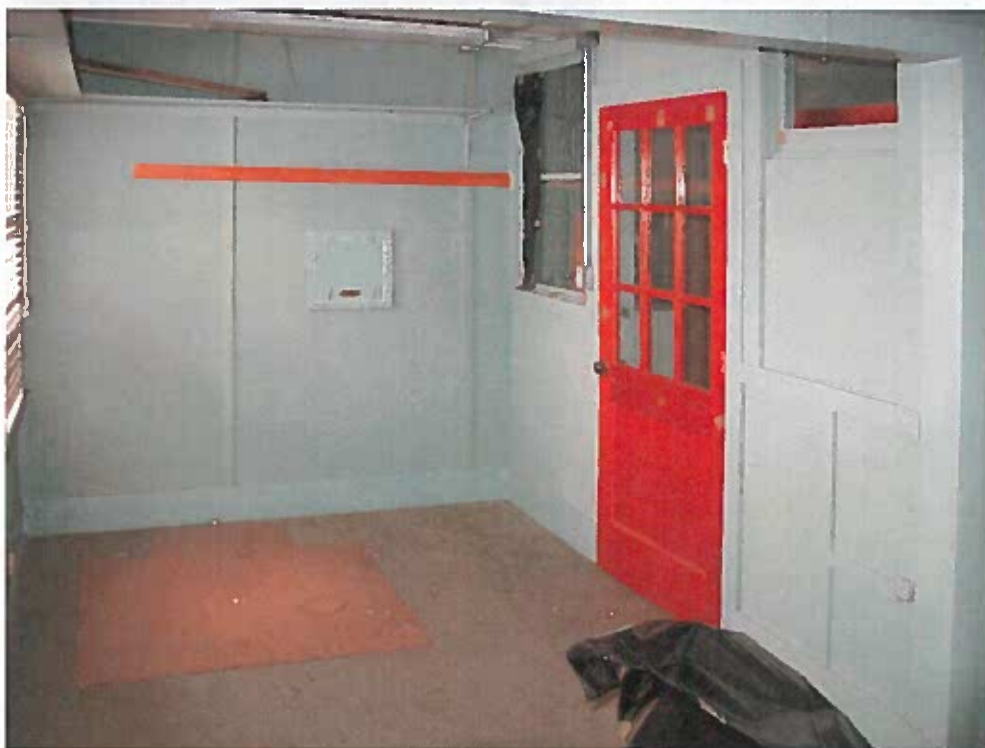
Storage room 109 immediately adjacent to the darkroom illustrated on the previous page.



Storage room 110; a significant amount of storage space was located on the first floor in close proximity to the retail sales area.



Office 111 is immediately north of the retail area and has visual supervision over the sales floor.



Office 112; centrally located along the north wing. Note the extensive use of Celotex within these spaces.

Office 113; immediately north of and connected to office 112.



Office 114, located at the northwest corner of the building, was originally designed to be the personal office of Jack Haynes.





Work room 115; since this is an internal area without windows, the opening in the top of the wall is believed to be for ventilation. The use of every available space for storage continues into this space.

Internal stairway, room 121.



The stair exits at the first floor (as shown in the top photo) into the former dining room. The photo at the right is the stair as viewed from the top of the stair run. This assembly is constructed with gypsum drywall and would comply with fire resistant requirements of the building codes, although distance to the stair from some of the second floor dormitory rooms may not.



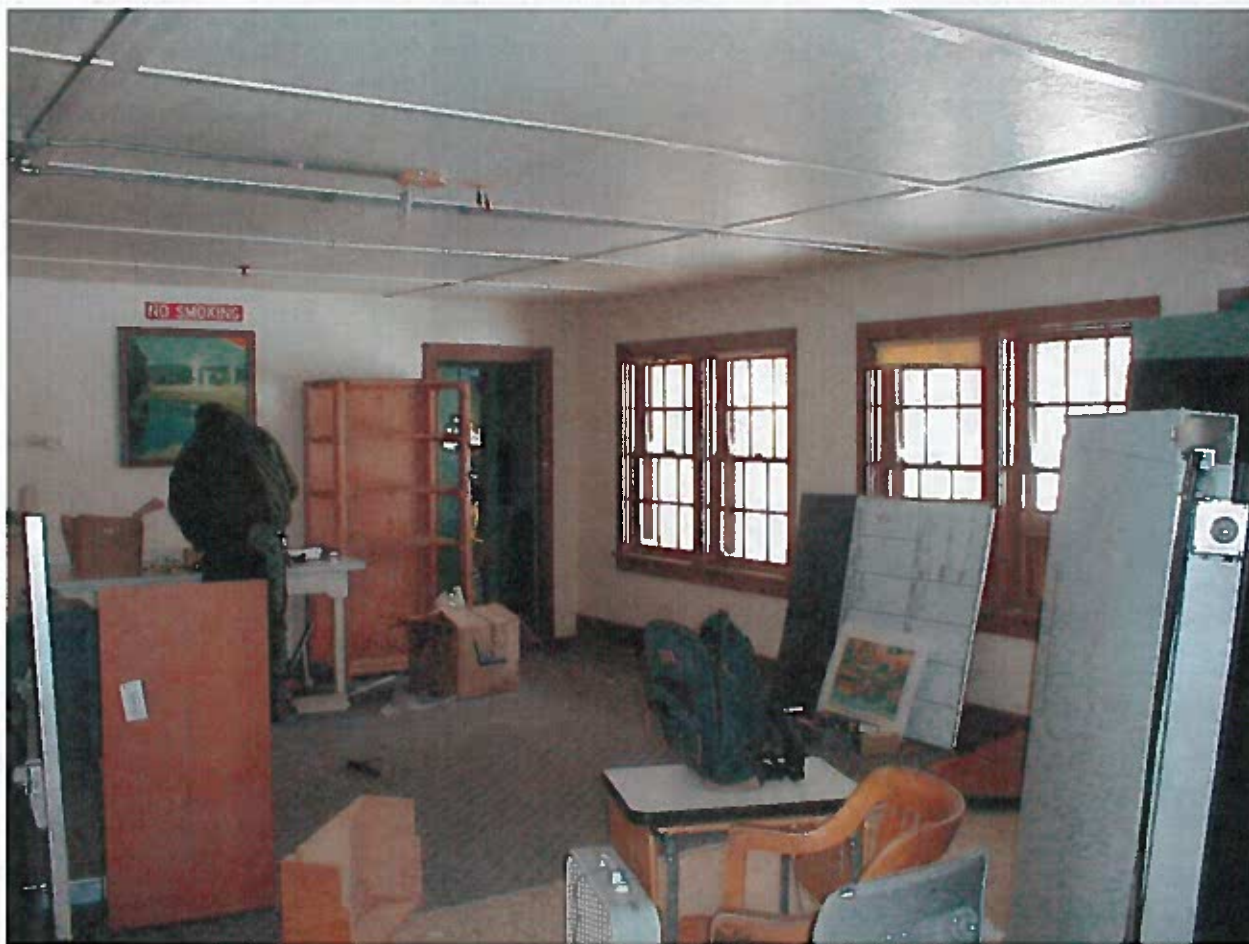


General view of the kitchen area, looking east. The refrigerator is built into a projecting alcove that extends outside the plane of the exterior wall.

Northeast corner of the kitchen; the entrance into the basement is from the far corner of this space. Beaded-pattern wood surfacing is used extensively on the exterior kitchen wall.



Commercial range hood attached to the ceiling of the kitchen; note the concrete slab beneath where the ranges were located.



First floor dining room. This space looks out onto the lawn area to the west and is immediately adjacent to the west-facing porch.

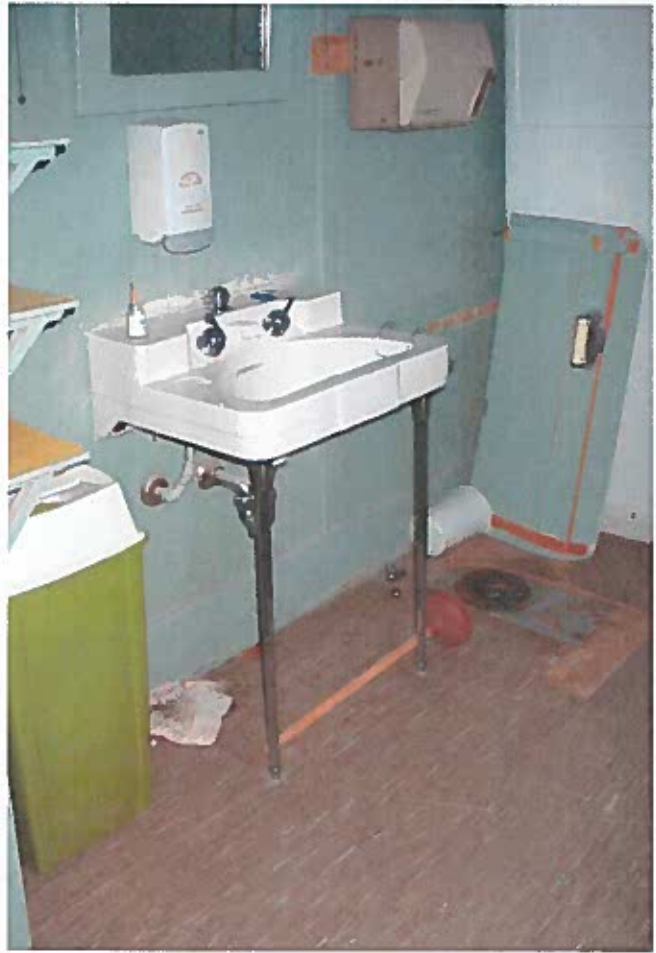


Corridor serving three dormitory rooms at the south end of the first floor. The tongue and groove fir flooring has been painted grey throughout this area.



Southeast dormitory room 125 on the first floor.

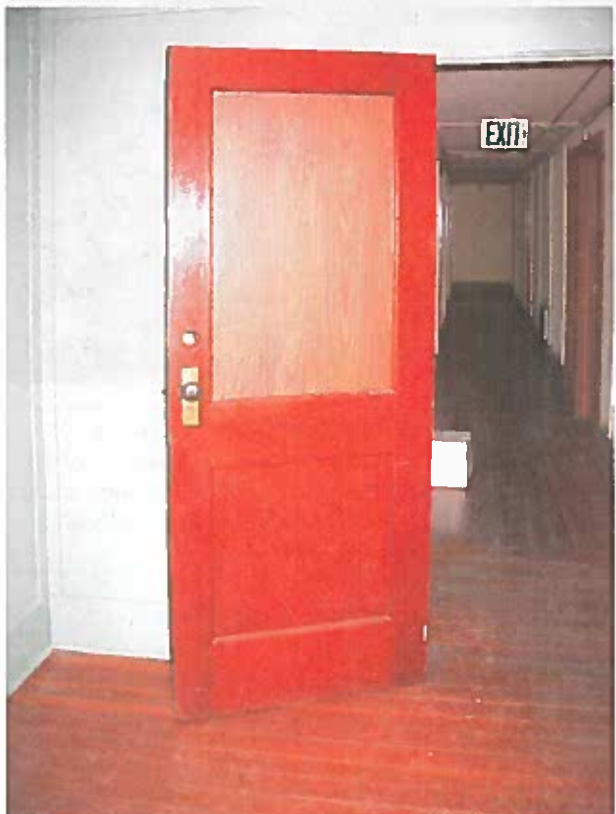
Bathroom that served the three dorm rooms at the south end of the first floor.



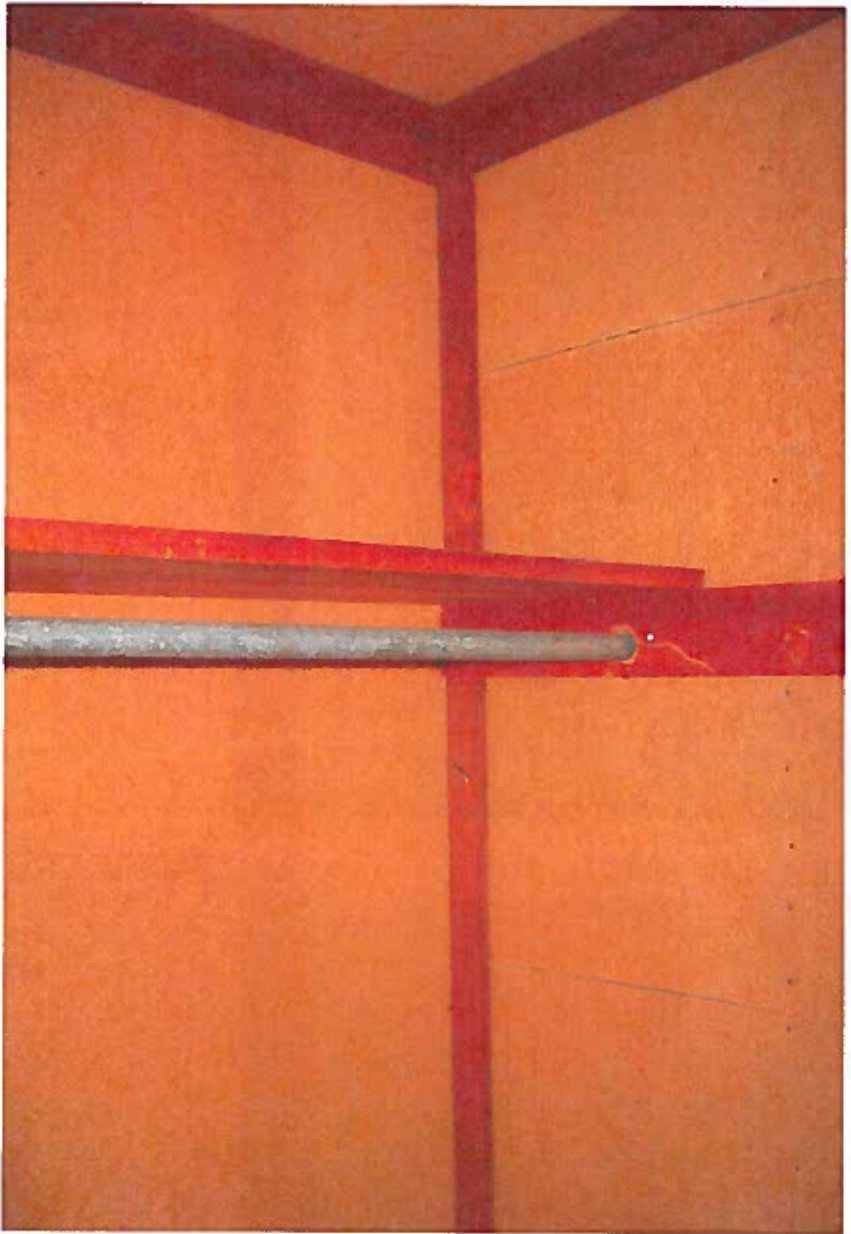
Dormitory room 127, first floor.



Corridor 203, second floor.



Second floor corridor 204 as viewed from dormitory room 207. Fir flooring has been used throughout this floor except for the bathroom areas, and walls are typically Celotex and wood batten trimmed with flat wood base and quarter-round.



This is a good example of the Celotex material referred to throughout this report. This particular example, within the closet of room 208, is unfinished, and the texture and color of the cane material from which it is made can be seen in its natural state. It was widely used in this region in the 1920s and 1930s, particularly in association with log structures.



From top to bottom, left-to-right: second floor dormitory rooms 210, 214, and 215. The use of materials and the design treatment of the second floor dormitory rooms was consistent throughout all of the rooms.



Upper left: men's bathroom 218.

All bathrooms for the dormitory rooms were "down-the-hall." There were 10 dormitory rooms on the second floor.

Upper right: One of the two showers in the women's bathroom (room 217).

Lower right: Remaining sink features within room 218. None of the plumbing is associated with the original construction of the building.





Room 219 on the second floor, designed as a quiet lounge for employees, was immediately accessible to the dormitory rooms. The widened framing in the upper photo encompasses a re-lite that admits natural light into the second floor corridor (room 204).

There is an exterior door on the near side of the window shown in the lower photograph that goes to the exterior wood stair shown in the exterior photographs and is used as another avenue of fire exiting. Presumably, it was also used as an after-hours access to the dormitory for the second floor occupants.





During preparation of this report, an area of deteriorated flooring was noted (and posted) immediately inside the north entrance into the retail sales area. On November 6, 2007, the floor was opened up for inspection by the consultant and NPS personnel. The photographs on the following pages document conditions found in this area of the first floor structure.





A number of rotted joists and supports were found in this immediate vicinity; deterioration was extensive at the affected members and was confined to this immediate locality. Due to the unusual and localized conditions, the NPS geologist was consulted. His office ruled out any ground-related phenomena (including geothermal) that may have contributed to this deterioration. These photos illustrate the completeness of the deterioration within the localized area.



As can be seen in the upper photo, the deterioration extends several feet toward the interior of the building from the exterior wall. However, it does not extend to the first interior girder (shown more clearly in the lower photo). That girder and supports in the proximity of the girder exhibit good visual characteristics and appear to be unaffected.





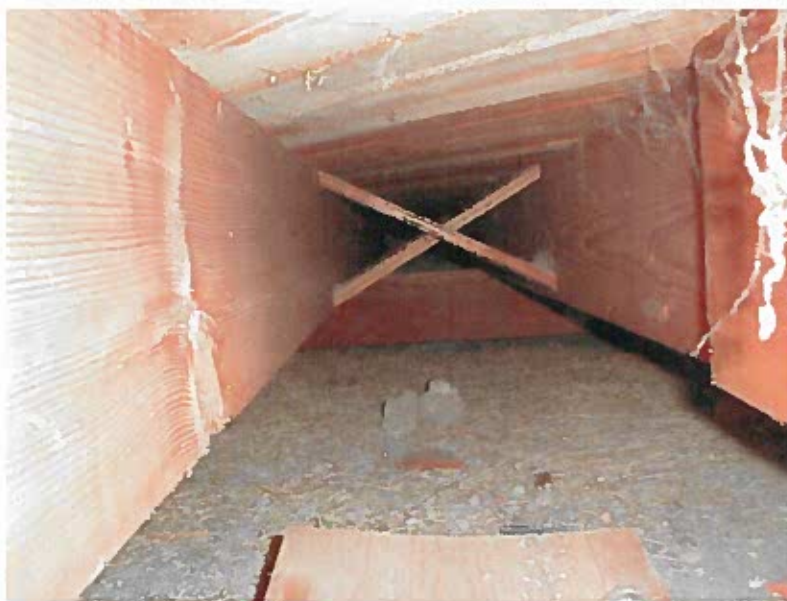
This photo illustrates the condition of the foundation wall adjacent to the point of entry for the floor investigation noted on the previous two pages. Although the wall exhibits some scaling, the concrete is sound. The top of the footing supporting the foundation, floor structure, and walls above is visible in this photograph where the dirt has been brushed aside and the beam from the flashlight is concentrated. The footing offset was measured and recorded on the drawings attached to this report.

Deteriorated flooring was also noted in the southwest corner of the retail area adjacent to the convenience outlets shown in this photo). An access panel located adjacent to the deterioration (left side of the photo) was used to investigate the damage.



As exhibited in this photo, wood members next to the deteriorated surface flooring at this location are in good condition. This deteriorated flooring is attributed to the installation of water coolers and soda dispensing cabinets which are known to have existed adjacent to the outlets.





Condition of the floor assembly below the dormitory wing; numerous locations were looked at where they could be accessed through mechanical grilles. The joists were in excellent condition at all locations investigated. As can be seen in this photo, there is very little clearance below the floor system and grade. It is recommended that additional ventilation be introduced below these floors.



A noticeable heave was observed in the floor between first floor dormitory room 126 and the adjacent closet. The cause is unknown and there were no accesses in the immediate area from which to conduct an investigation. It is known that the common wall between the room and the closet is located above the foundation wall for the partial basement below.

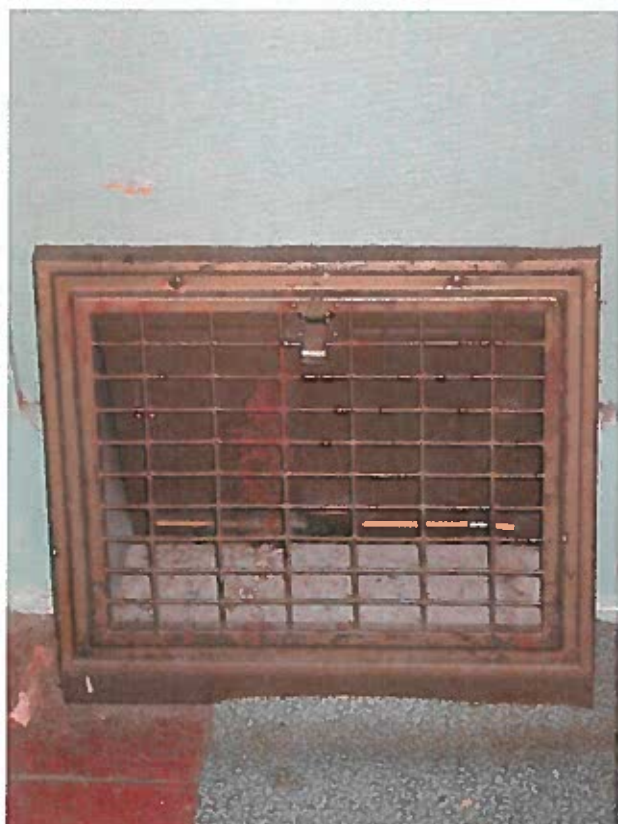


Typical rail and stile fir door used at all dormitory room locations. Many of these doors are in good condition. Their future use would depend on the level of alteration proposed for the structure and the implications of fire codes as a result of those alterations.



The first floor vault at the Haynes headquarters is substantially constructed with concrete and reinforcing; the interior is plastered. The steel door shown above befits the vault class used at the facility.

Two examples of mechanical grilles used in the Haynes headquarters; they are judged to be original features in the building.





This cabinet heater is located at the southwest corner of the retail sales area; its condition is unknown but it is unlikely that it would be suitable for use again.

Light fixture at the first floor unisex toilet; it is judged to be of contemporary origin.



Contemporary wiring that has been intrusively installed in an abandoned doorway located in the southeast corner of room 109.





Decorative thimble in the brick chimney at the west wall of the kitchen.

Examples of light fixtures in the dormitory rooms. The base of the upper fixture appears to be original; note the star pattern. The lower fixture could be a replacement.





Numerous eras of electrical wiring—knob-and-tube, braided wire, romex, and metallic conduit—are evident next to the brick chimney in the attic.



Electrical apparatus located at the south wall of the partial basement below the dormitory wing.

Ventilation opening into the adjacent storage room from the top of the basement stair. The purpose of this ventilation is not known.



General view of the partial basement looking south from the primary space. The brick chimney is visible on the left, bottom of the access stairs at center, and a structural clay tile wall at the right.





This structural clay tile enclosure is constructed below the basement access stair. Its purpose is not known, but the presence of wood floor sleepers suggests that materials that either had to be cooled or were caustic were stored here.



East wall of the partial basement; the windows originally admitted light through the lightwell along the east side of the dormitory wing.

This improvisational structure was installed to support the weight of the concrete added beneath the range location in the kitchen, an indication that the range (now gone) and the range hood (still present) were not original to the Haynes headquarters.

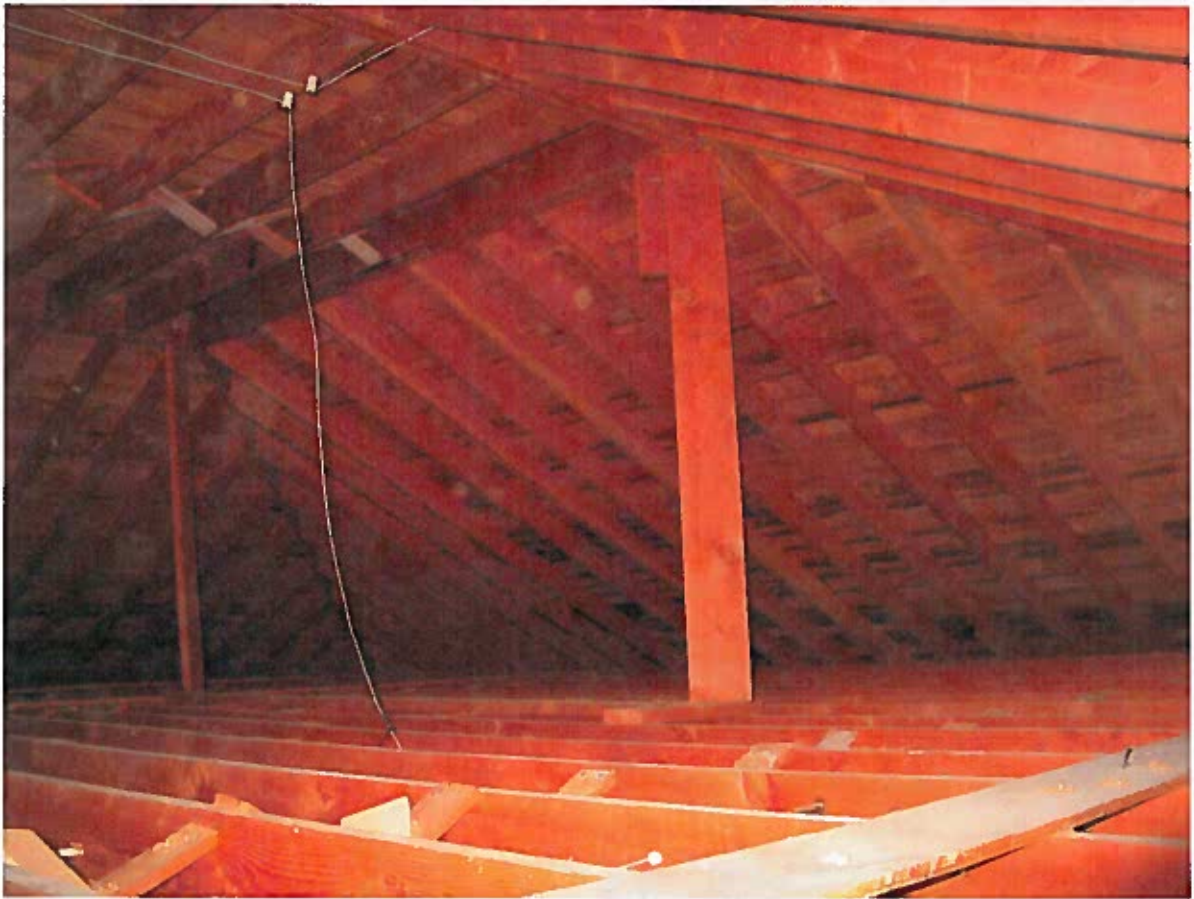




This furnace was added in the basement relatively recently during the facility's use.



The presence of these heating oil tanks indicates that the building was once heated with an oil fired appliance. It is recommended that the tanks be removed.



Ceiling and roof framing above the retail sales area. Note the extremely good condition of the wood framing materials. Vertical members supporting the center flat roof area need to be stiffened and steel (seismic resistant) connectors need to be incorporated in their attachment to beams and joists.



Another view of framing above the retail area; note the framing for the saddle that extends behind the north facing pediment and the extensive use of knob-and-tube wiring.



This is the ceiling joist pattern above the retail sales area's angled corner. It reflects the pattern of the fan trim on the ceiling below.

Intersection of the roof framing
from the north wing with the
pyramidal roof framing above the
retail area.



Intersection of the roof framing
from the north wing with the
pyramidal roof framing above the
retail area.





Attic framing above the northeast corner of the structure; the change in roof slope reflects the massing at the exterior of the building.

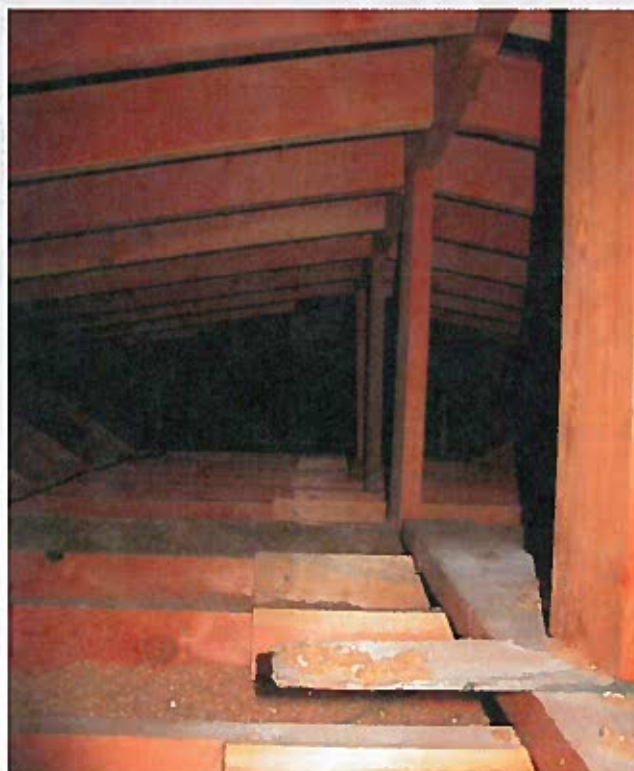


Closer view of bracing that extends back into the west wing of the dormitory.

Attic framing above the dormitory wing that extends to the south from the northwest corner of the facility; note how the change in roof slope was framed.



View in attic looking at the south end of the building. Cripple columns need to have metal framing anchors applied.



Part 2. Treatment and Use

ULTIMATE TREATMENT AND USE— Guidelines

Procedural Alternatives

As a Historic Building in an established Historic District, any work undertaken on the Haynes Picture Shops Headquarters must be done in compliance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* as administered by the United States Department of the Interior (USDI). The standards include guidelines for four treatment approaches as summarized below in order of importance:

- Preservation—retains all historic fabric through conservation, maintenance, and repair. This approach includes preservation of changes and alterations that have been made over time.
- Rehabilitation—retains all preservable fabric through conservation, maintenance, and repair but allows greater latitude for replacement if the property is more deteriorated. Rehabilitation standards focus attention on the elements that give a property its historic character.
- Restoration—Retains only materials from the most significant time in a property's history while permitting removal of materials applied to the property from other periods of time.
- Reconstruction—Re-creation of a non-surviving site, landscape, building, structure, or object using all new materials.

Recommended Preservation Treatment

The recommended treatment for the Haynes Picture Shops Headquarters is the rehabilitation classification.

Justification

It has been determined that the building will not be used for its original purpose in the future. A change in use or occupancy will necessitate that the structure be rehabil-

itated to accommodate the new use. The USDI guidelines permit greater flexibility in use for the rehabilitation classification than for preservation or restoration. The guidelines define the rehabilitation classification as follows:

When the physical condition of character-defining materials and features warrants additional work repairing is recommended. Rehabilitation guidance for the repair of historic materials such as masonry, wood, and architectural metals again begins with the least degree of intervention possible such as patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading them according to recognized preservation methods. Repairing also includes the limited replacement in kind—or with compatible substitute material—of extensively deteriorated or missing parts of features when there are surviving prototypes. Although using the same kind of material is always the preferred option, substitute material is acceptable if the form and design as well as the substitute material itself convey the visual appearance of the remaining parts of the feature and finish. When an entire interior or exterior feature is missing, it no longer plays a role in physically defining the historic character unless it can be accurately recovered in form and detailing through the process of carefully documenting the historical appearance. Although accepting the loss is one possibility, where an important architectural feature is missing, its replacement is always recommended in the Rehabilitation guidelines as the first or preferred, course of action. Thus, if adequate historical, pictorial, and physical documentation exists so that the feature may be accurately reproduced, and if it is desirable to re-establish the feature as part of the building's historical appearance, then designing and constructing a new feature based on such information is appropriate. However, a second acceptable option for the replacement feature is a new design that is compatible with the remaining character-defining features. The new design should always take into account the size, scale, and material of the historic building itself and, most importantly, should be clearly differentiated so that a false historical appearance is not created.

Compatibility Matrix

The Haynes Picture Shops Headquarters has not been used as a production hub for park photography for many years; a role it fulfilled until 1967 under the tutelage of the Haynes family and later as operated by Hamilton Stores, Inc., as a photo shop, a Christmas Store, and finally as a Nature Store in 1997. The store closed after the Hamilton Stores, Inc., contract expired in 1999. After the store closed, the Povah family transferred ownership of the structure to the National Park Service without reimbursement for possessory interest. A condition of this transfer was that the building would not be used for a commercial operation again. If it was decided by the NPS to reassign the property to another concessioner, NPS and the concessioner would be responsible for paying the possessory interest to the Povah family. It has been determined that the building will not be used again for concessioner purposes because of this agreement. As noted in the executive summary, it currently serves as storage for various NPS departments that have administrative offices in the Mammoth area.

The structure is an important example of the evolving architecture that occurred in the park from 1920 to 1930. It was one of the pioneers of applying the philosophy of incorporating natural materials into architectural design and, in this case, using those materials while working within the framework of the Crafts movement, and to a lesser degree, Art deco influences. The Haynes headquarters also serves as a visual anchor at the end of Avenue A as well as at the south side of the Parade Ground. The building is readily accessible to the public at the intersection of Avenues A and B, and it has been recognized that it could serve a more permanent and visible use than its current storage functions. As a result of that recognition the building has been discussed in planning for the Mammoth Hot Springs Historic District.

One strategy for rehabilitating a building or structure for new uses is to study the spaces within the structure and look for a use that is a good fit for the size, arrangement, and nature of the existing spaces. Information collected in the preparation of HSRs like this document can greatly assist this effort. The evaluation for a rehabilitated use must consider the condition of materials, fire resistance, capacities of structure and systems, and accessibility of the property. Regardless of the selected use for the facility, there are interior features, spaces, and materials that must be preserved to maintain the historic credibility of the site.

The existing building could be characterized as having been designed for a retail and retail support space on most of the first floor with a kitchen/dining suite near the service side of the first floor, and lodging (dormitory rooms) for employees on the second floor. The original design therefore suggests larger open spaces on the first floor with spaces for individuals at other locations as the easiest and most economical way to make use of the structure. Subject to the needs of the National Park Service and its visitors, the following uses have been identified as being compatible with the existing structure:

- I. National Park Service or concessions office space with a conference/meeting center that includes a large meeting space in the former retail areas, some overnight accommodations, and food dispensing (not food preparing) amenities. This could serve conferences for small groups, or larger groups where only selected guests could stay on-site. As an alternative, kitchen and dining spaces could be adapted for additional meeting spaces in lieu of food dispensing. Although the lodging historic use and potential is there, it is of the bath-down-the-hall variety. For longer term temporary or seasonal residential usage, this might prove to be a detracting feature, and would be a consideration in redesigning the floor plan and compatible uses layout.
- II. The large open former retail space includes excellent day lighting characteristics and would be readily adapted to exhibit purposes—either as a feature that is open to the public daily or as an exhibit space that is opened only on special occasions or used for changing displays. There is also potential for window displays that would not require physically opening the facility. Any exhibitry in this space would have to be resistant to the sun, which impacts the space primarily during morning hours through the large windows on the east elevation. The remainder of the day the room is lit by indirect sunlight. The remainder of the facility could be used for office functions if there is a need for additional office space in the Mammoth district.
- III. The large open retail space could also be enjoined for educational purposes such as lectures, nature talks, or presentations if that need exists in the Mammoth area. Visual devices (such as Powerpoint and DVD presentations) might be difficult except during evening hours in the summer since the lighting is relatively difficult to block out due to the two-story height of the window systems. However, this might be offset

with the use of powered curtains or shades, and the south wall of this space would be a perfect location for presentation screens due to its large expanse and lack of window or door fenestration.

- IV. One observation made during preparation of this report is that the public uses the site for parking even though the site is not formally prepared for vehicles. The parking use appears to be predominantly related to the intermittent presence of wildlife on the Parade Ground or adjacent areas; the public parks on site for wildlife viewing or photography. The occurrence of this use seems to be fairly frequent.
- V. As noted above, transitional uses for the building in recent years have included storage for numerous NPS departments and seed collection/sorting of native plants. Storage as it currently exists in the facility is not adversely affecting the loading on the building; however, storage occupancies assigned by code would require a building that is stronger than the Haynes headquarters. The seed-related activities might be better served by a facility that is less finished or is at ground level. Nevertheless, alternative locations would have to be found for these functions if the Haynes headquarters were rehabilitated for other purposes.
- VI. The structure could be adapted to museum/visitor contact use, although it is suspected that provision of interpretation, visitor education, and museums extends to numerous sites in the park that are part of an integrated park presentation. Use of the second floor spaces for museum purposes or support space would not be as convenient as use of the first floor spaces. This purpose might be better served if museum/exhibit preparation spaces occur on the first floor and administrative office space occurs on the second floor. The May 2000 Yellowstone National Park Long-Range Interpretative Plan for Mammoth Hot Springs (p. 10) proposes to "convert the Albright Center to Office use, and locate a new visitor contact station near the terraces, in the vicinity of the new restroom building." The Long-Range Interpretative Plan also states that one of the recommendations for an in-park visitor center is to "convert the present Nature Store in Mammoth to a new facility to enhance visitor experiences. Alternatives include providing classrooms, and/or administrative offices/housing for the Yellowstone Association and/or installing exhibits to interpret the pre-1915 cultural history of the park."

In addition to the intuitive uses listed above, the process of evaluating a building for compatible uses incorporates a compatibility matrix that looks at the following elements:

- 1. Size and arrangement of the spaces in the building: are they small cellular spaces or large unobstructed spaces, and what is the relationship of the spaces to each other (adjacencies)?
- 2. The fundamental structural system: clear-span structures can accommodate large rooms, rigid frame structures with a grid layout fit best with orderly spaces that are repetitive in size, and bearing wall buildings generally adapt well to occupancies with smaller rooms.
- 3. Available structural capacity: can existing members accept changes in loading inherent in the change in occupancy (including capacity of underlying supporting soils)?
- 4. Ease of modification of the basic structural system: will change or modification represent an easy or difficult construction or design challenge?
- 5. Building code implications: which use requires the least code compliance?
- 6. Available fire resistance offered by the existing building: is existing fire resistance suitable for the proposed new use (including exits, fire separation, areas of rescue, etc.)?
- 7. A new use that can most successfully align with current NPS policies for structures.
- 8. Degree of difficulty for making the facility accessible to mobility impaired individuals.
- 9. Adverse effects to the historic structure.
- 10. Appropriateness of the proposed use to maintaining the integrity criteria of a historic structure: location, workmanship, design, feeling, setting, association, and materials.
- 11. Existing building utility systems: materials, adaptability, capacity, flexibility.
- 12. Durability of materials can be a consideration; some uses mandate more durable materials than others.
- 13. Relative cost to accommodate a proposed use.
- 14. Energy; seasonal uses.
- 15. "Green" (LEED) building considerations.
- 16. Parking.
- 17. Best use of building's cultural and aesthetic attributes.
- 18. Serves the greatest number of visitors.

Evaluation factors are presented below in table format to compare what might be done with the Haynes headquarters. Since the two floors of the facility are distinctly different, a separate table applies to each floor. The tables are intended to assist in clarifying thinking; elements can be added to the table when appropriate and weighting is judgmental. Another way to tailor this assessment is to assign numbers and rank each occupancy type numerically.

Not surprisingly, the best fit based on the above evaluation would be to rehabilitate the facility for a mercantile first floor use and a residential second floor use; this is because the building was originally designed for that purpose.

However, assembly use of the first floor also ranked high, as did use of the second floor for office space. Storage/utility functions rated positive in many categories based on the assumption that the structure could be used as is; but ranked low in cultural, aesthetic, and visitor service categories. Results from this type of evaluation relate to building attributes only; they must also fit within National Park Service regional planning goals as well as anticipated visitor impacts.

Two code alternatives for continued use of the Haynes headquarters were evaluated by this report: (1) considers the structure as a conference/meeting center with assembly use of the first floor and office space on the second floor.

Evaluation for Rehabilitated Use (First Floor)—Haynes Picture Shops Headquarters

ELEMENT; ATTRIBUTE	ASSEMBLY; Interpretive, Museum, Lecture, Meeting	EDUCATIONAL Classroom	FACTORY; Maintenance Shop	HAZARDOUS MATERIAL STORAGE	MERCANTILE; Retail, Bookstore, Gifts	RESIDENTIAL; Staff, Visitors	STORAGE	UTILITY
Size and arrangement of spaces suitable for proposed use	+	N	-	-	+	-	+	+
Adaptability of basic structural system (clear span)	+	+	+	-	+	-	+	+
Available structural capacity	+	+	-	-	+	+	+	+
Ease of modification	+	-	+	-	+	-	N	N
Compliance with building codes	N	-	-	-	+	N	-	-
Available fire resistance	-	-	-	-	+	-	N	-
Compliant with NPS policies	N	N	N	-	N	-	N	N
Accessibility by the mobility impaired (ADA)	EQ	EQ	EQ	NA	EQ	EQ	EQ	EQ
Historic adverse effects	+	+	-	-	+	-	-	-
Appropriateness and integrity	+	+	-	-	+	-	-	-
Impact to incorporate utility systems	N	N	N	NA	N	-	+	+
Durability of materials suitable for use	N	N	-	-	+	-	-	-
Relative cost to re-hab to new use	+	+	N	-	+	-	+	+
Energy implications	EQ	EQ	EQ	EQ	EQ	EQ	+	+
Green "LEED" considerations	EQ	EQ	EQ	NA	EQ	EQ	NA	NA
Parking	EQ	EQ	EQ	NA	EQ	EQ	NA	NA
Best cultural & aesthetic fit	+	N	-	-	+	-	-	-
Provides a service to the greatest number of visitors	+	+	-	-	+	-	-	-

Note: The occupancies listed are directly related to the occupancy types in the 2006 International Building Code.

- (+) Favorable condition or fit
- (-) Unfavorable condition or fit
- N Neutral condition
- EQ Applies equally to all listed occupancy categories
- NA Not applicable to that type of use

bly and lodging functions, and (2) considers the structure as an exhibit/office facility. By comparison, an evaluation for educational meetings or as a museum/administrative office would be similar to the (2) alternatives identified.

Concessioner Office Space

The Haynes headquarters could be renovated to accommodate administrative offices to support the Concession Contract YELL-077. Renovation would include seismic and structural stabilization as well as code compliant improvements to meet health/life safety and ADA requirements. All of the general offices including management,

risk management, lodging, and reservations would be relocated from the Mammoth Hotel to the Haynes headquarters. The existing and adjacent parking areas would easily accommodate employee needs. Once the structure and surrounding lands are assigned to the concessioner, all repair and maintenance would become its responsibility. Relocation of the administrative offices from the hotel would relieve congestion in the Mammoth Hotel area and return 11 hotel rooms and an additional 5,000 square feet to guest services. The quality of visitor services would improve at the hotel and preservation of the Haynes headquarters would be ensured with this adaptive reuse.

Evaluation for Rehabilitated Use (Second Floor)—Haynes Picture Shops Headquarters

ELEMENT; ATTRIBUTE	ASSEMBLY; Interpretive, Museum, Lecture, Meeting	BUSINESS; Offices	EDUCATIONAL Classroom	FACTORY; Maintenance Shop	HAZARDOUS MATERIAL STORAGE	MERCANTILE; Retail, Bookstore, Gifts	RESIDENTIAL; Staff, Visitors	STORAGE	UTILITY
Size and arrangement of spaces suitable for proposed use	-	+	-	-	-	-	++	N	-
Adaptability of basic structural system (clear span)	-	+	-	-	-	-	+	N	N
Available structural capacity	-	+	+	-	-	-	+	-	N
Ease of modification	-	+	-	-	-	N	++	N	N
Compliance with building codes	-	N	-	-	-	N	N	N	N
Available fire resistance	-	N	-	-	-	N	N	N	N
Compliant with NPS policies	-	N	N	-	-	N	-	N	N
Accessibility by the mobility impaired (ADA)	-	N	-	-	NA	-	N	N	N
Historic adverse effects	-	+	-	-	-	-	+	-	-
Appropriateness and integrity	N	+	N	-	-	N	++	-	-
Impact to incorporate utility systems	N	+	N	N	NA	N	+	N	N
Durability of materials suitable for use	-	+	-	-	-	-	+	N	N
Relative cost to re-hab to new use	-	+	N	N	-	N	+	N	N
Energy implications	EQ	EQ	EQ	-	EQ	EQ	EQ	+	+
Green "LEED" considerations	EQ	EQ	EQ	EQ	NA	EQ	EQ	NA	NA
Parking	EQ	EQ	EQ	EQ	NA	EQ	EQ	NA	NA
Best cultural & aesthetic fit	N	+	N	-	-	N	+	-	-
Provides a service to the greatest number of visitors	+	N	+	-	-	+	N	-	-

Note: The occupancies listed are directly related to the occupancy types in the 2006 International Building Code.

(+) Favorable condition or fit

(-) Unfavorable condition or fit

N Neutral condition

EQ Applies equally to all listed occupancy categories

NA Not applicable to that type of use

Science Research Center

Another considered use for the building is as a broad-based science center. The range of natural sciences in Yellowstone National Park include biological and volcanic monitoring, botany, microbes, endangered species, and paleontology. Virtually all types of scientific research occur in the park, much of it based at Mammoth Hot Springs, but spread from the backcountry and mountainous areas of the park to the front country thermal features toured and observed by millions of park visitors every year. At this time, there are facilities in the Mammoth area that serve the biological and geological scientific community; the primary location is the Yellowstone Center for Resources, Building #27 of Fort Yellowstone National Historic Landmark District; the second is the various laboratories found in the Yellowstone Heritage Research Center; the third location, not well known, is the former Haynes headquarters, where native plant seed collection, cleaning, sorting and classification have occurred over the last seven or eight years along with storage of many records, samples, and equipment associated with the Natural Resources Branch of the Yellowstone Center for Resources.

A large number of universities, independent researchers, government agencies and scientific organizations have participated over the decades in researching the Yellowstone ecosystem. Public interest in natural features and animals has always been the primary reason for visitation to the park. Following the potential for increasing participation by outside financial sponsors of science in Yellowstone, a science center located in the former Haynes headquarters could provide a location accessible to outside scientists coming into the Yellowstone area to the only year-round vehicular access point in the park. The building could also serve as a secondary visitor contact point that could provide interpretation of the Mammoth Hot Springs features, or provide public access to the NPS scientific community. This would have the potential to garner more broad-based public support for NPS natural sciences programs through education.

The scientific research center could be a facility where research conducted by scientists that are not NPS employees could be done without interfering with YCR operations, or possibly compromising secure government facilities, records, and laboratories from unauthorized persons. The research center could have a public use function for medium- to reasonably large-scale meetings, various conferences, and temporary or permanent facilities serving research needs. It could provide temporary housing for re-

search assistants, wolf tracking teams, volunteer researchers, students, faculty, and others who are participating in undertakings that benefit the Yellowstone scientific community. Budgets for research are usually limited, leaving little room for consideration of a base of operations, temporary housing, eating facilities, and other functions that could be served by this building.

The potential uses of this structure would compare, on a smaller scale, to those of the Youth Conservation Corps (YCC) facilities in the Mammoth Garage Administrative Area. Maintenance of a science research center could possibly be financed by charging for use of the facilities by outside groups or organizations for conference space or scientific research. The difference between using this as a designated facility for one organization and a more general research facility might be the introduction of chemicals or biohazards that might be part of a research lab and would require separation from more public uses, sleeping quarters, and dining facilities. This building has served this type of function in the past, with the photo and film developing facilities combined with retail space, office space, dining room, and sleeping quarters on the upper floor.

Building Code Review

A building code analysis was done for the Haynes Picture Shops Headquarters to determine if there were major areas of concern to be addressed as part of the preservation plan. This analysis is general in nature but includes the primary elements that impact current and future use of the facility. Additional detailed building code requirements would be considered during subsequent phases of project development or preparation of construction documents; detailed requirements are defined to include those technical issues that would not adversely impact the concepts or recommendations for this structure.

Building codes reviewed during the preparation of this report include:

- *2006 International Existing Building Code (IEBC)*. The provisions of this Code constitute the minimum standards for change of occupancy, alteration, or repair of existing buildings and structures including historic structures. The purpose of this code is to encourage the continued use or reuse of existing buildings and structures.

- *2006 International Building Code (IBC)*. This Code provides minimum standards to safeguard life, limb, health, property and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures. This code is intended for use with new structures and as a source of criteria for the IEBC by reference.
- *NFPA 101—Life Safety Code*.

Criteria

The IEBC has been determined to be the primary reference for evaluation of the Haynes Picture Shops Headquarters. The requirements of IBC are generally stricter than those of the IEBC due to the fact that they are applicable to new construction rather than the reuse of existing buildings; however, the two codes are very similar in regard to topics dealing with safety issues. Both codes were consulted and are reported on here in the interest of allowing park administration to evaluate the benefits of attaining a higher standard of safety if cultural values are not compromised and if the cost/benefit ratio is low.

The application of the IBC and the IEBC, is a recent development in the western United States. The IEBC, in contrast to its forerunner the UCBC, is more lenient in regard to recognized historic structures that are to remain as is or are to be repaired; however, alterations or changes in occupancy quickly shift the emphasis toward new construction criteria depending on the level of impact from the proposed changes. The IBC and the IEBC also require automatic fire sprinkler systems to a much greater extent than did previously used codes. Depending on the nature of the historic property these systems can be intrusive and compromise cultural values; at the very least they add considerable expense to the maintenance of the property. Those impacts are identified on the following pages.

Reviewers are cautioned that the code information in this document is for general information purposes only; as projects are developed further research and consultation of the building code are warranted.

The IEBC requirements differentiate between repair, alteration, and additions (or relocation) of existing buildings; generally the more a structure is changed, the more restrictive is the application of the building codes. For example, a building that is only repaired is not required to meet as many provisions of the building code as one that is altered or added to. The IEBC has established three levels of building alterations for purposes of evaluating code requirements; therefore, doing a code analysis on an exist-

ing building is directly tied to knowing how much change is planned for the structure in the future.

To assist in understanding how this may be applied to the Haynes headquarters, a codeflow chart has been developed that shows which portions of the building code are applied to various repairs or changes to existing buildings. (See the following page.) The flowchart identifies the path of building code analysis to be applied to any historic property as well as a notation of the criteria that determine which classification is appropriate to the project. As noted in the first box, the fewest requirements would be for an historic property that will not be altered, but each level of alteration has different requirements. The least restrictive requirements apply in the lefthand category and the more restrictive requirements are progressively listed toward the right. The applicable chapters of the IEBC that apply to the classification are listed below each category for the convenience of the reviewer.

In the interest of being thorough, several of the code alternatives were looked at as they may apply to this historic property and were in this section of the report in table format. Conclusions and recommendations from the comparisons of the various alternatives may be found at the end of the section.

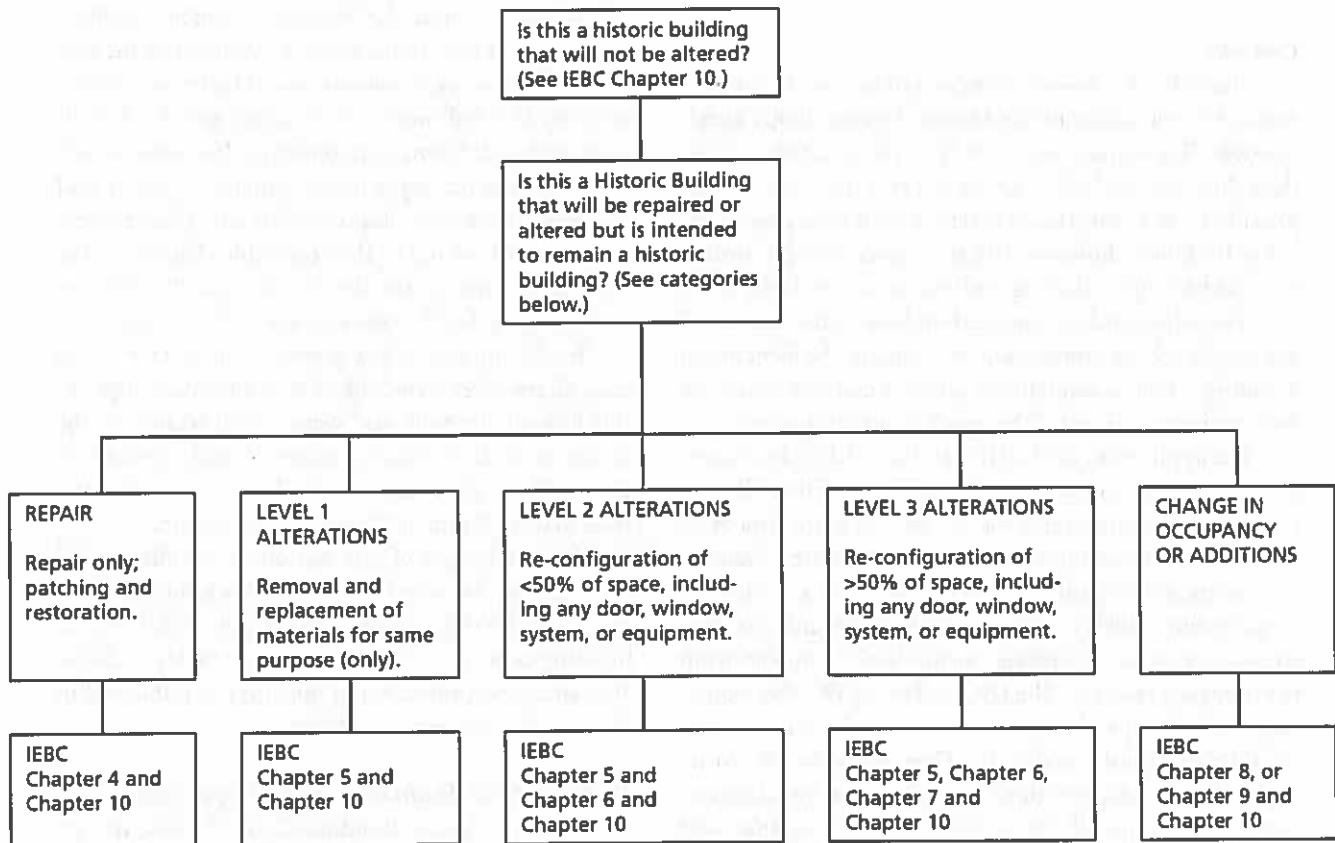
The final pages of this section on building codes show the requirements for the Haynes headquarters if it was not historic and had to comply with the IBC building code. (The last two pages are tables of allowable areas and protection of openings as published in IBC for the convenience of reviewers.)

Building Code Evaluation and Comparisons

As noted under Building Code Review, the attached evaluation tables tabulate IEBC building code requirements as they would apply to code-mandated categories of use for the Haynes headquarters:

- Repaired Building (only); historic property repaired without consideration to a new use.
- Altered Building; historic property altered without consideration to a new use. Note that although there is more than one level of alteration for non-historic properties described within the code, all levels of alteration are treated generically within the chapter on historic structures.
- Building re-used with a Change in Occupancy; but as a historic property.

International Existing Building Code (IEBC) Flowchart



The Haynes Picture Shops Headquarters is a historic property that has been evaluated as a repaired building, a Level 1 Alteration building, and a building that will experience a "change in occupancy" for purposes of this report; other classifications can be reviewed at the discretion of park administrators. The decision to compare a "change in occupancy" category is based on the presumption that it is unlikely that the building will ever be retrofitted as a picture shop.

The IEBC also has specific requirements for existing buildings that are not certified as historic. Those categories include:

- Repaired building (only); non-historic property repaired without consideration to a new use.
- Building altered to Level 1 status; replacement materials or assemblies only; non-historic.
- Building altered to Level 2 status; building re-configured with impacted areas less than 50%.
- Building altered to Level 3 status; building re-configured with impacted areas more than 50%.
- Building re-used with a change in occupancy; but as a non-historic property.

Since the IEBC lists requirements for both historic and non-historic existing buildings within the same document and there is, by necessity, cross referencing between the requirements, the IEBC can be a difficult code to read,

interpret, and apply. The attached tables attempt to simplify that interpretation to the greatest extent possible.

Although application of the IEBC permits judgment on the part of the building official regarding fire issues, it has been assumed that the building official would adopt stricter views regarding fire compliance for this facility because of geographic location and limited year-round fire fighting resources.

Because of the selected method of presentation, this compilation may seem extensive. The reviewer is reminded that there are some very positive aspects to this structure and that some items on the deficiency list are relatively inexpensive to address.

The categories within the matrix are directly quoted from the IEBC code and the specific line items within the tables are paraphrased from the code. Some requirements have been omitted because they do not apply to the Haynes headquarters (for example, requirements for high-rise structures).

IEBC Chapter 10—*Historic Buildings*

Item	Requirement	Applicable
1001.2	Building to be investigated, evaluated, and report filed with Building Official.	APPLIES
1001.3	When occupancy R-3 also used for Group A, B, or M purposes such as tours, exhibits, public assembly, or museums <3,000 SF, building can be classed as occupancy B.	N/A; exceeds 3,000 SF
1001.4	If in Flood Hazard area and improvements are substantial, must comply with IBC 1612. <i>Exception:</i> If a historic building will continue to be a historic building after repairs or work is completed, the work is not considered a substantial improvement.	N/A; not in Flood Hazard area
1002	Repairs: 1. Repairs may use original or like materials. 2. If a historic building is determined dangerous, no work is required except to correct unsafe conditions. 3. New foundations for relocated historic buildings to comply with IBC, otherwise building treated as a historic building. 4. Historic buildings—Chapter 4 applies if repairs (only) are made. 5. Replacement using original materials is permitted, but glazing in hazardous locations must comply with IBC requirements.	APPLIES TBD N/A; Not Relocated May apply APPLIES
1003	Fire safety: 1. Requirements apply if a historic building is undergoing alterations, change of occupancy, or is moved. (GENERAL) 2. Historic buildings that do not conform to IBC and constitute a fire hazard shall be fire sprinklered. Fire sprinklers shall not substitute for the required exits. (APPLIES) 3. Door, corridor, and stairway widths not in conformance with IBC may be approved by the Code Official if there is adequate room for egress. (DOES NOT APPLY; WIDTHS OK) 4. Main exit doors need not swing in the direction of travel if other means of egress available for total occupant load. (MOST DOOR SWINGS OK; REVISE OTHERS) 5. Groups R-1, R-2, and R-3: Transoms may remain if fixed in fire-resistant wall and there is a sprinkler on each side of the transom. (N/A-NO TRANSOMS) 6. Historic finishes can remain. 7. In buildings three stories and less, exit enclosures shall limit the spread of smoke but do not have to be fire rated. (STAIRS MUST BE ENCLOSED-EVALUATE LANDINGS) 8. One-hour fire resistance need not be provided where the existing wall and ceiling finish is wood or metal lath and plaster. (1-HR REQD @ INT BRG WALLS; STRUCTURE DOES NOT MEET THIS REQUIREMENT.) 9. Historic glazing materials in interior walls required to be 1-hour may be permitted when provided with smoke seals and the area is fire sprinklered. (APPLIES TO GLAZING AT RE-LITES ONLY) 10. Grand stairways are excepted from handrail requirements and guardrail requirements provided that they are not dangerous. (N/A) 11. Guardrails: (APPLIES TO LANDING @ EXTERIOR STAIR) A. Height to be 42" B. Existing ornamental patterns shall be accepted 12. Alternative exit signs permitted for historic buildings if character of space damaged; subject to approval of building official	If altered or use of building is changed, chapters 5, 6, and 7 may apply in addition to these requirements The structure meets some of the requirements of section 1003 as it exists. 1 Sprinklers required 2 Widen ADA doors 3 Reconfigure stairs (landings and number of exits) 4 Upgrade bearing walls to 1-hour 5 Smoke seal re-lites 6 Provide guardrail at exterior stair.
1004	Alterations: Accessibility: requirements of section 506 apply only to historic buildings that undergo alterations; if altered section 506 requirements are to be met unless technically infeasible. If historic significance of the property is threatened or destroyed by compliance with 506, the following alternative requirements may be applied: A. If at least one main entrance cannot be made accessible, an accessible non-public entrance that is unlocked while the building is occupied or a locked accessible entrance with a notification system or remote monitoring shall be provided. B. Multilevel buildings: an accessible route from an accessible entrance to public spaces on the level of the entrance shall be provided. C. Where toilet rooms are provided, at least one accessible toilet shall be provided; may be unisex. D. Slope of ramp may be increased to 1 in 8 if run is 24" or less.	APPLIES (if altered) APPLIES APPLIES APPLIES

1005	Change of Occupancy: - Chapter 8 applies except as noted below. - Allowable floor area of historic buildings changing occupancy may be increased by 20%. - Historic structures changing to a higher hazard occupancy may use alternative methods to comply with fire resistance and exterior opening protective requirements. - One-hour occupancy separations may be omitted if the building is fire sprinklered. - Where fire-retardant roof covering is required, roof covering materials of at least class C are permitted. - Door, corridor, and stairway widths not in conformance with IBC may be approved by the code official if there is adequate room for egress. - Main exit doors need not swing in the direction of travel if other means of egress is available for total occupant load. - Transoms fixed in fire-resistant wall may remain if they are wireglass in metal frames or other approved glazing is installed on one side of the transom. - If finishes are required to be at least Class III flame spread, existing non-conforming materials shall be surfaced with fire retardant paint or finish. - One-hour fire resistance need not be provided where the existing wall and ceiling finish is wood or metal lath and plaster. - Existing stairways shall comply with chapter 8; alternatives for stairways and railings may be accepted by the code official if they meet the intent of these provisions. Buildings <3,000 SF may allow existing conditions to remain at all stairs and railings. - Alternative exit signs permitted for historic buildings if character of space damaged; subject to approval of building official. - Existing historic stairways in buildings changed to a Group R-1 or R-2 occupancy shall be accepted where it can be shown that the stairway can support 75 PSF. - Existing light levels are acceptable if compliance with section 811.1.1 would cause a loss of character or materials. - Accessibility (section 812.5) shall apply to historic structures that change occupancy unless technically infeasible. Alternative requirements of 1004 shall be permitted if compliance with these requirements threaten or destroy the historic significance of the building.	1005.5-CLASS C REQD N/A SEE 1003 N/A N/A APPLIES May be applied. APPLIES May be applied. APPLIES
1006	Structural: - Historic buildings shall comply with applicable structural provisions for the work as classified in chapter 3 (i.e., repair, level 1, 2, or 3 alterations, change in occupancy, relocated building, or additions). <i>Exception:</i> Code official may accept existing floors and approve operational controls that limit the live load on any such floor. - If code official determines that a component or portion of a building is dangerous, only that specific component or portion shall be required to be repaired, strengthened, or replaced.	APPLIES

Summary: If the Haynes headquarters were not altered, it complies with many of the provisions of the criteria of Chapter 10. To fully comply with Chapter 10 the following must be done:

- Dangerous structural members must be repaired, strengthened, or replaced; the only obvious structural failures noted during the preparation of this report were the floor joists immediately adjacent to the north public entrance.
- A report and evaluation must be filed with the building official; this report may be used for that purpose.
- Exit stairs must be enclosed; reconfigure stairs to enclose landings and provide two exits from 2nd floor level.
- The main floor must be accessible throughout (primarily hardware revisions).
- Provide at least one accessible toilet on the main floor.
- Install sprinklers.
- Widen doors required for ADA access.
- Upgrade interior bearing walls to 1-hour fire resistance.
- Provide smoke seal at re-lites.
- Provide guardrail at exterior stair.

The following page summarizes the building code requirements for the Repairs classification that apply in addition to the issues listed in Chapter 10.

IEBC Chapter 4—Repairs to Existing Buildings

Applies to Repaired Buildings except as modified by Chapter 10

Item	Requirement	Applicable
401.2	Use materials permitted by Code or like materials.	APP
401.3	Work shall make building no less conforming to code than it was before the repairs.	APP
401.4	If in Flood Hazard area, must comply with IBC 161.2	N/A
403.1	Cannot use hazardous materials for repair.	APP
403.2	Replacement glazing to comply with safety glazing requirements.	APP
404.1	Existing level of fire protection to be maintained.	APP
405.1	Existing means of egress maintained.	APP
406.1	Existing level of accessibility maintained.	APP
407.1.1	Seismic Evaluation Required (see IEBC for detailed requirements).	APP
407.1.2	Wind design and analysis is required of existing building undergoing repairs.	APP
407.2	Repairs shall not reduce strength or stability of existing building.	APP
407.3	Structural repair to damaged buildings. New members to comply with IBC requirements If damage is substantial: Engineering analysis and evaluation is required. Repaired structure must comply with IBC wind & seismic requirements If damage is less than substantial: Repair may be made with materials, methods, and strengths in existence prior to the damage.	N/A N/A APP
408	Electrical repairs may be done with like material except: Receptacles to comply with 406.3(D) of NEC Edison base plug fuses may be used only in limited applications (see 408, 1) Grounding of grounding type receptacles permitted to be grounded to any point. Hospital-grade receptacles required in patient bed locations. Frames of ranges, ovens, cook units, dryers, etc. may be grounded to the grounded circuit conductor.	APP APP APP N/A N/A
409	Mechanical: must comply with 401.1	APP
410	Plumbing: Prohibited materials: Copper and brass traps and tailpieces <.027" wall thickness Solder with more than 0.2 percent lead Water closets with a concealed trap, unventilated space, or walls not thoroughly washed at each discharge. Cement, concrete, mastic, hot-pour, or O-ring joints. Joining of different types of plastic with solvent Saddle type fittings	May apply if repaired
410.2	Replacement water closets must comply with International Plumbing Code; maximum capacity shall be 1.6 gallons per flushing cycle (3.5 gallons for blowout design).	May apply if replaced

Summary: In addition to the requirements of Chapter 10, a repaired Historic Building must comply with the following:

1. A seismic evaluation is required.
2. A wind analysis is required.
3. New structural repairs must comply with IBC.
4. Specific electrical devices must comply with IBC and NEC (see Item 408 above).
5. "Like" materials may be used; hazardous materials cannot be used for repairs.
6. The building can be made no less safe.
7. Existing fire protection, egress, and accessibility are to be maintained.

IEBC Chapter 5—Level 1 Alterations

Applies to Buildings with Replacement Level Alterations except as modified by Chapters 4 and 10

Item	Requirement	Applicable
501.2	Work shall make building no less conforming to code than it was before the repairs.	APP
501.3	If in Flood Hazard area, must comply with IBC 1612.	N/A
503.1	New interior finishes to comply with flame spread requirements of IBC.	APP
503.2	New carpeting to comply with radiant flux requirements of IBC.	APP
503.3	All new work to comply with IBC, ICC Electrical code, Energy Conservation code, IMC, and IPC (mechanical & plumbing).	APP
503.3.1	International Fuel Gas Code applies to General Regulations, gas piping installation, chimneys and vents, and specific appliances.	May apply
504.1	Existing level of fire protection to be maintained.	APP
506.1	Accessibility requirements apply (see 506.1.1 - 506.1.12 and chapter 11 of IBC; if technically infeasible the alteration shall provide access to maximum extent feasible. The altered element or space is not required to be on an accessible route Accessible means of egress are not required Existing buildings are not required to have type B dwelling or sleeping units Altered entrances are not required to be accessible if the building has an accessible entrance on an accessible route. Altered elevators shall comply with ASME A17.1 & ICC A117.1 Platform lifts complying with ASME A18.1 & ICC A117.1 are permitted as part of an accessible route. Ramp slopes may be steeper than required by IBC where space is limited (see 506.1.4) Raised or sunken dining permitted if same ambience available at accessible space. One of each type of performance area to be accessible; all not required to be accessible. Accessible alarms for sleeping units in I-1, I-2, I-3, R-1, R-2, & R-4 occupancies apply only to the spaces being altered. Accessible unisex toilet permitted if existing toilet rooms cannot be altered. One accessible dressing, fitting, or locker room may be located at same location as other facilities if it is technically infeasible to alter existing rooms. Maximum threshold height of 3/4" at doors (beveled.) Accessibility of existing facilities not required to exceed that of new construction. Alterations shall not reduce existing accessibility. When alterations impact areas of primary function, an accessible route must be provided, including toilet rooms / fountains except as noted: 1. Cost of accessible route need not exceed 20% of cost of alteration of space. 2. Provision does not apply to alterations limited to windows, hardware, controls, outlets, or signs. 3. Provision does not apply to alterations limited to mechanical, electrical, fire protection systems or abatement of hazardous materials.	APP APP APP only if R3 APP N/A (currently) N/A APP N/A N/A N/A N/A APP only if R3 APP N/A APP APP APP APP
507.1	Structural: Applies to replacement of building supported equipment and to re-roofing. Where additional dead load is generated and stress is increased >4%, structural components to comply with IBC. Parapet bracing and wall anchors required for all re-roofs of unreinforced masonry bearing wall buildings in Seismic Design Category D, E, or F. Roof diaphragms to be evaluated for all re-roof projects that exceed 50% of the roof area if roof diaphragm is part of a lateral force resisting system.	May apply May apply N/A APP

Summary: In addition to the requirements on the previous two pages, the following requirements would have to be complied with if the Haynes headquarters is altered to a Level 1 category:

1. Interior finishes are to comply with flame spread criteria (dependent on finishes selected).
2. Alterations to the building would have to comply with the International Mechanical Code, International Plumbing Code, International Energy Conservation Code, and International Fuel Gas Code (new work only). Additional insulation would be required. Ventilation and combustion air requirements may require adjustment.
3. Additional accessibility requirements would apply (see above). Accessible alarms required at altered spaces. All areas of primary function to be accessible.

Applies to buildings with plan alterations <50% of floor area except as modified by Chapters 4, 5, and 10

[illegible]

Item	Requirement	Applicable
604	Fire protection: 1. Provide sprinklers in high rise buildings serving more than 30 occupants 2. Groups A, E, F-1, H, I, M, R-1, R-2, R-4, S-1, and S-2: A. Provide sprinklers if more than 1 tenant or 30 occupants, the IBC would require sprinklers for new construction; and work area exceeds 50% of the floor area. B. Work areas in Group R occupancies of 3 stories or less are excepted. C. Sprinklering can be limited to work area whose use requires it if there is fire separation from other uses. 3. Work in a windowless story shall be sprinklered if the IBC would require it to be sprinklered in new construction. 4. Work areas that share more than 1 tenant or an occupant load >30. 5. All sprinkler systems to be supervised by control systems and alarms (see 604.2.5). 6. Standpipe system required if more than 50' above or below fire department access. 7. Approved fire alarm system required; existing systems may be used. Alarm installation must comply with occupancy requirements listed in IBC. 8. If re-configured space >50% of floor, then entire floor must meet fire protection requirement. 9. Smoke alarms required for R occupancies & I occupancies (sleeping).	N/A Sprinkler – see previous section(s) N/A N/A N/A N/A APP May apply APP
605	Means of egress: 1. Applies only to areas being re-configured (work area) 2. Number of exits to comply with IBC on every story (see IBC). 3. Single exit allowed if occupant load <50 and travel distance <75' for group A, B, E, F, M, U, and S occupancies 4. Single exit allowed for B, F-2, and S-2 occupancies if not more than 2 stories and <3,000 SF/ floor if travel distance <75' 5. Single exit allowed for parking garages with mechanical parking 6. Single exit allowed in group R-1 and R-2 occupancies if occupant load (less staff) is <12, or if not more than 2 stories and not more than 4 dwelling units per floor and travel distances are <50'; not permitted for developmentally disabled. 7. Group R-1 and R-2 buildings with multiple levels within the dwelling units have special provisions as well as exceptions (see 605.3.6) 8. Group R-2, H-4, H-5, I, rooming houses, and childcare centers: single exit permitted if one story with maximum occupant load of 10 and travel distance <75'. 9. Group R-2: single exit permitted from below grade story if sprinklered and egress window available from each dwelling unit. 10. Group R-2: single exit permitted if fewer than 4 dwelling units per floor and smoke-proof enclosure or exterior stair available within 20' of entrances into each unit. 11. Group R-3: single exit from below grade permitted if fire sprinklered.	APP See Comments N/A N/A Not recommended N/A N/A N/A N/A N/A N/A
605.3	Fire escapes: 1. Unobstructed access without locks required. 2. Access through doors or windows permitted from single dwelling units or sleeping units in R-1, R-2, and I-1 or from spaces with maximum occupant load of 10. 3. New fire escapes permitted only where exterior stairs cannot be used. 4. Openings within 10' of fire escapes to be protected with 3/4-hour fire assemblies. 5. Ladders prohibited for E, I, rooming houses, and child care centers on fire escapes.	N/A Note: see egress window requirements
605.3.1	Fire escape construction: 100 PSF LL; steel or non-combustible unless Type V; 22" minimum, 8" maximum riser; 8" minimum tread; 40" x 36" minimum landing within 8" to bottom of door.	N/A
605.3.2	Mezzanines with occupant load >50 or travel distance >75' require 2 independent means of egress; if sprinklered may increase travel distance to 100'.	N/A
605.3.3	Group A: Main entrance must be able to exit half of total occupant load.	APP (complies)
605.4	Egress doorways: 1. Two doorways are required for all rooms and spaces with occupant load >50 or a travel distance >75' except for storage rooms with an occupant load <10 and spaces that are served by only a single exit. 2. Two doorways are required for I-2 occupancy and for any patient sleeping room or suite of rooms >1,000 SF.	APP (complies) N/A

Item	Requirement	Applicable
605.4.2	All egress doors serving occupant loads >50 shall swing in the direction of travel.	
605.4.3	Door closer: 1. Self-closing doors required if serve an exit passage or exit stair. 2. If re-configured space >50% of total area, self-closing doors required throughout.	APP APP
605.4.4	Panic hardware required for all Group A occupancies with an occupant load >100..	APP (only if major space is used for assembly)
605.4.5	Emergency power source required for power controlled doors in Group I-3 occupancy in areas that have 10 locks or more.	N/A
605.5	Corridor doors and openings: 1. Hollow core doors and louvered doors prohibited. 2. If corridors are not fire rated then openings need not be fire rated. 3. 1-3/8" solid core minimum thickness without glass other than approved wireglass. 4. Dwelling and sleeping units of R-1, R-2, and I-1 to have closers. 5. All replacement doors to be 1-3/4" minimum. *6. Exceptions: Corridor doors within a dwelling or sleeping unit; existing doors complying with 15 minimum HUD rating; existing doors in fire sprinklered building (must be smoke gasketed however), group homes with 15 occupants max and a fire sprinkler may omit closers; and door assemblies with a 20 minimum rating. 7. If re-configured space exceeds 50% of floor area, then all openings to comply with requirements.	APP APP APP APP
605.5.2	Transoms: Groups I-1, R-1, and R-2 transoms glazed with 1/4" wireglass in rated frames and permanently secured / sealed.	N/A
605.5.3	Misc. corridor openings: consistent with other corridor construction.	APP
605.6	Dead end corridors not to exceed 35', unless not group A or H occupancy and equipped with: 1. Fire alarm system (may be 50'). 2. Fire sprinkler system (may be 70' for building or 50' for floor)	
605.7	Artificial lighting required at egress doorways.	APP
605.8	Exit signs required; If work area >50%, applies to entire area	APP
605.9	Handrails: 1. Required for all exit stairways. 2. Provide one for stairways up to 66" wide; two if wider than 66"	APP
605.10	Guardrails: applies to all stairs, landings, or balconies more than 30" above floor or grade.	APP exterior stair
606	Accessibility: 1. Comply with chapter 5, Level 1 alterations 2. If stair or elevator added, accessible route must be added. 3. If group I-1, I-2, I-3, R-1, R-2, or R-4 added, new accessibility requirements apply to the quantity of spaces being added.	APP May apply APP
607	Structural: 1. New alterations must not reduce strength or stability of building or members. 2. New members to comply with IBC. 3. Existing members supporting new vertical loads must comply with IBC; 5% increase in stress permitted. 4. Level 2 alterations that increase the seismic base shear by more than 5% must comply with chapter 7 (707). 5. Alterations that cause a change in snow drifts shall comply with IBC unless stress is not increased by more than 5% or group R occupancy with fewer than 5 dwelling units that qualifies for light frame construction methods.	APP APP APP N/A N/A
608	Electrical: 1. Newly installed electrical to comply with chapter 5, level 1 alterations. 2. Groups A-1, A-2, A-5, H, and I: wiring upgraded as required in chapter 5 for all re-configured space. 3. Groups R-2, R-3, and R-4 regulated by International Residential Code must conform to 608.3.1 - 608.3.7 (see requirements for number of C.O. and light fixtures, etc.)	APP May apply APP

Item	Requirement	Applicable
609	Mechanical: 1. Natural or mechanical ventilation required (see International Mechanical Code). 2. Ventilation: 5 CFM outdoor air and 15 CFM ventilation air required per person. 3. Local exhaust required for all newly introduced devices that produce particulates, odors, fumes, vapors, combustion products, gaseous contaminants, organisms, etc. in such quantity as to affect health.	APP
610	Plumbing: If occupant load increased by 20%, fixtures for the story to be provided in quantities required by International Plumbing Code.	APP (assembly occupancy)

Summary: In addition to the requirements for Chapters 4 and 10, the following requirements would have to be complied with if the Haynes headquarters were altered to a Level 2 category:

1. Vertical openings and stairways would have to be enclosed with 1-hour assemblies.
2. Smoke alarms and smoke detection required if used for R occupancy
3. An approved fire alarm system is required for all proposed uses.
4. Corridor doors may have to be fire rated, may have to comply with minimum thickness requirements, and may require closers.
5. Primary egress doors to comply with direction of door swing; hardware requirements.

**** Section 605:** Unless the building official accepts exit passage through one adjoining room, the path of travel to the existing interior stair is lengthy and contorted; it is recommended that the stair and its access be reconfigured to provide shorter and more obvious access. A second exit stair is also recommended from the second level.

****NPS policy** requires fire sprinklering for all residential occupancies in addition to the building code requirements identified above.

Alternatives

Rehabilitation of Haynes Headquarters as a Conference Center

Comparative Building Code Analysis (Using IBC 2006)

Basic Requirements—Existing square footage: 5,651 first floor; 3,513 second floor. This analysis is for a conference center with overnight lodging for speakers and invited guests.

Subject	IBC Section	Sprinklered Building	Un-sprinklered Building	Remarks
Building use (occupancy)		Meetings (1st floor) Lodging (2nd floor)	Meetings (1st floor) Lodging (2nd floor)	
Occupancy classification	301	A-3; R-1	A-3; R-1	
Incidental uses	508.2	No requirement for separation	1-hour or sprinkler re- quired for separation	At furnace/boiler room
Accessory uses	508.3.1	Food distribution; exhibit	Food distribution; exhibit	Less than 10% of area
Non-separated occupancies	508.3.2			None Identified
Separated occupancies	508.3.3	1-hour	2-hour	Separation is between A-3 and R-1 only
Total occupant load	1004.1.1	257	257	238 (1st floor); 19 (2nd floor)
Type of construction	503	V-B	V-B	
Allowable area (basic)	503	11,500 SF	6,000 SF	Based on most restrictive occupancy classification
Area increase (frontage)	506.2	5,750 SF	3,000 SF	Use 0.5 for increase
Area increase (sprinkler)	506.3	23,000 SF	N/A	Use 2.0 for increase
Total allowable area	506.1	4,0250 SF	9,000 SF	
Allowable height (stories)	503	2	1	Must be sprinklered for 2-story
Exterior wall fire resistance	602	No requirement	No requirement	Sufficient fire separation distance
Number of exits required	1019.1	2	2	Applies to both floors
Required egress width— corridors	1005.1	3' 3" lower 3' upper	4' 3" lower 3' upper	Use 3' – 0" for sub-corridor at back of first floor
Required egress width—stairs	1005.1 1009	3'	3'0"	No egress stairs at lower level
Interior finish—exits	803.5	Class B	Class A	
Interior finish—corridors	803.5	Class B (1 st) Class C (2 nd)	Class A (1 st) Class B (2 nd)	
Interior finish—rooms	803.5	Class C	Class C	

Rehabilitation of Haynes Headquarters as an Administration/Exhibit Building

Comparative Building Code Analysis (Using IBC 2006)

Basic Requirements—Existing square footage: 5,651 first floor; 3,513 second floor. This analysis is for an Administration Building with Public Exhibits on the first floor.

Subject	IBC Section	Sprinklered Building	Un-sprinklered Building	Remarks
Building use (occupancy)		Exhibits (1st floor) Offices (2nd floor)	Exhibits (1st floor) Offices (2nd floor)	
Occupancy classification	301	A-3; B	A-3; B	
Incidental uses	508.2	No requirement for separation	1-hour or sprinkler re- quired for separation	At furnace/boiler room
Accessory uses	508.3.1	Food distribution; Lunch/meeting	Food distribution; Lunch/meeting	Less than 10% of area
Non-separated occupancies	508.3.2			None Identified
Separated occupancies	508.3.3	1-hour	2-hour	Separation is between A-3 & B (only)
Total occupant load	1004.1.1	283	283	251-first; 32-second floor
Type of construction	503	V-B	V-B	
Allowable area (basic)	503	11,500 SF	6,000 SF	Based on most restrictive occupancy classification
Area increase (frontage)	506.2	5,750 SF	3,000 SF	Use 0.5 for increase
Area increase (sprinkler)	506.3	23,000 SF	N/A	Use 2.0 for increase
Total allowable area	506.1	40,250 SF	9,000 SF	
Allowable height (stories)	503	2	1	Must be sprinklered for 2-story
Exterior wall fire resistance	602	No requirement	No requirement	Sufficient fire separation distance
Number of exits required	1019.1	2	2	Applies to both floors
Required egress width— corridors	1005.1	3' 7" lower 3' upper	4' 9" lower 3' upper	Use 3' for sub-corridor at back of first floor.
Required egress width—stairs	1005.1 1009	3'	3'	No egress stairs at lower level
Interior finish—exits	803.5	Class B	Class A	
Interior finish—corridors	803.5	Class B (1 st) Class C (2 nd)	Class A (1 st) Class B (2 nd)	
Interior finish—rooms	803.5	Class C	Class C	

Haynes Picture Shops Headquarters

Company Information

This information is for internal use only. It is not to be distributed outside the company.

Product Line	Product Name	Product Description		Product Code	Product Price
		Product Details	Product Features		
Product Line A	Product A-1	Product A-1 Description	Product A-1 Features	Product A-1 Code	Product A-1 Price
	Product A-2	Product A-2 Description	Product A-2 Features	Product A-2 Code	Product A-2 Price
	Product A-3	Product A-3 Description	Product A-3 Features	Product A-3 Code	Product A-3 Price
Product Line B	Product B-1	Product B-1 Description	Product B-1 Features	Product B-1 Code	Product B-1 Price
	Product B-2	Product B-2 Description	Product B-2 Features	Product B-2 Code	Product B-2 Price
	Product B-3	Product B-3 Description	Product B-3 Features	Product B-3 Code	Product B-3 Price
Product Line C	Product C-1	Product C-1 Description	Product C-1 Features	Product C-1 Code	Product C-1 Price
	Product C-2	Product C-2 Description	Product C-2 Features	Product C-2 Code	Product C-2 Price
	Product C-3	Product C-3 Description	Product C-3 Features	Product C-3 Code	Product C-3 Price
Product Line D	Product D-1	Product D-1 Description	Product D-1 Features	Product D-1 Code	Product D-1 Price
	Product D-2	Product D-2 Description	Product D-2 Features	Product D-2 Code	Product D-2 Price
	Product D-3	Product D-3 Description	Product D-3 Features	Product D-3 Code	Product D-3 Price
Product Line E	Product E-1	Product E-1 Description	Product E-1 Features	Product E-1 Code	Product E-1 Price
	Product E-2	Product E-2 Description	Product E-2 Features	Product E-2 Code	Product E-2 Price
	Product E-3	Product E-3 Description	Product E-3 Features	Product E-3 Code	Product E-3 Price
Product Line F	Product F-1	Product F-1 Description	Product F-1 Features	Product F-1 Code	Product F-1 Price
	Product F-2	Product F-2 Description	Product F-2 Features	Product F-2 Code	Product F-2 Price
	Product F-3	Product F-3 Description	Product F-3 Features	Product F-3 Code	Product F-3 Price
Product Line G	Product G-1	Product G-1 Description	Product G-1 Features	Product G-1 Code	Product G-1 Price
	Product G-2	Product G-2 Description	Product G-2 Features	Product G-2 Code	Product G-2 Price
	Product G-3	Product G-3 Description	Product G-3 Features	Product G-3 Code	Product G-3 Price
Product Line H	Product H-1	Product H-1 Description	Product H-1 Features	Product H-1 Code	Product H-1 Price
	Product H-2	Product H-2 Description	Product H-2 Features	Product H-2 Code	Product H-2 Price
	Product H-3	Product H-3 Description	Product H-3 Features	Product H-3 Code	Product H-3 Price
Product Line I	Product I-1	Product I-1 Description	Product I-1 Features	Product I-1 Code	Product I-1 Price
	Product I-2	Product I-2 Description	Product I-2 Features	Product I-2 Code	Product I-2 Price
	Product I-3	Product I-3 Description	Product I-3 Features	Product I-3 Code	Product I-3 Price
Product Line J	Product J-1	Product J-1 Description	Product J-1 Features	Product J-1 Code	Product J-1 Price
	Product J-2	Product J-2 Description	Product J-2 Features	Product J-2 Code	Product J-2 Price
	Product J-3	Product J-3 Description	Product J-3 Features	Product J-3 Code	Product J-3 Price

International Existing Building Code (IEBC) Analysis

2006 International Building Code

Table 601. Fire-Resistance Rating Requirements For Building Elements (Hours)

Building Element	Type I		Type II		Type III		Type IV	Type V	
	A	B	A(e)	B	A(e)	B	HT	A(e)	B
Structural frame(a)	3(b)	2(b)	1	0	1	0	HT	1	0
Bearing walls									
Exterior(g)	3	2	1	0	2	2	2	1	0
Interior	3(b)	2(b)	1	0	1	0	1/HT	1	0
Nonbearing walls and partitions									
Exterior	See Table 602		See Table 602		See Table 602		See Table 602	See Table 602	
Interior(f)	0	0	0	0	0	0	See Section 602.4.6	0	0
Floor construction including supporting beams and joists	2	2	1	0	1	0	HT	1	0
Roof construction including supporting beams and joists	1-1/2 (c)	1(c,d)	1(c,d)	0(c,d)	1(c,d)	0(c,d)	HT	1(c,d)	0

a. The structural frame shall be considered to be the columns and the girders, beams, trusses, and spandrels having direct connections to the columns and bracing members designed to carry gravity loads. The members of floor or roof panels that have no connection to the columns shall be considered secondary members and not a part of the structural frame.

b. Roof supports: Fire-resistance ratings of structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.

c. Except in Group F-1, H, M and S-1 occupancies, fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members may be used for such unprotected members.

d. In all occupancies, heavy timber shall be allowed where a 1-hour or less fire-resistance rating is required.

e. An approved automatic sprinkler system in accordance with Section 903.3.1.1 may be substituted for 1-hour fire-resistance-rated construction, provided such system is not otherwise required by other provisions of the code or used for an allowable area increase in accordance with Section 506.3 or an allowable height increase in accordance with Section 504.2. The 1-hour substitution for the fire resistance of exterior walls shall not be permitted.

f. Not less than the fire-resistance rating required by other sections of this code.

g. Not less than the fire-resistance rating based on fire separation distance (see Table 602).

704.8 Allowable Area of Openings

The maximum area of unprotected or protected openings permitted in an exterior wall in any story may not exceed the values set forth in Table 704.8. Where both unprotected and protected openings are located in the exterior wall in any story, the total area of the openings shall comply with the following formula:

$$A/a + A(u)/a(u) < 1.0 \text{ (Equation 7-2)}$$

where

- A = Actual area of protected openings, or the equivalent area of protected openings, A_e (see Section 704.7)
a = Allowable area of protected openings
A_u = Actual area of unprotected openings
a_u = Allowable area of unprotected openings

Table 704.8 Maximum Area of Exterior Wall Openings (A)

Classification of opening	Fire Separation Distance (feet)							
	0 to 3(f,i)	>3 to 5(c,g)	>5 to 10(c,e,g,h)	>10 to 15(d,e,g)	>15 to 20(d,g)	>20 to 25(d,g)	>25 to 30(d,g)	>30
Unprotected	Not permitted	Not permitted	10%(i)	15%(i)	25%(i)	45%(i)	70%(i)	No limit (b)
Protected	Not permitted	15%	25%	45%	75%	No limit (b)	No limit(b)	No limit (b)

For SI: 1 foot = 304.8 mm

- Values given are percentage of the area of the exterior wall.
- See Section 704.7 for unexposed surface temperature.
- For occupancies in Group R-3, the maximum percentage of unprotected and protected exterior wall openings is 25 percent.
- The area of openings in an open parking structure with a fire separation distance of greater than 10 feet shall not be limited.
- For occupancies in Group H-2 or H-3, unprotected openings are not be permitted for openings with a fire separation distance of 15 feet or less.
- For requirements for fire walls for buildings with differing roof heights, see Section 705.6.1.
- The area of unprotected and protected openings is not limited for occupancies in Group R-3 with a fire separation distance greater than 5 feet.
- For special requirements for Group U occupancies, see Section 406.1.2.
- Buildings whose exterior bearing wall, exterior non-bearing wall, and exterior structural frame are not required to be fire-resistance rated by Table 601 or 602 may have unlimited unprotected openings.
- Includes accessory buildings to Group R-3.

Building Code Summary

From the standpoint of building codes, the recommended treatment for the Haynes Picture Shop Headquarters is to perform all work on the building in compliance with the IEBC "Change in Occupancy" category as a conference center if this use is consistent with regional planning of the National Park Service.

Accessibility Considerations

The general categories that are analyzed for compliance with ADA guidelines are listed in the table below. Topics related to more than one historic property within the Mammoth Hot Springs Historic District are annotated in the "building complex" column and are not specifically addressed by this report.

Category	Applicable	Not applicable	Building complex	Comments
Accessible route	X			ADA site circulation is not clearly defined; walkways required.
Parking	X			Parking spaces to be located and assigned.
Passenger loading zone	X			One required; none exists for this facility.
Pathways			X	Separate site study is recommended.
Drinking fountains (and telephones)	X			Add public ADA compliant accessories.
Ramps	X			A ramp to one main public entrance is required.
Stairs	X			See building code section of report.
Lifts	X			
Entrances	X			Entrance doors do not comply with ADA hardware requirements.
Doors and gates	X			Door hardware does not comply with ADA requirements.
Building lobbies and corridors		X		
Elevators		X		An elevator is required unless waived by Advisory Council.
Rooms and spaces	X			Storage spaces not required to be fully accessible.
Assembly rooms	**	**		Applies to former retail and dining areas.
Toilet rooms	X			At least one ADA compliant toilet room required, may be unisex.
Bathtubs and showers		X		Required if residential use is considered.
Restaurants and cafeterias		X		
Medical care facilities		X		
Business, mercantile	**	**		
Libraries		X		
Postal facilities		X		
Dwelling units		X		

ADA Compliance Summary

Assuming that the building will be used for a public purpose (exhibit, meeting, educational), the following accessibility provisions apply:

1. Designate and provide ADA parking space(s) for this facility.
2. Provide ADA unloading/loading zone for this facility (may be related to parking space).
3. Provide (or re-activate) ADA telephones and drinking fountain within facility.
4. Revise entrance hardware and hardware into accessible spaces to be ADA compliant.
5. Provide at least one accessible unisex toilet room within facility unless adjacent facilities are provided.

6. Subject to being waived, an elevator is required.
7. Provide ramp to entrance terrace at southeast corner of structure.

Requirements identified as "applicable" in the table above have been integrated into the overall Preservation Plan of this report, assuming that the building will be assigned new uses. Not all of the requirements marked "applicable" would be needed if the building continues to be used for inactive or seasonal storage. If continued use of the building is limited to storage, a minimum of one entrance must be made accessible for staff members who may have mobility impairment.

Structural Considerations

Location

Mammoth, Yellowstone National Park, 45 degrees 00' North latitude; 110 degrees 00' West longitude; 6,380' elevation (approximate).

Structural Building Codes

Building codes and requirements applicable to the engineering evaluation of this structure are as follows:

- *2006 International Building Code* (An occupancy classification has been established in the Building Code section of this report.)
- *2006 International Existing Building Code*
- Recommended Lateral Force Requirements, Structural Engineers Association of California (reference only)
- Montana State University—Snow Loads for Structural Design in Montana, Videon and Schilke, 1989 (reference only)
- University of Colorado—Structural Snow Loads, Keller, 1985.
- ASCE 7—latest edition

Loads

Loading and factors pertinent to the development of this structure include:

Vertical Loads—Snow

The University of Colorado and Montana State University publications are very similar, however, the University of Colorado study is site specific and the Montana State University study applies to adjacent areas of Montana near the park. The IBC designates YNP as an area requiring a site-specific case study.

From the University of Colorado publication:

- $P_g = .012 \times \text{elevation of } 6,380' = 76.6 \text{ PSF unfactored ground snow load}$
- Exposure 'C'; 50 year mean reoccurrence
- $C_e = 0.9$ for 20' ht. structure
- Importance factor of 1.0
- $P_f = (C_e)(I_w)(P_g)$; Resultant snow load = 68.9 PSF (occupied) (w/o DOL factor)
- Drifted snow must be accounted for as applicable

Floor Live Loads

(All three occupancies have been considered in this evaluation.)

- Residential occupancy—40 PSF (R3)
- Office occupancy—50 PSF (B)
- Exhibit areas—100 PSF (typically 'A'; 'B' for historic structures)
- Mechanical and electrical equipment loads—actual (none currently)

Lateral Loads:

- Wind: 90 mph basic wind speed; exposure 'C'; importance factor of 1.0 (See Wind Analysis in Appendix)
Worst case wind pressure, $P = 15.7 \text{ PSF}$
- Seismic (earthquake): Equivalent Lateral Force Procedure, section 1617.4
 $V = C_s \times W$
Probability zone: Based on NEHRP acceleration maps
Importance factor I (low hazard)
Soil/structure interaction factors— F_a and F_v : Use Soil Type 'B'
Structural system resistance factor $R_w = 2.0$ (Table 16-N)(judgemental)
(See tabulations for Seismic in Appendix)
Total base shear coefficient. = 0.4165; use 41.65% W for base shear (A 25% snow load reduction has been used for seismic calculations.)
Interior walls and partitions—5 PSF lateral load (minimum)
Concrete/masonry wall base anchorage—200 PLF

Soils

A soils investigation has not been done at the site as of the date of the preparation of this report. Adjacent sites have been investigated and information from those investigations could be applicable to the Haynes Picture Shops Headquarters.

Other Considerations

Movement of the structure: it is recommended that thermal, shrinkage, and time-dependent factors be monitored at the facility.

Selected Safety Checks

Loads and forces applicable to safety checks for the building are as listed in the preceding section. Building code requirements as they pertain to structural members were also reviewed as part of this report. Structural code deficiencies are identified as applicable.

Factors

Live load reduction factors were not applicable to this review because the spans and supported areas in the facility are smaller than the minimums established by the building code.

Duration of load factors:

- A duration of load factor of 1.15 has been assigned for snow loads.
- A duration of load factor of 1.33 has been assigned for seismic and wind loads.

Deflection is a measure of rigidity and is significant in safety for structures that are continuous frame systems; it is not generally a safety consideration for structures like the Haynes Picture Shop Headquarters but is rather a measure of performance.

Findings

For this report, observations were made, measurements taken, and calculations were done to the extent that weaknesses could be identified and decisions could be made regarding use of the building as well as developing the Preservation Plan; however, additional supplemental calculations would be required to develop connections and details at the time that remedial construction occurred.

Foundation: Without destructive testing, inspection of the foundation was limited to what could be seen within the basement, an area next to a deteriorated floor that was opened up adjacent to the north entrance, and selected probes with borescopes through mechanical grilles. The foundation is concrete at all locations viewed, and internal reinforcing patterns are unknown. Except for the basement, the entire foundation consists of a short stem wall supported by a concrete continuous spread footing; it is presumed that footings rest on or are very near the travertine formation found throughout the Mammoth area. Internal floor girders are supported by concrete piers cast on isolated spread footings. Although shallow, the foundation appears sound at all locations viewed and evidence

of deterioration or differential settlement were not noted. Under floor ventilation is through grilles cut into the floor rim joist (some of which have been closed off); it is recommended that this be further explored as improvements are planned for the facility.

Lateral resistance from wind or seismic forces: A very preliminary comparative seismic calculation has been completed for this structure. The total (actual) seismic weight of the building, including snow with a 25% reduction, is 936,000 lbs. Applying the factors identified above results in a total base shear for the structure of approximately 390,000 lbs., not accounting for distribution of forces, a seismic reduction factor of 1.33, or torsion. The extensive shear walls around the perimeter of this relatively low mass will contribute to lateral resistance and there are numerous opportunities to introduce stiffening within the interior if required. Diaphragms are intact and well connected to the perimeter bearing walls. It is recommended that the Tri-Services manual (Corps of Engineers) be reviewed for lateral resistance values of board sheathing. If interior finishes are changed from Celotex to gypsum drywall, lateral bracing can be introduced as needed along with adding insulation for energy efficiency.

Implementation of the IEBC building code will permit a reduction in the intensity of lateral forces from what is listed above; however, the degree of reduction is contingent upon the final use selected for the building as well as the amount of impact of any proposed changes.

Deterioration: Two significant areas of structural deterioration were noted: (1) A girder supporting the upper deck of the southeast stair is badly deteriorated and must be replaced, and (2) an area of floor immediately adjacent to the north entrance into the retail area is severely deteriorated. This area is limited to a small section of flooring and floor joists; it was opened up and photographed during preparation of this report. The cause of this localized deterioration was unknown; it was speculated that it may have been exposed to an active steam vent from the Mammoth terrace that has since become dormant. The condition was reviewed by NPS Geologist Henry Heasler in January 2008. A thermal scan and measurement of ground temperatures indicated no geothermal heat or fluid at the time of measurement (see Appendix D).

Deterioration of a non-structural nature is discussed in the Condition Assessment section of this report.

Door/window headers: Evidence of overloading of any door or window headers was not noted within the building.

Roof sheathing: Roof sheathing (as viewed from attic spaces below) is in excellent condition.

Floor joists: Except for the area adjacent to the north entrance, all floor joists viewed were in excellent condition. Selected safety check calculations were done for representative floor members with results as follows:

1. Joists supporting the Retail area are adequate to carry 80 PSF (based on 1/360 deflection of total load). This is suitable for many occupancies with the exception of fixed seat assembly use or storage use. Flexure controls these members.
2. Joists supporting the dining area can carry 158 PSF (presuming the intermediate supporting girder is continuous).
3. 1st floor dormitory joists can carry loading similar to the dining room (140 PSF).
4. 2nd floor dormitory joists—Following the vertical load path from the attic of the dormitory wing to the floors below is complicated (see section in the drawings). The 1st and 2nd floor bearing walls are not aligned in this portion of the structure, and the roof loading that is translated from the attic brace pattern causes the 2nd floor framing members to be overloaded under full snow and live load. Several solutions could be investigated to alleviate this problem.
 - a. Alter the 2nd floor plan so that the bearing walls align and re-position the attic bracing so that all roof loads transfer directly to the bearing wall. (The chimney location could be a problem.)
 - b. Introduce additional bracing and connectors into the attic roof assembly so that the roof acts as a clear span truss and roof loads are transferred to exterior bearing walls below.
 - c. Open up the ceiling of the dining area and introduce supplemental supports sufficient to carry the added roof loads.

Roof rafters: Roof framing is adequate in all locations except the large open attic above the retail space. Rafters over the flat roof portion of the truncated pyramid are undersized for the snow load tabulated from structural studies referenced to prepare this report. Because of the elevated position of this part of the structure, it is likely that wind has helped to reduce the 50-year reoccurrence of larger snow loads; It is not known if snow load has caused

extra effort on the part of maintenance in the recent history of the structure. It is possible, with observation, that the existing roof could remain unaltered—otherwise additional support would have to be provided.

Soils related movements: No specific deficiencies were noted.

Energy Considerations

Cursory observations regarding thermal resistance available at the building were made during the course of preparing measured drawings for the facility.

Roof: The roof assembly has 6" of fiberglass blanket insulation. Thermal resistance available from this assembly would meet the minimum building code requirements under the aegis of the International Energy Code. However, should the NPS desire to increase thermal resistance for the structure it could easily be achieved since the attic is relatively unobstructed and readily accessible.

Walls: Wall construction consists of a shingled exterior, 1x board sheathing, 2x wood framing, and a Celotex interior. It is believed that the walls are uninsulated but since there is a cavity available, thermal resistance could be introduced into the walls in a number of ways: (1) foam insulation injected into the cavity through holes and the holes repaired when complete, (2) interior furring that includes high R-value rigid insulation (polyisocyanurate), or (3) introduction of blanket insulation if the Celotex interior materials are removed and replaced with a more fire-resistant finish.

Floor system: The floor system is 2x wood framing with a sub-floor and finish flooring. It is uninsulated. Portions of the floor could be easily insulated where there is a basement space, or where there is adequate room for workers (retail space). Other parts of the structure would require removal of flooring to introduce insulation. Introducing insulation over the ground around the perimeter of the structure could offer some thermal conservation; this approach could be further studied if the facility is used throughout the year.

Infiltration: Windows/doors are in fair condition; if it is envisioned that the facility would be used during off-season it is recommended that these assemblies be improved. Weather stripping of doors is mandated and applying storm windows (preferably to the interior) is encouraged.

Preservation Plan

The Preservation Plan is derived from a review of the historic documentation of the property, the rating/priority matrix of the condition assessment, and the technical evaluations of fire, code compliance, and structural safety.

The extent of work to be accomplished at the property must be consistent with a high standard of preservation ethics and integrity as mandated by *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. The recommendations contained in this Preservation Plan are based on the following rationale:

The proposed treatment of the building is preservation of existing fabric and replacement with in-kind materials to the maximum extent feasible, with consideration for protection of persons and property from life-safety issues. The intent is to sensitively integrate life-safety elements and new uses into the structure (recognizing that they ensure the long-term life of the building) without compromising the historic character.

Continued use of the building will have elements of Preservation, Rehabilitation, and Restoration included within work suggested by this report. Reconstruction is not contemplated.

1. Exterior elements will be preserved and enhanced.
2. Interior spaces—modifications for changes in use as well as life-safety improvements will be treated as rehabilitations within a historic structure.

The final appearance of the building is intended to be essentially the same as what we see today, with emphasis on having the building appear well-maintained and related to its surroundings. The building has conveyed that appearance throughout much of its history, has had little (if any) change to its appearance, and continues to convey

a sense of time and tradition.

The following paragraphs summarize the priority of work to be implemented at the Picture Shop as recommended by this Historic Structure Report. Building elements identified as “critical” or “serious” in the condition assessment portion of this report are reflected in this listing of priorities.

- **Priority #1—Life safety, fire safety.**

Satisfying building code structural requirements and correcting obvious structural safety deficiencies are fundamental life safety topics. Adding alarm, detection, and suppression systems are the primary fire concerns.

- **Priority #2—Add elevator.**

- **Priority #3—Seal and protect exterior building envelope.**

Rehabilitating wall surfacing (including windows) and general maintenance and repair of the exterior are included under this priority.

- **Priority #4—Rehabilitate interior, upgrade utility systems.**

Numerous elements within this category involve maintenance activities that have been deferred as a result of the building not being used for its designed purpose.

- **Priority #5—Changed use and ADA accessibility.**

- **Priority #6—Parking, site access, and site enhancements.**

Prioritized Work Plan (Preservation Plan)

Category	Location	Element	Rtg	Cond	Remarks	No.
Life Safety and Fire Safety						
Structure	General	Seismic and wind analysis (code official)	***	Critical	*** Building code requirement	1.00
Environmental	General	Hazmat evaluation	****	Critical	Required	1.10
Structure		Structural repairs (see text)	5	Critical	Evaluate 2nd floor joists over dining room	1.15
Structure		Structural repairs (see text)	5	Critical	Evaluate exterior stair	1.20
Structure	North entrance	Structural floor repair	2	Critical	Consult park geologist	1.30
Fire	Entire building	Fire sprinkler system	5	Critical	Add	2.00
Fire	Entire building	Fire alarm	5	Critical	Add	2.10
Fire	Entire building	Fire detection	5	Critical	Add	2.20
Fire	Entire building	Emergency lighting	5	Critical	Add	2.30
Fire	Entire building	Fire extinguishers	-	Critical	Supplement; rejuvenate	2.40
Fire	General	Add 2nd interior exit stair from 2nd floor	5	Critical		2.50
Fire	General	**Re-configure exist interior exit stair	5	Critical	**Subject to any proposed new use	2.60
Fire	General	Increase fire resistance of corridors	5	Critical	Replace/cover celotex; retain woodwork	2.70
Fire	General	*Increase fire resistance of rooms * (applicable if rooms used for residential occupancy only)	*	*	* Replace celotex; retain woodwork	2.80
Elec	Service	Investigate	5	Critical		2.90
Elec	Distribution	Conductors, wireways, panels	5	Critical	Upgrade	2.95
Elevator	Elevator	Add elevator	5	**	Dependent upon proposed continued use for building	3.00
Seal and Protect the Exterior Envelope						
Roof	Retail	Roof ridge	4, 5	Serious	Replace when re-roof	3.10
Roof	Retail	Roof surfacing	4, 5	Serious	Roofing will need replacement in near future	3.11
Roof	Retail	Cedar Breather; air infiltration barrier	5	N/A	Add when re-roof (if cedar)	3.12
Roof	Retail	Icedam edge protection	5	N/A	Add when re-roof	3.14
Roof	Other	Roof ridge	4, 5	Serious	Replace when re-roof	3.15
Roof	Other	Roof surfacing	4, 5	Serious	Roofing will need replacement in near future	3.16
Roof	Entire roof	Roof sheathing	2	Minor	Roofing will need replacement in near future	3.17

Priority Rating System: Critical—Requires immediate action to preserve essential historic features and materials experiencing advanced deterioration, or to assure the stability of the building, or to preclude a threat to health or safety; Serious—Materials or assemblies are approaching an advanced state of degradation, or will soon pose a threat to health or safety; Minor—Degradation is minimal and preventative maintenance has not been followed; life expectancy of the material is reduced.

Category	Location	Element	Rtg	Cond	Remarks	No.
Roof	Entire roof	Flashing	4	Minor	Replace when re-roof	3.18
Roof	Entire roof	Roof edging	5	Minor	Replace when re-roof	3.19
Roof	Canopy	Roof surfacing	4, 5	Serious	Roofing will need replacement in near future	3.20
Walls	All exterior walls	Shingle surfacing	2	Serious	Repair lower courses; re-hab remainder	4.10
Walls	All exterior walls	Air infiltration barrier	5	—	TBD	4.11
Walls	Canopy	Canopy columns	2	Serious	Repair lower courses; re-hab remainder	4.12
Roof	Perimeter	Fascia	1, 2	Minor	Maintain; restore	4.20
Roof	Perimeter	Soffit	1	Minor	Maintain; restore	4.30
Walls	All exterior walls	Windows, typical 6/6 double-hung	1, 2	Serious	Rehabilitate	4.40
Walls	All exterior walls	Windows, fixed w/div.	1, 2	Serious	Rehabilitate	4.50
Walls	All exterior walls	Windows, picture (offices)	5	Serious	Replace to match historic	4.60
Walls	All exterior walls	Windows (display)	1, 2	Serious	Rehabilitate	4.70
Walls	All exterior walls	Exterior casings and trims (thru-out)	1, 2	Serious	Maintain; restore	4.80
Walls	Exterior	Cladding (shingle surfacing)	1, 2	Serious	Repair lower courses; re-hab remainder	4.85
Walls	Exterior	West porch columns	1, 2	Serious	Repair lower courses; re-hab remainder	4.90
Walls	Exterior	West porch railing	1, 2	Serious	Repair	4.91
Walls	Exterior	Rail at north door	2	Serious	Repair	4.92
Walls	Exterior	Ladders from 2nd floor windows	—	—	Retain as part of historical record	4.93
Walls	Exterior doors	Public corner door	1	Minor		5.10
Walls	Exterior doors	Public east door	1	Minor		5.20
Walls	Exterior doors	Public north door	1	Minor		5.30
Walls	Exterior doors	West side entrance	3	Minor		5.40
Walls	Exterior doors	West dining door	3	Minor		5.50
Walls	Exterior doors	West corridor door (SW corner)	3	Minor		5.60
Walls	Exterior doors	East kitchen door	3	Minor		5.70
Walls	Exterior doors	South staff door	3	Minor		5.80
Walls	Exterior doors	Access door into utility space	3	Minor		5.90
Walls	Exterior doors	2nd floor exterior stair door	3	Minor		5.95
Structure	Exterior	Window areaway, basement windows	3	Critical	Rehabilitate	6.10
Structure	Exterior	Front entrance steps (SE)	3	Minor	Rehabilitate	6.20

Materials Rating System: 1. Historic Material—Preserve (in place); 2. Historic Material—Preserve wherever possible; replace with in-kind; 3. Historic Material—Preserve wherever possible; replace with compatible; 4. Preserve where there is no reason for removal; 5. Remove/alter/replace (sensitivity); 6. Specified treatment not required.

Category	Location	Element	Rtg	Cond	Remarks	No.
Chimney	Exterior	Brick	2	Minor		6.30
Chimney	Exterior	Brick corbelled cap	2	Minor		6.40
Chimney	General	Flue liner	4	Minor		6.50
Rehabilitate Interior, Upgrade Utility Systems, ADA Accessibility						
Interior	General	Increase ceiling insulation	6	Serious		7.10
Interior	General	** Add vapor barrier to ceiling	—	—	** Evaluate—Replace celotex; retain woodwork	7.11
Interior	General	Add insulation to exterior walls	6	Serious	Evaluate alternative methods to accomplish	7.12
Interior	General	** Add vapor barrier to walls	—	—	** Evaluate—Replace celotex; retain woodwork	7.13
Interior	General	New wall finishes at exterior walls	4, 5	—	Replace celotex; retain woodwork	7.14
Interior	General	Sand & finish wood flooring throughout	3	Minor		7.20
Interior	General	Rehabilitate bathrooms	5	Serious		7.30
Interior	TBD	ADA bathroom	5	Serious		7.31
Interior	General	ADA access to building	5	Serious	Provide	7.40
Interior	General	Interior bedroom doors	2	Minor	Restore historic; replace introduced doors	7.50
Interior	General	Interior office doors	2	Minor	Restore historic; replace introduced doors	7.51
Interior	Vault	Vault door	1	Minor	Retain; restore	7.52
Interior	General	Interior utility doors	2	Minor	Restore historic; replace introduced doors	7.53
Interior	General	Casings and trims	2	Minor	Restore	7.54
Structure	Kitchen	Interior concrete slab—kitchen	4, 5	Minor	Retain if kitchen retained with continued use of facility	7.60
Structure	General	Attic and foundation ventilation	4, 5	Minor	Provide attic ventilation; restore foundation vents	7.64
Elec	General	Light fixtures	3	Minor	Appropriate period fixtures	7.67
Mech	General	Water supply	6	TBD		7.70
Mech	General	Waste and vent	6	TBD		7.71
Mech	General	HVAC—central	6	TBD		7.72
Mech	Retail space	HVAC—heater in retail only	6	TBD		7.73
Hardware	General	Doors and windows	3, 5	TBD		7.80

Priority Rating System: Critical—Requires immediate action to preserve essential historic features and materials experiencing advanced deterioration, or to assure the stability of the building, or to preclude a threat to health or safety; Serious—Materials or assemblies are approaching an advanced state of degradation, or will soon pose a threat to health or safety; Minor—Degradation is minimal and preventative maintenance has not been followed; life expectancy of the material is reduced.

Category	Location	Element	Rtg	Cond	Remarks	No.
Site Access						
Site		Curbs and curb cuts	4, 5	Serious		8.10
Site		Site—paths and walks	5	Serious	Include ADA walkways	8.11
Site		Drive-through	5	Serious		8.12
Site		Site landscaping—west lawn	4	Minor		8.20
Site		Site landscaping—north and east ground surface	5	Minor		8.21
Site		ADA parking space(s)	5	Minor	Designate	8.22
Site		ADA loading zone	5	Minor	Assign	8.23
Security						
		Security system	6	—	TBD	10.00

Materials Rating System: 1. Historic Material—Preserve (in place); 2. Historic Material—Preserve wherever possible; replace with in-kind; 3. Historic Material—Preserve wherever possible; replace with compatible; 4. Preserve where there is no reason for removal; 5. Remove/alter/replace (sensitively); 6. Specified treatment not required.

Part 3. Record of Treatment

This section intentionally left blank; to be completed when work is implemented at the Haynes Picture Shops Headquarters.

PRESERVATION TREATMENT AND RECOMMENDATIONS

I. Completion Report

II. Technical Data

Part 3. Record of Treatment

For a complete record of the patient's treatment, the physician should keep a record of the patient's condition, the treatment given, and the results of the treatment.

Information recorded in the record should include:

I. Chief Complaint

II. History of Present Illness

Appendices

Appendix A. Supplemental Historical Information

The following is excerpted from the nomination form to the National Register of Historic Places:

Location: Yellowstone National Park, Wyoming
Listed on: 3/20/2002

The Mammoth Hot Springs Historic District is significant as the administrative and concession headquarters of the largest national park in Wyoming. It is important for its historical association with the development of Yellowstone National Park and with the development of administrative and concession policies in Yellowstone and the national park system. The district's location, near one of the major natural curiosities in the park, the Mammoth Hot Springs Terraces, and at the juncture of the first entrance road to the park resulted in its selection as the site of the first administrative headquarters and the site of the first concessions in the first national park in the United States. The first hotels in Yellowstone were located at Mammoth Hot Springs, as well as the first retail store, photograph shop, and filling station, the successors of which still operate within the district. The army era in the national parks is also associated with the district, which includes Fort Yellowstone, the best-preserved post representing the early military efforts to protect the nation's natural resources. The district is also important for its association with the early history of the National Park Service, reflecting the influence of that agency on park development in areas such as preserving natural features and scenic resources, responding to the popularity of the automobile, creating museums and educational programs, and incorporating master plans in park design. The district is also associated with the history of New Deal era public works programs, having benefited from several projects which provided funding and manpower for improvements and new construction.

Mammoth Hot Springs is also significant for its architecture. Fort Yellowstone, within the district, reflects the layout and architecture of a typical western army fort of the late nineteenth century, and is remarkable for its level of integrity, the masonry displayed in its native sandstone buildings, and the substantial quality of its construction. The buildings of the military period are representative of the work of the United States Quartermaster Corps, Hiram Chittenden, and Reed and Stem. Buildings erected after the military era in the administrative area of the district are significant for their representation of the work of architects of the National Park Service, and the landscape of the district reflects the influence of the agency's master plans and the efforts of its landscape architects. Government buildings of the post-military era include fine representatives of French Renaissance and English Tudor style architecture. The concession area buildings are notable for their reflection of the evolution of park commercial architecture from the late nineteenth through the mid-twentieth centuries. Included within the district are concession buildings which are excellent representatives of Colonial Revival, Rustic, Prairie, and Art Moderne styles. The work of architects hired by concessioners, including Robert C. Reamer, Fred Wilson, and Douglas McLellan, is also represented in the district.

Appendix B. Accessibility Guidelines

Background (Excerpted from UFAS Unit 2—Regulatory Issues):

The four federal standard setting agencies (the General Services Administration, the Department of Defense, the Postal Service, and the Department of Housing and Urban Development) developed the Uniform Federal Accessibility Standards (UFAS) to be consistent with the Minimum Guidelines and Requirements for Accessible

Design (MGRAD). When introduced in 1984, UFAS was the most comprehensive standard and is still the mandatory standard for all buildings designed, constructed, altered, or leased with federal funds.

Cities, counties, or states develop their own building construction regulations, and most have added accessibility provisions by adopting in whole or in part the technical specifications of ANSI 117.1 (1980), (1986), UFAS, MGRAD, or those in one of the model codes. All states have some form of access standards.

If no federal money is used in the design, construction, or renovation of the facility the Architectural Barriers Act (1968) does not apply. However, if no federal money is used in the renovation of the facility, the provisions of the local building code must be complied with. Most states have adopted the latest edition of the International Building Code. The 2003 edition of IBC contains provisions for accessibility that are referenced from CABO/ANSI 117.1. In summary, the ADA requirements are very similar regardless of the source of funding.

Historic Structures

In regard to historic structures, UFAS provides the following guidance in Unit 2—Regulatory Issues:

The general approach to application of [A.D.A.] standards is to require a cooperative analysis of each renovation/alteration to a "qualified structure" (i.e., a property already listed or declared eligible for listing on the National Register of Historic Places) by interested parties, state and local advisory councils on historic preservation, and others to determine the extent and methods for compliance. The procedures for completing this analysis are described in Section 106 of the National Historic Preservation Act of 1966, as amended...

... The agency can use alternate means to create program access...

... Nevertheless (considering the procedure described above) those historic buildings covered by the Architectural Barriers Act must adhere to the provisions of UFAS when renovations are undertaken.

Under Minimum Requirements for Project Type, the UFAS standard continues:

*In the special case of historic buildings the requirements for providing access are detailed in Subsection 4.1.7 of UFAS, pages 13-14. ** The general approach to application of standards at historic sites is to require a cooperative analy-*

sis of each renovation/alteration to a "qualified structure" to determine the extent and methods for compliance. The procedures for completing this analysis are described in Section 106 of the National Historic Preservation Act of 1966, as amended, 16 United States Code 470 (including Executive Order 11593, Protection and Enhancement of the Cultural Environment); and "Protection of Historic and Cultural Properties", 36 CFR Part 800.

Each federal agency is responsible for taking into account the effect of an undertaking on any property included (or eligible for inclusion) in the National Register of Historic Places. As a general rule, an official from the federal agency will work with the State Historic Preservation Officer and other interested parties to identify potential conflicts and propose methods for resolving the conflicts during the early planning stages of the project. The goal of this initial planning is to determine what effects (either None, Not Adverse, or Adverse), the proposed undertaking will have on the property.

If it is determined that there will be some effect on the property, the Advisory Council on Historic Preservation reviews and comments on the proposed plans and either amends or accepts the plan. If it is determined that some adverse effect will occur, it is necessary to draw up a Memorandum of Agreement outlining how the effects will be taken into account. An understanding is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Only after the Council has determined that accessibility requirements for accessible routes, ramps, entrances, toilets, parking, displays, and signage have an adverse effect can the special application provisions of Subsection 4.1.7(2), page 14, be utilized. And even then, all requirements which do not have an adverse effect must be met.

*(** Applicable portions of pages 13 & 14 of Subsection 4.1.7 have been attached below for reference.)*

The preceding paragraphs apply only to federally funded projects; projects funded through state, local, or private sources must comply with CABO/ANSI 117.1

Both the federal standards and CABO/ANSI 117.1 have provisions for implementing alternative measures to compliance requirements. The ANSI wording regarding alternative measures is identical to the federal standard (UFAS); the difference is that a state or local preservation officer can apply the criteria and the involvement of

the president's Advisory Council is not required. The alternative measures requirements may be summarized as follows.

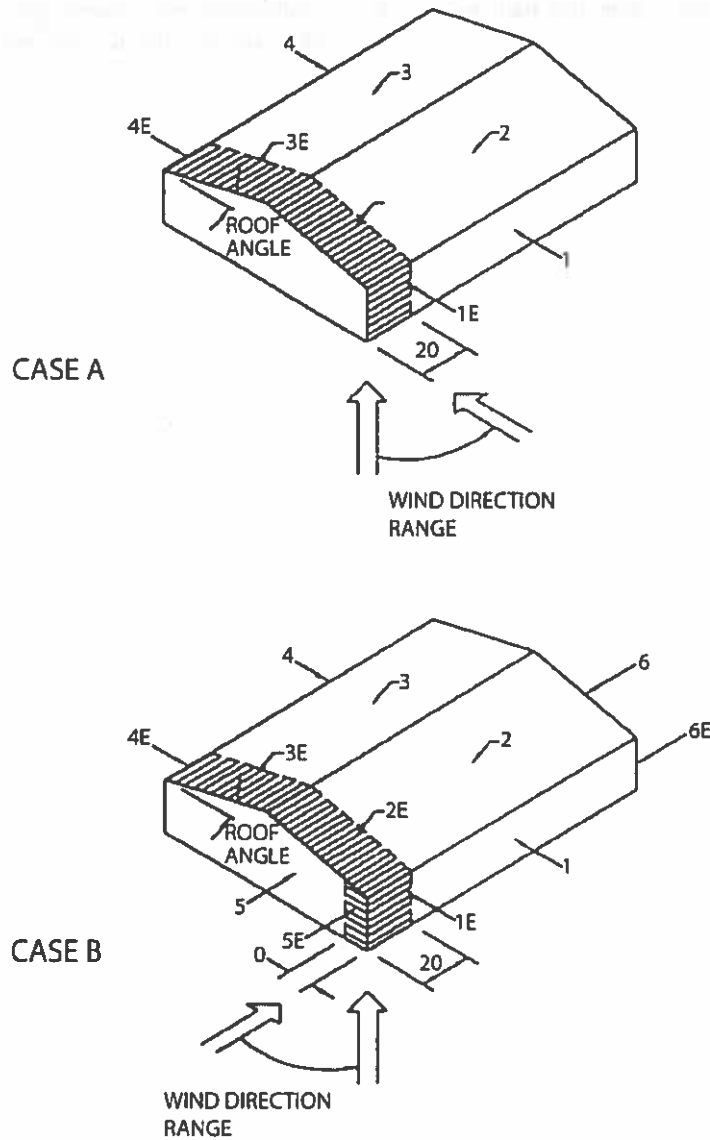
- Accessible routes: Can be limited to one for historic properties if multiple routes create adverse impacts.
- Accessible entrance: Only one accessible entrance is required to be provided and it does not have to be the primary public entrance.

- Accessible toilets: Only one accessible toilet is required within a facility if adverse effects are caused by providing multiple toilets; it can be of unisex design.

All publicly used spaces on an accessible floor of the facility must be accessible. Although having all floors accessible is strongly encouraged, this is not required if vertical access would cause adverse effects.

Appendix C. Structural Support Documentation

Applicable Wind Load Cases



Note to reviewer: These load cases are correlated to formulas and factors found in the ASCE manual, "Design Loads for Buildings and Other Structures," and referenced by the pertinent building codes that would be applied to the Haynes Picture Shops Headquarters. The load cases represent the wind direction from sidewalls and endwalls respectively.

Tabulation of Material Weights

MATERIAL WEIGHTS			
DESCRIPTION	UNIT	WT	SOURCE
FLOOR ASSEMBLY			
WD FINISH FLOOR	SF	2.0	
WOOD SUB - FLOOR	SF	2.0	
FLOOR FINISH	SF	2.0	
STRUCTURE - 2x10 @ 16" C/C	SF	2.5	
CEILING (ALLOW 5/8" GPDW)	SF	2.8	
SUB-TOTAL	SF	11.3	
INTERIOR WALL ASSEMBLY			
NEAR SIDE FINISH (ALLOW 5/8" GPDW)	SF	2.8	
FAR SIDE FINISH (ALLOW 5/8" GPDW)	SF	2.8	
FRAMING (2x4 @ 16" C/C)	SF	1.0	
ALLOWANCE (M/E; SOUND ATT, ETC.)	SF	1.2	
SUB-TOTAL	SF	7.8	
EXTERIOR WALL ASSEMBLY			
NEAR SIDE FINISH (ALLOW 5/8" GPDW)	SF	2.8	
FAR SIDE FINISH (3/4" SHEATHING)	SF	2.0	
FAR SIDE FINISH (WD SHINGLE; PAPER)	SF	2.0	
FRAMING (2x4 @ 16" C/C)	SF	1.0	
ALLOWANCE (M/E; SOUND ATT, ETC.)	SF	1.2	
SUB-TOTAL	SF	9.0	
ROOF ASSEMBLY			
ROOF SURFACING & PAPER	SF	2.8	
ROOF SHEATHING	SF	2.0	
FRAMING (USING 2x8 @ 16 AVE.)	SF	2.0	
CEILING JOISTS (2x6 @ 16)	SF	1.0	
CEILING - (ALLOW 5/8" GPDW)	SF	1.2	
ALLOWANCE (M/E; INSUL, ETC.)	SF	2.2	
SUB-TOTAL	SF	11.2	

Seismic Weight of Structure

QUANTITIES / WEIGHTS			
DESCRIPTION	UNIT	AMOUNT	WEIGHTS
UPPER ROOF AREA (HORIZ PROJ)(x 1.2 SLOPE)	SF	6584	73741
EXTERIOR 2ND FL WALL	LF	348	22958
INTERIOR 2ND FL WALL	LF	618	35430
SECOND FLOOR AREA	SF	3701	41821
LOWER ROOF AREA (HORIZ PROJ)(x 1.2 SLOPE)	SF	2200	24640
EXTERIOR 1ST FL WALL	LF	386	33594
INTERIOR 1ST FL WALL	LF	649	48951
VAULT			
CEILING	SF	103	7725
WALLS	LF	36	34812
BRICK CHIMNEY (USE 80 PCF ALLOWANCE)	CF	320	25600
BASEMENT			
CEILING STRUCTURE	SF	717	8102
8" CONC WALLS	LF	110	88000
SCT WALLS	LF	21	6720

TOTAL = 452094

Appendix D. Analysis of Ground Temperatures

Introduction

On January 16, 2008, Yellowstone National Park geologists Hank Heasler and Cheryl Jaworowski investigated ground temperatures beneath the Haynes Picture Shops Headquarters, also known as the Nature Store, to determine whether geothermal heat and fluids were affecting the ground floor.

Methodology

Ground temperatures were measured using two instruments. A FLIR ThermoCAM 640C was used to thermally image the ground surface. The FLIR temperatures were confirmed using an Oakton Thermocouple Thermometer with a type K probe. The temperatures measured by the Oakton probe and the FLIR were within one degree Celsius of each other.

Results

A FLIR temperature scan of the ground floor indicated no thermal anomalies. Two areas of concern were

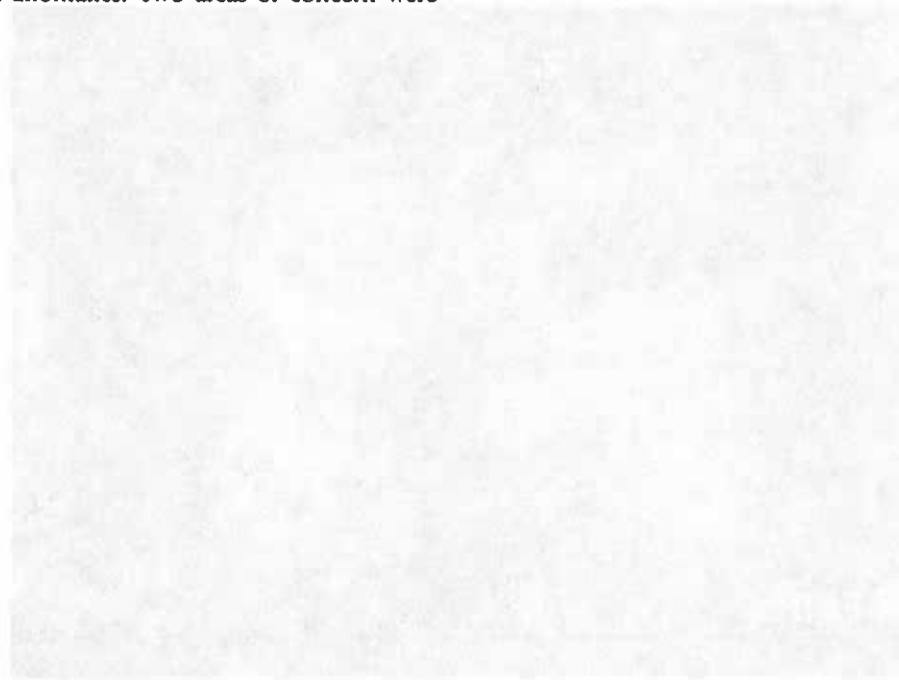
exposed to allow the direct measurement of ground temperatures. A hole was cut in the floor near the main northeast door of the Haynes headquarters. The visible image of the hole is shown in Figure 1 and the thermal infrared image of the hole in Figure 2. Note in Figure 2 the relatively warm area (red to white colors) is -6°C (21°F).

In the southwest corner of the main ground floor eastern room, an access panel was removed to expose the ground (Figure 3). Note that the temperatures of the ground exposed through the access hole are cold (Figure 4, -3.6°C (26°F)).

Conclusions

The thermal scan and measurement of ground temperatures of the Haynes headquarters indicate no geothermal heat or fluid at the time of measurement.

Photos and figures are found on pages 140–141.



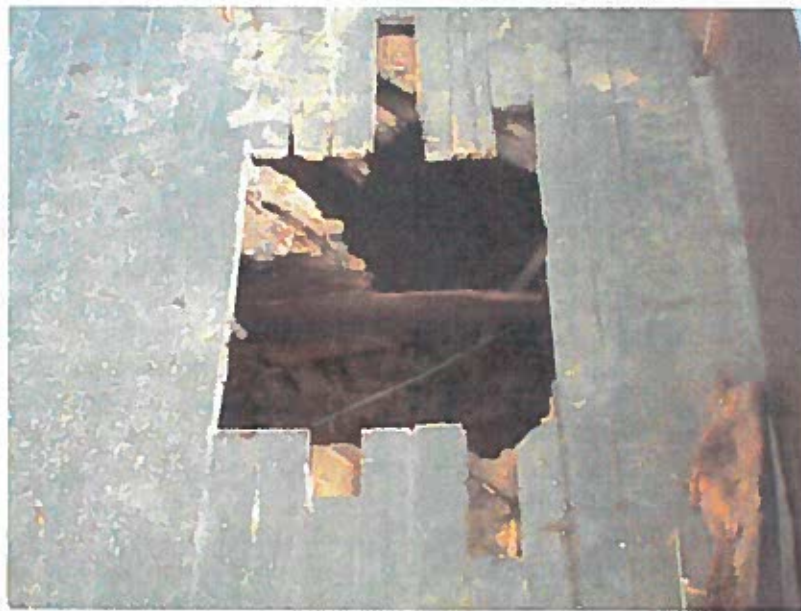


Figure 1. A hole had been cut in the floor near the main northeast door of the Nature Store. Notice the door base on the right (north) of the photo. View to the west taken January 16, 2008, 10:31 am MDT.

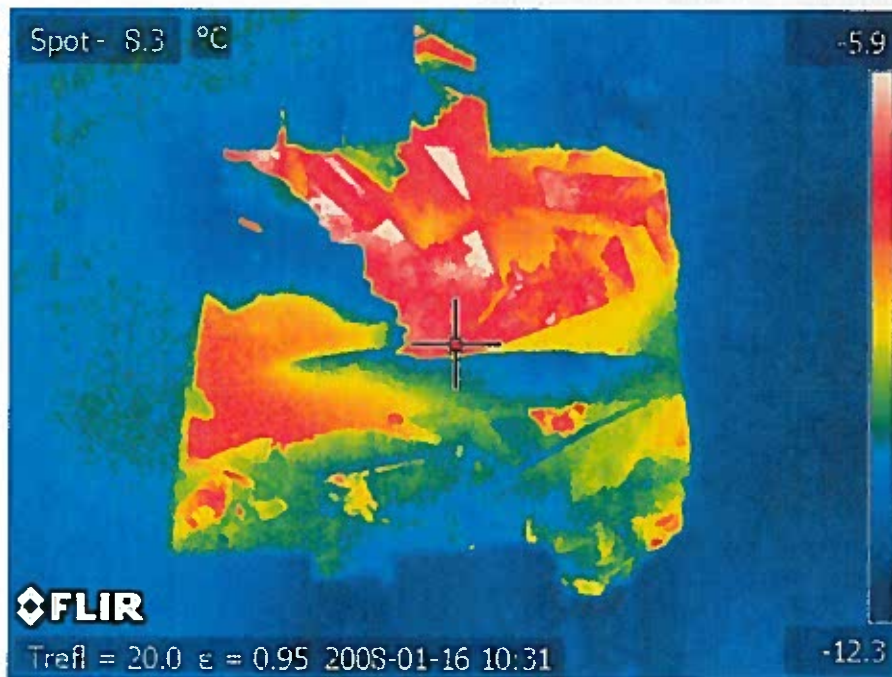


Figure 2. Thermal image of floor and ground temperatures near the main northeast door of the Nature Store (see Figure 1). Blue colors represent cooler temperatures; red and white indicate relatively warmer temperatures. The maximum temperature in the image is cold (-6°C (21°F)). View to the west taken January 16, 2008, 10:31 am MDT.



Figure 3. View of an access panel in the southwest corner of the main ground floor eastern room. The access area is about 0.5 meters (1.5 feet) in length by 0.3 meters (1 foot) in width. View to the west taken January 16, 2008, 10:11 am MDT.

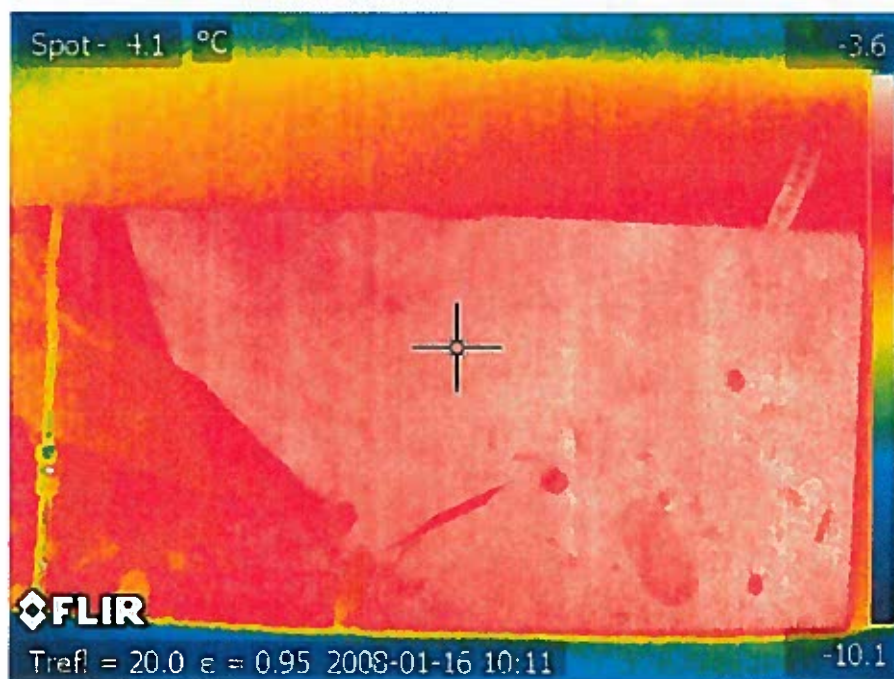
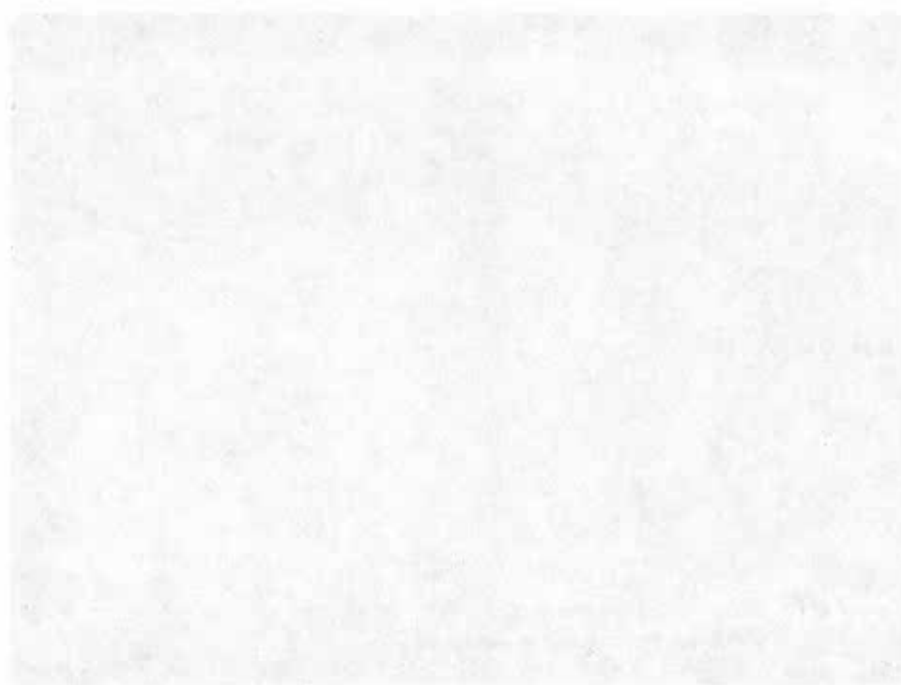
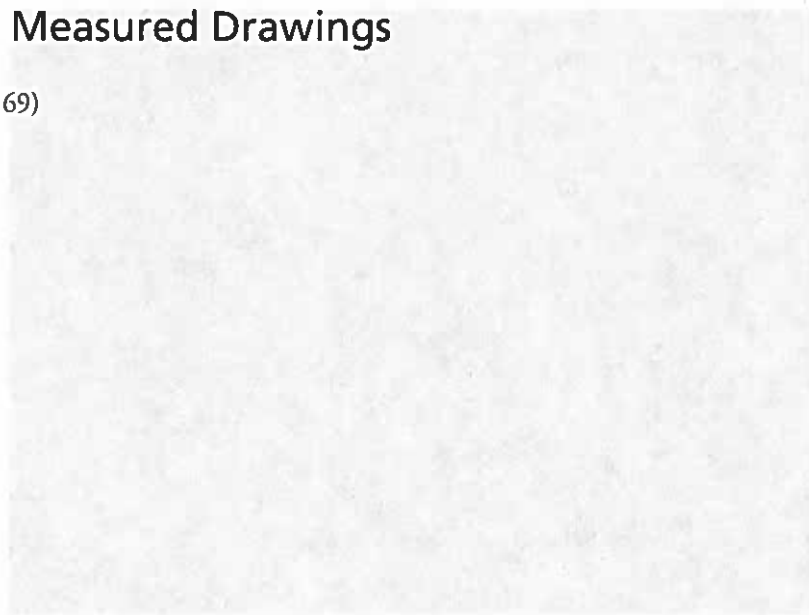


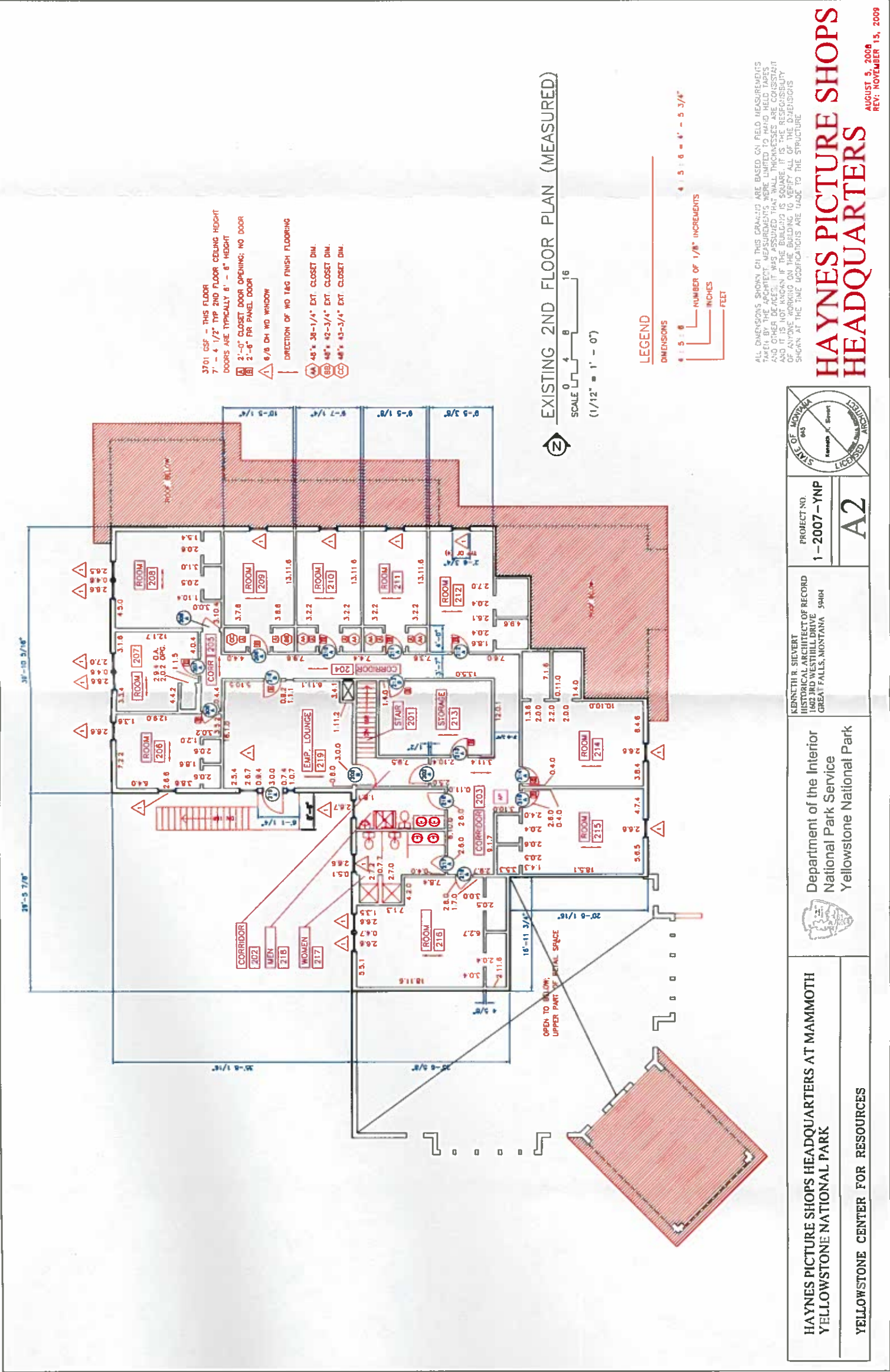
Figure 4. Thermal image of floor and ground temperatures near the access panel in the southwest corner of the main ground floor eastern room (see Figure 3). The access area is about 0.5 meters (1.5 feet) in length by 0.3 meters (1 foot) in width. Blue colors represent cooler temperatures; red and white indicate relatively warmer temperatures. The maximum temperature in the image is cold (-3.6 °C (26 °F)). View to the west taken January 16, 2008, 10:11 am MDT.

Appendix E. Measured Drawings

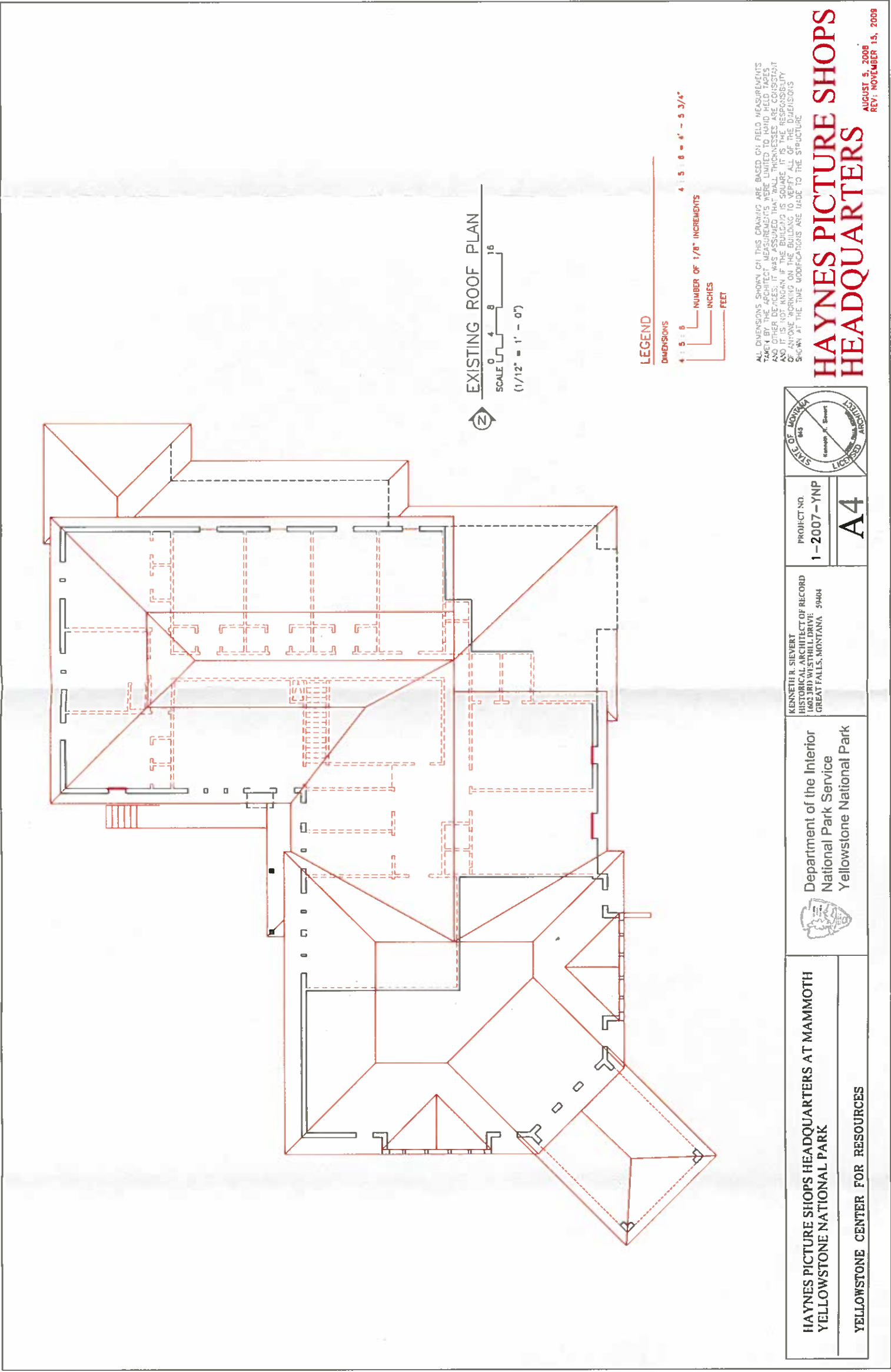
(See pages 143–169)

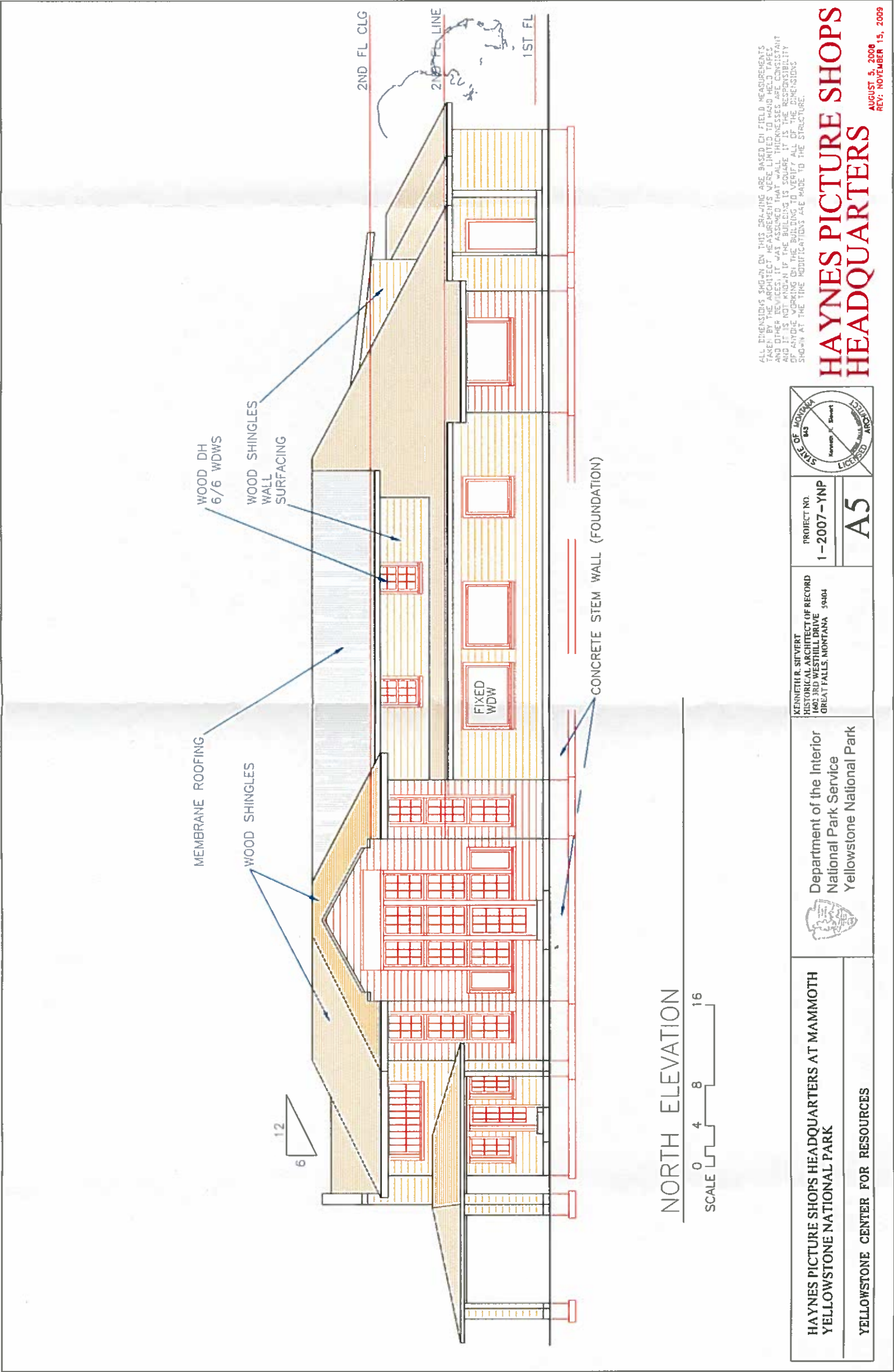


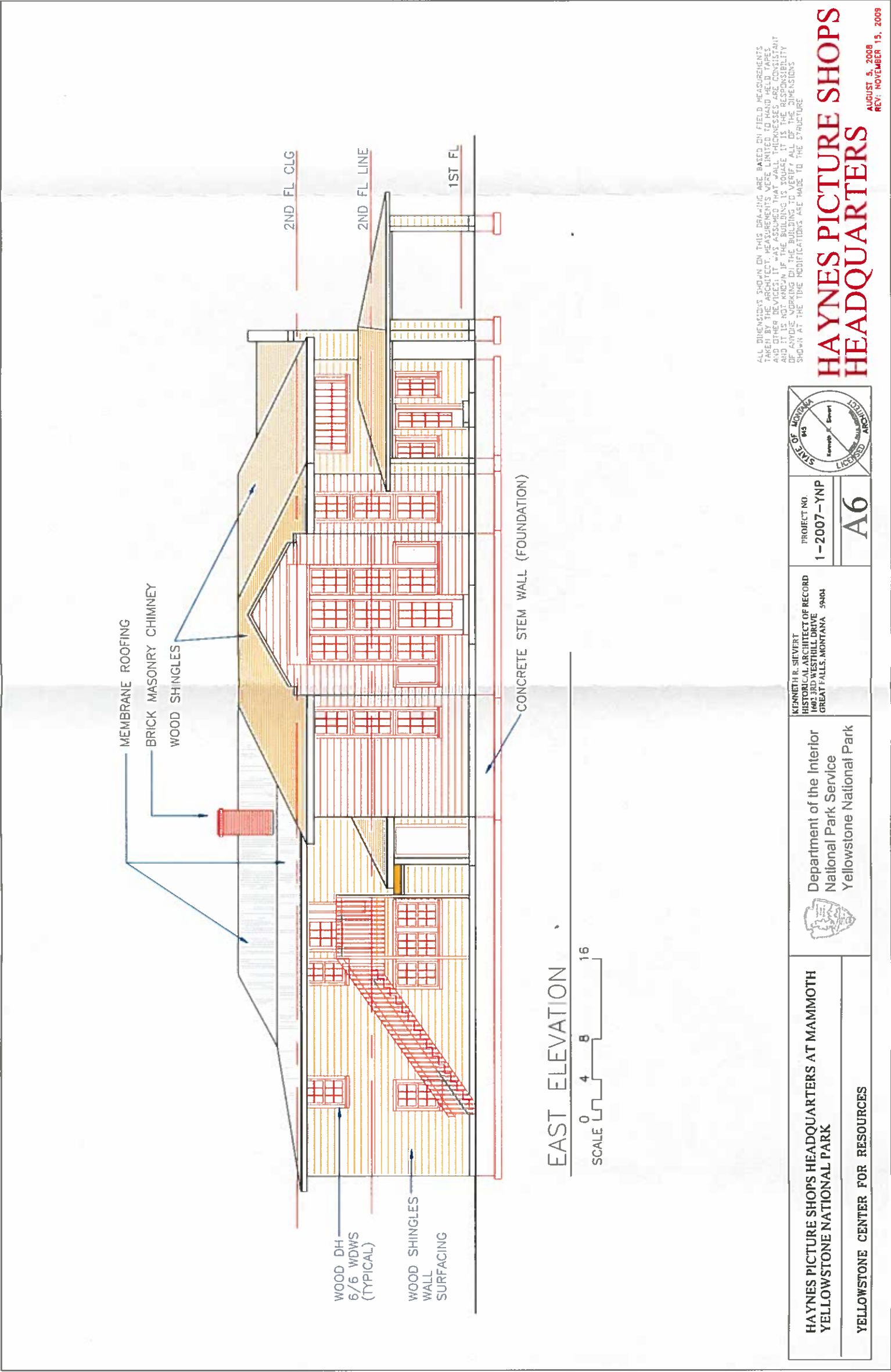








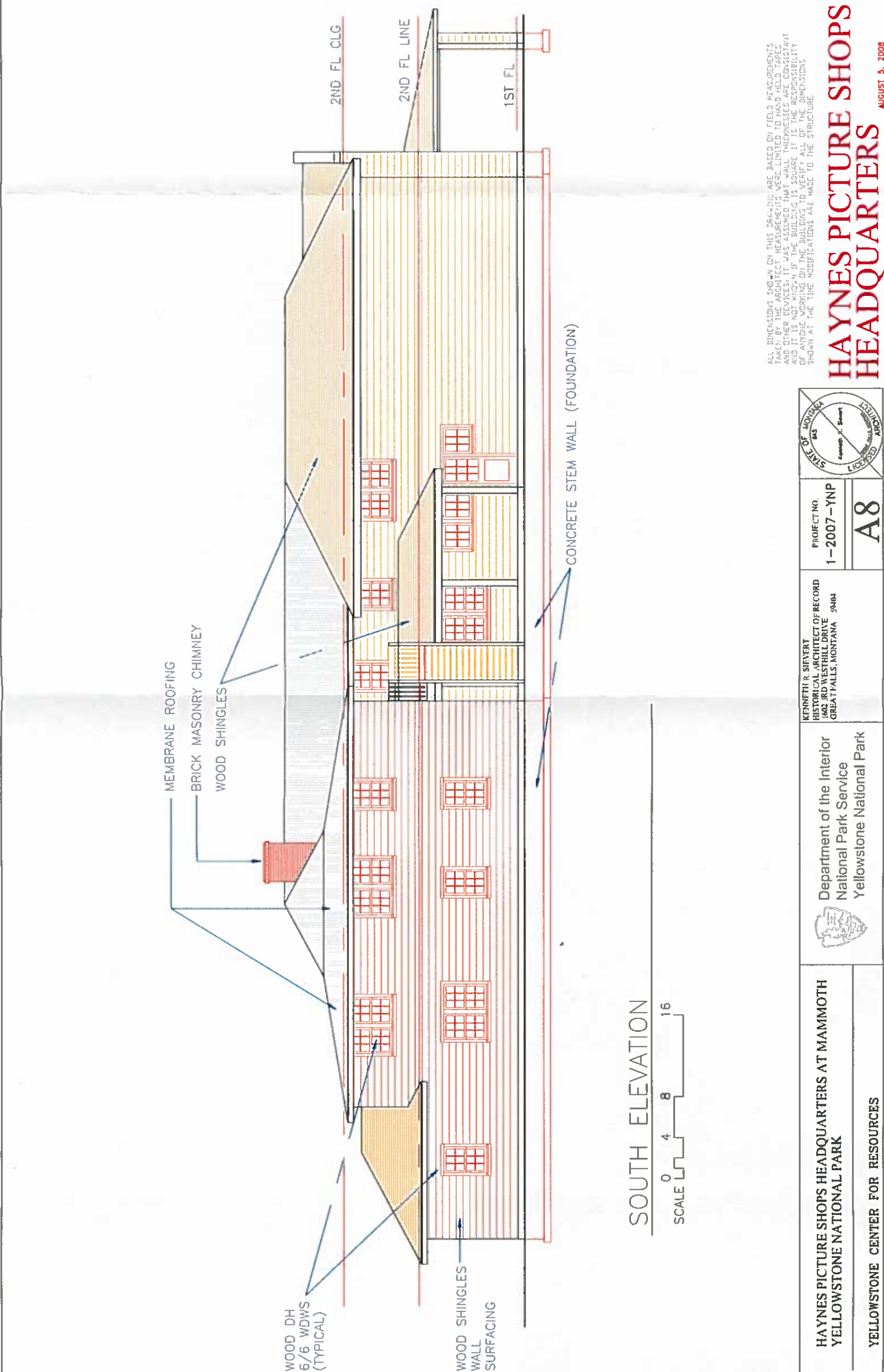






AUGUST 5, 2008
REV: NOVEMBER 15, 2009

Appendices 153



ALL DIMENSIONS SHOWN ON THIS DRAWING ARE BASED ON FIELD MEASUREMENTS TAKEN BY THE ARCHITECT. MEASUREMENTS WERE LIMITED TO HAND HELD TAPES AND OTHER DEVICES. IT WAS ASSUMED THAT WALL THICKNESSES ARE CONSISTANT AND IT IS NOT KNOWN IF THE BUILDING IS SQUARE. IT IS THE RESPONSIBILITY OF ANYONE WORKING ON THE BUILDING TO VERIFY ALL OF THE DIMENSIONS SHOWN AT THE TIME MODIFICATIONS ARE MADE TO THE STRUCTURE.

HAYNES PICTURE SHOPS HEADQUARTERS

AUGUST 3, 2008
REV: NOVEMBER 15, 2009



PROJECT NO.
1-2007-YNP

A8

KENNETH R. SIVERT
HISTORICAL ARCHITECT OF RECORD
1602 3RD WESTHILL DRIVE
GREAT FALLS, MONTANA 59404

Department of the Interior
National Park Service
Yellowstone National Park

HAYNES PICTURE SHOPS HEADQUARTERS AT MAMMOTH
YELLOWSTONE NATIONAL PARK

YELLOWSTONE CENTER FOR RESOURCES

ROOM FINISH SCHEDULE

NO.	ROOM NAME	FLOOR		BASE		WALLS		EAST		SOUTH		WEST		CEILING		REMARKS
		SUBSTR.	FINISH	RATE	COND.	WALL	COND.	WNSCT	RATE	COND.	WALL	WNSCT	RATE	COND.	HEIGHT	
101	RETAIL SPACE	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX	16.3.0	SOME FLOOR DETERIORATION
102	CORRIDOR	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		
103	CORRIDOR	WD	T&G		1x8	CTX		CTX	N		CTX	N		CTX		
104	CORRIDOR	WD	T&G		1x8	CTX		CTX	N		CTX	N		CTX		
105	SIDE ENTRANCE	WD	T&G		1x8	CTX		CTX	N		CTX	N		GPDW		BATTENS ON GPDW CEILING
106	UNISEX TOILET	WD	T&G		QR	CTX		CTX	BW		CTX	BW		CTX		
107	TELECOMM	WD	SV		QR	GPDW		GPDW	N		GPDW	N		CTX		
108	DARKROOM	WD	T&G		QR	CTX		PWD	N		CTX	N		CTX		
109	STORAGE	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		
110	WORK ROOM	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		
111	OFFICE (CASHIER)	WD	CPT		B1	CTX		CTX	N		CTX	N		CTX		
112	OFFICE (COUNT RM)	WD	CPT		B1	CTX		CTX	N		CTX	N		CTX		
113	OFFICE (PURSER)	WD	CPT		B1	CTX		CTX	N		CTX	N		CTX		
114	J. E. H. OFFICE	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		
115	WORK ROOM	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		
116	VAULT	CONC	CONC		N	PL		PL	N		PL	N		PL		
117	SIDE ENTRY	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		
118	PERSONNEL	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		
119	PASSAGE	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		
120	TELECOMM	WD	T&G			CTX		CTX	N		CTX	N		CTX		WD TREADS & RISERS
121	STAIR	**	**		**	GPDW		GPDW	N		GPDW	N		GPDW		
122	KITCHEN	WD/CONC	SV		QR	BW		BW	N		BW	N		CTX		
123	DINING	WD	SV/CPT		B1	CTX		CTX	N		CTX	N		CTX		
124	CORRIDOR	WD	T&G		QR/B1	FB/CTX		FB/CTX	N		FB/CTX	N		CTX		
125	APT / GUEST RM	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		
126	BATHROOM	WD	TILE		B1	CTX		CTX	N		CTX	N		CTX		
127	APT / GUEST RM	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		
128	APT / GUEST RM	WD	T&G		B1	CTX		CTX	N		CTX	N		CTX		

ACT	ACQUISITIONAL TILE	CTH	HEXAGONAL CERAMIC TILE	MFB	MINERAL FIBER BOARD	R4	4" RUBBER BASE	RATINGS	HISTORIC MATERIAL	PRESERVE IN PLACE	CONDITION	1	CRITICAL	IMM.	ACTION	RECO
AF	ACQUISITIONAL WALL COVERING	CTX	CELOTEX	MAS	MASONITE	R6	6" RUBBER BASE	1	HISTORIC MATERIAL	PRESERVE WHEREVER POSSIBLE; REPLACE WITH IN-KIND	2	2	SERIOUS	ACTION	PENDING	
B	BRICK	FB	FIBERBOARD	N	NONE	SV	RESILIENT FLOORING	3	HISTORIC MATERIAL	PRESERVE WHEREVER POSSIBLE; REPLACE WITH COMPATIBLE	3	3	MINOR	MAINTENANCE	RECO	
B1	1x8 W/ QTR RND	GM	GLASS BLOCK MASONRY	PL	PLASTER	SYC	COVED RESILIENT FLOORING	4	PRESERVE WHERE THERE IS NO REASON FOR REMOVAL	5	5	5	NO ACTION	REQUIRED		
BG	GLAZED BRICK	GP	GYPSUM WALLBOARD	PLB	PLASTER OVER PLASTER BOARD	VT-8	8 x 8 VINYL TILE	6	REMOVE / ALTER / REPLACE (SENSITIVELY)	6	6	6	NO ACTION	REQUIRED		
BW	BEAD PATTERN FINISH WOOD	GPF	FURRED GYPSUM WALLBOARD	PR-MT	PRESSED METAL	VT-12	12 x 12 VINYL TILE									
C	CONCRETE	IL	INLAND UNCLEM	PT	PANT	VWC	VINYL WALL COVERING									
C-PT	PAINTED CONCRETE	KC	KEENE'S CEMENT	QR	QUARTER ROUND	WD	WOOD									
CHU	CONCRETE MASONRY UNIT	LIC	LAY IN CEILING (2' x 4')	QT-1	QUARRY TILE											
CPT	CARPET	LIC-2	LAY IN CEILING (2' x 2')													
CT	CERAMIC TILE	MBL	MARBLE													

ALL DIMENSIONS SHOWN ON THIS DRAWING ARE BASED ON FIELD MEASUREMENTS TAKEN BY THE ARCHITECT. MEASUREMENTS WERE LIMITED TO 1/2" ROUNDED UP. NO ADJUSTMENTS WERE MADE FOR MATERIALS OR FINISHES. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS. IF ANYONE WORKING ON THE BUILDING TO VERIFY ALL OF THE DIMENSIONS SHOWN AT THE TIME MODIFICATIONS ARE MADE TO THE STRUCTURE.

HAYNES PICTURE SHOPS HEADQUARTERS

AUGUST 3, 2008
REV: NOVEMBER 13, 2009



KENNETH R. SHYRT
1403 1/2 WEST 10TH AVENUE
GREAT FALLS, MONTANA 59404



Department of the Interior
National Park Service
Yellowstone National Park

HAYNES PICTURE SHOPS HEADQUARTERS AT MAMMOTH
YELLOWSTONE NATIONAL PARK

YELLOWSTONE CENTER FOR RESOURCES

PROJECT NO
1-2007-YNP

A9

NO.	ROOM NAME	FLOOR			BASE			WALLS				EAST				SOUTH				WEST				CEILING		REMARKS			
		SUBSTR.	FINISH	RATE	COND	MTL	RATE	COND	WALL	WNSCT	RATE	COND	WALL	WNSCT	RATE	COND	WALL	WNSCT	RATE	COND	WALL	WNSCT	RATE	COND	MATERIAL		HEIGHT	RATE	COND
201	STAIR	**	**			**			GPDW	N			GPDW	N			GPDW	N			GPDW	N			GPDW				
202	CORRIDOR	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
203	CORRIDOR	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
204	CORRIDOR	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
205	CORRIDOR	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
206	APT/GUEST RM	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
207	APT/GUEST RM	WD	SV			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
208	APT/GUEST RM	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
209	APT/GUEST RM	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
210	APT/GUEST RM	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
211	APT/GUEST RM	WD	CPT			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
212	APT/GUEST RM	WD	CPT			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
213	STORAGE	WD	CPT			N			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
214	APT/GUEST RM	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
215	APT/GUEST RM	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
216	APT/GUEST RM	CONC	CONC			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
217	WOMEN	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
218	MEN	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
219	EMPLOYEE LOUNGE	WD	T&G			B1			CTX	N			CTX	N			CTX	N			CTX	N			CTX				
B1	BASEMENT	CONC	N			N			CONC	N			CONC	N			CONC	N			CONC	N			EXP. STR.			SCT ENCLOSURE W/ WD FLR AT EAST WALL	

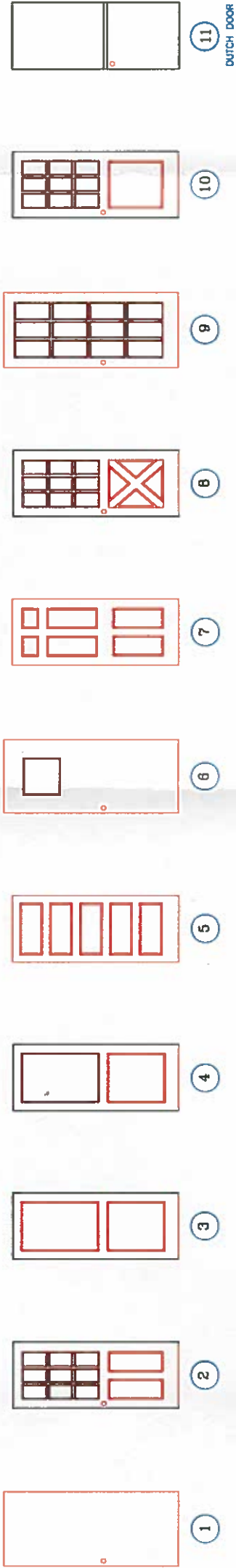
ACT ACoustICAL TILE AF ACoustICAL WALL COVERING B BRICK B1 1/8" G/FR RND B2 WAZED BRICK B3 BEAD PATTERN FINISH WOOD C CONCRETE C-PT PAINTED CONCRETE CMU CONCRETE MASONRY UNIT CPT CARPET CT CERAMIC TILE										CTH HEXAGONAL CERAMIC TILE CTX CELOTEX FB FIBERBOARD GM GLASS BLOCK MASONRY GP GYPSUM WALLBOARD GPF FURRED GYPSUM WALLBOARD IL INLAND UNIOLEUM KC KEENE'S CEMENT LC LAY IN CEILING (2' x 4') LIC-2 LAY IN CEILING (2' x 2') MLB MARBLE										Department of the Interior National Park Service Yellowstone National Park										PROJECT NO 1-2007-YNP										STATE OF MONTANA 1943 Landscape Architect LICENSED										DATE: 11/15/07										CONDITION 1 CRITICAL: IMM ACTION REQD 2 SERIOUS: ACTION PENDING 3 MINOR: MAINTENANCE REQD 4 NO ACTION REQUIRED									
ACT ACoustICAL TILE AF ACoustICAL WALL COVERING B BRICK B1 1/8" G/FR RND B2 WAZED BRICK B3 BEAD PATTERN FINISH WOOD C CONCRETE C-PT PAINTED CONCRETE CMU CONCRETE MASONRY UNIT CPT CARPET CT CERAMIC TILE										CTH HEXAGONAL CERAMIC TILE CTX CELOTEX FB FIBERBOARD GM GLASS BLOCK MASONRY GP GYPSUM WALLBOARD GPF FURRED GYPSUM WALLBOARD IL INLAND UNIOLEUM KC KEENE'S CEMENT LC LAY IN CEILING (2' x 4') LIC-2 LAY IN CEILING (2' x 2') MLB MARBLE										Department of the Interior National Park Service Yellowstone National Park										PROJECT NO 1-2007-YNP										STATE OF MONTANA 1943 Landscape Architect LICENSED										DATE: 11/15/07										CONDITION 1 CRITICAL: IMM ACTION REQD 2 SERIOUS: ACTION PENDING 3 MINOR: MAINTENANCE REQD 4 NO ACTION REQUIRED									
ACT ACoustICAL TILE AF ACoustICAL WALL COVERING B BRICK B1 1/8" G/FR RND B2 WAZED BRICK B3 BEAD PATTERN FINISH WOOD C CONCRETE C-PT PAINTED CONCRETE CMU CONCRETE MASONRY UNIT CPT CARPET CT CERAMIC TILE										CTH HEXAGONAL CERAMIC TILE CTX CELOTEX FB FIBERBOARD GM GLASS BLOCK MASONRY GP GYPSUM WALLBOARD GPF FURRED GYPSUM WALLBOARD IL INLAND UNIOLEUM KC KEENE'S CEMENT LC LAY IN CEILING (2' x 4') LIC-2 LAY IN CEILING (2' x 2') MLB MARBLE										Department of the Interior National Park Service Yellowstone National Park										PROJECT NO 1-2007-YNP										STATE OF MONTANA 1943 Landscape Architect LICENSED										DATE: 11/15/07										CONDITION 1 CRITICAL: IMM ACTION REQD 2 SERIOUS: ACTION PENDING 3 MINOR: MAINTENANCE REQD 4 NO ACTION REQUIRED									

DOOR SCHEDULE

DOOR SCHEDULE

DOOR NO.	DOOR					CASING / TRIM		REMARKS			
	NO. SGL/PR	SIZE			HAND	MAT	TYPE		FIRE RATE	EXT. SIDE	INT. SIDE
		W	H	T							
101A	SGL	3'-0"			LHR	WD	9		1x4	1x4	
101B	SGL	3'-0"			LHR	WD	9		1x4	1x4	
101C	SGL	3'-0"			LHR	WD	9		1x4	1x4	
102A	SGL	3'-0"			RHR	WD	7		1x4	1x4	DOOR REMOVED; STORED ON SITE
103A	SGL	3'-0"			RH	WD	7		1x4	1x4	
103B	SGL										
104A	N	(2'-8")							1x4	1x4	DOOR MISSING
104B	SGL	3'-0"			RHR	WD	5		1x4	1x4	
105A	SGL	3'-0"			RHR	WD	8		1x4	1x4	
106A	SGL	2'-8"			LHR	WD	3		1x4	1x4	
107A	SGL	2'-8"			RHR	WD	10		1x4	1x4	
108A	SGL	2'-0"			RHR	WD	5		1x4	1x4	
111A	SGL	3'-0"			RHR	WD	10		1x4	1x4	
112A	SGL	3'-0"			RHR	WD	10		1x4	1x4	
113A	SGL	2'-8"			LHR	WD	7		1x4	1x4	
114A	SGL	3'-0"			LHR	WD	**	CLASS	1x4	1x4	DUTCH DOOR (SLAB)
116A	SGL	2'-8"			LH	VAULT	**		1x4	1x4	VAULT DOOR
117A	SGL	2'-8"			LHR	WD	2		1x4	1x4	
117B	SGL	3'-0"			LHR	WD	7		1x4	1x4	
118A	-	(3'-0")			RHR				1x4	1x4	DOOR MISSING
118B	-	(3'-0")			LHR				1x4	1x4	DOOR MISSING
119B	SGL	3'-0"			LHR	WD	1		1x4	1x4	SEE PLAN (CLOSET)
120A	SGL	3'-0"			LHR	WD	5		1x4	1x4	
120B	SGL	2'-7 1/2"			**	WD	2		1x4	1x4	
121A	SGL	2'-8"			LHR	WD	8		1x4	1x4	
122A	SGL	2'-8"			RHR	WD	2		1x4	1x4	
123A	SGL	2'-8"			LHR	WD	2		1x4	1x4	
123B	SGL	2'-8"			LHR	WD	1		1x4	1x4	
124A	SGL	2'-8"			LHR	WD	2		1x4	1x4	
125A	SGL	2'-8"			RHR	WD	3		1x4	1x4	
125B	SGL	2'-8"			LH	WD	3		1x4	1x4	
126A	SGL	2'-8"			LHR	WD	3		1x4	1x4	DOOR MISSING
127A	-	(2'-8")			LHR				1x4	1x4	DOOR MISSING
128A	-	(2'-8")			RHR				1x4	1x4	DOOR MISSING
128A	SGL					WD	3		1x4	1x4	

DOOR NO.	DOOR						CASING / TRIM		REMARKS	
	NO. SGL/PR.	SIZE			HAND	MAT	TYPE	FIRE RATE		EXT. SIDE
		W	H	T						
202A	SGL	3'-0"			RHR	WD	1		1x4	1x4
202B	SGL	3'-0"			LHR	WD	1		1x4	1x4
206A	SGL	2'-6"			RHR	WD	3		1x4	1x4
207A	SGL	2'-6"			LHR	WD	4		1x4	1x4
208A	SGL	2'-6"			LHR	WD	3		1x4	1x4
209A	SGL	2'-6"			RHR	WD	3		1x4	1x4
210A	SGL	2'-6"			RHR	WD	3		1x4	1x4
211A	SGL	2'-6"			RHR	WD	4		1x4	1x4
212A	SGL	2'-6"			RHR	WD	4		1x4	1x4
213A	SGL	2'-6"			LHR	WD	3		1x4	1x4
213B	SGL	2'-6"			LHR	WD	3		1x4	1x4
214A	SGL	2'-6"			LHR	WD	3		1x4	1x4
215A	SGL	2'-6"			RHR	WD	3		1x4	1x4
216A	SGL	2'-6"			RHR	WD	4		1x4	1x4
217A	SGL	2'-6"			RHR	WD	3		1x4	1x4
218A	SGL	3'-0"			LHR	WD	3		1x4	1x4
219A	SGL	3'-0"			LH	WD	2		1x4	1x4
219B	SGL	2'-6"			LHR	WD	1		1x4	1x4



DOOR TYPES
NO SCALE

NOTE: VAULT DOOR NOT SHOWN

ALL DIMENSIONS SHOWN ON THIS DRAWING ARE BASED ON FIELD MEASUREMENTS TAKEN BY THE ARCHITECT. MEASUREMENTS WERE LIMITED TO HAND HELD TAPES AND WERE NOT VERIFIED BY A SURVEYOR. THE ARCHITECT ASSUMES NO LIABILITY AND IT IS NOT WARRANTED IF THE BUILDING IS SQUARE. IT IS THE RESPONSIBILITY OF ANYONE WORKING ON THE BUILDING TO VERIFY ALL OF THE DIMENSIONS SHOWN AT THE TIME MODIFICATIONS ARE MADE TO THE STRUCTURE.



Department of the Interior
National Park Service
Yellowstone National Park

HAYNES PICTURE SHOPS HEADQUARTERS AT MAMMOTH
YELLOWSTONE NATIONAL PARK

YELLOWSTONE CENTER FOR RESOURCES

KENNETH R. SEVERT
HISTORICAL ARCHITECT OF RECORD
1802 W. WESTHILL DRIVE
GREAT FALLS, MONTANA 59404

PROJECT NO.
1-2007-YNP



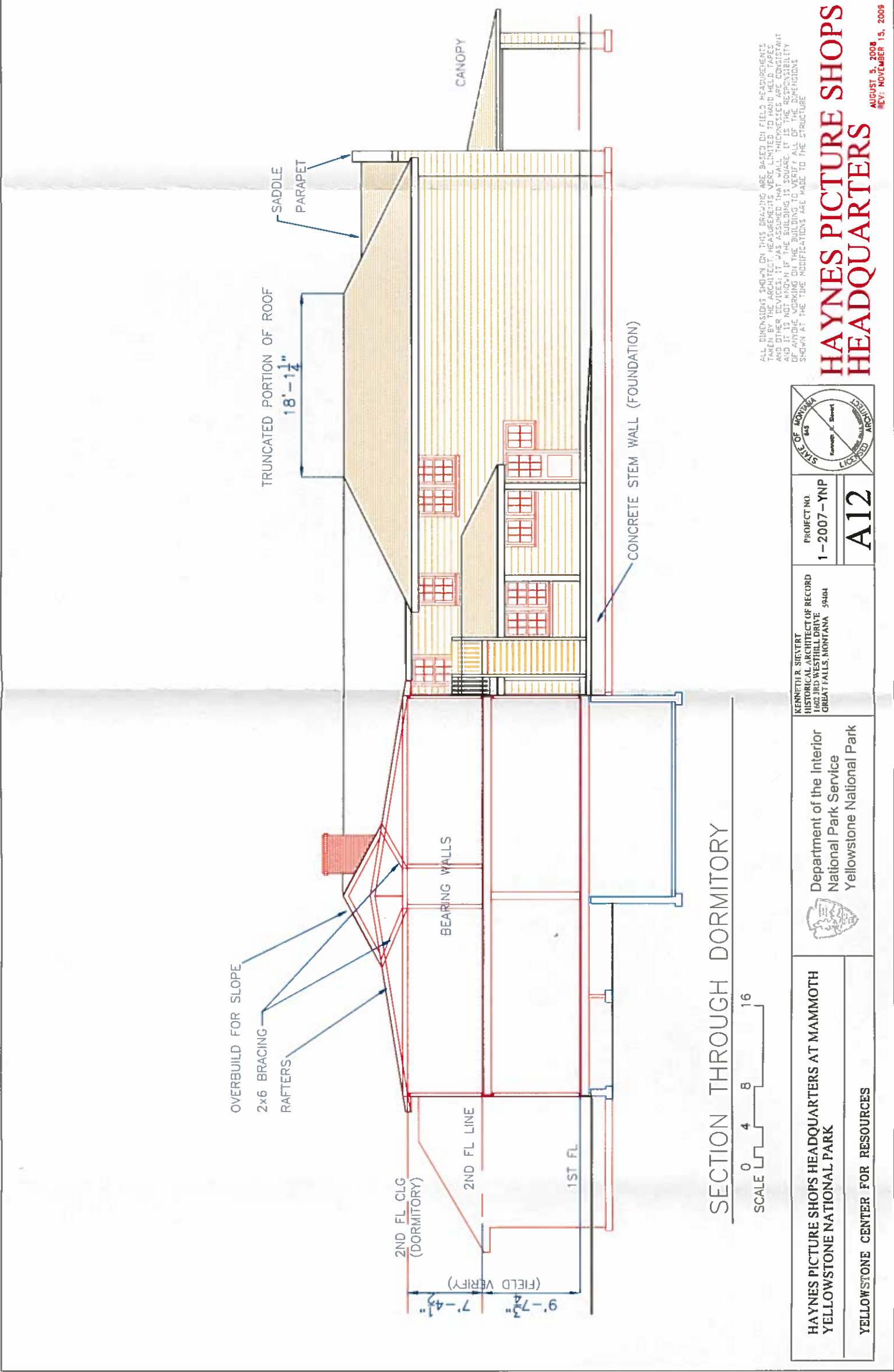
1-2007-YNP

A11

HAYNES PICTURE SHOPS
HEADQUARTERS

AUGUST 5, 2008
REV: NOVEMBER 15, 2009

Appendices 161



ALL DIMENSIONS SHOWN ON THIS DRAWING ARE BASED ON FIELD MEASUREMENTS TAKEN BY THE ARCHITECT. MEASUREMENTS WERE LIMITED TO HAND HELD TAPES AND OTHER DEVICES. IT WAS ASSUMED THAT WALL THICKNESSES ARE CONSISTANT AND IT IS NOT KNOWN IF THE BUILDING IS SQUARE. IT IS THE RESPONSIBILITY OF ANYONE WORKING ON THE BUILDING TO VERIFY ALL OF THE DIMENSIONS SHOWN AT THE TIME MODIFICATIONS ARE MADE TO THE STRUCTURE.

HAYNES PICTURE SHOPS HEADQUARTERS

AUGUST 5, 2008
REV: NOVEMBER 15, 2009



PROJECT NO.
1-2007 - YNP
A12

KENNETH R. SIEVERT
HISTORICAL ARCHITECT OF RECORD
1602 3RD WESTHILL DRIVE
GREAT FALLS, MONTANA 59404



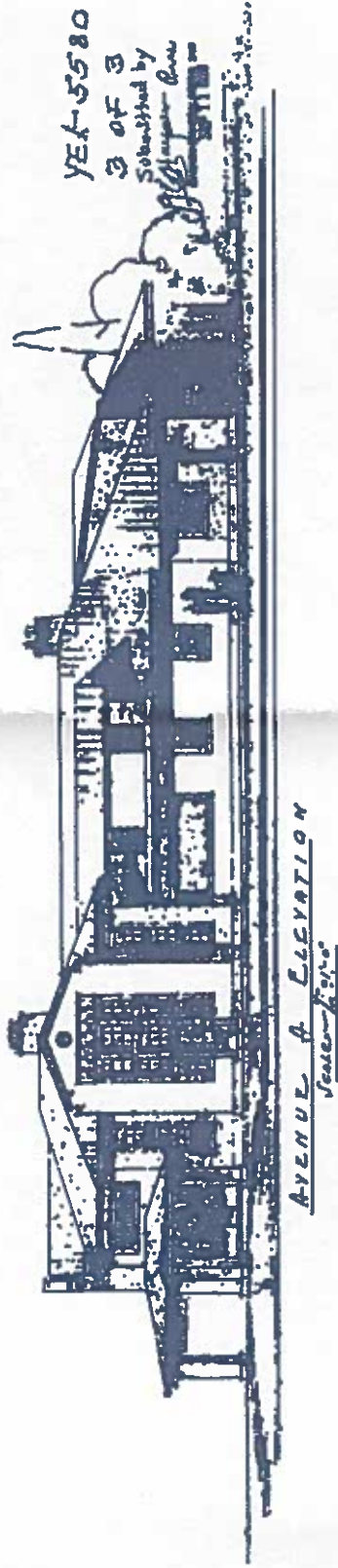
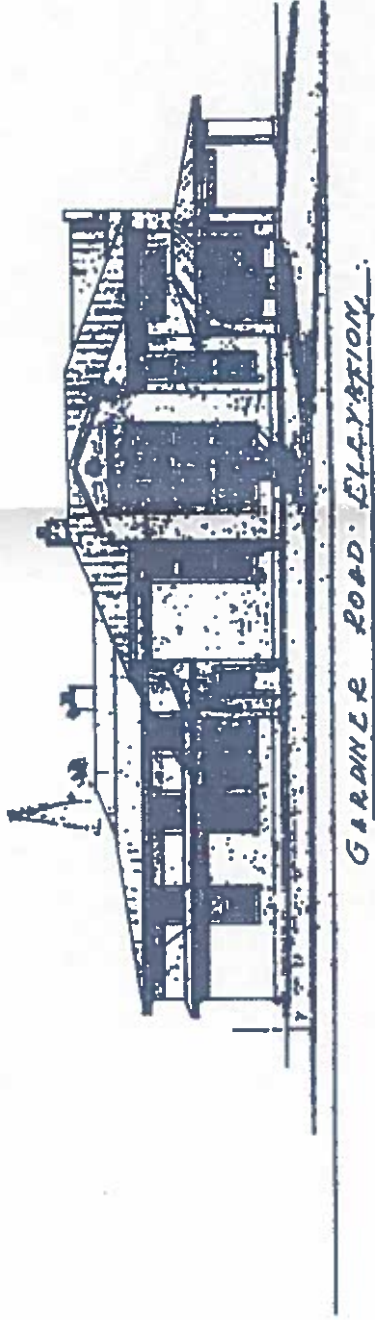
Department of the Interior
National Park Service
Yellowstone National Park

HAYNES PICTURE SHOPS HEADQUARTERS AT MAMMOTH
YELLOWSTONE NATIONAL PARK

YELLOWSTONE CENTER FOR RESOURCES

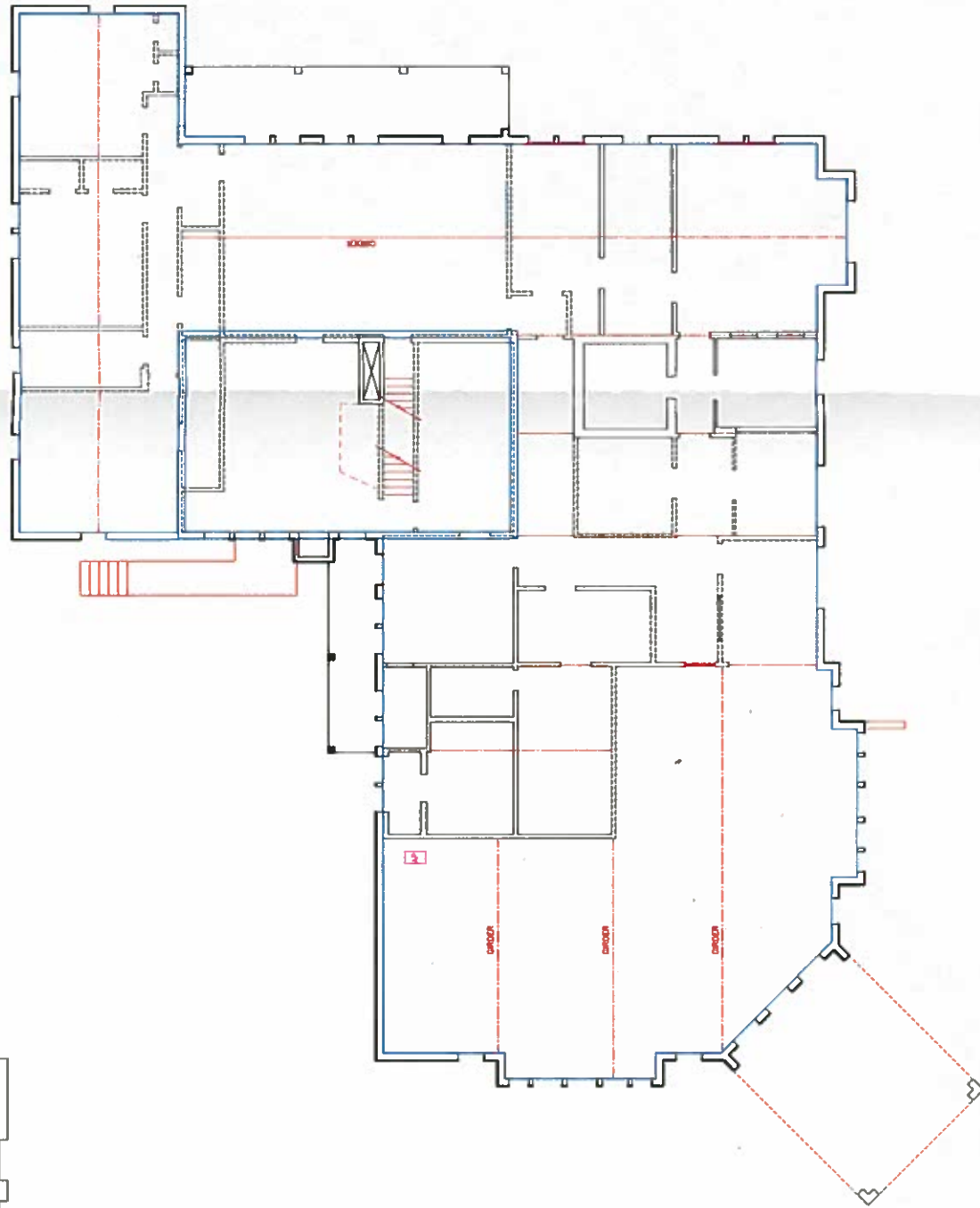
SECTION THROUGH DORMITORY

SCALE 0 4 8 16



PRIMARY ELEVATIONS FROM ORIGINAL DESIGN DRAWINGS

HAYNES PICTURE SHOPS HEADQUARTERS AT MAMMOTH YELLOWSTONE NATIONAL PARK	 Department of the Interior National Park Service Yellowstone National Park	KENNETH R. SEVERT HISTORICAL ARCHITECT OF RECORD 1403 3RD WESTHILL DRIVE GREAT FALLS, MONTANA 59404	PROJECT NO. 1-2007 - YNP		HAYNES PICTURE SHOPS HEADQUARTERS	AUGUST 5, 2008 REV: NOVEMBER 15, 2009
YELLOWSTONE CENTER FOR RESOURCES						



NOTE: FRAMING IS SHOWN (TYPICALLY) AT 18" O.C. BASED ON SPACING OBSERVED AT LOCATIONS ACCESSIBLE BELOW FIRST FLOOR; NOT ALL SPANS COULD BE OBSERVED AND MUST BE CONFIRMED.

LEGEND

DIMENSIONS

4 5 6 — NUMBER OF 1/8" INCREMENTS
4 5 6 — INCHES
4 5 6 — FEET

FRAMING SHOWN ON THIS DRAWING IS BASED ON FIELD OBSERVATIONS MADE BY THE ARCHITECT. SOME FRAMING LOCATIONS AS WELL AS THE DIRECTION OF THE FRAMING IS ASSUMED. THE ASSUMPTIONS ARE BASED ON NAILING PATTERNS, THE DIRECTION OF FISH FLOORING, AND WHAT COULD BE SEEN UNDER ACCESSIBLE LOCATIONS OF THE STRUCTURE. IT IS THE RESPONSIBILITY OF ANYONE WORKING ON THE BUILDING TO CONFIRM THE FRAMING PATTERNS INDICATED.

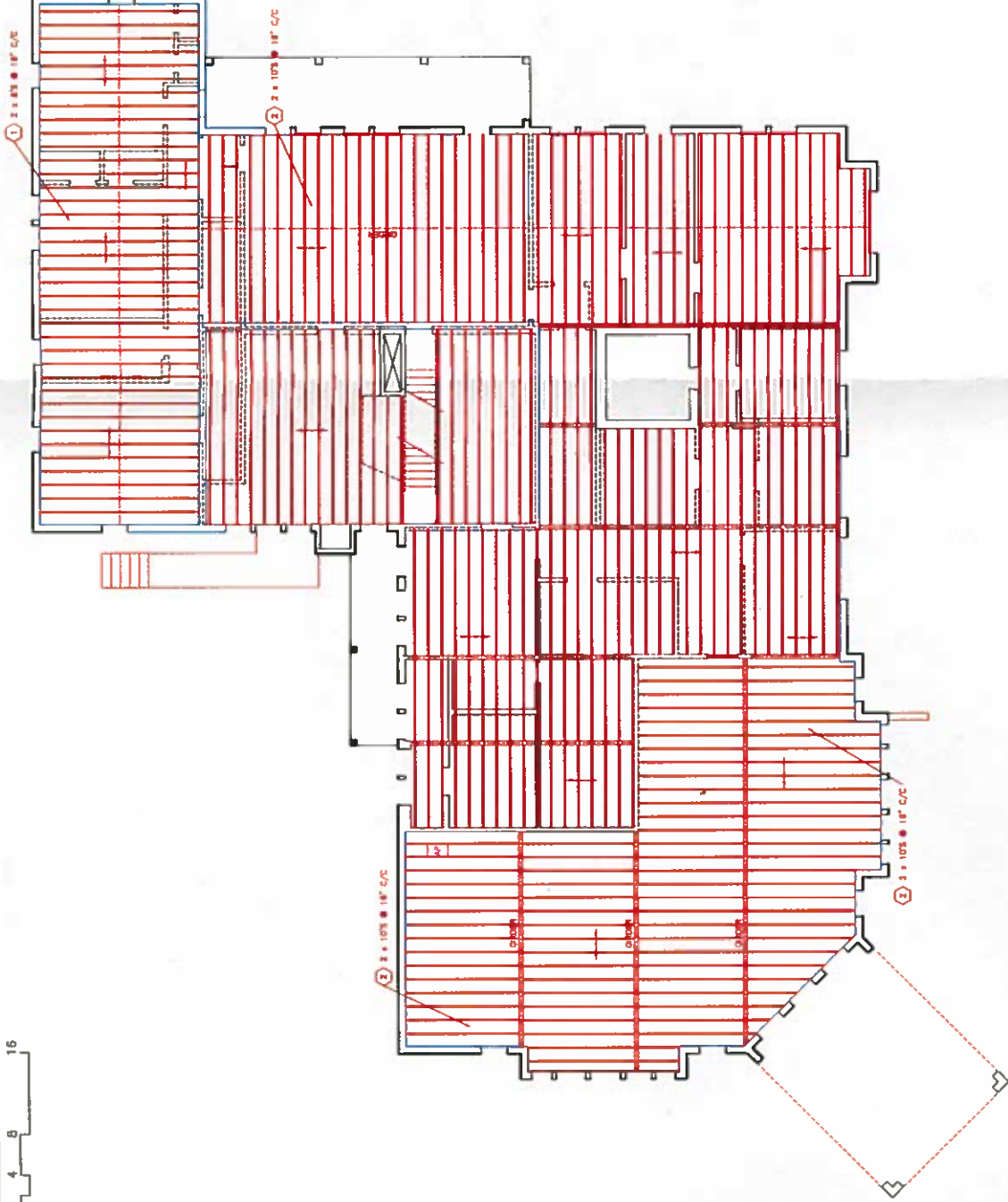
HAYNES PICTURE SHOPS
HEADQUARTERS
AUGUST 5, 2008

AUGUST 5, 2008
REV: NOVEMBER 15, 2009

HAYNES PICTURE SHOPS HEADQUARTERS AT MAMMOTH YELLOWSTONE NATIONAL PARK	 Department of the Interior National Park Service Yellowstone National Park	KENNETH R. SIEVERT NATIONAL BUREAU OF RECONSTRUCTION 1402 3RD WESTHILL DRIVE GREAT FALLS, MONTANA 59404	PROJECT NO. 1-2007-- YNP	SI	
YELLOWSTONE CENTER FOR RESOURCES					

EXISTING 1ST FLOOR FRAMING PLAN

SCALE 0 4 8 16



DIRECTION OF NO TAG FINISH FLOORING

- 1) 2 x 8's @ 18" C/C
- 2) 2 x 10's @ 18" C/C
- 3) 3

NOTE: FRAMING IS SHOWN (TYPICALLY) AT 16" O.C. BASED ON SPACING OBSERVED AT VISUAL INSPECTION OF EXISTING FLOOR. NOT ALL SPANS COULD BE OBSERVED AND MUST BE CONFIRMED. SOME GIRDER LOCATIONS ARE ASSUMED

LEGEND

DIMENSIONS

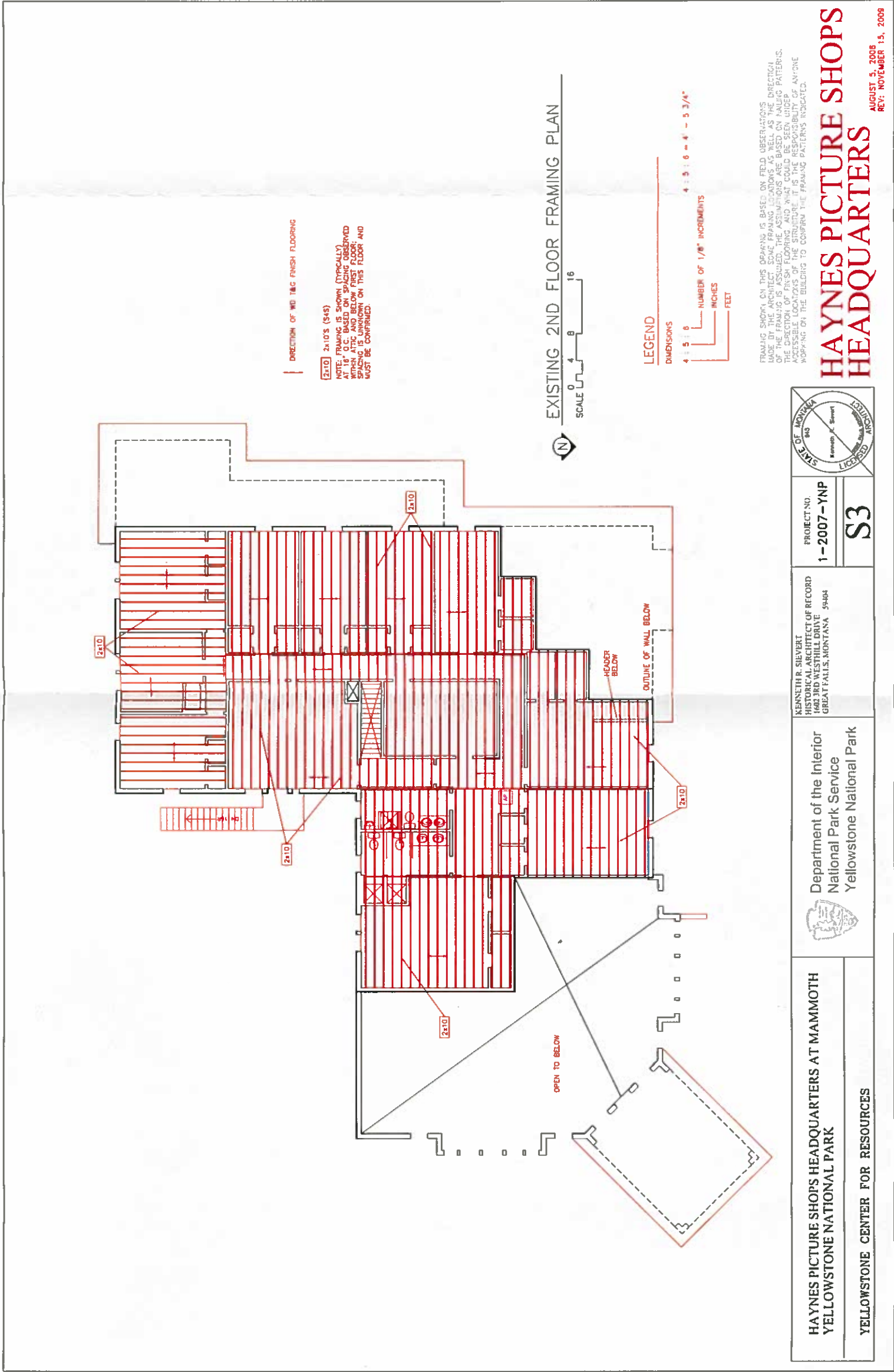
4 : 5 : 6 = 4' - 5 3/4"
NUMBER OF 1/8" INCREMENTS
INCHES
FEET

FRAMING SHOWN ON THIS DRAWING IS BASED ON FIELD OBSERVATIONS OF EXISTING STRUCTURE. FIELD OBSERVATIONS WERE MADE BY VISUAL INSPECTION OF THE FRAMING IS ASSUMED. THE ASSUMPTIONS ARE BASED ON FIELD PATTERNS. THE DIRECTION OF FINISH FLOORING AND WHAT COULD BE SEEN UNDER ACCESSIBLE LOCATIONS OF THE STRUCTURE. IT IS THE RESPONSIBILITY OF ANYONE WORKING ON THE BUILDING TO CONFIRM THE FRAMING PATTERNS INDICATED

HAYNES PICTURE SHOPS HEADQUARTERS

AUGUST 3, 2008
REV: NOVEMBER 15, 2009

 Department of the Interior National Park Service Yellowstone National Park	KENNETH R. SEVIST HISTORICAL ARCHITECT OF RECORD 1403 3RD WESTHILL DRIVE GREAT FALLS, MONTANA 59404	PROJECT NO. 1-2007-YNP	
	S2		



Appendix F. Participants in the Preparation of this Report

This report has been prepared as part of a contractual agreement between Sievert & Sievert Cultural Resource Consultants and the National Park Service, Yellowstone National Park. The purpose of the agreement is to create a Historic Structure Report for the Haynes Picture Shops Headquarters at Mammoth as a first phase to address treatment of the historic property. The primary partners in the cooperative agreement are:

National Park Service, Yellowstone National Park
Sievert & Sievert CRC—Professional consultants in the fields of historic architecture, architecture, and structural design

Participants in the preparation of this report, including their areas of expertise, were:

Kenneth R. Sievert, A.I.A.; A.S.C.E. (aff): Principal author; principal investigator of materials, structural assemblies, materials conservation, and building codes; project manager for S&S.

Herbert E. Dawson, YNP Historic Architect; YNP project manager—contributions throughout.

Lee H. Whittlesey, M.A., J.D., Ph.D. (hon), YNP Historian—history, chronology, and historical significance of the Haynes Picture Shops.

Henry Heasler Ph.D., Supervisory Geologist, and Cheryl Jaworowski, Geologist, Yellowstone Center for Resources—investigation and measurements of potential geothermal activities under the structure, preparation of findings report.

NPS Maintenance Division—contributions to Ultimate Treatment of materials and assemblies.

As a special assignment related to Cooperative Agreement H1233E007 between the Montana Preservation Alliance and the National Park Service, Yellowstone National Park, MPA Director Chere Justo reviewed and edited the report, and contributed to the historical sections of the document.

Tom Olliff, Division Chief of the Yellowstone Center for Resources, and Ann Johnson, acting branch chief of the Cultural Resources Branch, Yellowstone Center for Resources, provided supervision and management team guidance for the project.

Appendix G. Bibliography

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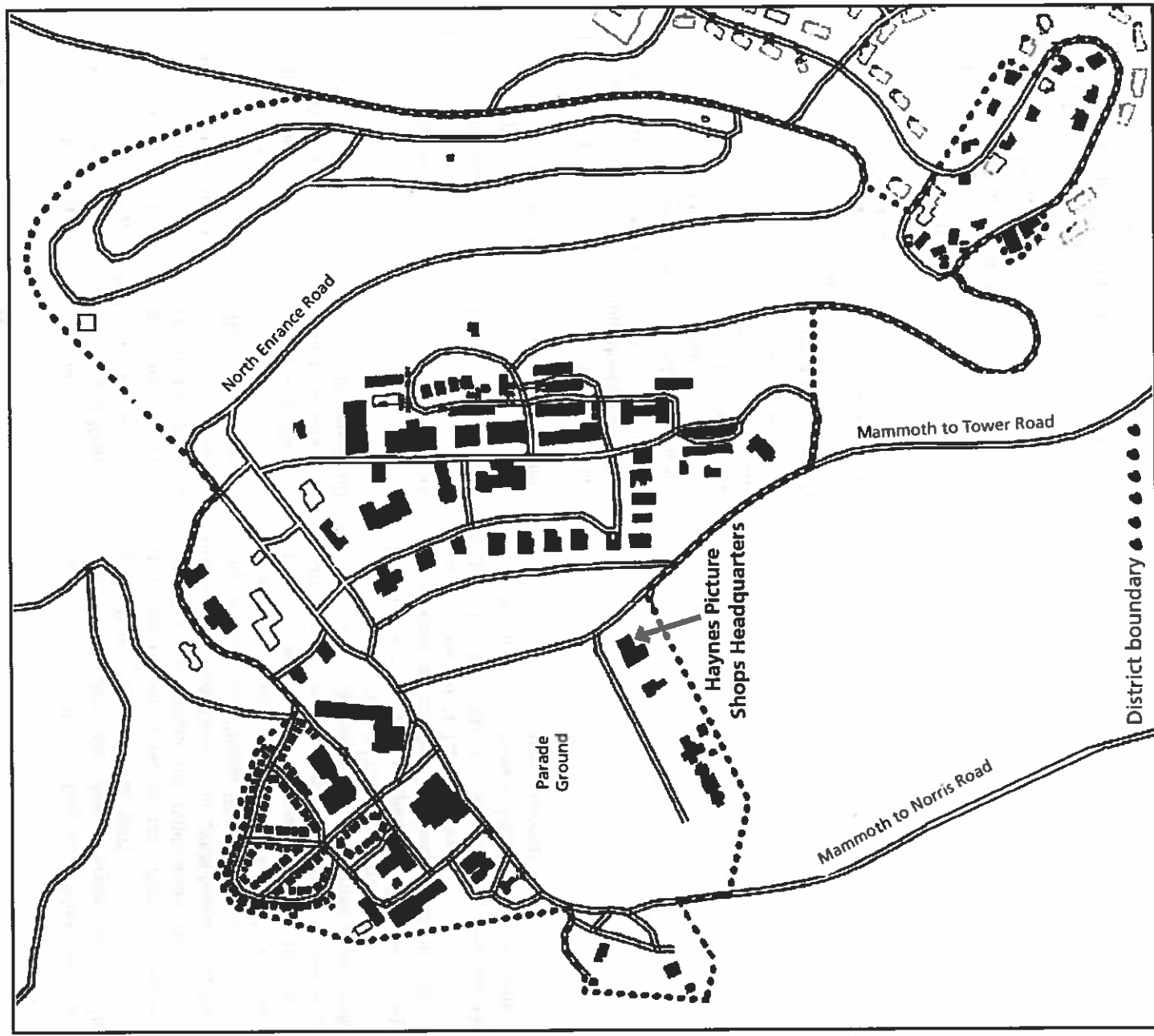
Keller, Guy Bruce. *Structural Snow Loads*. Colorado: Graduate School of the University of Colorado, 1985.

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U.S. Architectural and Transportation Barriers Compliance Board. *Accessibility Guidelines for Buildings and Facilities; Appendix IV* Latest Edition.

Videon, F. E. & Schilke, J. P. *Snow Loads for Structural Design in Montana*. Bozeman, Montana: Department of Civil and Agricultural Engineering, 1989.

Appendix H. Map of Mammoth Hot Springs Historic District



Notes

Executive Summary

- ¹ Yellowstone National Park, The State of The Park (Mammoth Hot Springs: National Park Service, 1999), pp. 4–13.
- ² Yellowstone National Park, Division of Interpretation, Executive Summary: Long-Range Interpretive Plan Yellowstone National Park (Mammoth Hot Springs: National Park Service, May 2000), pp. 9–11, 14.
- ³ Mary Shivers Culpin, “For the Benefit and Enjoyment of the People”: A History of Concession Development in Yellowstone National Park, 1872–1966 (Yellowstone National Park: National Park Service, Yellowstone Center for Resources, 2003).

Part 1. Developmental History

- ¹ Lee Whittlesey Draft, July 2007; Chere Justo additions, April 2008. The building that housed the Haynes Picture Shop Headquarters has been known since 1997 as the Hamilton Christmas Store.
- ² Haynes Guide 1966, p. 47, includes a photo; Lindsley, Chronology, p. 293; Joyner, 1929, p. 202.
- ³ Carl Mautz, *Biographies of Western Photographers* 1840–1900 (1997), p. 270.
- ⁴ Mary Shivers Culpin, *For the Benefit*, p. 25.
- ⁵ Edward W. Nolan, *Northern Pacific Views: The Railroad Photography of F. Jay Haynes, 1876–1905* (Helena: Montana Historical Society Press, 1983), pp. 20–22.
- ⁶ Mary Shivers Culpin, “For the Benefit, Appendix E, Timeline of Concessioners in YNP.
- ⁷ Mautz, *Biographies*, p. 270 ; and Catalog to Haynes Family Photographs, 1866–1989, Collection 1507, Merrill G. Burlingame Special Collections. Montana State University, Bozeman, Montana. <www.lib.montana.edu/collect/spcoll/findaid/1507.html>
- ⁸ For biographies of Frank Jay Haynes see Freeman Tilden, *Following the Frontier with F. Jay Haynes, Pioneer Photographer of the Old West* (New York: Knopf, 1964); and Montana Historical Society, *F. Jay Haynes, Photo-*

- grapher* (Helena: Montana Historical Society Press, 1981). There is no formal history of the Jack Haynes operations in Yellowstone, but the YNP Archives has a taped (CD) interview with Jack Haynes conducted by Aubrey L. Haines in 1961. See also Richard L. Saunders, *Glimpses of Wonderland: the Haynes and Their Postcards of Yellowstone National Park* (Bozeman: Saunders, 1997).
- ⁹ Stephen T. Mather to Horace M. Albright, September 28, 1928, in box C-35, file “900.01 Construction [of] Buildings J.E. Haynes FY 1929-30-31,” YNP Archives.
- ¹⁰ This building is currently used as housing for Xanterra’s chief of operations.
- ¹¹ J.E. Haynes to H.M. Albright, two letters both dated September 11, 1928, in box C-35, file 900.01 Construction Buildings J.E. Haynes FY 1929-30-31, YNP Archives. Mike Keller’s house was shown in *Haynes New Guide and Motorists’ Complete Log of Yellowstone National Park* (St. Paul: J.E. Haynes, 1928), pp. 20–21, as the headquarters for all Haynes operations at that time.
- ¹² E-TIC (Technical Information Center, an on-line catalog of the Denver Service Center, National Park Service), as referenced by Herb Dawson, YNP Historic Architect.
- ¹³ Haynes to Albright, September 11, 1928, YNP Archives. The 1930 Haynes Guide acknowledged the presence of the new building when it stated in its road log: “Haynes Picture Shops Headquarters (Mileage 4.7), at the left, was completed in 1929, replacing, but on a different site, the first Haynes Shop erected in the park at Mammoth Hot Springs in 1884. This shop at Mammoth besides the retail establishment houses the business headquarters of the company in the park.” Jack Ellis Haynes, *Haynes New Guide: The Complete Handbook of Yellowstone National Park* (Saint Paul: Haynes Picture Shops, Inc., 1929), p. 22.
- ¹⁴ It appears that Willson was responsible for all modifications and Vint only reviewed and approved designs with comments, which were usually followed closely by the concessioners.
- ¹⁵ Photos in Thomas C. Vint, “Preliminary Report on

the Mammoth Hot Springs Plan, Yellowstone National Park" (file 329), August 9, 1929, in box D-28, folder 3, YNP Archives.

¹⁶ [Thomas C. Vint], Map: "Department of Interior—National Park Service, Yellowstone National Park Mammoth Hot Springs Area, Division of Landscape Architecture," January 8, 1929, included with Vint, "Preliminary Report," box D-28, folder 3, YNP Archives.

¹⁷ Mary Shivers Culpin, *For the Benefit*, p. 15, top photo. The caption for this photograph: "Haynes Studio after relocation to edge of Capitol Hill" is incorrect, the author apparently mixed up Haynes' 1929 building with Haynes' 1884 home and picture shop. Numerous

sources, including various editions of Haynes Guide (i.e., 1947 edition, Chronology pages) and Culpin, *For the Benefit* (p. 130) state that the 1884 building was moved to the base of Capitol Hill in 1903. However, an October 16, 1902 newspaper, the *Gardiner Wonderland* (Montana), presumably more accurate, indicated that the house had been moved by that date.

¹⁸ Culpin, *For the Benefit*; and personal communication, ¹⁹ Culpin, *For the Benefit*, p. 112.

²⁰ The Haynes Picture Shop Headquarters became the Hamilton Stores' Nature Store in 1997. Personal communication, Mary Murphy, YNP Concessions Chief, to Herb Dawson, April 14, 2008.