Clarion Hotel
Twin Lakes, CO
Historic structure assessment

Prepared for:

Friends of Twin Lakes

SHF 14-HA-008

February 5, 2015

Deliverable #5

Avenue L Architects

AVENUE L ARCHITECTS

Historic structure assessment
Clarion Hotel
Twin Lakes, CO

Prepared for:

Friends of Twin Lakes

SHF 14-HA-008
February 5, 2015
5LK.41

This project was paid for by a State Historical Fund grant from History Colorado, the Colorado Historical Society

Table of Contents

Section 1: Introduction

1.1 Research Background/Participants

Purpose: The purpose of the project is to prepare a historic structure assessment and plan for preservation of the historic Clarion Hotel in Twin Lakes, Colorado. The assessment and plan will be used to document the facility's current condition, and to guide and prioritize building preservation and maintenance actions.

Property Owner:
USDA Forest Service
810 Front Street
Leadville, CO 80461
Lisa Corbin

Grant Recipient Contact:
Friends of Twin Lakes
70 County Road 26
Twin Lakes, CO 81251
John Kester
(719) 486-7284
jjkester.twinlakes@gmail.com

Preservation Specialist
Gheda Gayou
State Historical Fund
1200 Broadway
Denver, CO 80203
(303) 866-2835
gheda.gayou@state.co.us

Architect:
Avenue L Architects LLC
224 South Logan
Denver CO 80209
(303) 290-9930
Kathy Lingo AIA
Kathy@avenueLarchitects.com

Structural Engineer:
JVA, Inc.
1319 Spruce Street
Boulder, CO 80302
(303) 444-1951
Ian Glaser, P.E.
iglaser@jvajva.com

Material Testing
Built Environment Evolution
P.O. Box 21433
Boulder, CO 80308
(303) 562-5872
Natalie Feinberg Lopez, Architectural Conservator
Natalie@builtenvironmentevolution.com

Arborist Terra Firma Forestry
P.O. Box 315
Salida, CO 81201
(719) 539-4944
Angie Jenson, Certified Arborist
AngieJenson315@gmail.com

1.2 Scope of Work and Procedure

The work of this project was funded by a State Historical Fund assessment grant from History Colorado, the Colorado Historical Society. The purpose of the project is to prepare a historic structure assessment of the Clarion Hotel in the Twin Lakes Historic District, Twin Lakes, Colorado. The Clarion Hotel, built in 1879, is presently unoccupied. It is identified in the National Register Nomination as the "Historic Adobe House."

The on-site assessment was conducted on May 21-22, 2014. Assessment personnel were historical architects Kathy and Len Lingo of Avenue L Architects, Denver CO; structural engineer Ian Glaser of JVA, Inc., Boulder, CO; and arborist Angie Jenson of Terra Firma Forestry, Salida, CO. An arborist was included on the team to assess potential hazards and risks related to five very large spruce trees adjacent to the north side of the building.

The field survey process consisted of visual observation and condition assessment of major building systems and components from the building exterior, roof, interior and crawl space. Assessment was limited to visual observations of building elements and materials that are visible to the naked eye. Samples of adobe and plaster were removed and sent to Built Environment Evolution, where they were analyzed. The weather was dry and favorable during the site assessment. Field documentation consisted of field notes, digital photographs, hand sketches and field measurements including laser level recordation. Later, these field measurements were used to create computer-aided design (CAD) floor plan and elevation drawings which are included with this report.

A start-up meeting was held at the site on May 21st, with Gheda Gayou of the State Historical Fund; John Kester, Joan Weber and Anita Mason representing the Friends of Twin Lakes; Cathie Kamke and Lisa Corbin of the USDA Forest Service, representing the property owner; and architect Kathy Lingo of Avenue L Architects. Following the meeting the group toured the building, met with the structural engineer Ian Glaser and arborist Angie Jenson, and discussed issues observed during the walk-through.

Avenue L submitted a draft assessment report on September 3, 2014. The Friends of Twin Lakes, the State Historical Fund, and the USDA Forest Service in Leadville CO reviewed the draft and provided comments. The review comments were incorporated into this final report.

Information Sources

Historical information and historic photographs are derived from the National Register nomination for the Twin Lakes Historic District (5LK.41); historic photographs provided by the Friends of Twin Lakes; historic photographs provided by the USDA Forest Service from San Isabel Forest archives; historic photographs in the collection of the Denver Public Library; the *History of Leadville and Lake County* by Don L. Griswold; and *Patrick J. Ryan Remembers: New York Boyhood and Manhood and Early Days in Twin Lakes* by Patrick J. Ryan. Please refer to the Bibliography for more information.

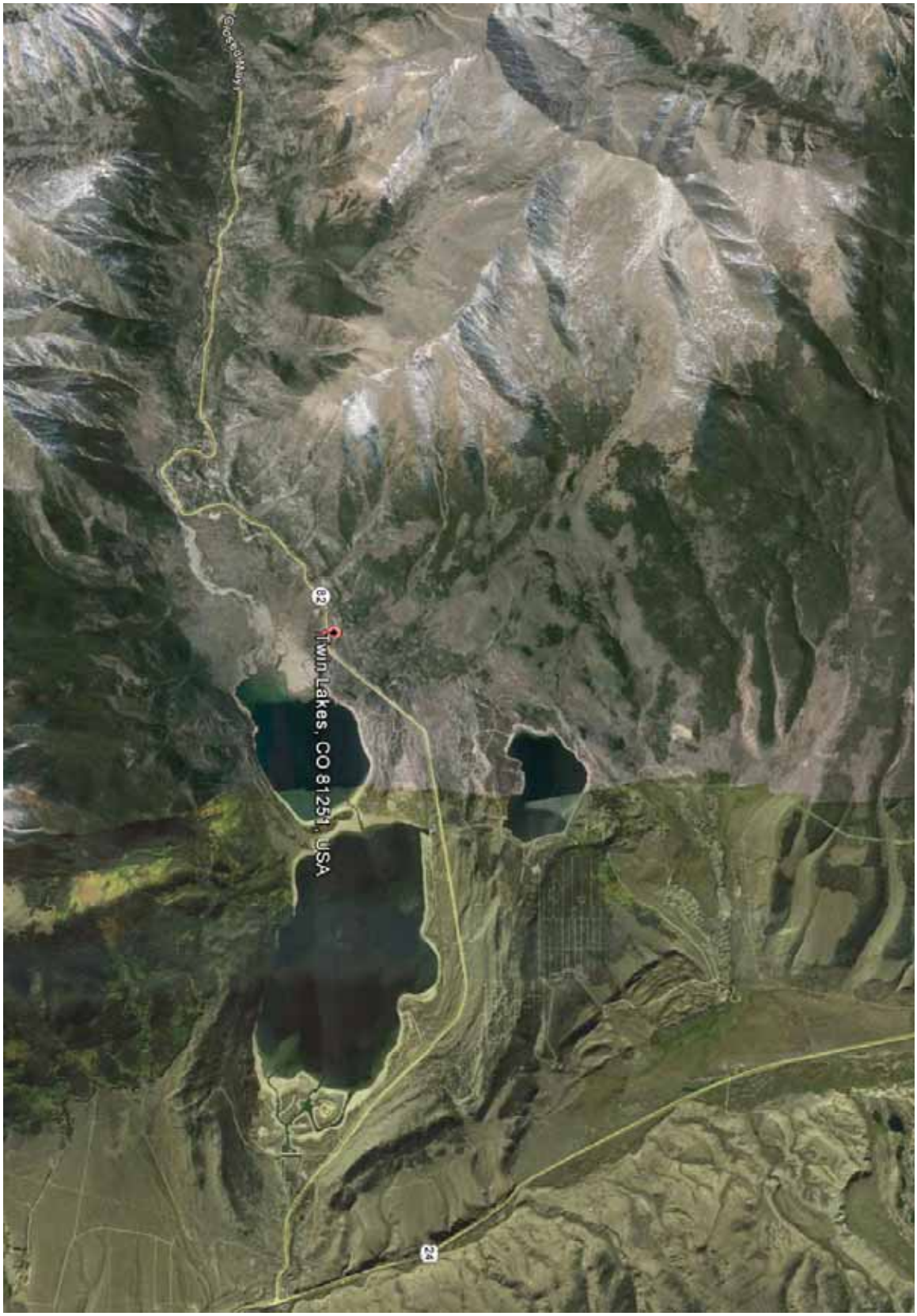
1.3 Property Location

The Clarion Hotel is situated in a cluster of large spruce trees on the south side of Colorado State Highway 82 near the center of the town of Twin Lakes, Colorado. Other buildings in the Twin Lakes Historic District on the south side of the highway include the Assayer's Office, Log House, Chicken Coop, and the Red Rooster (Visitor Center). The rest of the historic district is on the north side of the highway.

The town of Twin Lakes is in Lake County, Colorado, in the high-altitude Lake Creek valley of the Sawatch Range. Twin Lakes' altitude is approximately 9200 feet above sea level and the peaks of Mt. Elbert, Mt. Massive, and Mt. Hope dominate the natural setting. Highway 82 passes through the center of the town. The road follows the north shore of Twin Lakes Reservoir, comprised of two scenic, interconnected lakes at the mouth of the narrow Lake Creek valley. To the west, this highway crosses Independence Pass, the highest paved pass in Colorado. To the east of the lakes, Highway 82 intersects U.S. Highway 24, which leads north to Leadville.

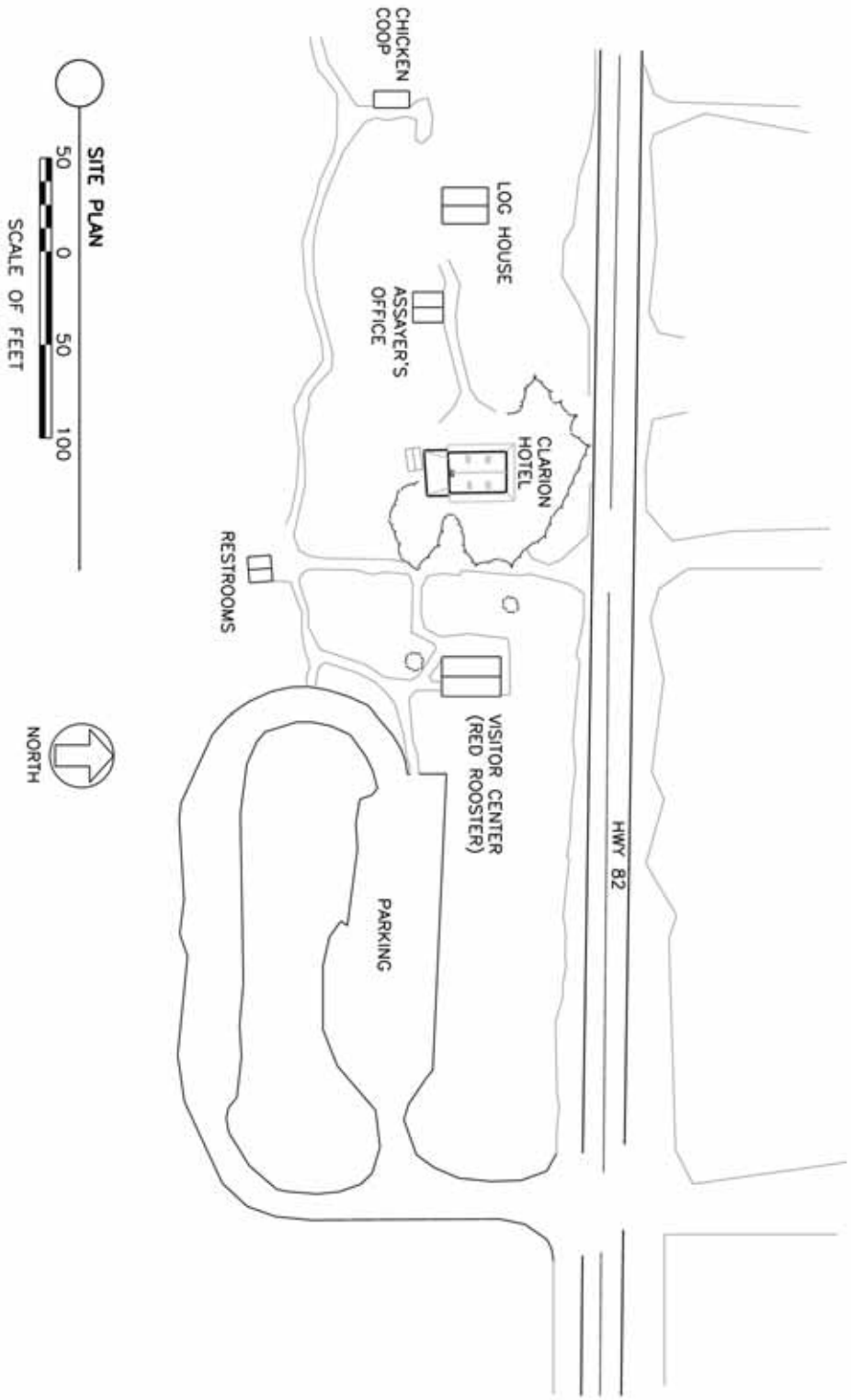
UTMs at the building: 13 380330.75E 4326746.95N

Looking northwest at the Clarion Hotel (center, with large spruce trees). The Red Rooster/Visitor Center is to the right (east of Clarion); Assayer's Office on the left (southwest of Clarion); with the Log House in the background to the left (west of Clarion).



Google Earth image: the town location, the two lakes, highways 82 and 24. North is to the right.

Google Earth image: the central portion of the town of Twin Lakes. Note the historic district parking lot and paved loop road.


SITE PLAN
SCALE OF FEET
50
0
50
100
NORTH
CHICKEN COOP
LOG HOUSE
ASSAYER'S OFFICE
CLARION HOTEL
RESTROOMS
VISITOR CENTER (RED ROOSTER)
PARKING
HWY 82

Executive Summary of Findings

The building has been unused for many years but has received very basic exterior maintenance. Overall it is generally in fair condition. Critical or serious issues identified by the assessment team are listed and briefly discussed below. Please refer to Sections 3 and 4 for more detailed discussion and recommendations.

Proposed Use and Interpretive Decisions

The recommended ultimate treatment is preservation. The intended use is for interpretation of the Clarion during the period of time (1879 to ca 1900) when it served as a hotel for travelers involved in mining-related businesses. There is no intent to restore the building to its appearance during that time period. Rather the intent is to accomplish treatments that will preserve the building while supporting the intended use. Treatments must comply with the Secretary of the Interior's Standards for the Preservation and Rehabilitation of Historic Properties. The Clarion is within the Twin Lakes Historic District and thus is a listed historic property.

Following the research and field observations done for this assessment, some questions arise about which existing materials and systems should be rehabilitated, which should be reconstructed, and which should be interpreted in their present states. The lean-to addition at the south end of the building is in very poor condition and has been extensively modified or rebuilt at least three times over its life. It requires extensive intervention to prevent imminent collapse; partial collapsing of the south adobe wall and the roof have already happened. The south addition could be extensively rehabilitated, utilizing existing materials to the extent possible. This assessment takes the position that the more prudent course of action is to reconstruct the south addition, which does not date from the period of significance, rather than trying to rehabilitate it.

An interesting aspect of the Clarion as a historic hotel is the miniscule size of the second floor guest rooms, which would have been less than 8 feet wide and about 7 feet long. Visitors would have a memorable experience if they could experience a reconstructed second floor with these tiny sleeping rooms. However, the second floor has been extensively remodeled, including removal of four of the eight original dormers that provided natural light to the guest rooms. The second floor original layout could be reconstructed, with reconstructed dormers. However, in order to comply with the Secretary of the Interior's Standards, an ultimate treatment of reconstruction (rather than preservation or rehabilitation) would require additional research. The building would need to be reconstructed to its documented condition during a specific time period. At present, no known historic photographs depict the Clarion with all eight dormers *and* in its current floor plan configuration. Various wings, no longer extant on the west and south sides, are visible in the historic photographs that show eight dormers. (See historic photographs in Section 2.1) If an historic photograph can be found showing eight dormers with the current plan configuration, this approach can be reconsidered.

There are building code issues with the second floor. When the Clarion is put back into use as an interpretive facility, it will be assigned an A3 occupancy per the 2012 International Building Code. The code does not permit a museum use on the second floor of a non-rated, non-sprinklered museum building. It is worth pursuing this question with the local building officials to determine if they are willing to allow an exception. Alternatively, the little sleeping rooms could be handled with some sort of interpretation since reconstruction of the second floor is not a viable option at this point.

Another code-related issue is the allowable load on the existing framing. The floor framing does not meet current codes. One option is to strengthen the framing to meet code. A second option is to limit the interior loading by posting the code-required weight limit.

It is important to note that compliance with current codes is not automatically required if the building met code when it was built, and if subsequent modifications have not rendered it less safe. However when the building's use is changed, or a system or element is repaired or replaced, it is required to be brought up to the code enforced at the time. There is also leeway in the code for historic buildings, and for building official discretion.

The building has been modified fairly extensively over time, as the historic photographs in Section 2 demonstrate. The south addition had several different shapes and profiles. There was an early wing on the west side that no longer exists. The interior functions of these wings, as well as interior functions of the existing first floor spaces, are not entirely obvious. If visitors are allowed into the first floor, decisions need to be made about how the first floor will be interpreted and furnished. Much of the first floor has been modified since 1900. A true restoration does not seem appropriate, so there will be elements from different time periods inside as well as outside. Perhaps the best approach will be to interpret the space as an evolution of changing uses. These are decisions for the stakeholders.

Blue Spruce Trees

The large spruce trees to the north and east were objects of concern. The trees are something of a local landmark and much beloved in the local community. Historic photographs show that they were planted not long after the Clarion was first built. As discussed in Section 3.2 and the arborist's report (Appendix), the root systems of the spruce trees do not appear to have adversely affected the foundation walls and are not prone to do so in the future. Aggressive pruning is recommended to limit the "sail area" of the trees in order to reduce the potential of wind-blown failure. The spruce tree roots do affect the concrete walkways under the porch roofs on the north and east sides. As discussed in Section 3.4, alternatives were considered for how to best surface the walkways: concrete, boardwalk, and pea gravel. These discussions can continue to take place with the stakeholders. It is the recommendation of the assessment team that the concrete walkways be replaced with concrete, except on the north side where pea gravel would effectively allow the tree roots to move. Additional care should be taken during construction to avoid compacting the roots of the trees.

Prioritized Recommendations

Critical:

- Reframe or completely reconstruct south addition
- Rebuild foundation below chimney
- Reframe or completely reconstruct porch roofs
- Remove mechanical duct penetrating foundation wall between rooms 2&3 and rebuild opening.

Serious:

- Aggressive pruning of blue spruce trees
- Main building foundation repair:
  - -Reset loose stones with mortar
  - -Rebuild damaged sections
  - -Remove interior floor sheathing to access inside faces of foundation walls

- Remove concrete sidewalk 3 sides. Fill collapsed areas/burrow holes. Regrade around south addition. Replace concrete walk east and west, replace with pea gravel north side.
- Strengthen roof framing:
  - -sister one split rafter
  - -gusset rafter pairs near ridge
  - -bolster framing and collar ties around chimney
  - -reframe around abandoned roof penetrations
  - -strengthen eave connection
- Exterior walls: Remove delaminated and incompatible plaster and replace with compatible material on exterior walls.
- Replace gable siding and trim on south gable and south side of west dormers
- Replace all dormer trim
- Replace roofing, southern dormer, west side
- Flash dormers to main roof and to dormer roofs
- Asbestos and lead based paint testing

Minor:

- Stabilize site paths for accessibility
- Provide one accessible picnic table
- Widen east door into Room 2 to 32" clear opening
- Inspect interior log sill and place supporting stones along its length
- Bolster second floor diaphragm to top of masonry connection with deep embedment in grout-filled holes
- Add decking in second floor dead spaces to complete diaphragm to adobe sidewalls
- Paint entire exterior after repairs are made
- Repair window sash, damaged sills, restore windows to operational
- Restore doors to be operational and provide working hardware
- Rooms 1&2: reattach ceiling bead board and replace missing ceiling boards

Discretionary:

- Strengthen first floor framing to allow higher occupancy, or limit occupancy and post load limits
- Replicate wallpaper over fireplace and repair chase enclosure
- Provide additional outdoor interpretation
- Battery powered security system

Section 2: History and Use

The Clarion Hotel is an unused historic building that is a contributing resource to the Twin Lakes Historic District. The hotel was built in 1879 by mining investor T.C. Wetmore to provide accommodations for freighters and miners travelling between the silver mines of Aspen and Leadville. The first floor was used as quarters for the owner's family. In later years, the building served as a single-family residence. The federal government purchased the building, along with other historic buildings south of Highway 82, in 1978.

2.1 Historical Background

Geologic History [1]

The early human history of the Twin Lakes valley was closely tied to the geologic features of the surrounding area. The rock in the area of the future Mt. Elbert and Massive formed as metamorphic and granite material deep underground more than a billion years ago. Approximately 65 million years ago, gold, silver, and other minerals were introduced along fault lines that millions of years later hard rock miners would follow in hopes of finding the mother lode. In the past 25 million years, the metamorphic and granite materials rose to form the Sawatch Mountains and expose their treasures at the surface. The combination of uplift, faulting, and the injection of precious metals defined the mining component of the geologic history of Twin Lakes and the Lake Creek valley.

Another component of geologic processes that affected the human history of this area began with a change in climate that covered the high peaks and valleys in snow that compacted to form ice. The tremendous weight of the ice caused it to move downhill, forming glaciers. The glaciers followed older slopes that flowed east and west, away from the continental divide. One glacier flowed down the path of the future Lake Creek. The glacier in Lake Creek ground the U-shaped valley and filled it with ice over 1,000 feet thick. The force of the glacier gouged the valley floor. As the glacier approached the Arkansas River and the climate became warmer, the glacier paused and formed a terminal moraine. With more melting the glacier snout retreated back up the valley. The terminal moraine formed a lake as the glacier retreated. As it retreated up the valley from the Arkansas River, it paused in its retreat for a while and deposited a recessional moraine. The recessional moraine separates the Twin Lakes. The glacier continued its retreat up the valley into its sources and was finally gone by about 13,000 years ago. For over 100 years visitors have marveled at the beauty of these lakes and valleys brought to us by geologic and climatic processes in the Twin Lakes and Lake Creek valley.

Early Visitors to Twin Lakes 1700s – 1840s

Native American Ute tribes were the earliest visitors to the Lake Creek valley. Because of the cold winter climate the Utes only came to the Lake Creek and upper Arkansas during the summer months. One major route used by the Utes during their seasonal travel to Lake Creek Valley was up Eagle River over Tennessee Pass into Lake County. Native American artifacts were found in Lake Creek Valley, many on Mt Bump adjacent to the Twin Lakes Historic District. Other routes across the continental divide included the passes currently known as Independence, Cottonwood, Tin Cup, Monarch, and Poncha. Artifacts indicate that the Utes did not regularly travel to Lake Creek until the late 1700s. By this time the Utes would have utilized horses during their travels.

The mountain men of the early 1800s went into the Rocky Mountains in search of beavers to be used in the top hats favored by members of high society. Most of the famous trappers went to the mountains in Wyoming, Idaho, and Montana. One of the well-known trappers in the Arkansas

valley was William "Old Bill" Williams. [2] He trapped in the Lake Creek valley from the 1820s to 1840s. Williams was also attracted to the Twin Lakes and its tremendous trout fishing. The lakes were called Williams Fishery for many years. John Charles Fremont, an explorer for the US Army, stayed in the Twin Lakes area in the 1840s and hired Williams as a guide.

Gold Mining and the Formation of the Town: 1860

The first mining boom in the Arkansas valley was in 1860 with the discovery of gold in California Gulch around Oro City and in Cache Creek south of Lake Creek valley. [3] In 1860, the town of Dayton (later renamed Twin Lakes) was established as a settlement for these early gold placer miners. In 1866, Dayton became the county seat of Lake County, and a two-story courthouse was built. The political position was short-lived, however, as the county seat, along with the courthouse building, was moved to Granite in 1868. Within a few years the surface gold was exhausted and miners drifted away.

Freighting and the Silver Boom: 1870s - 1893

In the mid-1870s miners in the Leadville area discovered large amounts of silver that they had overlooked when searching for gold. By 1876, the Colorado Silver Boom stretched from Leadville to Aspen. By 1879, tens of thousands of hard rock miners were looking for the next bonanza of silver. The overflow of miners came to the Lake Creek valley looking for any precious minerals and they found them.

The years of 1879-80 brought many changes. The town of Dayton was renamed Twin Lakes. The Twin Lakes and Roaring Fork Toll Company improved the rough path over Hunter Pass to the point where horses and stagecoaches could make the trip. Hunter Pass, later renamed Independence Pass, connected Leadville with Aspen. The stagecoach road closely aligned with the present Highway 82 route. This improvement enabled the movement of freight, supplies and people. Business opportunities soared in Twin Lakes as an excellent stopping point below the pass. Miners began to head west from Leadville, crossing the pass in defiance of orders from Governor Pitkin not to do so until the federal government had negotiated a peace treaty with the Utes. Miners who crossed the pass on July 4, 1879, renamed it Independence Pass. In 1880, the Lake County seat was moved to Leadville, where it remains today.

To accommodate miners from the Lake Creek valley and freighters going to a new strike in Aspen, three hotels were built in 1879: the Holt (photo 2-2); the Wolf, built by Maggie Weber; and the Clarion Hotel (photo 2-1), built by T.C. Wetmore. [4] Wetmore decided to build an adobe structure to keep the building warmer in the winter and cooler in the summer. The hotel was only one and a half stories high. Up to eight guests stayed upstairs in the small half story that had a dormer in each room. The rest of the house downstairs was for the kitchen, dining facility, and living quarters for the owners.

The transport of people and freight to Aspen and Leadville, rather than actual mining, was the primary business activity in the Lake Creek valley. The most well-known freighters were Patrick Ryan, Christopher Carson, and Charles Foxall. Transportation centered around the Holt Hotel for both freight and stages for people. Mining activity in the Lake Creek valley was modest at best. One of the major mines was the Gordon Mine on the East slope of Perry Peak.

In 1881, B. Clark Wheeler financed the opening of a toll road over Independence Pass. Business was so robust that for the first five years, a crew of men with snow shovels kept the toll road open all winter long. In 1884, Leadville mining magnate James V. Dexter bought the entire townsite of Twin Lakes, resurveyed it, enlarged the plat, and reorganized the village. By the early 1880s, Twin Lakes was a prospering community of 250 people with a post office, two general stores

(photo 2-3), a blacksmith, an assay office, two saloons and the three hotels in town. The future looked very bright.

Things changed, and fast. In 1887, David Moffat and the Rio Grande Railroad built a rail line from Leadville to Glenwood Springs and thence to Aspen. Although the railway took a longer route between the Leadville and Aspen silver operations, it was faster, safer, and more reliable. This resulted in a drastic reduction in traffic and tolls collected on the Independence Pass road. By 1888, operation of the toll road was discontinued. The road still existed but it was not kept open year-round and no tolls were collected. The stagecoach service over the pass continued on a limited basis. Freighting did continue between Leadville and Twin Lakes [5].

In 1893, repeal of the Sherman Silver Purchase Act set off a panic in Leadville and other silver mining areas. The price of silver plummeted, many silver mines closed, and the commercial stagecoach service over Independence Pass was discontinued. The road was abandoned until 1927, when the State of Colorado rebuilt the route from Aspen to Twin Lakes and designated it as part of Highway 82. Most of the highway followed the original route, although some portions deviated.

The slowdown in mining and freighting resulted in the closure of the Clarion Hotel by the early 1900s. The Clarion was then used as a private residence. One recent owner of the Clarion was John McDonough from 1973 to 1976. He owned the property until the Bureau of Reclamation purchased all of the residences on the south side of Highway 82. At this time the Twin Lakes Historic district was established.

T.C. Wetmore, first owner of the Clarion Hotel

T.C. Wetmore was born into a prominent family in New York in 1815.[6] The son of Seth Wetmore and Lucinda Cook, he had many siblings. His given name was Titus C. Wetmore, although he appears in various documents as T.C. Wetmore, Thomas C. Wetmore, and Titus C. Whitmore (incorrectly transcribed from the 1850 census as Silus C. Whitmore.) He lived in Rensselaer New York until at least 1840.[7]

By 1850, he was a farmer living in the small agricultural community of Malta Township in DeKalb County, Illinois, with his wife Eliza (also from New York), along with Helen (age 14), Emma (age 7), Daniel (age 5) and William (age 2).[8] In 1854, he was one of three charter members who formed the DeKalb Masonic Lodge No. 144, a group whose members included many prominent local citizens. [9] T.C. Wetmore was a township supervisor of Malta from 1859-1861.[10] Malta was located along the Galena and Chicago Union Railroad (later consolidated with the Chicago and Northwestern Railway), a railway intended to connect Chicago with the rich lead mines of Galena. However, the line was never constructed as far as Galena.[11] Malta remained primarily agricultural and struggled financially.

At the time of the 1860 census, T.C. Wetmore was still living in Malta with Eliza, William P., and Emma, as well as Douglas (age 5), Frank (age 2) and relatives Nancy Wetmore (age 56), Melissa Wetmore (age 18), and William Wetmore (age 15). [12] On this census, T.C. estimated the value of his real estate holdings at $10,000 – a handsome sum in 1860! Later documents identified him as a hotel keeper at Malta, although the census states his occupation as a miner. There were no mines near Malta, but it appears he may have already had mining interests in the Pikes Peak region of what is now Colorado.

In May of 1860, T.C. was one of seven DeKalb County delegates to the Illinois Republican Nominating Committee[13] and a supporter of candidate Abraham Lincoln. The day after the state convention, T.C. set out for the Pikes Peak region, which was not yet within an organized

territory. In January 1861, he wrote to Abraham Lincoln, whom he had met at the Illinois nominating convention:

> "…the next day after I got home I left for what is called Pikes Peak. I prospected thoroughly on the head waters of the Arkansaw (sic) and discovered some valuable gold and silver mines. I worked one of my gold claims with about Twenty hands from 10th June to 20th Sept and it paid $20.00 to the hand pr day and we found we had a population of about 70,000, nearly all good Republican voters. We called a convention of Sixty four mining districts with five delegates each, and at the convention I was elected unanimously a Delegate to represent their wants to congress. The committees on teritories (sic) in Senate & house have agreed on a bill to organise us into a teritory (sic) by the name of Idaho….We must have a Special Indian agent, for the Yutes (sic) and Navajos, our best Gold discoveries are in their country and we must treat with them or fight them…rest assured we are true to the Union. Truly, your Sincere friend and obt Servt T.C. Wetmore." [14]

Wetmore's claim to a seat in Congress from the "Idaho Territory" was short-lived. The newly-formed provisional government was challenged by many miners almost immediately. The South Platte Mining District, acting on its own, sent Wetmore to Congress, while the Mount Vernon Mining District declared itself independent of everybody but the Congress of the United States. Another group refused to accept territorial status and declared for immediate statehood. Some argued that Kansas had jurisdiction, and others insisted that north of Denver belonged to Nebraska. To compound the confusion, Denver elected a "people's government" that was independent of the provisional government. Numerous loosely organized local jurisdictions were established, mostly revolving around miners' courts that regulated claims. [15] Congressional designation of new western states and territories had been bogged down for years, as southern and northern politicians fought over whether slavery would be permitted in the new western regions. By 1861, the South had seceded, clearing the way for creation of western free-labor states and territories. On February 28, 1861, the Territory of Colorado was formally incorporated.

On March 20, 1861, Lincoln recommended T.C. Wetmore for appointment as Chief Justice in the newly formed Colorado territory, identifying him as an informal delegate from Colorado and formerly a hotel keeper at Malta, Illinois.[16]

T.C. Wetmore does not appear in the 1870 census, but by 1870 his first wife Eliza had moved back to New York. [17] In the 1880 census, Titus C. Wetmore was still a miner in Colorado, living with his wife Amy E. Wetmore, who was born in New York.[18] T.C.'s son Douglas was living with the couple. T.C. was not found in any census records after 1880.

Further research is recommended. Lake County Courthouse records in Leadville, and the Leadville Public Library would be good places to start. Newspapers, obituaries and directories (if they exist) might be found in the Leadville library, as well as possible clipping files. The courthouse may contain property ownership files that would help to establish a chain of ownership of the Clarion after T.C. Wetmore's ownership. The courthouse may also contain mining company records. Another possible area for research is the town of Wetmore, Colorado, in Custer County (but close to Fremont and Pueblo Counties). Wetmore Colorado was founded by William H. Wetmore (1848-1896), who may be a relative of T.C.'s or possibly his son. T.C. had a son William born in 1848, who is listed in the 1860 census as William P., but the middle initial could be a transcription error. The Wetmore Hardscrabble Genealogical and Historical Society in Wetmore may have further information pertinent to the Clarion: historycenter@wetmorehistoricalsociety.com.

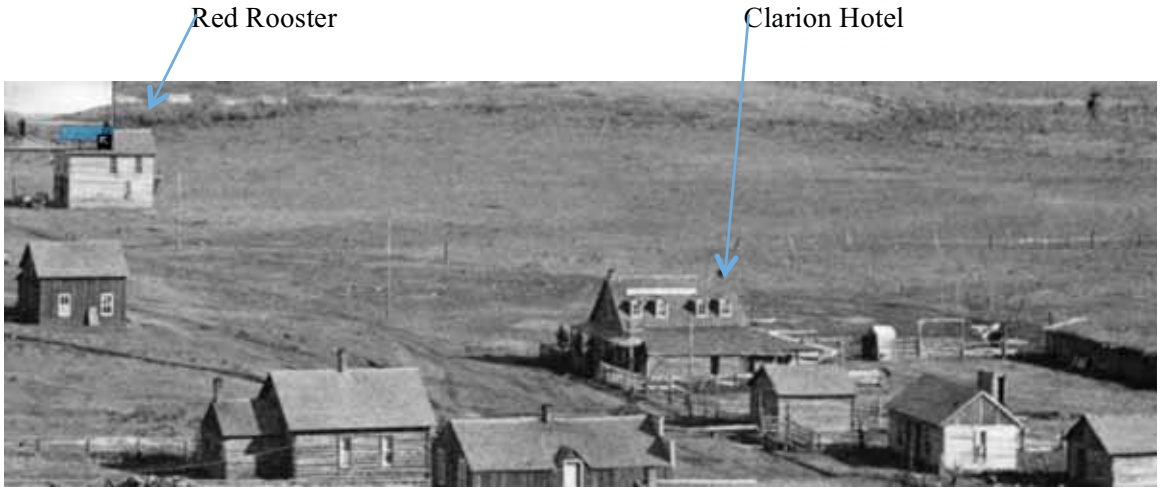


Photo 2-1. Looking southeast, ca 1880. The Red Rooster was moved adjacent to the Clarion in the 1970s. Photograph courtesy Twin Lakes Visitor Center.

Photo 2-2. This ca. 1880 photograph shows the Lake Hotel, where freighters and stagecoach passengers stayed enroute to Aspen. Besides the Lake Hotel, this building was also known as the Delmonico, The Twin Trout, Holt, and Anderson Hotel. A freight wagon is on the left and a stagecoach is behind the freight wagon horses. This building still stands 2 blocks east of the Clarion. Photograph courtesy of Twin Lakes Visitor Center.

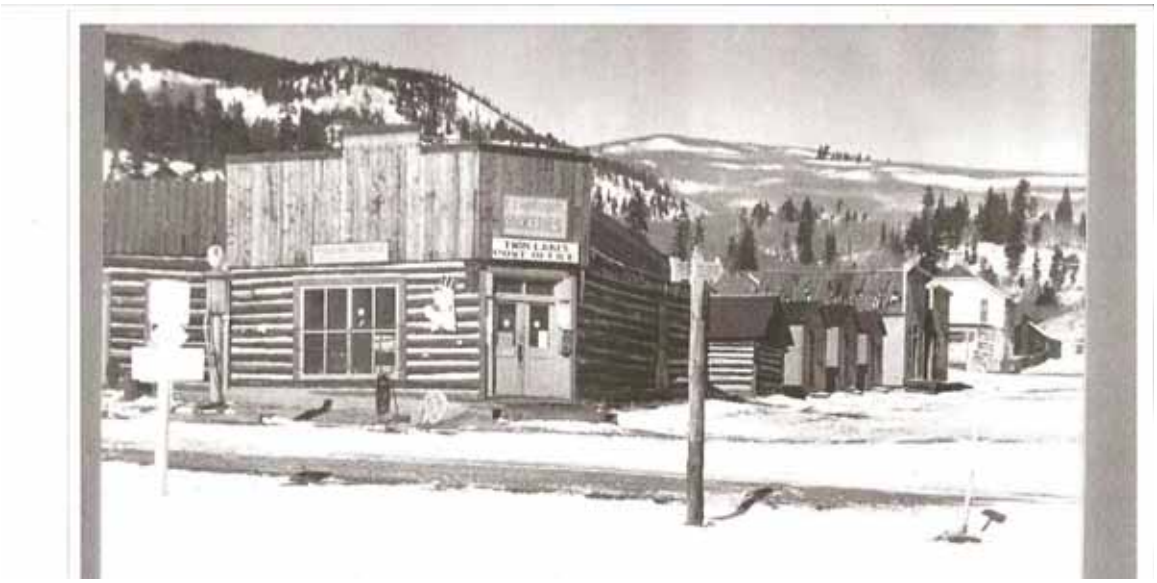


Photo 2-3. This photograph shows the north face of the general store owned and run by E.J. Hofenagel. The General Store was one block east of the Clarion Hotel. The proprietor's sign is above the Twin Lakes Post Office sign on the corner of the building. A Shell gasoline sign is to the right of the front door and a gasoline pump is to the left of the store windows. The Post Office operated in the General Store until 2011. Photograph courtesy of Twin Lakes Visitor Center.

Tourism and Leisure Activities, 1870s - present

By the 1870s, the town had become a popular summer vacation destination for the well-to-do, offering spectacular scenery and the state's largest glaciated lake with its excellent fishing and boating. (photo 2-4) Imagery by famous artists and photographers helped to promote the area. In 1873 photographer William Henry Jackson [19] accompanied Ferdinand Hayden on a survey expedition in central Colorado. Several famous photographs were taken, including the Mount of the Holy Cross and images of the Twin Lakes area. However, while climbing La Plata Peak, up the Lake Creek valley, Jackson's favorite mule stumbled and broke all of the photographic glass plates of the Twin Lakes area. "My finest negatives lost," Jackson lamented, with no time to re-take any of them. This was a true loss for the Twin Lakes area before effects of the silver boom. Nonetheless, several of Jackson's images of the area survive. (photos 2-6, 2-7)

Many prominent citizens, including writers and artists, visited Twin Lakes. Helen Hunt Jackson, the author of the novel *Ramona*, vacationed in Twin Lakes in the summer of 1874. Susan B. Anthony is believed to have visited Twin Lakes during a visit to Leadville and California Gulch. In the mid-1870s painter Thomas Moran visited Twin Lakes. He created etchings from some of Jackson's photographs of the area. In addition, at least six sketches that Moran made here survive in collections of the Gilcrease Museum, the Jefferson National Expansion Memorial, and other museums. Artist Helen Henderson Chain's 1876 painting of the lakes is in the Boston Public Library art collection. (photo 2-5) General William Jackson Palmer, founder of Denver and Rio Grande Railroad and family vacationed in Twin Lakes. Most of these visitors did not stay in the town of Twin Lakes which was almost empty from the mid-1860s to mid-1870s.

In the 1880s, James V. Dexter built the nearby Interlaken Resort on Twin Lakes, a 100-acre resort featuring a dance pavilion, horse stables, and servant's quarters. The area became a haven for

wealthy tourists who boated in the summer and skied in the winter. In the 1950s, enlargement of the lakes cut off access to the resort.

Today, the Twin Lakes area remains a popular tourist destination. The Twin Lakes Visitor Center assists over 4000 visitors per year with information on local fishing, boating, hiking, picnicking, and sightseeing.

Photo 2-4. Fishing party on Twin Lakes ca. 1875-1900. Photographer: Joseph Collier. Denver Public Library Western History/Genealogy Department, C-150

Photo 2-5. Twin Lakes, Colorado, 1876, painting by Helen Henderson Chain. Boston Public Library art collection

Photo 2-6. Lower Twin Lake ca 1881-1890. Photographer William Henry Jackson. Denver Public Library Western History/Genealogy Department, WHJ-225

Photo 2-7. The Twin Lakes, ca. 1882-1900, promotional stereograph. Photographer William Henry Jackson. Denver Public Library Western History/Genealogy Department, WHJ-10085

The Twin Lakes Dam Water Projects: 1898 - 1978

In addition to freighting, mining and tourism, Twin Lakes supplied another commodity that was crucial to development in Colorado: water. Although the Twin Lakes were formed naturally by glacial action, they have been modified for water storage. In 1898, the first Twin Lakes Dam (Historic American Engineering Record HAER CO-63) was constructed as part of an extensive, privately owned water project. This project captured water in the upper Roaring Fork, west of the Continental Divide, and diverted it to the eastern slope, using the Twin Lakes as storage. The project was conceived as a means of providing irrigation for sugar beet farmers east of Pueblo.

The system capacity was enhanced in 1935 when an ambitious transmountain diversion system greatly increased the amount of water available to farmers in the Arkansas Valley. Still in use today, the system collects the headwaters of the Roaring Fork River and a number of other western slope streams. It carries the water under the Continental Divide through a three-mile long tunnel known as the Independence Pass Tunnel and discharges it into the Twin Lakes Reservoir.

In 1978, the Bureau of Reclamation purchased the Twin Lakes Reservoir and its water reclamation system, along with the historic buildings on the south side of the highway within the town. In 1980, the Bureau of Reclamation completed construction of a new dam at Twin Lakes Reservoir, about 2500 feet downstream from the historic dam. The historic dam and outlet works were partially dismantled, inundated, and remained underwater until 1989 when the reservoir was lowered. The historic dam and outlet works were recorded to HAER standards in 1989.

More recently, the water has been redirected to Front Range municipal and industrial uses.

Colorado State Highway 82, 1927 – present

In 1927, the State of Colorado rebuilt the abandoned stagecoach route from Aspen to Twin Lakes and designated it as part of Highway 82. Most of it followed the original route, although some portions deviated. Between 1927 and 1961, tourism overtook mining as the draw to Aspen and Independence Pass. Although the railroad offered faster access, many visitors preferred to drive as "motoring" became a popular leisure time activity. In 1967, the east side of Independence Pass was paved. The Rio Grande discontinued its passenger train service when Interstate 70 was completed through Glenwood Canyon.

In 2012, a 40-mile segment of Highway 82 from Twin Lakes to Aspen was designated as part of the Top of the Rockies National Scenic and Historic Byway. This was a coordinated effort between the Byway's Board of Directors and the USDA Forest Service. The goal of the Byway is to enhance the route's intrinsic qualities, develop design guidelines, improve Byway safety, provide quality interpretation and develop a site master plan.

The Byway master plan identified the town of Twin Lakes as a high priority interpretive site for mining and regional history. The town's geographic position as the Byway's east closure point is crucial to the Byway's success.

ENDNOTES to Section 2.1

1. Private communication with V. Matthews, former Colorado Geologist (2014)
2. *Mountain Men and Fur Traders of the Far West*, edit. L. R. Hafen, (1965) William Sherley (Old Bill) Williams, p. 193
3. *History of Leadville and Lake County, Colorado*, D. Griswold & J. Griswold (1996).
4. *History of Leadville and Lake County*, Colorado, p. D. Griswold & J. Griswold (1996)

5. *Patrick Ryan Remembers*, Privately circulated by Ryan Family, (1943)
6. *The Wetmore Family of America and its Collateral Branches*, James Carnahan Wetmore, p. 73, p.97 (1861)
7. United States Census, 1840
8. United States Census, 1850
9. "DeKalb Masonic Lodge No. 144" (http://www.dekalbmasons.com, accessed 29 January 2015)
10. *Past and Present of DeKalb County, Illinois*, Prof. Lewis M. Gross (1907). Chicago, The Pioneer Publishing Company. P. 126.
11. "Galena and Chicago Union Railroad" (http://en.wikipedia.org, accessed 29 January 2015)
12. United States Census, 1860
13. "Delegates to the Illinois State Republican Nominating Convention in 1860", Wayne C. Temple, *Journal of the Illinois State Historical Society 92* (1999), p. 292
14. T.C. Wetmore letter to Abraham Lincoln, 17 Jan 1861 (http://ancestry.com Abraham Lincoln papers)
15. *The Far Southwest, 1846-1912: A Territorial History,* Howard Roberts Lamar (1966). Yale University Press, p. 187
16. *Collected Works of Abraham Lincoln Vol. 4*, p. 295. 20 March 1861, Memo on Appointments to Territories.
17. United States Census, 1870
18. United States Census, 1880
19. *William Henry Jackson, Framing the Frontier*, D. Waitley p. 137 (1998)

2.2 Significance and Contexts

The Clarion Hotel is significant under Criterion A, Events, in the area of Commerce, for its association with business services that supported regionally significant freighting, mining and transportation efforts. Although the region as a whole relied heavily on silver mining when the Clarion was built, it was the associated freighting and transportation businesses that shaped the town of Twin Lakes in the last three decades of the 1800s.

The major historic developments in Twin Lakes responded to the needs of people transporting ore, supplies, and workers to and from the silver mines of Leadville and Aspen. Twin Lakes was a convenient overnight stopping point on that long and difficult journey. The town offered food and beverage services, a blacksmith, general stores, a post office, lodging options, and an assay office. The Clarion Hotel fit into that pattern by providing lodging services to the miners, freighters, and other support workers passing through Twin Lakes on their way to or from Independence Pass.

Although the Clarion was a hotel, it is not significant in the area of Recreation. There is no evidence that tourists stayed here. The guest quarters were extremely small and the hotel ceased operation shortly after the downfall of the local silver mining industry, implying that it never served the tourist market.

The Clarion Hotel is significant under Criterion C, Architecture, as an extremely rare example of a true adobe structure in Lake County and in a high elevation mountain location. This may be the only true adobe structure in Lake County.

The Clarion Hotel is evaluated under Steven Mehls' *Colorado Mountains Historic Context* in the areas of: Precious Metal Mining as an Industry (1860-1920); Early Transportation (1859-1913); and Recreation, Tourism, Roots and Development (1865-1945).

The National Register nomination for the District was written in 1974. Like many nominations prepared at that time, it is fairly brief. It identifies the District areas of significance as architecture and recreation. National Register Criteria are not mentioned, but can be inferred as being A, Events (recreation) and C, Architecture. Based on the historical background discussed above in Section 2.1, the District may also be significant in the areas of Commerce (the business of trading goods, services, and commodities) and Transportation (for the role of the highway and services provided in the town in support of freighting operations).

It is recommended that the District be re-evaluated to determine boundaries, identify a period of significance, identify National Register criteria, and re-evaluate the areas of significance for the District.

The period of significance for the Clarion Hotel under Criterion A is 1879 – 1900 (estimated date of closure of the hotel function). The period of significance for the Clarion Hotel under Criterion C is 1879.

2.3 Architectural Style and Character-Defining Features

The Clarion Hotel is a 1-1/2-story plastered adobe structure with a wood framed front-facing gable roof enclosing a finished attic with dormers. The building is rectangular in plan and faces north to Highway 82. On the north, east and west sides, there is a continuous, narrow, wraparound shed-roofed porch. The shed roof is supported on simple wood posts. The south end of the building has a one-story adobe addition with a wood framed hipped roof.

The architectural style is closest to the National Folk House, Gable Front Family, as described in Virginia & Lee McAlester's *A Field Guide to American Houses*. The building does not fit well into any of the late nineteenth century styles, but contains a mix of elements. Like the national folk house, this is a simple front-gabled structure, with a narrow shotgun plan on the first floor. The wood shingled gable siding is typical of this style, as are the simple, relatively unadorned punched window openings. The dormers and porch are reflective of Victorian styles. The Victorian and National Folk styles typically utilize wood framing with wood siding or shingles as an exterior finish. The use of true adobe for the first floor structure of this building is unusual, as adobe is a construction type more commonly found in Pueblo Revival styles. True adobe is very unusual in Colorado mountain communities and at high altitudes outside of the San Luis Valley. This may be the only example in Lake County.

Character-Defining Features

Note: Features that do not date from the period of significance are not character-defining.

Site: (photo 2-8)
Building is in a late 19th-century historic district in a small mountain town of modest 1 to 1-1/2 story wood framed or log buildings with gable roofs
Set close to the south side of the road to Independence Pass, just east of where the pass road enters the narrow canyon
Lake Creek wetlands/open meadow to the south and east, with tall mountain peaks beyond
Fairly flat site with native grasses
Spruce trees planted on north side of building
Building separated from the road by wood fencing. Existing fence is not the original fence, but of a similar size and scale.

Exterior Character-Defining Features (photo 2-9)
One and one-half story building facing north
Plastered adobe brick first floor exterior walls
Front-facing gable roof with wood shingles, gabled dormers, adobe chimney
Dormer windows wood sash 4/4 divided light
Horizontal wood siding on gables and dormer walls
North side porch with shed roof on wood posts
Three exterior wood panel doors (rooms 1 and 2)

Interior Character-Defining Features
First floor "shotgun" plan arrangement
Tongue and groove flooring, Room 1
Wood board flooring, Room 2 and second floor (photo 2-10)
Bead board ceiling (photo 2-10)
Stairway to second floor (Photo 2-11)
Fireplace and adobe interior chimney (photo 2-10)
Wallpaper and muslin remnants on interior walls in various locations (photo 2-10)
(Note: Room 3 has been extensively modified since the period of significance and is not character-defining)
Second floor dormers and bead board siding finish

Photo 2-8. 2014, looking south showing site, relationship to highway, meadow, mountains

Photo 2-9. 2014 photo of west side

Photo 2-10, looking southeast in room 2: beadboard ceiling, board flooring, adobe chimney

Photo 2-11. Looking up historic stair. Enclosure has been widened to accommodate furnace flue.

2.4 Construction History and Chronology of Changes

1879 Constructed. Main gable roof has four dormers each side and two chimneys. One-story wing on west and south sides with shed/hipped roof. (Photo 2-12)
Ca 1890 West wing with shed roof removed. South wing with shed roof exists, which may be part of the original south wing. (Photo 2-13)
Early 1900s Hotel use discontinued. The building begins use as a single-family dwelling.
Before 1967 Two dormers have been removed from each side of main gable roof (photo 2-14)
Before 1974 A large wood-framed south addition with a shed roof and horizontal wood siding exists, extending beyond the west porch by about fifteen feet. Red Rooster tavern building is moved adjacent to the Clarion.(Photo 2-15)
1974 National Register nomination notes that the building is faced with brick. Brick was removed between 1974 and 1979. (Photo 2-15)
1978 Clarion and other historic buildings south of the highway purchased by Bureau of Reclamation. The Clarion was no longer used.
1979-80 Bureau of Reclamation drawings show the following work:

- Removal of frame addition extending west from the south wing
- New membrane roof and fascia on porches and south wing
- New wood shingle roof on main gable roof and dormers
- Remove metal stack through south wing roof
- Patch existing stucco: north end of west elevation & south end of east elevation.
- New “furred stucco” on south wall of south wing
- Remove & replace missing or deteriorated horizontal wood gable siding & dormer siding to match existing.

- Closure panels added over doors and windows.
- North porch roof leveled. Replaced missing post, second from west end.
- West porch: two northernmost posts plumbed and secured. Southernmost post replaced.
- Opening below west window in Room 2 framed in.

Between 1980 and 1994: West end of south wing roof partially reframed from shed to hip. Door opening added on south wall of south wing.

1991 assessment:
Notes no major structural problems except the porch, which has bowing posts, sagging roofs, and heaving concrete floor slab on all three sides. West porch roof sagging above second post from the south, fascia rotting, hole below doorway so nothing supports concrete slab. North porch: posts bowing due to heaving from concrete slab, caused by tree roots. Northwest corner of north porch, sagging porch roof. Northeast corner of north porch: porch has seriously shifted; corner post may have been moved back. East porch: big sag in porch roof. Exterior stucco noted to be in good condition, but loosened from the wall and cracking on east elevation above southernmost window on main house. West elevation: crack noted next to door into south wing; loose stucco above southernmost window of main house; gaps around door frame.

Modifications at unknown dates before 1979:
Removal of north chimney
Interior power outlets and ceiling light fixtures added, later removed.
Rooms 1 & 2:
Exterior walls of Rooms 1 & 2 furred out to the interior and faced with gypsum wallboard.
First floor window jambs extended in to accommodate added thickness of wall. Crown molding and jamb trim added to window. Window sill trim removed. North exterior door trim removed on inside.
Closet built on west wall of Room 1.
Room 2 east window replaced with a newer, smaller window sash.
Room 2 south wall chase enclosure framed out over adobe chimney.
Abandoned flue opening three feet north of fireplace in Room 2.
Room 3 (south wing):
Has been modified several times, based on historic photographs
Room 3 south door opening covered with plywood. East window partially filled in. South window filled in. West door to exterior has a solid outer door, later addition.
Kitchen cabinets and sink added
Stairwell:
Bottom of stairwell opened into Room 2.
Furnace added under stair. Stair enclosure widened to north to accommodate.
Cased opening between rooms 1 and 2 moved east by 3 inches, possibly related to furnace addition.
Lower stairwell walls finished with gypsum wallboard.
Second floor:
Second floor layout modified to create two bedrooms and two closets.
Cement fiber board added over floor

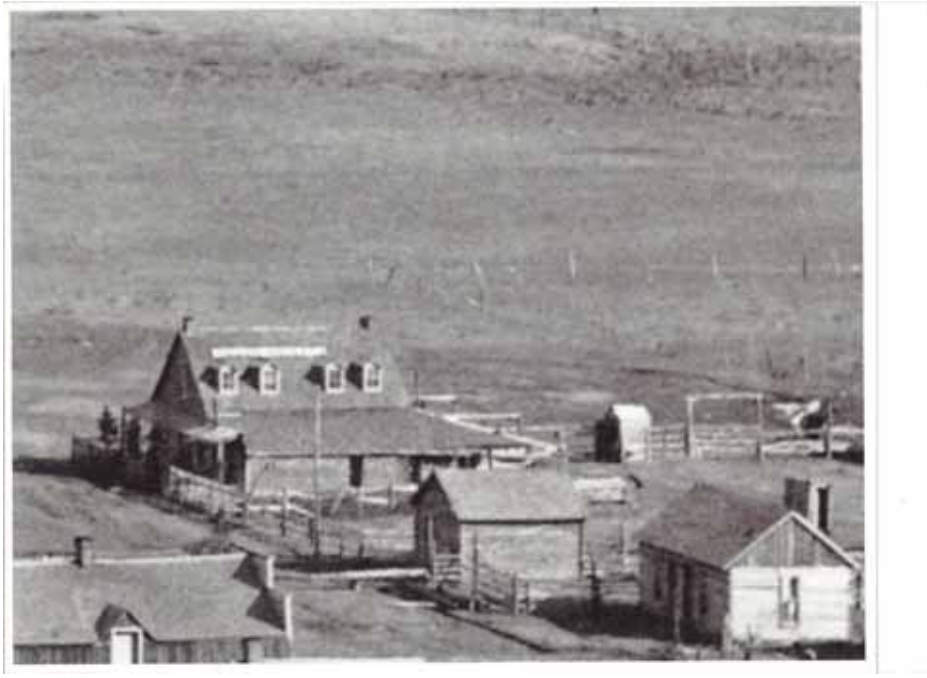


Photo 2-12. Clarion Hotel ca. 1880. Note the spruce trees in front of the building are approximately eight to ten feet tall. The main roof has four dormers and two chimneys. The west side of the building has a one-story room with an extended shed roof. Photo, Twin Lakes Visitor Center.

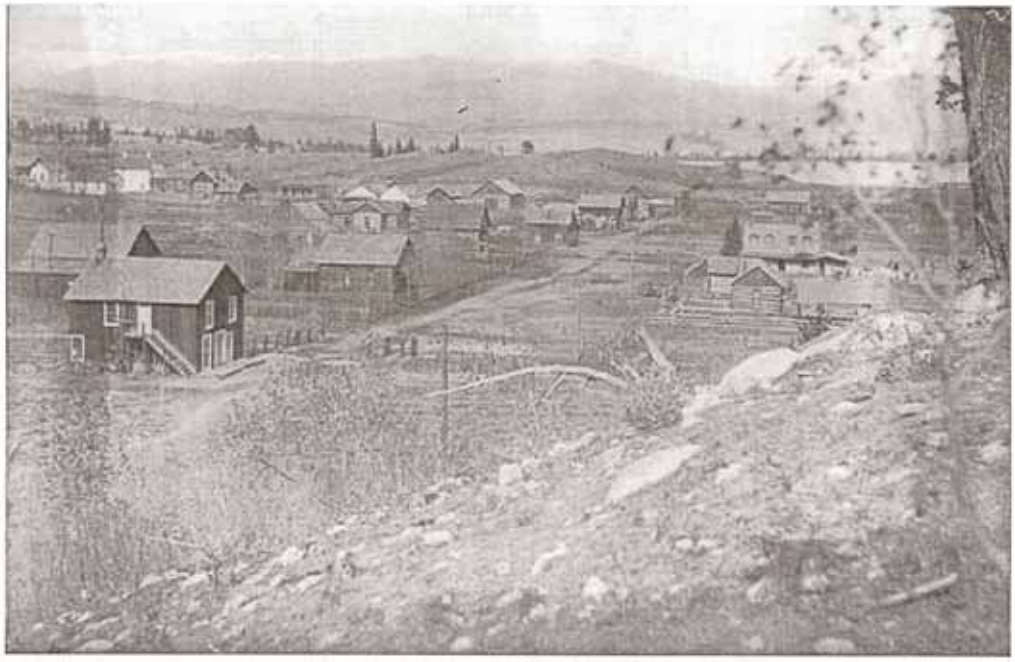


Photo 2-13. Undated. Spruce trees are now as tall as the roof. The west side shed roof has been removed. A shed roof on the south side is visible. Photo, Twin Lakes Visitor Center.

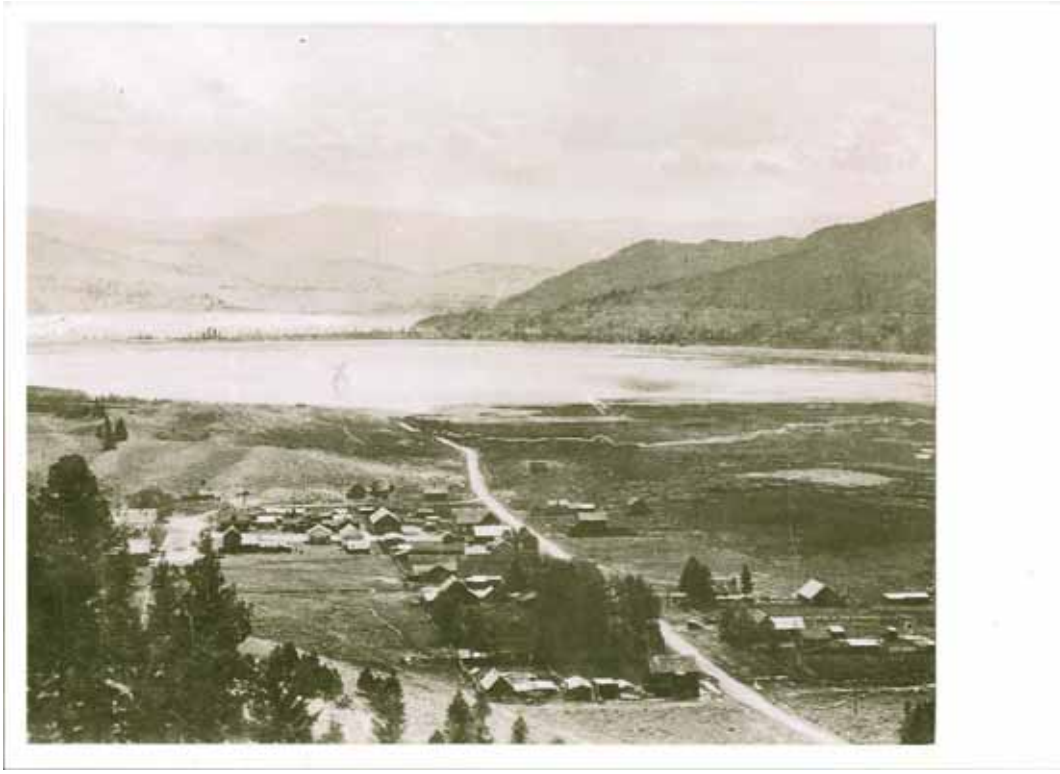


Photo 2-14. In this view the Clarion roof has only two dormers on each side and the spruce trees are 1-1/2 to 2 times the height of the roof. The highway was paved in 1967 and appears to be paved in this photo. Twin Lakes Visitor Center photo.

Photo 2-15. 1974 National Register nomination photo shows two dormers and a shed-roofed structure with wood siding on the south side of the main building. The nomination notes that the building has brick facing.

2.5 Proposed Use

The building was initially used as a hotel, then a single family residence. It has been unused since the late 1970s. Presently, no access to the interior is allowed. The intent is to rehabilitate the building for interpretation in support of the activities in the adjacent Red Rooster/Visitor Center. The Visitor Center currently serves over 4000 visitors per year out of the approximately 200,000 who pass by on Highway 82. The number of people who stop could be increased with improved interpretation of the mining era in Twin Lakes. Since the 1980s, the local community has turned the Red Rooster (a historic grocery store, later tavern and brothel) into a visitor center, built a paved parking lot and added restrooms, paths and a footbridge. In addition to the Red Rooster and the Clarion, the immediate area includes the Assay Office, Chicken Coop and Log House (Fine House). Visitor Center volunteers provide interpretation of the immediate area as well as information on other recreational opportunities in the area.

Preservation of the building will save it for future generations, and will allow for better interpretation even if access to the interior is not financially feasible immediately. The community hopes to preserve the Clarion and over the long term, furnish it with period artifacts (or replicas) to allow interior access. With this, visitors will gain an understanding of what life was like when Twin Lakes was a bustling center for late nineteenth century mining-related businesses.

The proposed use for interpretation is appropriate and will not require modifications that would destroy historic integrity or require the removal of excessive amounts of historic fabric. The number of visitors allowed into the building at any one time should be limited to prevent over-use and to avoid code-required safety upgrades that would be necessary if larger groups were permitted inside.

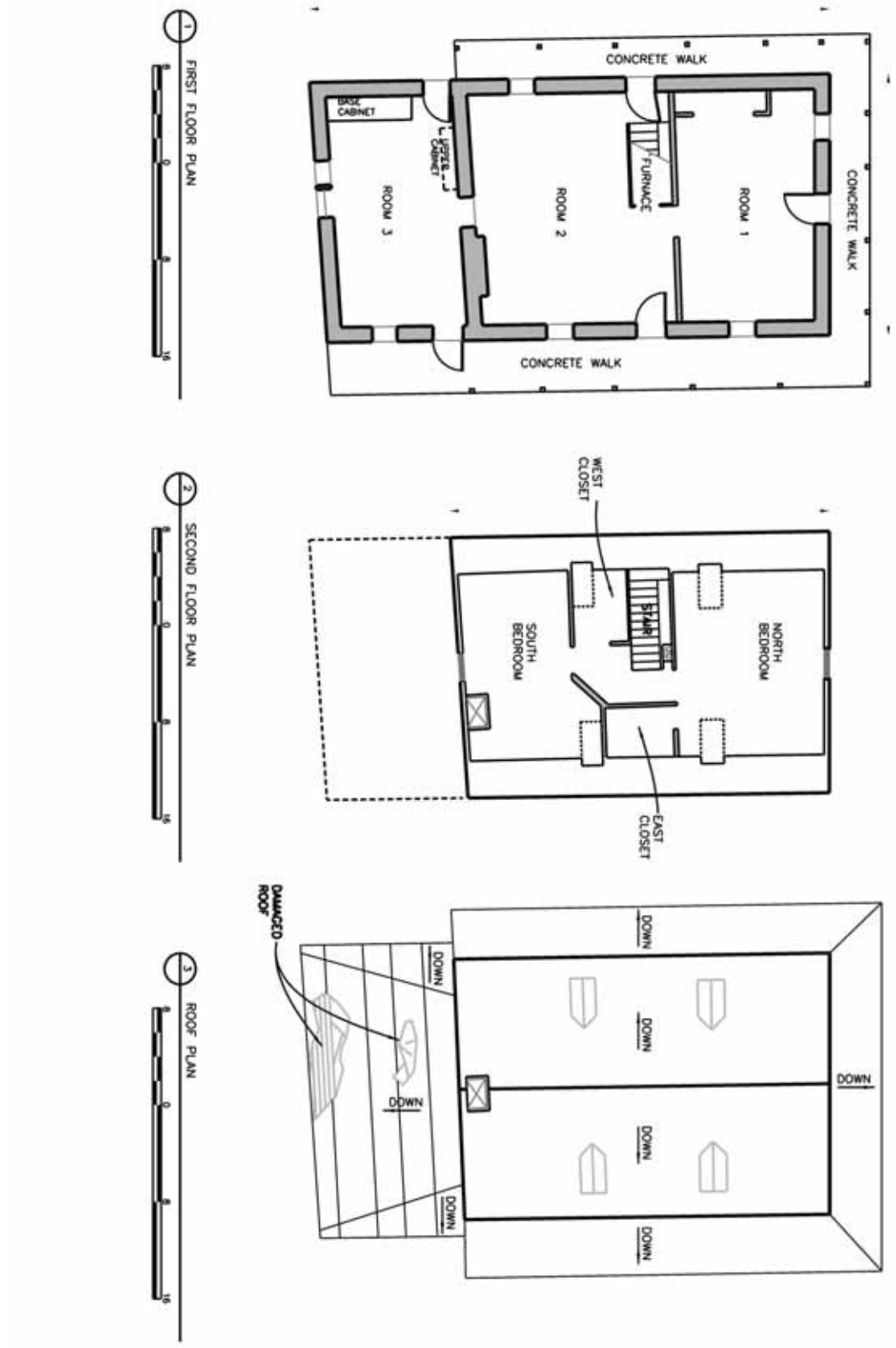
The Leadville Heritage Museum, operated by the Lake County Civic Center, has in its collection numerous artifacts from Twin Lakes dating from the Clarion Hotel period of significance. These may include furnishings from the Clarion, but that has not been determined yet. The Heritage Museum has expressed interest in working with the Friends of Twin Lakes to identify and lend appropriate artifacts for display in the Clarion Hotel after its rehabilitation. Another artifact that has been tentatively identified is a heating stove that was at the north end of the second floor, and may now be owned by John McDonough in Leadville. McDonough owned the Clarion for 3 years in the 1970s. If artifacts are kept within the Clarion, a battery-powered security system should be considered.

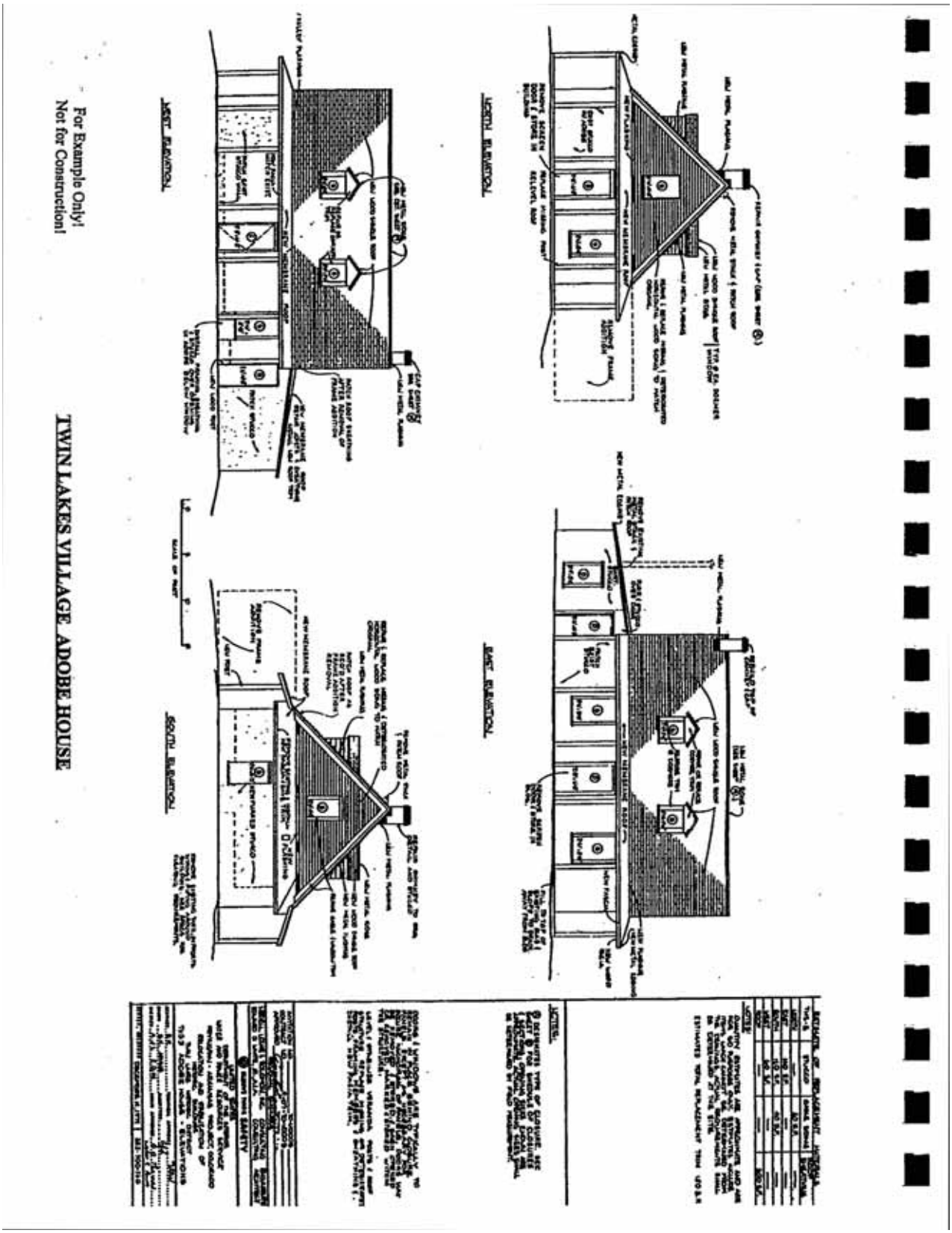
2.6 Cultural Resource Data

The Clarion is structure THS-3 in the Twin Lakes Historic District (5LK.41). The District was entered into the National Register of Historic Places in July 1974. In the nomination, the Clarion is identified as the Historic Adobe House and is listed as a “principal building”. The town of Twin Lakes is part of the Top of the Rockies Scenic and Historic Byway, designated in 2012. Twin Lakes is identified in the Byway master plan as a high priority interpretive site for mining and regional history.

2.7 Drawings

Please refer to 2014 floor plan drawings on the next page, followed by 1979 elevation drawings by the Department of the Interior.


1
FIRST FLOOR PLAN
CONCRETE WALK
BASE CABINET
UPPER CABINET
ROOM 3
ROOM 2
FURNACE
ROOM 1
CONCRETE WALK
CONCRETE WALK
2
SECOND FLOOR PLAN
WEST CLOSET
STAIR
SOUTH BEDROOM
NORTH BEDROOM
EAST CLOSET
3
ROOF PLAN
DAMAGED ROOF
DOWN
DOWN
DOWN
DOWN
DOWN
DOWN
DOWN
DOWN



1979 drawings by Department of the Interior

Section 3: Building Condition Assessment: Definitions

Definitions:
Evaluations of building features or elements were recorded as being in good, fair, or poor condition. These terms are defined as follows.

Good Condition:

The feature or element is intact, structurally sound, and performing its intended purpose.
There are few or no cosmetic imperfections.
The feature or element needs no repair and only minor or routine maintenance.

Fair Condition:

There are early signs of wear, failure, or deterioration, although the feature or element is generally structurally sound and performing its intended purpose.
There is failure of a sub-component of the feature or element.
Replacement of up to 25 percent of the feature or element is required.
Replacement of a defective sub-component of the feature or element is required.

Poor Condition:

The feature or element is no longer performing its intended purpose.
The feature or element is missing.
The feature or element shows signs of imminent failure or breakdown.
Deterioration or damage affects more than 25 percent of the feature or element and cannot be adjusted or repair.
The feature or element requires major repair or replacement.

Treatment Priority 1: Critical. The element exhibits advanced deterioration that has resulted or will result in failure within two years. The deficiency is a current and immediate threat to the health and/or safety of the user. This category includes any critical safety issues, such as critical safety-related code violations or critical accessibility problems that represent current and immediate threats to health and/or safety of users.

Treatment Priority 2: Serious. The element exhibits deterioration that, if not corrected, will result in its failure within 2 to 5 years. This category includes any serious safety issues, such as safety-related code violations, or serious accessibility problems that represent potential threats to health and/or safety of users.

Treatment Priority 3: Minor: The element exhibits evidence that standard preventative maintenance practices have not been followed and there is a reduced life expectancy of the affected element.

Recommended Treatments:
The Secretary of the Interior's Standards for the Treatment of Historic Properties (36CFR Part 68) describes four approaches to treatment of historic properties: Preservation, Rehabilitation, Restoration, and Reconstruction. The degree of intervention recommended depends on the existing condition of each specific element and its significance or importance to the property. Each historic property should have an ultimate treatment; in other words, one overriding treatment approach that guides the treatment philosophy for the entire property. Specific areas

and specific portions of a building may have different recommended treatments, in response to conditions and needs.

The Secretary of the Interior's Standards define the treatments as follows.

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

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

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

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

The recommended ultimate treatment for the Clarion Hotel is Preservation.

Section 3.1 Site

Description

The Clarion Hotel is situated in the center of the Twin Lakes Historic District, in the cluster of historic buildings located south of Highway 82. The Clarion faces north to the highway, with the Twin Lakes Visitor Center (historic Red Rooster) to the east, and the historic Assayer's Office, Log House, and Chicken Coop to the west. A non-historic public restroom building is located southeast of the Clarion. East of the Visitor Center there is a parking lot and loop drive with access from the highway. See Site Plan drawing in Section 1. The Visitor Center is open to the public but the other historic buildings are available for exterior viewing only. Meandering non-historic footpaths of crusher fines, some edged with stones, connect the buildings. Between the Clarion and the Visitor Center there is a non-historic wooden footbridge over a small drainage. Picnic tables for visitor use are located throughout the historic site. On the east side of the Clarion, there is a wood-edged picnic area surfaced with crusher fines and

The site slopes down gently to the south, toward Lake Creek and the wetlands around it. (Photo 3.1-2) Steep mountain peaks frame the view to the south and west, where the highway begins its ascent into the narrow canyon leading to Independence Pass. A two-rail wooden ranch-style fence separates the historic buildings from the south side of the highway. (Photo 3.1-1)

Vegetation throughout the site consists of native grasses. On the north and east sides of the Clarion are five very tall spruce trees that were planted soon after the hotel was built.

Photo 3.1-1. Looking southwest at Visitor Center showing site setting. Clarion is to the right of the Visitor Center in its grove of spruce trees.

Photo 3.1-2. Looking southeast at wetlands and non-historic toilet building. Just south of the Clarion, a shallow gabled roof with wood shingles covers an unused storage pit.

Photo 3.1-3. Site along south and east sides

Photo 3.1-4. Looking west along north porch showing concrete porch slab, porch roof and spruce trees

Photo 3.1-5. Looking north along west porch showing concrete porch slab, porch roof, footpath with stone edging

Immediately adjacent to the building, there is a concrete walkway under a wood framed porch roof on the east, north and west sides. (Photos 3.1-3, 4, 5)

Condition

Site drainage and grading are discussed in Section 3.2.

Accessibility
The site is not fully handicap accessible, but accessibility is achievable. An accessibility analysis of the entire site is beyond the scope of this assessment, but the site is relatively flat and crusher fines paths have been added. No accessible picnic table was seen.

Recommendations
If the exterior of the Clarion is to be used for interpretation, an accessible route from an accessible parking space should be provided. The existing crusher fines path should be treated with a stabilizer that will allow the path to maintain its surface when used by persons with wheelchairs or walkers. The addition of an accessible picnic table with at least 36" clearance of stabilized surface should be provided somewhere along the accessible route.

If interior access to the Clarion is to be provided, then the east door into Room 2 is recommended for widening to 32" clear width. None of the existing exterior doors are wide enough for accessibility.

The addition of some exterior interpretation is recommended for several reasons. The Visitor Center, the primary source of visitor information, is not handicap accessible and is not open year-round. In the future, it may be possible to allow visitors into the Clarion interior, once it has been stabilized and preserved. Exterior interpretation would allow off-season visitors to learn more about the Clarion even when staffing does not permit interior access.

Priority
Site Accessibility: Minor, because existing paths to the Clarion are close to meeting accessibility standards. As a federally-owned property, Architectural Barriers Accessibility Standard (ABAAS) requirements for access to Federal recreation facilities apply.

If visitors are allowed access to the interior of the Clarion, then accessibility into the building should be provided for disabled persons, or adequate interpretation provided. Accessibility to the second floor is not feasible, and should be handled with interpretation.

Section 3.2.1: Site Grading and Drainage Assessment

General description:

A concrete sidewalk apron surrounds the west, north, and east sides of the primary structure under the porch roofs. The sidewalk measures 3 inches thick and an inscription in the flatwork is dated 1964 (Photo 3.2-1). The sidewalk is approximately 3 feet wide, matching the width of the porch roof. Large spruce trees flank the north and east sides of the Hotel.

The south, lean-to addition (enclosing Room 3) is bounded on all three sides by earth. Refer to the foundation section below for further discussion on the grade elevation around the addition

Condition:

The concrete sidewalk is in poor condition. It is cracked and heaved in many places where influenced by the surrounding tree roots. In some locations there are burrow holes beneath the exterior slab where critters gain access to the crawlspace (Photo 3.2-2)

The exterior grade around the lean-to is in poor condition. It does not appear to slope away from building footprint. (Photo 3.1-3) Because the grade has been raised, it is in contact with the stucco and adobe exterior walls and makes them susceptible to moisture infiltration. Exterior grade along the east and west sides of the main building has slight positive drainage. (Photos 3.1-5, 3.1-3) The north side is dominated by the large spruce trees, whose roots cause the grade to slope towards the building along that side. This condition has also caused uplift in the north porch columns and porch roof. (Photo 3.1-4)

Photo 3.2-1: Exterior sidewalk damage and burrow hole at southeast corner

Photo 3.2-2: Burrow hole beneath exterior concrete sidewalk, west side

Porch walkway discussion:
Two options were considered for replacement of the porch walkway surface, with a third option for the north porch. The concrete walks could be replaced with a framed boardwalk, either constructed of treated wood or recycled plastic boardwalk over treated wood framing. On the north side, this would have the advantage of accommodating movement as the tree roots continue to grow. The disadvantage of a boardwalk system is that it either requires some underlying structure, meaning the grade below would be much lower next to the building; or the treated or plastic boardwalk rests directly on the soil, resulting in a shorter life for the material. The alternate approach on the east and west sides is to replace the existing concrete walks with new concrete walks, sloped to drain away from the building.

The north porch presents a unique challenge relative to the large Spruce trees and their roots. A paved or framed walkway surface in that location would require repair or replacement on a regular basis. The recommended approach is to surface the north porch floor with pea gravel or crusher fines. This surface could accommodate the ongoing tree growth and could readily be re-graded when required. Care is needed to avoid compacting the tree roots during construction.

Recommendations:

- Re-grade around south addition. (Serious)
- Remove concrete sidewalks along east, west and north sides entirely. Add fill in collapsed areas or burrow holes. (Serious)
- On the east and west sides, replace concrete sidewalks with new concrete sidewalks of at least 4" thickness and reinforced with fibermesh. Ensure positive drainage away from the building. (Serious)
- On the north side, replace concrete walk with crusher fines or pea gravel. (Serious)

Section 3.2.2: Foundation Condition Assessment

General description:
The perimeter foundation system of the Clarion Hotel consists of dry-stacked rubble stones. The stones are granite that are assumed to have been sourced locally (Photo 1). Over time, clay and soil mobilized by water have filled the voids between the stones and act as a crude mortar. The stone stem wall was measured to extend roughly 20 inches below grade (Photo 3.2-2). The foundation walls are approximately 12 inches thick, matching the thickness of the adobe exterior walls. There is no footing or base course beneath the foundation walls although the walls do taper outward slightly towards their base where the larger stones were used.

The main building floor system consists of two framing bays. An approximately 12 inch diameter sill log running east-west and aligned below the furnace room's south partition wall divides the framing bay. It is unknown whether the log rests directly on the interior grade or on stone supports. Interior grade is currently in contact with the bottom and sides of the log (Photo 3.2-3).

A singular stacked stone support supports one of the 8 inch diameter log floor joists at midspan. The stacked stone prop is located in the center of the south bay of the main building, below Room 2. (Photo 3.2-4). A similar, crude and seemingly isolated prop exists in the north bay, below Room 1. (Photo 3.2-5) (*Note that the framing below Room 1 is inaccessible for observation. The photo was taken from below Room 2 in one access opening between log joists.)* A loose stack of rubble stones in the crawlspace supports an adobe chimney along the south wall of Room 2. (Photo 3.2-6).

Room 3 is in a lean-to addition at the south end of the building. In this location, the rubble stone stem wall was measured to extend roughly 12 inches below the current exterior grade elevation (Photo 3.2-7). Along the east, south, and west elevations of the south addition, a concrete curb/parge coat has been installed atop the stone foundation and adjacent to the exterior adobe wall. The concrete curb/parge coat measures approximately 8 inches tall by 1 inch thick (Photo 3.2-8). Presently the interior finish floor elevation roughly matches the exterior grade elevation, but there is clear evidence that both have been raised in several campaigns over the years. The concrete curb is placed against the base of the adobe walls where they are now below grade. There are multiple layers of floor sheathing. The door thresholds are approximately 6 inches below the current interior floor elevation (Photo 3.2-9). There was no evidence of interior footings or isolated props in the south addition, but that area of the crawlspace is inaccessible for observation.

Condition:
Overall, the foundation system is in fair condition.

Where observed in the south bay (Room 2) crawlspace of the main building and in the two exploratory excavations, the perimeter stone stem walls appeared to be relatively intact (Photo 3.2-10). On the other hand, some of the stones have displaced and rolled inward (Photo 3.2-11), vermin are known to access the crawlspace via holes in the perimeter wall (Photo 3.2-2), and the wall has been inappropriately modified to accommodate modern sheet metal ductwork (Photo 3.2-12).

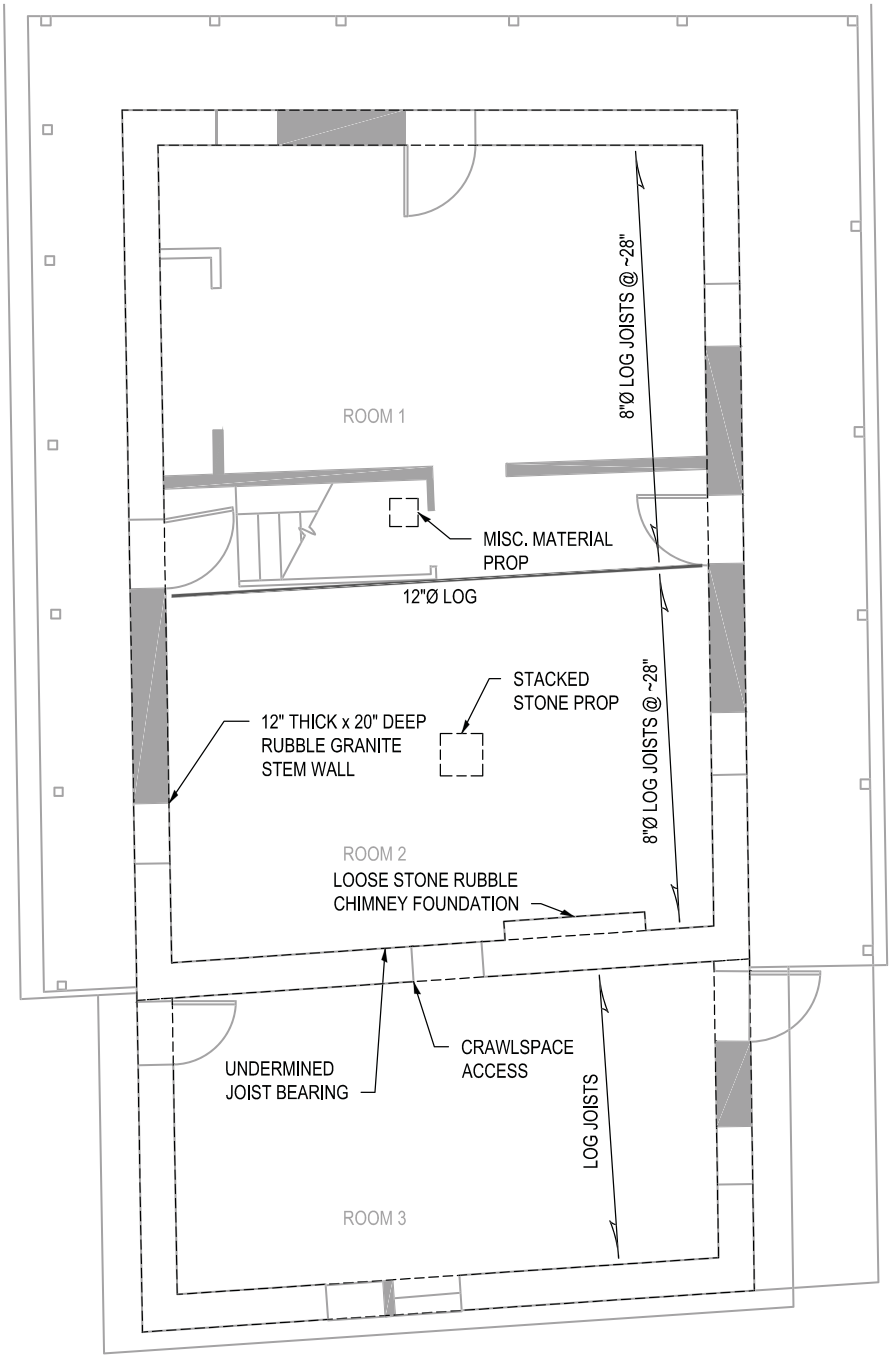
Although the foundation does not extend enough below grade deep enough to meet the Lake County code frost depth requirement of 48 inches, there are no clear signs of distress directly related to frost heave.

Similarly, the root systems from the surrounding spruce trees do not appear to have adversely affected the foundation walls and are not prone to do so in the future. The following pertinent information in regards to the trees effect on the structure were gleaned during an onsite meeting with the arborist and her subsequent report (See Appendix).

> The complete root systems extend in a radius of at least 60 feet from the tree trunks and the root balls are approximately 15 feet in diameter. Therefore, the tree roots certainly extend below and beyond the footprint of the Hotel. Although the primary/structural tree roots are expected to be no more than 18 inches below the ground surface, no roots were visible in the crawlspace. The young roots followed the path of least resistance and extended parallel or below the foundation walls as they grew. This was evidenced in the exploratory excavation where a primary root (although displacing the adjacent exterior slab) bent sharply parallel to the foundation wall without damaging the wall appreciably (Photo 3.2-13). The exterior adobe walls and stone foundations were of sufficient mass to resist the upward force imparted by the young primary roots that may have traveled below the foundation as they grew in length and girth. The mature roots are not likely to expand in length or girth in the future; they are done growing.
>
> Also, the trees are leaning away from the prevailing wind direction of west-southwest. The arborist explained that when the trees eventually fall over during a wind storm, they will fall to the east-northeast, away from the Hotel, and that any roots below the foundation wall will snap just outboard of the foundation wall. Given the trees' height and the roughly 5 inch diameter of the primary roots, some foundation, wall, and porch floor damage should be expected in the event that one of the trees does fall over. It was recommended that the trees be aggressively pruned to limit their sail area subjected to wind and in turn increase their lifespan and reduce their risk of toppling. It was also explained that the failure of the trees would not necessarily be instantaneous. Displacements in the soil above the root ball would signal that the tree is moving; monitoring of the trees was therefore recommended in conjunction with periodic pruning.

The rubble stone foundation below the chimney is in poor condition. The individual stones have displaced and the assembly is no longer directly supporting the chimney masonry where it projects north from the gable end wall (Photo 3.2-14). The chimney's masonry is now partially supported by the wood floor framing. The cause of the foundation's poor condition in this area is unknown, but water infiltration into the crawlspace that caused soils subsidence is a possible culprit. The southeast corner of the crawlspace is not accessible or visible, but the foundation wall just to the east of the chimney is presumed to have come apart similarly. The floor in this area is displaced downward substantially indicating that the log joists have moved downward sympathetically with their stone wall support.

The rubble stone foundation supporting the perimeter walls of the lean-to south addition (Room 3) appears to be only one course high. At this bearing elevation just below grade, the soils are more prone to moisture cycles than the soils at lower elevations. Consequently, the base course of stones is more prone to settlement when soils are wetted and weakened, and more prone to heaving when the wetted soils freeze, in comparison to the more substantially constructed foundation around the main portion of the structure. As discussed in Section 3.4, there is evidence that the lean-to addition has settled downward relative to the main building. The entire addition is constructed skewed, as seen in the measured floor plan in Section 2.7 and below.



FIRST FLOOR & FOUNDATION PLAN

Recommendations:

- Around the main portion of the structure, the foundation walls should be repaired. This involves removing the interior floor sheathing so that the inside face of the walls can be accessed, loose stones be reset with mortar, and damaged sections be rebuilt. The exterior face of the foundation wall should also be exposed to perform the same repair work. This work should be monitored by an archaeologist. (Serious)
- The opening in the south foundation wall currently affording mechanical duct access needs to be treated. If the duct is removed, the opening can be infilled/rebuilt. If the duct needs to remain, then the opening jambs need to reconstructed and a lintel installed so that the log joists and floor sheathing are no longer undermined. (Critical) *Note that the other end of the duct passes over the top of the interior log sill between joists with no effect on the structure.*
- The interior log sill should be inspected to ensure it has not suffered moisture-borne decay. None is expected. Therefore clearing soil and debris away from the sides and bottom of the log is expected. If the log is merely resting on the earth, then stones or concrete footing should be placed periodically along its length. (Minor)
- Interior isolated props can remain without treatment since they do not damage the structure and since they are not needed to support the floor. If strengthening the first floor framing is undertaken as discussed below, each log joist will need to be supported by a prop that bears on a stone or concrete footing. (Discretionary)
- Replace or rebuild the foundation below the chimney. This can be accomplished without extensively shoring or reconstructing the chimney by performing the work in stages. The foundation can be reconstructed with mortared rubble stones or with reinforced concrete. (Critical)
- Similar to the foundation around the main structure, the foundation around the lean-to addition should be exposed on both sides so that it can be repaired. Pending the objectives of the stakeholders and the final treatment of the lean-to addition, it may be appropriate to replace the existing foundation with a conventional reinforced concrete footing and stem wall. (Serious)

Photo 1.2-3: Granite stone on site similar to those used in foundation

Photo 3.2-2: Depth of foundation as measured from exterior exploratory excavation along north elevation

Photo 3.2-3: Log sill/foundation dividing north and south first floor framing bays

Photo 3.2-4: Singular stacked stone support at midspan of a log joist in the south bay

Photo 3.2-5: Isolated adobe, wood, and miscellaneous material log joist support in the north framing bay

Photo 3.2-6: Loose stack of stones supporting the chimney above

Photo 3.2-7: Depth of foundation as measured from exterior exploratory excavation along south elevation of lean-to addition

Photo 3.2-8: Concrete curb/parge coat along base of south addition exterior walls

Photo 3.2-9: West elevation of south addition. Note multiple layers of floor sheathing and threshold elevation relative to apron slab

Photo 3.2-10: Inside face of stone foundation wall along west elevation of main building in south bay

Photo 3.2-11: Inside face of stone foundation wall along east elevation of main building in south bay below Room 2

Photo 3.2-12: Inside face of stone foundation wall along south elevation of main building in south bay below Room 2. Note that opening made for duct has undermined the log floor joist.

Photo 3.2-13: Base of foundation wall along north elevation. Note that tree root is oriented parallel to foundation wall and that is has not displaced the immediately adjacent stones.

Photo 3.2-14: Rubble stone footing beneath chimney has spilled outward into the crawlspace

Section 3.3: Structural System Condition Assessment

General description:
The Clarion Hotel is a one and one-half story adobe brick building clad in stucco with a crawlspace below. The main building is rectangular in plan and measures 22 feet wide by 31 feet long. A one story, 22 feet wide by 12 feet long, lean-to addition interfaces with the south side of the main building. Both the main building and the lean-to addition have wood framed floors and roofs. All of interior partitions are stud framed except the former exterior south wall of the main building which is constructed of adobe bricks.

The lateral force resisting system of the Hotel is provided by the wood roof and ceiling diaphragms and the exterior adobe shear walls.

Condition:
Overall, the gravity framing systems of the Clarion Hotel range from good to poor condition. The main portion of the building is in considerably better condition than the lean-to south addition.

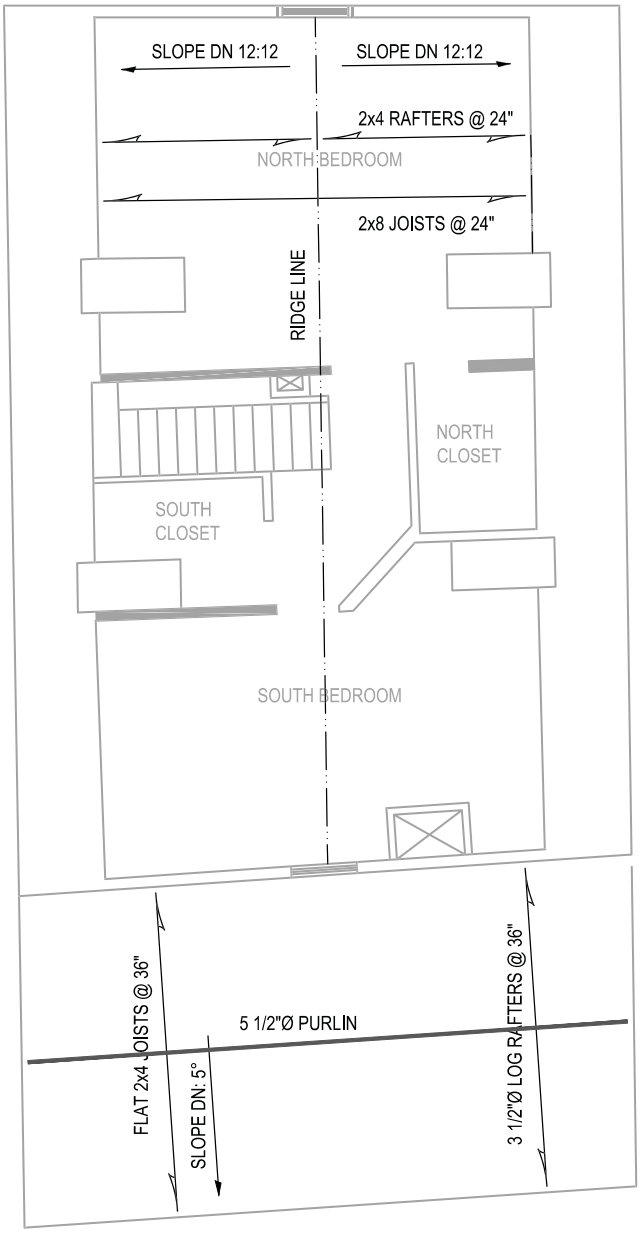
The lateral force resisting system of the Hotel is in fair condition. The wood diaphragms and adobe walls are adequately proportioned to resist lateral forces, but the connections between the system components need to be bolstered.

Refer to sections above and below for further discussion and recommended treatments.

3.3.1 Floor and Ceiling Systems

General description:
The first floor framing in the main building is composed of two bays of 8 inch diameter log joists spaced at roughly 28 inches on center (Photo 3.3-1 and floor plan in Section 3.2). One bay spans roughly 13 feet in the north-south direction from the stone foundation stem wall below the south wall to a 12 inch diameter mud-sill log located just south of the stair construction/furnace room above. Each 8 inch joist is notched to rest on the stone wall. The other bay is only visible through an opening above the 12 inch log between joists. The framing in this north bay is a mirror image of the south bay but spans about 15-1/2 feet. The floor is sheathed with 1x6 rough sawn horizontal boards running east to west. In the north bay (Room 1) the floor sheathing is topped with tongue and groove hardwood flooring. The logs do not appear to be flattened (or if so, only slightly) where the decking rests; instead the decking is shimmed where it bears on the joists (Photo 3.3-2). The crawlspace depth varies somewhat and averages roughly 12 inches below the bottom of the log joists.

Visible from a small opening in the south foundation wall, the framing of the lean-to addition matches that of the main building. At this location, the log floor joists span roughly 10-1/2 feet. The diameter of the logs, nor the presence of intermediate props, could be determined. This floor bay is also sheathed with 1x6 rough sawn horizontal boards topped with hardwood flooring, but additional wood sheathing layers, and a topping slab have been added during its lifespan (Photo 3.3-3). The depth of the crawlspace under the addition is difficult to determine but where visible it is near or in contact with the bottom of the log joists with clear space between the joists (Photo 3.3-4).



SECOND FLOOR & ROOF FRAMING PLAN

NORTH

The second floor joists of the main building also act as the ceiling joists for the first floor. These rough sawn 1-5/8 inch by 7-3/4 inch members spaced at 24 inches span east to west between the exterior walls (Photo 3.3-5). The joists are supported by a single header where interrupted at the east edge of the stair opening in the second floor.

At the adobe sidewalls, the joists rest on adjacent 2x4 and 2x8 plates (Photo 3.3-6). At the gable walls, the edge joists bears on intermittent wood shims atop the adobe (Photo 3.3-7). Bead-board is hung from the bottom of the joists as the ceiling finish (Photo 3.3-8) and the tops of the joists are sheathed with 1x random-width horizontal boards. Roughly 36 inches from the exterior face of the exterior side walls, a short stud wall composed of 2x4 cripples spaced at 24 inches extends from the joists to the roof rafters. No horizontal floor sheathing exists between these walls and the eaves (Photo 3.3-9).

The ceiling joists of the lean-to addition are 2x4 members oriented flatwise, are spaced at roughly 36 inch centers, and have a 5 degree downward slope from north to south (Photo 3.3-10). These members are supported by the south exterior wall and a make-shift ledger to the north. The ceiling finish is fastened to furring strips running perpendicular to the 2x4 flat ceiling joists.

Condition:
The floor framing in the main building is generally in good condition. Both the log floor joists and the sawn lumber second floor joists are in good physical condition.

The live load carrying capacity of the first floor log joists is about 60 psf. Under the 2012 International Building Code, the capacity need be 100 psf accordant with public assembly for the proposed new building use as a museum. Since there are no signs of distress in the members that are visible and deflections at midspan are within typical tolerances, these areas in the main building could be load posted pending approval by the building official. This would limit the intervention and be in the best interest of preserving the building as it was constructed. On the other hand, it would be a relatively simple and reversible operation to add midspan support lines to the log joists during other foundation repair work.

The first floor framing of the lean-to addition is in fair condition. Log joists appear to be of smaller diameter than those in the main building and they are near or in contact with the earth. There was not clear evidence that the joists were deteriorated or overloaded since the floor was relatively level and stiff, but their proximity to the crawlspace soils makes them susceptible to eventual decay.

The second floor framing is in fair condition. Although the joists are largely in good physical condition despite their 20 foot span, their live load carrying capacity is less than half the minimum required. Also, there is an anomalous framing condition one joist bay to the south of the stair opening. There is a non-continuous joist pair instead of a continuous joist. As a result, the unsupported ends of the joists where they lap have deflected downward and disturbed the bead-board ceiling finish. It is not abundantly clear why the discontinuity exists but it is possible that an east-west running first-floor wall that supported the joist pair was removed. The wall would have run parallel to the joist framing and concealed the seam in the bead-board that is now visible (Photo 3.3-11).

The single joist headers around the stair opening are considerably undersized for their demands. The wood framing is also not anchored to the tops of the adobe sidewalls or gable walls and relies solely on friction. As part of the structural due diligence assessment it is evident that positively

anchoring the wood framing to the masonry as a safeguard to a seismic event is prudent. Doing so will help transfer in-plane shear forces into the masonry and will also provide restraint to the walls from tilting outward from the building. Similarly, the omission of the second floor wood decking in the dead spaces along the eaves lessens the second floor diaphragm capacity.

The ceiling joists in the lean-to addition are in poor condition. They are insufficiently sized to support the self-weight of the ceiling and as a result they have deflected downward significantly.

Recommendations:

- Load post the first floor to allow a maximum live load of 60 psf. (Serious)
    - Alternatively, the log joists could be supported at their mid-length by wood or stone props atop stone or concrete isolated footings. (Discretionary)
- At the lean to addition, verify the log size and spacing so that the live load carrying capacity can be determined. Load post the area or introduce intermediate supports as recommended for the main building if the existing capacity is insufficient for the proposed new use. In combination with the perimeter foundation repairs, excavate the soils beneath the framing, provide a moisture barrier atop the soil, and ventilate the crawlspace to discourage moisture-borne decay. (Serious).
    - Alternatively, the relatively small floor area could be replaced with a concrete slab on grade if the existing framing is determined to be unsalvageable or the difficulty of excavating the crawlspace is too great. The top layer of the existing floor of the addition is concrete. (Discretionary)
- Strengthen the second floor framing by sistering the joists with laminated veneer lumber (LVLs) and supplementing the wood-to-wood connections around the stair opening with framing anchors and fasteners. (Serious)
- Bolster the second floor diaphragm to top of masonry wall connection around the entire main building perimeter. Given the characteristics of the adobe, anchors would have considerable embedment to bridge several courses and be inserted in oversized grout-filled holes. (Minor)
- Install wood decking or plywood sheathing to the second floor in the dead spaces to complete the diaphragm to the adobe sidewalls. (Minor)
- Reframe the non-historic lean-to addition ceiling or remove. (Critical)

Photo 3.3-1: First floor log joists in the south bay of the main building looking north at log sill

Photo 3.3-2: Top of log is shimmed where floor decking bears

Photo 3.3-3: Cross section of floor sheathing and finishes in lean-to addition under Room 3. Note upper layer of concrete.

Photo 3.3-4: Log joist resting on or near crawlspace soils faintly visible in background beyond hole in foundation wall.

Photo 3.3-5: Second floor joists

Photo 3.3-6: Second floor joists bearing on adjacent plates over adobe wall. Note also rim board, rafter, and back of porch rafter notched over rim board

Photo 3.3-7: Second floor end joist bearing on wood shim stack over adobe wall

Photo 3.3-8: Bead-board ceiling finish on the underside of the second floor joists, Room 2

Photo 3.3-9: Dead space along east and west sides of second floor. Note cripple studs supporting rafters and unsheathed second floor rafters

Photo 3.3-10: Lean-to addition ceiling joists and furring strips. Rafters are concealed in shadow

Photo 3.3-11: Seam in ceiling representing possible end of former load-bearing interior wall, Room 2. Discontinuous joist end visible at aperture in ceiling.

3.3.2 Roof Framing System

General description:
At the main building of the Clarion Hotel, the roof is framed with 2 inch x 4 inch rough sawn rafters spaced at 24 inches on center and sloped on a 12:12 pitch. There is no ridge board but the rafters are toenailed to each other (Photo 3.3-12). At the exterior wall, the rafters are birdsmouthed to bear and are toenailed to the second floor joists (Photo 3.3-13). The roof is sheathed with 1x random-width boards planed from logs (they are not planed on their short faces) spaced about 2 ± 1-1/2 inches apart (Photo 3.3-14). Each rafter pair has a side-lapped and side-nailed collar tie located about 50 inches below the roof peak (Photo 3.3-15). Seventy five percent of the collar ties are 7/8 inch by 4-1/2 inch boards, the remaining twenty five percent are rough sawn 2x4s. The collar ties serve as the ceiling joists for the second floor.

The dormers are constructed of wood over-framing supported by the wood rafters. The dormers are only 24 inches wide so that each dormer wall rests directly on a rafter. The rafter framing and spacing does not change at the dormers.

The gable end walls of the main building are framed with vertical siding boards spanning from the 2x8 rim at the second floor to the end rafter. The vertical boards are supported intermediately by the end collar tie shimmed flush with rough sawn 2x4 blocking. There are no studs at the gable ends; the vertical siding simply spans between the roof, ceiling, and floor framing which act like girts (Photo 3.3-14). At the south end of the attic, two diagonal struts laced with 1x decking support the low side of the adobe chimney where it batters and a strut oriented in the opposing direction helps stiffen the assembly (Photo 3.3-16).

The rafters of the lean-to addition are 3-1/2 inch diameter log rafters spaced at 36 inches. These rafters span 10-1/2 feet from the south wall of the main building on a make-shift ledger (Photo 3.3-17) to the south wall of the lean-to addition (Photo 3.3-18) with a mid-span support of a 5-1/2 inch diameter dropped log purlin (Photo 3.3-19). The partial hips on the east and west sides are framed with log hip beams and flat 2x4 rafters (Photo 3.3-20). The shed roof is sheathed with 1x decking. The hips are sheathed with plywood.

The north, east, and west elevations of the Hotel are flanked by a shed porch roof. The roof is framed with rough sawn 2x4 rafters spanning about 3 feet from the exterior of the building to 3 inch by 3 inch chamfered posts which are spaced roughly at 6 feet (Photo 21). The porch roof is sheathed with rough sawn 1x decking, milled similarly to the decking on the main building, and it is overlain with plywood.

Condition:
Overall, the roof framing condition varies from fair to poor.

The framing over the main portion of the Hotel is largely in fair physical condition but there are some defects that require repair. In the northwest corner of the main building, one of the roof rafters is split and the framing is cut at a former flue location (Photo 22). The chimney interrupts the two collar ties closest to south wall of the main building. The framing in this area is also not sufficiently sized to support the weight of the chimney within code allowable stresses. In most places in the attic the roof framing was observed to be performing satisfactorily. Although the rafter, collar tie, cripple stud, and second floor joist assembly is not robust compared to today's standards, in most places in the attic the framing was observed to be performing satisfactorily and, pending confirmation from the building official, need not be strengthened comprehensively. The addition of plywood sheathing atop the horizontal skip sheathing as well as bolstering the rafter to second floor joist connection along the sidewalls will greatly enhance the roof framing's structural integrity.

The shed roof framing at the lean-to addition is in poor condition. The size and spacing of the rafters are simply too lean to safely support the prescribed uniform snow load and the snow drift load induced by the high roof. The rafters are visibly deflected and the ledger is pulling from the wall in some locations.

The shed porch roof framing is also in poor condition. Like the addition, the size and spacing of the porch rafters are inadequately proportioned. The framing is also distorted as it has moved sympathetically with the columns that bear on the heaved exterior sidewalk slab.

Recommendations:

- Selectively strengthen the roof framing over the main building. This includes the sistering of all split rafters (only one observed), gusseting the rafter pairs near the ridge, bolstering the framing and collar ties around the chimney, reframing around the abandoned roof penetrations, adding plywood sheathing, and enhancing the connection along the eaves with blocking, framing anchors, and fasteners. (Serious)
- The lean-to addition roof can be strengthened in place but the number of strengthening elements such as supplemental rafters and purlins may overwhelm the existing appearance of the framing. It may be possible to lessen the amount of strengthening to some degree by limiting occupancy to this part of the building in the winter months, but significant bolstering is required nonetheless to prevent the possibility of collapse. If the framing were to be exposed, the use of new steel rafters and purlins may be appropriate

to clearly differentiate them and to keep the proportions compatible with the existing framing. (Critical)

- Alternatively, the roof can be rebuilt with modern materials and the framing concealed with a ceiling finish. (Discretionary)

- The porch roof similarly requires a comprehensive overhaul. Creative solutions like steel flitch plates or WT steel sections concealed within the existing rough sawn lumber profile will help keep the rafter proportions and spacing compatible with the extant materials. (Critical)

Photo 3.3-12: Ridge of the main building roof. Note the lack of a ridge board and the two toenails

Photo 3.3-13: Main building rafter to joist connection with four side nails.

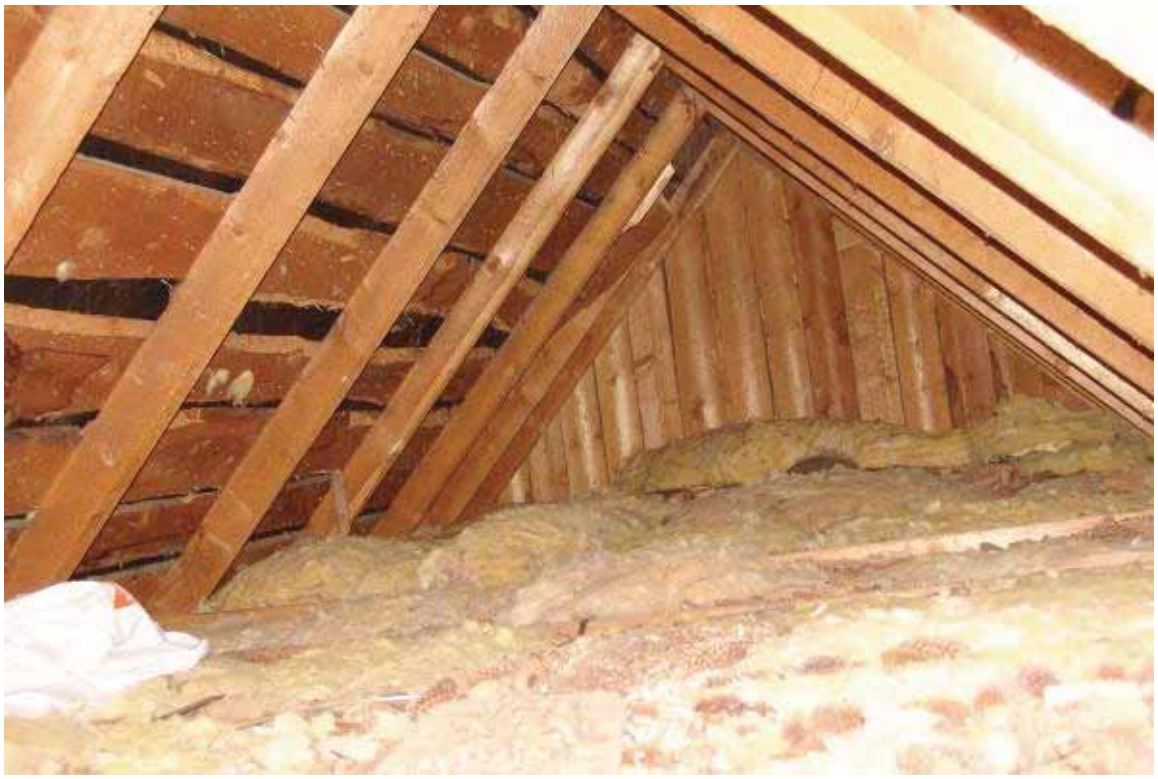


Photo 3.3-14: Main building attic. Note decking planed from logs and vertical siding at gable end wall spanning between end rafter pair and collar tie.

Photo 3.3-15: Main building rafter to collar tie connection with four side nails.

Photo 3.3-16: Struts supporting battered adobe chimney at south end of attic

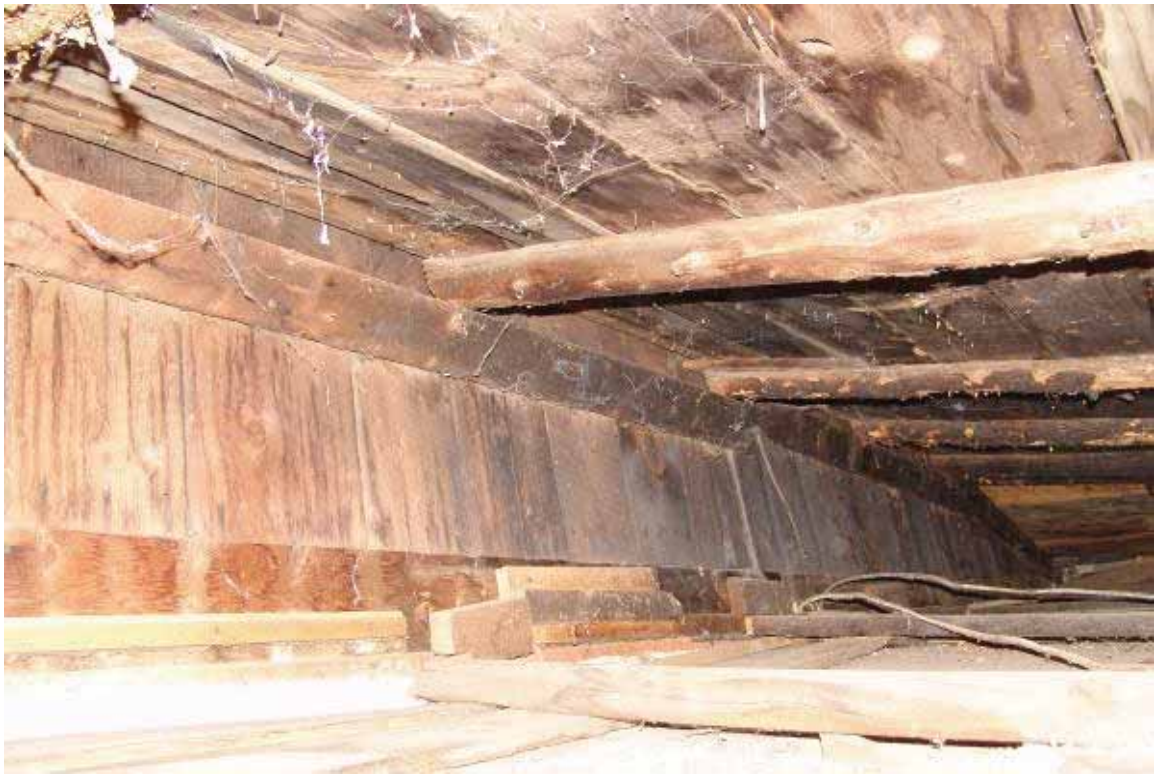


Photo 3.3-17: Ceiling joists and rafter ledgers at south lean-to addition above Room 3

Photo 3.3-18: Rafters and ceiling joists at south wall of south lean-to addition above Room 3

Photo 3.3-19: Dropped log purlin and rafters at the south lean-to addition above Room 3

Photo 3.3-20: Log hip and flat 2x4 rafter at south lean-to addition hip above Room 3

Photo 21: Underside of the porch roof framing

Photo 22: Cut rafters at former roof penetration locations

Section 3.4: Exterior Walls

Windows and doors are discussed in Section 3.6. Roofing, dormers, and fascia are discussed in Section 3.5.

General description:
The main building consists of a one story space having a finished attic within the gable roof. There is a one-story lean-to addition on the south side of the main building. The first floor exterior walls are constructed of adobe, about 8 feet tall, with a stucco finish painted pink/tan. Gables are sided with 5" wide wood lap siding painted white. The south lean-to addition walls are adobe with stucco painted warm pink/tan.

The primary elevation faces north. (Photo 3.4-1) This elevation has a front-facing gable roof, a centered front entrance door, one double-hung, divided light wood sash window near the west end of the first floor, and one centered double-hung, divided light wood sash window in the gable. A full-width, shed-roofed porch roof on wood posts is visible on this side. Under the porch roof, and above the top of the adobe wall, exposed framing is visible. (Photo 3.4-10) There is a 7" wide horizontal wood board, 1" thick, flush with the adobe. Above the board are vertical 6" wide wood boards.

The east elevation of the main building has a side-facing gable roof with two gable-roofed dormers and a plastered adobe chimney. (Photo 3.4-2) The main floor has a centered exterior door and two double-hung wood sash windows, the northern of which is divided light. The shed-roofed porch on wood posts extends the length of the main building, stopping at the south lean-to addition. The east elevation of the south addition has a shallow hipped roof, an exterior door adjacent to the main building, and one double-hung window.

The south elevation (photo 3.4-3) presents the 7-foot-tall adobe wall of the lean-to, with one centered, boarded-up door, and a boarded-up window opening immediately west of the door opening. The south elevation of the main structure is gabled, with wood lap siding and a centered divided light wood sash window. The sides of the dormers are visible, sided with wood lap siding.

The west elevation of the main building presents a side-facing gable roof with two gabled dormers, with the main floor exterior walls of stucco-finished adobe. (Photo 3.4-4) There is a centered exterior wood door and a double-hung divided light window near the south end. Like the west and north elevations, the shed-roofed porch is visible along the full extent of the main building, stopping short of the south lean-to addition. The west elevation of the lean-to is plastered stucco, with an exterior door adjacent to the main structure.

Adobe and Stucco
The adobe units measure 12 inches long by 6 inches wide by 3-1/2 inches tall. Where observed, the adobe was seen to be loosely laid in running bond with periodic headers (Photo 3.4-5). The walls are two wythes thick. The mortar contains no Portland cement and no hydrated lime, in a ratio of one part fines to four parts sand. The exterior face is coated with stucco/plaster with a smooth finish. The stucco is one part hydrated lime to five parts sand, with animal hair added as a binder. This analysis is based on a sample taken from the north side. See Section 4.2 for stucco and adobe material testing. The adobe contains no hydrated lime and no Portland cement, and is comprised of a ratio of one part fines to four part sands. Interestingly, the adobe contains significant amounts of pyrite. Adobe samples from the south addition and the main house are very similar in composition. Significant portions of the stucco have been patched more recently,

as shown on the 1979 drawings at the end of Section 2. Patched areas may date from several different time periods, and most of the patches are of a stiffer plaster mix. The entire south wall of the lean-to addition has a modern metal lath and plaster lath system.

The 1974 National Register nomination notes that the exterior walls are finished with brick, although it is difficult to discern that in the associated photograph. (Photo 2-15). This may explain the light score lines visible on the west elevation, which may have been drawn as coursing guides for the brick installation. There is no other physical evidence of brick.

The chimney is also constructed of adobe. At the first and second floors and the attic, the adobe surfaces are not coated. On the first and second floor the adobe is concealed by non-historic gypsum wallboard over furring wall studs (3.4-8). Where the chimney projects above the roof, it is surfaced with stucco having a rough finish (3.4-9).

Interior Faces of Exterior Walls

At the main house, the interior face of adobe is surfaced with non-historic gypsum wallboard that has been furred out from the adobe. In some locations, there appears to be a layer of pressed fiberboard underneath the gypsum wallboard. The south wall of the main building is now an interior wall, but it is constructed of adobe also. It no longer has a stucco finish on the side that was formerly exterior but has some remnants of a possible whitewash coating on the exposed adobe. (Photo 3.4-6)

At the lean-to addition, the interior faces of the adobe walls are surfaced with pressed fiberboard with wood battens. Wood lintels support the adobe over the window and door openings (Photo 3.4-7.4-7)

Condition:

The adobe walls at the main building are in fair condition. They are in poor condition at the lean-to addition.

The walls at the main portion of the building were found to be generally intact and plumb. There are some cracks in the lower courses of the wall (Photo 3.4-5) related to minor foundation movement. The cracks in the top of the wall are somewhat more pervasive but were found to propagate only through the finish and not through the units themselves in the one location investigated (Photo 3.4-73.4-7). This behavior is result of the marriage of differing materials at interfaces prone to absorb moisture. It is speculated that moisture can enter the wall assembly where the stucco abuts the window trim and the wood fascia/rim. Subjected to moisture and freeze-thaw cycles, the stucco likely loses its adherence to the wood. At the jambs, the stucco must then bridge across the lintel. At the head, it must cantilever across the lintel to meet the trim. As a result, it eventually cracks and fully delaminates. It is also possible that the wood lintels are deflecting under live and snow loads and in turn cracking the stucco although the same cracking in the heads occurs on the non-load bearing north wall (Photo 3.4-10). The third possibility is just that the brittle stucco cracks at the reentrant corners where the highest tensile stresses develop during thermal and moisture expansion/contraction cycles just like a slab-on-grade does when it cures and shrinks.

The exterior face of the walls are bowed and tilted, but this phenomenon is also is related to the surface finish. In most cases, the stucco seemed to simply vary in thickness and was found (by sounding) to be adhered to the adobe. In other places, the stucco has delaminated (also determined by sounding).

There are vertical cracks on both the east and west elevations at the interface of the lean-to with the main building. This signals that the addition walls are not toothed into the main walls. These cracks also indicate that the addition has settled to a larger degree relatively than the main building. This is most clear on the west elevation where the crack coarsely stair-steps south as it travels up the wall (Photo 3.4-11).

The south wall of the lean-to addition has suffered severe damage. A portion of the wall has collapsed (Photo 3.4-12). The overriding failure mechanism appears to be moisture infiltrating the assembly and degrading the binders in the adobe units and mortar. Moisture has entered the wall via leaks in the roof and roof flashing, through gaps in the door's wood trim, and at the base where the lowest adobe courses are now below grade. The modern plaster coat does not have the breathability to allow the moisture to dry out.

Gable siding on the north elevation is in good condition. Gable siding on the south elevation is very deteriorated from exposure to weather and ultraviolet light. Dormer siding facing south on west dormers is deteriorated from ultraviolet exposure.

Recommendations:

- Remove delaminated areas of plaster/stucco and replace compatible material. (Serious)
- Remove incompatible areas of plaster/stucco and replace with compatible material. (Serious).
- Remove all plaster on the south wall of the lean-to and rebuild the collapsed sections. Correct roof leaks and apply compatible stucco/plaster. (Critical)
- Replace gable siding on south gable and south side of west dormers. (Serious)
- Paint entire exterior following repairs. (Minor)

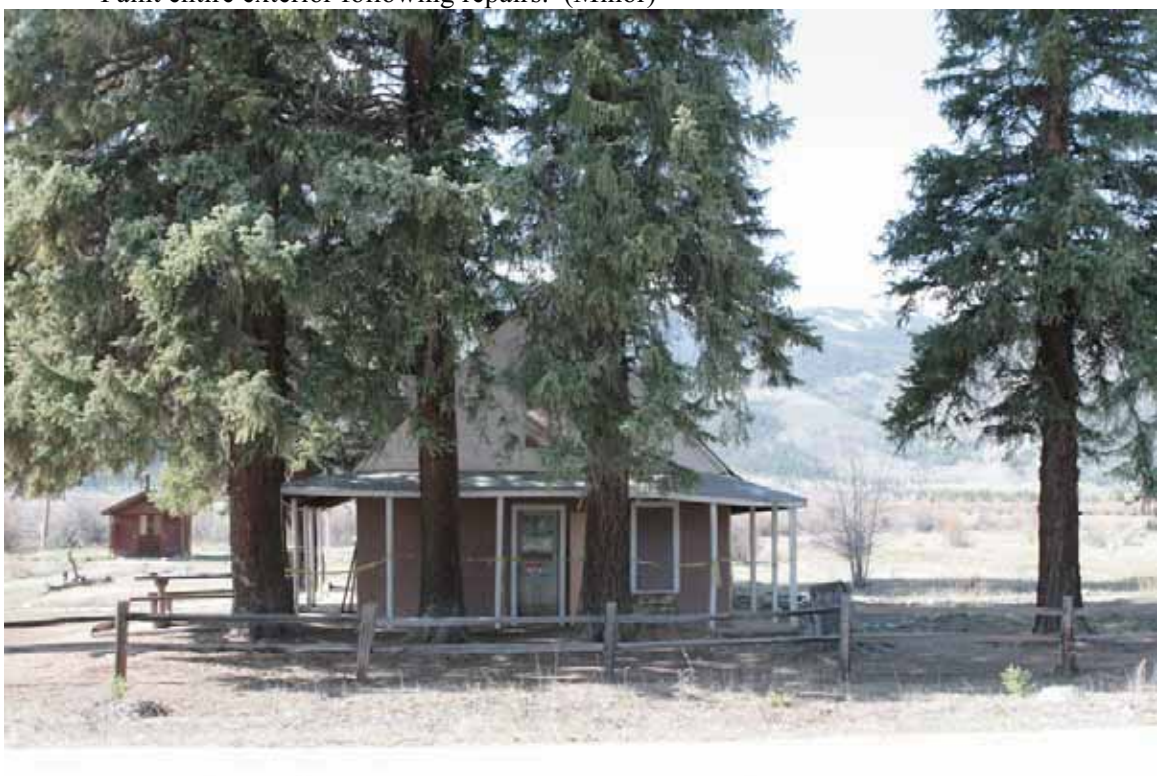


Photo 3.2-1. North elevation

Photo 3.4-2. East Elevation

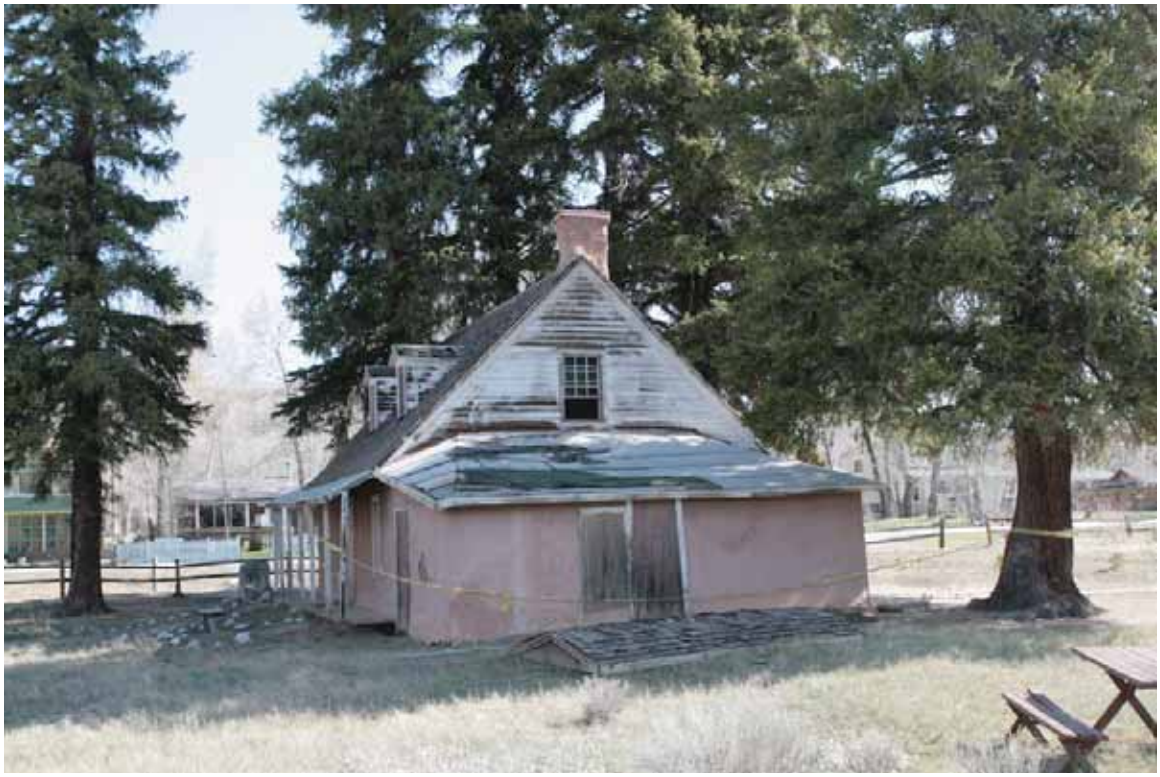


Photo 3.4-3. South Elevation

Photo 3.4-4. West Elevation

Photo 3.4-5. Adobe wall on north elevation

Photo 3.4-6: Adobe wall on south elevation of main building. Looking north inside Room 3

Photo 3.4-7: Flat wood lintel embedded in adobe assembly along east elevation

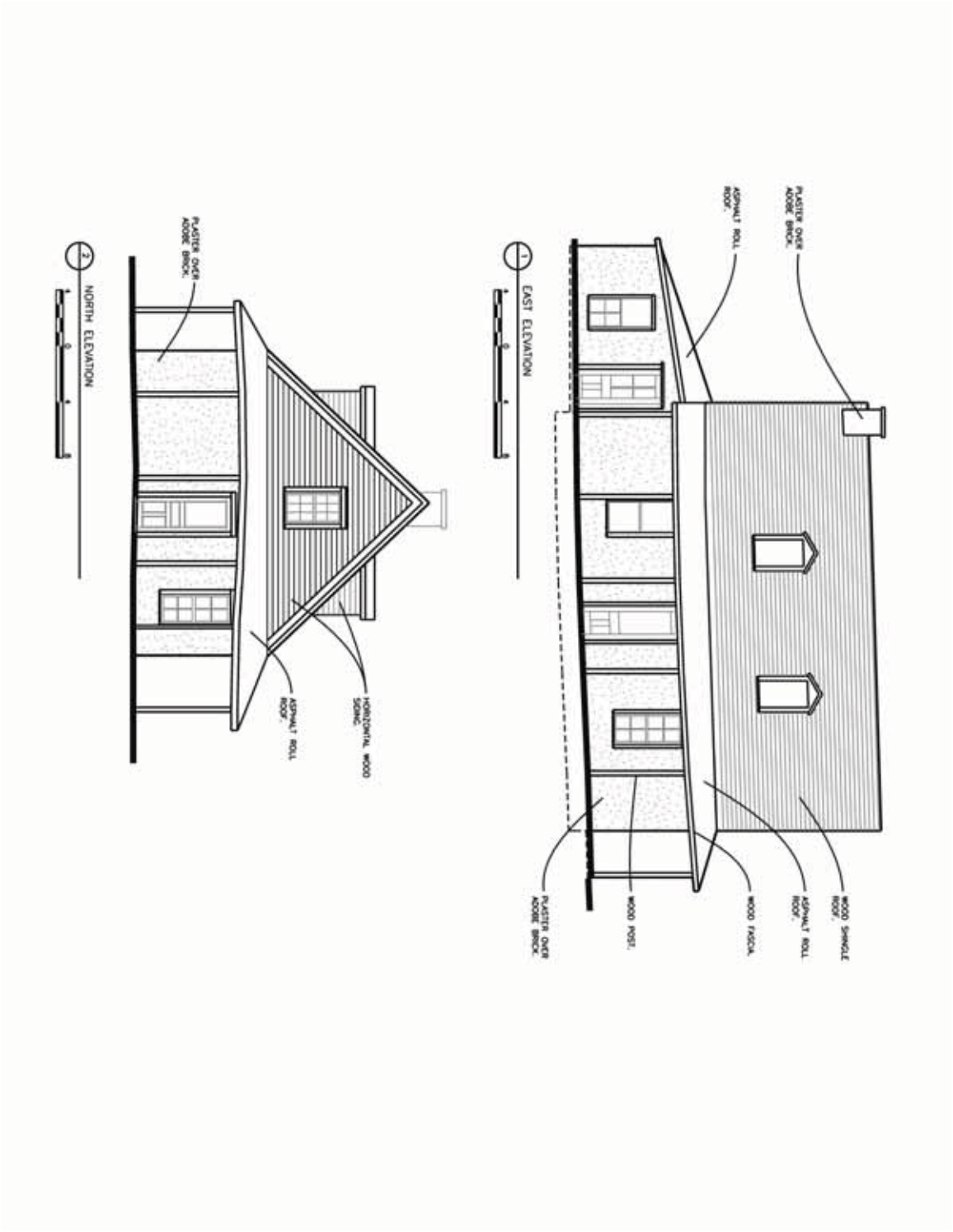
Photo 3.4-8: Adobe chimney behind furring wall on first floor inside Room 2

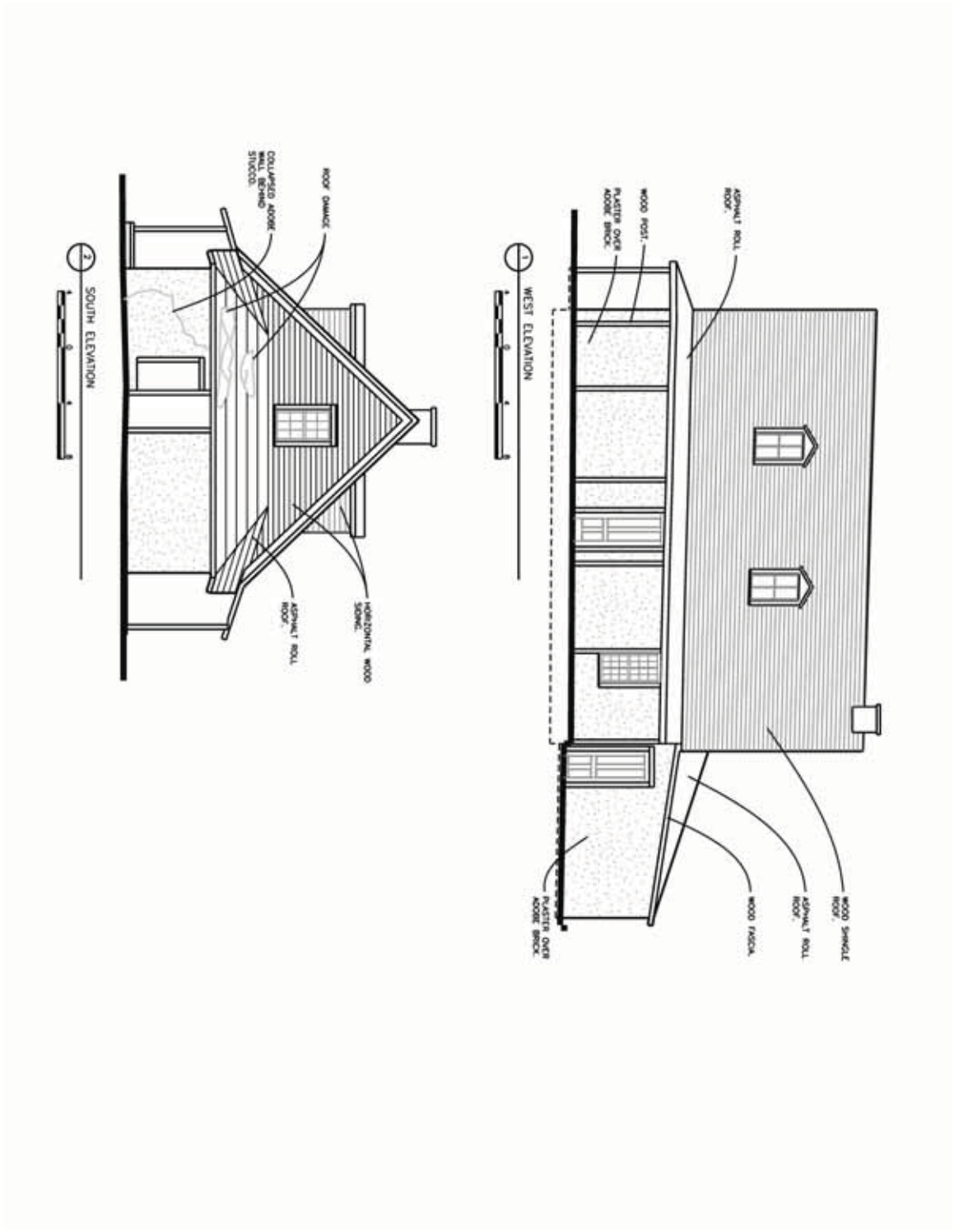
Photo 3.4-9: Adobe chimney above roof

Photo 3.4-10: Cracks in stucco at door and window head corners along north elevation

Photo 3.4-11: Stair step crack along west elevation. Crack originates at edge of slab where foundation discontinuity and rotation is suspected.

Photo 3.4-12: Collapsed south wall of lean-to addition (inside Room 3)


2
NORTH ELEVATION
PLASTER OVER ADOBE BRICK
ASPHALT ROLL ROOF
HORIZONTAL WOOD SIDING
1
EAST ELEVATION
ASPHALT ROLL ROOF
PLASTER OVER ADOBE BRICK
PLASTER OVER ADOBE BRICK
WOOD POST
WOOD FASCIA
ASPHALT ROLL ROOF
WOOD SHINGLE ROOF


2
SOUTH ELEVATION
COLLAPSED ADOBE WALL BEHIND STUCCO
ROOF DAMAGE
ASPHALT ROLL ROOF
HORIZONTAL WOOD SIDING
1
WEST ELEVATION
ASPHALT ROLL ROOF
WOOD POST
PLASTER OVER ADOBE BRICK
WOOD SHINGLE ROOF
ASPHALT ROLL ROOF
WOOD FASCIA
PLASTER OVER ADOBE BRICK

Section 3.5 Envelope: Roofing and Waterproofing

Roof framing is discussed in Section 3.3. Dormer windows are discussed in Section 3.6.

Description:

The main building roof is a front-facing gable of approximately 12:12 pitch covered with one layer of cedar shingles. Gables are trimmed with simple two-part wood trim painted white. There is a plastered adobe chimney just east of the ridge, near south end of the main structure. The main roof rafters project about 8" beyond the adobe wall, but this condition is concealed below the porch roof.

There are four gabled dormers, two each on the east and west sides. The dormers have the same roofing as the main gable roof, but they appear to have two layers of shingles. Dormer walls and primary gable ends are sided with painted 5" lap siding. The dormer gable ends project about 6 inches, unlike the primary gables, which do not project. There is no roof overhang on the dormer sidewalls. Fascia trim is simple 1x4 wood. There is vertical wood trim, about 1x6, at the windows. Dormer windows are wood sash, divided light 2/2, awning operation. Windows are discussed in Section 3.6.

There is a shed-roofed porch wrapping around the east, west and north sides of the main building. The porch roof has asphalt roll roofing of a light gray color. The roofing is placed on a plywood deck over gapped boards running longitudinally. The structure is described in Section 3.3. Rough sawn 2x4 rafters are cut back as if there were once exposed rafter tails. There is a non-historic 1x4 wood fascia.

The south addition roof is a shallowly-pitched shed, with shallow hipped ends on the east and west sides. This roof has asphalt roll roofing and simple 1x fascia trim. The south addition roof overhangs the exterior walls by about 12 inches.

Condition:

The roofing conditions vary from fair to poor.

The primary roof is in fair condition. (Photo 3.5-1) Existing wood shingles exhibit some cupping but the main roof generally appears to be relatively recent and performing well. The ridge flashing looks good. The trim on the south gable is deteriorated. Five exposed rafters on west side are split or cut below the porch roof.

Dormers (Photo 3.5-1)

All dormers have deteriorated fascia trim and deteriorated window trim and window sills. Siding on both south-facing dormer walls on west side is deteriorated from ultraviolet light and is in poor condition. The roofing on the southern dormer on the west side is in poor condition. All dormers exhibit a gap at the top of their north-facing walls between the dormer wall and the roof trim. This is likely due to deflection in the roof structure. The dormers do not have adequate flashing between their walls and the main roof.

Chimney

The adobe chimney is bowed out at the top. The plaster looks loose at the base of the chimney. Metal cap flashing and base flashing are in good condition.

Porch

Porch roofing varies from fair to poor condition. While the roll roofing is in fair condition, the porch roof structure is very deflected and out of plane. (Photo 3.5-2)

South Addition (Photos 3.5-3, 3.5-4)

The south addition roof is partially collapsed and is in very poor condition. The roof decking is partially collapsed, roofing partially failed, and trim very deteriorated.

Recommendations:

- Replace south gable trim. (Serious)
- Replace south gable siding. (Serious)
- Replace/splice 5 split exposed rafters, west side, below porch roof. (Serious)
- Replace all trim, all dormers. (Serious)
- Replace siding, south-facing dormer walls, west side. (Serious)
- Replace roofing, southern dormer, west side. (Serious)
- Flash dormers to main roof. Flash all dormers walls to dormer roofs. (Serious)
- Replace loose plaster on chimney. (Serious)
- Rebuild south addition roof. Some framing may be salvageable. (Critical)
- Replace entire porch roof structure. Some framing members may be salvageable. (Critical)

Photo 3.5-1. West side dormer, south side gable siding, west side fascia and roofing.

Photo 3.5-2 showing north porch roof deflection.

Photo 3.5-3 showing collapsing roof/ceiling in south addition. Room 3, interior.

Photo 3.5-4 showing collapsing roof in south addition.

Section 3.6 Windows and Exterior Doors

Description of Windows:
All windows and doors are currently kept boarded up for security reasons. The plywood was removed to allow visibility for the assessment. Please refer to elevation drawings at the end of Section 3.4 for locations of windows and exterior doors.

First floor, north elevation

At Room 1: wood sash, double hung divided light historic window with simple exterior 1x4 wood trim painted white. Interior: jambs have been extended in by 4" to accommodate furred-out walls. Non-original simple crown and jamb molding. Sill trim has been removed, was 4" tall. No window hardware.

First floor, east elevation (Photo 3.6-1)

North end, at Room 1: wood sash, double hung divided light historic window with simple exterior 1x4 wood trim painted white. Interior: jambs have been extended in by 4" to accommodate furred-out walls. Non-original simple crown and jamb molding. Sill trim has been removed, was 4" tall. No window hardware. (Photo 3.6-2)

Center, at Room 2: Newer window, wood sash with simple exterior 1x4 wood trim painted white. Interior: jambs have been extended in by 4" to accommodate furred-out walls. Non-original simple jamb molding. Head trim has been removed. No window hardware. Window has no upper sash.

South end, at Room 3: An unusual assemblage of a fixed plywood upper panel and four-light wood sash below. There is a shelf on the interior above the four-light window. The sill is a few inches above the interior floor. The opening is visibly out of square. Simple exterior 1x4 wood trim. Interior jambs have been extended in by 4" to accommodate furred-out walls.

First floor, south elevation

At Room 3: An atypical assemblage of a fixed plywood upper panel and four-light wood sash below. (Photo 3.4-12) There is a shelf on the interior above the four-light window. The sill is a few inches above the interior floor. The opening is visibly out of square. Simple exterior 1x4 wood trim. Interior jambs have been extended in by 4" to accommodate furred-out walls.

First floor, west elevation:

South end, at Room 2: wood sash, double hung divided light, newer window with simple exterior 1x4 wood trim painted white. Interior: jambs have been extended in by 4". Non-original simple jamb molding. Head trim is missing.

Second floor, gable windows (north and south similar):

Wood sash ¾ divided light double hung, newer window. No hardware. In the north bedroom, the window sill is just above floor level. Simple 1x4 wood trim. (Photo 3.6-3)

Second floor dormers (Photos 3.6-4, 3.6-5)

West side dormer windows are four-light, wood sash, and appear to be awning operation. East side dormer openings are blocked up from both sides. Exterior dormer window trim is simple painted wood boards. The interiors of the dormer enclosures are finished with painted bead board walls and flat ceilings. In some locations, there is some wallpaper over the bead board.

Condition of Windows:
The windows are in fair condition. They are boarded up, and they do not operate. Some of the windows have missing sash. Some are missing interior trim. Exterior window trim is in acceptable condition. Most of the existing sash are water damaged at the bottom, and sills are water-damaged.

Window Treatment Recommendations:
To deter vandalism, windows can be boarded up until the building is put into service, and during off-seasons. Plywood infill panels can be painted to simulate the historic divided light glazing patterns.

The windows should be restored to be operational, in order to provide natural ventilation. Lower sections of window sash and sills that are water-damaged should have replacement wood spliced in. Window frames, sash and trim should be cleaned, scraped and painted. Existing interior trim on the first floor does not date from the period of significance. It can be left in place and painted. Missing interior trim should be replaced with very simple 1x4 wood pieces and painted.

Priority: Minor.

Description of Exterior Doors:
North exterior door: Historic wood panel door with upper glass panel, one intermediate horizontal wood panel, and two lower vertical wood panels. Historic hardware and skeleton key lock, plus a newer interior keyed latch. Exterior trim: simple 1x4 wood trim painted white.

East exterior door into Room 2: Historic wood panel door with upper glass panel and two lower vertical wood panels, historic hinges, rest of hardware has been removed. There is no trim. Door has a wooden threshold.

West exterior door into Room 2 (at base of stairs): Inner historic wood panel door with plywood infill in two upper panels. There are two lower wood panels. Hardware is historic, with a locking latch and decorative interior knob. Trim has been removed. There is a solid outer door that is a later addition.

East exterior door into south lean-to addition (Room 3): wood door with four-light upper glass panel, and two lower wood panels. (Photo 3.6-6) The door has been removed and stored inside the room. The door has latching hardware of an older appearance. Porcelain door knobs have been removed and stored inside Room 3.

South exterior opening into south lean-to addition (Room 3): Opening is filled in with plywood. There is no door, although hinge attachments and simple wooden trim still exist.

West exterior door into south lean-to addition (Room 3): Older four-panel wood door with trim and hardware removed.

Condition of Exterior Doors:
The exterior doors are in fair condition. North door frame is pulling away from the exterior stucco.

Doors – Recommended Treatment
If visitors are to be allowed into the building, exterior doors should be restored to be operational with working hardware. Doors should be cleaned, scraped and painted, with water-damaged portions spliced with new material. Remove north door frame and securely reattach to adobe substrate.
Priority: Minor.

Photo 3.6-1. First floor, east elevation, exterior of window

Photo 3.6-2. First floor, east side, interior

Photo 3.6-3: South bedroom window

Photo 3.6-4: Dormer in South Bedroom

Photo 3.6-5: East side dormer

Photo 3.6-6: East side door into Room 3

Section 3.7 Interior Finishes and Special Interior Features

General Organization and Discussion of Room Functions:
The first floor is a simple arrangement of three rooms, arranged side by side from north to south. The first floor rooms have been identified from north to south as Rooms 1, 2, and 3, for ease of reference in this report. Room 3, in the south lean-to addition, most recently served as a kitchen.

The second floor historically contained 8 very small individually rented sleeping rooms, presumably accessed from a central hallway at the top of the existing stairs. The second floor has been remodeled at least once. Its current configuration has a central hallway leading to one bedroom at each end. There are two closets, one opening to the north bedroom and one to the hallway.

As discussed in Section 2, the building had at least three different configurations over time, including a no-longer extant wing along the west side, and at least two different arrangements of a south wing. While we do know that the first floor served as living quarters for the hotel proprietor, we can only speculate on the exact functions of the first floor rooms. Physical evidence suggests that the stair enclosure was previously separated from Room 2, and was accessed from the west door. The west door, at least for a time very early in the building's history, would have led to the west wing. Physical evidence also suggests that the existing wall between Rooms 1 and 2 is not original and an east-west bearing wall, a few feet south of the stairwell, has been removed.

Assignment of historic room functions to the first floor seems speculative. Interpretation of the Clarion interior, particularly of the first floor, should present factual information rather than assumed room uses and furniture layouts, until better information becomes available.

Room 1 is the northernmost room, roughly rectangular in plan, with an exterior door and one window to the north and one window on the east side. (Photo 3.7-1)

Floor: 3-1/2" tongue and groove, unfinished, running north-south.
Ceiling: 5" bead board painted tan, over ½" sheathing. Five feet inside the north wall is a glue line on the ceiling indicating a possible removed wall.
Walls: non-historic gypsum wallboard with no wall base.
Closet: Non-historic closet on west wall. Pressboard walls painted blue, with wood battens and 8" wood wall base. Unpainted pine cased opening to main room, no doors.
Room 1 has non-historic, non-operational power outlets, switches, and a ceiling mounted pull-chain socket light fixture.

Room 1 condition: Good. There is some sagging in the ceiling.
Room 1 recommendations: Re-attach ceiling bead board to structure above. Repaint interior using the existing colors. Do not apply finishes to existing unfinished flooring and trim. (Minor)

Room 2 is the center room. It is roughly rectangular in plan with two exterior doors and two windows. (Photo 3.7-2)

Floor: 1x5 unfinished wood boards running north-south. Within Room 2, the floor slopes down 3" to the east and down 5" to the south.
Ceiling: 5" painted bead board.
Walls: non-historic gypsum wallboard over pressboard, partially painted. There is a non-original cased opening between Rooms 1 and 2, trimmed with unfinished pine boards. The opening has been moved east by 3", based on evidence on the floor.

Room 2 has non-historic, non-operational power outlets, switches, 2 ceiling pull-chain socket light fixtures with evidence a third has been removed.
Adobe fireplace/chimney on south wall has been partially enclosed in a chase framed with 1x9 horizontal wood boards. The chase has 3 layers of wallpaper over muslin and wood wall base painted pink. There is a round metal flue opening at the top. A round opening in the ceiling, 3 feet from the chase, historically accommodated a flue pipe to heat the south end of the second floor.

Room 2 condition: Fair. Ceiling bead board is sagging where structure above is discontinuous and there are some missing boards.
Room 2 recommendations: Repair ceiling structure as recommended in Section 3.3, re-attach bead board ceiling and replace missing boards in like kind. Repaint interior using the existing colors. Do not apply finishes to existing unfinished flooring and trim. Repair fireplace chase. Replicate one of the historic wallpaper patterns and install it on the repaired chase. (Minor)

The Furnace Closet is under the stair, in the northwest corner of Room 2. It opens to Room 2. The stairwell and closet were widened to accommodate a furnace. The furnace, now non-functioning, still exists. Its flue runs up on a slope parallel to, and north of, the stairs. (Photo 3.7-3) Inside the closet, the undersides of the stair risers are covered with wallpaper and newspaper remnants. The newspaper remnants are in German. The closet floor is ½" x 6" unfinished boards over 1" boards.

Furnace Closet condition: Good.
Furnace Closet recommendations: No changes. If possible, document newspaper remnants. (Minor)

The Stair (Photo 3.7-3) has a non-original opening to Room 2.
Floor (at bottom of stair): 3-1/2" floor boards running north-south.
Walls at bottom of stair: non-historic vertical tongue and groove 1x4 with light tan stain finish
Walls in stairwell: unpainted non-historic gypsum wallboard below second floor level. Above second floor level, walls are vertical 1x4 tongue and groove.
Stairs: wood painted bright blue. 9" risers, 10" treads. 12" wide stringer on north side encloses the furnace flue.

Stair condition: Good.
Stair recommendations: Test paint to determine original paint colors, and repaint to match original colors. (Minor)

Room 3 (Kitchen) (Photo 3.7-4) is within the south lean-to addition. The room's shape is a very distorted rectangle, the distortion being due to a combination of structural displacement and poor construction techniques. The floor is 5" below Room 2. The floor has a pronounced slope to the south.
Floor: Vinyl asbestos tile on 2" concrete on tongue and groove flooring.
Walls: All walls, including north wall, are adobe with furred out pressboard with battens. North wall only has 5" wood wall base.
Ceiling: sloped gypsum wallboard with white vinyl wallcovering
Kitchen: West wall has a non-functioning single bowl white porcelain sink in wood base cabinet with orange plastic laminate countertop. Wood base cabinets are simple and appear hand made. On the north wall there is a pair of wooden wall cabinets with shelves.

Room 3 condition: Poor. The roof structure and roofing are failing and collapse may be imminent. The south adobe wall has partially collapsed into the interior of the room.

Room 3 recommendations: Demolish and reconstruct the entire south lean-to addition on a new foundation. The addition is not historic. Rehabilitation and repair would be extensive, with very little original material being salvageable. The interior kitchen cabinets, which are simple but appear hand-made, should be salvaged and re-installed. (Critical)

Second Floor: (Photos 3.7-5, 3.7-6)
The second floor has been extensively remodeled and now consists of a central hall, two bedrooms and two closets. Four of the original eight dormers still remain and retain some historic finishes. The hallway retains some partial historic finishes.

Floor: Wood board flooring of varying widths, mostly 8". The wood boards are visible in the hall, but have been covered elsewhere with non-historic 4x8 cement fiberboard. There are some remnants of linoleum, likely dating from the 1950s.

Walls: Unpainted non-historic gypsum wallboard. In the hallway, there are vertical wood boards on some of the walls. At the opening to the south bedroom, wallpaper and 2 layers of newspapers are visible over bead board wall finish.

Ceilings: Unpainted non-historic gypsum wallboard, following gable roof slope at sides. Tops of ceilings are 6'-5" above finish floor. There are non-historic square ceiling light fixtures, non-functioning.

Dormers: The dormers are finished with horizontal 3-1/2" bead board siding on the walls and ceilings. The dormer ceilings are flat. The dormer in the west closet has wallpaper over the bead board. The dormer in the south bedroom has 2 layers of wallpaper over bead board. The dormer enclosures are very narrow, less than 2 feet in width.

Second floor condition: Good. There is evidence of water damage inside some of the dormers, but it does not appear to be recent.

Second floor recommendations: No work is recommended on the second floor, other than window rehabilitation (see Section 3.6). The second floor has been extensively remodeled, including removal of four of the eight original dormers that provided natural light to the original guest rooms. The second floor original layout could be reconstructed, with reconstructed dormers. However, in order to comply with the Secretary of the Interior's Standards, an ultimate treatment of reconstruction (rather than preservation or rehabilitation) would require additional research. A reconstruction treatment would require that the entire building be returned to its documented condition during a specific time period. At present, no known historic photographs depict the Clarion with all eight dormers *and* in its current floor plan configuration. Various wings, no longer extant on the west and south sides, are visible in the historic photographs that show eight dormers. (See historic photographs in Section 2.1). While there is some interest in reconstructing the missing dormers, there is presently no interest in reconstructing the missing west and south wings.

Photo 3.7-1. Room 1, looking east.

Photo 3.7-2. Room 2, looking south.

Photo 3.7-3. Looking up stairs.

Photo 3.7-4. Room 3 looking southwest.

Photo 3.7-5. South bedroom looking southwest

Photo 3.7-6. South bedroom dormer

Section 3.8: Power and Utility Systems

Description
The building has not been occupied since the 1970s. Power and utility systems have been disabled since that time. There is a non-functioning furnace under the stairs that presumably ran on propane. Some ductwork still exists in the crawlspace. There are heat register openings in some of the rooms, with the covers removed.

There is no electrical service to the building. On the first floor, there are non-functioning power outlets on the walls, and pull-chain bare bulb ceiling light fixtures. On the second floor there are square ceiling light fixtures and non-functioning power outlets. The second floor fixtures appear to be more recent than the first floor fixtures. There is no telephone service to the building.

There is no water or wastewater service. Room 3, in the south lean-to addition, has a non-functioning kitchen sink. There is no evidence of any other plumbing services to the building.

During the historic period, heat was provided by an adobe fireplace in Room 2 and ducted to the second floor. Historic photographs show a second chimney at the north end, implying that there was also a fireplace in Room 1, but it has been removed.

Condition: Systems are not functioning and they do not pose a safety hazard. As discussed in Section 3.2, ductwork in the crawlspace between Rooms 2 and 3 was routed through a foundation wall, resulting in significant structural damage.

Recommendations: No electric, telephone, water, wastewater, gas or propane services are recommended. While some minimal electrical service might be useful, none of the other buildings in the historic district (south of the highway) have electrical service, and ongoing utility bills are not currently budgeted.

If artifacts are to be kept in the building, the addition of a security system should be considered. Available systems are limited that do not require electricity and telephone service. There are some limited systems available that operate on batteries. The batteries would need to be recharged off-site on a regular schedule.

As discussed in Section 3.7, the fireplace should be rehabilitated but not made operational, and first floor ceiling light fixtures retained. The second floor should be left as is and interpreted as a residential adaptation. The second floor could be reconstructed as an 8-room hotel but only if further information comes to light that allows the entire building to have a reconstruction or restoration treatment. The recommended ultimate treatment is preservation, not restoration, so a strict adherence to the period of significance ending around 1900 is not mandatory.

Section 4: Analysis and Compliance

4.1 Hazardous Materials

The building has not been tested for hazardous materials. It was significantly modified during the 1970s and earlier. Some of the construction materials used during those remodeling episodes could contain asbestos. Possible locations include:
Possible vinyl asbestos tile, Room 3
Flooring mastic under second floor linoleum, and Room 3 tile
Window caulking
Drywall
Plaster or stucco
Plumbing joint compounds (kitchen sink)
Ductwork joints

No hazardous materials are known to exist. Paint should be tested for the presence of lead. If the paint does contain lead, workers should be made aware of this anytime they are cutting or sanding painted materials so they can take appropriate precautions.

Hazardous materials do not need to be abated unless they are disturbed by construction. If confirmed hazardous materials exist, and will be disturbed by construction, a licensed abatement contractor should perform the abatement.

4.2 Materials Analysis

Please refer to *Clarion Hotel Mortar, Plaster & Adobe Report*, July 10, 2014, by Built Environment Evolution, duplicated at the end of this Section. Please refer to Section 4.4.1 below for wood species analysis of existing structural members.

4.3 Zoning Code Compliance

The Lake County Zoning Districts map dated May 10, 2010 is currently in effect. This location is in a Scenic Conservation Overlay District (SCO). Any proposed building or structure that the County Planning Commission deems to represent an intrusion on the scenic view within a SCO district shall be prohibited unless the intrusion can be mitigated to an extent satisfactory to the Planning Commission. The proposed use of the historic Clarion Hotel will not cause a change in the scenic view.

4.4 Building Code Compliance

This building code compliance assessment is based on the 2012 International Building Code and all Lake County Building Code Amendments adopted by Lake County, Colorado.

Federal agencies such as the Forest Service (the building owner) choose to comply with the most recent codes. At the time of this report in 2014, the most recent applicable codes are the 2012 International Building Code, International Residential Code, International Plumbing Code, International Fuel Gas Code, International Private Sewage Disposal Code, and International Existing Building Code.

Section 3407 of the IBC does offer some leeway for historic buildings as follows:
"3407.1 Historic buildings. The provisions of this code relating to the construction, repair, alteration, addition, restoration and movement of structures, and change of occupancy shall not be

mandatory for historic buildings where such buildings are judged by the building official to not constitute a distinct life safety hazard."

An existing building is not required to meet current codes if no work is being done on a system or element that was code-compliant when it was constructed. This is known as being "grandfathered in". Once a modification or major repair is made to a system or element, it must be brought up to the current code. The stair does not comply with current codes (treads too small and risers too high) but no action would be required as long as the stair is not rebuilt or substantially modified.

However, allowing the public inside the Clarion constitutes an occupancy change. An occupancy change requires that existing conditions be brought up to current code, if in the opinion of the code official, existing conditions are hazardous.

If the Clarion is to be used for interpretation, with the public allowed inside, the occupancy is A3, Museum.

Occupancy:	A3	
Building Area:	First floor gross:	928 SF
	Second floor (occupiable):	466 SF
Occupant load:	A3 Museum: 30 sf per person	
	First floor: 32 persons	
	Second floor: 16 persons	
	Total 48 persons	

Number of exits required: One (A occupancy with fewer than 49 persons)

Construction type: VB, non-rated, non-sprinklered
Allowable square footage: 6000 SF
Allowable height: 1 story. A story is defined as a finished floor surface more than 6 feet above grade plane. **The upper level of the Clarion qualifies as a story, and the upper level does not meet code for an A3 occupancy.** Local building officials are given some leeway in determining whether allowing the public to use the second floor constitutes a hazard. In the case of the Clarion, with a Federal owner, the Federal Government also has the ability to determine whether a hazard exists. It is worth pursuing these discussions as the Friends of Twin Lakes' intent for the building use start to take shape. We suggest that the Friends of Twin Lakes prepare a letter explaining their intent for the space, and discuss it with the local building officials, given the information above. Avenue L Architects is available to assist in that discussion.

For A3 occupancies the code requires plumbing fixtures, one toilet and one lavatory per sex. A good argument can be made that the existing vault toilet building on the site meets this requirement. The code also requires one drinking fountain. If necessary, this could be met with bottled water.

If no artificial light is provided, natural light is required at the rate of net glazed area equal to 8 percent of the floor area of the space served. The existing openings will comply if they are not boarded up.

If no mechanical ventilation is provided, natural ventilation is required at the rate of net openable area equal to 4 percent of the floor area of the space served. Including exterior doors, this is achievable if some of the windows are operable.

4.4.1 Structural Code Compliance & Materials Analysis

This building code compliance assessment is based on the 2012 International Building Code and all Lake County Building Code Amendments adopted by Lake County, Colorado.

The IBC requires that the structural stresses in the existing building structure and its individual structural members not be increased by more than 5 percent due to alterations or additions, unless the members experiencing these increased forces are in compliance with the IBC requirements for new structures. Existing framing members that are not experiencing new loads as part of the rehabilitation and that are not dangerous as determined by the building official may remain in place without treatment. All repairs to structural elements found not to meet these criteria need to be strengthened in accordance with the IBC requirements for new structures.

Since there is a proposed change in occupancy which increases the historically assigned live loads, any members found to be deficient should be strengthened to current standards. But in the interest of preservation and permitted by exceptions in the code for historic buildings, the building's floor areas could be load posted where there are no major signs of distress or safety issues. Similar arguments can be made for the roof framing where existing systems have performed adequately over the building's life span.

As far as the lateral force resisting system (LFRS), the building will not be undergoing a change in risk category and the LFRS will not be altered as part of the proposed rehabilitation. Therefore, the system need not be analyzed with respect to current code requirements. Only components of the LFRS determined to be dangerous by the building official (or engineer) need be strengthened.

Structural Design Criteria:

- Ground Snow Load = 70 psf
- Roof Snow Load = 60 psf
- Roof Live Load = 20 psf
- Hotel Rooms Live Load = 40 psf
- Public Live Load (Museums, Lobbies) = 100 psf
- Wind Speed = 115 psf
- Frost Depth = 48 inches

Material Analysis:

Wood coupons were gathered from representative framing members to determine the wood species by comparing the cellular structure microscopically to known species. Grade was estimated by visual observation of in-place framing members. The findings are as follows:

- First Floor, 8" Diameter Log:
  - **Pine** (*Pinus*), either Lodgepole or Ponderosa. These subspecies cannot be readily differentiated microscopically, but Lodgepole was more available near the project location and elevation and is thus somewhat more likely.
- Second Floor 2x8:
  - **Spruce** (*Picea*). Likely Engelmann Spruce but the individual species cannot be reliably differentiated microscopically.

- Roof 2x4 Rafters (3 specimens):
    - **Spruce** (*Picea*). Likely Engelmann Spruce but the individual species cannot be reliably differentiated microscopically.
- Species Combination and Grade:
    - **Spruce-Pine-Fir, Select Structural.** This species combination includes both Engelmann Spruce and Lodgepole Pine. This grade was chosen because most of the wood found in the Hotel is from the original construction and had few grade limiting defects such as sloped grain, knots, and checks. Wood members from the subject's era of construction were denser (and stronger) than similar members grown today so the selection of the higher grade gives credit to that fact.

4.5 Accessibility Compliance

Federal properties must comply with the ABAAS, Architectural Barriers Act Accessibility Standard.

If the exterior of the Clarion is to be used for interpretation, an accessible route from an accessible parking space should be provided. The existing crusher fines path should be treated with a stabilizer that will allow the path to maintain its surface when used by persons with wheelchairs or walkers. The addition of an accessible picnic table with at least 36" clearance of stabilized surface should be provided somewhere along the accessible route.

If interior access to the Clarion is to be provided, then the east door into Room 2 is recommended for widening to 32" clear width. None of the existing exterior doors are wide enough for accessibility. The interior openings from Room 2 into Rooms 1 and 3 are already 32" clear width or wider. The floor height difference between Rooms 2 and 3 is not accessible, a condition that needs to be corrected for structural reasons as well as accessibility.

Accessibility to the upper floor is not feasible, and the upper floor does not meet code anyway for a museum use. Interpretation is recommended to convey the second floor experience to all visitors.

On the following pages, please see the mortar, stucco and adobe test report.

CLARION HOTEL
TWIN LAKES, COLORADO

MORTAR, PLASTER & ADOBE REPORT
July 10, 2014

Prepared for
AVENUE L ARCHITECTS
Denver, CO

By
Built Environment Evolution

MORTAR REPORT

A BRIEF HISTORY OF MORTAR

Lime mortars have been used for thousands of years, and over time various techniques and additives have been handed down via the craftsmen of the trade. Different applications required different combinations of sands, lime and pozzolanic additives. Lime was often slaked on site, or barrels of lime putty that had been allowed to slake for up to two years were brought to the site. Sand shape and size and the final use would determine the proportions of the mix. Pozzolanic additives, such as brick dust, fly ash, and volcanic ash, created a harder, more durable mortar that could be constructed to set under water. Portland cement was first patented in 1824, and first manufactured in the US in 1872. It was used as an additive to mortars in small amounts to strengthen and accelerate the set time of the mortar. Portland cement became more prevalent, and in the 1930s premixed, bagged mortar was introduced, at which time the use of lime mortars began to decline significantly.

REPAIR WORK WITH MORTAR

Lime mortars take years to develop to full strength, but deteriorate over time, particularly when contact with water allows the lime to leech. Leaking gutters, settlement, cracking, rising damp, and efflorescence are some of the signs and causes of deterioration. When repair work is warranted, the root cause of the deterioration must be solved before any work to the mortar can begin. Without eliminating the cause of deterioration, repair efforts will be wasted.

Matching the existing mortar mix is critical to the longevity of the structure. The use of a mortar or Portland cement that is harder than the masonry units will cause damage. In addition, a denser Portland cement can act as a vapor barrier causing additional damage to the masonry units and joints. Lime mortars act as expansion joints, allowing the structure to expand and contract without pulling apart. Sand gradation, color and shape must be matched in addition to the ratio of lime in order to match appearance as well as function. Weather conditions, water content, and temperature can all affect the success of the curing of the mortar.

CHARTS

The charts below illustrate the various characteristics and make up of the samples collected.

Table 1: Description of Sample location on Structure

SAMPLE #	LOCATION
1	Mortar – Exterior, South Wall
2	Plaster – Exterior, North Wall
3	Adobe – from Addition
4	Adobe – from Original

Table 2: Description before testing, Hardness and Color

SAMPLE #	HARDNESS	COLOR
1	Very Soft	Dirt Brown
2	Soft	Light Gray
3	Very Soft	Dirt Brown
4	Very Soft	Dirt Brown

Table 3: Aggregate Shape and Gradation

SAMPLE #	AGGREGATE SHAPE	AGGREGATE GRADATION
1	Rounded	Very Fine - Very Coarse
2	Sub angular	Very Fine - Very Coarse
3	Rounded	Very Fine - Very Coarse
4	Rounded	Very Fine - Very Coarse

Table 4: Color of Fines

SAMPLE #	COLOR OF FINES
1	5YR 4/2
2	10YR 8/2 (with Animal Hair)
3	5YR 4/2 (With lots of Pyrite)
4	5YR 4/2 (With some Pyrite)

Table 5: Color of Sands

SAMPLE #	COLOR OF SANDS
1	5YR 4/2
2	2.5Y 7/2
3	5YR 4/2
4	5YR 4/2

Table 6: Total Percentages

SAMPLE #	% LIME	% FINES	% SANDS	% PORTLAND	% OTHER
1	0	19	81	0-4.99	0
2	13	6	68	0-4.99	~2
3	0.7	18	82	0-4.99	~8
4	0	21	80	0-4.99	~5

CONCLUSIONS

Avenue L Architecture collected and submitted four samples from the Clarion Hotel in Twin Lakes, CO to the BEE laboratory. The samples were tested using acid digestion. Each sample had a hydrochloric acid wash test applied, used to determine the lime, fines and sands ratios. Sands and fines were then matched for size, color and shape so the project mason may replicate the original mortar or adobe composition. Results showed that Samples 1, 3 and 4, grouped well, indicating they have very similar composition. All samples appear to use similar sands and have little or no lime content. The fines on these three samples came out with a high ratio compared to a typical mortar mix. Sample #3 created a slight displacement during the acid wash testing phase, but this amount could be due to a higher amount of soluble silica in the sands, and still allows the three samples to group well. Samples #3 and #4 both have noticeable pyrite as a portion of the sands (shown on Table 6: Total Percentages in the column titles "% OTHER" – this is an estimate, with the total amount as a component of the Sands, and weighed as such. Additional testing would be required to assess the exact percentage. Contact BEE for pricing should additional testing be required, including the measurement of clay content.) No tests in the BEE laboratory can account for cactus juice or other natural additives that can be traditional binders found in adobe bricks, and stuccos. Sample #2, the exterior plaster, had a significant amount of lime in the sample, as shown on Table 6. In addition, there was horse or cow hair added to the plaster, often found in historic plasters to create a matrix that assists in longevity and cohesion. All samples appear to have no Portland cement added. Table 6, above, shows the final percentages for the individual samples.

A replication of the historic exterior plaster is one part hydrated lime to five parts sand. Match sand color, size and shape for the most accurate match. Create mock-ups to confirm a match of color and strength.

A replication of the historic mortar and adobe is no hydrated lime and no Portland cement added to a fines and sands ratio that is one part fines to four parts sand. Match sand color, size and shape for the most accurate match. Create mock-ups to confirm a match of color and strength. Clay composition of the soil used should match as well. No tests in the BEE laboratory can account for cactus juice or other natural additives that can be traditional binders found in adobe bricks, and stuccos.

MORTAR ANALYSIS FORM

Project: Clarion Hotel	Location: Twin Lakes, Colorado
Sample #: 1	
Date Taken: June 2014	Date Examined: July 6, 2014
By: Ave L Arch	By: BEE - NFL
Sample description before testing: Dirt Brown, Very Soft, Rounded Aggregate, Very Fine to Very Coarse	

Test I: Determine the Amount of Calcium Carbonate

1	5	Weight of Sample
2	5	Volume of Sample
3	0.0	Liters of CO2 released = V. Original Reading 750ml. Final reading 750ml.
4	0.0	Corrected volume is V corrected for barometric pressure and temperature. Corrected Volume = V x 620/760 x 273/295 = V x 0.816x0.925
5	0.0	CO2 = Moles CaCO3 = M = V (corrected)/22.4
6	0.0	Grams CaCO3 = M x 100 (molecular weight of CaCO3 is 100).
7	5YR 4/2	Fines Color
8	5YR 4/2	Sands Color
9	0	Hair or fiber present; type:
10	2.5	Weight of original filter paper
11	3.45	Weight of filter paper with fines
12	1	Cc's of fines
13	115.1	Weight of beaker
14	119.15	Weight of beaker with sand
15	4	Volume of sand
	CONCLUSIONS	
16	0.0	Lime parts per weight
17	0.0	Lime parts per volume
18	0.19	Fines parts per weight
19	0.19	Fines parts per volume
20	0.81	Sands parts per weight
21	0.80	Sands parts per volume

MORTAR ANALYSIS FORM

Project: Clarion Hotel	Location: Twin Lakes, Colorado
Sample #: 2	
Date Taken: June 2014	Date Examined: July 6, 2014
By: Ave L Arch	By: BEE - NFL
Sample description before testing: Dirt Brown, Very Soft, Rounded Aggregate, Very Fine to Very Coarse	

Test I: Determine the Amount of Calcium Carbonate

1	5	Weight of Sample
2	4.5	Volume of Sample
3	0.19	Liters of CO2 released = V. Original Reading 750ml. Final reading 940ml.
4	0.143412	Corrected volume is V corrected for barometric pressure and temperature. Corrected Volume = V x 620/760 x 273/295 = V x 0.816x0.925
5	0.0064023214	CO2 = Moles CaCO3 = M = V (corrected)/22.4
6	0.64023214	Grams CaCO3 = M x 100 (molecular weight of CaCO3 is 100).
7	10YR 8/2	Fines Color
8	10YR 8/2	Sands Color
9	Yes	Hair or fiber present; type: Animal hair
10	2.5	Weight of original filter paper
11	2.9	Weight of filter paper with fines
12	0.5	Cc's of fines
13	112.0	Weight of beaker
14	115.8	Weight of beaker with sand
15	3.2	Volume of sand
	CONCLUSIONS	
16	0.13	Lime parts per weight
17	0.14	Lime parts per volume
18	0.08	Fines parts per weight
19	0.09	Fines parts per volume
20	0.76	Sands parts per weight
21	0.71	Sands parts per volume

MORTAR ANALYSIS FORM

Project: Clarion Hotel	Location: Twin Lakes, Colorado
Sample #: 3	
Date Taken: June 2014	Date Examined: July 6, 2014
By: Ave L Arch	By: BEE - NFL
Sample description before testing: Dirt Brown, Very Soft, Rounded Aggregate, Very Fine to Very Coarse	

Test I: Determine the Amount of Calcium Carbonate

1	5	Weight of Sample
2	5	Volume of Sample
3	0.01	Liters of CO2 released = V. Original Reading 750ml. Final reading 760ml.
4	0.007548	Corrected volume is V corrected for barometric pressure and temperature. Corrected Volume = V x 620/760 x 273/295 = V x 0.816x0.925
5	0.00033696429	CO2 = Moles CaCO3 = M = V (corrected)/22.4
6	0.033696429	Grams CaCO3 = M x 100 (molecular weight of CaCO3 is 100).
7	5YR 4/2	Fines Color
8	5YR 4/2	Sands Color
9	Yes	Hair or fiber present; type: Pyrite
10	2.4	Weight of original filter paper
11	3.3	Weight of filter paper with fines
12	1	Cc's of fines
13	111.4	Weight of beaker
14	115.5	Weight of beaker with sand
15	4	Volume of sand
	CONCLUSIONS	
16	0.007	Lime parts per weight
17	0.007	Lime parts per volume
18	0.18	Fines parts per weight
19	0.18	Fines parts per volume
20	0.82	Sands parts per weight
21	0.8	Sands parts per volume

MORTAR ANALYSIS FORM

Project: Clarion Hotel	Location: Twin Lakes, Colorado

Sample #: 4	
Date Taken: June 2014	Date Examined: July 6, 2014
By: Ave L Arch	By: BEE - NFL
Sample description before testing: Dirt Brown, Very Soft, Rounded Aggregate, Very Fine to Very Coarse	

Test I: Determine the Amount of Calcium Carbonate

1	5	Weight of Sample
2	5	Volume of Sample
3	0.0	Liters of CO2 released = V. Original Reading 750ml. Final reading 750ml.
4	0.0	Corrected volume is V corrected for barometric pressure and temperature. Corrected Volume = V x 620/760 x 273/295 = V x 0.816x0.925
5	0.0	CO2 = Moles CaCO3 = M = V (corrected)/22.4
6	0.0	Grams CaCO3 = M x 100 (molecular weight of CaCO3 is 100).
7	5YR 4/2	Fines Color
8	5YR 4/2	Sands Color
9	Yes	Hair or fiber present; type: Pyrite
10	2.5	Weight of original filter paper
11	3.55	Weight of filter paper with fines
12	1	Cc's of fines
13	112.1	Weight of beaker
14	116.11	Weight of beaker with sand
15	4	Volume of sand
	CONCLUSIONS	
16	0.0	Lime parts per weight
17	0.0	Lime parts per volume
18	0.21	Fines parts per weight
19	0.2	Fines parts per volume
20	0.802	Sands parts per weight
21	0.8	Sands parts per volume

Section 5: Preservation Plan

5.1 Prioritized Recommendations

Critical:

- Reframe or completely reconstruct south addition 308 sf @ $100/sf	30,800	
- Rebuild foundation below chimney	5,000	
- Reframe or completely reconstruct porch roofs 440 sf @ $30	13,200	
- Add for tree protection on north side	2,000	
- Remove mechanical duct penetrating foundation wall between rooms 2&3 and rebuild opening.	250	
- Professional fees	8,000	
Subtotal Critical Issues		**59,250**

Serious:

- Aggressive pruning of blue spruce trees	1,800	
- Main building foundation repair:	8,000	
-Reset loose stones with mortar		
-Rebuild damaged sections		
-Remove interior floor sheathing to access inside faces of foundation walls		
- Remove concrete sidewalk 3 sides. Fill collapsed areas/burrow holes,	7,500	
o Regrade around south addition. Replace concrete walk east and west,		
o replace with pea gravel north side.		
- Strengthen roof framing: Labor $7000, Materials $500	7,500	
-sister one split rafter		
-gusset rafter pairs near ridge		
-bolster framing and collar ties around chimney		
-reframe around abandoned roof penetrations		
-strengthen eave connection		
- Exterior walls: Remove delaminated and incompatible plaster and		
replace with compatible material on exterior walls. 20 SY @ $175 =	3,500	
Add for tree protection on north side	1,000	
- Replace gable siding and trim on south gable and south side of west dormer	1,000	

- Replace all dormer trim $7/sf x $50	350	
- Replace roofing, southern dormer, west side $20/SF x 10	200	
- Flash dormers to main roof and to dormer roofs, allow	500	
- Asbestos and lead based paint testing	1,000	
- Professional fees	10,000	
- Archaeologist monitoring	5,000	
Subtotal Serious Issues		**47,350**
Minor:		
- Stabilize site paths for accessibility 5.27/SF x 300 sf	1,581	
- Provide one accessible picnic table	905	
- Widen east door into Room 2 to 32" clear opening	1,500	
- Inspect interior log sill and place supporting stones along its length	500	
- Bolster second floor diaphragm to top of masonry connection with deep embedment in grout-filled holes	5,000	
- Add decking in second floor dead spaces to complete diaphragm to adobe sidewalls, labor	1,000	
- Paint entire exterior after repairs are made 970 @ $2.00	1,940	
- Repair window sash, damaged sills, restore windows to operational 10 windows @ $800	8,000	
- Restore doors to be operational and provide working hardware 5 doors @ $800	4,000	
- Rooms 1&2: reattach ceiling bead board and replace missing ceiling boards, labor	900	
- Professional fees	5,000	
Subtotal Minor Issues		**30,326**
Discretionary:		
- Strengthen first floor framing to allow higher occupancy (or limit occupancy and post load limits)	5,000	
- Replicate wallpaper over fireplace and repair chase enclosure	1,500	
- Provide additional outdoor interpretation (varies, not included)		
- Battery powered security system	2,000	
- Professional fees	9,000	
Subtotal Discretionary Items		**17,500**
GRAND TOTAL		**$154,426**

5.2 Preservation Plan

The work can be divided into phases, if necessary, as resources are available. Below is the recommended approach to phasing the work.

Phase One: Critical work and associated tasks

- Reframe or completely reconstruct south addition 308 sf @ $100/sf	30,800	
- Reframe or completely reconstruct porch roofs 440 sf @ $30	13,200	
- Add for tree protection on north side	2,000	
- Remove concrete sidewalk 3 sides. Fill collapsed areas/burrow holes,	7,500	
o Regrade around south addition. Replace concrete walk east and west,		
o replace with pea gravel north side.		
- Tree pruning	1,800	
- Rebuild foundation below chimney	5,000	
- Remove mechanical duct penetrating foundation wall between rooms 2&3 and rebuild opening.	250	
- Archaeologist monitoring	5,000	
- Professional fees	12,000	
Subtotal Phase One:		**$77,550**

Phase Two: Exterior walls, windows and doors

- Exterior walls: Remove delaminated and incompatible plaster and replace with compatible material on exterior walls. 20 SY @ $175 =	3,500	
Add for tree protection on north side	1,000	
- Main building foundation repair: -Reset loose stones with mortar -Rebuild damaged sections -Remove interior floor sheathing to access inside faces of foundation walls	8,000	
- Asbestos and lead based paint testing	1,000	
- Bolster second floor diaphragm to top of masonry connection with deep embedment in grout-filled holes	5,000	
- Add decking in second floor dead spaces to complete diaphragm to adobe sidewalls, labor	1,000	
- Paint entire exterior after repairs are made 970 @ $2.00	1,940	
- Repair window sash, damaged sills, restore windows to operational 10 windows @ $800	8,000	
- Restore doors to be operational and provide working hardware 5 doors @ $800	4,000	
- Professional fees	15,000	

Subtotal Phase Two:			**$48,440**
Phase Three: Roofing and roof framing, site paths, interior work			
- Replace gable siding and trim on south gable and south side of west dormer	1,000		
- Replace all dormer trim $7/sf x $50	350		
- Replace roofing, southern dormer, west side $20/SF x 10	200		
- Flash dormers to main roof and to dormer roofs, allow	500		
- Strengthen roof framing: Labor $7000, Materials $500	7,500		
-sister one split rafter			
-gusset rafter pairs near ridge			
-bolster framing and collar ties around chimney			
-reframe around abandoned roof penetrations			
-strengthen eave connection			
Site paths, walks, site furniture			
- Stabilize site paths for accessibility 5.27/SF x 300 sf	1,581		
- Provide one accessible picnic table	905		
Interior work			
- Widen east door into Room 2 to 32” clear opening	1,500		
- Inspect interior log sill and place supporting stones along its length	500		
- Rooms 1&2: reattach ceiling bead board and replace missing ceiling boards, labor	900		
- Strengthen first floor framing to allow higher occupancy (or limit occupancy and post load limits)	5,000		
- Replicate wallpaper over fireplace and repair chase enclosure	1,500		
- Battery powered security system	2,000		
- Professional Fees		5,000	
-			
Subtotal Phase Three:			**$ 28,436**
GRAND TOTAL			**$152,426**

Section 6: Bibliography

Published Works:

Bois, Henry L. *The History of DeKalb County, Illinois.* O.P Bassett Printers, Chicago, 1922.

Colorado Historical Society. *A Guide to Colorado's Historic Architecture and Engineering.* Second Edition. Office of Archaeology and Historic Preservation, Denver, CO, 2003

Griswold, D. and Griswold, J. *History of Leadville and Lake County, Colorado*. Colorado Historical Society, 1996

Gross, Prof. Lewis M. *Past and Present of DeKalb County, Illinois.* The Pioneer Publishing Company, Chicago, 1907.

Hafen, L.R., editor. *Mountain Men and Fur Traders of the Far West*. Bison Books, 1982

Lamar, Howard Roberts. *The Far Southwest, 1846-1912: A Territorial History.* Yale University Press, 1966.

Lincoln, Abraham. *Collected Works of Abraham Lincoln Vol. 4*. 20 March 1861, "Memo on Appointments to Territories."

McAlester, Virginia & Lee. *A Field Guide to American Houses*. Alfred A. Knopf, New York, 2004.

Mehls, Steven, *Colorado Mountains Historic Context*, Colorado Historical Society, 1984

Morand, Anne. *Thomas Moran: Field Sketches 1856-1923*. University of Oklahoma Press, 1996

Temple, Wayne C. "Delegates to the Illinois State Republican Nominating Convention in 1860", *Journal of the Illinois State Historical Society 92* (1999): 289-98

Waitley, D. *William Henry Jackson, Framing the Frontier*, Mountain Press Publishing Company, 1998

Wetmore, James Carnahan. *The Wetmore Family of America, and its Collateral Branches.* Albany: Munsell & Rowland, 1861.

Manuscripts:

Ryan, Patrick J. *Patrick Ryan Remembers: New York Boyhood and Manhood and Early Days in Twin Lakes.* Privately circulated by the Ryan Family, 1943. In the collection of the Denver Public Library Western History and Genealogy Department.

Wetmore, T.C., letter to Abraham Lincoln, 17 Jan 1861. Abraham Lincoln papers, Ancestry.com

Photograph Collections:

Twin Lakes Visitor Center Photo Collection
Denver Public Library, Western History and Genealogy Department historic photo collection

Reports and Assessments:

Eco Irrigation & Landscaping. "Visual Tree Inspection Report of Clarion Hotel." June 16, 2013

US Bureau of Reclamation, Denver Office. "The Twin Lakes and Interlaken Historic Districts: Condition Assessments and Preservation Recommendations." May 1991

US Forest Service Leadville Ranger Station, prepared by The Center for the Stabilization and Reuse of Important Structures, Department of Industrial Sciences, Colorado State University. "Twin Lakes Village: Building Stabilization and Reuse Parameters." December 1994

USDA Forest Service, report prepared by Mark Varhus, West Zone Engineer. "Clarion Hotel Preliminary Structural Inspection." August 31, 2012.

Government documents:

National Register of Historic Places, Twin Lakes District 5LK41, 1974
Twin Lakes Dam and Outlet Works, Historic American Engineering Record CO-63, 1989
Top of the Rockies National Scenic and Historic Byway Interpretive Management Plan, 2012
United States Census, 1840, 1850, 1860, 1870, 1880.

Internet sources:

Dekalbmasons.com/DeKalb Masonic Lodge No. 144,, accessed 1/29/15
En.wikipedia.org/wiki/Colorado_State_Highway_82, accessed 8/24/14
En.wikipedia.org/wiki/Galena_and_Chicago_Union_Railroad, accessed 1/29/15
En.wikipedia.org/wiki/Leadville_Mining_District, accessed 8/24/14

Twin Lakes Spruce Tree Consult
May 2014

Assessing hazardous conditions and potential risks for five spruce trees next to a historic building in Twin Lakes.

These trees are tall, large, and dense structures that can lose parts or catastrophically fail. The only way to completely remove the risk is to remove all of the trees on the site. On the other hand, the historic significance and benefit of these trees definitely weigh on the side of mitigating some of the hazards to reduce some of the risk and monitor the trees throughout the life of the trees. To remove the trees or to mitigate some of the hazards by tree pruning, are very costly and therefore brings us to our third option which is to leave the trees as they are.

Three Options:

1. Remove trees completely
2. Prune the trees to reduce windsail, give clearance of branches from the roof of the structure, and stunt the growth of the spruce trees--monitor the trees for failure
3. Leave trees as is, no action taken

Tree Failure:

If the trees fall, most likely they will not snap at the trunk, rather they will fall from the weight of the canopy via wind gusts. When this happens, it will take a large root-ball which includes the basil root collar, large structural roots, and rocks/soil within the root ball.

The likely-hood of the trees to fall via wind-throw is high because of the dense canopy, weight of the trees, shallow roots, and compacted soils. They also take the biggest brunt of the wind as no other trees are around to spread out the wind load. Winds can be high in the area due to topography of the area, being at the mouth of a narrow mountain canyon and temperature differences from high mountain zones and the large body of water from Twin Lakes.

Tree parts might also fail by branch breakage. The branches are heavy and long creating heavy tip-weight that could fail in a wind or snow load.

Tree risk assessment to the structure:

There are roots from the trees that extend under the structure. In the event of tree failure, the breaking of those structural roots will compromise the integrity of the building. Because the 5 trees are so close to the building, the root ball will impact the deck, foundation, and the wall to a small degree. However, the tree lean and tree weight on all 5 trees are away from the building and will fall in the direction away from the structure.

The targets that lie in the way of a falling tree include one powerline that feeds the museum, a small split rail fence, and one tree is leaning across the highway. These targets have little consequences except for the unlikely incident of a person or car crossing paths with exact timing of a tree-falling e event.

The overall level of risk present is relatively low as the targets are not of great consequence and the human factor is a very small probability of a person being in the path of a fallen tree.

Stipulations:

- *I am not offering recommendations, but providing options in regards to the health and care of these trees*
- *I assume no responsibility of disease, infestations, insect outbreaks, and/or failure to these trees*
- *This visit included only a visual inspection of accessible components of the trees. The tree risk assessment did not include the coring of the trees to see the integrity of the inside of the core*

Angie Jenson
ISA Certified Arborist
RM-7221A