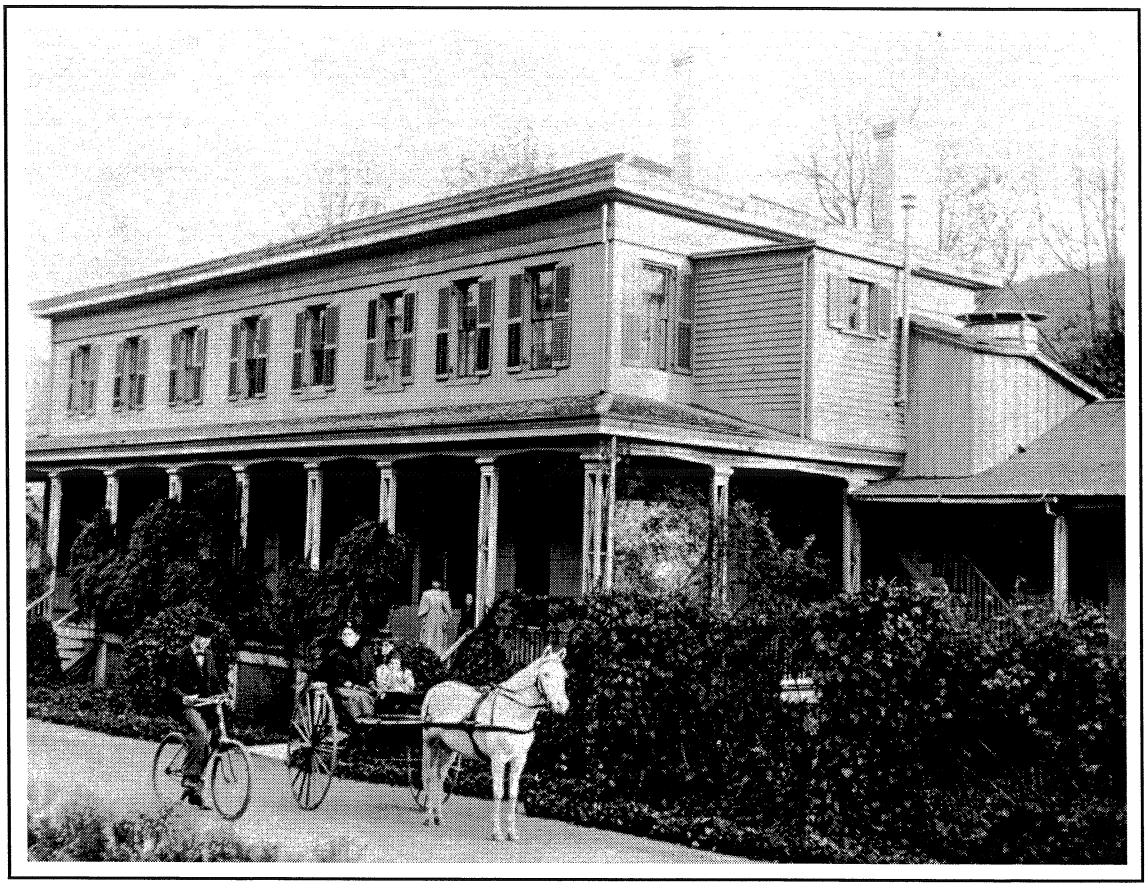
HISTORIC STRUCTURE REPORT
VOLUME I

FOR

CASA GRANDE
New Almaden, California



Prepared for

COUNTY OF SANTA CLARA
ENVIRONMENTAL RESOURCES AGENCY
PARKS AND RECREATION DEPARTMENT

March, 2000

TENNEBAUM-MANHEIM ENGINEERS | PATRI . MERKER . ARCHITECTS

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INTRODUCTION

EXECUTIVE SUMMARY

Tennebaum-Manheim Engineers was contracted by the County of Santa Clara Parks and Recreation Department to evaluate the condition of Casa Grande, review its history from existing documents, and develop plans for its rehabilitation. The project was initiated by the County's purchase of the building in 1998 and its desire to preserve and restore the historical resource for the education and enjoyment of the public.

The project goals for Casa Grande are as follows. First, to understand the development and importance of Casa Grande as a building and a historically significant landmark within the New Almaden National Register Historic District through historic research and on-site investigations and surveys. Second, produce a schematic design chosen from conceptual designs developed for the restoration of Casa Grande. Third, provide a cost estimate for construction costs for the complete restoration (at current market rate) based on the schematic design.

Historical Background

Andres Castillero, a Cavalry Captain in the Mexican Army, was traveling on a mission for the Mexican government when he happened upon the Ohlone Indians. They had painted themselves with a rich red pigment. Castillero recognized the paint as Cinnabar, the base material of quicksilver. Knowing that the Mexican government had offered a large reward for the discovery of a mineral source equal to the famous Almaden quicksilver mine in Spain, he began tracking down its source. He obtained from the Indians, the necessary information of its locality, which brought him to a cave in a valley twelve miles south of Pueblo of San Jose. Castillero determined the mine would be extremely rich and quickly registered the mine with the Mexican Division of Mines in California at the Pueblo of San Jose.

Barron, Forbes and Company, a British company, bought Castillero's shares of his mine in 1846, and hired Henry Halleck, an engineer, as the Manager of the mine at New Almaden. He improved mining methods and operations. Halleck commissioned the construction of a two-story brick hotel for visitors and company dignitaries in 1852. Upon completion in 1854, Halleck designated the building the Mine Manager's residence and named it "Casa Grande". John Young, Resident Manager of the mine, lived in the house and maintained it as the mining company headquarters. Partners would gather in the house with some of the most influential men in California.

After years of legal action regarding the validity of the original Castillero mining rights, the Barron, Forbes and Company sold the New Almaden Mine to Quicksilver Mining Company in 1863. From that time on, numerous Mine Managers and their families lived in the Casa Grande. During its heyday, the Quicksilver Mine at New Almaden produced more than $70,000,000 in quicksilver, making it the most valuable single mine in California. By the turn of the century, the cinnabar deposits were depleting. The Quicksilver Mining Company declared bankruptcy in 1912 and sold the mine and the Casa Grande to The New Almaden Corporation. Mining operations continued under teh N.A. Corporation until 1925. During the time that the Casa Grande served as the Mine Manager's Residence (1854 - 1925), the building underwent very few physical changes.

The New Almaden Corporation sold the mine holdings and Casa Grande in 1927. From that time on it no longer functioned as a Mine Manager's residence. It was sold to private owners beginning with the Black Brothers who developed the swim club called "Club Almaden". Dance floors on the north side and showers and locker rooms for the outdoor swimming pools were added to the building. Other owners who followed the Black Brothers made some changes to Casa Grande as well. The old dance floor was enclosed and turned into a ballroom, which was later remodeled into a show venue called the Opry House. A large opening in the existing masonry wall was made to create a proscenium arch for the stage and the old Parlor was converted into a back stage area for the show. Under the last owner, before Santa Clara County purchased Casa Grande, considerable changes occurred. Mr. Espeland (1980-1998) removed all interior walls of the upper floor and converted most of the main floor into office spaces. Deterioration and removal of certain elements occurred during the last 35 to 40 years of private ownership. Verandas were removed; plaster on the facade deteriorated and ultimately fell or was removed.

Santa Clara County purchased Casa Grande after the completion of an approved seismic upgrade and has provided the public with the New Almaden Historical Museum within the building. This building, in conjunction with the mine, is a significant part of local history and important to preserve for the public.

Rehabilitation Recommendations

Prior to forming conceptual designs, a public meeting was held to inform the community of the nature of the study and to get their opinions and ideas as to what direction the restoration should take. After meeting with the client and the public, the design team formulated three conceptual plans based on input from the public, County Parks personnel and historic preservationists.

It was important to understand the building both physically and historically. The restoration depended on the physical condition and the history of the building as well as the anticipated future function. These three determinants, the history, physical condition and function helped us to develop conceptual designs, which were presented to the public.

The design team's conceptual plans were presented to County of Santa Clara and a meeting was held for their comments and direction. The three conceptual plans were narrowed down to two conceptual designs. Concept 1 can be defined as restoring Casa Grande as much as possible while keeping the various non-historical additions to the building. (The non-historical additions are considered those added after 1925 when the building no longer served as a mine manager's residence.) Concept 2 can be defined as removing the additions and restoring the building back to its "Period of Significance." Both concepts included building and fire code upgrades for exiting and access for disabled persons, dependant on the building function.

Casa Grande is one of the major contributing structures in the New Almaden National Historic District and is significant on the national, state and local levels. When evaluating a historic building, its significance is defined as the importance of the property to the history, architecture, archaeology, engineering, or culture of a community. The significance is based on association with historical events; association with a significant person; or whether the building has distinctive physical characteristics of design or construction. The Period of Significance is the span of time during which significant events and activities occurred. To determine the Period of Significance, historical facts are examined to define the period of time in which the building contributed to the broad themes or historic contexts important to the community, nation or state. After review of the historic record, and

consultation with the National Park Service, it has been determined that the Period of Significance is the era during which Casa Grande served as the Mine Manager's Residence for the New Almaden mining operations (1854 to 1925).

The Parks and Recreation Department, under advisement of the Historic Architect and the National Park Service Preservation Assistance Branch, decided to restore the building to its Period of Significance. The design team developed Concept 2 into schematic plans which are described in detail in the body of this report.

A construction cost estimate was developed based on the schematic plans and presented to the County of Santa Clara Parks and Recreation Department. The recommended budget for construction for Year 2000 was estimated to be $2,353,074. Exclusions are listed on page 6 of the cost estimate. These may add significant costs to the project.

This study is a first step in preserving this historically significant resource.

Casa Grande *Date Unknown*

INTRODUCTION

INTRODUCTION

In May of 1999, Tennebaum-Manheim Engineers and Patri Merker Architects were retained to provide structural and historic architectural design services for the restoration of Casa Grande. The scope of services includes the following:

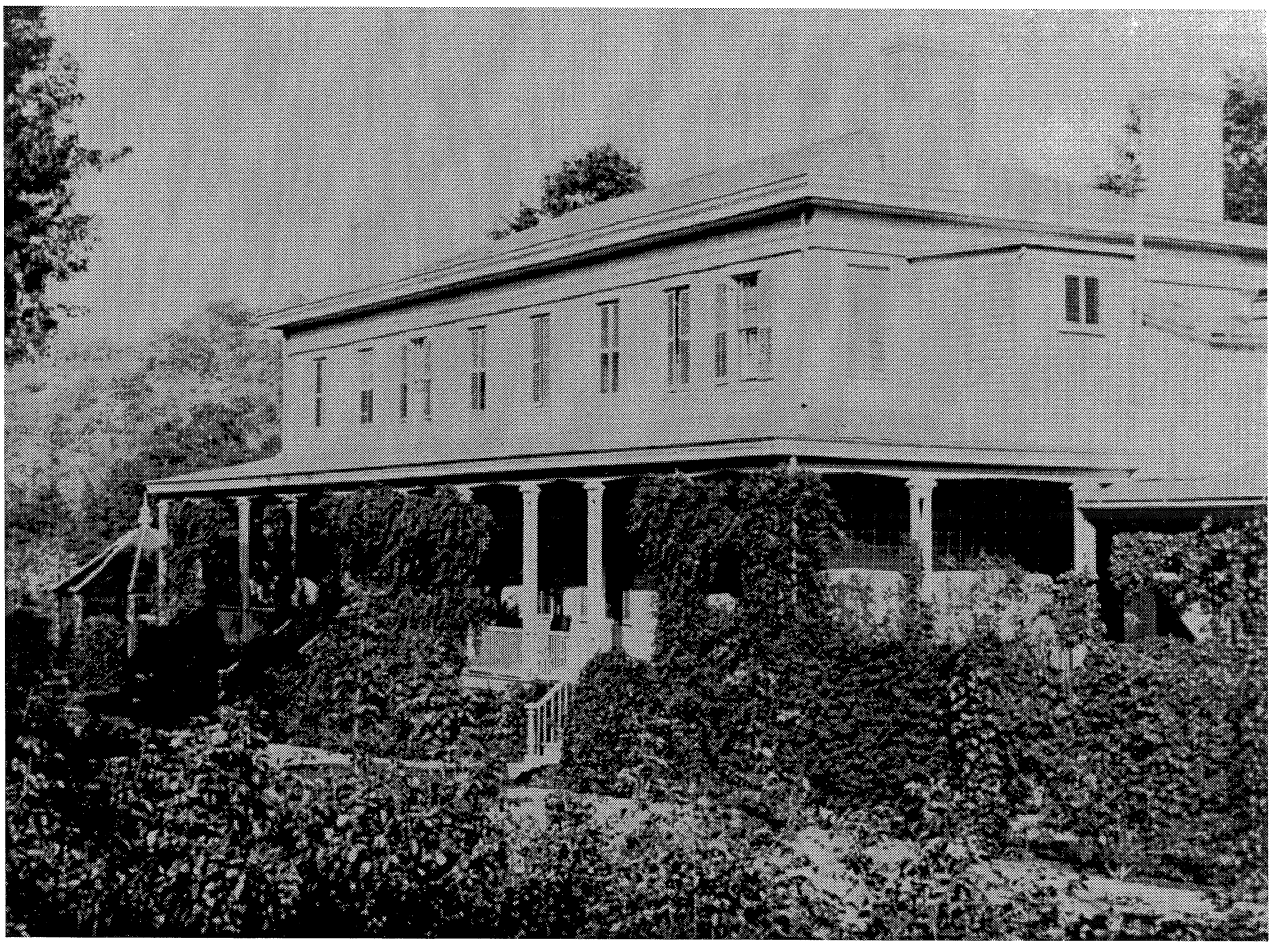
- Research the history of the building and develop a construction chronology.
- Assess the current conditions of the building and determine its overall structural stability.
- Identify deterioration processes that are occurring, prepare a summary of the types of material deterioration and surface failures observed, and make an assessment of their cause.
- Prepare a restoration plan for the building, including a schematic design for the proposed building use.

This survey was conducted by:

Client/Historic Research:	County of Santa Clara Parks and Recreation Department Mark Frederick, Capital Project Manager II
Structural Engineers/Prime Consultant:	Tennebaum-Manheim Engineers San Francisco, CA Nancy Tennebaum, Principal-In-Charge
Historic Architect Consultant:	Patri Merker Architects San Francisco, CA Glenn David Mathews, AIA,
Materials Conservation Consultant:	Architectural Resources Group San Francisco, CA David P. Wessel, Principal Conservator
Mechanical/Fire Sprinkler Consultant:	Mechanical Design Studio San Francisco, CA Minola Anghel, Principal-In-Charge
Electrical Consultant:	Ackerman/Practicon Palo Alto, CA Joe Galiata, Principal-In-Charge
Cost Estimating Consultant:	Rudy Carrasquilla

PURPOSE OF REPORT

The purpose of this Historic Structure Report (HSR) is to provide the County of Santa Clara with a general report of the existing conditions of the building, a focused description, detailed assessment and considered recommendations for the restoration of Casa Grande. It is based on a general building inspection and evaluation, review of existing documentation, and historical research. The report was initiated by the County's purchase of the building in 1998 and the Parks and Recreation Department's desire to preserve and restore the historical resource for the education and enjoyment of the public.

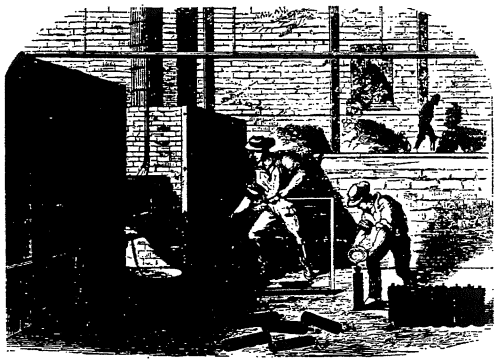


Casa Grande *Circa 1890*

BUILDING HISTORY

Introduction

In 1845 Andres Castillero, a Cavalry captain in the Mexican Army, was on a mission for the Mexican government in Northern California in an ill-fated attempt to purchase Sutter's Mill from John Sutter[1]. During this travel he happened upon a population of Ohlone Indians that had painted themselves with a rich red pigment. Castillero, an well-educated engineer, immediately recognized the paint as Cinnabar, the base material of quicksilver. Knowing that the Mexican Government had offered a $100,000 reward for the discovery of a mineral source equal to the famous Almaden quicksilver mine in Spain, he began tracking down its source. His research brought him to a cave in a valley 12 miles south of the Pueblo of San Jose where the natives had been mining cinnabar and trading it up and down the coastal region for many years. After testing the ore at his campsite along the creek that runs though the picturesque valley, Castillero determined the mine would be extremely rich because of the weight of the ore. He quickly registered the mine with the Mexican Division of Mines in California at the Pueblo of San Jose. Castillero complied with Mexican tradition of dividing the mine into 24 shares. Half of these shares he kept for himself and the balance he distributed to the four local gentlemen who had assisted him in his efforts[2].



The Mine In 1854

Woodcut graphic from The Pioneer Magazine, 1854

Castillero's early attempts to mine the claim and produce the ore were primitive and inefficient. He realized that he needed the financial help of the Mexican Government to develop the mining operation and set off to Mexico. Meanwhile, the relations between the United States and Mexico had begun to deteriorate. Frustrated with his lack of success in securing funding from the Mexican government and his mounting obligations of active military service in the war with America, Castillero sold his shares of the mine to the Barron, Forbes & Company, a British commercial firm with offices in Tepic, Mexico in 1846.

The Barron, Forbes Company financed the mining operations and eventually bought out Castillero's other partners to become majority owners of the mine. Between 1846 and 1850 the company improved the mining methods and achieved moderate success. In 1850, Barron, Forbes and Company established an association with the San Francisco law firm of Halleck, Billings and Peachy[3]. Captain Henry Halleck, a West Point graduate, engineer, and framer of the constitution of the State of California, was engaged in the field of California land titles with considerable knowledge of Mexican Land Grants which were in much dispute after California became a state. Halleck accepted a proposal to become the Manager of the Mine at New Almaden. He immediately reorganized the mining operation and improved mining methods and processing systems.

Castillero's claim under Mexican mining regulations was not detailed enough to withstand scrutiny when the Mexican land grants were converted into American land holdings. In 1851, Congress created the Land Commission to review the validity of all land grants under provisions of the Treaty of Hidalgo, the treaty signed to end the Mexican War and transfer ownership of California to the United States.

In dispute was the boundary agreement between Castillero and the adjoining rancheros. The subsequent legal cases went through the courts from 1858 to 1863, culminating with two separate Supreme Court decisions against the claim and the intervention of President Lincoln. The Barron-Forbes Company capitulated and sold the mine to the Quicksilver Mining Company of New York and Pennsylvania in 1864

Construction of Casa Grande

In April of 1852 Halleck commissioned the construction of a number of brick structures at the mine to replace wood frame structures[4]. One of the structures to be built was a two-story hotel for visitors and company dignitaries. It was reported that Halleck designed the hotel with influence from Architect Gordon Cummings, the designer of Halleck's Montgomery Block development in San Francisco[5]. The building was constructed by the New Almaden Mine's contractor, Francis Meyer, and was completed in 1854. Some historic sources report that the two-story section of the building was an addition to a single story masonry building that had been constructed a few years previous[6]. Upon completion, Halleck designated the building the Mine Manager's Residence and named it "Casa Grande[8]". He did not live in the house but stayed there every few weeks while visiting the mine from his home in San Francisco. John Young, Resident Manager of the mine lived in the house and maintained it as the mining company headquarters. Partners would gather at the house to conduct business with some of the most influential men in California[7].

Casa Grande was built on a slope in the shape of a rectangle. It consisted of two full stories in front and three stories in the rear. The lower floor contained the main kitchen, living quarters for the servants, storerooms and a large vault. It was noted in some historical accounts that the brick came from England as ballast in sailing ships and that bricks have been found in the building with "Greatenough, Scotland" kiln marks[9]. This speculation may or may not be true. Halleck commissioned a number of masonry buildings to be built to replace wood frame buildings and the bricks may have actually come from a brick kiln on the mine premises. It could also be that these buildings were built with a mixture of bricks from the mine furnace or imported bricks. Another scenario is that the one story structure was built first using the imported brick and the two-story section was built later with Halleck's site fired brick. Brick was the preferred material for construction because of its resistance to fire.

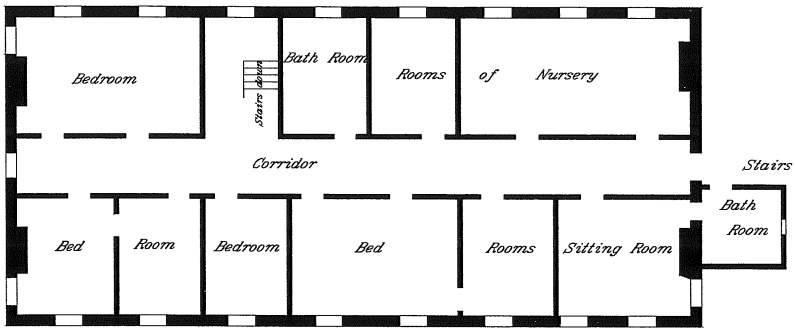
The building is in the Federal architectural style that was favored by Captain Halleck[10]. The building was constructed with a sheltered veranda supported on slender wood columns that wrapped around the main floor level. The brick walls were covered with a natural cement plaster that was scored to resemble cut ashlar stone and then white washed. To reinforce the illusion that the building was constructed of stone, the builders mixed sand into the white wash. Our early conservation investigation revealed that the sand mixed paint was also used on the window frames.

The Mine Manager's Residence

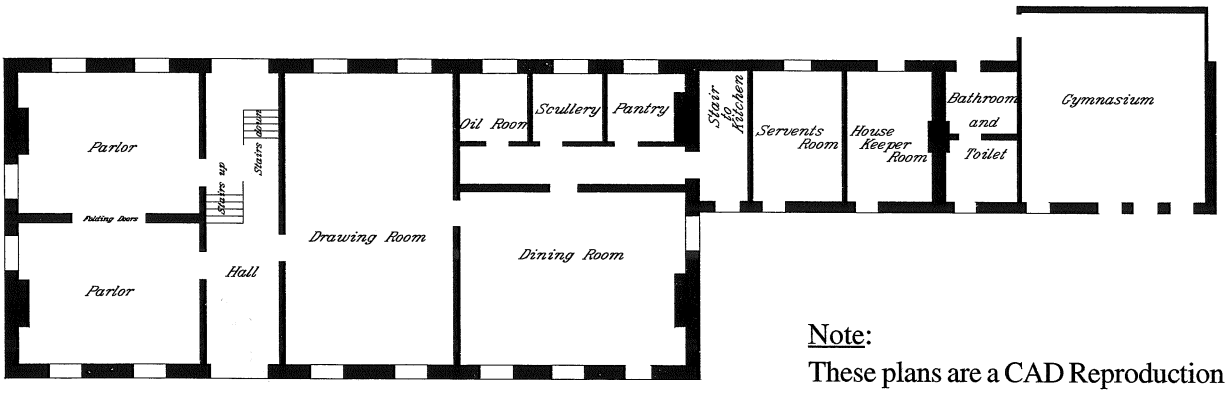
Halleck reportedly used the house for entertainment and furnished it with crystal chandeliers, handcarved fireplace frames with inlaid mother-of-pearl, thick rich carpets, French furniture and wallpaper all shipped around the Horn.

In 1861, Halleck was commissioned Major General in the Union Army and set sail for Washington D.C. He served first as Commander of the Department of Missouri and later General-in-Chief of all Union land forces. In 1865 Halleck returned to San Francisco as Commander of the Department of the Pacific. By this time, the Barron Forbes Company had sold the mine to the Quicksilver Mining Company and the mine and Casa Grande was in the hands of Samuel Butterworth.

MANAGER'S RESIDENCE
Q. M. Co.
New Almaden, Cal.

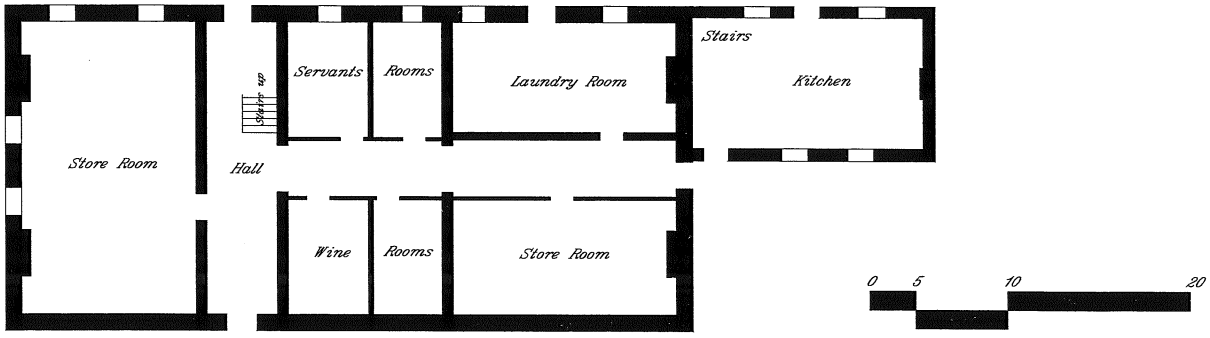


Plan of 2nd Floor



Note:
These plans are a CAD Reproduction of the June 1888 Remodel Plan

Plan of 1st Floor

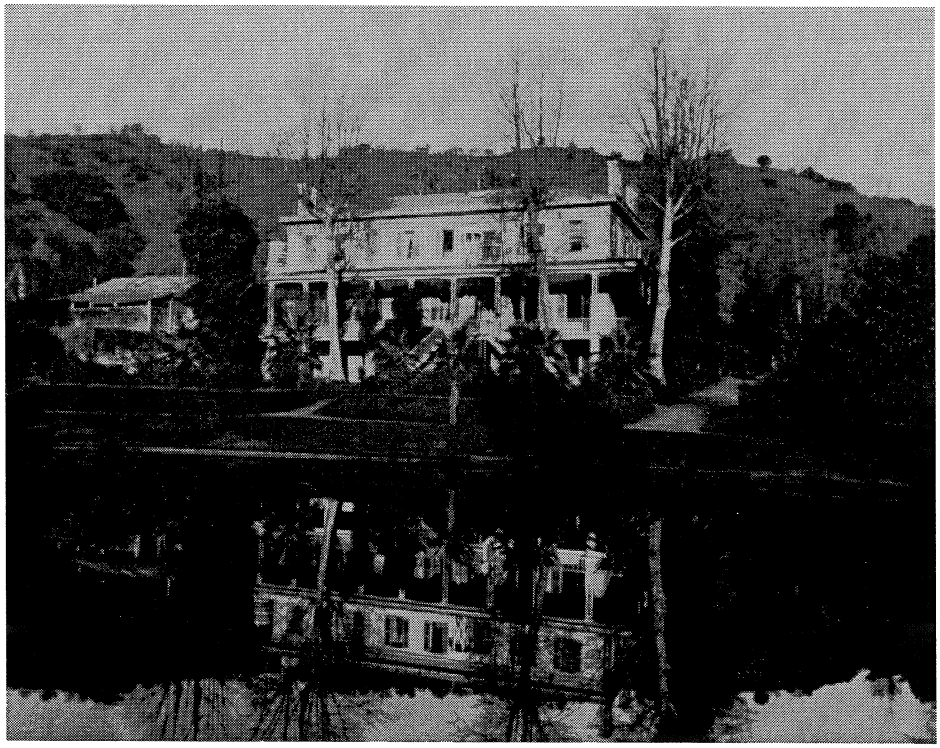


Plan of Basement

Samuel Butterworth managed the mine from 1864 to 1870 but only lived in Casa Grande for a few years. When Butterworth moved his family back to San Francisco in 1866, the mining company began operating the house as a chic resort hotel for wealthy San Franciscans[11]. It was during Butterworth's tenure that prominent men like William Sharon, James Fair, William Ralston and Baron Rothschild were lavishly entertained at Casa Grande with many political discussions held in the spacious Drawing Room.

Butterworth retired in 1870 and named his nephew James Butterworth Randol as his successor at the mine. Randol dispensed with the hotel operation and moved his family into Casa Grande. Under Randol, the already ornate "Grand House" was further enhanced. In the late 1870's Randol diverted Arroyo de los Alamitos, the creek that runs behind Casa Grande, to create a large private lake with a large island and fountain[12]. At this time he also installed an extensive garden as advised from a frequent guest, John McLaren, the designer and creator of San Francisco's Golden Gate Park[13]. In 1888 he thoroughly remodeled the house and added a gymnasium in the basement for his sons (Plans of this remodel are in this report) [14]. The family lived there until 1892 when Randol retired and was succeeded as mine manager by Robert Bulmore.

Robert Bulmore and his family lived in the house until 1900 and were the last of the mine manager residents of Casa Grande[15]. Around this time, the mining operations slowed and the Quicksilver Mining Company began to experience financial trouble. From 1900 through to 1915 the mine had a number of managers, however none of them lived in Casa Grande. The Quicksilver Mining Company declared bankruptcy in 1912[16]. In 1915 the New Almaden Corporation bought the mine and George Sexton became General Manager. In the failing last days of the mining operation, Sexton devised grandiose schemes to make money and keep the mine operating. One of these schemes was the plan to convert the Casa Grande into a County Club with a golf course and exclusive residential development nearby. His plans fell through and Sexton died in 1926. The New



Prize Winning Photograph of Casa Grande by Robert Bulmore *1894*

Almaden Corporation filed for bankruptcy in late 1927 and the mine holdings and Casa Grande were sold. At this point the Casa Grande were no longer directly associated with the mercury mining operations.

Post Mine Ownership

From its construction in 1854 to when the mining company sold the house in 1926, there were few changes to the building, although many different mine managers and their families came and went. It was under this new private ownership (after mine ownership) that Casa Grande underwent most of its major changes.

In 1928 the Black Brothers, David and Ben, purchased Casa Grande and much of the surrounding area from the bankrupt New Almaden Corporation. Ben Black was a songwriter for 20th Century Fox, famous for his song "Moonlight and Roses". The Blacks were the first to develop the property as a swim club. In the beginning, they charged general admission to use the grounds and swim in the lake. In 1931, David Black enhanced the development by building a raised outdoor dance floor off the North Veranda[17]. From 1932 to 1935 they developed the swim club, now called "Club Almaden," by converting the lake into swimming pools and adding showers and locker rooms in the basement of Casa Grande. During that time, David Black resided in the upper floor of Casa Grande and shared it with the Wilson Family. In 1932, Black leased the main floor to a Mr. Christiani and Mr. Christiani paid to renovate the main floor into a formal dress restaurant. The restaurant operated until after World War II when Mr. Christiani declared bankruptcy. The Blacks closed Casa Grande from 1945 to 1949[18].

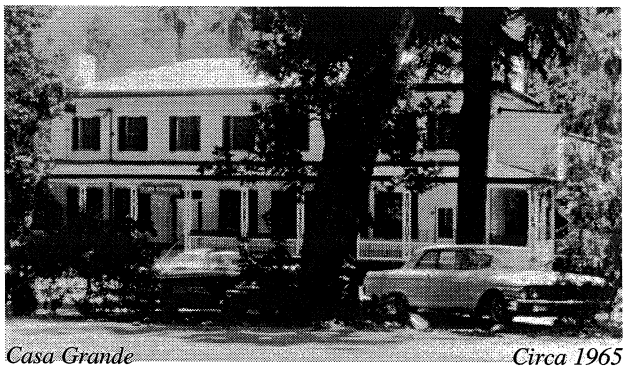
In 1949 Robert Gray leased Casa Grande from the Blacks with an option to buy if the swim club operation was successful. Gray eventually bought the Casa Grande, upgraded the swimming pools and operated the club till 1951. Having financial troubles, Gray sold the club to Norman Pope, one of his investors in the swim club operation.

Norman Pope turned Casa Grande into a very successful operation. It was so successful that at times he had to turn people away. He continued the swim club operation. He also enclosed the old dance floor and created an elegant ballroom. In 1963 he remodeled the ballroom into a show venue for old time melodrama. As Postmaster for the town of New Almaden, Norman Pope also operated a post office out of the old Drawing Room.

It was during this time that the age of the building started to become a factor. By the late 1960's the original scored plaster had seriously deteriorated on the upper floor facades and was falling off. Pope had the plaster removed from the upper floor facades giving the building a two-tone look.

Failing health forced Pope to sell the operation in 1968. Harry Fromm purchased Casa Grande and continued the operation. In 1978, Fromm enlarged the Opry House show venue by removing the north facade windows of the main floor and demolishing the masonry wall between them to create a proscenium arch for the stage. The old Parlors were converted into a back stage area for the show.

In 1979 Fromm became a partner with Terry Espeland and together they ran various operations at Casa Grande. In 1981, with the decline of the swim club business, the swimming pools were removed and the rear yard was landscaped. Also during this time, the



Casa Grande *Circa 1965*

original scored plaster wall surface was removed from the lower floor facades exposing all of the underlying brick. In 1985 Espeland bought Fromm out and became sole owner of the building. Fromm continued to lease the Opry House space from Espeland and continued the weekend show venue.

Under the ownership of Terry Espeland, the Casa Grande saw considerable change. Upon purchase of the house, Mr. Espeland remodeled the upper floor and removed all of the original interior walls. In 1987 the main floor (except the Opry House backstage area) was converted into office space. In 1987 the basement was remodeled into a restaurant. In 1990 the rear grounds were re-landscaped and a series of decks were installed and developed into accessory spaces to the restaurant operation in the basement level.

In 1997 Terry Espeland negotiated a deal to sell the Casa Grande to the County of Santa Clara. Mr. Espeland had been notified by the County Building Office to seismically upgrade the building prior to any negotiation associated with the sale. He was legally required to make the necessary upgrade before he could sell the property. The construction for the upgrade was completed in late 1997 and in January of 1998 the County of Santa Clara became the owner of the 149-year-old architectural treasure.

After acquisition of the building, the County of Santa Clara remodeled the office areas of the main floor into the New Almaden Mining Museum. As part of this remodel, the original Dining Room was furnished as a "period mine office."

Reconstructed Mine Manager's Office *2000*

Period of Significance

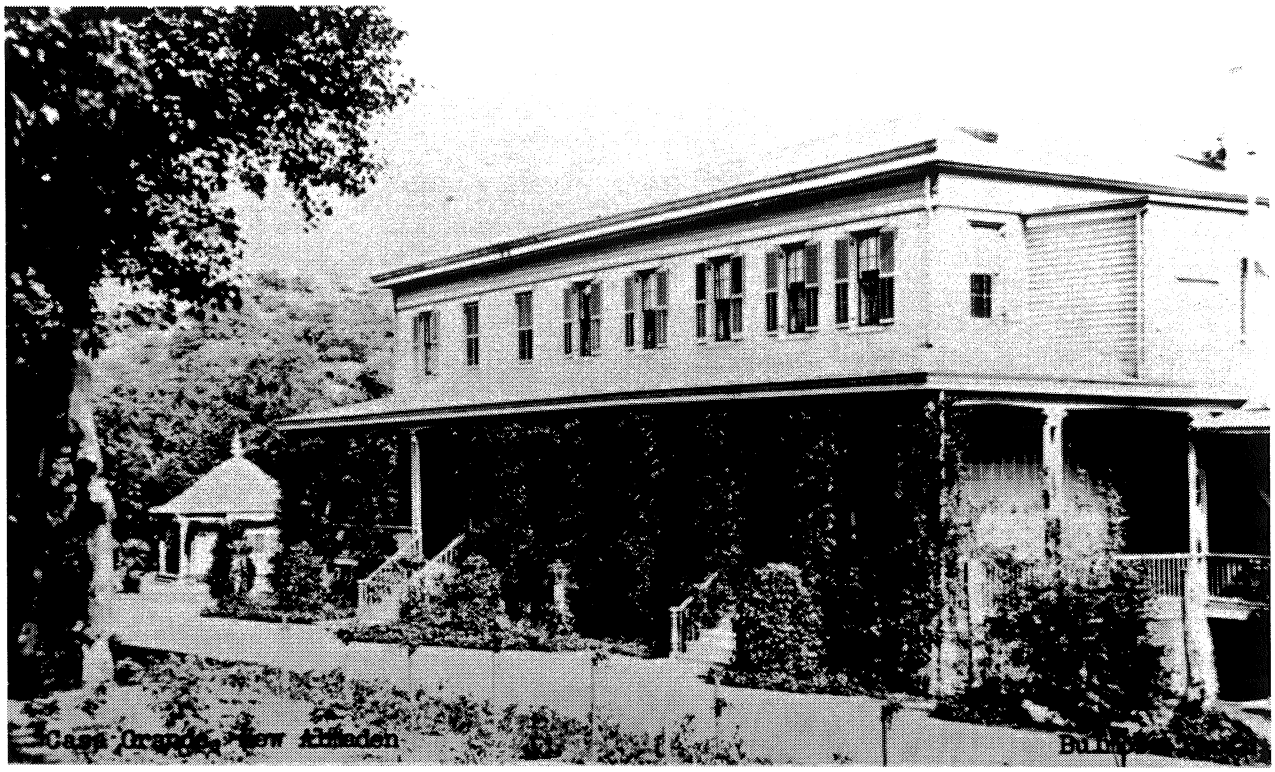
(Portions reproduced from the National Register Nomination Form)

The New Almaden mine was one of the richest mining operations in California and the first quicksilver deposit discovered in North America. It was one of the world's four major sources of quicksilver and produced more metallic wealth than any gold or silver mine in the west. Until the discovery of the cyanide process in 1887, quicksilver was the only reduction agent of gold and silver. The quicksilver from this mine made possible the rapid development of the great gold and silver quartz mining industry of California and the Comstock Load in Nevada in the 1850s and 1860s.

The discovery of placer gold at Sutter's Mill in 1848 and the resultant exploitation of the vast deposits of the Mother Lode, expanded the demand for quicksilver. During the placer mining era of 1848 to 1860, mercury was thrown on the riffle bars or cleats of the pans or cradle, sluice box or Long Tom, to amalgamate the small particles of floating gold. In quartz mining, which developed in California after 1852, quicksilver was vital in amalgamating both gold and silver. In this process, the ground or powdered quartz is mixed with mercury and water and the gold separated by a gravity process.

In 1850, under the supervision of Henry Halleck, the New Almaden mines began producing some 532,000 pounds of quicksilver. By 1854, production reached about 1,000,000 pounds making it second only to the Almaden mine in Spain and outranked the other quicksilver producers throughout the world. The gold mines in California used about 76,000 pounds a month in 1856 and in the 1860's the Comstock Lode added to the market. In 1865, the New Almaden mine contributed 60% of the California and Nevada consumption of mercury which yielded a total of $20,000,000 for the mine owners.

Henry Halleck, the first manager of the New Almaden Mine and later commander of the Union Armies in



Casa Grande *Circa 1890*

the Civil War, commissioned the construction of the Casa Grande in 1852 as part of his reorganization of the mine operations. When he assumed the duties of mine manager he found New Almaden to be a primitive Mexican mining camp. Immediately he organized an efficient operation that replaced the archaic system for extracting the quicksilver from the cinnabar ore with the construction of six modern furnaces. It was under Halleck that the mines began large-scale quicksilver production. Casa Grande became the personal and official residence of the mine manager. During the years the mine managers occupied the house they enjoyed the unique rural splendor uncommon to other mining environments. Nowhere in the western mining areas was a touch of grandeur so artistically expressed as in the stately building of the Casa Grande.

Through its doorways came many visitors and dignitaries. Prominent personalities of the time such as financier and railroad builder William Sharon; James Fair, Comstock silver king; banker William Ralston, Baron Rothschild, emissaries of the Emperor of China, and foreign consuls gave Casa Grande a touch of dignity quite exclusive in the world.

In 1964, the New Almaden Historic District was created as a National Register Historic District. The District encompassed the entire New Almaden mining area including Mine Hill, Casa Grande and the remaining structures of Hacienda. In the National Register of Historic Places Inventory Nomination Form, Casa Grande is listed as one of the major contributing structures of the historic district.

Conclusion

From the date of its construction in 1854 to 1928 when it was sold to the private developers, Casa Grande was the official mine manager residence of the New Almaden mining operation. During this 74-year period the building served its purpose without any major physical changes. Because of the buildings relationship to the mine and the important personalities involved, especially Captain (later General) Henry Halleck, we conclude that the period of significance for Casa Grande is the time during which the building was used as the Mine Manager's Residence from 1854 to 1925.

Inlaid Mother of Pearl Fireplace *1965*

NOTES

1. Jaime Schneider, *Quicksilver, The Complete History of Santa Clara County's New Almaden Mine*, San Jose 1992, page 12

2. Bulmore, Laurence and Milton Lanyon, *Cinnabar Hills*, California, 1967, page 4

3. Butler, Phyllis F., *New Almaden's Casa Grande*, California Historical Quarterly, California, Vol. LIV Winter 1975, page 315

4. Butler, Phyllis F., *New Almaden's Casa Grande*, California Historical Quarterly, California, Vol. LIV Winter 1975, page 315

5. Butler, Phyllis F., *New Almaden's Casa Grande*, California Historical Quarterly, California, Vol. LIV Winter 1975, page 316

6. Kaufman, Marion Bailey, *Quicksilver Earnings Built Casa Grande*, San Jose Mercury News, Sunday October 10, 1965, page 19

7. *Casa Grande Recalls the Past*, El Minero de New Almaden, July 31, 1966

8. *Casa Grande Recalls the Past*, El Minero de New Almaden, July 31, 1966

9. Pope, Norman J., *The Casa Grande of Nuevo Almaden*, page 16

10. Butler, Phyllis F., *New Almaden's Casa Grande*, California Historical Quarterly, California, Vol. LIV Winter 1975, page 317

NOTES (CONTUNED)

11. Butler, Phyllis F., *New Almaden's Casa Grande*, California Historical Quarterly, California, Vol. LIV Winter 1975, page 319

12. Butler, Phyllis F., *New Almaden's Casa Grande*, California Historical Quarterly, California, Vol. LIV Winter 1975, page 320

13. Bulmore, Laurence and Milton Lanyon, *Cinnabar Hills*, California, 1967, page 98

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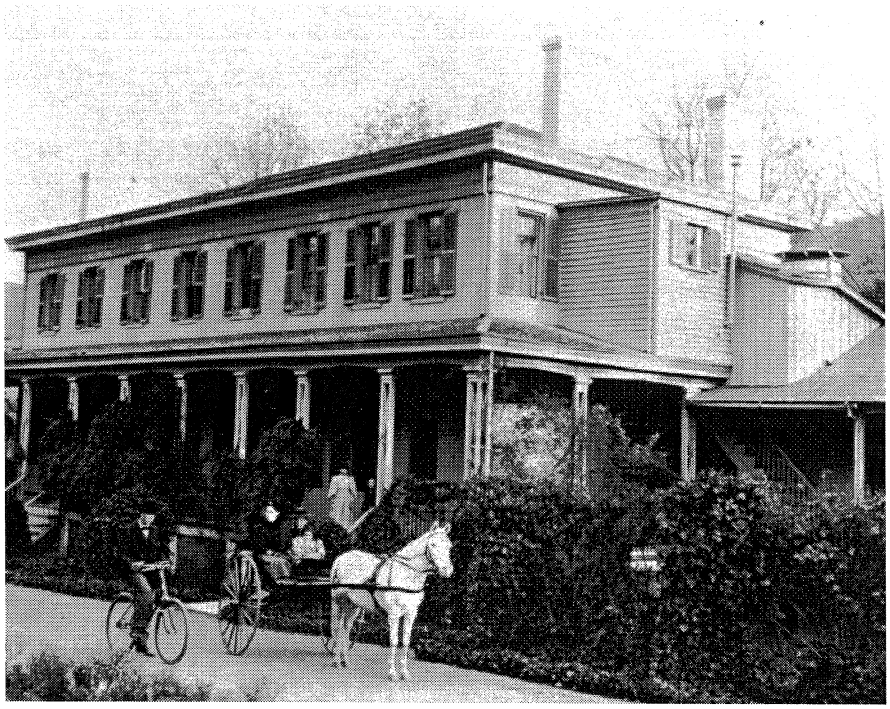


Casa Grande *Circa 1890*

BUILDING CHRONOLOGY

Date	Description
Late 1845	Andres Castillero registered mine with Federal (Mexican) Division of Mines in California in San Jose.
1846	Mine acquired by Barron, Forbes & Company operating out of Tepic Mexico.
1850	Captain Henry Halleck became Director of the New Almaden Mine.
1852	Frances Meyers, New Almaden Mines contractor, began construction of 2-story masonry structure to be used as the mining company hotel.
1854	Two story masonry structure completed. Halleck named it "Casa Grande" and designated it as the Mine Manager's residence and headquarters for the mining company partners.
1858	Legal challenges to Castillero's claim began
October 1861	Halleck commissioned Major General in Union Army, sailed for Washington D.C. Sherman Day became mine manager.
August 1863	New Almaden Mine sold to Quicksilver Mining Company. Samuel Butterworth became General Manager and moved into Casa Grande.
1863	Supreme Court decisions against Castillero's claim; Barron Forbes Company sold mine to the Quicksilver Mining Company
Late 1860's	Quicksilver Mining Company operated Casa Grande as chic resort hotel.
July 1870	Samuel Butterworth retired and was succeeded as General Manager by his nephew James Butterworth Randol.
1870's	Randol diverted Los Alamitos Creek to create private lake with ornamental fountain at the rear of Casa Grande and created a lavish garden.
1888	Randol extensively remodeled Casa Grande.
1892	Randol retired as General Manager of the mine and is succeeded by Robert Bulmore. Bulmore and family lived in Casa Grande until 1900.

Date	Description
1900-1915	Jefferson Tatham and family and others lived in Casa Grande.
1912	Quicksilver Mining Company declared bankruptcy.
1915	Mine and house sold to New Almaden Corporation. George Sexton became manager of the mine.
1924	Sexton planned to convert Casa Grande into Country Club with golf course. Plan eventually fell through.
August, 1926	George Sexton died.
December, 1927	New Almaden Corporation declared bankruptcy.
1928	Casa Grande purchased by David & Ben Black.
1926-1934	Lee Branford Wilson and family moved into Casa Grande, and shared house with David Black. Basement was in disrepair and not used.
1931	David Black built raised outdoor dance floor off north veranda.
1932	Mr. Christiani operated an elegant restaurant out of the old Dinning Room on the main floor.
1932-1935	Black developed the site into a recreation unit "Club Almaden" by converting the lake into swimming pools
1933	Black adds shower and locker rooms to basement for resort pools.
Late 1930's	Mr. Christiani gained control of Casa Grande.
1945	The Black Family regained control of Casa Grande
1945-1949	Casa Grande closed.

BUILDING CHRONOLOGY (CONTINUED)

Date	Description
1949	Robert Gray leased the building from Black Family with option to buy. Upgraded the pools and operated swim club/resort.
1951	Casa Grande purchased by Norman Pope.
Circa 1956	Pope renovated upper floor into his private residence. Enclosed open exterior dance floor to create an elegant ballroom.Remodeled Parlors into Saloon. Continues swim club operation.
Late 1960s	Ballroom renovated into show venue (Opry House).
1964	New Almaden National Historic District created. Casa Grande designated as contributory building to district.
1966	New Almaden Post Office moved into what was formally the Drawing Room.
1968	Pope sells Casa Grande to Harry Fromm
Late 1960's	Original scored plaster removed from upper floor façade.
1978	Original windows and section of brick wall removed on north façade to convert Parlors into backstage area for Opry House show venue.
1980's	Remainder of original scored plaster removed from lower facades.
1981	Pools demolished
1985	Harry Fromm sells building to Terry Espeland
1985	Original walls of upper floor removed in remodel. One story section and south portion of two-story section of the main floor remodeled for use as insurance company offices. Basement remodeled into restaurant.
1990	Decks and landscaping installed.
1991	Old water tank house repaired.
1997	Espeland commissioned seismic upgrade of building as required prior to selling

Date	Description
	property.
January 1998	Casa Grande sold to County of Santa Clara.
1998	Santa Clara County remodeled the insurance company office area into museum space and reconstructed the old Dining Room area into a room of the original vintage furnished with period office furniture.
1999	Tennebaum-Manheim Engineers received contract with County of Santa Clara for as needed services and begins evaluation and recommendations for the rehabilitation of Casa Grande.

Lake at Casa Grande *Circa 1890*

EXISTING CONDITIONS

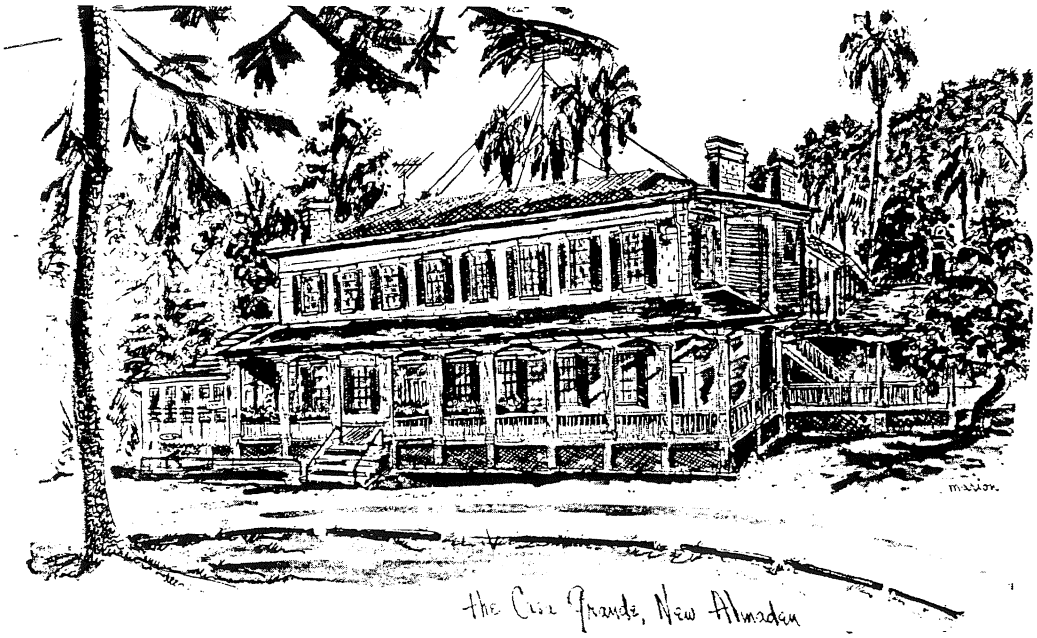
EXISTING CONDITIONS SYSTEMS

Introduction

The following descriptions of the existing conditions of the building systems and materials of Casa Grande are a synopsis of a more detailed Existing Conditions Report contained in the Report Supplement. This section describes only the conditions of the materials and systems of the building. Recommendations for restoration and treatments are discussed in the Detailed Restoration section of this report.

General Architectural Description

Casa Grande can be described as three separate but attached structures. For simplicity we will call the central structure Casa Grande, the south structure Casa Grande Museum and the north structure the Opry House. Casa Grande (the central structure) is a long red brick masonry rectangle, eight bays wide and four bays deep with two stories on the west (front) side and three stories on the east (rear) side. It is covered by a low hip roof. The attached structure on the south side, Casa Grande Museum is a brick masonry structure with one story on the West Side and two stories on the East Side with a gable roof. The Opry House is a wood frame addition to Casa Grande with one story on the East Side and two stories on the west. It has a hip roof. A shed roof supported by lacy wood pillars and wood railing shades the veranda of the raised first floor across the Casa Grande and Casa Grande Museum structures. This veranda is a remnant of the original veranda that once encircled the entire structure. The door and window openings are simple wood lintels and sills constructed to imitate stone. A simple wood cornice decorates the second floor. Two pairs of red brick chimneys on the north and south sides pierce the hip roof of Casa Grande and a single chimney remains on the roof of the Casa Grande museum.



Pen & Ink Rendering from San Jose Mercury News October 10, 1965 by Marion Bailey Kaufman

Exterior

Roofs

The central Casa Grande section is covered with a low hip roof with wood shingles. The gable roof of the museum is a hodge-podge of roofing materials. The West Side gable is covered with various layers and colors of rolled asphalt roofing sheets. It is possible that these layers of roofing material also cover a layer of wood shingles. The rolled roofing sheets are worn and have many patches. The East Side gable is covered with wood shingles. The wood shingles are in fair condition but are at the end of their serviceable life. The roof over the Opry House on the north side of the building is covered with asphalt shingles that look relatively new and in good condition. The roof of the veranda is covered with asphalt shingles that are in poor condition.

Exterior Walls - Brick

The materials conservation section of the Existing Conditions Report contains a detailed review of the condition of the masonry walls. The following description is an overview of the general conditions.

Deteriorated Brick at East Facade *2000*

The exterior walls of Casa Grande are constructed of red brick. These walls were once covered by a coat of plaster scored in an ashlar pattern to imitate stone. To continue the illusion that the building was constructed of stone, the original plaster was painted with a whitewash that was mixed with fine sand. The plaster coating was removed in two stages. First the upper floor facades in the 1960s and later the mid and lower level facades in the 1980s. In general, the exterior brick is in good to fair condition considering it is nearly 150 years old. This is due to the fact that the brick was covered with plaster most of this time. At some point, perhaps as part of the plaster removal, the exterior brick surfaces were sandblasted. This procedure and other removal processes such as chipping and grinding were also used to remove the original plaster. These abrasive removal processes created a condition that has lead to the accelerated deterioration in some of the bricks in the more exposed areas.

The brick piers that support the verandas show considerable deterioration (of the brick and mortar) due to water intrusion. This is seen mostly at the base of the piers where water has "wicked" up the pier from ground moisture or standing water on the concrete decks, etc. A great deal of deterioration may be seen under the front veranda where the grade level has been raised. Here, a portion of the piers and walls retain soil and underground moisture has penetrated the wall and caused considerable damage to the historic material.

Exterior Walls - Wood

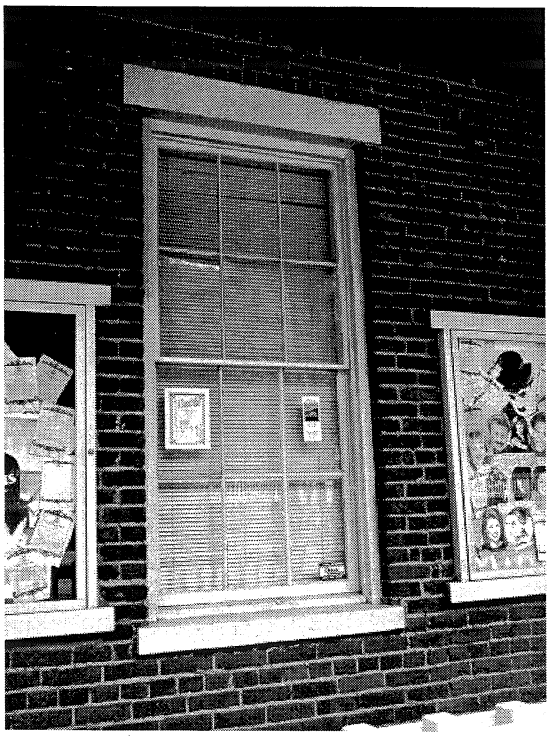
The exterior walls of the "Opry House" north addition and the south and east walls of the Casa Grande museum are constructed of wood studs covered with rough-sawn vertical T-111 plywood siding. This siding continues across the rear of the building at the first (basement) level where it clads various recent additions to the building as well as the restaurant restrooms and the rear exit stair. The siding is relatively new and in good condition in most places.

Foundation/Basement Walls

The first floor of Casa Grande was once the basement of the building. The original exterior walls and many of the interior walls are original red brick and are approximately 18" thick. All of the interior brick walls have had arched openings punched through to create circulation for the restaurant. The walls look to be in good condition. Most of the original basement window openings have been closed and converted into display niches for the restaurant. One original wood window frame can be found in the electrical room under the front veranda.

Original Windows

Historic photographs indicate that the original windows of the Casa Grande were wood double-hung sashes in a six-over-six pattern with window muttons. Nine of these windows exist today. There are two to the north of the main entry front door and three to the south. At the rear facade there are two sets on either side of the main entry rear door. All the other windows of the building are wood replacement units. The two windows on each side of the front door have had their sills raised. The south window was altered to accommodate the New Almaden Post Office that once was located in the building. The north window was altered to accommodate a ticket window for the "Opry" theater. In both cases, the original window material is in place and can be restored to its original configuration. The southern most original window on the front is located in the reconstructed Mine Manager's Office and has had a Plexiglas panel applied to the outside to seal the opening. The four original windows on the rear are all intact with the exception of the window to the north (right) side of the door. Here, the upper sash has been removed and replaced with a window air conditioning unit. All of the original windows look to be in good to fair condition but are in need of restoration and repair work in order to be operable.



Original Window *2000*

Museum Replacement Windows

The windows of the museum are wood double glazed window units installed by Terry Espeland when this area of the building was remodeled in the mid 1980s. According to a historic floor plan from the 1880's, the openings where these windows are located were once door openings. The openings were closed up to the level of the current window sill with matching new brick. Other windows in the museum wood exterior walls match the replacement windows.

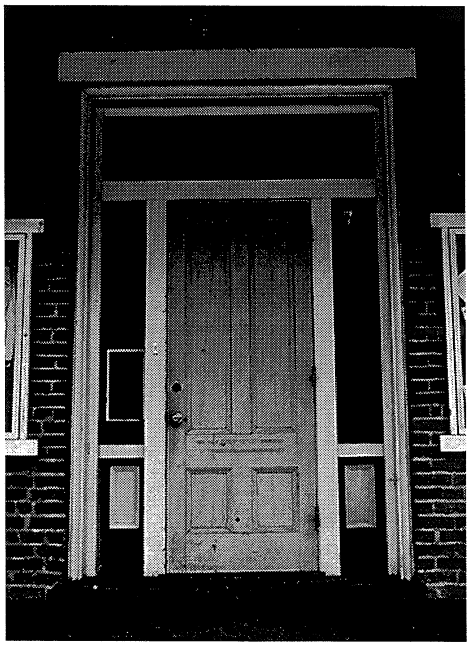
Third Floor Replacement Windows

The original upper level windows were removed in one of the recent remodeling efforts and replaced with new double-glazed wood windows with a mixture of fixed and casement operation. The fixed windows are divided into 15 panes with snap-on mutton. The casement windows have the operating sash divided into 12 panes with a fixed section of three panes at the top separated from the operating sash by a horizontal mullion. The windows of the Club Almaden Restaurant, on the first floor, are also wood casement replacement windows. One window on the east façade was removed and the opening filled in with brick that do not match the original brick.

All of the new replacement windows are in good condition with the exception of a few on the third floor where the operating hardware is in need of repair or adjustment.

Original Doors

During our review of the building we found that only the rear and front hallway doors appear to be original or old enough to be considered historically significant. Both of these doors are "style and rail" type panel doors constructed with mortise and tendon joints. The hardware on these doors has been altered many times as evidenced by many patches on the jamb rails. The doors are in working order but in poor to bad condition and should be completely restored.



Front Door *2000*

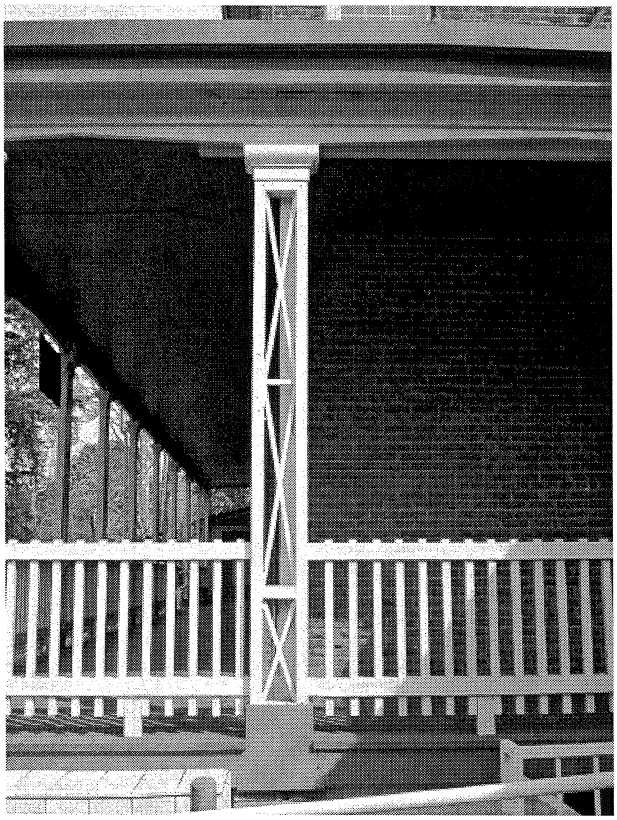
Replacement Doors

Three doors on the front (west) facade in the museum area have been changed to modern clear finished raised panel oak doors. The doors are in good condition and in working order. The double doors to the "Opry House" and the single doors to Club Almaden are relatively new non-historic solid core flush face doors. They are all in good operating condition but their style is not in character with the building. The double entry doors of Club Almaden are dark stained clear coated wood panel doors and are in good condition.

Front Veranda

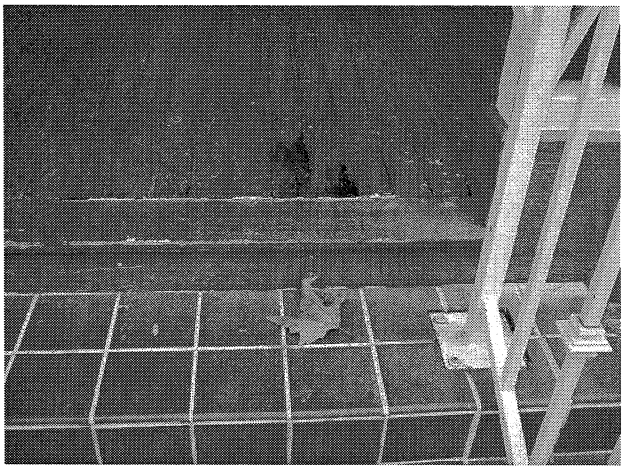
The front veranda of the Casa Grande is a remnant of the veranda that originally continued around all sides of the building. The veranda on the north side was removed when the dance floor was enclosed. The rear veranda was intact until the early 1990s. The front veranda is supported by columns consisting of two vertical 2" x 4" posts spaced approximately 12" and connected by 2" x 4" diagonals that zigzag the length of the column creating a light lacy element on the facade. The individual column elements are unified at the base and head trim. Most of the column elements look as if they have been replaced over the years with few, if any, original columns remaining. The columns are in good condition.

A wood railing with vertical wood banisters spans



Veranda Column *2000*

between each column. The floor is constructed of tongue and groove wood decking spanning the width of the veranda and is painted. The flooring is not original, but is quite old. There is a gap in the veranda flooring at the juncture of the wall where the original wall plaster was removed in the 1980s. Through this gap another tongue and groove flooring material can be seen. The area of flooring at the main entry stair is badly deteriorated and could fail causing injury. This area of flooring should be repaired immediately with new tongue and groove material that matches the existing.



Veranda Floor *2000*

The ceiling of the veranda is constructed of tongue and groove "bead board". Most ceiling material looks to be in good condition with the exception of the area at the front door of the "Opry" where the ceiling sags. The source of this sag should be investigated and the material removed. Once this is done, the ceiling boards can be restored to their proper condition.

Veranda Ceiling *2000*

Rear Porch

None of the original rear veranda remains intact. The current porch exists only between the "Opry" rear exit doors and the rear hallway entry door on the rear (east) side of the building. Here the original roof has been removed and replaced with a canvas awning supported by new wood 4x4s. The wood picket railing has been replaced with a solid wood railing constructed of 2x4s covered in T-111 rough-sawn plywood. In the area between the rear entry door and the rear museum addition, the veranda was removed and a corrugated metal roof installed 12" above the floor level to shield the restaurant restrooms below. The flooring of the rear porch is plywood coated with a waterproofing deck material. The entire rear porch construction is in poor condition and suffers from the lack of maintenance. The stairs are rotted and should be removed and rebuilt. The corrugated metal roof over the restrooms is not in good condition. It should be removed and a better solution found for roofing the restrooms.

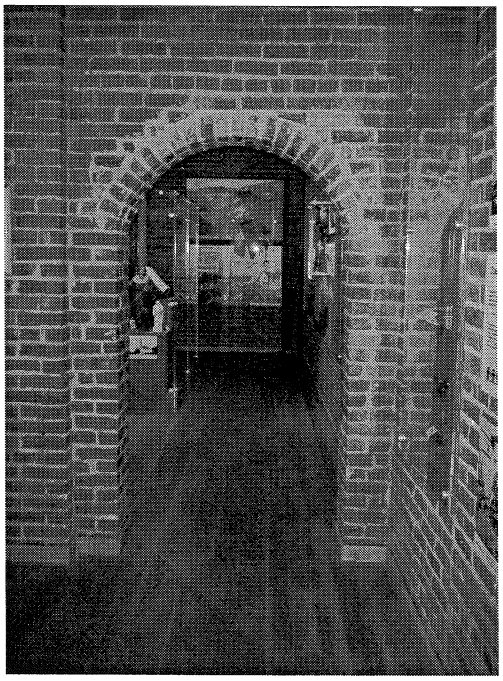
Interior

Interior Walls

The only original interior walls of the building remaining are red brick walls that form the structure. These walls form the Main Hall, the wall that divides the office area from the museum display space and the wall that divides the one story museum space. All other interior walls are new partition wood frame with gypsum board. All of the interior brick walls were once covered with the same plaster material that was on the outside of the building. Like the outside walls, all of the plaster material was removed from the interior brick walls leaving the brick exposed. The gypsum board walls are texture coated and painted. All of the walls are in good condition with the exception of the brick wall that divides the one story museum space. Here, where an arched opening was added in the wall, the bricks of the new arch are loose with cracks forming above the arch. This problem is discussed in the Structural section of the Supplemental Report.

Floors

The floor material of the Main Hall and possibly the Opry Dressing Room are original wood plank flooring. The museum remodel and the seismic upgrading performed in 1997 required the removal of the original flooring in the second and third floors where seismic strapping was required. A new soft wood floor was installed in the main museum area to match, as closely as possible, the original flooring material. The new floor is unstained, oiled and in good condition. The original flooring in the Main Hall shows a lot of wear, but is in good to fair condition. Other areas of the second and third floors have either carpet or vinyl flooring that was recently installed in the museum remodel or seismic upgrade and are in good condition.



New Flooring at Mining Museum *2000*

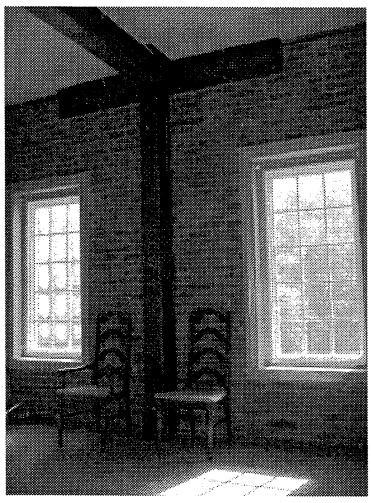
Structural Overview

Casa Grande can be described as three separate but attached structures. The main building, Casa Grande, is a three-story unreinforced masonry building with wood roof and floor diaphragms over wood joists. The adjacent attached structure, designated as Casa Grande Museum, is a two-story unreinforced masonry building with wood roof and floor diaphragms over wood joists. The Opry House, an addition on the East Side of Casa Grande, has wood floor framing bearing on wood stud walls.

The existing perimeter masonry walls range from 18" thick to 14" thick in the Casa Grande and Casa Grande museum and are in good condition. The interior brick walls on the 1st and 2nd floor range from 9" to 14" thick. There are no interior brick walls on the third floor. In some locations, the original wall openings have been modified or enlarged. The wood framing within the building is primarily the original redwood and in very good condition. The size and depth of foundations are unknown, however the floors appear to be quite level, which indicates that the foundations are adequate for the building for bearing pressures.

Seismic upgrade documents dated 1-13-98 and as-built drawings were prepared by Robert W. Croyle, P. E. The work has been carried out and documented by the County Building Inspectors. The as-built drawings indicate that the original diagonal floor sheathing was removed throughout most of the building. Wall to floor ties and plywood diaphragms were added. Two steel moment frames were added on the third floor. The columns of the moment frames are located on the third floor, seated on the top of the 2nd floor interior brick walls, to the top of the ceiling joist. There are also angle brackets at the top of the 3rd floor perimeter brick walls spaced at approximately 32" to 48" o.c. There are several questions regarding the upgrade and it may be prudent to examine the effectiveness of the seismic upgrade.

The Opry House is wood frame over wood stud walls with a slab on grade first floor. The roof has four wood trusses with 3x4 joists @ 2'-0" o.c. parallel to the trusses. The joists appear to be sagging and may be overstressed. The original veranda on the north side of the building was removed leaving only the basement veranda columns intact to support the stage. At the main floor level, two windows and an area of brick between them were removed to create an enlarged opening for the stage (proscenium). The opening supports the brick wall above with two wood members. The size and depth of the foundation supporting this structure is unknown.

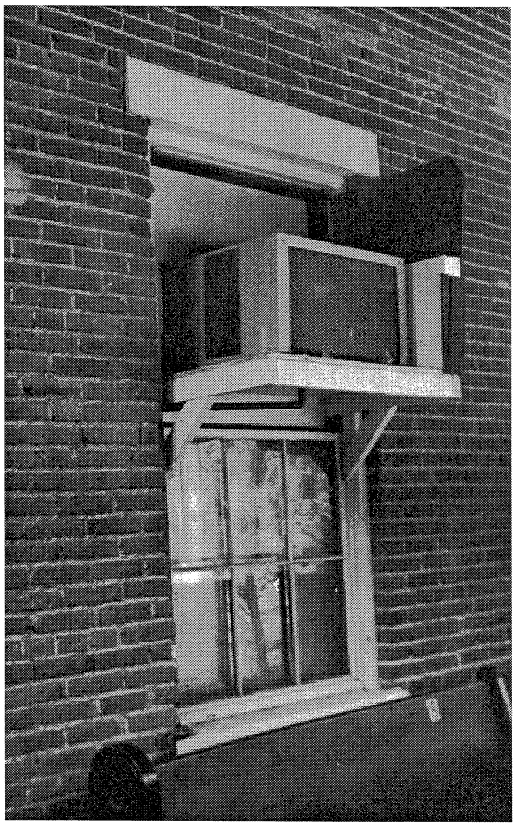


Steel Frame at Upper Floor 2000

Heating, Ventilation and Air Conditioning Systems

Most of the existing heating, ventilation and air conditioning (HVAC) equipment at Casa Grande was installed in the early or mid 1980s and have been in operation for 15 to 20 years. The operating life expectancy of these units is approximately 15 years. The operating and maintenance costs of these units accelerates rapidly after they approach the end of their useful life.

There are a number of areas where the existing HVAC systems do not meet current code standards. Most of these involve inadequate ventilation of the spaces, or in the case of the lower floor toilet rooms, no ventilation at all. A more detailed analysis of the HVAC systems is provided in the Existing Conditions Report in the Supplemental.



AC Unit at Stars Dressing Room Window *2000*

Plumbing System

When Casa Grande was constructed in 1854, there were no interior plumbing systems. Through historic photographs and oral histories we know that bathrooms and kitchens were added as plumbing technology became available in the latter part of the 19th Century. One of the plumbing additions we know of was the bathroom at the south end of the upper floor. It was constructed as a separate room outside the perimeter wall and was supported by the veranda roof. This bathroom was removed during one of the later remodels of the building. Photographs from the late 1950s show a similar structure on the east façade. It is possible that this was also a later bathroom addition or an extension of an existing bathroom. Neither of these bathrooms exists today. The 1888 remodel plans in the Building History section of this Report indicate a bathroom on the upper floor. The 1888 remodel plan also labels one of the rooms in the Museum area "Bathroom and Toilet." No remains of this bathroom exist today.

Water is supplied to the building through a 2" water service from Almaden Road. Fixtures located in the kitchen, toilets and bar are fed from this line through a water softening system located in the mechanical room. Two water heaters supply hot water to the facility. A 100-gallon gas fired water heater located in the

Bathroom Added in 1888 *Circa 1890*

mechanical room serves all of the fixtures on the Main and Lower floors. A 20-gallon electric water heater located in the Restaurant Bar on the lower floor serves that bar.

The existing sanitary waste system consists of two separate septic tanks and their associated leach fields. One is located on the southeast side of the building and the other on the northeast side. The systems appear to be in good condition.

Electrical Systems

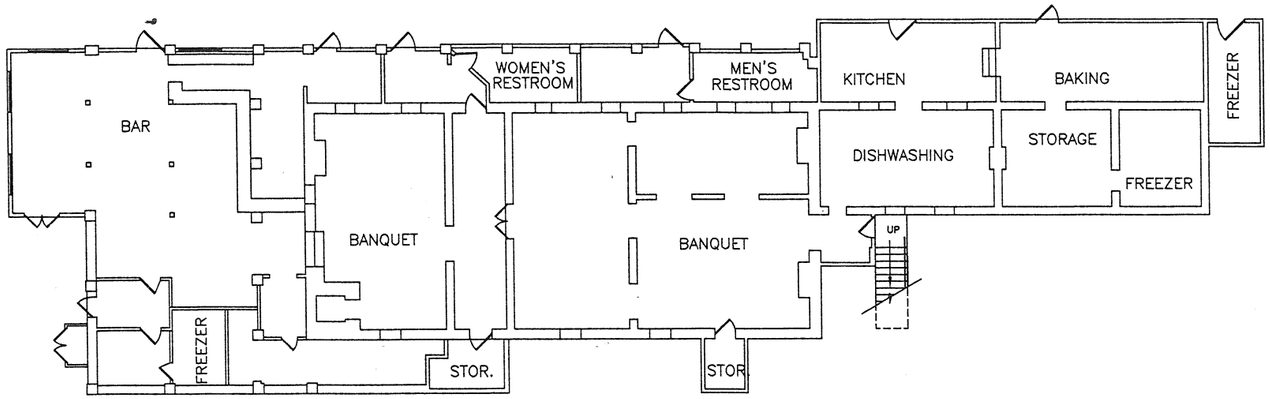
The main incoming electrical service is fed overhead from the utility service pole to exposed service heads located on the front façade of the building. The service heads extend down through the front veranda in two service raceways to an incoming pull box section located in the basement utility room under the front veranda. The incoming service is 120/240 Volt, single phase and is rated at 800 Amps. The electrical service extends from the 800 Amp incoming pull section to a 12"x12" gutter with cables then extending into four separate meters.

The main incoming telephone service is also fed overhead from the utility service pole and follows the same route to the main telephone panel in the basement utility room.

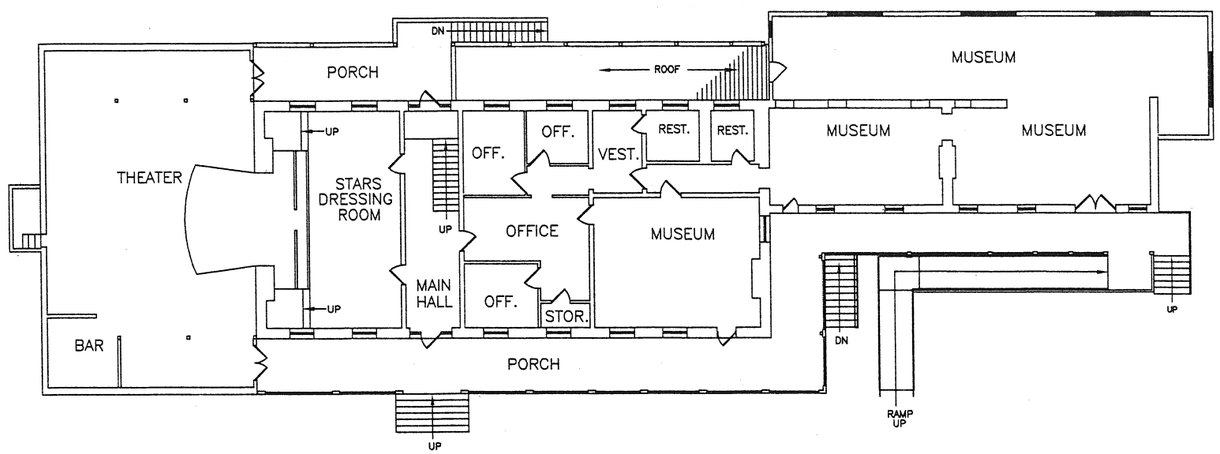
The existing system appears to be adequate to serve the existing loads. It is possible that a new three-phase service may be required to serve future air conditioning and/or new kitchen loads. Select panelboard locations will require modifications to adjacent shelving to maintain adequate code working clearances.

Individual branch circuit receptacles, devices, and lighting fixtures were observed. Numerous changes will be required once the extent of the building reconfiguration and/or restoration is determined.

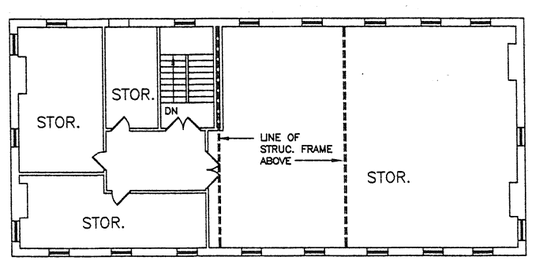
EXISTING CONDITIONS PLANS



1 FIRST FLOOR PLAN



2 SECOND FLOOR PLAN



3 THIRD FLOOR PLAN

NOT PRINTED TO SCALE

CASA GRANDE

21350 ALMADEN RD.
SAN JOSE, CA

County of Santa Clara
Environmental Resources Agency
Parks and Recreation Department
298 Garden Hill Drive
Los Gatos, CA 95032

TENNEBAUM-MANHEIM ENGINEERS
STRUCTURAL DESIGN & ENGINEERING
414 Mason Street, Suite 605
San Francisco, CA 94102
415-772-9891

CONSULTANTS

ARCHITECT
Patri-Merker Architects
400 2nd Street, Suite 400
San Francisco, CA 94107
(415) 284-1100

MECHANICAL ENGINEER
Mechanical Design Studio
375 Fremont Street, Suite 250
San Francisco, CA 94105
(415) 284-0114
Job No. 9073.00

ELECTRICAL ENGINEER
Ackerman Practicon
801 East Charleston Road
Palo Alto, CA 94303
(650) 965-1000

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Sheet Title:
FLOORPLANS

Sheet Number:
A-1

RESTORATION PROJECT DESCRIPTION

PROPOSED BUILDING PROGRAM

Introduction

Santa Clara County Department of Parks and Recreation's mission is to offer opportunities for recreation, education and enjoyment of the natural environment and to preserve its cultural history. The County of Santa Clara purchased the Casa Grande with the intent of incorporating the facility into the existing Almaden Quicksilver Park.

In keeping with its mission to preserve the cultural history of the County, the Department of Parks and Recreation commissioned this report to ascertain the appropriate approaches to the restoration of the building and to provide insights into appropriate adaptive reuse scenarios.

Preservation Standards

Casa Grande is within and contributes to the New Almaden National Historic District. Therefore, any work on the building should comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties. There are four distinct, but interrelated approaches to the treatment of historic properties – preservation, rehabilitation, restoration and reconstruction. The recommended treatment for the Casa Grande is restoration. This report provides the guidance necessary to meet these standards. The Standards for Restoration are quoted:

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.

1. *A property will be used as it was historically or be given a new use which reflects the property's restoration period.*

2. *Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.*

3. *Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.*

4. *Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.*

5. *Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.*

6. *Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.*

7. *Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.*

8. *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

9. *Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

10. *Designs that were never executed historically will not be constructed.*

Design Concepts

In preparing our restoration plan the project consulting team: inspected the facility and studied the cultural history of the building and its surrounding area; evaluated the significance of the remaining historic elements and material of the building; and prepared the Existing Conditions section of this report. Public workshops were held to elicit opinions about the building's rehabilitation program from the local residents and other interested parties. From the information gathered, in conjunction with consultation with the Western Region of the National Parks Service, the historic design professionals then produced three conceptual plans for review by the Public and the Parks and Recreation Department. The three plans were narrowed down to two conceptual plans.

The rejected conceptual plan included incorporating a new elevator within the existing building. The shaft and required lobby area would have a detrimental impact in the historic material of the building in addition to spacial concerns. The two viable concept plans were further evaluated and are discussed in this report. Concept 1 restores the Casa Grande while keeping the various non-historical additions to the building. Concept 2 removes the additions and restores the building back to its original configuration to comply with the Period of Significance.

Concepts Analysis

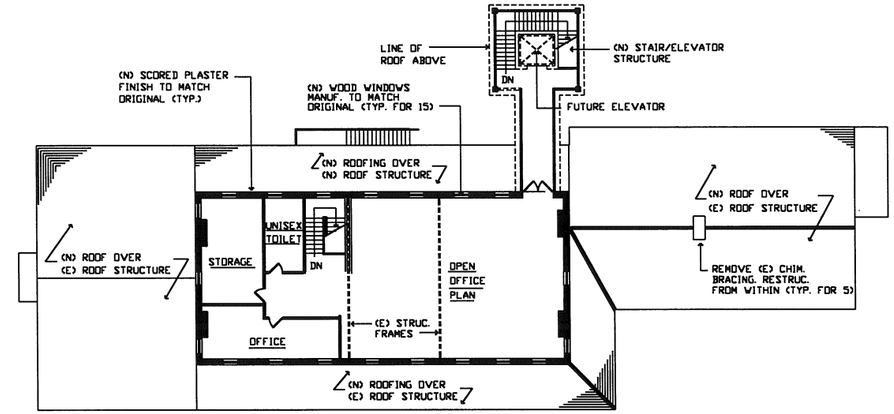
Concept 1 and 2 shared the same program for the main floor. Both called for the original Parlors and Drawing Room areas to be restored to the Period of Significance by removal of modern walls and the creation of restored period rooms for interpretive display. Both concepts also included a reconstruction/ restoration of the original veranda with a stair down to the rear yard and a new elevator/stair tower on the east façade. The two concepts were also similar in plan for the upper floor, except for the room functions. The differences in the room designations are discussed below. Finally, both concepts showed the construction of new toilet rooms and a warming kitchen in the south end of the lower floor.

As stated in the introduction, the main difference between the Concept Plans is the removal of existing non-historical additions to the Casa Grande. Concept 1 proposes the restaurant and bar remaining on the lower floor to be used in conjunction with the new warming kitchen and new toilet rooms as rental areas for concessionaires. In Concept 2, the bar wis removed and the restaurant remodeled into museum space for the extension of the Mining Museum. Concessionaires would be allowed to rent the grounds with use of the new toilets and warming kitchen.

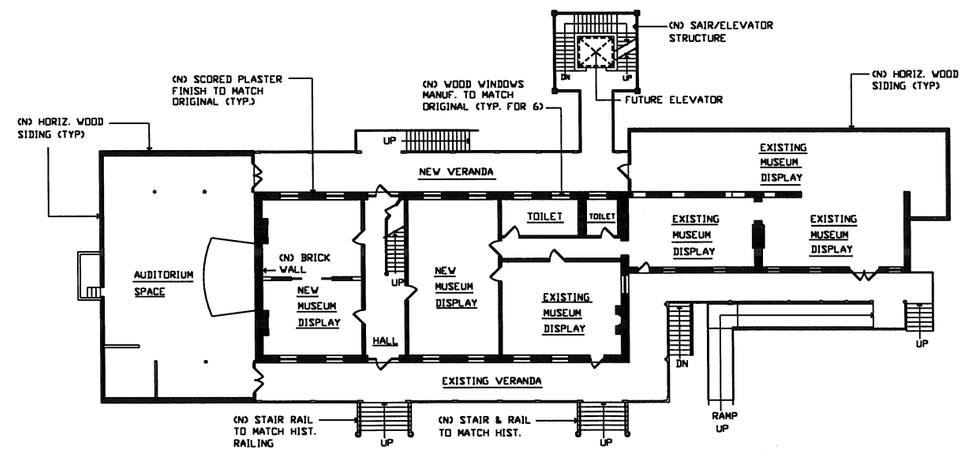
On the main floor, Concept 1 would retain the Opry House structure and restored the area into an auditorium space for lectures and presentations. Concept 2, would remove the Opry House structure and reconstructed the veranda and north wall of the building to its original configuration.

The differences between Concept 1 and 2 on the upper floor is in the room designations. These designations reflect different possible uses for the spaces under each concept. Concept 1 allows for mostly office and some storage space on this floor. In Concept 2, where the Auditorium space is not available because of the removal of the Opry House structure, a Community Meeting Room is designated in the large open area on the south end.

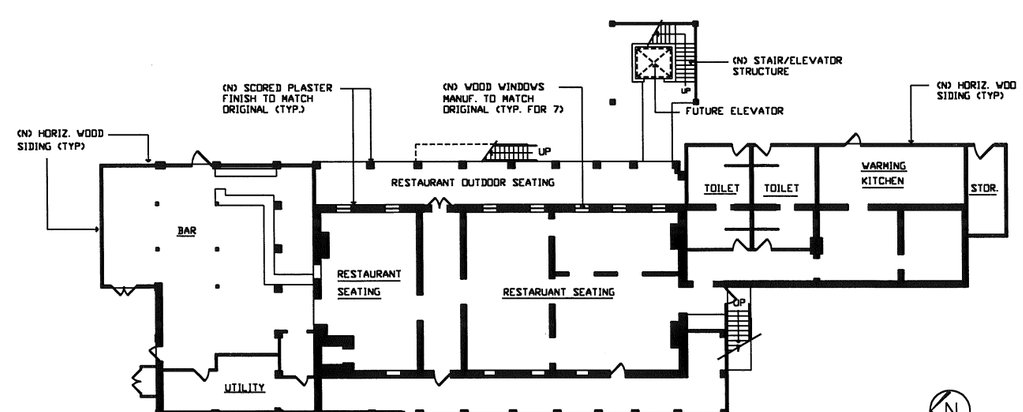
Both concepts were presented to the Santa Clara Parks and Recreation Department and the local residents. The Parks and Recreation Department, under advisement, decided to proceed with the Concept 2 design to restore the building to its Period of Significance.



CONCEPT ONE - UPPER FLOOR



CONCEPT ONE - MAIN FLOOR



CONCEPT ONE - LOWER FLOOR

CASA GRANDE

21350 ALMADEN RD.
SAN JOSE, CA

County of Santa Clara
Environmental Resources Agency
Parks and Recreation Department
298 Garden Hill Drive
Los Gatos, CA 95032

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(415) 284-0114

ELECTRICAL ENGINEER
Ackerman Practicon
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(650) 965-1000

Date: 9/22/99
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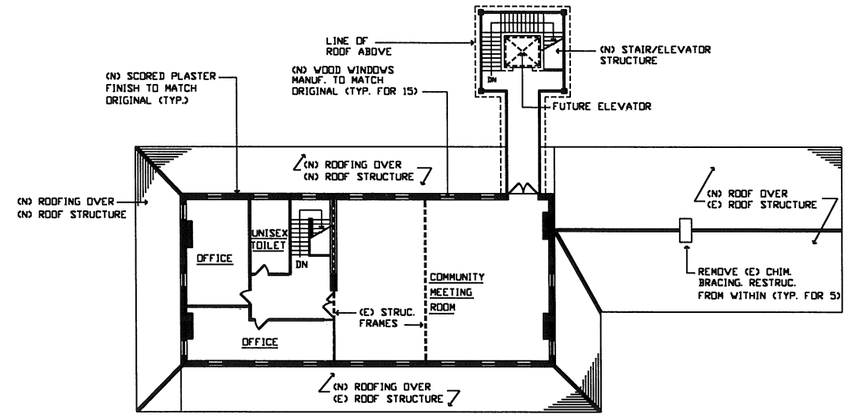
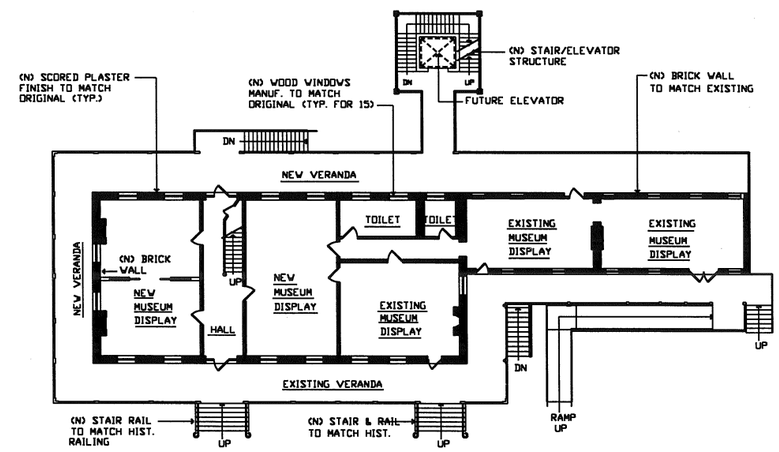


CONCEPT TWO - MAIN FLOOR



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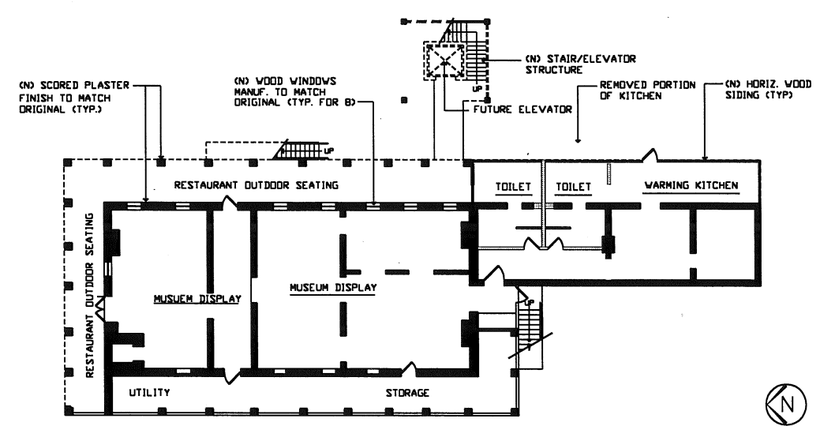

CONCEPT TWO - LOWER FLOOR

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BUILDING CODE ANALYSIS

The State Historic Building Code

The State Historic Building Code (SHBC) is Part 8 of the California Administrative Code (also known as Title 24). The intent of the State Historic Building Code is to save California's architectural heritage by recognizing the unique construction problems inherent in renovating historic buildings and offering an alternative code to address these problems. The SHBC provides alternative building regulations for the rehabilitation, preservation, and restoration of structures designated as historic buildings. Casa Grande, by its listing on the National Register of Historic Places, qualifies as a government approved certified historic structure. Existing historical conditions where the State Historic Building Code will be invoked for the proposed building program are:

- Use of existing non-conforming exterior doors as exits
- Width of existing exterior doors for exits
- Allowable design values for archaic materials

Energy Requirements
As a qualified historic structure under state statute, Casa Grande is exempt from Title 24 energy regulations.

Disabled Access
All new work related to the restoration of Casa Grande must conform to Title 24 disabled access requirements.

The Americans with Disabilities Act (ADA) is a federal civil rights legislation that requires alterations to a facility be made in such a manner that, to the maximum extent feasible, the altered portions of the facility are made readily accessible to and by individuals with disabilities. The requirements of the ADA may be subject to contradictory interpretations in the future. The authors of this report have used their best professional efforts to interpret applicable ADA requirements as they apply to the proposed restoration procedures for the Casa Grande. The authors, however, cannot guarantee that the proposed restoration will comply with all interpretations of the ADA requirements.

California Building Code - 1998 Edition

Exits
Some of the existing exterior doors of Casa Grande do not meet current code requirements for exiting. A variance must be sought using the exceptions in the State Historic Building Code for these doors to be used as an exit in their current configuration.

Museum Doors
The double entry doors are currently hinged to swing into the museum. The museum is considered an assembly space with occupancy sufficient enough to require the doors to swing out. These doors must be reconfigured to swing out in the direction of exit travel.

Museum Second Exit:
As stated above, the museum is considered assembly occupancy. This occupancy requires a second means of egress. The existing door to the front veranda does not qualify as an exit since it is too close to the front door exit. The door to the office areas cannot be considered an exit since one would have to travel

though numerous other spaces to reach the outside. The existing rear door opens onto the corrugated metal roof of the first floor restrooms and cannot be considered an exit. The proposed building program calls for a section of the existing Mining Museum to be removed for the reconstruction of the rear veranda. The reconfiguration of a new exit onto the rear veranda would be created.

Second Exit from Upper Floor

Currently, the third floor is being used only for storage. A second means of egress must be provided if the restoration plans are to take advantage of this square footage for other uses.

Upper Floor Stair Vestibule

The vestibule landing in its current configuration is too small to meet current code. To comply with the code the vestibule landing size must be increased and the doors changed to a smoke door assembly.

Front Porch Railing

The railing of the front veranda is constructed at 36" high and does not meet the current code height requirement of 42" for a guardrail. If the railing was original or old enough to be considered historically significant, the Historic Architect could invoke the State Historic Building Code (SHBC) for it to remain. However, we believe that the existing railing is fairly new and therefore can not be covered by the SHBC. The railing will have to be raised if a major restoration project is undertaken at Casa Grande.

Main Stair Railing

The height of the hand and guardrails of the main interior stair do not meet current code. Unlike the front veranda railing, the main stair rails are either original to the building or very old and are considered a significant historical element. In this area, the Historic Architect could invoke the SHBC to keep the railing heights the same. However, since the issue is one of public safety, the County and the Historic Architect will entertain possible solutions that could add safety while not detracting from the historic character of the stair.

Main Stair Railing *2000*

Structural Upgrade

The proposed structural upgrade for the Casa Grande is discussed in great detail in the Detailed Restoration Program section of this report. The upgrade of the building will have to conform to the structural requirements of the Uniform Building Code, and the Alternative Structural Regulations of the State Historical Building Code, Title-24, Part 8. The building underwent an approved seismic upgrade in 1998, however it is recommended that the seismic upgrade be re-evaluated.

Uniform Plumbing Code

New plumbing for toilet rooms and warming kitchen will be required to meet the regulations of the Uniform Plumbing Code.

Uniform Mechanical Code

New heating and air conditioning systems installed in the renovation effort will be required to meet the regulations of the Uniform Mechanical Code.

National Electrical Code (NFPA70)

New electrical systems installed will be required to meet the regulation of the National Electrical Code.

DETAILED RESTORATION PROGRAM

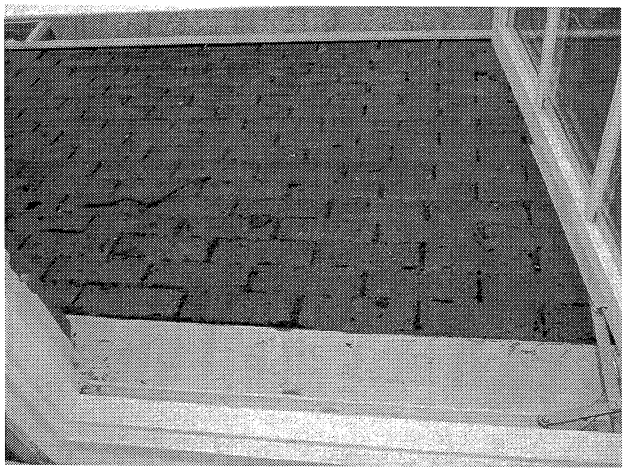
Introduction

The Schematic Design for the restoriation of the Casa Grande was developed from the prefered Concept 2 plans. The following restoration program is a written description of the Schematic Design solution.

Architectural

Roofs

Recommended Restoration Procedure:
The existing roofs of the building are a hodge-podge of asphalt shingles and rolled roofing. They show many signs of recent patching and there is evidence of water intrusion in numerous areas of the interior.



Veranda Roof Shingles *2000*

In the proposed building program, the Opry House roof will be removed when that section of the building is demolished. All other existing roofing material on the Casa Grande section, Museum section and the existing veranda roofs will be removed down to the existing wood sheathing substrate. If the existing substrate is "skip" sheathing (sheathing consisting of spaced boards that wood shingles were nailed to) the skip sheathing will be removed and replaced with new plywood sheathing.

All existing roof areas and new roof elements such as the new veranda and Stair/Elevator structure will be roofed with new Class "A" fire rated asphalt shingles manufactured to resemble wood shingles.

Prior to installation of the new roofing, the existing gutter, downspout and flashing systems will be evaluated. Deteriorated materials will be removed and replaced with new material matching the existing and both new and old materials will be painted. The integration of the roofing and flashing materials at the main roof swales will require special attention and detailing to ensure a long-term watertight condition. The flashing of the veranda roofing will also be a special condition. Here, the existing horizontal mortar joints 4 to 6 inches above the roof wall juncture will be chiseled out for a depth of one inch and the upturned flashing inserted into the void. Once the end of the flashing is inserted, the horizontal joint will be repointed with the appropriate pointing mortar to create a watertight seal.

Exterior Walls - Brick

Recommended Restoration Procedure:
The exterior brick wall surfaces of the building appear to be in good condition at first glance. However upon closer observation, a more serious problem is evident. The problem stems from an original construction procedure and a modern construction technique used in the renovation of the building. As stated in the History and Existing Conditions sections of this report, the exterior masonry of the building was once covered with a thick plaster that was scored to resemble stone. In the 1850's when the builders added the plaster, picks were used to roughen the smooth brick surfaces for better adhesion between the brick and plaster. This construction procedure was fine as long as the plaster remained on the building. However once it was removed, as in the case of Casa Grande in 1968 and 1985, the roughened brick faces were then exposed to weathering. To understand what problem this causes for the building, you must first understand the mechanics of the common historical

brick. Prior to the early 20th Century, the technology for firing bricks was not advanced enough to provide a brick that was hardened throughout its full body. Older bricks were fired at temperatures that only hardened the outside surfaces leaving the interior of the bricks much softer. A brick, with its hard surface removed, will absorb water when exposed to the elements. When the brick dries, the heat that draws the water out of the middle of the brick also brings out the natural salts in the material. These salts, or efflorescence, break down the softer internal material and the brick begins to crumble away. Eventually, the body of the brick will deteriorate to a soft red powder.

Roughened Brick *2000*

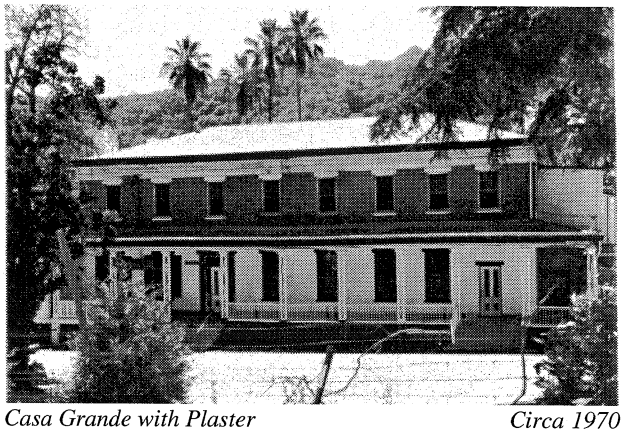
In the case of Casa Grande, the brick surfaces were first exposed in the 1960's when the plaster started to deteriorate and fall off the building. In the areas where the plaster was removed in the '60's, the brick has started to deteriorate. The most deteriorated area is on the east (rear) facade of the upper floor where large sections of brick will be lost, if the deterioration is not stopped.

In 1985 the remainder of the plaster was removed from the lower floor facades. Since most of this plaster was protected from the elements by the veranda roofs it was not badly deteriorated and was much harder to remove. In order to remove the large sections of plaster, the exterior wall surfaces appear to have been sandblasted. The sandblasting not only removed the plaster, but most of the hard surface of the brick. This procedure exposed all of the lower brick surfaces to weathering and accelerated deterioration.

To preserve the historic brick of the Casa Grande, the ongoing deterioration must be deterred. The three methods researched by the design team are: 1) coat the brick with an opaque breathable masonry paint; 2) coat the brick with a clear breathable masonry coating; or 3) re-plaster the building.

It is the opinion of the Design Team that painting the building with an opaque breathable coating is not appropriate since the brick of the building had never been painted. Therefore this treatment would not meet the Secretary of the Interior's Standards for Restoration of Historic Buildings. Also, the coating would need to be re-applied every few years and would add a considerable maintenance life cycle cost.

Application of a clear breathable coating is acceptable since it maintains the exposed brick look created when the original plaster was removed in the 1960's. But, like the opaque coating, it must be re-applied often and has an impact on the life-cycle cost of the building. The exposed brick only occurred after the Period of Significance, and may not be appropriate



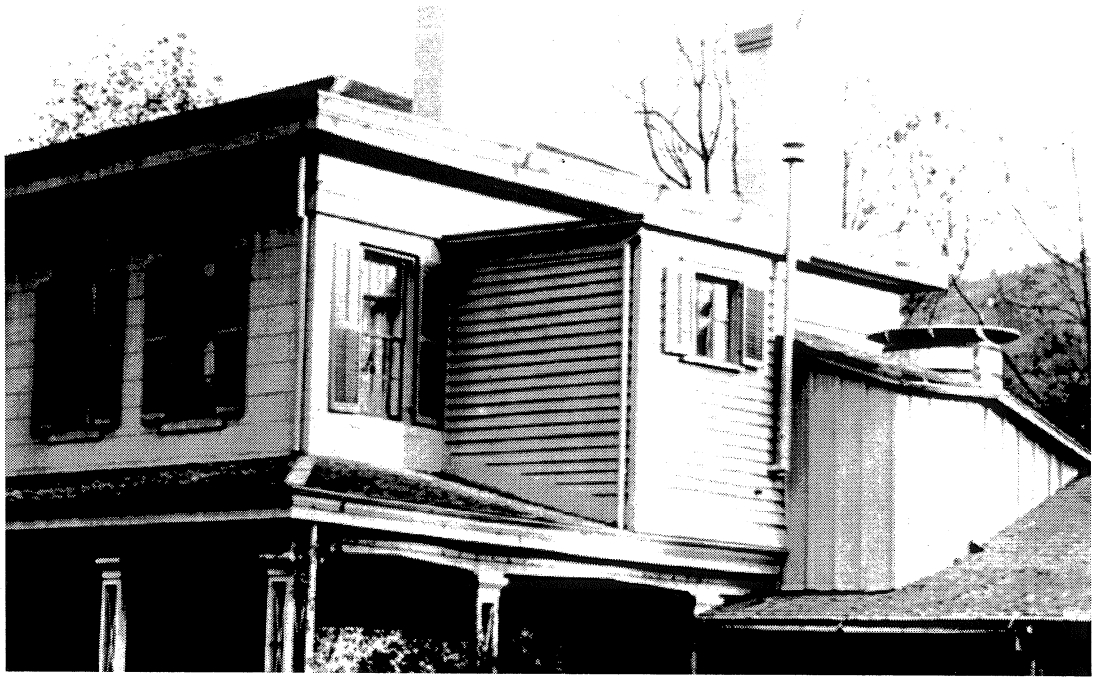
Casa Grande with Plaster Removed from Upper Floor *Circa 1970*

Plastering the building again is appropriate if the plaster matches the original plaster in material, texture and detail. Sufficient historic photographic evidence of the building is available to ascertain the areas of plaster and the score pattern. We have also found two areas of original plaster on the north wall of the main floor on either side of the Opry House stage. From these sources, there is enough information to accurately reconstruct the plaster finish on the building. Our findings were submitted to the Western Region office of the National Park Service (the entity that administers the National Register of Historic Places). After review, they concurred with the design team recommendation that the replacement of the plaster on the exterior wall would not only be appropriate but would also be the preferred preservation technique to preserve the historic brick material. Therefore, we are proposing in our restoration plan that a new plaster coating be applied to all of the exterior masonry surfaces. The new plaster will be similar to the original in composition and will be scored and painted to match the original finish.

Exterior Walls - Wood

Recommended Restoration Procedure:
The only existing exterior wood clad walls are at the Opry House, the lower level bathroom additions and the rear museum additions on the lower and main floor levels. All of these areas are slated to be removed in the restoration plan for the reconstruction of the veranda. Historically, there had been wood siding on portions of the Casa Grande. Photos from the 1880's show a bathroom and stair enclosure on the south end of the upper level that were finished with wood siding. The bathroom section had horizontal siding where the stair enclosure had vertical board and batten siding. Photographs from as late as the early 1970's show these elements still intact.

Since the existing wood siding exists only on building elements that are proposed to be removed, there will be no restoration requirements. However, there is one new element of the design where wood siding is proposed. The new Stair/Elevator structure, which is designed to blend with the historic character of the



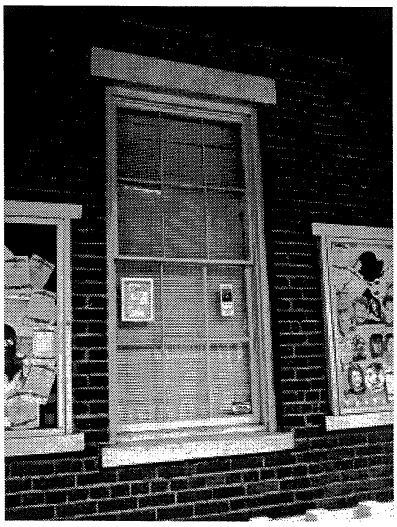
Detail of Plaster and Wood Siding *Circa 1890*

building by invoking a water-tower look, which has a penthouse element on top. Horizontal siding was chosen for the finish of the penthouse. There is an existing historical watertower on the Casa Grande complex. It is a wood frame structure clad with horizontal siding located on the north end of the property and not in the scope of this report.

Original Windows

Recommended Restoration Procedure:
Only nine of the original fifty windows remain. They are operable and in fair condition. A few original window frames exist in the utility areas under the front veranda in the lower level, but they are not in good condition and their sashes are gone. Other window frames or sashes may be found hidden behind construction when the lower level is restored.

All of the original windows are in need of repair or general maintenance. During the restoration of the building it is recommended that each original window is to be restored to its original configuration and put into working order. The restoration plans call for the replacement of broken or missing glass with single plate glass, along with replacement of sash cords and weights. Missing sashes will be replaced with new sashes manufactured to match the original.

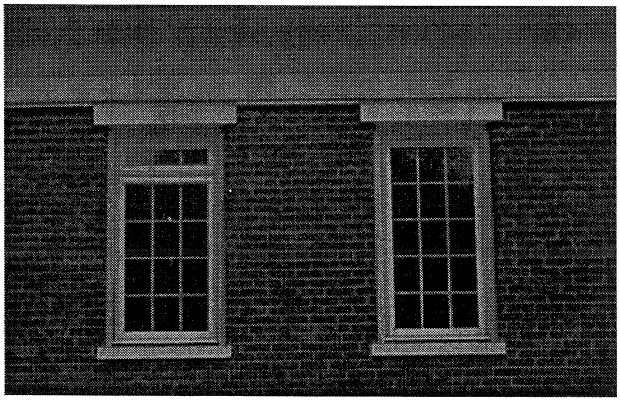


Original Window 2000

Replacement Windows

Recommended Restoration Procedure:
The replacement windows are in good condition. All of the replacement windows in the building were installed within the last ten years. They are well made modern wood windows with metal cladding and integral weather-stripping. They are low maintenance and energy efficient, but they are not appropriate for a National Register Landmark building.

The restoration plans call for these windows to be removed and new double hung wood windows manufactured to match the original wood windows installed. At the in-filled window opening on the upper floor, the brick in-fill material will be removed and a new double hung wood window installed.



Upper Floor Replacement Windows 2000

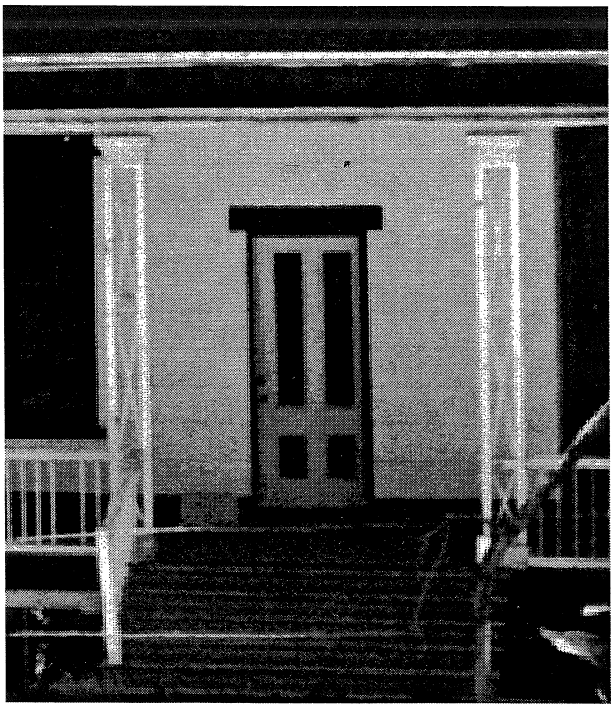
Original Doors

Recommended Restoration Procedure:
The two original wood doors at the front and rear hallway opening of the main floor are in poor condition. They have been fitted and re-fitted with hardware and patched many times.

The original doors will be removed and restored in a wood shop. They will need to be carefully taken apart and the individual styles, rails and panels refinished and missing or deteriorated tendons patched. Once re-assembled, the doors will be re-finished, fitted with new hardware and installed in their original locations.

Replacement Doors

Recommend Restoration Procedure:
The replacement doors were all installed in the last ten years and are in good condition. They are clear-finished multi-panel oak doors; however, their style is not in character with the style and age of the building.



Original Wood Door *Circa 1970*

The replacement doors will be removed and replaced with new wood "style and rail" doors with two or four panels. These doors will closely resemble the original doors and will be more in character with the building. All doors will be painted, not clear finished.

Verandas

Recommended Restoration Procedure:
The front veranda is all that remains of the original veranda that wrapped around the house. The Opry House, the existing rear porch, and the portions of the rear areas of the museum will be removed in the building restoration and replaced with a reconstruction of the original veranda including the double stair case on the at the rear of the building. To accomplish this, details of the original porch still existing on the front of the building will be copied. The reconstructed areas will have the same painted tongue & groove flooring, column and rail design, and tongue & groove bead board ceilings. The only change from the original will be the height of the guardrails. The original veranda rails were approximately 36 inches high. Current code requires that the guardrails be 42 inches of the floor. Since the existing railings are not historic, they will be reconstructed to match the new 42-inch high guardrails.

Interior

Interior Walls

Recommended Restoration Procedure:
The only remaining original interior walls are the two masonry walls that form the main hall on the main floor and the masonry interior walls in the museum area. All of the other interior walls are modern gypsum board walls on wood studs. The masonry walls of the main hall once had plaster finish similar to the exterior walls, but that has been removed. The finish of the museum masonry walls is unknown. All

of the other original interior walls were removed in various renovations over the years.

On the main floor of Casa Grande the original floor plan will be recreated. The new walls that break up the old Drawing Room will be removed and the old wall surfaces reconstructed in period detail. The new wall and ceiling finishes will not be plaster, but gypsum wallboard attached to the masonry or wood studs and finished to resemble plaster. Wood wainscot and wallpaper of period style and design will be added where appropriate to recreate the lavish interiors that once graced this stately home.

The restoration plan calls for the existing room layout on the upper floor to remain for offices and a community meeting room uses with only the minor reconfiguration of the stair vestibule.

On the lower level, the only interior walls will be the masonry foundation walls and the interior sides of the exterior masonry walls. Since these walls were in the kitchen and storage areas they were kept exposed brick and never finished. The restoration plan calls for the lower level, originally storage and servants quaters, to be renovated into the mining museum and not a reconstructed period museum as in the main level. It is therefore appropriate to leave the brick exposed and unfinished as a backdrop of the museum displays.

Floors

Recommended Restoration Procedure:
The only original wide wood plank flooring material remaining in the building is in the Main Hall and in the old Parlor (Stars Dressing Room). All other flooring is either new or replacement flooring installed to match the existing.

On the main floor the restoration plan calls for reconstruction of the period interiors, new wide wood plank flooring will be installed to match the original (except where new replacement material matching the original already exists) with thick, rich area rugs of period design. The existing concrete floor on the lower level will be covered with a high-grade commercial carpet. The high-grade commercial carpet that was installed on the upper floor during the last renovation will be retained.

Structural Design Recommendations

Introduction

The following structural recommendations are based on the schematic design for the restoration of Casa Grande.

A seismic evaluation was not included in our scope of work, due to the fact that a seismic upgrade designed by Robert W. Croyle, P.E. was completed and approved for permit in late 1997. As stated in the Existing Conditions section, it may be prudent to have the seismic upgrade re-evaluated. A copy of a letter to Mark Frederick, the Parks and Recreation Department Project Manager dated February 1, 2000 states the reasons for a re-evaluation and is included in the Supplemental Report.

The building is in excellent condition with only some minimal deterioration in the brick masonry primarily on the West Side. There is evidence of some wood rot where exposed to exterior conditions (primarily wood framing under the veranda porch). The anticipated structural work coordinated with architectural restoration/rehabilitation design is described below and is shown on the schematic drawings S1 through S5.

The major proposed alterations to the building's current configuration include demolition of the existing Opry House, demolition of the museum addition on the east side, restoration of the original verandas and construction of the new stair and elevator structure. It should be noted that removal of the existing brick masonry such as enlarging door openings is to be minimal and should not have an

impact on the structural integrity of the building. Brick walls are to be filled in with reinforced masonry at certain areas, which should actually help in the lateral resistance of the building.

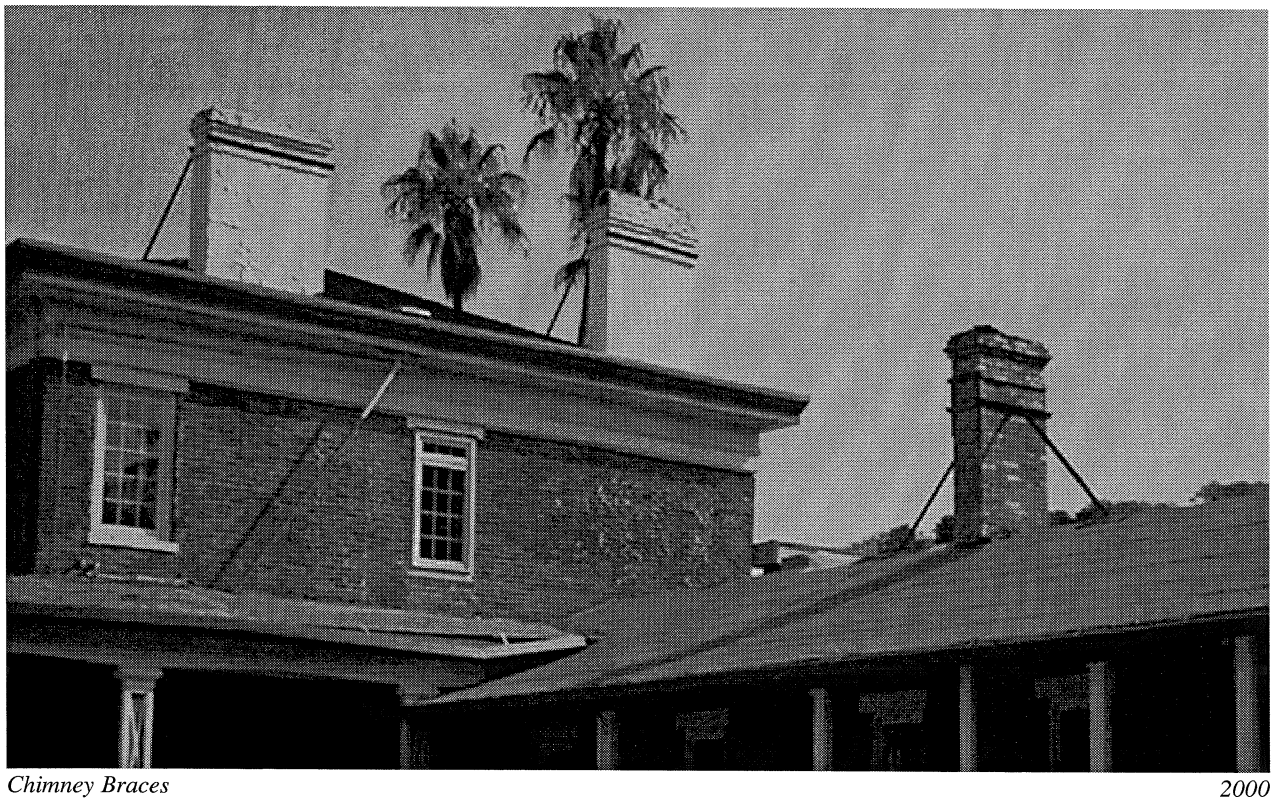
Structural Schematic Design

Exterior

Chimneys:
Although steel bracing for the chimneys was added in the 1998 seismic upgrade, we believe that the bracing was not properly detailed at the chimneys and may actually induce twisting at the museum chimney. In addition, the existing bracing can be easily seen from below and is considered to be architecturally inappropriate. The proposed structural rehabilitation of the chimney is to remove the existing bracing and install an interior steel laced framework anchored to the brick which extends from the top floor to the top of the chimney. This provides adequate structural reinforcing and preserves the architectural fabric. The fireplace cannot be functional with this system.

Another option considered (but not detailed in the schematic drawings) was to remove the brick chimney down to the roof and rebuild it in wood or metal studs with plywood and plaster over it thereby replicating the original chimney. However, this may not be architecturally appropriate since the original materials would be altered. The advantages to this option are that the chimneys would be much less expensive to brace and allow for the use of the fireplaces.

Roofs:
The existing museum roof framing does not meet minimum code load requirements and it is recommended to add new 2x4 joists between the existing roof joists.



Chimney Braces *2000*

Existing spaced sheathing of the entire roof of Casa Grande is to be removed and replaced with plywood.

Verandas:
The roof and soffit over the verandas on the north and east sides of the building will be built to match the building's original design. Plywood will be added to the new framing and posts will be added from the porch to support the veranda roof framing. New framing to support the veranda porch on the north and east sides will also be added.

Existing rotted wood at the existing veranda is to be removed and replaced as noted on the schematic drawings.

Brick Pilasters:
The brick pilasters as they currently stand could potentially kick out and collapse in an earthquake. We propose to tie the pilasters at the top to prevent a collapse. The brick pilasters below the veranda are to be tied in at the top with threaded rods into new or existing members as shown on the schematic drawings.

Upper Floor

No major structural alterations are designated, except for a new door opening for egress to the proposed exterior stair and elevator.

Arch at Museum *2000*

Main Floor

The museum addition on the East Side is to be removed and a new reinforced masonry in-fill wall will be added in line with the existing exterior wall, which will match the building's previous appearance during its designated period of significance.

An arch was cut at an original door opening in the museum area, which has a crack through the center of the arch. We have provided a detail in our schematic drawings to support the brick arch with curved steel plates bolted into the existing brick. A vertical plate is to be concealed and the curved bottom plate picking up the brick arch will be visible on the underside.

Non-bearing partition walls will be removed in the room that formally served as a drawing room (currently serving as office/copy room).

The rooms, which were formally parlors, now serving as a back stage dressing room for the Opry House, will be restored to its original layout. A large opening was cut in the original exterior brick wall, and the wall and floor above this opening are supported on three sistered wood beams. The restoration plan calls for to the existing opening to be partially in-filled with reinforced brick in order to recreate the original window openings. This will require shoring of the wall and floor above, removal of the wood beams, and construction of the masonry in-fill wall.

Lower Floor

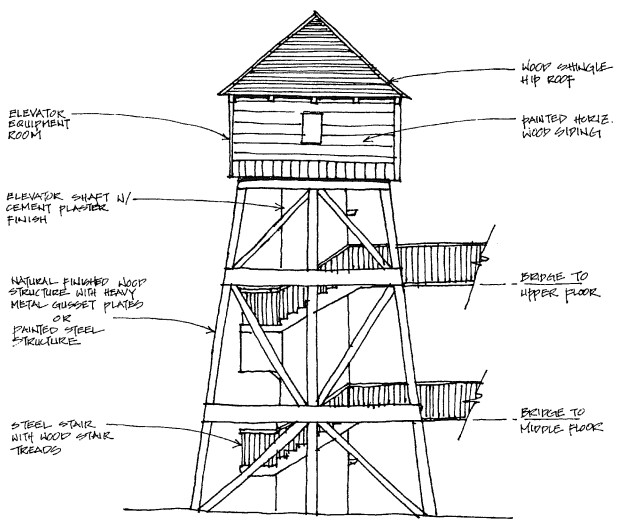
The stud walls below the museum addition will be removed as already noted and new stud walls will be built to enclose a new warming kitchen area.

Various openings in the existing brick walls are to be filled in with new reinforced masonry.

We have recommended that areas such as the areas below the east veranda porch not be excavated to avoid undermining the building's foundation.

Elevator/Stair Structure with Walkway

A new elevator/stair structure with a walkway as shown on the architectural schematic drawings is proposed. Because of the spans, height, and overturning issues, we feel that steel or concrete is the most appropriate structural system. We have designed the supporting braced structure in steel. Wood nailers may be attached for framing a wood deck and wood handrail system. Steel members also support the walkway between the main building and stair tower. The connection at the existing building and the walkway supporting beams provides bearing yet allows horizontal movement between the main building and the stair structure. This is accomplished by providing a Teflon slider at the building.



Elevator/Stair Structure Design Sketch

Mechanical and Plumbing Systems

Design Criteria

Heating, Ventilating and Air Conditioning and Plumbing systems shall be designed per most recent California Building, Mechanical and Plumbing Codes and all other applicable federal, state and local standards and regulations.

The fire protection system shall be design-build by a licensed fire protection contractor based on the latest NFPA 13 and City of San Jose Fire Department requirements.

Heating, Ventilating and Air Conditioning

Heating, Ventilating and Air Conditioning (HVAC): All existing HVAC equipment shall be demolished and replaced with new equipment as described.

All ductwork will be low pressure, and distributed in ceiling space or soffits to ceiling or wall air outlets.

All AC units will be controlled via local programmable thermostats and an electronic time clock with minimum 3 channels.

Lower Floor:
The lower floor museum display areas will be served by a rooftop-mounted gas/electric A/C unit (AC-1) with a capacity of 7.5 tons. Supply and return air ducts will be ducted to the first floor via a duct shaft through the 2nd and 3rd floors.

The lower floor restrooms and warming kitchen area will be served by a rooftop mounted gas fired make-up unit MUA-1 with a capacity of 2,000 cfm. All air will be exhausted via (2) roof mounted exhaust fans (one for the restrooms and one for the kitchen) EF-1 & EF-2. Supply and exhaust risers will be routed through a main floor shaft.

Main Floor:
The new museum display area on the main floor area will be served by a rooftop gas/electric AC unit (AC-2) with a capacity of 5.0 tons. Ductwork risers will be brought into the ceiling via a shaft through the 3rd floor. The existing museum display area will be served by a roof-mounted gas/electric A/C unit (AC-3) with a capacity of 3.0 tons.

The women's and men's restrooms will be exhausted via a roof-mounted fan (EF-3) with a capacity of 350 cfm.

Upper Floor:
The upper floor will be air conditioned by a roof mounted gas/electric air conditioning unit with (AC-4) a capacity of 4.0 tons and the office area by a similar unit (AC-5) with a capacity of 2.0 tons. A dedicated fan (EF-4) will exhaust restrooms with a capacity of 220 cfm.

Materials:
Rigid ductwork will be rectangular or round galvanized sheetmetal fabricated and installed per UMC, ASHARE, and UMC standards.

Flexible round ductwork will be UL Class I to comply with UL-181. For connection to air outlets, limited to 7'-0" length.

Air filters will be 2" thick, 30% efficient pleated media for packaged equipment. 15" deep - 35% efficient bag filters at custom equipment.

Packaged air conditioning equipment will be Trane, York or Carrier.

Fans will be by Greenheck or Penn.

Plumbing

All existing plumbing equipment and piping shall be demolished and replaced with new as described below. Exception: Water softener can be reused/ relocated if elected by Owner.

Water Service:
The existing 2" domestic water service from Almaden Road will serve the renovated building. A new water meter will be installed in a concrete meter box outside the building. A reduced pressure backflow preventer and a pressure-reducing valve will be installed at the first level. The domestic cold water system will serve all plumbing fixtures at the lower, main and upper levels. Domestic hot and cold water piping will be copper Type L, joints with 95/5 solder.

Water Heaters:
A gas fired water heater installed at the lower level will provide the domestic hot water for the first floor kitchen and restrooms. The main and upper floor lavatories will be supplied with hot water by local instantaneous electric water heaters.

Water heaters will be gas fixtures by A.O. Smith, Ruud or Rheem. Instantaneous electric water heaters will be Eemax, Chronomite or Hot Aqua.

Sanitary Waste System:
The sanitary waste and vent system will include below slab and above ground waste and vent piping, associated cleanouts, floor drains and vent through roof penetrations. A new grease interceptor will be provided for the kitchen fixtures and equipment wastes. Existing building sewers, septic tank and leaching field will remain and will be used for the renovated building.

Below and aboveground sanitary drainage piping will be cast iron, no-hub bituminous-coated interior and exterior neoprene sleeve with stainless steel shield joint.

Condensate drainage piping will be copper tubing type M with alloy grade 50 solder joints.

Storm Drainage:
The storm drainage system is part of the architectural scope of work. The roof drainage includes gutters and downspouts that discharge onto the ground. The existing sump pump in a pit at the bottom of the

outside stair going down to the first level will be replaced. The existing PVC discharge line will be removed and replaced.

Gas:
The existing natural gas meter and regulator presently located on the northwest side of the building in front of the museum will be relocated to the west side of the building. The natural gas system will supply the rooftop air conditioning units; the gas fired domestic water heater and the cooking equipment.

Natural gas piping will be black steel Schedule 40, threaded malleable iron. Galvanized steel Schedule 40 piping will be used for exposed piping.

Fire Sprinklers

Materials shall be per NFPA 13 and Santa Clara County Fire Department Requirements. The building will be sprinkled throughout based on the following design criteria:

Light hazard - General areas, offices, museum - 0.10 gpm/ sq. ft. over 1,500 sf most remote area.

Ordinary hazard Group I - Storage areas, mechanical rooms - 0.15 gpm/sq. ft. over 1,500 sq. ft. most remote area.

The fire protection water service will be connected to the water main on Almaden Road. A detector double check valve will be installed. Post Indicator Valve(PIV) and Fire Department Connection (FDC) will be located as directed by the Fire Department.

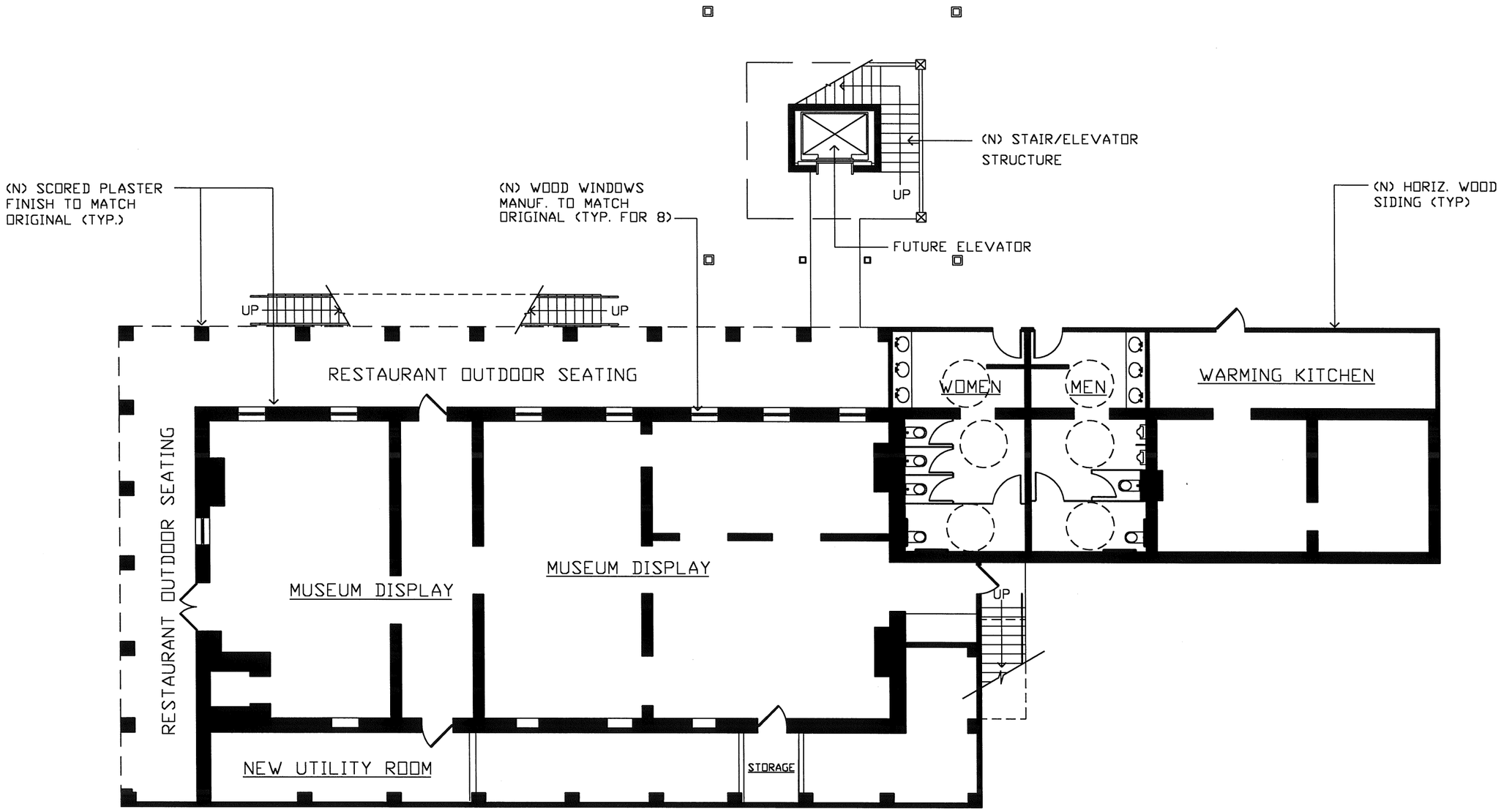
Electrical and Telephone Systems

Service:
The main incoming electrical service is fed overhead from the utility service pole to service heads located at the roof and then down through two service raceways to an incoming pull box section located in the basement. The incoming service is 120/240 Volt, single phase and is rated at 800 Amps. This existing overhead electric service will be removed and will be replaced with an underground service as part of the restoration project. The new electric service will be modified to a 120/208 volt, 3 phase, 4 wire service to accommodate new air conditioning and kitchen loads. A new main electrical switchboard and meter will be installed to replace the existing gutter and meter arrangement.

Electrical Panels:
The existing electrical panelboards and load centers will be modified and/or replaced to accommodate the new layouts and revised loads. New panelboards will be installed where required.

Telphone Service:
The main incoming telephone service is also fed overhead from the utility service pole. This existing overhead telephone service will be removed and will be replaced with an underground service as part of the restoration project.

RESTORATION DRAWINGS



PROPOSED LOWER FLOOR PLAN

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CASA GRANDE

21350 Almaden Rd.
San Jose, CA

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Environmental Resources Agency
Parks and Recreation Department
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ELECTRICAL ENGINEER
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(650) 965-1000

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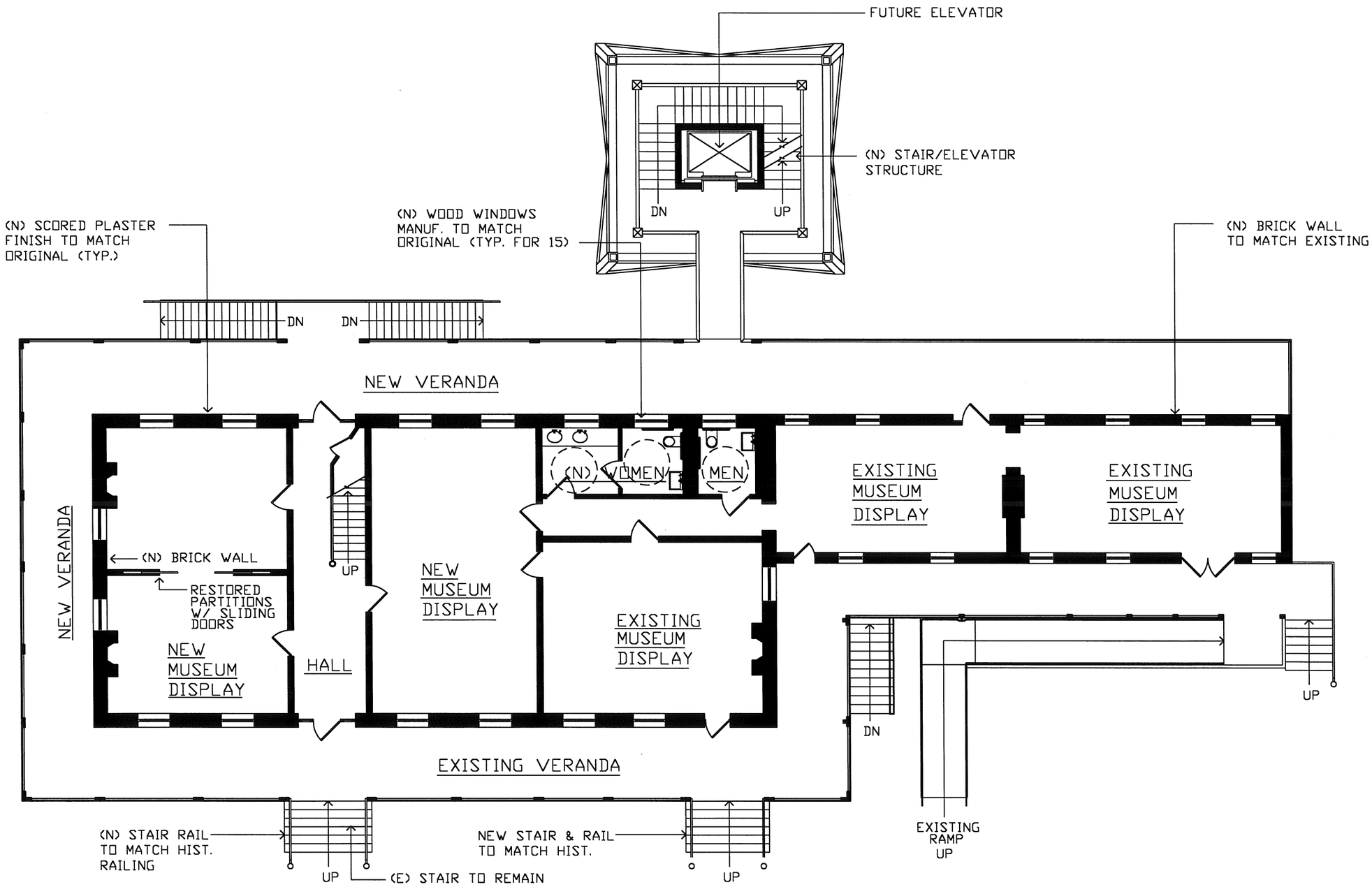

PROPOSED MIDDLE FLOOR PLAN

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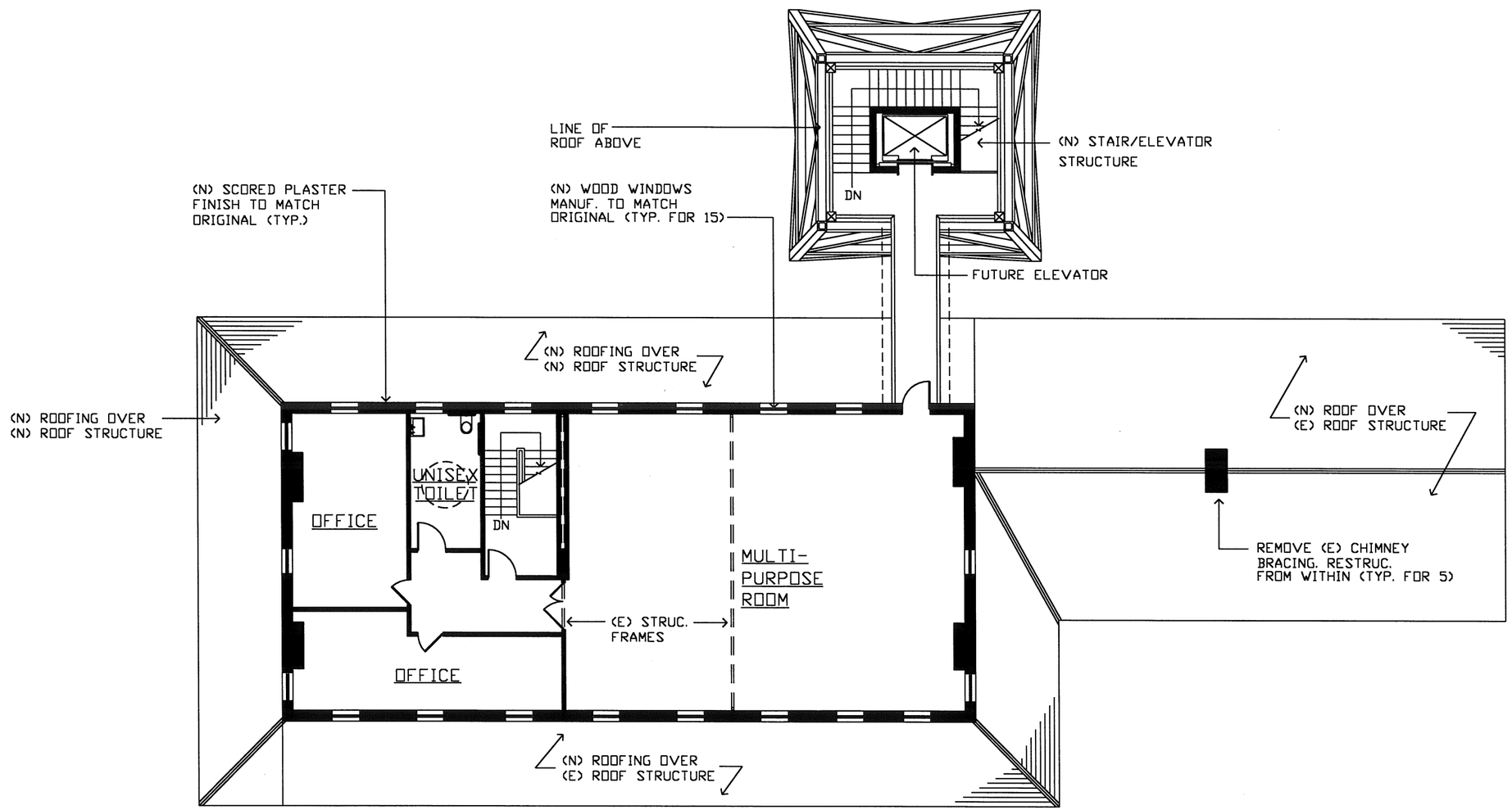

PROPOSED UPPER FLOOR PLAN

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PROPOSED REAR ELEVATION

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PROPOSED FRONT ELEVATION

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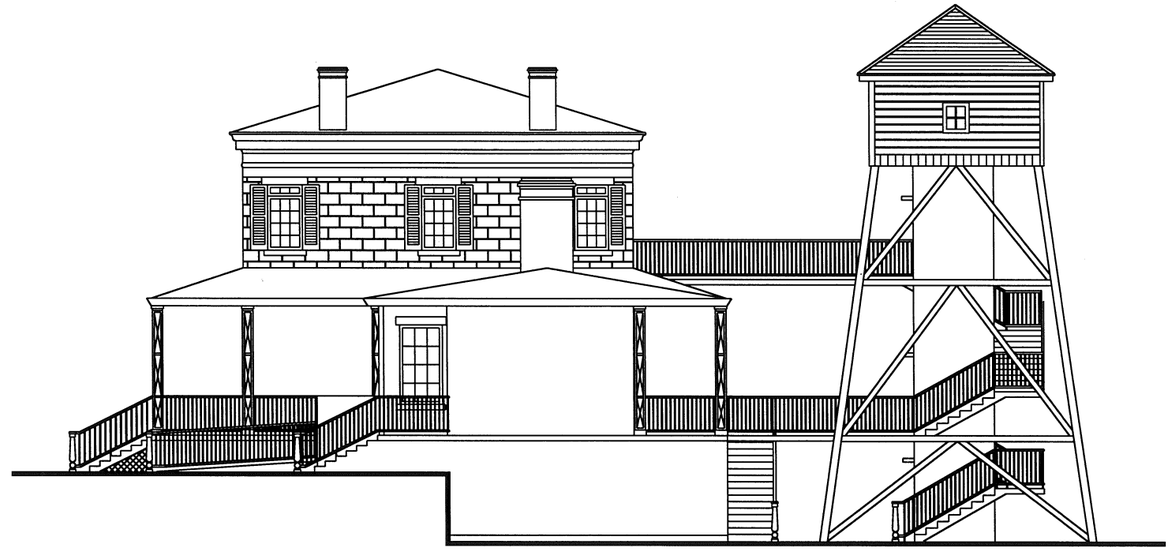

PROPOSED REAR ELEVATION

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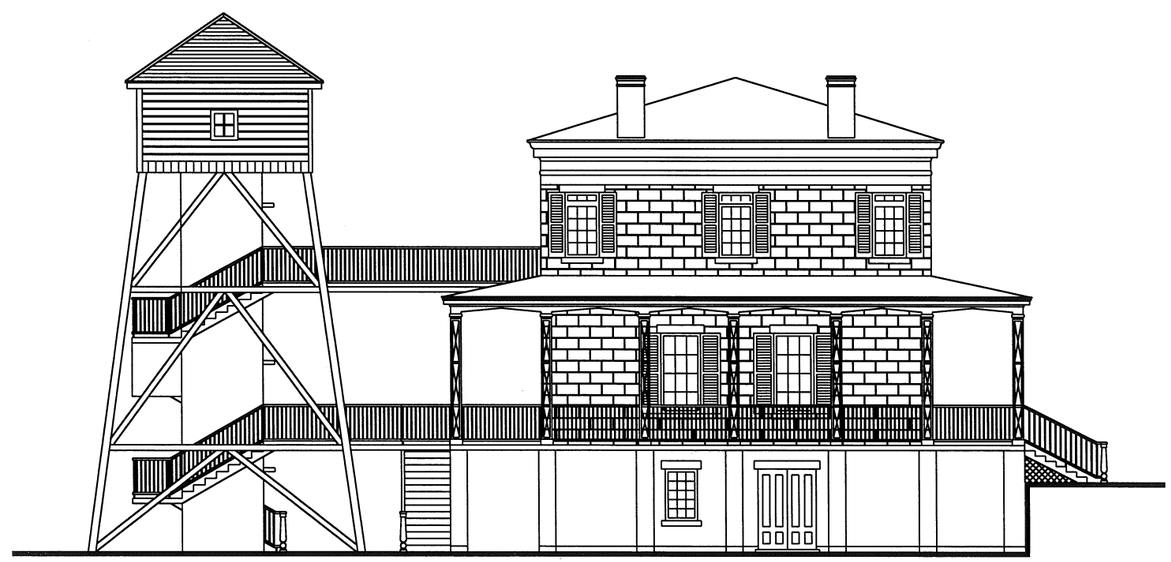

PROPOSED FRONT ELEVATION

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