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Grandma Brisbrey's Bottle Village: A Values Based Conditions Assessment of an American Folk Art Environment

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A Thesis in Historic Preservation Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment of the Requirements for the Degree of Master of Science in Historic Preservation 2007.

Advisor: Koenraad van Balen

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Historic Preservation and Conservation

Comments

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GRANDMA PRISBREY'S BOTTLE VILLAGE:
A VALUES BASED CONDITIONS ASSESSMENT OF AN
AMERICAN FOLK ART ENVIRONMENT

Teresa Suzanne Duff

A Thesis

In

Historic Preservation

Presented to the Faculties of the University of Pennsylvania
in Partial Fulfillment of the Requirements of the Degree of

MASTER OF SCIENCE IN HISTORIC PRESERVATION

2007

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Tressa "Grandma" Prisbrey, ca. 1974
Bottle Village
Simi Valley, California

"Nothing contributes so much to tranquilize the mind as a steady purpose
– a point on which the soul may fix its intellectual eye."

-Mary Wollstonecraft Shelley

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1. Introduction

Grandma Prisbrey's Bottle Village is one of few remaining female built folk art environments in California and the United States (Fig. 1.1). Located at 4595 Cochran Street in Simi Valley, California, hundreds of people pass by this site everyday unaware of its presence, history and significance. In 1951, Tressa Prisbrey (1896 – 1988) began constructing life-size structures made from glass bottles, cement mortar, and numerous found objects (Fig. 1.2). Over the next eighteen years she continued erecting small buildings, fountains, sculptures, a mosaic walkway and flower wells, slowly encompassing the entire 1/3 acre site in recycled sculpture and architecture. By 1988 the property contained 15 structures, wishing wells and flower pots, as well as sculptures such as the *Leaning Tower of Bottle Village* and *Altar to All Faiths*. A mosaic walkway with embedded scissors, license plates, game pieces, ceramic shards and other found objects winds through the site directing the visitor through Bottle Village, the name deriving from the materials used to erect the structures.

1.1. Research Objectives

The evaluation of current conditions and deterioration patterns at Bottle Village is of paramount importance for its preservation. Bottle Village sits in a seismically active area of Southern California. In 1994 an earthquake centered 18 miles from Bottle Village caused irreversible damage to the integrity of the glass bottle structures. Since this time, the structurally unstable Bottle Village has remained closed to the public. In addition, the

lack of regular maintenance and constant shortfall of funding have contributed to the deteriorated state of the site. A study of the materials such as glass, cement mortar and wood, and an evaluation of their deterioration mechanisms will provide a broader understanding of the exhibited building pathologies. A rapid conditions assessment survey aims to document the current state of four extant structures through detailed analysis. The ideal outcome of this study is a systematic and methodical approach for documenting and recording the structures and conditions of a fragile and deteriorating folk art environment in Southern California. Ultimately, the dissemination of this thesis aims to raise awareness of this significant site, resulting in the stabilization, repair and conservation of Grandma Prisbrey's Bottle Village.

1.2. Site Description

Located in Simi Valley, CA (34° 16'45.02" N, 118° 42'16.68" W), the site of Bottle Village is 40' by 300', running north and south (Fig. 1.3). Eucalyptus trees line the east side of the property, and numerous succulents and cacti grow abundantly throughout the site. At the height of Bottle Village, 15 structures made of cement mortar and bottles stood on this 1/3 of an acre. The structures exhibited varying typologies and construction techniques from load bearing bottle masonry to light framed platform construction with bottle masonry infill and pitched, sloped or flat corrugated metal roofs. Most structures tend to line the edge of the property, but no apparent spatial arrangement seems evident based on the site plan.

A winding mosaic footpath traverses the site from north to south, leading the visitor to the entrances of the bottle structures. The footpath is imbedded with ceramic shards, metal toy guns, game pieces, glass bottle bottoms with inserted family photos (Fig. 1.4), shop signs, plastic aeronautical devices from the neighboring Rocketdyne Santa Susana Field Laboratory, and numerous other inquisitive objects (Fig. 1.5). This footpath provides a visual foundation for the colorful and eclectic bottle structures. In the early 1980s, the caretakers of Bottle Village widened and appended ramps to the original mosaic walkway for wheelchair code compliance. These additions were constructed in the style of Tressa Prisbrey's mosaic, though a differentiation is visible (Fig. 1.6).

After the 1994 Northridge earthquake, only seven structures remain extant; these include the Rumpus Room, the Round House, Cleopatra's Bedroom, the Viewing Room, the Third Pencil House, the Shell House and the School House, as well as the mosaic footpath, and sculptures such as the Leaning Tower of Bottle Village, the Water Fountain and the small wishing well. These structures are in a severe state of deterioration exhibiting collapsed roofs, loss of bottle masonry walls, bulging and cracking of mortar, wood rot and deformation of the framing.

The Doll House, the Cabana, the Bottle House, the First and Second Pencil House, and the wall along the west side of the property have fallen into a state of ruins (Fig.1.7), exhibiting loss of more than half of the structure. These structures exhibited both unreinforced load bearing bottle masonry and wood framed construction. The original trailer enclosure was demolished and removed from the site due to almost

complete destruction after the 1994 earthquake (Fig. 1.8). Ruins vary for each structure, approximating 1' to 5' in height at the tallest point, and exhibiting broken glass bottles along the exposed top surface. Tressa's 1955 Royal Spartanette Trailer sits along the west edge of the property, approximately 30 feet from the entrance on Cochran Street. Presently, there is a cinder block wall which traverses the property line on the west, north and east sides of the site, with a black iron gate on the south edge of the property.

1.3. A Collector's Mentality

Through daily trips to the local dump, Tressa Prisbrey collected found objects such as bottles, dolls, carpets, pictures, signs, ceramics, game pieces, license plates, and numerous other items. These objects became the primary medium for creating and constructing Bottle Village. Her self-published book, *Grandma's Bottle Village*, states, "Everyday for nearly four years, I have gone to the dump unless I happen to be town. I spend a lot of time picking over stuff. I drive a Studebaker truck, so I have lot's of room to put the junk in." ¹

The fist structure Tressa Prisbrey built at 4595 Cochran Street was a 30 foot wall along the east edge of her property (Fig. 1.9), "... so a collection of bottles all shapes and sizes, started to find their way to my front yard, putting them together in a heap invited me to do something with them, so those that weren't colored, were colored, for I painted

¹ Tressa Prisbrey, *Grandma's Bottle Village* (Simi Valley, CA: Prisbrey; 1960) 12.

them on the inside. I completed a 30 foot long wall out of glass bottles, ... Thus began the bottle village.”²

Tressa continued to build for 18 years, naming each structure thematically as they were conceived. The Pencil House (Fig. 1.10), built ca. 1956, was the second structure erected to house a pencil collection entailing approximately 2,000 pencils which she had collected and brought from North Dakota, “The Pencil Room has two windows and a mosaic floor. Everything that you can imagine is in the floor, and lot’s that you can’t.”³ The Pencil House was not large enough for the entire collection of pencils, so she embarked on a Second Pencil House located on the west edge of the property. Both of these structures exhibit unreinforced bottle masonry, and currently sit in ruins.

The Rumpus Room (Fig. 1.11), built ca. 1956, contains 180,000 green bottles, “I couldn’t get enough naturally green bottles, so I painted what I needed.”⁴ The Rumpus Room exhibits unreinforced light framed platform construction. This structure is one of the first departures from the load bearing bottle masonry at Bottle Village. Based on traditional construction techniques, Tressa may have laid the cement mosaic floor plan first, giving an outline for the dimensions of the Rumpus Room. Next, she may have erected the load bearing members followed by the wall framing wood studs running parallel to each other. Trusses for the pitched corrugated metal sheet roof would have ensued. Infill with bottle masonry between the wall studs and roof pediments most likely

² Prisbrey, *Grandma’s Bottle Village*, 2.

³ Prisbrey, *Grandma’s Bottle Village*, 3.

⁴ Prisbrey, *Grandma’s Bottle Village*, 10.

would have been the last phase of construction for the Rumpus Room. The advantage of platform construction is apparent with the short, easy to handle wood pieces.⁵ Other structures which exhibit the unreinforced light framed platform construction are the School House (Fig. 1.12) built ca. 1960, the Shell House (Fig. 1.12) built ca. 1958, the Third Pencil House (Fig. 1.13) built ca. 1963, and the Viewing Room (Fig. 1.14) built ca. 1963.

The Doll House (Fig. 1.15), built ca. 1958, contained a collection of dolls, "...like everything else, I got so many dolls that I didn't know what to do with them. The natural thing was to build a house for them, and eventually measured 8 by 19 feet."⁶ Though this structure is non-extant, it also exhibits coarse bottle masonry with some wood framing components. Tressa used larger bottles at the base of the walls. This may indicate her understanding of load distribution, constructing walls which are thicker at the base for support and stability.

The Round House (Fig. 1.16), built ca. 1957, derives its name from the circular 24 feet diameter form. It is the second circular structure Tressa built, the first being the Little Hut (non-extant), built ca. 1957, which measured 8 feet in diameter. Size and construction technique differentiate these two structures. The Round House remains standing and structurally stable. It has a central, load bearing column for roof support, joists, and a three foot foundation to support the light framed platform construction.

⁵ Edward Allen and Joseph Iano, *Fundamentals of Building Construction, Materials and Methods* (New Jersey: John Wiley & Sons; 2004) 146.

⁶ Prisbrey, *Grandma's Bottle Village*, 8.

Instead of wood sheathing, bottle masonry infill gives this structure its unique color, texture and construction.

1.4. Timeline

Tressa Prisbrey (Thresie Luella Schafer) was born in Easton, Michigan in 1896, the last of eight children. At age fifteen, she married Theodore Grinolds in Minot, North Dakota, and eventually they had seven children together. After Theodore's death in 1931, Tressa became active in local politics,⁷ but eventually decided to move to the Pacific Northwest in the late 1930's. It was in North Dakota that Tressa began collecting pencils as a hobby.⁸ This collection would travel with her in future relocations, and eventually serve as the impetus for building the first structure of what was to become Bottle Village.

During World War II, she worked at Boeing Corporation as a parts assembler in Seattle, Washington. After the war, in 1946, Tressa and her daughter Micky moved to Santa Susanna, California (current day Simi Valley, CA) and lived with Hattie Hanson, Tressa's sister. In 1947 Tressa and Albert Prisbrey married, and moved to their own piece of property in Santa Susanna. With the help of Al, Tressa built a house from cinder blocks on their property. In 1954, Tressa's daughter Velma died, upon which her and Al sold their property to pay hospital bills and finance the purchase of a smaller piece of property, 1/3 acre at 4595 Cochran Street, Simi Valley, CA.

⁷ R. Garcia, *Grandma Prisbrey's Bottle Village*, <http://users.adelphia.net/~echomatic/bv/timeline.html>.

⁸ Garcia, *Bottle Village*.

In 1956, Tressa began building, with bottles and cement mortar, a wall to barricade the adjacent turkey farm. This was the beginning of Bottle Village, a fabricated environment of memories, colors, textures and intuitive building design which would incite the curiosity of neighbors near and far. Over the course of 18 years, 1956 to 1972, Tressa would build 15 structures and 22 sculptures.⁹

At the age of sixty, Tressa began constructing what eventually became Bottle Village, “I got to thinking about the various things I could do to our one third acre, ... We had spent a good share of our funds for the land, and couldn’t really afford cement blocks out of the rest, so thought of bottles. Goodness knows there were enough of them around.”¹⁰ The original instigation for Tressa’s desire to use bottles as a building material may have come from a direct source. After visiting Knott’s Berry Farm in Orange County, California in the early 1950’s, Tressa observed that bottles could be used as a viable building material based on the reconstructed Tom Kelly Bottle House from Rhyolite, Nevada (Fig. 1.17).

In late 1955 or early 1956, construction began on the east wall and the Bottle House, though prior to this a few small structures such as the masonry “wheel covers” of the original trailer had been erected. After marrying Al Prisbrey and settling in Simi Valley, she was determined to cease moving about the country. Covering the wheels on the trailer the couple called home was an outward expression of her desire for

⁹ Garcia, *Grandma Prisbrey’s Bottle Village*.

¹⁰ Prisbrey, *Grandma’s Bottle Village*, 1.

permanence and stability. She also desired a place to display her pencil collection which had accumulated into the thousands. Therefore, the wall built along the east edge of property was adjoined with a structure to house the pencil collection. This structure, the First Pencil House, was not large enough for the entire collection, so Tressa continued building.

While building the original wall along the edge of the property, Tressa asked friends, neighbors, and local markets to save items for her to use in constructing Bottle Village, “I spent so much time visiting and reminiscing over the treasures that people had, that I had to put an end to it. It was fun, but it wasn’t getting the village under way.”¹¹ Tressa’s collections which entailed thousands of pencils outgrew the lone trailer on a 1/3 acre of empty property. Her restlessness, determination and vision, coupled with her husband’s excessive drinking, and the lack of funds to purchase cement blocks, most likely culminated in the initial construction of a bottle wall and house to display her personal treasures.

Gradually Tressa gained experience which increased the pace of construction, “On all of these houses, I’ve done all the work myself, with the exception of putting on the roofs and hanging the doors. My sons usually do that. Practically everything I have done on this place, someone has given to me, or I have found.”¹² Tressa, with little building experience, embarked on a project which grew in scale as did her knowledge of

¹¹ Prisbrey, *Grandma’s Bottle Village*, 22.

¹² Prisbrey, *Grandma’s Bottle Village*, 4.

construction. The trailer enclosure (ca. 1956) may be the earliest wood framed structure at Bottle Village, exhibiting platform construction, bottle masonry infill and a flat roof. When compared with the First Pencil House (ca. 1956) and the Bottle House (ca. 1956), both load bearing bottle masonry, this enclosure exhibits Tressa's quick ability to learn and apply her intuitive engineering skills.

Over the course of eighteen years, Tressa continued to build and expand the boundaries of her construction knowledge with circular, and non-orthogonal structures like the Round House (ca. 1957) and The Shell House (ca. 1959), the School House (ca. 1957) and the Third Pencil House (ca. 1960). Perhaps as space on the 1/3 acre became sparse, she was relegated and confined to obscure plans for additional structures, explaining the odd shape and placement of the Third Pencil House (Fig. 1.3). Yet the obscurity also lends charm to an already chaotic and juxtaposed setting of colors, textures and disjointed objects.

Tressa Prisbrey was faced with death throughout her life, including six of her seven children, the death of two husband's, one fiancé and all her siblings but one. She sold Bottle Village in 1972 in order to move to Oregon and care for her ailing son who died two years later. In 1974, Tressa returned to Bottle Village as caretaker where she gave tours to anyone who came to visit.

This same year, Tressa Prisbrey received recognition for her eighteen year project in the exhibits *Naives and Visionaries*, sponsored by the Walker Art Center in

Minneapolis, Minnesota. *In Celebration of Ourselves*, hosted by the Museum of Modern Art in San Francisco (1977), was an exhibit featuring California artists and their built environments. Dedicated to depicting "... the essence of Californian art – the fearlessness of expression, the joy and wonder – at the grassroots level,"¹³ Seymour Rosen photographed and documented hundreds of sites and events throughout the Golden State. These images were compiled into the exhibit which propelled the contemporary folk art world into mainstream institutions for the mass public. Beth Coffelt, author of the introduction for the exhibition catalogue, states, "... California art springs from a teeming chaos of redwood grove mysticism, mountain mysteries, city life, and a funky mix of fetish, ritual, irreverence, Indian lore, pioneer gold rush fantasy, and sunsets. It reflects the many different people, ..." ¹⁴ In the catalogue of the exhibition, Tressa is given a short biography with accompanying photos of her folk art environment. The inclusion of Bottle Village and Tressa Prisbrey in *In Celebration of Ourselves* indicates that her work as an artist was regarded as a major contribution to California's contemporary character, finding its place in history as one of the many "reflections" in the melting pot of California culture.

Bottle Village received the Ventura City Landmark status in 1979. Immediately following this in the same year, the National Endowment for the Arts allocated funding for the commission and design of a bottle mural by Tressa Prisbrey at the Simi Valley

¹³ Beth Coffelt, "Introduction," *In Celebration of Ourselves* (San Francisco: California Living Book; 1979) 12.

¹⁴ Coffelt, "Introduction," *In Celebration of Ourselves*, 12.

Public Library, solidifying her status as an artist and acknowledging her endeavor. In conjunction with the new local landmark status, Preserve Bottle Village Committee (PBVC), a non-profit organization, formed in July of 1979 to raise funds for property tax payments and annual maintenance, as well as aid the ailing artist who would continue to reside on site as caretaker until 1982. Throughout this time continuous change of ownership plagued the site, sometimes threatening demolition and bankruptcy.

In February 1981, Bottle Village became the 939th California State Historical Landmark. California Historical Landmarks are buildings, structures, sites or places that have been determined to significantly contribute to a statewide history.¹⁵ At least one of the itemized criteria must be met for listing: the first, last, only or most significant of its type in the state or geographic region (Northern, Central or Southern California); association with an individual or group having profound significance on California; be a prototype or example of an outstanding period, style, architectural movement or construction, or be the best surviving example by a pioneering architect, engineer or master builder in a region.¹⁶ In addition, the nomination of California Historical Landmark must be supported by the County or City/Town in which the resource is located, and officially nominated by the Director of State Parks of California.¹⁷ Bottle

¹⁵ Office of Historic Preservation, *California State Historical Landmarks*, http://ohp.parks.ca.gov/default.asp?page_id=21381.

¹⁶ Office of Historic Preservation, *California State Historical Landmarks*, http://ohp.parks.ca.gov/default.asp?page_id=21381.

¹⁷ Office of Historic Preservation, *California State Historical Landmark*, http://ohp.parks.ca.gov/default.asp?page_id=21381.

exemplifies a pioneering, self-taught builder, who, through design and construction technique, has contributed to one of California's most unique forms of architecture.

By July of 1986, PBVC obtained ownership of the site, conducting tours for visitors while working with the City of Simi Valley to obtain proper permits for building code compliance and expansion of audience capacity at Bottle Village.¹⁸ At the age of 86, Tressa's health began failing due to a stroke, obliging her to relocate to San Francisco where the only surviving child, Othea, cared for Tressa until her death in 1988.

On January 17th, 1994, the Northridge Earthquake, registering 6.2 on the Richter Scale, was centered 8 miles from Bottle Village. The damage was massive, completely destroying the Bottle House, the first Pencil House, the Doll House, and causing severe loss to many other structures on site.

Though in a partial state of ruins, Grandma Prisbrey's Bottle Village was listed on the National Register of Historic Places in October 1996, solidifying the third landmark status awarded to the environmental folk art site. The National Register of Historic Places is a designated directory of buildings, sites, districts and objects which are significant in American history, architecture, engineering, archaeology and culture.¹⁹ Nomination and acceptance to the National Register implies the property is significant on a National, State or community level. These designated sites also receive consideration in planning federal or federally funded projects, eligibility for federal tax benefits, and

¹⁸ Garcia, *Grandma Prisbrey's Bottle Village*.

¹⁹ National Register of Historic Places, <http://www.cr.nps.gov/nr/listing.htm>.

qualification for federally assisted funding for preservation efforts.²⁰ The National Register itemizes all historic site listings through predetermined categories: historic significance, architect, builder or engineer, architectural style, historic person, area of significance, period of significance, owner, historic function, historic sub-function, current function and current sub-function.²¹

Presently, the site remains closed to the public due to a lack of funding for stabilization of the deteriorating structures.

²⁰ National Register website, *Criteria*, <http://www.cr.nps.gov/nr/listing.htm>.

²¹ The National Park Service, *The National Register of Historic Places, Vacant/Not in Use*, <http://www.nationalregisterofhistoricplaces.com/CA/Ventura/vacant.html>.

2. Environmental Folk Art in America

American folk art encompasses a broad genre of artists and mediums, finding its roots in self-taught artists and crafts people who employ everyday objects for means of expression. In the early 20th century, the term folk art was analogous with self-taught art, a mode of identification to loosely group this ambiguous artistic avenue.²² Extending beyond the realm of architecture is built environments, also known as visionary gardens, environmental art and assemblage. These unique places are speckled across the United States, as well as other countries, providing respite during a long journey, or destinations for enjoyment and discovery. Using readily found objects, these creators become builders of gardens, structures and spaces that defy the traditional architectural vocabulary. These people often do not attempt to belong to a defined artistic movement, instead opting to satiate an inner psyche which is compelled to create.

2.1. History of Environmental Folk Art

It is unknown at what point in time or by whom the first folk art environments were built. Palais Ideal, conceived and built by Ferdinand Cheval (1836 – 1924) over the course of thirty years (1879-1912), is one the world's oldest and most exemplary built environments. Inspired by a dream, Cheval would collect rocks everyday during his 32km postal route in the countryside of Lyon, France. Eventually he combined the collected rocks with cement, chicken wire and lime to build an organic and sculptural

²² Carol Crown, "Inside Outside Art," *No. 42*, (Fall 2002): 8.

structure 26m in length and 14m wide (Fig. 2.1). Cheval inscribed his creation with hundreds of mementos, “1879-1912/10 thousand days/93 hours/33 years of effort,” and “Everything you can see, passer-by is the work of one peasant who, out of a dream, created the queen of the world.”²³ As a monumental work of vision and passion, Palais Ideal exemplifies the dedicated self-taught artist who is driven to satiate an inner psyche to create.

Parallels may be drawn between the formal architectural vocabulary and the folk art environment. Watts Towers in Southern California evokes the design of renowned architect Antonio Gaudi’s *Sagrada Familia* (Fig. 2.2), built 1883 – unfinished. Simon Rodia, an Italian immigrant who settled in Watts, California, a suburb of Los Angeles, spent thirty-three years building three tall towers and six smaller towers enclosed in a walled garden (Fig. 2.3). With cement and metal tubing, the tallest tower rises 90 feet high, and all are decorated in a collage of ceramic and glass shards and sea shells. Rodia’s impetus for toiling his spare time and energy was summarized in one statement, “I wanted to do something big.”²⁴ The desire to manipulate the environment in ways that can be evaluated aesthetically transcends continents and cultures, and goes back to the earliest known cave paintings. Perhaps folk art environments may be placed on this continuum of human outward expression.²⁵

²³ John Maizels, *Raw Creation, Outsider Art and Beyond* (London: Phaidon Press Ltd; 1996) 160.

²⁴ Maizels, *Raw Creation*, 179.

²⁵ Jay Platt, “Fixing Dreams, Preserving America’s Folk Art Environments” (Masters Thesis, University of Pennsylvania, 1996), 17.

In *Historic Preservation* by James Marston Fitch, the concept of economic retrieval and recycling is explored throughout history. Pre-industrial societies would use, reuse, repair and patch objects for maximum utility and energy conservation, "... every possible bit and piece being salvaged for reuse in new combinations."²⁶ Prior to world-wide industrialization, time and effort to retrieve, size and erect new materials for each individual structure was extremely high in labor, cost and time. Therefore, people throughout time have reused building materials to abate these factors. Fitch provides two examples; columns from Periclean Athens were reused for the retaining walls of the modern Acropolis in Greece, and many Romanesque churches of southern Europe recycled columns from nearby Roman temples.²⁷ Perhaps this provides the earliest known source of retrieval recycling. Fitch expands upon the historical reuse of building materials stating the Eastern Mediterranean Orthodox church aesthetic formed from the recycling of brick used in pagan temples.²⁸ This is a broad statement which deserves further analysis, yet the concept that a stylistic aesthetic may have formed from retrieval recycling is paramount in placing this form of construction on an international and historical continuum.

With industrialization and advancement in technology, technological obsolescence, the determination of an object's use based on economy rather than physical utility, emerged.²⁹ The concept of replacing used objects with new became the accepted

²⁶ James Marston Fitch, *Historic Preservation* (New York: McGraw-Hill Book Company; 1982) 29.

²⁷ Fitch, *Preservation*, 29.

²⁸ Fitch, *Preservation*, 29.

²⁹ Fitch, *Preservation*, 30.

trend in the United States during the Industrial Revolution, and has continued through the to the 21st century. The reuse and retrieval of objects became obsolete, relegated to the lower socio-economic classes in America, and visually distinguishing people and places from the mainstream. Technological evolution has become so prevalent that it is now viewed as synonymous with progress,³⁰ making sites such as Bottle Village appear to the mainstream architectural vocabulary as marginal, unsophisticated and overly organic in aesthetics and construction.

One of the earliest known bottle houses (glass bottle masonry) in America was built by William F. Peck in 1902 due to the scarcity of construction resources in Tonopah, Nevada,³¹ a small silver mining town in the desert of the Southwest. Rail lines and roads to remote towns in the west were rare and difficult to travel, making the transport of large, heavy construction materials exorbitantly expensive. Settlers and miners used what was immediately available including glass bottles from the saloons, generally the first commercial establishment in these small mining camps and towns.³² Capitalizing on this resource, Peck used over 10,000 beer bottles and an unknown mortar to build his house (Fig. 2.4). Oil tin cans (Fig. 2.5) and barrels (Fig. 2.6) were used by miners for building materials in Tonopah, as well as other isolated areas of the west, giving evidence for the use of a plethora of found objects as construction materials. As

³⁰ Fitch, *Preservation*, 31.

³¹ Debra Jane, Roadside Architecture, Bottle Houses, <http://www.agilitynut.com/h/bh.html>.

³² Margo Bartlett Pesek, "Trip of the Week, Buildings Made of Bottles can still be Found in Nevada," *Las Vegas Review Journal*, July 30, 2000, http://www.lvrj.com/cgi-bin/printable.cgi?lvrj_home/2000/Jul-30-Sun-2000/lifestyles/14012107.html.

the mining towns grew in population, so did the local dump, where people collected used and discarded objects to make do.

In the gold mining town of Rhyolite, Nevada, Tom Kelly spent over three years (ca. 1905) constructing a house mostly of Busch beer bottles and adobe mortar. Joshua trees, the only trees which grow in the arid landscape of Nevada, do not provide sufficient lumber for building a traditional timber framed house. According to various sources, the bottle house located at Knott's Berry Farm which Tressa saw on her visit is a replication of the Tom Kelly house. While visiting Rhyolite in the early 1950's, Walter Knott, owner and propriety of Knott's Berry Farm, saw Tom Kelly's bottle house and was inspired to recreate the beer bottle masonry structure as part of a western mining town sub-theme at the Southern California amusement park. By introducing the Tom Kelly house in a strategic and accessible location for the general public, Walter Knott established a link between the unique history of the west and contemporary mid-20th century society. Assimilation to one's environment can take many varying forms, evidenced in the miners ad hoc architecture of an isolated and harsh landscape. The history of settlers of the southwest illustrates a story of perseverance, resourcefulness, hardship and ingenuity, qualities which transcend time, place and people. Similarities between Tressa and the miners of the southwest are twofold, inhabiting a relatively isolated area with little money for construction materials, Tressa capitalized on one of the only free and local resources, the city dump.

2.2. Contemporary Art Movement and Assemblage

In 1961 the Museum of American Folk Art was founded. Herbert Wade Hemphill, Jr., one of the founders of the aforementioned museum, wrote *Twentieth Century American Folk Art and Artists*, a 1974 groundbreaking book which summarized folk art as, "... everyday people out of ordinary life... who are unaware of most and certainly unaffected by the mainstream of professional art."³³ Hemphill helped to amass a collection which included objects such as Amish quilts and colonial paintings, Hopi Indian dolls and Americana shop signs for display and exhibit at the museum. These types of objects reflect the pulse of regional heritage within the United States, documenting the undercurrent of local issues and priorities.

Assemblage is one form of contemporary art. As a movement, it became popular with artists such as John Cage, Robert Rauschenberg and Marcel Duchamp, culminating in the 1968 MoMA (Museum of Modern Art) exhibit *The Art of Assemblage*. This exhibit meant to serve the viewer with the juxtaposition of non-related objects, inciting a cognitive tension with the result of producing a personal relationship defined by the viewer. Yet people such as Simon Rodia and Tressa Prisbrey were not aware of these mainstream movements even though their creations may have preceded or simultaneously taken place with the assemblage movement and MoMA exhibit. Instead of isolating objects for individual historical value as in the museum setting, Tressa Prisbrey assembles them together creating a plethora of abstract and whimsical relationships.

³³ Platt, *Fixing Dreams*, 17.

While both methods of display orientate the object into a particular context, it becomes evident the difference between mainstream and folk art; the former isolates the object's context, while the latter reunites the object into a new context.

To help protect these distinctly unique places in the United States, SPACES (Saving and Preserving Art and Cultural Environments) was conceived in 1978 by Seymour Rosen. He sought to search, locate, and document contemporary environmental folk art in-situ, as well as aid the creators of these sites in maintaining and preserving their visions of American heritage. Although many have disappeared since their conception, SPACES has served an invaluable role in introducing these sites to a mass audience while battling for their official recognition of city, state and federal landmark status.

2.3. Defining the Folk Art Environment

Folk art environments are inherently difficult to define³⁴ due to many factors such as location, materials, fabrication technique and intent. They are part architecture, part sculpture and part landscape design,³⁵ presenting a skewed yet imaginative approach to materializing the surreal. According to anthropologist and folklorists, the term 'folk' implies communal traditions taught from one generation to the next; yet in mainstream modern culture it may also imply self-taught or untrained. From this, recent scholars

³⁴ Platt, *Fixing Dreams*, 4.

³⁵ Maizels, *Raw Creation*, 169.

have sought to use ‘visionary’, ‘outsider’, ‘grassroots’ or ‘intuitive’ in conjunction with art environment, yet all refer to similar intents and products.³⁶

Seymour Rosen, an environmental folk art advocate, brings forth his definition:

Folk art environments are handmade, personal places large-scale sculptural and/or architectural structures built by self-taught artists generally during their later years. These environments usually contain a component of accumulated objects, often those discarded by the larger society, which have been transformed and juxtaposed in unorthodox ways. The spaces are almost always associated with the creator’s home or business and have developed without formal plans. The sites tend to be immobile and monumental in amount of components or in scale. Owing less allegiance to popular art traditions and more to personal and cultural experiences and availability of materials, the artists are motivated by a need for personal satisfaction rather than by a desire to produce anything marketable or to gain notoriety. Most sites in this country have been developed by people who are in middle age to old age, and represent a substantial and sustained commitment of time and energy.³⁷

Though this definition is broad in description, it states specific attributes and conditions which formulate the context to further discuss these unique landscapes.

Charles Jencks and Nathan Silver articulate the architecture of such places as ad hocism, “human endeavors which denote a principle of action having speed or economy and purpose or utility... it involves using an available system of dealing with an existing situation in a new way to solve a problem quickly and efficiently.”³⁸ Jencks and Silver first coined the term ad hocism in 1968 to define the intent and action of assembling, in

³⁶ Platt, *Fixing Dreams*, 12.

³⁷ Seymour Rosen, “An Art of Unpretentious Joy: Preserving America’s Folk Art Environments,” *Spot 10*, (Summer 1991): 6.

³⁸ Charles Jencks and Nathan Silver, *Adhocism, the Case for Improvisation* (New York: Anchor Books/Doubleday; 1973) 9.

particular when compared to modern architecture. This is similar to Rosen's definition in that the creator utilizes the discarded from mainstream society. By comparing the architect or engineer with the builder of ad hoc architecture, Jencks and Silver claim the only difference is intent. Societal norms and philosophies constrain and standardize what is deemed acceptable, yet ad hocism cuts through these currents to fulfill an immediate purpose.

Verni Greenfield delves further to define the cognitive process of producing environmental folk art sites as aesthetic recycling, "... the process through which people conceive and physically transform industrially manufactured objects or products... how individuals re-see or revalue items in their environments as a perceptual/conceptual process which precedes and accompanies conceptual problem solving."³⁹ This definition plays true, especially when juxtaposed with the modern movement of assemblage, the merging of unrelated objects into new context.

All four examples attempt to narrow and organize the genre of environmental folk art. Academic analysis of the terminology provides a context from which to dissect the qualitative and quantitative values which are further explored in chapter 3 through evaluation of the artistic, historical, social and scientific values.

³⁹ Verni Greenfield, *Making Do or Making Art; a Study of American Recycling* (Ann Arbor: UMI Research Press; 1986) 7.

3. Values

A thorough investigation and analysis of the inherent values in an historic site must be conducted prior to commencement of any conservation intervention. Overarching categories which influence contemporary values include historical, social, scientific and artistic groupings. Historical values may be evaluated by a material's age, the association with people or events, the uniqueness and rarity of the site and/or materials, the exhibited technical or engineering qualities, or the potential for archival and documentary purposes.⁴⁰ Social values include the use of the site, specifically events which do not capitalize on the historical value but instead define the space.⁴¹ Aesthetic values encompass visual qualities such as the concept of beauty. More broadly, it may include smell, sound and touch for an entire sensory experience.⁴² The scientific value applies specifically to conservation research, analyzing the fabrication, construction, performance and deterioration of materials individually and collectively. Therefore, the objective of chapter 3 is to identify, articulate and evaluate the inherent values which justify and support further assessment of the existing conditions at Bottle Village. The conclusion of these values is exhibited in an authenticity matrix and summarized in the mission statement.

⁴⁰ Randall Mason, *Assessing Heritage Values* (Los Angeles: GCI; 2005) 11.

⁴¹ Mason, *Assessing Heritage Values*, 12.

⁴² Mason, *Assessing Heritage Values*, 12.

3.1. Analysis of Terminology

In regards to folk art, many scholars have declared this form should be approached in conjunction with mainstream fine art movements,⁴³ as a visual philosophy that expands upon and transcends the common held beliefs, definitions and boundaries of a society. In *The Aesthetic Language of Self-Taught Art*, Alison Weld weaves a common denominator between the material, historical and aesthetic values of folk art:

“The tension between the chosen aesthetic language and the motivating cultural forces especially informs these works, imbuing each work with its specific personal integrity. This integrity is informed by social, political, and historical experience as well as by shared formal understanding. Concrete understanding is juxtaposed with elusive idea. It is the transmission of this personal integrity, in particular, which allows us to experience the strength of this art.”⁴⁴

The chosen form and material of folk art objects and environments make a particularly complex and layered relationship. Therefore, the analysis of historical, social and aesthetic values inherent in Grandma Prisbrey’s Bottle Village is justified and necessary in composing a multi-phase conservation plan.

A review of the terminology for landmark designation (national and state) brings forth a starting point to begin analysis of the inherent and evolving values embodied at Bottle Village. According to the National Register of Historic Places (Fig. 3.1), the historical significance for Grandma Prisbrey’s Bottle Village is implicit in the architecture, engineering and person. This primary, over-arching category implies scale

⁴³ Alison Weld, “The Aesthetic Language of Self-Taught Art,” *Self-Taught Art* (Jackson: University of Mississippi Press; 2001) 166.

⁴⁴ Weld, “Aesthetic Language,” *Self-Taught Artist*, 166.

(architecture), construction (engineering), and design (artist, architect or engineer). The second category, architect, builder or engineer, implies the importance and recognition of individuals who expand upon and transcend the boundaries of conventional construction methods and design. Yet the third category, architectural style, assigned to Bottle Village is cited as “other,” exemplifying the complexity of non-traditional architecture and materials in mainstream culture. Tressa “Grandma” Prisbrey is designated the historic person, and the area of significance for Bottle Village is allocated to architecture, landscape architecture and art. Through cursory exploration it becomes evident that the National Register categories are stifling, generic and vague in defining the essence and nuances that make a site worthy of national title and preservation.

Counterpoint to this argument, the interpolation of the National Register categories allow further exploration and review of the values which compose Bottle Village. It does not suffice to categorize architecture as “other,” defined as *being or feeling different in appearance or character from what is familiar, expected or generally accepted*.⁴⁵ Though Bottle Village construction is non-traditional and non-conforming to mainstream definitions, this terminology fails to mention explicit qualities of resourceful, intuitive, and eclectic, important characteristics in defining the folk art environment. The use of current industry standards and terminology to define Bottle Village has led to a lack of understanding of the inherent values which inevitably determine the preservation strategies to ensue.

⁴⁵ Cambridge English Dictionary, 15th ed., s.v. “other.”

The Office of Historic Preservation for the California State Parks defines designation criteria into three categories of which only one is necessary for obtainment of state title; the association to events which have contributed significantly to broad historical patterns in the United States, California, or the local region; association with lives of people important to local, state or national history; embodies the specific characteristics of a type, style, period or regional method of construction or master builder of high artistic value; has contributed or will contribute important information to the history of the local area, state or nation.⁴⁶ These criteria delve further in establishing a standard of significance while taking into account the importance of regional people, traditions and conditions. The California criteria also account for the survivability of a site in a seismically active area.

3.2. Evaluating Authenticity

The Nara Conference on Authenticity (1994) provides a framework for analyzing heritage values. Overarching aspects such as form and design, materials, use and function, tradition and techniques, location and setting, and spirit and intent are expanded upon to incite critical review and inspection of heritage values. Herb Stovel further explores the framework of heritage values through a critical analysis of the authenticity question. In *Considerations for Framing the Authenticity Question*, Stovel illustrates the usefulness in reevaluating the aspects by which conservators make, devise and justify

⁴⁶ Office of Historic Preservation, *California Register, Register Programs*, http://ohp.parks.ca.gov/default.asp?page_id=21238.

intervention and treatment. Are universal principles present by which to evaluate cultural heritage? Do these aspects benefit or trivialize non-conforming communities and groups? How does authenticity illustrate the broader goals of conservation?⁴⁷

In response to the Nara Conference on Authenticity, the Raymond Lemaire International Centre for Conservation (RLICC) formed a methodology using a matrix system for identifying and monitoring the values of an individual site, serving as the connection between the analysis and conservation criteria.⁴⁸ Heritage sites may possess a wide variety of values which may be ambiguous, coincide and challenge each other. The authenticity matrix devised aims to identify, disentangle and assess the values of Grandma Prisbrey's Bottle Village by exploring these six contrasting and complimenting dimensions. The formation of a matrix concisely illustrates the objectives which provide justification for conservation treatment, whether it may include stabilization or reconstruction or abstention. The authenticity matrix will also serve as a reference tool for future monitoring, re-examination of values and conservation treatments (Fig. 3.2).

⁴⁷ Herb Stovel, "Consideration in Framing the Authenticity Question in Conservation," *Nara Conference on Authenticity in Relation to the World Heritage Commission*, Nara, Japan, 1 – 6 November 1994 (UNESCO World Heritage Center, Agency for Cultural Affairs, ICCROM, 1995) 133.

⁴⁸ Bert Lemmens, Nicandra Nocera & Koenraad Van Balen, "Understanding and Evaluating Authenticity Using the Nara Document," *Conservation in Changing Societies: Heritage Development* (Leuven: Raymond Lemaire International Centre for Conservation; 2006) 85.

3.2.1. Form & Design

Form and design relate to the geometrical understanding of a structure, as well as the typological features.⁴⁹ The Nara Conference on Authenticity deem a critical understanding of form and design necessary for a base for future survey and documentation work, understanding of the chronological development, as well as the first phase of a conservation program.⁵⁰ The form and design exhibited at Grandma Prisbrey's Bottle Village is unconventional, non-orthogonal, and ad hoc. Though Tressa Prisbrey was an untrained builder and artist, her work must still be subjected to an evaluation of form and design through critical and deliberate terminology.

Bottle Village exhibits two types of construction, unreinforced load bearing bottle masonry, and unreinforced light timber framed platform construction. Based on historic photographs and visual observation, Bottle Village exemplifies the learning process of one woman who, through experience and intuition, evolved as a builder and artist. Tressa Prisbrey experimented with different forms of architecture including rectangular, circular and heart-shaped floor plans and frames. Her designs included mosaic floors, glass bottle masonry, and pitched, sloped and flat roofs of corrugated metal or wood planks. When viewed from the interior, a certain element of colored light conjures a unique and individual experience. The Round House exemplifies the apex of Tressa's engineering

⁴⁹ Nara Conference on Authenticity, 1994.

⁵⁰ Nara, 1994.

capabilities, constructing a 24 foot diameter structure which withstood a 6.7 earthquake in 1994.

3.2.2. Materials

Materials lend color, texture, durability and character to a structure. The Nara Document states an inventory of materials must be devised, along with an assessment of their respective conditions and deterioration,⁵¹ as a contributing element in analysis of values. The materials used for construction of Grandma Prisbrey's Bottle Village elicit ambiguity, curiosity, awe and inspiration. Tressa collected objects of every medium to install as a building material or art object. These objects have been taken from their intended context, and reinserted into a new and complex matrix. For example, wood telephone poles of approximately 10 inches diameter are reused to form the vertical load bearing members of Cleopatra's Bedroom. At Bottle Village, container glass is redefined as a structural building material, the masonry unit, while cement mortar remains in its historical use as the bonding agent. The found objects may be admired individually, as well as a collective whole. Each object was hand-picked by the artist, entailing a cursory visual assessment of condition, potential use (i.e. structural or visual purposes) and aesthetic contribution to Bottle Village.

⁵¹ Nara, 1994.

3.2.3. Traditions and Techniques

Traditions and techniques exemplify cultural or regional methods, materials, uses and functions of buildings. More specifically, this may be exhibited in the types of tools employed, gender or social division of work, and mainstream trends and concepts. The value of traditions and techniques is interrelated to form, design, materials, location and artistry. These values, when applied to folk art, represent some of most complex and controversial issues surrounding folk art scholarship, the isolated yet parallel development of folk artists from mainstream movements. Alison Weld states that all artists have a visual language in which their ideals, spirit and integrity take plastic form.⁵² Therefore, traditions and techniques are inter-related and dependent upon various other values.

Tressa Prisbrey embodies the self-taught artist and intuitive engineer. She redefines the above stated criteria, adapting herself⁵³ and surroundings to suit the needs of her inner drive to collect and create from junk. Her husband, Al Prisbrey, taught Tressa basic construction applications when they lived on Alamo Street, their home prior to Cochran Street. Originally, Tressa mixed and laid the mortar with her hands. It was her sister, Hattie, who introduced the trowel to Tressa. Her construction techniques evolved as her vision and skill level progressed, exemplified when comparing the first Pencil House, the Rumpus Room and the Round House.

⁵² Weld, "The Aesthetic Language," *Self-Taught Art*, 166.

⁵³ *Grandma's Bottle Village, the art of Tressa Prisbrey*, VHS, directed by Allie Light and Irving Saraf (1986; Berkeley, CA: University of California Extension Center for Media and Independent Learning).

3.2.4. Use and Function

Tressa Prisbrey began building structures with bottles and cement mortar after a visit in the early 1950s to Knott's Berry Farm where she saw a replication of Tom Kelly's Bottle House. She was struck with the idea to extend her and her husband's living quarters beyond the trailer which currently served as their primary residence. The merit in exploring use and function values helps to determine all changes and modifications made to a structure over time, further identifying the current state of materials and future planning of building use.⁵⁴

After building a 30 foot wall, flower wells and other small structures, Tressa built an enclosure around the trailer and a porch as protection from the intense Southern Californian sun. She also built a small room to house her pencil collection. The Pencil House was not large enough to exhibit the entire collection of pencils, therefore she embarked on a second pencil house. If Tressa was not building, she was cleaning, maintaining and repairing her structures.

3.2.5. Location and Setting

After moving from North Dakota to Seattle where Tressa worked as a parts assembler in a factory, she and her daughter decided to travel to Southern California where Tressa's sister, Hattie Hansen, lived. Santa Susana, now known as Simi Valley, was open, undeveloped land speckled with farms and ranches. The vastness of this area

⁵⁴ Nara, 1994.

prior to development may have reminded her of North Dakota and her family homestead. In the early 1950s, this land would have been relatively inexpensive due to its rural location, far proximity to a major metropolitan city, and minimal public transportation.

Simi Valley is located on the boarder of Ventura and Los Angeles Counties, and is located in a seismically active area. Surrounded by three fault lines, the Santa Rosa Fault to the northwest, the Northridge Hills Fault to the Northeast, and the Chatsworth Fault to the south, it suffers from constant minor seismic events, as well as occasional large scale earthquakes. Simi Valley is approximately 40 miles northeast of Los Angeles. The Santa Susanna Pass in the San Fernando Mountains allows access to and from Los Angeles County.

3.2.6. Spirit and Intent

The spirit and intent of Tressa Prisbrey's pursuit to create Bottle Village evolved over time. Originally, Tressa sought a room to display her amassing pencil collection which outgrew the trailer she and her husband called home. Without the funds to purchase traditional building materials such as cement blocks, plaster and wood for framing, resourceful measures were undertaken. Tressa, much like the inhabitants of the western mining towns in the early 20th century, collected discarded objects for new uses. A sense of utility prevails upon the early structures of Bottle Village. As Tressa realized

her skill and enjoyment in creating “something from nothing,” she transitioned into artist, making Bottle Village a monument to creativity on all levels.⁵⁵

Tressa possessed a collector mentality and distaste for waste,⁵⁶ basing her choices on the beauty she saw in every-day objects. Her choice of objects as she rummaged through the dump was cognoscente and deliberate. Objects were selected for their use, whether overt or covert, and their perceived beauty. Having lived through the Great Depression, Tressa physically and psychologically knew how to live by “making do” with the immediate surroundings. In her adult life, Tressa would out-live six of her seven children, two husbands, and all but one sibling. Creativity became a source of making meaning for a life which experienced prolific death. Yet despite the hardships of her life, Tressa’s sense of play and lightheartedness is displayed throughout Bottle Village in works like *Spring Garden*, a garden of cacti interspersed with bed springs (Fig. 3.3), and *The Leaning Tower of Bottle Village*, an aerodynamic towering sculpture (Fig. 3.4). These two examples elicit an element of shock value, and play upon the whimsical. *The Shrine to All Faiths*, a pseudo-altar which exhibits a statue of St. Francis, the Madonna and the Star of David, gives evidence to her reflection of diverse visitors who represented people of all faiths.⁵⁷

In her own words, Tressa elucidates the spirit and intent in which the materials were collected:

⁵⁵ Amy Skillman, interview with former director of Bottle Village (1982 – 1986), 11 October, 2007.

⁵⁶ Skillman, “interview,” 11 October, 2007.

⁵⁷ Prisdrey, *Grandma’s Bottle Village*, 8.

“Now some people may think that daily visits to the town dump could be a pretty depressing thing, ... to me, it is a never ending source of interest and a priceless experience. I may never know the circumstances that led first to the purchase of what is now trash, nor will I ever know, ... the reason for discarding these things, but, to have a vivid imagination, to put both ends together to make a whole, makes these collection forays very worthwhile. And sometimes you come up with a real find. But to me, everything can be used in building or adding something of interest to Bottle Village.”⁵⁸

Independently and collectively the materials of Bottle Village embody a unique, invaluable spirit and intent. For visitors, the materials used and embedded in Bottle Village elicit a sense of discovery and memory making, “... when my folks were here from Indiana, I took them to your place [Bottle Village] and then took them on a tour of ... Knott’s Berry Farm, Marine Land and Disneyland. The only thing my Dad could talk about was the Bottle Village.”⁵⁹ During Tressa’s life, she cleaned, repaired and maintained Bottle Village as a vibrant and fanciful environment for anybody to enjoy. Tours for 25 cents were given on a daily basis to anyone who showed up.⁶⁰ Since Tressa’s death, the 1994 earthquake, and the closing of Bottle Village to the public, the site’s spirit and intent now embody dormant memories, objects of disjointed context, and morbid decay. Layers of dirt, dust and visible disrepair are prolific throughout the materials. Therefore, a shift in the spirit of Bottle Village must be recognized in light of the original intention.

⁵⁸ Prisbrey, *Grandma’s Bottle Village*, 22.

⁵⁹ Prisbrey, *Grandma’s Bottle Village*, 7.

⁶⁰ Prisbrey, *Grandma’s Bottle Village*, 4.

3.3. Mission Statement

Grandma Prisbrey's Bottle Village is a unique and rare folk art environment exhibiting the spirit and determination of a self-taught artist. Over the course of three decades, Tressa Prisbrey created, built, maintained and showcased one of California's most distinctive yet undervalued built folk art environments. This county, state and national landmark illustrates an evolution of architectural typologies constructed from discarded objects and assembled together in ad hoc form. Embedded into the built fabric is an exhaustive collection of mid-century collectible Americana evoking memories, curiosity and contemplation.

Bottle Village is presently at risk due to a lack of security, maintenance and financial instability, as well as opposing local legislation, real estate development and earthquake activity. The assessment of tangible and intangible values, and the documentation and survey of the historic fabric, aim to identify the conservation priorities and methodology for Bottle Village while safeguarding the embodied values and history of this unique folk art environment. As one of few remaining female built folk art environments in America, Bottle Village contributes to the continuum of retrieval recycling, evoking the local history the southwest, while symbolizing the triumph of artistic spirit and intuitive engineering. It is the goal of Preserve Bottle Village Committee to reopen the site to the public while preserving the unique heritage for future enjoyment, learning, and enrichment.

4. Literature Review

A primary goal for this thesis is to gain a deeper understanding of the building pathologies of Grandma Prisbrey's Bottle Village through practical application of the appropriate documentation and materials analysis. The research for the following chapters is based on a comprehensive review of current literature in the conservation, architecture and art historical fields. In order to qualitatively analyze the materials, research in glass and cement mortar was conducted, as well as the deterioration wood. Before documentation was executed, guidelines and methods were investigated, assessed and subsequently determined for site visits. The consultation of professionals was also sought. To gain a thorough understanding of the historical significance, archival research was conducted. Art historical research pertaining to American art and folk art was explored to lend a broader understanding to the vocabulary and typologies within this category of environmental art.

Two general categories evolved while conducting literature research in preparation for site visits, including recording and site analysis, and materials properties and analysis. Though conservation is a key component to this thesis, it was necessary to explore and develop the appropriate, most economically feasible and most sustainable means of documenting the Bottle Village. Due to time and funding constraints, limitations for surveying and documentation were applied. It is the hope that through thorough investigation of the materials, questions of authenticity, reconstruction and

intervention will be explored and answered to ensure appropriate interventions to the delicate fabric.

4.1. Documentation

Documentation and recording of Grandma Prisbrey's Bottle Village is of paramount importance due to its fragile, unique and endangered state. Loss due to earthquakes and marauders over the past twenty years keeps the Bottle Village in imminent risk of irreversible damage. In proceeding with the appropriate surveying methods, an analysis of various tools and techniques was undertaken via consultation with professionals and the following literature review. In regards to documentation techniques, tools and technology, resources published within the last 10 years were consulted due to the rapid and ever changing technology industry.

As stated in W. Bohler's article Comparison of 3D Laser Scanner and other 3D Measurement Techniques, the challenge of heritage documentation lays in the objects various nature, size and complexity, sometime leading to inadequate solutions.⁶¹ Therefore, proposed questions based on guidelines distributed by Amel Chabbi of the Getty Conservation Institute prior to site visits includes 'who are the users and providers', 'what is the time in the field versus data processing time', 'is there a need for specialized training', and 'what are the advantages versus disadvantages of the tool and technique in regards to accuracy, availability, budget, transportation and handling?' In addition, the

⁶¹ W. Bohler, "Comparison of 3D Laser Scanning and other 3D Measurement Techniques" *Recording, Modeling and Visualization of Cultural Heritage* (London: Taylor & Francis Group, 2006) 89 – 99.

Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation⁶² were reviewed to ensure a clear and defined approach for documenting Bottle Village. These standards are in accordance with the Historic American Buildings Survey (HABS) guidelines for documentation.

4.1.1. Hand Survey

To survey means documentation of examinations or inspections conducted in order to achieve a comprehensive view, as of a place, a group of related items, or to ascertain the condition or value.⁶³ Hand surveying implies this act is executed without mechanical or digital instrumental aid, relying solely on observation of site, precision of measurements, and accuracy of geometric equations and concepts. It is a developed, acute skill which may entail large amounts of time to accurately record all details.

In chapter 8 of *Measurement and Recording of Historic Buildings* by Peter Swallow et al., a step-by-step process for recording a building's measurements onto paper is demonstrated through text and diagrams. Though this process develops a keen sense of observation, it also lends evidence to enhance the understanding of how a building or site has been adapted or altered over time. This evidence may include "differences in style,

⁶² U.S. Department of the Interior, *Guidelines for Architectural and Engineering Documentation*, 2001 (Washington D.C.: GPO).

⁶³ The Getty Research Institute. *Art and Architecture Thesaurus Online*, http://www.getty.edu/research/conducting_research/vocabularies/aat.

construction technique, structural independence of adjoining parts, additional walls or blocked doors or windows.”⁶⁴

For the purpose of this thesis, a complete and comprehensive hand survey was not executed due to time, access and skill level. The intricacies of building materials at Grandma Prisbrey’s Bottle Village in combination with the instability of the structures make a complete site hand survey a risky, time consuming project and questionable endeavor.

4.1.2. Instrumental Survey

According to Peter Swallow, et al., the definition of an instrumental survey is, “a survey whose framework and intrinsic accuracy rely on measurement through a mechanical device and without direct contact with the object being surveyed.”⁶⁵ The following descriptions of tools and techniques will explore this approach to recording and documenting an historic site or structure for the purpose of “capturing information of the geometry and texture of the subject’s fabric.”⁶⁶ In addition, the concept of two-dimensional and three-dimensional documentation must be proposed as relevant and feasible methods of documentation. On complex historic structures, such as Bottle Village, the ability and skill level to render a 3D object may be time consuming, requiring technical software and highly skilled professionals.

⁶⁴ Peter Swallow, et al., *Measurement and Recording of Historic Buildings* (UK: Donhead, 2004), 112.

⁶⁵ Swallow, et al., *Measurement and Recordings*, 123.

⁶⁶ Mario Santana Quintero, *The Use of Three-Dimensional Techniques of Documentation and Dissemination in Studying Built Heritage* (Leuven: Katholieke Universiteit Leuven, 2003), 50.

4.1.3. REDM Total Station

The use of a vernier theodolite in contemporary surveying is almost obsolete due to the time consuming nature and tendency for error. First, the instrument must be leveled. The surveyor looks through the telescope reticule and measures angles, both horizontal and vertical, on the façade or surface of the object. The distance from the theodolite to the point is then measured via tape or chain.

The total station is an electric theodolite. When combined with an electronic distance meter (EDM) it is called a total station theodolite. Measurements are taken by pointing the telescope reticule at a target and pressing the “capture” button to record the measurement digitally. The measurement takes place by the EDM transmitting a known wavelength from the instrument to the surface of the object. The wavelength then bounces back to the total station. The elapsed time of travel to and from the surface of the object is calculated and a measurement recorded. This not only quickens the pace of surveying, it also makes for fewer errors.⁶⁷ In the recent past, a prism was necessary to reflect the wavelength back to the instrument. Today, REDM, or reflectorless electronic distance meter, is possible due to the incorporation of lasers with a stronger wavelength. Additionally, the cost for a REDM total station has deflated as technology has improved.⁶⁸

⁶⁷ Swallow, et. al., *Measurement and Recording*, 125.

⁶⁸ Swallow, et. al., 125.

4.1.4. Record or Field Photography

Photography is a very useful technique for documenting architecture, conditions and materials. It is an indirect technique for recording the fabric and context of a structure. The cost of a digital camera has plateaued with the development of technology, making the investment in a powerful, hand-held camera feasible. Therefore, photography is an economically viable option for documenting small, non-profit sites with scarce funds, such as Grandma Prisbrey's Bottle Village. Also, photography may serve as an archival tool as well, preserving heritage for future research, reference, and more complicated metric documentation techniques.

Dr. Mario Santana of Katholieke University Leuven explains that the most commonly used photographic techniques for documentation of built heritage are field or observational photography, rectified photography, photogrammetry and orthophotography.⁶⁹ In regards to this thesis, digital photography with a Cannon PowerShot A620 (7.1 mega pixels) was employed for the purpose of field observation and conditions documentation. In addition, the use of photogrammetry, rectified photography, stereophotography and orthophotography are introduced as an option for further documentation of Grandma Prisbrey's Bottle Village.

⁶⁹ Santana, *Three-Dimensional Techniques*, 57.

4.1.5. Photogrammetry

Photogrammetry is the science, and art, of determining the size and shape of objects as a consequence of analyzing images recorded on film or electronic media.⁷⁰ Close-range photogrammetry is a reliable and inexpensive technique used to supply accurate information about the position, size and shape of an object by measuring images of the object in lieu direct contact with the object.⁷¹ Close-range photogrammetry is a termed used for objects or sites that are smaller than 300 feet (100m). As a tool and technique for cultural heritage documentation, it has several advantages including minimal site disturbance, rapid results (especially when compared to hand surveying), direct import into other digital programs for further documentation techniques, ability to produce three-dimensional images relatively quickly, and the capability for stereophotography which may be useful for structural and conditions analysis.⁷² Dallas also states the limitations to using close-range photogrammetry by explaining that some forms of architecture do not plot well, the line of sight for obtaining correct data may sometimes be obstructed, and experts are usually needed for good to high quality results.⁷³

⁷⁰ J.G. Fryer, "Introduction: Photogrammetry." *Close Range Photogrammetry and Machine Vision* (London: University College of London, 2001) 1.

⁷¹ M.A.R. Cooper & S. Robson, "Theory of Close-range Photogrammetry." *Close Range Photogrammetry and Machine Vision* (London: University College of London, 2001) 9.

⁷² R.E.A. Dallas, "Architectural and Archaeological Photogrammetry," *Close Range Photogrammetry and Machine Vision* (London: University College of London, 2001) 284-285.

⁷³ R.E.A. Dallas, "Architectural and Archaeological Photogrammetry," 285.

4.1.6. Rectified Photography

Rectified photography is a metric survey technique. By taking photographs of a structure or façade, the images can then be rectified, or made geometrically correct, using ASrix, a non-proprietary software program which is easy to use and requires very little training.⁷⁴ As a three step process, a photograph of the façade of the structure is imported into ASrix. Previously measured targets, or points, on the façade are then aligned with a calibrated grid in ASrix. By aligning the points in the photo with the points on the grid, the photo becomes an accurate representation, producing a scaled and geometrically correct image. This may be used as an archival document, or contribute to further documentation such as stereophotography, and ortho-photography. Rectified photography is also helpful for analyzing material conditions. By importing the rectified raster based image into AutoCAD, it is possible to “map” the different existing conditions by tracing over the image with various colors, line weights, hatch marks, or other features, creating a vector based, multi-layer document. Since rectified photography is a relatively quick and inexpensive tool, sufficient results may be achieved by a conservator or non-professional surveyor.⁷⁵ Yet the decision to employ this tool must be based on knowledge and condition of the site, being that rectified photography works best on relatively flat surfaces.

⁷⁴ Antonio Almagro, *Simple Methods of Photogrammetry: Easy and Fast* (Proceedings of the XVIII International Symposium, CIPA 2001, Surveying and Documentation of Historic Buildings – Monuments – Sites Traditional and Modern Methods (Germany: CIPA, 2001) 33.

⁷⁵ D.P. Andrews, et al., “A Comparison of Rectified Photography and Orthophotography as Applied to Historic Floors – with Particular Reference to Croughton Roman Villa,” CIPA 2005 XX International Symposium, 26 September – 1 October (Torino, Italy).

4.1.7. Stereophotography

Producing stereopairs with the rectified photographs is an option, especially if the surface areas are textured or oblique, such as Bottle Village. VSD is a stereoplotting program which allows the importation and automatic imaging of stereophotographs for the purpose of viewing the structure in stereo, or three-dimension. By displaying two identical images side-by-side in combination with the use of a special optical viewer, images on screen exhibit three-dimensional character. The image can then be zoomed for detailed analysis, or imported into AutoCAD for conditions mapping. Although Antonio Almagro states VSD is a “clever answer to the need of low-cost but high quality systems for recording cultural heritage,”⁷⁶ it is a proprietary program developed only in Spanish.

4.1.8. Laser Scanning

“The 3D laser scanner is used to obtain a scaled replica of the target scene, structure, or object. The resulting data is an accurate mapping of the surface of a façade, structure or landscape, providing professionals with the means to study and analyze the site or structure without having to visit it. It further provides a digital copy of the subject that can be revisited in as the site or object changes over time.”⁷⁷

Laser scanning is a relatively new method of documentation which collects hundreds to thousands of 3D points along a surface with a laser distance measurer in near

⁷⁶ Almagro, *Simple Methods*, 33.

⁷⁷ University of Arkansas Resource Center for Heritage Visualization, *Laser Scanning 3D Modeling for Heritage Visualization*, <http://www.cast.uark.edu/cast/nrchv/NRCHVWeb/3DModelLaserIndex.html>.

real time.⁷⁸ The product results in a 3-dimensional digital image of an object, or façade. The advantage of a 3D laser scanner is the ability to record a surface, simple or complex, in a relatively short amount of time. Rather than accessing the original measurements taken by the scanner, the near real time is the automatic conversion of the measurements into 3D coordinates.⁷⁹ However, the disadvantages of 3D laser scanning are the inability to delineate the edge of a surface causing range deviation. For example, when the laser beam interfaces with an edge, noise, or deviation, may occur with the measurement, resulting in a non-recorded portion of the surface. White surfaces tend to record better than black or very dark surfaces, according to a test conducted by W.H. Böhler.⁸⁰ In regards to Bottle Village, range deviations may occur due to the highly reflective surface area⁸¹ of the bottles embedded in the masonry, as well as the differing plane levels of the spherically shaped bottles.⁸² Due to financial constraints, data processing skills and the unique construction materials of Bottle Village, laser scanning was not pursued as a documentation tool for this thesis.

⁷⁸ Böhler, *3D Laser Scanning*, 90.

⁷⁹ Böhler, *3D Laser Scanning*, 91.

⁸⁰ Böhler, *3D Laser Scanning*, 92.

⁸¹ Böhler, *3D Laser Scanning*, 92.

⁸² Böhler, *3D Laser Scanning*, 93.

5. Conditions Survey Overview

A conditions survey systematically collects all necessary information pertaining to the design, materials, construction and condition of a building. Conditions surveys are based on tangible and intangible values embodied in a building or site, as well as the priorities of the historic fabric, and limitations of the site stewards. The type and extent of damage also plays a role in devising a conditions survey for permanent record.

The conditions survey composed for Grandma Prisbrey's Bottle Village provides a methodological framework for investigation which is tailored to suit the unique materials, as well as historical background of Bottle Village. The adaptation of this system exemplifies that a scientific and methodological approach may be employed for surveying folk art environments which exhibit non-traditional, alternative, and ad hoc forms of construction and building materials. To identify the necessary and sufficient conditions for deterioration mechanisms at Bottle Village, consideration of various factors such as environment, micro-climate, architectural design and construction, and repairs and maintenance contribute to the understanding of possible building pathologies, as well as influence decisions regarding future interventions and treatments.

To reconcile the values illustrated in the authenticity matrix with the priorities of Preserve Bottle Village Committee, a three-level conditions assessment was devised to assess buildings based on their overall condition. The outlined priorities in the Long Range Construction Plan provide a starting point for the Level I cursory visual

examination of all structures, extant and non-extant, at Bottle Village. The result is a prioritized listing of structures demarcating priority and integrity. Level II focuses on structural conditions using a rapid conditions assessment form and a semi-quantitative rating system. Through observation, field photography, and in-situ testing, a conditions glossary, or damage atlas, provides definitions and documentation of existing conditions by material component. Level III illustrates the graphic recording of each critical condition. Geographic Information Systems (GIS) was employed to map the conditions for overall analysis of site-wide patterns of deterioration. The culmination of this three-tiered conditions survey is to document in permanent format the existing conditions at Bottle Village, synthesizes the qualitative and quantitative information, and develop an understanding of the performance of non-traditional building materials.

5.1. Level I - Objective

The objective of the Level I survey is to gather the necessary information to make a preliminary assessment of each structure at Bottle Village, and to determine which structures will proceed to Level II of the conditions assessment. Gauging the depth and justification of investigation depends on the objectives of the assessment.⁸³ Therefore, a qualitative structural assessment including composition and fabrication/assembly of building material, environment and micro-environment, construction techniques, and a

⁸³ Sir Bernard M. Feilden, *Between Two Earthquakes, Cultural Property in Seismic Zones* (Italy & Los Angeles: ICCROM & GCI; 1987) 91.

visual assessment of the architectural integrity precede any quantitative assessment and analysis for assessing conditions at Bottle Village.

5.2. Long Range Construction Plan

The first component to the conditions assessment is reconciling the limitations of site and the needs of the historic fabric. In February 2006, the Preserve Bottle Village Committee composed a Long Range Construction Plan (Appendix B) articulating three phases for the stabilization of structures, reconstruction of landscape features, and reinstatement of interior objects. The ultimate goal of this plan is to reopen Bottle Village to the public with the intent of a safe and authentic experience. This plan entails a cursory review of the existing conditions of the structures, and possible mitigation for their long term preservation. Highlighting aspects such as physical integrity of structures and capability to house interior objects, the board aims to reopen and raise awareness of this unique environmental art site as soon as possible. Therefore, the Long Range Construction Plan is an integral component to formulating, justifying and composing an approach for further analysis of building significance and conditions, providing a basis for future interventions and site interpretation.

The accompanying chart, *Level I Conditions Overview* (Fig. 5.1), designates a sequential value for overall condition and priority for intervention of each structure. These values are independent of each other. The Level I Survey correlates priority with physical integrity; a structure with extensive loss of fabric has a low integrity rating, and

thus a lower priority based on the monetary investment required for substantial intervention and treatments. A structure with a high priority exhibits good integrity, and relatively little loss of original fabric. This type of structure will be less costly for stabilization and intervention. Therefore, initial attention is given to structures which need little to moderate stabilization, allowing for a more immediate reopening of Bottle Village, and the possibility of visitors, donors and fundraising for continued conservation efforts from entrance fees.

A color code system further correlates structures which will be assessed via observation and the rapid conditions assessment form in Level II. Three color coded ranks provide classification at varying levels: *Green* denotes a structure is in good condition, exhibits a high degree of design integrity (original fabric free of repairs) and good structural stability; *Yellow* denotes fair condition, a moderate degree of design integrity and fair structural stability with some structural failure; *Red* denotes poor condition, severe to total loss of original integrity, and minimal to no structural stability. In some cases, red indicates ruins. Structures which exhibit green for both condition and integrity, or a combination of green and yellow in those two categories, will be considered for Level II assessment. Structures which exhibit red in either category will not be considered for further immediate analysis. Prioritizing structures which demonstrate good condition and integrity will allow visitors to enter a limited number of structures and enjoy the fundamental interior experience of Bottle Village. While all structures and features contribute to the overall experience of Bottle Village, the Level I

Survey is meant to prioritize intervention activities based on the effort necessary to open the site to the public. Structures and features in poor condition are not meant to be abandoned, but rather temporarily stabilized while preservation occurs elsewhere.

5.3. Container Glass Manufacture

Understanding the composition, fabrication and potential performance levels of architectural materials is essential to understanding their unique patterns of deterioration. Therefore, a cursory review of the fabrication of container glass in America serves as supporting information for understanding the physical properties and typologies of container glass that may be present at Bottle Village.

Until 1892, most container glass was still made by hand using the blow-and-blow (Fig. 5.2) and the press-and-blow techniques (Fig. 5.3). The blow-and-blow method entailed making the body of the bottle first, then forming the neck to finish. Not until this process was reversed, neck first followed by the fabrication of the body, did semi-automatic bottle making take place.⁸⁴

The blow-and-blow process was mechanized in Europe first, and later came to United States. The introduction of the first automatic glass forming machine in America was the Owens bottle machine in 1903.⁸⁵ This new machine had a device which distributed the exact amount of batch to a mould, then pressed it into the mould using a plunger. Production of container glass rose and the materials costs dropped. By 1917,

⁸⁴ R.W. Douglas and Susan Frank, *History of Glassmaking* (GT Foulis: UK; 1972) 41.

⁸⁵ R. W. Douglas and Susan Frank, *Glassmaking*, 42.

the wages of the machine workers in the glass houses had risen beyond those of the hand workers,⁸⁶ indicating the importance of the automatic glass forming machine to the industry. Included in the mechanization of glass forming, were the mechanization of batch making, conveying, and the development of the long, narrow Lehr, the chamber adjacent to the kiln where bottles pass through for cooling.⁸⁷ By 1912 the American glass container industry led the world in bottle and production. In twenty-five years, the American bottle industry had changed from a material made by hand, to producing 90% of its container glass with fully mechanized machines, and exporting \$3,000,000 worth of products annually.⁸⁸ In 1904 the total production of containers was 12,005, in 1925 it increased to 26,044 annually, and by 1970 container production totaled 267,179 annually.⁸⁹

Bottle Village exhibits hundreds of varying types of bottles from different companies of soda pop, beer, whiskey, wine, food and medicine production. It is unknown if Tressa preferred a specific type of bottle for construction, yet visual observation of the structures indicates she grouped the containers based on color and size. For example, the oval shaped Milk of Magnesia bottle is bright blue, making it easily distinguishable (Fig. 5.4) amongst the structures. Daniel Paul of Preserve Bottle Village Committee believes the Bottle House (Fig. 5.5) is constructed entirely of Lucky Lager

⁸⁶ Ibid

⁸⁷ R. W. Douglas and Susan Frank, 43.

⁸⁸ Ibid

⁸⁹ Ibid

beer bottles.⁹⁰ An official inventory of bottle brands, shapes and industry recipes was not undertaken for this thesis due to accessibility of the site and materials, time constraints and industry patent restrictions. Since Tressa retrieved many of the bottles from the local dump, the spectrum of container glass is a representative sampling of the surrounding community's consumption habits during the mid-twentieth century. Therefore, given the source for bottles, as well as the date stamp located on the underside of each bottle (Fig. 5.6), it may be surmised that the majority of bottles used for the construction of Bottle Village were produced by mass-mechanized container glass industry in America between 1945 and 1968.

5.4. Construction Techniques

To accurately identify issues related to assembly, research and survey of construction techniques employed at Bottle Village was conducted in regards to wood framing, joints and connections, and load bearing masonry walls. Investigation of a building's needs should consider past, current and future uses of the structures, making assembly a key component to understanding the mechanisms of deterioration for a comprehensive conditions survey.

Conventional wood framed timber platform construction is simple in concept, yet requires great detail and precision (Fig. 5.7). All wood components are 2" by 2"

⁹⁰ Daniel Paul, email message to author, 3 October 2006.

members, allowing for easy cutting and handling.⁹¹ Connections are made with wire nails using face, end or toe nailing.⁹² There is no preparation of joints, making the platform construction process relative quick.⁹³ The construction begins with setting the floor plan. The floor plan may consist of parallel floor joists with a header at each end and subfloor sheathing, or a concrete slab entailing no wood joists or sheathing. Bottle Village exhibits concrete slab floors with mosaic inset and no subfloor unit. Once the floor plan is set, a sole plate is installed, the cross piece at the bottom of the load bearing walls. Walls are erected using parallel wood studs at measured intervals (12” or 18” intervals), and a top plate, the cross piece at the top of the studs, is installed for overall stability. Usually the top plate is doubled (two 2” by 2”) to support the vertical load of the roof structure. In sloped roofs, rafters are headed off by the top plates and the ridge board at the peak of the roof. Once the frame is complete, wood sheathing is nailed to the exterior wall studs for connection and stabilization of the frame, as well as preparation for masonry, plaster or dry wall infill.

Platform construction exhibited at Bottle Village does not employ any continuous connection such as sheathing, instead infilling between studs with non-load bearing cement mortar and glass bottle masonry. Though this effect is visually stimulating, the overall stability of structures is weak due to lack of a continuous connection. According to Allen, the final application of the wood sheathing is a key component to platform

⁹¹ Edward Allen and Joseph Iano, *Fundamentals of Building Construction, Materials and Methods* (New Jersey: John Wiley & Sons; 2004) 146.

⁹² Ibid.

⁹³ Ibid.

construction, otherwise the end nail connections at the sole and top plate have little holding power when confronted with uplift from wind loads.⁹⁴ In respect to seismic activity, or shear and lateral forces, the absence of a foundation, sheathing and/or diagonal braces places an inordinate amount of strain on the connections of the frame during an earthquake. These linking components aid in a structure's ability to move as one unit, as well as displace and absorb forces equally throughout the frame and connections.

Connections permanently join the wood components together to form a frame. The three types of connections used for platform construction are face, end and toe nail connections (Fig. 5.8). Face nailing is the strongest and most stable of the three types of connections.⁹⁵ End nailing is primarily used to stabilize the stud components until the forces of gravity, or load bearing weight, is applied from the second level or roof structures.⁹⁶ Toe nailing is used when face nailing is not possible due to access and configuration of wood components. Toe nailing is nearly equal in strength and load capabilities to face nailing.⁹⁷ Connections are integral components to a structures framing in seismically active areas. Due to the forces produced during an earthquake, joints such as face, end and toe nailing do not provide the necessary flexibility and strength to accommodate shear and lateral forces, and are regarded as the weak link in

⁹⁴ Allen & Iano, *Building Construction*, 146.

⁹⁵ Allen & Iano, *Building Construction*, 102 – 103.

⁹⁶ Ibid.

⁹⁷ Ibid.

wood construction.⁹⁸ Grandma Prisbrey's bottle Village exhibits nail connections of all types which were likely administered with a hammer.

Load bearing bottle masonry is exhibited on several structures at Bottle Village, the First Pencil House, Bottle House and the Cabana, as well as walls, wishing wells and other landscape features. Due to the 1994 Northridge earthquake, these structures are currently in a state of ruins, with less than 50 percent integrity of intact original fabric remaining. Therefore, it is important to understand the difference in construction between load bearing and framed structures at Bottle Village; the former exhibit irreversible loss of fabric, poor condition and low priority in terms of the Level I Survey, while the latter are damaged but remain standing.

According to Allen, there are three types of masonry load bearing walls, reinforced or unreinforced masonry, single or composite masonry, and solid or cavity masonry construction.⁹⁹ Load bearing masonry construction consists of a leveled system where the top floor and walls are supported by the walls and floor underneath, continuing to the ground level. To support multiple storey loads, the walls must become thicker from top to bottom of the structure. Unreinforced masonry cannot carry the same load as reinforced masonry, and is generally unsuitable for use in seismically active areas.¹⁰⁰

The Bottle House exemplifies unreinforced load bearing bottle masonry (Fig. 5.5). The American Concrete Institute and the American Society of Civil Engineers composed

⁹⁸ Ibid.

⁹⁹ Allen, 338.

¹⁰⁰ Allen & Iano, *Building Construction*, 338.

standards for the design and construction of load bearing masonry walls (ACI 530/ASCE 5),¹⁰¹ yet it may be assumed that Tressa Prisbrey did not follow these standards due to a lack of experience in the construction and engineering field. Instead, her design is based on intuitive engineering illustrated by the development of building typologies through trial and error.

5.5. Environment

Individual materials are susceptible to certain environmental elements, affecting the type and rate of deterioration. For this reason, characterization of the environment was researched and included in the formulation of present building pathologies. It is important to gather environmental information when assessing the conditions of a historic structure.¹⁰² Therefore, a general overview of precipitation, temperature, and seismic data has been included in the Level I conditions assessment.

According to the graphic representation of weather data collected and averaged from 1961 to 1990 by NOAA (National Oceanic and Atmospheric Administration) and NCRS (Natural Resources Conservation Center), the Simi Valley area receives approximately 14 – 16 inches of annual precipitation (Fig. 5.9). Cross-referencing NRCS Ventura County weather data statistics from 1971 to 2000 illustrates a thirty-year annual average of 15.54 inches of precipitation in Oxnard, CA, the closest weather data station to Bottle Village. Precipitation is one necessary and sufficient condition for possible

¹⁰¹ Ibid.

¹⁰² Fielden, *Between Two Earthquakes*, 91.

deterioration of building materials including wood rot, corrosion of metal, and glass deterioration via a direct ion exchange between the silica network and the presence of water. Precipitation may also provide a conduit for the transport of salts and pollutants, either inherent in the building materials, the ambient pollution, or the precipitation itself (acid rain). Porous materials such as wood and mortar, and the molecular structure of glass, may absorb soluble pollutants through rainfall.

The average temperature recorded and calculated by NOAA from 1971 to 2000 is 61.5 degrees Fahrenheit, and the average total snow fall is nill. The average maximum and minimum monthly temperatures are 70.2°F and 52.2°F, with the extreme temperatures recorded at 103°F and 30°F. Temperature gauges approximations for thermal expansion of wood framing and glass masonry units. As a design issue, the combination of isotropic and anisotropic materials will perform in opposition to one another in relation to heat and moisture expansion. Therefore, to assess the exhibited conditions at Bottle Village, a general understanding of temperature and moisture levels must be considered.

Simi Valley is a seismically active area. In particular, January 17th, 1994, a 6.7M_w earthquake struck at 4:30:55 PST, the epicenter located in Reseda, CA, at 34° 12.80' N, 118° 32.22' W with a depth of 18.4 km.¹⁰³ Also known as the Northridge Earthquake, damaged occurred up to 125 km from the epicenter, making Simi Valley

¹⁰³ Southern California Earthquake Data Center, *1990 – 1999 Northridge Earthquake*, http://www.data.scec.org/chrono_index/northreq.html.

especially vulnerable to destruction and casualties. Bottle Village suffered immense structural damage and loss, and has remained closed to the public due to red tag status enacted by the city municipal government.

Graphic representation illustrates the state-wide potential for shaking that is anticipated to occur from 2003 to 2013 (Fig. 5.10). According to 2003 data from the California Geologic Survey and USGS, the potential for heavy shaking from a seismic event has a very high possibility in Ventura County. It is estimated that from 2003 to 2013 California will entail \$30 billion dollars in damage due to earthquake activity and damage.¹⁰⁴ This figure includes landmark sites such as Bottle Village, which have already endured partial destruction from previous events, specifically the 1994 Northridge earthquake. This map is useful for engineers and architects to understand the probable size and location of earthquakes when considering design aspects for structures. By anticipating the probable exceedance of an earthquake, professionals can design buildings to endure heavier shaking than what might be expected.

Temperature, humidity and seismic activity affect the performance of architectural materials. The primary materials at Bottle Village include wood, mortar and container glass, all of which display varying levels of thermal expansion and contraction, plasticity, brittleness, hardness, compression and tension.

¹⁰⁴ USGS, *Potential for shaking map*, (2003)
http://www.conservation.ca.gov/cgs/images/shaking_18x23.pdf.

6. Conditions Survey: Level II Objective

The Level II Survey provides a base quantitative assessment of each structure and feature by recording the conditions of the material components (e.g. glass bottles) and systems (e.g. roofs). It informs the final Level III survey which graphically records detailed conditions by type, location and degree of severity with an eye toward treatment. Based on the qualitative assessment of Bottle Village, a quantitative conditions survey form was designed to record detailed structural conditions per sub-element, such as walls, framing and roofs. Through literature review, various techniques of recording documentation were researched and evaluated prior to the detailed conditions assessments (Level II and Level III). A conditions glossary and key plan allow for a visual record of the type and location of an existing condition.

6.1. Documentation and Recording

Documentation and recording, defined in Article 16 of the Venice Charter (1964), states,

“In all works of preservation, restoration or excavation, there should always be precise documentation in the form of analytical and critical reports, illustrated with drawings and photographs. Every stage of the work of clearing, consolidation, rearrangement and integration, as well as technical and formal features identified during the course of the work, should be included. This record should be placed in the archives of a public institution and made available to research workers. It is recommended that the report should be published.”¹⁰⁵

¹⁰⁵ UNESCO, ICOMOS, *The Venice Charter*, IInd International Congress of Architects and Technicians of Historic Monuments, Venice, 1964, http://www.international.icomos.org/charters/venice_e.htm.

According to the Venice Charter, documentation provides the base information for creating a record of a building or site at a specific point in time which is then disseminated for further research. The assemblage of all data must be combined into one record to capture information pertaining to the form, design, spatial relationship, condition and location of a building or site. English Heritage lends the analogy of travel in defining the integration of documentation and recording as, “the unfamiliar journey is not started without a map; the map is the key to the route and, at journey’s end, it can be kept as a record that can inform others planning future journeys.”¹⁰⁶

The objectives for compiling a record of Bottle Village are to document the current structural and material conditions through qualitative and quantitative analysis. In addition, the documentation of Bottle Village provides permanent information if total destruction occurs. Therefore, the subsequent text exemplifies one approach which solicits further completion. Time, funding and data processing skill levels are factors when considering documentation techniques for compilation of a record.

Prior to on-site recording and analysis, archival research was conducted at the California State University, Channel Islands. The most recent survey of the site was prepared by Howard Stupp & Associates in 1990, four years before the Northridge earthquake. Over 200 photographs and slides were viewed for comparison between past and present condition of architectural fabric and overall site landscape.

¹⁰⁶ Measured and Drawn, Techniques and Practice for the Metric Survey of Historic Buildings (UK: English Heritage; 2003) 1.

During December 2006, six site visits were conducted for the purpose of documenting Bottle Village. Using a Leica TCR307 total station with a reflectorless electronic distance meter (Fig. 6.1), data points were collected with a pda (portable data acquisition) for the west façades of the School House, Shell House, Third Pencil House and Round House. All data was processed in the digital lab at the Getty Conservation Institute in Los Angeles, CA. Digital elevations of the exterior facades of these four structures and the Round House were combined with the pda survey data to create ortho-rectified photomontages for the purpose of this thesis (Figs. 6.2, 6.3, 6.4). These images serve as preliminary examples for further photo-rectification, and completion of a full site survey.

Bottle Village presents challenges when considering documentation techniques. The advantages for employing the REDM total station in conjunction with digital ortho-rectified photo elevations are efficiency, ease in set-up and handling of equipment, minimal site disturbance and the multi-use of rectified images for further analysis such as detailed conditions mapping. Disadvantages include difficulty in rectifying highly irregular construction such as exhibited at Bottle Village. Rectifying these images is especially intricate, eliciting the expertise of an experienced surveyor and data processor. Due to time and funding constraints, a complete site survey was not undertaken, yet the introduction of rectified photography exemplifies the necessity and possibilities if future analysis is to take place at Bottle Village.

6.2. Rapid Conditions Assessment Survey

The conditions survey form (Appendix C) serves four purposes: to provide documentation of visual and tactile observations, adaptable field use in hard copy or digital format, linking with databases, and base information for future monitoring and testing. Composed as a portable data file (pdf) using Acrobat Designer 7.0, this survey form will allow linking with database software such as Microsoft Access, or it may be translated into HTML script for online dissemination. By standardizing a format, terminology and identifying existing conditions, the survey form aims to provide a framework for current and future examination and continued monitoring of Bottle Village.

Defining the parameters of the conditions survey entails assigning a qualitative value for each exhibited condition. Structures were assessed based on three primary structural components: walls, framing and roof. Within each structural component, sub-categories articulate the corresponding material under investigation. Therefore, 'walls' entail the material sub-categories glass and mortar; 'framing' entails wood, and 'roof' entail metal and wood. Each sub-category itemizes the exhibited and overarching conditions pervasive throughout all structures on site; this would include deformation of wood framing, friable mortar and missing glass bottles. A numerical rating system (1 through 5) assigns an overall percentage of undamaged material for each condition exhibited; 5 = 100%, 4 = 99% to 90%, 3 = 89% to 80%, 2 = 79% to 70%, 1 = 69% to 60%, 0 = 59% or less. Based on previous site visits, cursory research and the priorities of

Preserve Bottle Village Committee, it was determined all materials required inspection based on the structural contribution to the building. Though conditions such as crizzling of glass, or dirt/dust/staining are considered types of damage, they were not rated since these conditions do not directly affect structural stability.

The walls of Grandma Prisbrey's Bottle Village display glass bottles and cement mortar, along with wood framing components. If individual components in a wall fail, such as missing masonry units or deteriorated mortar, the wall will no longer retain and support the necessary load requirements for stability and safety, a prevalent state at Bottle Village. Relevant conditions for glass components of the walls conditions assessment include missing and broken glass bottles. Mortar, the agent which bonds the glass bottles together, may exhibit cracking, deformation, detachment, friability or loss. For the assessment of the walls conditions, each condition received a numerical value based on visually analysis.

Framing is the skeleton of a building, entailing all joists, studs, beams, trusses, joints and connections for proper support, flexibility and strength. It is the first above ground component erected when constructing a building, supporting the roof and subsequent levels. If one of the many components in a framework fail, the adjacent areas will either compensate for or fail under stress causing a ripple effect throughout the frame of the entire structure. Grandma Prisbrey's Bottle Village displays framing deterioration due to construction techniques, weather deterioration and earthquake damage. The individual material conditions of the wood framing include checking, collapse, loss,

rot/termite damage, detachment and deformation. These seven conditions affect the structural capability of the buildings, contributing to the overall performance and deterioration.

Roofs protect from the elements of weather, and provide stability and reinforcement through attachment at the top of a building. If a roof fails, it may incite further destruction of the frame and walls by failure to provide protection from the elements such as water infiltration, wind, fire and UV radiation. This would allow deterioration to occur from both the interior and exterior of the building, which in effect compounds the rate of deterioration. The roofs at Grandma Prisbrey's Bottle Village are wood planking or corrugated metal sheeting. The Round House exhibits flat wood roof with a rolled-mineral roof layer. The conditions pertaining to the metal roofs are corrosion, detachment and loss, while the conditions pertaining to the wood roofs are deformation, detachment and loss.

The exhibited conditions are spatial mapped in ArcView (GIS). By assigning quantitative values for each condition, these numbers correspond with colors which indicate the level of severity of each condition; green represents high integrity (5 or 4), yellow indicates moderate integrity (3 or 2), and red indicates low integrity (1 or 0), with variations in between. Level II maps include the cumulative total condition for broken and missing glass, for cracking, deformed, detached, friable or missing mortar, for checking, collapsed, missing, rot/termite damaged, detached and deformed framing, and for deformed, detached, corroded, and detached roofs (Figs. 6.5-6.9).

6.3. Damage Atlas

The composition of a damage atlas provides visual examples of structural deterioration at Bottle Village (Appendix D). Each condition was photographed and classified based on material and type of damage. The factors which contribute to deterioration at Bottle Village may be the result of one or more active or inactive processes. In addition, the damage atlas is one aspect of the qualitative assessment.

7. Conditions Survey: Level III Objective

The objective of the Level III Survey combines qualitative and quantitative research into one format for analysis of overall structural performance levels at Bottle Village. Level III GIS maps build upon the assigned Level I priority rating, and corresponding Level II material condition rating to establish a link between design, assembly and long-term performance of materials (Fig. 7.1-7.5). By analyzing the material conditions of four structures designated high priority at Bottle Village, structural performance correlations and site-wide deterioration patterns appear, indicating areas which may require further detailed investigation, analysis, testing and monitoring. This chapter presents information on individual material composition and deterioration, mortar analysis with the intent of establishing possible changes to the mix over time, and site-wide patterns of deterioration due to design and assembly. Finally, the Level III Survey assesses the priority ranking for all four structures in regards to current condition, revealing the potential investment for stabilization and intervention of the historic fabric prior to reopening of the site.

7.1. Material Analysis

The use of portland cement, container glass and found wood objects for building materials at Grandma Prisbrey's Bottle Village presents a unique opportunity to study the performance and deterioration of materials used in a non-traditional manner. Chemical incompatibility may be due to high pH levels in the portland cement which incite attack

on the silica network of the container glass. According to ASTM D 1293-95, when the clinker is mixed with water [on site], a pH level of 12 to 13 can be reached,¹⁰⁷ forming a caustic material. Carbon dioxide leaves a residue when the lime is heated during fabrication. This residue introduces the high pH level in Portland cement, and when mixed with water, additional ions are added into the batch. Clays and organic matter may also contribute to an initial high pH level in cement, but this may decrease over time due to carbonation of the mortar and climatic conditions.

7.1.1. Glass

Glass, defined by ASTM C162-94C, is an inorganic product of fusion that has cooled to a rigid condition without crystallizing.¹⁰⁸ In terms of molecular dynamics, it is possible to justify different views that it is a highly viscous liquid, an amorphous solid, or simply that glass is another state of matter which is neither liquid nor solid.¹⁰⁹

The resistance of a glass against chemical attack does not only depend on the bulk composition, but also on its thermal history, its homogeneity, the roughness of its surface and any prior surface treatments leading to changes in the surface structure.¹¹⁰ In addition, the leached layer is of fundamental importance in understanding durability.

¹⁰⁷ Portland Cement MSDS (Accessed 12.2.06:
http://www.vincistone.com/library/msds_lehigh_portland_cement.htm)

¹⁰⁸ ASTM C162-94C

¹⁰⁹ Philip Gibbs. "Is Glass a Liquid or a Solid?" October 1996, (Accessed 11.20.2006:
<http://math.ucr.edu/home/baez/physics/General/Glass/glass.html>)

¹¹⁰ Hannelore Romich, "Historic Glass and its Interaction with the Environment" *The Conservation of Glass and Ceramics: Research, Practice and Training*. (London, James & James: 1999) 7.

The molecular structure of glass is rigid, but disordered (Fig. 7.6). In pure silica glass (SiO_2) silicon atoms are surrounded by four oxygen atoms forming a tetrahedral unit but without the regular and orderly structure of crystals. In “regular” glass alkali ions are introduced into the silica structure to provide electroneutrality. These modifiers break up the silica network, bonding ionically with the glass network and altering properties such as viscosity, thermal expansion and durability. Fluxes reduce the viscosity (or melting point) of the silica, and stabilizers add chemical durability to the glass composition while also preventing total crystallization. It is largely the presence, type and quantity of the modifiers which impair the highly durable nature of the pure silica network.¹¹¹

The environmental factors affecting glass durability are temperature, exposure time, continuous or cycled attack, relative humidity and the presence of pollutants or microorganisms (for atmospheric weathering) or the composition and pH of the solution (for reactions in solutions).¹¹² By adding a flux such as soda, the glass is made water soluble and more susceptible to decomposition. Therefore, the stabilizer (lime or lead) is added to make a more durable glass that may have better properties in regards to chemical deterioration. The complex mechanisms of glass corrosion can be explained by studying the principal reactions of glass in aqueous solutions with different pH levels.¹¹³

¹¹¹ Newton, Roy and Sandra Davidson. *Conservation of Glass*. Butterworth Heinemann Ltd; London: 1989 (140 – 141).

¹¹² Hannelore Romich, 7.

¹¹³ Hannelore Romich, 6.

Corrosion of glass by water is a direct ion exchange. Alkali ions from the soda cannot leave the glass unless protons replace them to maintain electrical neutrality in the microstructure. Ions such as potassium and sodium are able to move around in the network, being continuously replaced by other cations when corrosion occurs. Protons are smaller than alkali ions (especially potassium ion) and thus the alkali-depleted surface layer has a smaller volume; potash glasses have about half the durability of the corresponding soda glasses because the potassium ion takes up more space in the network. This ion exchange may lead to a decrease in volume causing microporosity of the surface layer, one result being the formation of pits (Fig. 7.7). These pits collect dirt, allow water to accumulate, and can be the source of further deterioration.

Crizzling occurs when there is a reduction in volume of the leached layer causing shrinkage (Fig. 7.8). At the molecular level, crizzling is a chemical instability due to an excess of alkali or deficiency in stabilizer. When a pH of 9 or more is reached, the silica network and the divalent network modifiers (calcium, magnesium, lead, etc.) can be leached out of the glass molecular structure. This causes a break down of the glassy network, and crystallization, or dissolution, ensues (Fig. 7.9). Chemically, the glass has entered a new phase, or solid state, one of an ordered molecular structure, ceasing to be amorphous or highly viscous. It can no longer be defined as a glass (ASTM C162-94C) when complete crystallization has occurred. This level of pH can be reached by several factors; when the alkali is not renewed by aqueous solutions, i.e. precipitation; if there is a high pH level due to acid rain or ambient atmospheric conditions; or, if the glass is

interfaced with materials which elicit varying pH levels. One or more of these effects may be occurring at Bottle Village.

The rate of deterioration of glass due to a pH level of 9 or more depends on the surface area (SA) of the glass and the volume (V) of the water involved.¹¹⁴ Therefore, SA/V is very important when understanding the specific deterioration rate of the glass. In the case of Bottle Village, this equation is complicated due to two reasons; the volume of a container (interior and exterior), and the abundance of varying sizes of container glass. There are over 50,000 bottles used in the construction of Grandma Prisbrey's Bottle Village, presenting a wide range of conservation issues for the sustainability of this endangered folk art site.

The individual shape and structure of the bottles also present concerns in regards to deterioration. Container glass exhibits a single, small opening for air and liquid to enter and exit. Due to this intricate location, elements such as water and dirt become trapped inside the container, protected from wind and rain, allowing the attack of the silica network to be virtually undisturbed. It may be surmised that individual microclimates have formed inside these bottles, perpetuating degradation of the glass. The surface area of the glass must include both exterior and interior when calculating the rate of deterioration in relation to the volume of water. Therefore, deterioration from the

¹¹⁴ Newton, Newton, Roy and Sandra Davidson. *Conservation of Glass* (London: Butterworth Heinemann Ltd; 1989) 136.

exterior surface which interfaces the cement mortar, and the interior surface which houses these microclimates, may work together in the degradation of the structures.

7.1.2. Mortar

Mortars are composed of a binder, aggregates, and additives. In particular, the binder is an important constituent in regards to performance and durability of the mortar. The binder, either clay, lime, gypsum, or a natural or artificial cement, chemically reacts with water imparting plasticity, workability and set time. Critical properties of mortar in the plastic state are workability, or consistency, and shrinkage. Workability allows mortar to fill voids between masonry units, covering all necessary surface area for better bonding.¹¹⁵ Once cured, or hardened, important properties include cohesive strength, adhesive bond strength, compression strength, modulus of elasticity, water permeability and degree of expansion and solubility.¹¹⁶ Aggregates include sand, crushed stone, pebbles, or slag, and contribute to the appearance in color and texture of a mortar, as well as inter-granular strength. Ideal aggregates will be angular, promoting interlocking of grain boundaries for maximum surface area. Additives contribute to set time, strength, color, plasticity, control shrinkage, enhance tensile strength and aid bonding agents.

Critical factors of mortar include the binder type, the water to binder ratio, the type of aggregate and the aggregate to binder ratio. Yet predicting the performance of

¹¹⁵ Harley J. McKee, *Introduction to Early American Masonry; Stone, Brick, Mortar and Plaster* (Washington: National Trust for Historic Preservation; 1973) 61.

¹¹⁶ McKee, *Ibid.*

masonry cement mortars is complex and difficult.¹¹⁷ Therefore, analysis and physical tests help to determine the constituents of a binder, and the binder/aggregate ratio when recreating a historic mortar as well as the desired final properties.

The function of a mortar within a structure, i.e. structural, decorative, etc., define the primary and critical properties of the mortar.¹¹⁸ The cement mortar used for the construction of Bottle Village is structural, protective and bonds the masonry units, or bottles, together into one monolithic mass.

Portland cement is manufactured from limestone (or chalk) and clay (or shale). The calcium carbonate (CaCO_3) when heated gives off carbon dioxide, leaving a residue of calcium oxide (CaO). Clay and shale consist mostly of kaolinite, which upon heating dissociate into alumina (Al_2O_3) and silica (SiO_2). These materials are then ground into a powder, and heated in a kiln to a temperature of approximately 1450°C . The clinker that is produced is then mixed with gypsum, ground into a fine powder, and bagged for distribution. The phase compositions in portland cement are denoted by ASTM C 150 as tricalcium silicate (C_3S), dicalcium silicate (C_2S), tricalcium aluminate (C_3A), and tetracalcium aluminoferrite (C_4AF).¹¹⁹ However, it should be noted that these compositions would occur at a phase equilibrium of all components in the mix and do not

¹¹⁷ Davison, J.I. "Masonry Mortars," *Canadian Building Digest*, no. 163 (1970): 4.

¹¹⁸ John J. Hughes and Jan Valek, *Mortars in Historic Buildings: a Review of the Conservation, Technical and Scientific Literature*. (Edinburgh: Historic Scotland, 2003).

¹¹⁹ US Department of Transportation, Federal Highway Administration, *ASTM C 150 – Portland Cement* (<http://www.fhwa.dot.gov/infrastructure/materialsgrp/cement.html>).

reflect effects of burn temperatures, quenching, oxygen availability, and other real-world kiln conditions.¹²⁰

There are four principle components of portland cement; alite, belite, celite and felite. The alite, a tricalcium silicate (3CaO SiO_2), is the main component, and constitutes about half of the cement mix. It is responsible for the early gain in strength, or hardening during curing.¹²¹ Belite and felite, a dicalcium silicate (2CaO SiO_2), constitute about $\frac{1}{4}$ of the volume of the portland cement mix, and are responsible for the long-term strength, or aging.¹²² In addition, the gypsum produces calcium sulfo-aluminate, which occurs as a natural mineral called enttringite. Primary enttringite formed naturally during the curing process is absorbed as an anti-shrinkage component. Secondary enttringite, formed from reaction with gypsum after the mortar has completely hardened, is an expansive reaction which may cause harmful cracking.

7.1.3. Glass Bottle Masonry

Glass is a brittle material. When placed in compression, such as vertical load bearing forces, the performance of glass is not durable. Mortar is also a brittle material, yet performance is based on the critical properties in the wet and dry state. Therefore, gravimetric mortar analysis was conducted to the study the particle size distribution, as

¹²⁰ US Department of Transportation, Federal Highway Administration, ASTM C 150 – Portland Cement (<http://www.fhwa.dot.gov/infrastructure/materialsgrp/cement.html>).

¹²¹ Henry J. Cowan, and Peter R. Smith. "Chapter 13: Lime, Gypsum, and Cement.," *The Science and Technology of Building Materials* (New York: Van Nostrand Reinhold; 1988) 115.

¹²² Henry J. Cowan, and Peter R. Smith, "Chapter 13," 115.

well as extract volumetric ratios to determine if changes to the mix for performance enhancement were made over time.

7.1.4. Test for Alkalinity

Quantitative analysis is conducted to determine the abundance of a particular substance in a sample. To determine if the constituents of the mortar are a possible source of alkalinity which may be inciting attack on the silica network of the container glass, a phenolphthalein test was conducted on four separate samples from Bottle Village. Phenolphthalein ($C_{20}H_{14}O_4$) is a pH indicator which denotes the level of carbonation, or state of curing, of a mortar. Wet and newly cured mortar may exhibit a pH of 12 (Fig. 7.10). During carbonation of the mortar, the pH will decrease due to contact with carbon dioxide in the air, as well as a minimum presence of humidity. Administering one drop of phenolphthalein on a mortar sample which is still curing will elicit a bright pink reaction, indicating a possible source of alkalinity from the presence of calcium hydroxide. If the reaction is pale pink, the mortar is close to a completely cured, carbonated state. The reaction of the Bottle Village mortar to the phenolphthalein tests was neutral, exhibiting no pink shade on the applied area (Fig. 7.11). Therefore, it is possible to surmise that calcium hydroxide does not play an active role in the molecular deterioration between the interfaces of the glass bottles and cement mortar.

Additional tests to cross-reference for the presence and level of alkalinity include pH strip testing of the mortar (Appendix E). Based on the results, it may be determined

that the constituents of the mortar are not an active contributing agent to high alkalinity and the deterioration of glass. Instead, high alkalinity may have been present when the bottle masonry walls were first constructed inciting the initial damage of a high alkaline mortar in contact with the glass silica network. A newly mixed mortar has the potential for a pH of 12, though contact with carbon dioxide will reduce this over time. When precipitation occurs, hydrolysis, the exchange of ions through the presence of water, may induce leaching of the silica network. In an arid, low humidity climate such as Simi Valley, it may be surmised that this action is not a continuous threat to the deterioration of the molecular structure of the glass bottles, though it may have occurred at an early point in time.

7.1.5. Gravimetric Mortar Analysis via Acid Digestion

Micromorphology, the study of individual phases and their relationship to one another within a solid material, is useful when analyzing and formulating a compatible replacement mortar for compensation repairs. Gravimetric mortar analysis, an indirect method to determine the approximate volumetric ratios of a mortar's constituents, as well as the type of binder (calcium or magnesium carbonate), and the shape, size and color of aggregates, was conducted on all four samples of mortar from Bottle Village. One of the limitations of gravimetric mortar analysis is the inability to decipher the amount of cement present in the mortar. It cannot be used on calcareous mortars since these particles which make up the aggregates dissolve upon acid digestion. Also, properties related to water/binder ratios, cleanliness of aggregates and mixing methods of mortars

may not be determined by gravimetric analysis. Therefore, the aim of conducting gravimetric mortar analysis for Bottle Village is to decipher if the binder to aggregate ratio changed over time. By studying the broad building campaigns (1956 to 1972) through material testing, and cross-referencing with the Level II Survey of existing conditions, insight into deterioration patterns due to design and assembly may be established.

Each mortar sample was ground into a homogenous powder, placed in the oven at 110° C for 24 hours, weighed, and placed in a 600mL beaker for disaggregation with hydrochloric acid (HCl) for 24 hours. Once the binder of the mortar had undergone acid digestion, the solution was filtered with 24.0 cm filter paper to separate the HCl, from the fines and the aggregates. Once the fines and the aggregates were separated, all eight samples were placed in the oven at 110° C for 24 hours, weighed, and recorded. Results include the sum of the aggregates and fines expressed as a w/w (weight-to-weight) percentage which is subtracted from the original sample to decipher the amount of binder. Visual observation of the aggregates prior to sieve analysis was executed using a Nikon SMZ-1 stereomicroscope. Results of visual observations, sieve analysis and particle size distribution graphs display the grading of each sample (Appendix E).

Mortar analysis indicates variations between the mixes used to construct the Pencil House (1955-56, the first structure built), the Rumpus Room (1955-56), Cleopatra's Bedroom (1957-58), and the Round House (1957-58). Mixes tend to be well to moderately graded, yet there is a strong variable in regards to percentage of fines and

percentage acid soluble. These differences, along with micromorphological observation, are one indication that Tressa was inconsistent with the type of aggregate and binder used for construction, as well as the ratios, or proportions, for each constituent. In the spirit of ad hocism, this may have been the result of trial and error, or simply what materials were available at that point of time.

7.2. Structural Performance Analysis

The Pencil House (1955-56) displays a low level of priority for intervention, yet remains a significant structure at Bottle Village due to its date of construction.

Subsequent to the Pencil House is the Rumpus Room. In regards to mortar analysis, both structures display nearly equal amounts in percentage of aggregates, fines and portion of acid solubility, yet their performance varies greatly. This may be due to the framing of each structure, not the constituents of the mortar. The former structure exhibits load bearing bottle masonry which is brittle and non-forgiving during seismic events, while the latter structure exhibits a platform frame construction, allowing for some movement and displacement of stress through connections and joints during earthquakes. The Pencil House is currently in a state of ruins, and therefore was not assessed in the Level II conditions survey; yet the comparison of mortar and structural design lends evidence for the current performance capabilities at Bottle Village.

The Rumpus Room (c. 1956) exhibits platform construction with a pitched corrugated metal roof. These features are ranked fair to good in the Level II Conditions

Survey. It is the glass bottles and mortar which exhibit significant loss, detachment and deformation. Therefore, the design of the structure which entails orthotropic and anisotropic materials, or wood and mortar, present varying degrees of thermal expansion and contraction, and must be further examined. Wood is an anisotropic material, directionally dependent according to the grain. Yet when used in conjunction with mortar, an isotropic material, their combined performance may be at opposition. Both materials exhibit varying coefficients of thermal expansion. Bottle Village is located in a semi-arid climate, where precipitation and relative humidity remain low. In a climate which can exceed temperatures of 90° F, these two materials will undoubtedly function in opposing ways. This may explain the detachment of the mortar from the wood framing. Upon seismic activity, the shear and lateral forces may shake loose the already detached masonry infill, resulting in significant loss of the bottle masonry which is present today.

The Level III: Priority & Mortar Conditions map indicates Cleopatra's Bedroom (c. 1957-58) is the third lowest ranking in regards to mortar conditions, and the third highest in priority for intervention; yet correlating these two rankings purposes a potentially significant investment in stabilizing the deteriorating mortar. Based on the rapid conditions assessment, the mortar displayed moderate to extreme friability, or disaggregation, on all four facades of the structure. The result of mortar analysis conducted on Cleopatra's Bedroom indicates a lean mix, exhibiting the highest volumetric percentage of aggregates to acid soluble, as well as the highest percentage of fines of all four samples. Fines may be clayey particles, cement, or additives for

performance or aesthetic enhancement which the HCl does not dissolve. Unknown factors such as the source and amount of water used for mixing, or temperature and humidity upon setting may also have affected the long-term performance of mortar for Cleopatra's Bedroom. Further investigation of the mortar for Cleopatra's Bedroom may consist of EDS (Energy Dispersive X-Ray Spectroscopy) and SEM (Scanning Electron Microscopy). Instrumental analysis may identify the chemical composition of the binder, giving conclusion as to the exhibited friability. For the purpose of this thesis, additional conditions and cross-referencing of qualitative information must be examined in determining the building pathologies of Cleopatra's Bedroom.

Framing at Bottle Village is in overall fair to good condition in regards to Cleopatra's Bedroom, the Rumpus Room, the Viewing Room and the Round House. The Level III: Priority and Framing Condition map rates Cleopatra's Bedroom the highest in terms of framing integrity, while the Round House displays 'Fair'. This may be due to a difference in material and design between the two structures.

As stated in the site description, the framing system of Cleopatra's Bedroom is composed of three discarded telephone poles as the main vertical load bearing components. It may be assumed these members have been pretreated in their previous life-cycle to provide strength, stability and durability in regards to climate and micro-climate elements. The lack of a below grade foundation for Cleopatra's Bedroom allows minimum surface contact between the wood telephone pole components and the cement ground (Fig. 7.12). In comparison with the Round House framing, 2" by 4" wood studs

at approximately 16" o.c. provide some of the vertical load bearing performance on the periphery of the circular structure (fig. 7.13). These wood studs are directly in contact with the earth, specifically 3' below grade, making these components susceptible to damp, rot and termite damage (fig. 7.14). The Level II rapid conditions survey indicates rot and termite damage is prevalent on 80% of these components. Biological deterioration of wood affects the load bearing capability and long-term performance. Level III designates a fair to poor roof condition for the Round House. Visible deformation and settling of the roof is present, indicating this component may be exceeding the load bearing capabilities of the deteriorating 2" by 4" wood studs. Though the Round House is ranked as the highest priority structure on site (or lowest financial investment for stabilization), the conditions analysis ranks framing and roof in a more severe state of decay than the Rumpus Room, Cleopatra's Bedroom or the Viewing Room.

Mortar analysis conducted on the Round House indicates a well and compactly graded aggregate, low percentage of fines, and significant binder ratio. Therefore, based on laboratory testing and visual observation, this mortar is extremely strong and durable. The results of correlating this information purposes questions for further investigation; did Tressa intend the bottle masonry infill to support vertical load? Current conditions including deteriorating wood supports and a deflecting roof suggest vertical load may have partially transferred over time to the bottle masonry "panels", which, due to a high binder to aggregate ratio mortar mix, may be capable of some support.

Site-wide patterns surface upon cross-referencing the Level III ArcView maps and mortar analysis tests. Structures with good framing performance tend to exhibit lower levels of mortar and glass integrity. Though these structures remain extant through seismic events, the frames do not provide enough stability for the glass bottle masonry infill. In addition, the use of isotropic and anisotropic materials elicits varying reactions and performance levels due to the fluctuating temperature, humidity and seismic activity, as exemplified with the Rumpus Room. The opposite is also true, the structure with a moderate to poor frame and roof rating exhibits the highest level of mortar and glass integrity. In regards to the Round House, perhaps the weight of a deflecting and settling roof, coupled with the circular design, may have ultimately united the structure as one unit, improving its survivability during the 1994 earthquake, and thus current day priority one ranking. Without perpendicular walls, the Round House may be at an advantage in terms of displacing shear and lateral forces during an earthquake. The Rumpus Room is highly orthogonal while Cleopatra's Bedroom displays five facades in a semi-orthogonal design.

Though initially regarded complex a complex site due to its use and type of materials, the primary mechanism of deterioration at Bottle Village is based on assembly and design. Therefore, it is evident that the design and current framing conditions play a significant role in the performance of the glass bottle masonry and overall survivability of each structure.

8. Conclusion

Grandma Prisbrey's Bottle Village is a rare and significant built folk art environment in the historical, cultural and artistic landscape of Southern California. Building with discarded objects, Tressa Prisbrey demonstrates the power of creativity, and the capability of intuitive engineering of a self-taught artist. Her desire to build stemmed from a collector's mentality, while simultaneously satiating an inner psyche to create beauty from everyday objects discarded by society. What ensued was a site devoted to assembling non-related objects embedded with memory and meaning into new context, form and use.

8.1. Review of Methodology

The scope of this thesis encompasses a three-level conditions assessment, both qualitative and quantitative, based on an evaluation of values via an authenticity matrix. These values, designated in the Nara Conference on Authenticity (1994), establish a starting point for discussion of appropriate documentation techniques which aim to provide a permanent record of the structures and their existing conditions. The use of building materials in a non-traditional manner makes Bottle Village a complex site, encompassing many layers of meaning and history. Therefore, the authenticity matrix served as an effective tool in providing structure and format for the identification of the significant and inherent values embodied Bottle Village.

Through a literature review, various methods of documentation were investigated based on five parameters: funding constraints, time entailed for collection of data, level of data processing skills required for the documentation technique, sustainability of technology, and accessibility to/disturbance of the historic fabric. With these considerations, rectified ortho-photography was deemed a sufficient method for documenting the non-traditional construction of Bottle Village. The greatest limitation with any documentation technique is the initial learning curve when on site. The use of an REDM total station served as a valuable learning opportunity, yet time dictated the level and quantity of data collection and processing. Therefore, the rectified images serve as one possible strategy when documenting Bottle Village. With an eye toward compiling a permanent record for future research and posterity of this nationally recognized site, standards such as HABS/HAER were consulted in the hope of beginning the process for inception into the Library of Congress HABS/HAER collection.

The priorities of Preserve Bottle Village Committee, stewards of the folk art site, provided a basis from which to devise a three-level conditions assessment. By reconciling the integrity of the structures with the funding limitations of the non-profit site, a conservation strategy for four specific structures carried through to a quantitative and qualitative conditions survey. Through site visits, each façade of all four structures was assessed based on the structural integrity of the glass, mortar, framing, and roofing. Level III synthesizes the Level I qualitative research, and Level II quantitative analysis to decipher site-wide patterns of deterioration. This system exemplifies a methodical and

phased approach may be undertaken to assess the conditions and fabric of non-traditional sites such as Bottle Village. Limitations arose due to accessibility during the course of the academic year. As stated earlier, the greatest learning curve is compiling information when on site. Though a comprehensive understanding of values, history and setting was researched prior to site visits, anomalies and inconsistencies surfaced which demanded re-evaluation and consideration of current objectives. In addition, the employment of a percentage-based quantitative conditions assessment system (rapid conditions assessment form) proved more complex than initially anticipated in terms of quantifying damage to extremely different design typologies.

8.2. Recommendations

Immediate

Areas which deserve further attention include execution of a full site survey (extant and non-extant structures). Bottle Village is a unique, fragile and endangered built environment. Local, state and federal landmark status exemplifies the significant contribution of Bottle Village within Ventura County, California and the United States. Two-and-a-half dimensional representation will aid in better understanding the design, assembly and deterioration of the unique building typologies exhibited at Bottle Village. Therefore, it is recommended that data collection using an REDM total station for the purpose of rectified ortho-photogrammetry be completed as soon as possible. The advantages for using rectified photography are twofold; it is efficient, entails low impact

on historic fabric, will provide base information for further documentation and is relatively inexpensive. Guidelines such as the National Parks Service HABS/HAER standards should be followed for archival quality results. As stated on the National Parks Service website, the goal of documenting historic American buildings is, "...is to provide architects, engineers, scholars, and interested members of the public with comprehensive documentation of buildings, sites, structures and objects significant in American history and the growth and development of the built environment."¹²³

Stabilization of all structures must ensue immediately. Threat of imminent collapse makes this site inaccessible to the public. Without community support, involvement and funding, Grandma Prisbrey's Bottle Village will continue to self-destruct. Therefore, it is recommended that all extant buildings receive structural support of the framing and masonry walls; individual ruins must receive structural support of masonry walls and consolidation or removal of broken glass along top edge of damage walls. By providing a safer environment for visitors to experience Bottle Village, awareness, support, and fund raising for future conservation interventions and complete site rehabilitation many ensue.

Mid-term

The use of GIS to spatially represent the overall conditions serves as a broad, overarching tool for understanding site-wide patterns. Results entailed direct

¹²³ National Park Service, Historic American Buildings Survey (HABS), *Secretary of the Interior's Standards for Architectural and Engineering Documentation*, http://www.cr.nps.gov/local-law/arch_stnds_6.htm.

relationships between deteriorating framing due to climatic conditions and seismic activity, and loss of bottle masonry. Therefore, upon immediate stabilization of structures, wood framing components must be evaluated as salvageable or in need of replacement. It is also recommended that a more detailed conditions assessment be conducted concurrently. This may include using AutoCAD overlay to spatial represent unique conditions for individual facades and structures.

Due to time constraints and scope of research, a full evaluation of the current stakeholders of Bottle Village was not developed, instead focusing on values which embody form and design, materials, location and setting, tradition and technique, and artistic spirit. In addition, issues of sustainability within the community context were not explored due to complex legislation, real estate development laws, and various other factors which fell beyond the scope of this thesis. It is recommended these integral constituents in preserving Bottle Village be explored and interwoven into future conservation considerations.

Long-term

As stated in the Mission Statement, it is the goal of Preserve Bottle Village Committee, as well as the aim of this thesis, to reopen the site to the public for a safe and authentic viewing experience. Therefore, it is recommended that collaboration between conservation experts and structural engineers ensue, providing seismic retrofitting and stabilization of all features on site while respecting the historic fabric.

The reconstitution of bottle masonry must be evaluated in terms of current conservation philosophy and practice. It is recommended that ruins remain as ruins for three reasons; issues of authenticity in terms of total reconstruction, acknowledgement of the location of Bottle Village in a seismically active zone, and the symbol of its survivability through juxtaposition with extant structures. Based on the authenticity matrix, the significant values of Bottle Village are embedded in the materials, form, design, historical setting and artistic spirit. For structural and aesthetic unity, it is recommended that areas of minor to moderate bottle masonry loss be reconstructed using salvaged bottles located in on-site storage.

8.3. Synthesis

Through the course of research, study, evaluation and compilation of this thesis, an understanding of the various factors which compose a conditions assessment have been gained. Specific research pertaining to construction assembly, material pathologies, and documentation techniques contribute vital knowledge for providing accuracy and precision when conducting a conditions survey. Yet it is the examination of tangible and intangible values which places a building or site within a chronological continuum, justifying investigation for conservation analysis and treatments. The outward expression of the human spirit coupled with available resources has informed building traditions throughout time. Contemporary context is no exception. Grandma Prisbrey's Bottle Village links the unique history of settlement in the West with mid-20th century society in Southern California. Making do with readily available resources, people have

developed and sustained traditions which deserve consideration. It is the discovery of this historical lineage, the artistic intent and unique fabrication which brings forth analysis and justification when pursuing conservation efforts at Grandma Prsbrey's Bottle Village.

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Appendix A: Figures

Chapter 1: Images



Figure 1.1: Bottle Village, panoramic view. (E.Askey 2007)



Figure 1.2: Tressa "Grandma" Prsbrey, sitting in front of *The Shrine to all Faiths*, 1974.. (CSUCI Archives)

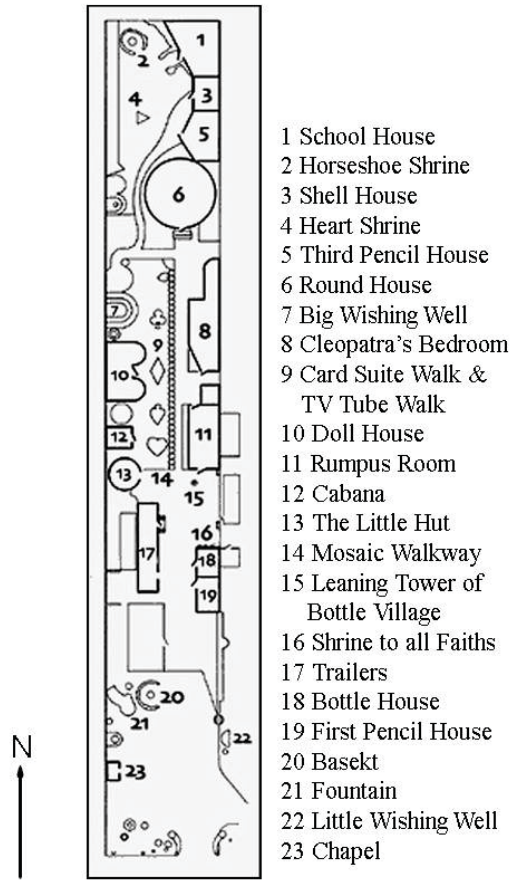


Figure 1.3: Plan of Bottle Village



Figure 1.4: Mosaic walkway
with imbedded family photo. (TSD 2007)



Figure 1.5: Mosaic walkway with imbedded ceramic & plastic objects. (TSD 2007)



Figure 1.6: Mosaic walkway built by Tressa Prisbrey on right, addition built by volunteers early 1980's on left. (TSD 2007)



Figure 1.7: The Cabana (b. 1956),
load bearing bottle masonry ruin. (TSD 2007)



Figure 1.8: Trailer enclosure: original enclosure left, non-extant, Royal Spartenette right, extant. (CSUCI Archives)



Figure 1.9: Original bottle masonry wall along east edge of property, ca. 1955. (CSUCI Archives)



Figure 1.10: Pencil House (b. 1955-56) on left,
Bottle House (b. 1955-56) on right. (CSUCI Archives)

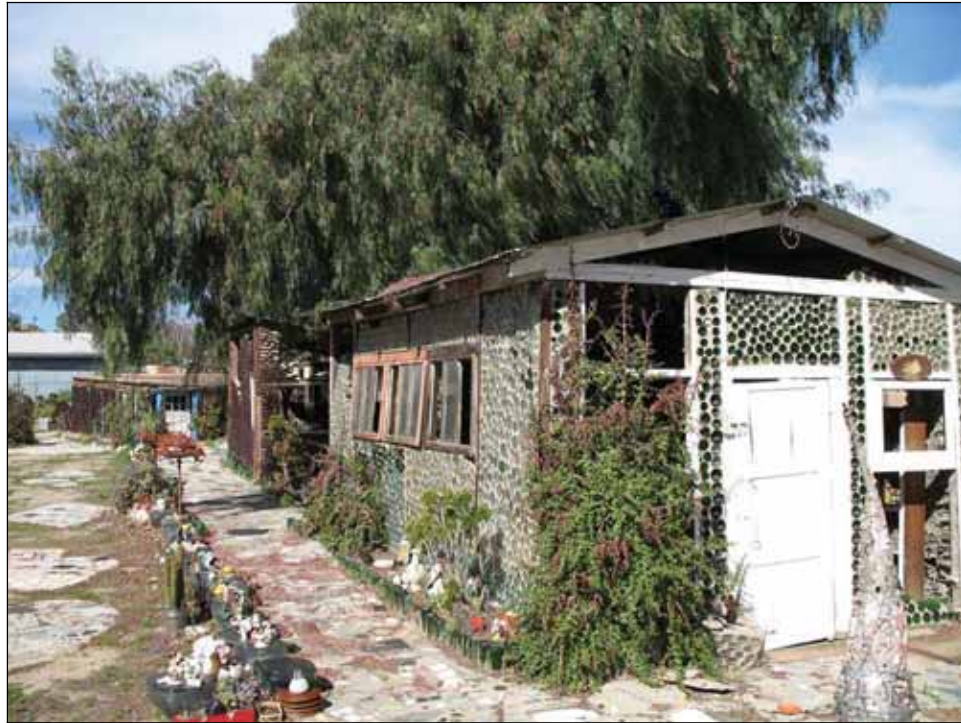


Figure 1.11: Rumpus Room, built c. 1956. (TSD 2007)



Figure 1.12: Shell House (b. 1959) on right, School House (b. 1956) on left. (CSUCI Archives)



Figure 1.13: Third Pencil House, built 1960. (CSUCI Archives)



Figure 1.14: Viewing Room, built c. 1962. (CSUCI Archives)



Figure 1.15: Doll House, built c. 1957, non-extant. (CSUCI Archives)



Figure 1.16: The Round House, built c. 1957 (R. Eppich 2007)



Figure 1.17: Knott's Berry Farm, replication of Tom Kelley's Bottle House from Calico, Nevada. (www.agilitynut.com)

Chapter 2: Images



Figure 2.1: Palais Ideal, built c. 1879 – 1912, Ferdinand Cheval.
(www.naturepixel.com)



Figure 2.2: Sagrada Familia, (c. 1883 – present), Antonio Gaudi, Barcelona, Spain. (www.nytimes.com)



Figure 2.3: Watts Towers (c. 1942) Simon Rodia; Los Angeles, CA. (www.varley.net)

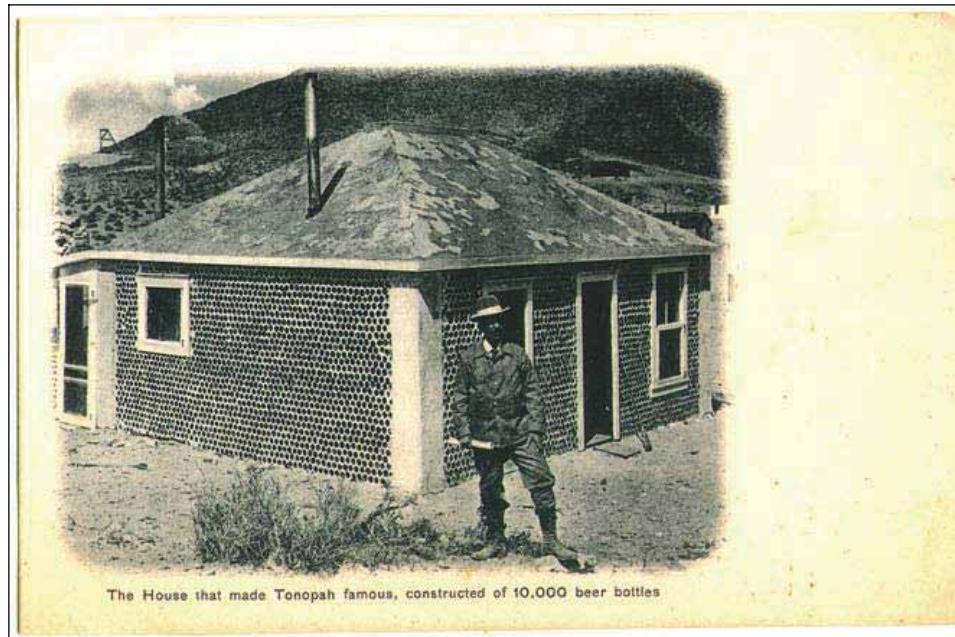


Figure 2.4: William Peck house, Tonopah, Nevada. (www.agilitynut.com)



Figure 2.5: Oil tin cans as building material, Tonopah, Nevada (www.agilitynut.com)

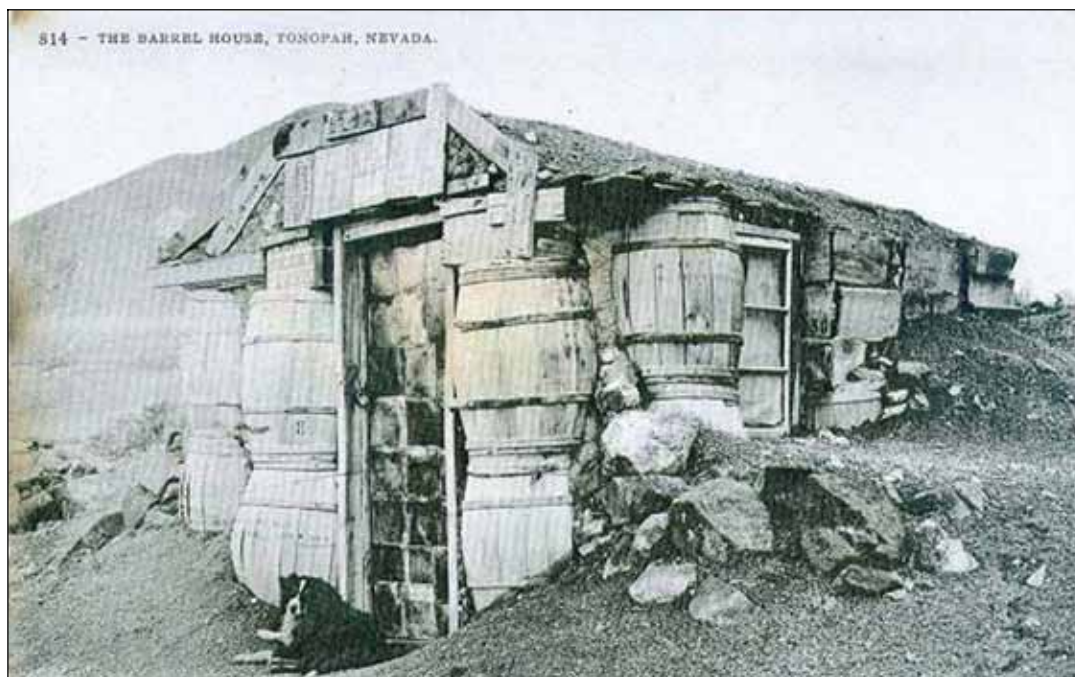


Figure 2.6: Wooden barrels used for building material, Tonopah, Nevada. (www.agilitynut.com)

Chapter 3: Images



Figure 3.1: National Register of Historic Places, criteria for landmark status. (www.nps.org)

Authenticity Matrix: Bottle Village, 2007				
Aspects				
Dimensions	Artistic	Historic	Social	Scientific
Spirit & Intent	Making something out of nothing. The desire to create with everyday objects.	Began as ad hoc and developed into art. Use of everyday objects reflects community trends.	Transcends all ages and cultures.	
Materials	Found objects embody values of site, excite discovery and memories. Acknowledges alternative resources for materials.	Excellent collection of early to mid-century Americana objects; admired individually and as collective whole.	Found objects exhibit social and economical values of community.	Provides study & research for conservation of non-traditional construction materials.
Form & Design	Exhibits varying forms and learning curve of builder. Illustrates artistic recycling.	One of few remaining female built folk art environments in California and North America.	Illustrates ad hoc architecture using found objects for main building medium.	Illustrates building typology from first to last structure and construction design by self-taught individual, a.k.a. intuitive engineering.
Tradition & Techniques	Illustrates artistic recycling and intuitive engineering. Exhibits bottle masonry construction and light framed construction.	Illustrates ad hocism, non-traditional materials and self-taught construction techniques.	Tressa had worked as an assembler in a factory and fruit picker, i.e. worked with hands in various jobs.	
Use & Function	Incites memories and sense of discovery from the beholder.	Ventura County Cultural Landmark (1979), California State Historical Landmark (1981), National Register of Historic Places (1996).	Exemplifies the struggle of small non-profit sites to sustain.	
Location & Setting	Residential site, i.e. the intent to embellish one's personal space.	Los Angeles urban story	Exterior and Interior viewing for authentic experience	Provides study for non-traditional construction materials located in seismic zone.



Figure 3.3: Spring Garden. (CSUCI Archives)



Figure 3.4: Leaning Tower of Bottle Village & Tressa Prisbrey. (CSUCI Archives)

Chapter 5: Images

STRUCTURE	YEAR	INTEGRITY	CONDITION	MATERIALS OF CONSTRUCTION:	
				floor	roof/walls
First Pencil House	c.1955-1956	11	poor	cement, bricollage*	woodframe, corrugated metal*** horizontally laid bottles, mortar
Bottle House	c.1955-1956	12	poor	cement, bricollage	woodboard, woodframe, metal*** horizontally laid bottles, mortar
Rumpus Room	c.1955-1956	2	good	cement, bricollage	woodframe, corrugated metal woodframe, horizontally laid bottles, mortar
Secret Storage	c.1957-1958	15	poor	cement, bricollage	woodframe, corrugated metal*** horizontally laid bottles, mortar
Cleopatra's Bedroom	c.1957-1958	3	fair	cement, bricollage	woodframe, corrugated metal woodframe, horizontally laid bottles, mortar
Viewing Room	c.1962-1963	4	fair	cement, bricollage	woodframe, corrugated metal woodframe, horizontally laid bottles, mortar
Round House	c.1957-1958	1	good	cement, bricollage**	woodframe, asphalt shingle woodframe, horizontally laid bottles, mortar
Third Pencil House	1960-1963	8	poor	cement, bricollage	woodframe, corrugated metal woodframe, horizontally laid bottles, mortar
Shell House	c.1957-1958	6	poor	cement, bricollage	woodframe, corrugated metal woodframe, horizontally laid bottles, mortar
School House	c.1959-1960	7	poor	cement, bricollage	woodframe, corrugated metal woodframe, horizontally laid bottles, mortar
Doll House	c.1958-1959	9	poor	cement, bricollage	woodframe, corrugated metal*** woodframe, horizontally laid bottles, mortar
Second Pencil House	c.1958-1959	14	poor	cement, bricollage	woodframe, corrugated metal*** woodframe, horizontally laid bottles, mortar
Cabana	c.1956-1957	10	poor	cement, bricollage	woodframe, palm thatching*** horizontally laid bottles, mortar
Trailer Enclosure	c.1955-1956	16	poor	cement, bricollage	woodframe, corrugated metal*** woodframe, horizontally laid bottles, mortar
Chapel	c.pre-1963	13	poor	cement, bricollage	woodframe, corrugated metal*** woodframe, horizontally laid bottles, mortar****
Meditation Room	c.1963	17	poor	earth	woodframe, corrugated metal*** woodframe, horizontally laid bottles, mortar
Royal Spartanette Trailer	1960	5	good	linoleum	aluminum aluminum

*all structures have no foundations
 **structure embedded three feet into grade
 ***roof disassembled or non-existent
 ****reconstructed present structure

Fig. 5.1: Conditions Overview

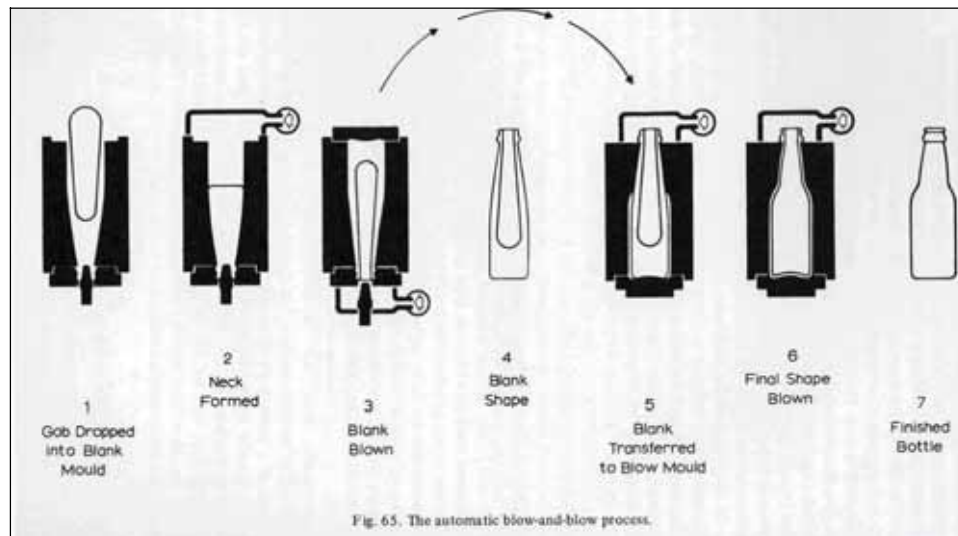


Figure 5.2: Container glass fabrication, blow-and-blow technique. (Jones & Sullivan 1985)

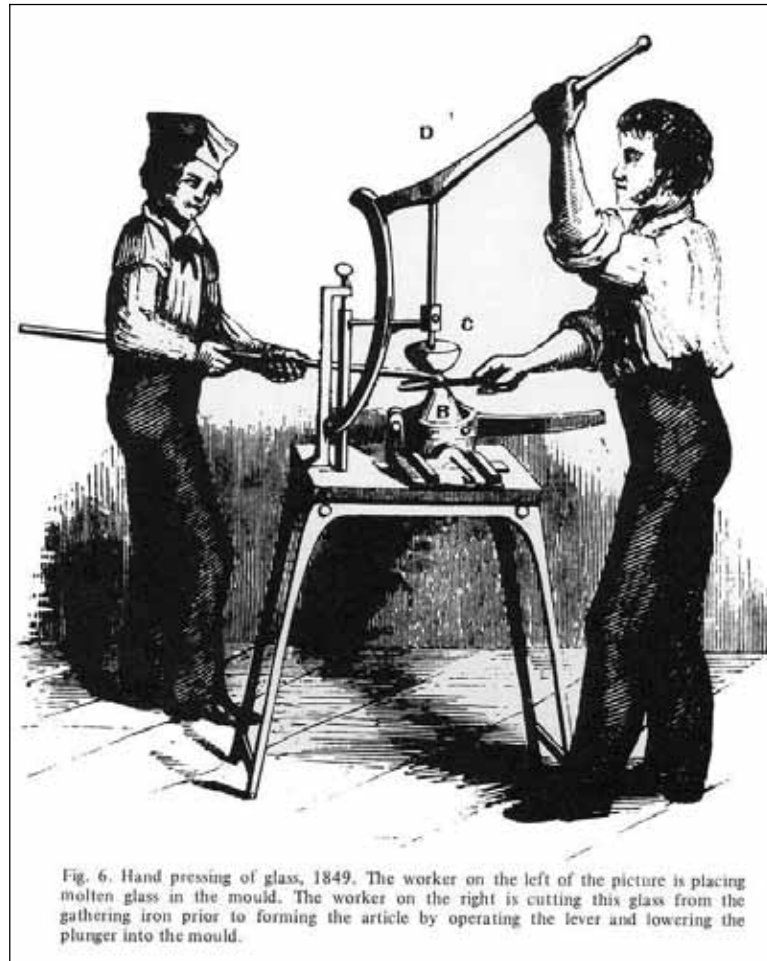


Figure 5.3: Container glass fabrication, press-and-blow technique. (Scoville 1948)



Figure 5.4: Wishing well constructed of blue Milk of Magnesia bottles. (CSUCI Archives)



Figure 5.5: Bottle House constructed from Lucky Lager beer bottles. (TSD 2007)



Figure 5.6: Date stamp on bottom of bottles. (TSD 2007)

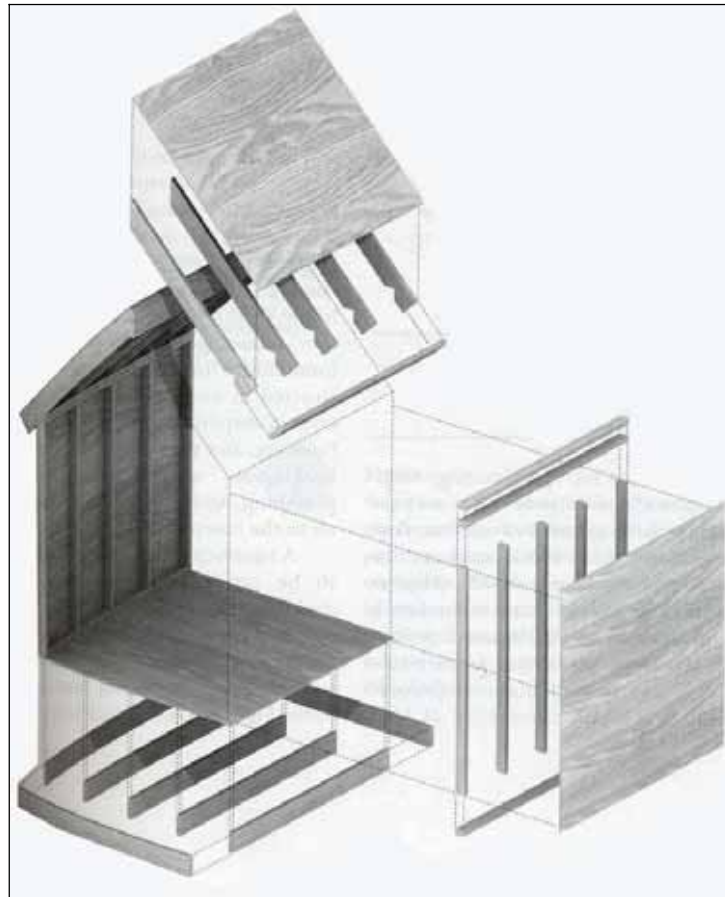


Figure 5.7: Platform construction. (Allen, 2004)

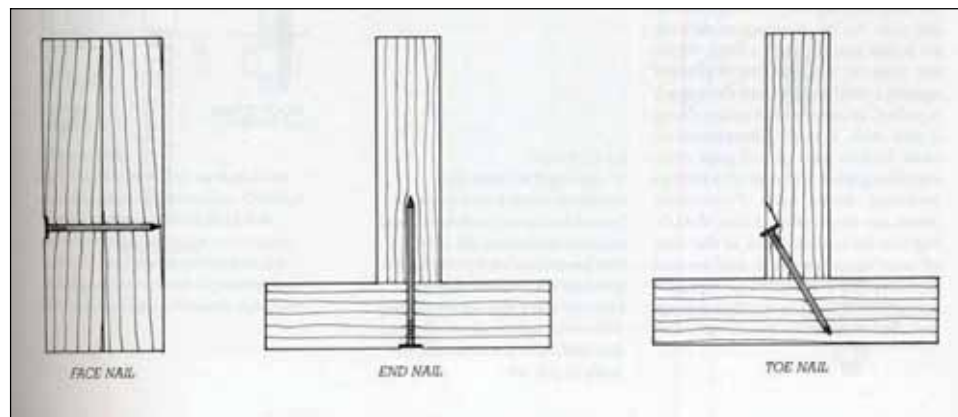


Figure 5.8: Face, face, end and toe nail connections exhibited on the platform frame construction structures at Bottle Village. (Allen, 2004)

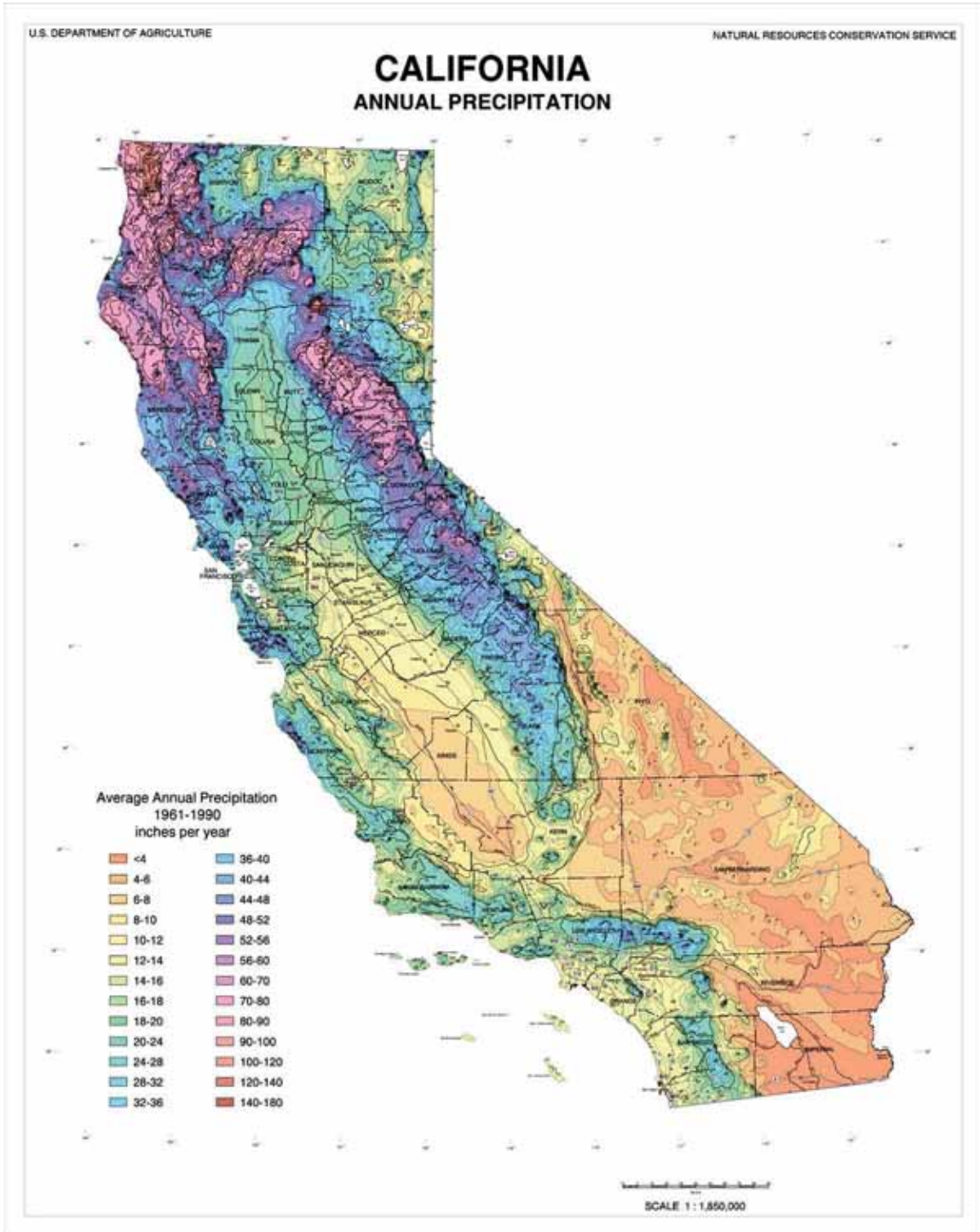


Figure 5.9: Annual precipitation in California, 1960 – 1990.. (www.ncgc.nrcs.usda.gov)

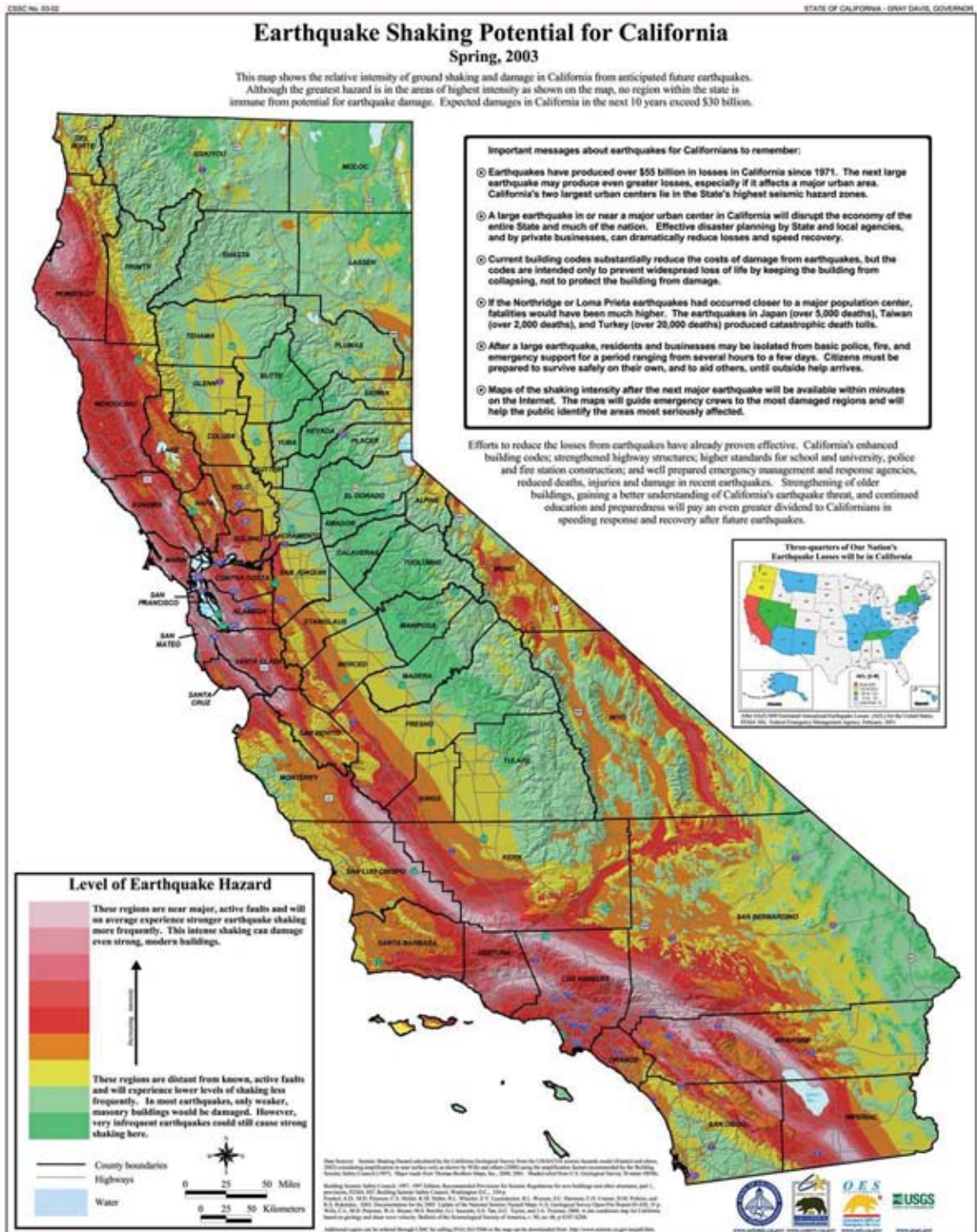


Figure 5.10: Earthquake shaking potential for California, 2003. Ventura County is rated as a moderate to extremely high possibility of heavy shaking and financial damage. (www.conservation.ca.gov)

Chapter 6: Images



Figure 6.1: Data collection with a REDM Leica TCR 307. (GCI 2007)



Figure 6.2: Ortho-rectified montage of School House, Shell House and Third Pencil House. (R. Eppich 2007)



Figure 6.3: Ortho-rectified montage of Round House exterior. (R. Eppich 2007)



Figure 6.4: Ortho-rectified montage of Round House Interior. (R. Eppich 2007)

BottleVillage: Level II Glass

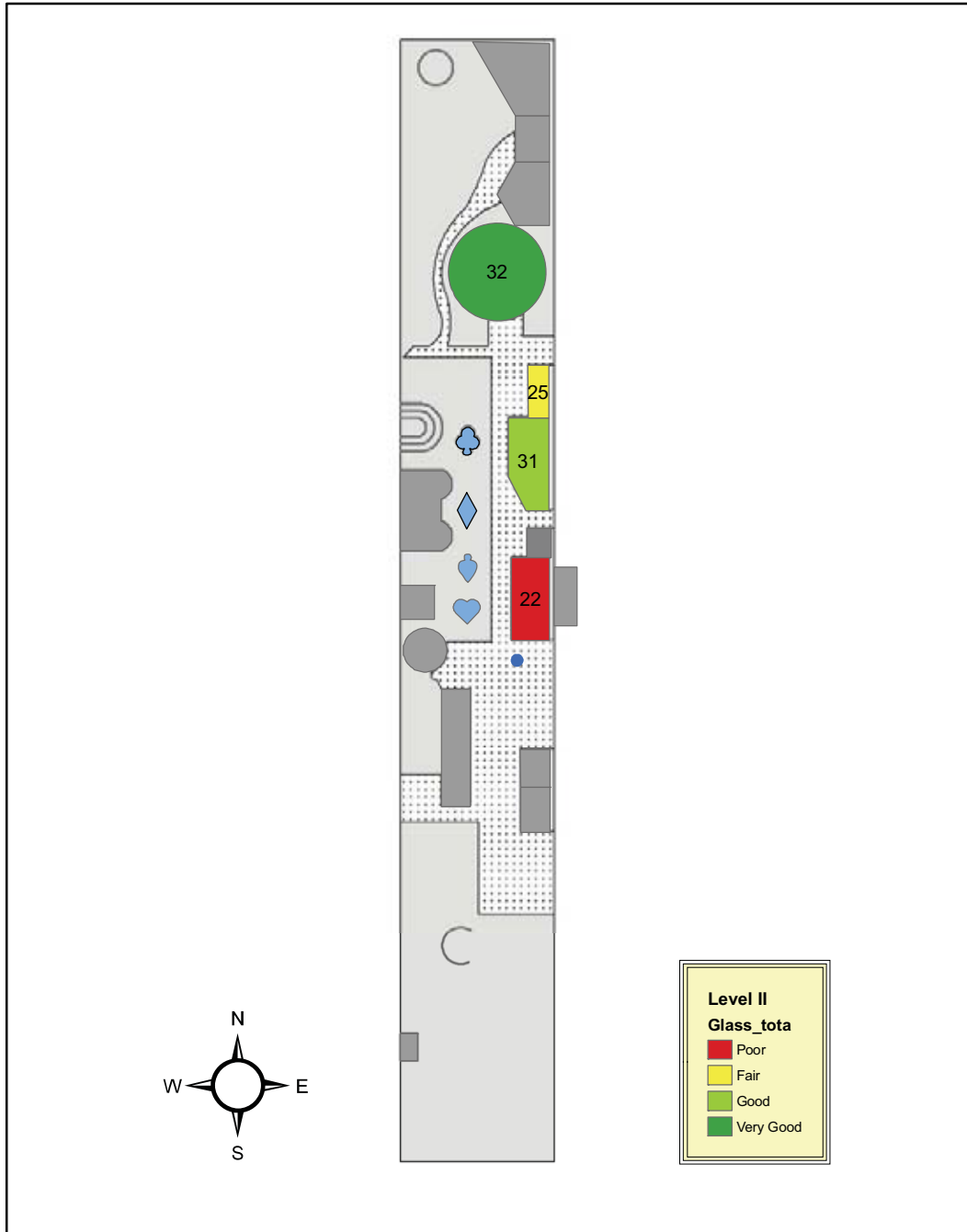


Fig. 6.5: ArcView Conditions Map
129

BottleVillage: Level II Mortar

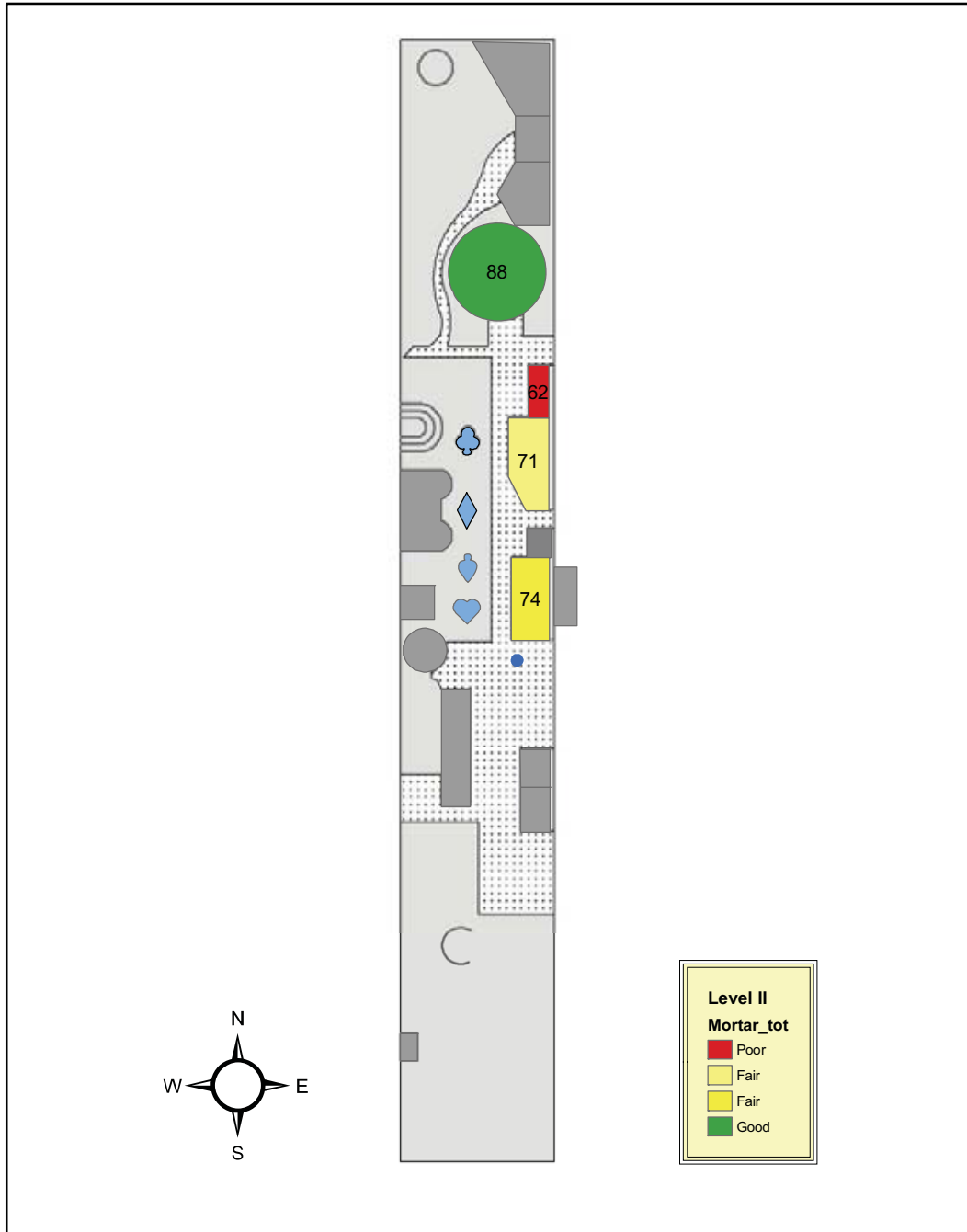


Fig. 6.6: ArcView Conditions Map

BottleVillage: Level II Framing

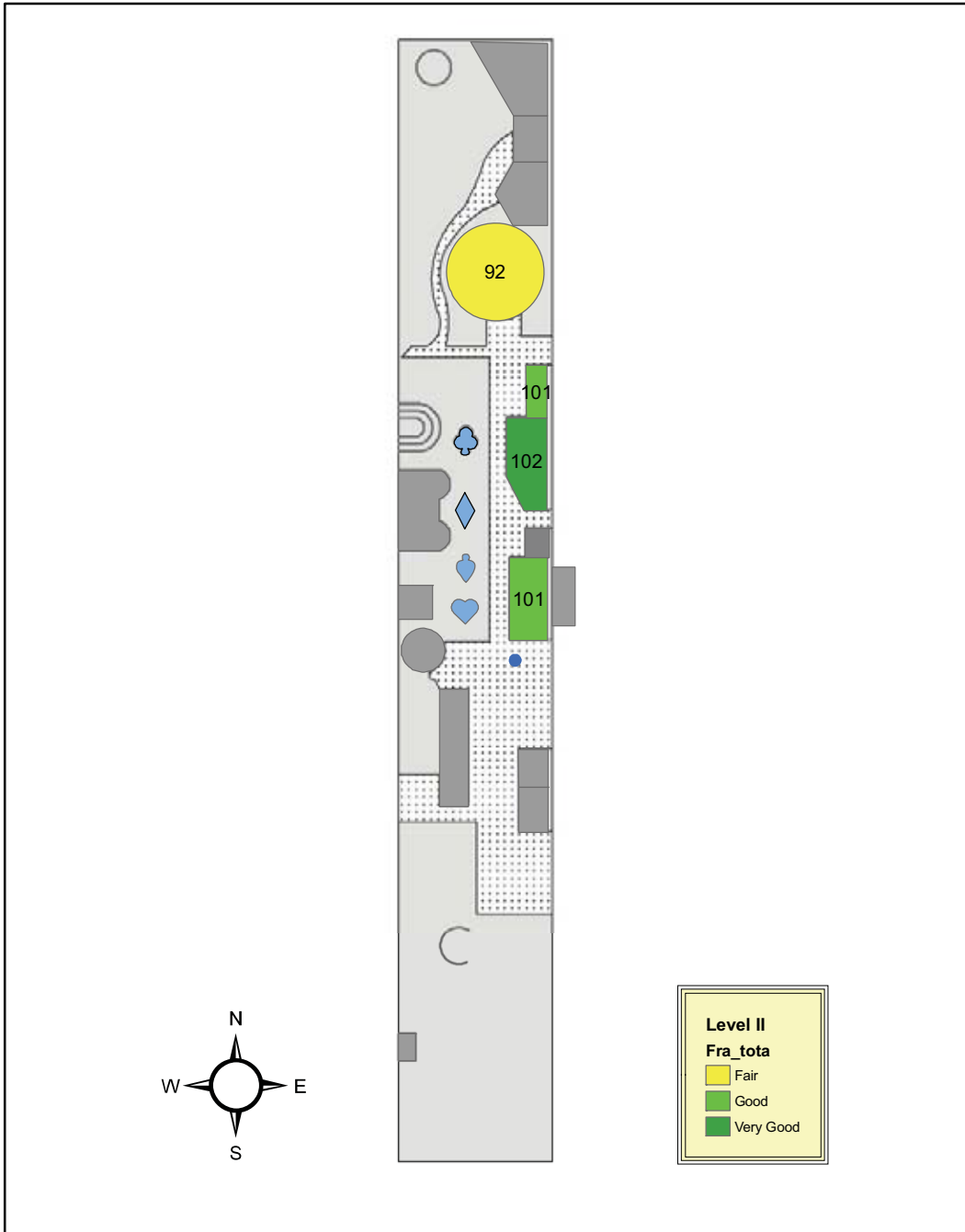


Fig. 6.7: ArcView Conditions Map

BottleVillage: Level II Roof

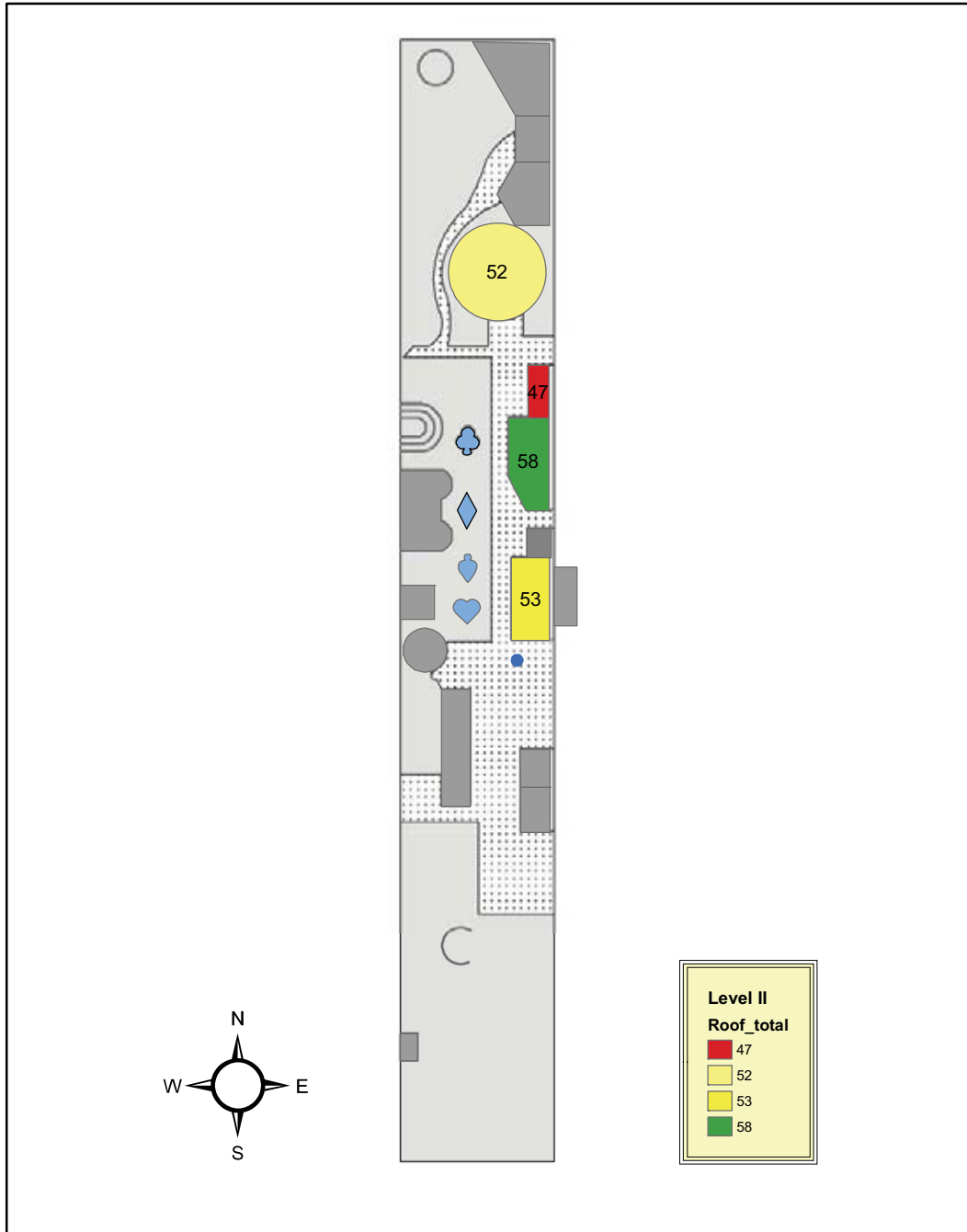


Fig. 6.8: ArcView Conditions Map
132

BottleVillage: Level II Condition Totals

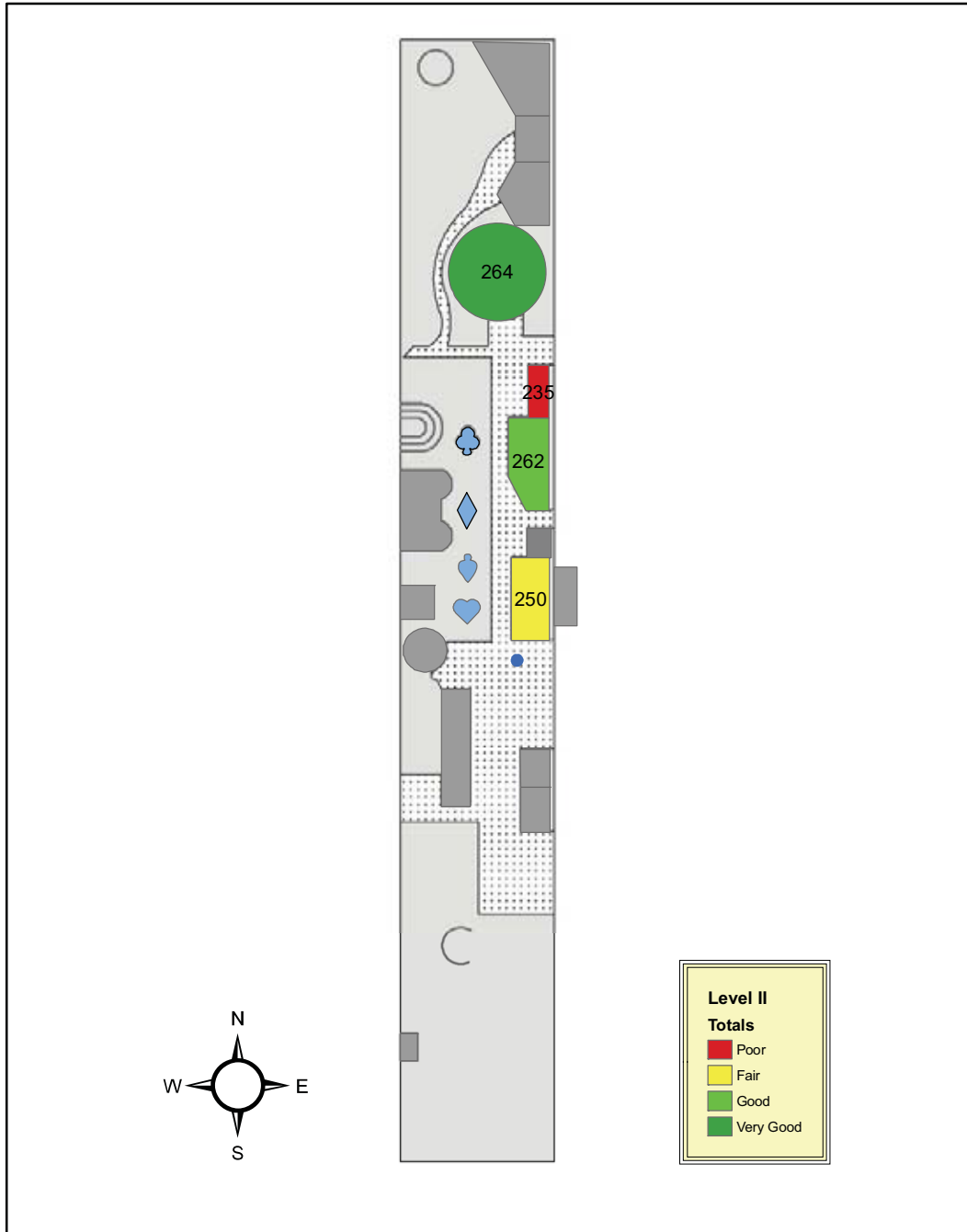


Fig. 6.9: ArcView Conditions Map

Chapter 7: Images

BottleVillage: Level III Priority & Glass

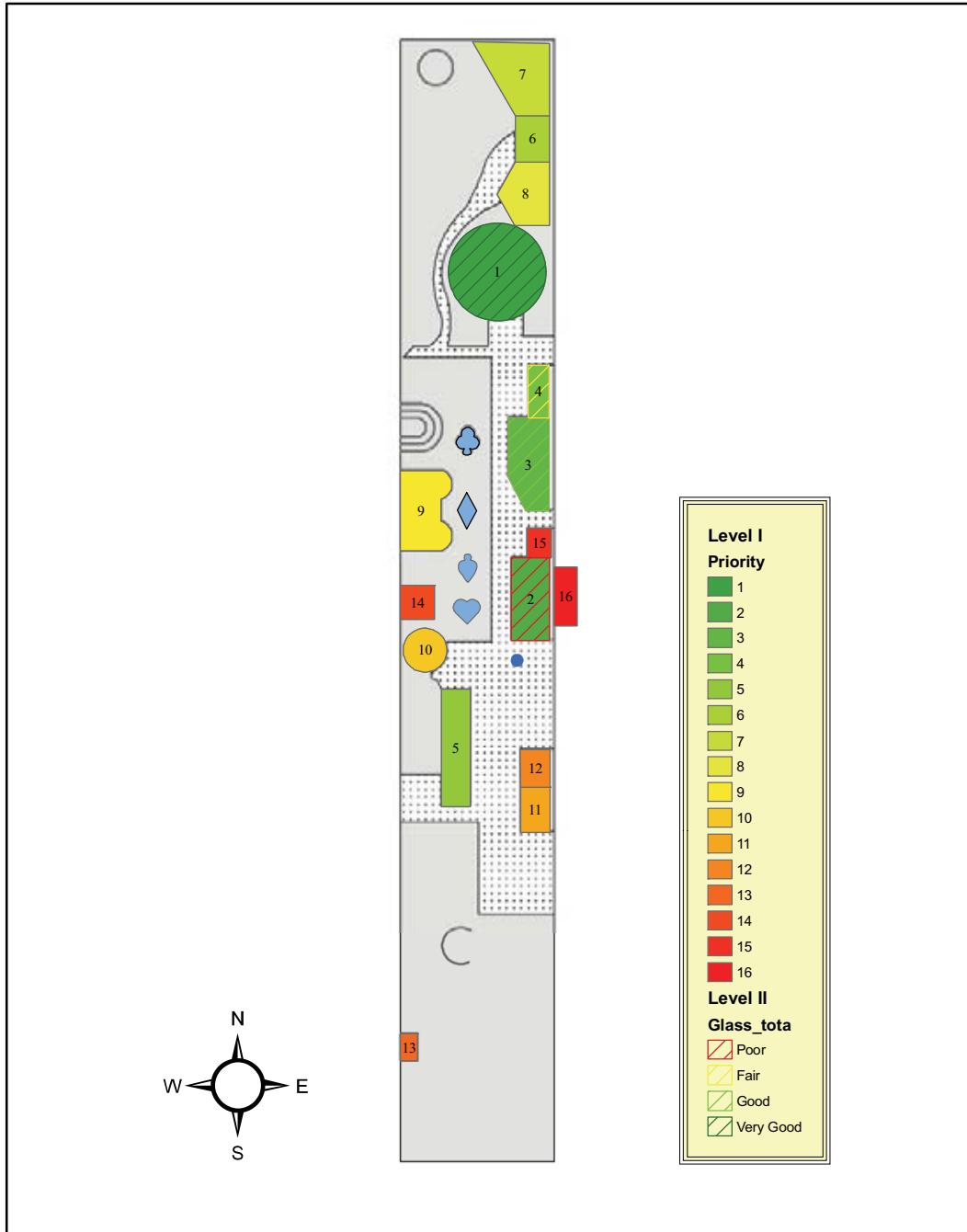


Fig. 7.1: ArcView Conditions Map
135

BottleVillage: Level III Priority & Mortar

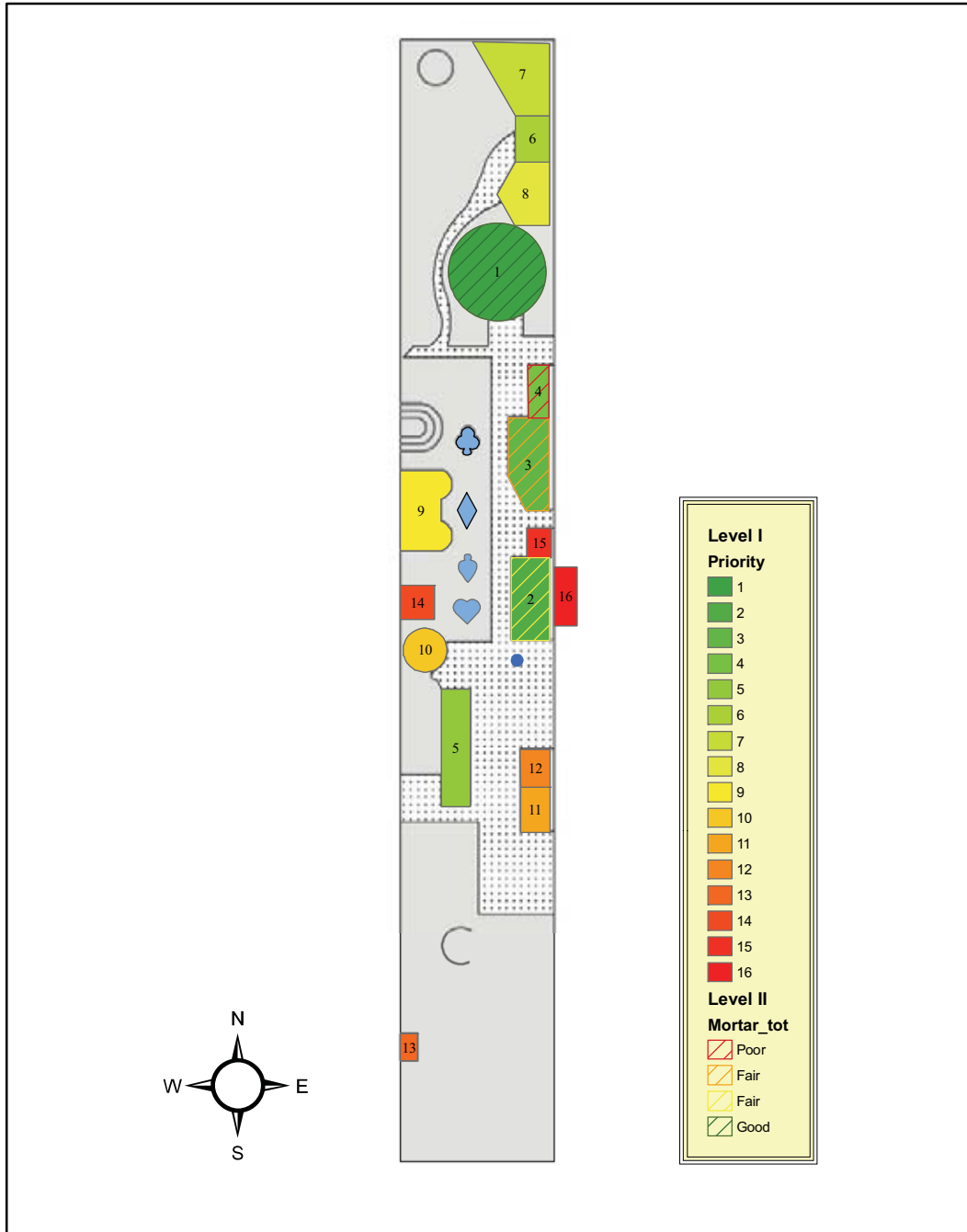


Fig. 7.2: ArcView Conditions Map

BottleVillage: Level III Priority & Framing

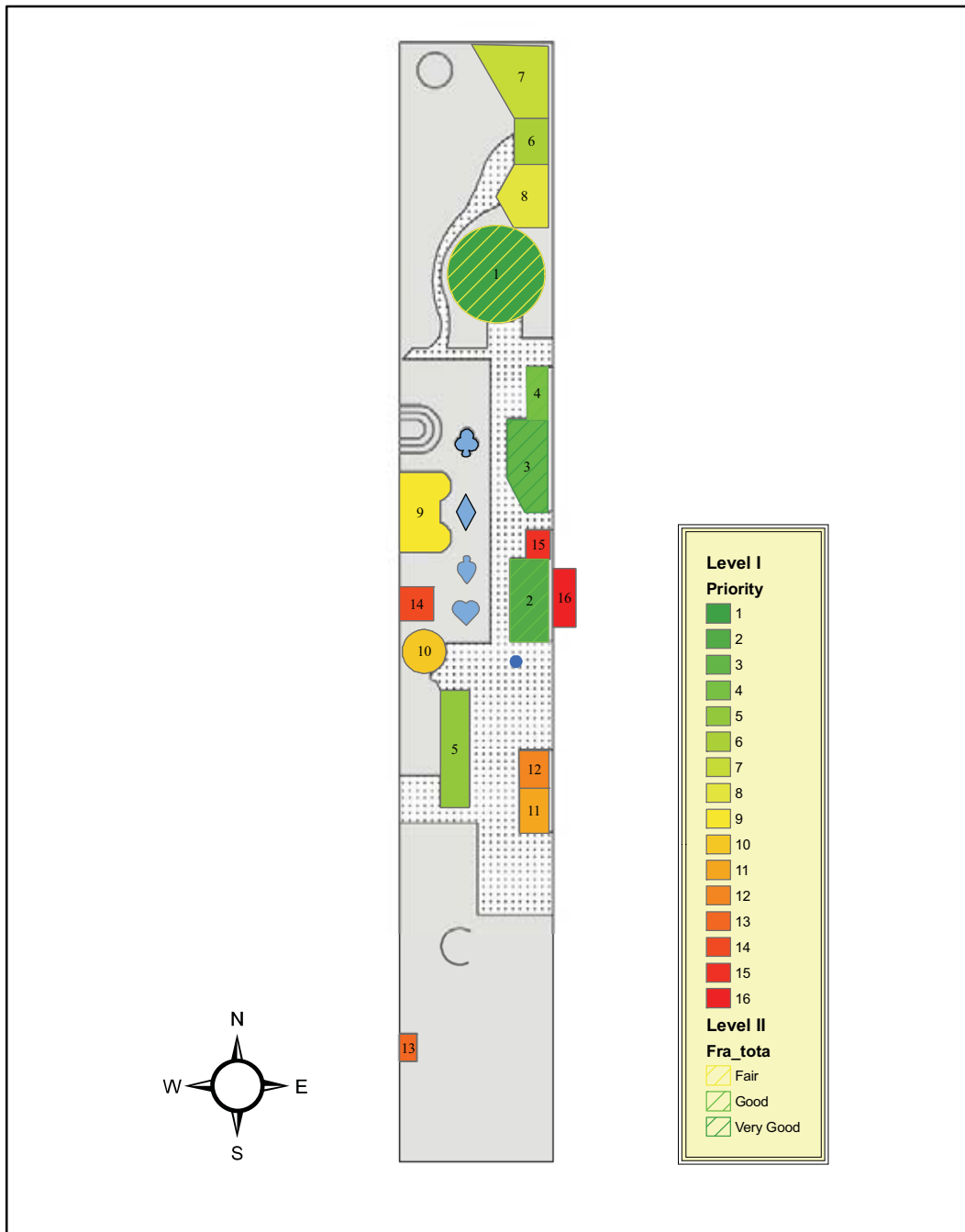


Fig. 7.3: ArcView Conditions Map

BottleVillage: Level III Priority & Roof

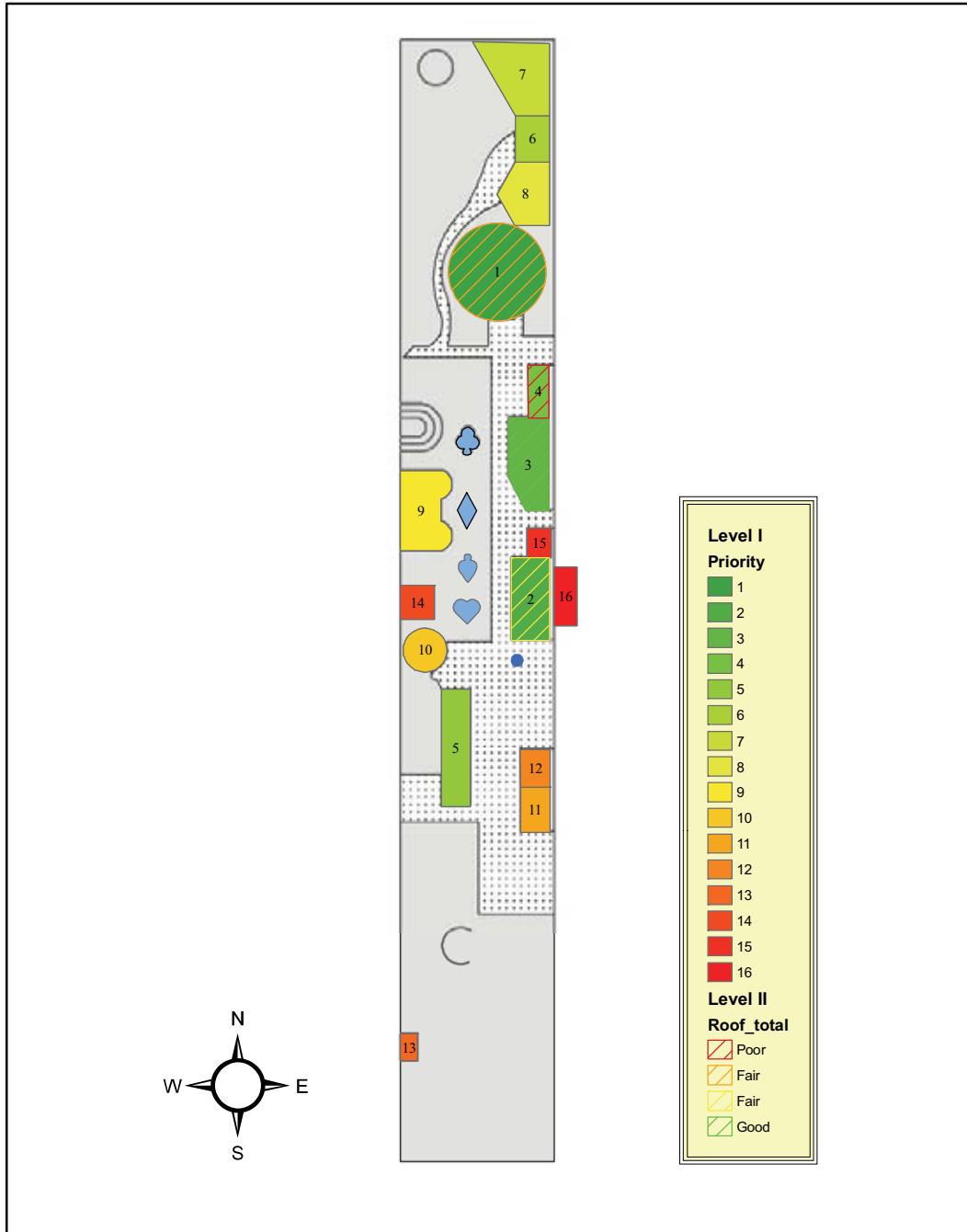


Fig. 7.4: ArcView Conditions Map
138

BottleVillage: Level III Priority & Condition Totals

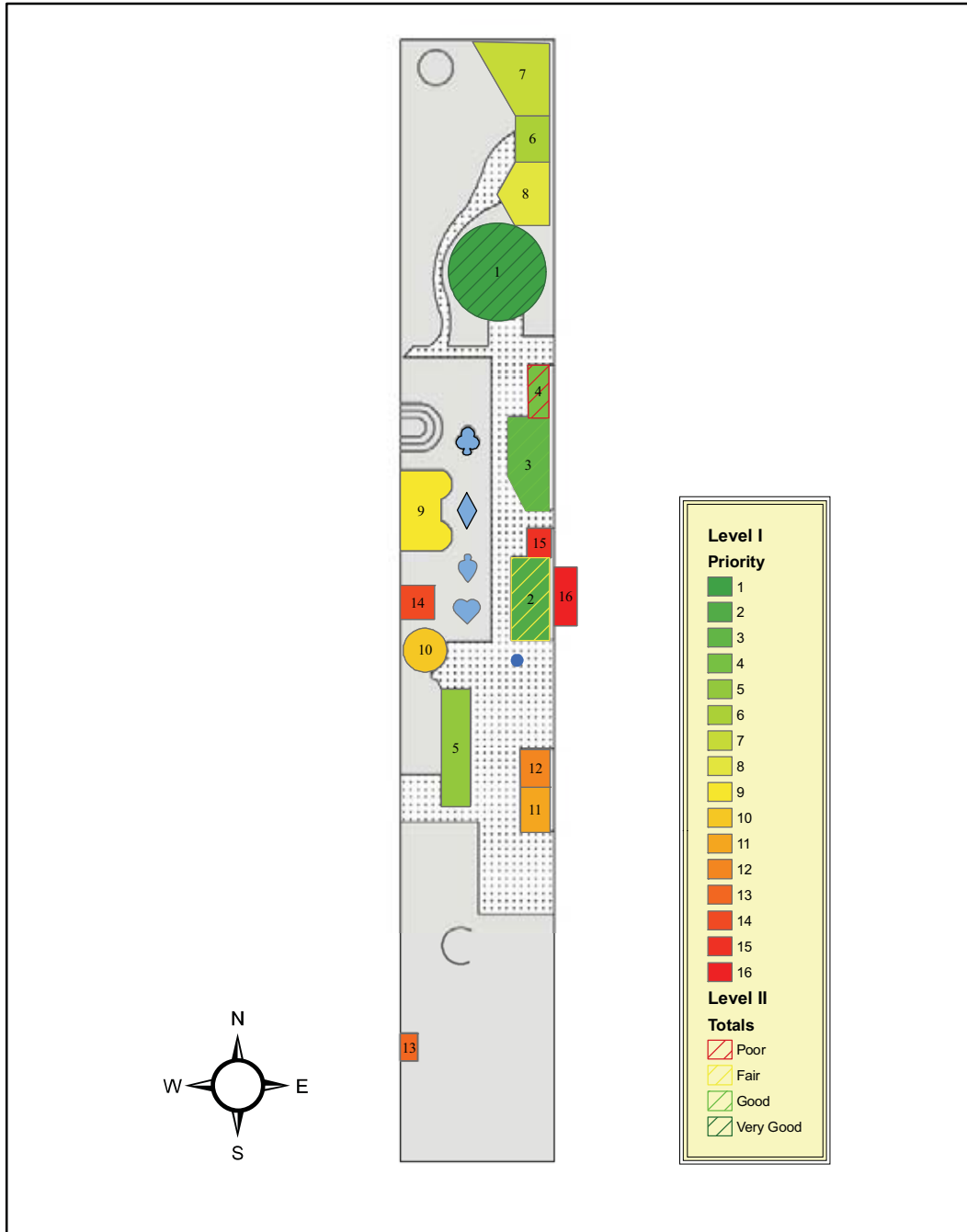


Fig. 7.5: ArcView Conditions Map
139

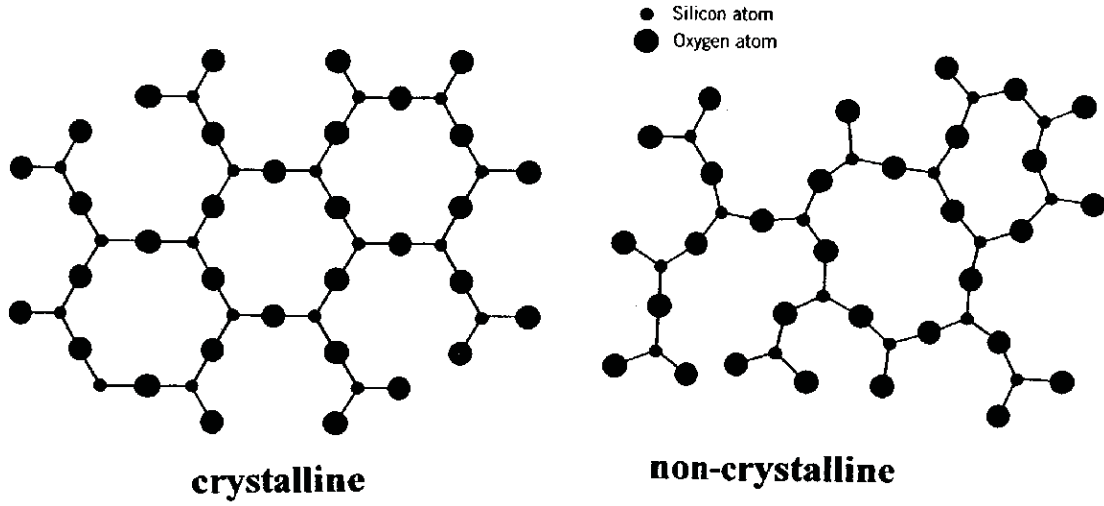


Figure 7,6: Molecular structure of glass, solid structure on left, rigid amorphous structure on right. (www.benbest.com)

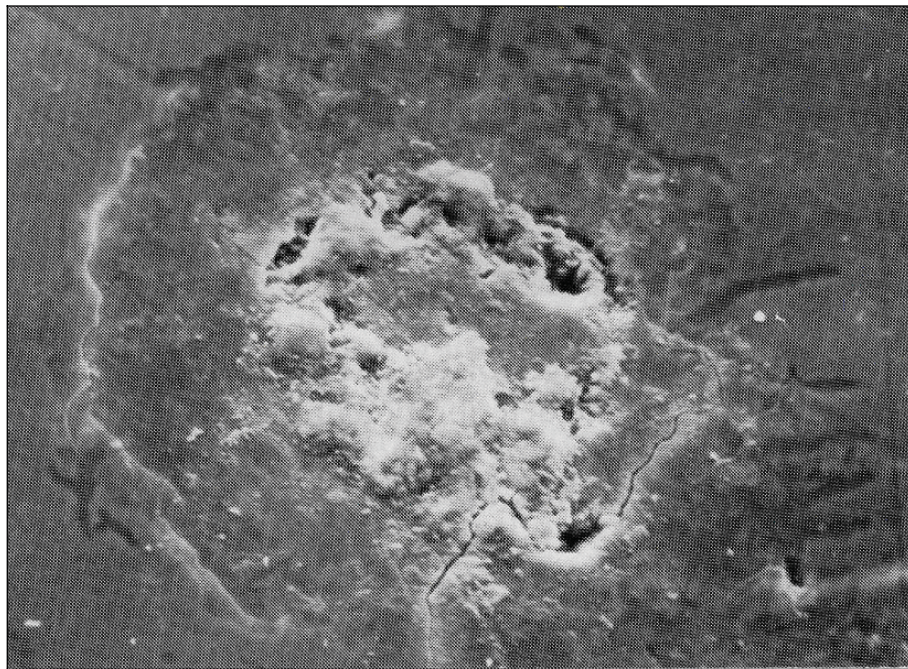


Figure 7.7: Pitting on surface of glass (400x). (Newton 89)

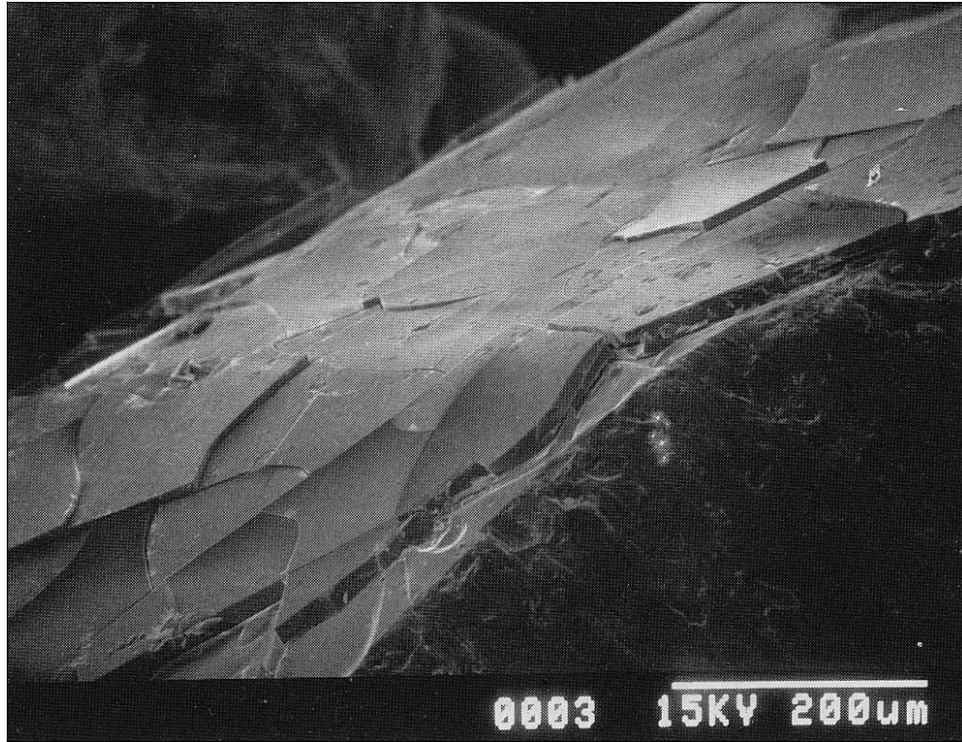


Figure 7.8: Crizzling of glass surface. (Tennent, 1999)

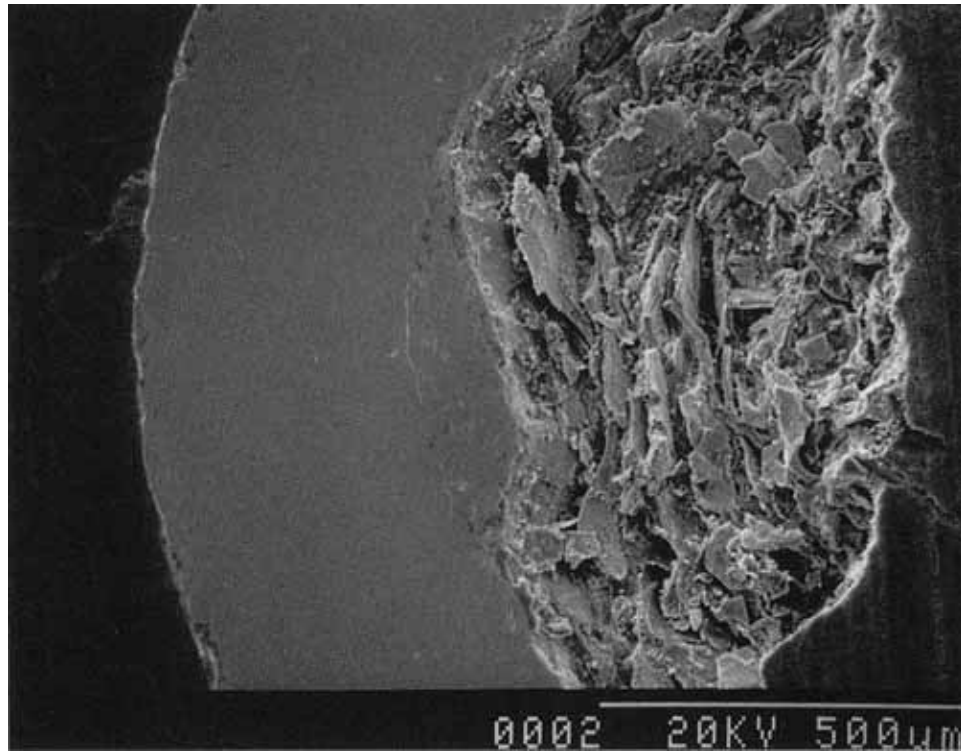


Figure 7.9: Crystallization of glass network. (Tennet 1999)

Concentration of hydrogen ions compared to distilled water		Examples of solutions at this pH
10,000,000	pH = 0	battery acid, strong hydrofluoric acid
1,000,000	pH = 1	hydrochloric acid secreted by stomach lining
100,000	pH = 2	lemon juice, gastric acid, vinegar
10,000	pH = 3	grapefruit, orange juice, soda
1,000	pH = 4	tomato juice, acid rain
100	pH = 5	soft drinking water, black coffee
10	pH = 6	urine, saliva
1	pH = 7	"pure" water
1/10	pH = 8	sea water
1/100	pH = 9	baking soda
1/1,000	pH = 10	Great Salt Lake, milk of magnesia
1/10,000	pH = 11	ammonia solution
1/100,000	pH = 12	soapy water
1/1,000,000	pH = 13	bleaches, oven cleaner
1/10,000,000	pH = 14	liquid drain cleaner

Figure 7.10: pH scale (www.Itbenvironmentalproject.com)



Figure 7.11: Phenolphthalein test for carbonation of mortar. (L. Hall 2007)



Figure 7.12: Cleopatra's Bedroom framing system. Recycled telephone poles constitute three vertical load bearing members of this structure (only one pole is pictured above). These poles are in direct contact with the cement ground (TSD 2007).



Figure 7.13: Round House load bearing studs and walls (TSD 2007)



Figure 7.14: Round House wood framing, rot and termite damage due to direct contact with damp ground. (TSD 2007)

Appendix B: Long Range Construction Plan

DRAFT

**GRANDMA PRISBREY'S BOTTLE VILLAGE
OUTLINE: LONG RANGE CONSTRUCTION PLAN**
February 21, 2006

Phase I Stabilization and Reopening:

Phase I.A: Stabilization:

1. Shore Roofs and brace wall sections in a manner compliant to local, state, and federal building and preservation ordinances.
2. Create a visitors path through the site that will be the least invasive upon the mosaic walk.

– This work will be conducted by a Certified Structural Engineer with experience in Historic Preservation. Cost: \$50,000.

Phase I.B: Round House Specific project.

Prisbrey's "Round House" structure is a 23' diameter circular building that is embedded three feet into the ground. Of all of the structures onsite, the Round House is the only structure to offer a true experience of Prisbrey's interiors, with light shining through various bottles, as well as small displays of her collections for viewing. The Round House survived the earthquake in better condition than any other structure. Unfortunately, this structure is beginning to disintegrate, with a roof that is beginning to collapse, and wall sections that are decaying. Because it is in relatively good condition (though this is changing fast) the Round House, of all Bottle structures onsite, is of immediate and highest priority for preservation. If the Round House roof can be repaired, and even bottle sections repaired, the structure will also serve as a strong "demonstration piece" and hopefully catalyst for preserving other structures.

Cost: \$20,000-\$35,000

Phase I.B: Site Security.

1. Alarm system, lighting, and fencing that will protect the site from trespassers during closed hours. Cost: \$8,000.

Phase I.C: Reopening Requirements

1. With stabilization completed, apply for appropriate conditional use permits and variances with the City of Simi Valley:
– Retain Preservation consultant knowledgeable to SHBC to negotiate CUP issues with the City (Handicap Access, Parking). Consultant Cost: \$5,000
Variances and CUP application hours and cost: \$4,000.

2. Temporary restroom facility: \$3600./yr. (Or reconnect trailer restroom??
Mel is this possible?)

Phase I Total Cost: \$90,600-\$105,600.

Construction plan draft EG D. Pruf

Phase I Timeline: Months 3-12

Phase I Goals: (1) To stabilize Bottle Village in a manner that is permissible for reopening. (2) To fulfill various administrative, non-construction tasks that will allow for the site to reopen. (3) To preserve and formally allow people into the Round House, which can serve as a demonstration piece for the restoration of other bottle structures.

Phase II: Full-Scale Rehabilitation

For each of the Rehabitable Structures, the process and needs are similar. This process involves the repair, in compliance to all local, state, and federal building and preservation ordinances. Prior to the project, the artifacts within each structure will be relocated.

Missing bottle wall sections would be repaired in a historically accurate manner. Other insufficient components would be replaced, including broken windows, rotted structural, roof, or other wood timbers, and faulty roofs themselves. Each structure would be seismically mitigated to its fullest potential. A thorough Architectural and Engineering Report is completed regarding the process of achieving this.

A qualified Structural Engineer with Historic Preservation experience will be hired to supervise each project, and to interface with the local Building and Safety department.

Related Components: Upon completion of the rehab project, each structure will be thoroughly cleaned.

Additional off-site storage space: \$1,248/yr

The following are a list of structures to be repaired in this appropriate order, with comments included specific to each structure. The Round House, which is of topmost priority, is of topmost priority, and is addressed in Phase I.

II.A: The Rumpus Room

Aside from the Round House, the Rumpus Room Presents the Most intact interior on-site, The structure sustained moderate to serious damage in the 1994 Northridge Earthquake.

Project Cost: \$50,000

II.B: Cleopatre's Bedroom: The Cleopatre's Bedroom structure is the largest onsite structure at Bottle Village. The structure sustained serious damage in the 1994 Northridge Earthquake, with its east wall completely collapsed.
Project Cost: \$75,000.

II.C: The School House, Shell House, Third Pencil House "triad."

These three structures, located at the rear of the property, are connected through shared side walls. Through their front elevations are relatively intact, their east walls sustained heavy onsite damage in the 1994 Northridge earthquake.
Project Cost: \$75,000.

II.D: The Viewing Room.

The viewing room, like the structures mentioned above features an intact west elevation but a disintegrated east wall. Its dominant feature are two large windows that have been broken. The structure the smallest scale freestanding rehabilitate structure on-site.
Project Cost: \$40,000.

Phase II Cost: \$245,000- \$295,000.

Phase II Timeline: Months 12-48.

Phase II Goals: To fully reconstruct the various structures that can be fully reconstructed, and do so in a manner that is compliant to local, state and federal building and preservation ordinances.

Phase III: Landscape Elements

Bottle Village features a variety of contributing landscape elements such as mosaic walks, succulent gardens, teapot and spring "gardens", plus a variety of freestanding sculptures. The Bottle Village landscape component incorporates plants, objects, and assemblages. Most of the Landscape Components at Bottle Village were listed as contributing resources in the successful 1996 National register of Historic Places nomination.

1. Tasks:

Hire a conservator to supervise the restoration of various onsite sculptures. The Sculptures Include the Following, with an Estimated Cost of restoring each in parenthesis: The Small Wishing Well (\$5,000); The Large Wishing Well (\$7,500.); the Dolls Head Shrine (\$2,000); The Shrine to All Faiths (\$5,000); Cactus Garden Walkways and Planters (\$7,000); Heart Shaped Shrine (\$4,000); various headlight planters (\$6,500) The Birdbath (\$3,750); The WaterFall (\$10,000); The Pond (\$4,000); The Leaning Tower of Bottle Village (\$2,000); the Horseshoe Shrine (\$3,000); the Mosaic Walk including site of First Trailer (\$20,000); The Pyramid (\$2,000); The Easter Basket (\$3,500), the Bottle Wall @ west elevation (\$7,000).

Note: The Waterfall, Pond, and Small Wishing Well originally held or featured water, and it is desirable to re-introduce these elements. Waterproofing, and in the case of the waterfall, a reintroduction of a water circulation system is necessary.

The conservator will also supervise the rehabilitation of various objects that comprise onsite outdoors collections. These collections include: The Spring Garden, The Teapot Garden. Total Cost: \$5,000.

A landscape designer will be hired to restore various landscape elements to their appearance during the Period of Significance for the site (1955-1972). This project will include identifying, through archival photographs, various plant specimens originally onsite. Total Cost: \$20,000.

Phase III Cost: \$116,750.

Phase III Timeline: Months 12-48.

Phase III Goals: To rehabilitate contributing landscape resources in a manner that is compliant to local, State, and Federal Site and Preservation Ordinances.

Phase IV: Interpretation and Reconstruction of Significantly Damaged structures

Onsite at Bottle Village are Seven Structures that are more than 50% destroyed, some of which are destroyed completely. Most of these were destroyed during the 1994 Northridge Earthquake. These include the Dolls House, The First and Second Pencil Houses, the Shot House, and the Meditation Room. The Cabana and the Trailer Enclosure were dismantled in under separate circumstances. Because of the severe damage to these structures, there is a legitimate concern of them not retaining their artistic integrity if a rebuilding process was conducted upon them. Therefore, these structures will be partially reconstructed. This will allow for a fair interpretation of their past existence, and will demarcate their historic location and convey Prisbrey's intent.

Costs in Parenthesis regarding the repair of these resources: Doll's House (\$18,000.), First Pencil House (\$7,000), Second Pencil House (\$7,000), Shot House (\$9,000), Meditation Room (\$15,000), Cabana (\$7,500).

Total Phase IV Cost: \$63,500

Phase IV Timeline: Months 12-24.

Phase IV Goals: To partially reconstruct significantly damaged structural resources in a manner that permits a fair visual interpretation of Prisbrey's Creation.

Phase V: Trailer Restoration

The remaining on-site trailer is a metal, c.1960 Royal Spartanette; now a collector's item in its own right. Prisbrey lived in this trailer from 1960 onward, as did her second husband, Al Prisbrey, until his death in 1968. The original paint scheme of the interior was white. The trailer has

sustained minor to moderate wear over time. Phase VI would repair the wear to the trailer, with the possible option of restoring water and sewage service to the trailer. A conservationist would be necessary for this restoration project, and an architect or contractor will be necessary to reintroduce the water and sewage components to the trailer. If the sanitation systems are feasible to ADA, and other municipal standards, the trailer may serve as a temporary office and restroom facility.

Restoration Cost, including labor and professional Fees: \$20,000.

Contractor cost, labor, and supplies for water and sewage services: \$10,000.

Total Phase V cost: \$30,000.

Phase V Timeline: Months 12 to 24.

Phase V Goals: To Restore the Prisbrey Trailer to its appearance during Bottle Village period of Significance (1955-1972), and to present permanent water and restroom facilities on-site.

Phase VI: Object Restoration, Part I

Within various Bottle structures were Prisbrey's numerous created and/or collected objects; these objects were Prisbrey's stated purpose for Bottle Village construction in the first place. Such objects range from dolls that Prisbrey found and made clothes for, pencil collages, decorated whiskey bottles, seashell collages, and much more. Phase IV proposes to clean and restore a select few pieces from Prisbrey's collections. The objects restored would be those that currently retain the most integrity, and only a limited number of each. Such objects would include: five dolls, five decorative whiskey bottles, five pencil collages, two seashell lampshades, two diamond collages, one swizzle stick collection. Included also in this phase would be the simple cleaning of various Prisbrey objects that do not need restorative attention.

Phase VI Cost: \$50,000

Phase VI Timeline: Months 24-60

Phase VI Goals: To present a sample of, in excellent condition, the best remaining examples of Prisbrey's hand-constructed objects and other accumulated collections.

Phase VII: Object Restoration, Part II

As mentioned in phase IV, Prisbrey collected or made numerous small-scale objects of various types. Most often these involved working with a variety of found objects. The variety of objects within Prisbrey's

collections are numerous; there are over 100 boxes of artifacts in storage already. Many of these stored objects may be deemed impossible to restore as many have severe damage. Other objects, even in fragment, may be deemed worthy of display or study as examples of post-WWII urban archaeology; forgotten mass-produced objects and the forgotten companies associated with them. Grants may be written to restore a cluster of like objects, or individual objects if desired.

Phase VII Cost: \$250,000

Phase VII Timeline: Months 36-96

Phase VII Goals: To restore as many remaining objects as possible of Prisbrey's created and/or collected objects.

Phase VIII: Construct on-site visitors center


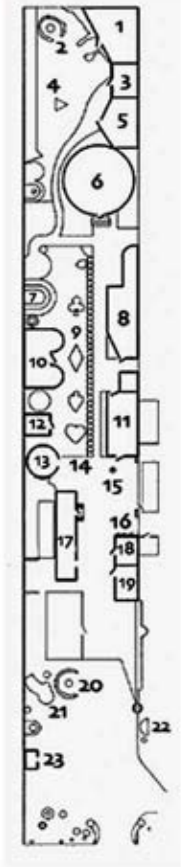
The perimeters of such a structure, and its possible uses are flexible at this time. At the minimum, the Visitors Center would include a set of restrooms and a front desk. Other possible components include a small library, an office, or a space for artwork or educational activities. Ideally the Visitors Center would be of sound design, yet one that does not overwhelm Prisbrey's Creation.


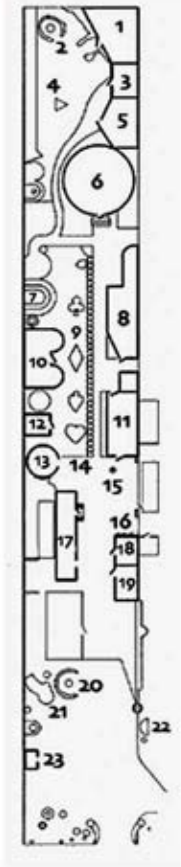
Phase VIII Cost: 2.0 to 5.0 million dollars.


Phase VIII Timeline: Months 48 to 96.


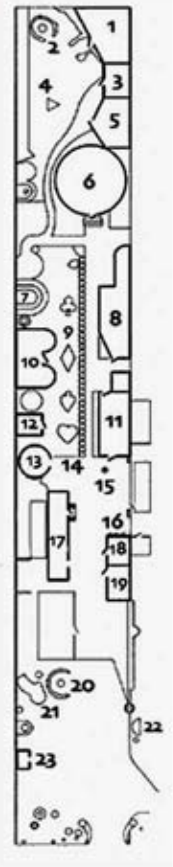
Phase VIII Goals: To complete the construction of a well-designed and operable on-site visitor's center.


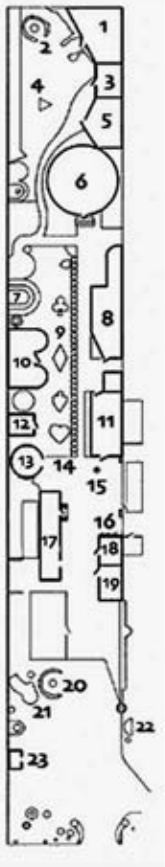
Appendix C: Conditions Survey Form


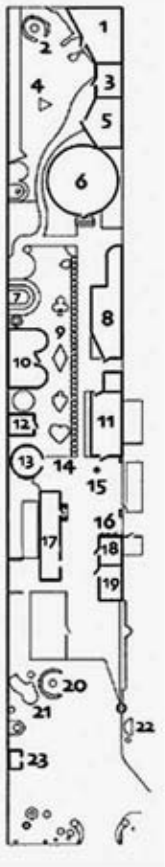
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Structure:	<input type="text" value="Round House, # 6, exterior"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Platform construction, flat wood roof, bottle masonry"/>			 Bottle Village - Image		
Dimensions:	<input type="text"/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
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Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
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Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
Roof						
Metal						
Corrosion	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
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Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Notes						
- Very good condition - Structurally stable - Minor loss of bottles - Rot and termite damage in wood studs, some areas exhibit complete loss - Moderate roof deformation						


Date:	<input type="text" value="7 March 2007"/>	Time:	<input type="text" value="16:29"/>	Grandma Prisbrey's Bottle Village		
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Structure:	<input type="text" value="Round House, # 6, interior"/>	<input type="button" value="Print Form"/>				
Type:	<input type="text" value="Platform construction, flat wood roof, bottle masonry"/>					
Dimensions:	<input 273"="" h,="" type="text" value="88" w"=""/>	Bottle Village - Image				
Overall Condition	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar						
Cracking	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
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Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
Roof						
Metal						
Corrosion	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Notes						
<ul style="list-style-type: none"> - Very good condition - Structurally stable - Extreme termite damage in joists and studs, complete loss in specific areas - Severe deformation of flat wood roof (replaced in early 1990's) - 						


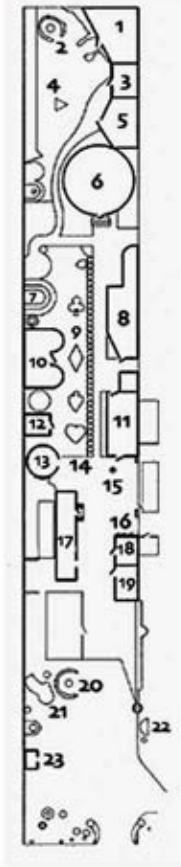
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Type:	<input type="text" value="Unreinforced platform construction, pitched roof, bottle masonry"/>			 Bottle Village - Image		
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Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
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Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
Roof						
Metal						
Corrosion	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Notes <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> - Detached corrugated metal roof sheets in NE and NW corners - Bottles exhibit white accretion/film; possible crizzling? - Rotting & checking of wood on joists </div>						


Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="12:45"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze N, 72 - 75 F"/>			4595 Cochran Street Simi Valley, CA Ventura County, USA 34 N, 118 W		
Structure:	<input type="text" value="Rumpus Room, # 11, South facade"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Unreinforced platform construction, pitched roof, bottle masonry"/>				Bottle Village - Image	
Dimensions:	<input 1="" 157="" 4"="" h,="" type="text" value="122" w"=""/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 0
Mortar						
Cracking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Roof						
Metal						
Corrosion	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
						
Notes						
<ul style="list-style-type: none"> - Overall condition fair - Massive detachment in framing and joins - Integrity poor; > 50% - Detachment of wood frame at joins - Corrugated metal roof (sheet) detachment in SE corner 						


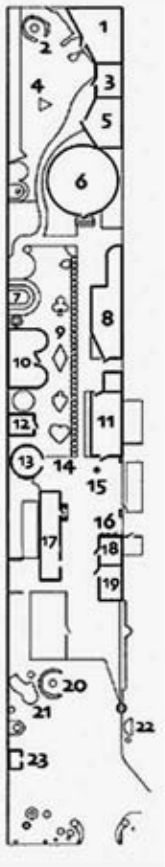
Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="13:58"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze N, 75 F"/>			4595 Cochran Street Simi Valley, CA Ventura County, USA 34 N, 118 W		
Structure:	<input type="text" value="Rumpus Room, # 11, East facade"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Unreinforced platform construction, pitched roof, bottle masonry"/>			 <p>Bottle Village - Image</p>		
Dimensions:	<input type="text" value="238 1/4" w"=""/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar Cracking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Roof						
Metal						
Corrosion	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
Notes						
<ul style="list-style-type: none"> - Bottle covered with whitish accretion/film; possible crizzling? - Some bottle masonry loss - Loss of fascia - Overall good condition 						


Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="13:17"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze N, 72 - 75 F"/>			4595 Cochran Street Simi Valley, CA Ventura County, USA 34 N, 118 W		
Structure:	<input type="text" value="Rumpus Room, # 11, West facade"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Unreinforced platform construction, pitched roof, bottle masonry"/>					
Dimensions:	<input 236"="" h,="" type="text" value="97 1/2" w"=""/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar Cracking	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Roof						
Metal						
Corrosion	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
Notes						
<ul style="list-style-type: none"> - Good to fair condition - Deformation of bottle masonry, especially on NW area of west facade - Severe loss and cracking of bottle masonry in NW area of west facade - Checking of wood eaves - Detached metal sheet in NW corner of roof; threat of imminent loss 						


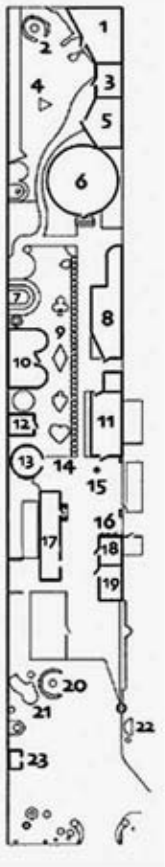
Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="15:35"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze N, 75 F"/>			4595 Cochran Street Simi Valley, CA Ventura County, USA 34 N, 118 W		
Structure:	<input type="text" value="Cleopatra's Bedroom, # 8, N facade"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Platform construction, sloped roof, bottle masonry"/>			 Bottle Village - Image		
Dimensions:	<input 149"="" h,="" type="text" value="112" w"=""/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar						
Cracking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Roof						
Metal						
Corrosion	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
				Total	<input type="text"/>	
				Notes		
				- Wooden truss exhibits severe deformation, threat of imminent collapse - Major loss of bottle masonry - NE "telephone pole" exhibits severe checking, rot/termite damage (difficult to access)		


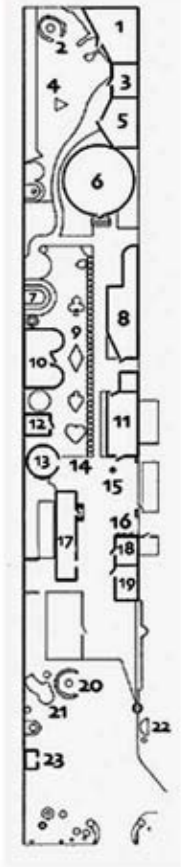
Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="14:40"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze N, 75 F"/>					
Structure:	<input type="text" value="Cleopatra's Bedroom, #8, South facade"/>					
Type:	<input type="text" value="Platform construction, sloped roof, bottle masonry"/>					
Dimensions:	<input 93"="" h,="" type="text" value="94" w"=""/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
	 Bottle Village - Image					
<input type="button" value="Print Form"/>						
						
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar						
Cracking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input type="text"/>						
Roof						
Metal						
Corrosion	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Notes						
- Good condition - Friable mortar - Mortar detachment from bottles						


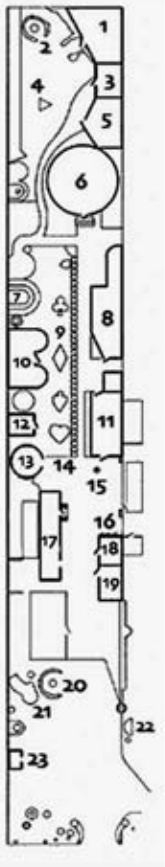
Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="15:50"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze, 72 F"/>			4595 Cochran Street Simi Valley, CA Ventura County, USA 34 N, 118 W		
Structure:	<input type="text" value="Cleopatra's Bedroom, # 8, East facade"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Unreinforced coarse bottle masonry (bottle wall along east edge of property)"/>			 Bottle Village - Image		
Dimensions:	<input type="text" value="N/A"/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar						
Cracking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
Roof						
Metal						
Corrosion	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Notes <div style="border: 1px solid black; height: 100px; width: 100%;"></div>						

Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="15:14"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze N, 74 F"/>			4595 Cochran Street Simi Valley, CA Ventura County, USA 34 N, 118 W		
Structure:	<input type="text" value="Cleopatra's Bedroom, # 8, West facade"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Unreinforced platform construction, bottle masonry, sloped roof"/>			 Bottle Village - Image		
Dimensions:	<input 253"="" h,="" type="text" value="113" w"=""/>					
Overall Condition:	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity:	<input checked="" type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar Cracking	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
Roof						
Metal						
Corrosion	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Notes						
- Fair condition - Some detachment of mortar along framing - Good framing, rot & termite damage evident in "telephone poles"						

Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="16:22"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze N, 74 F"/>			4595 Cochran Street Simi Valley, CA Ventura County, USA 34 N, 118 W		
Structure:	<input type="text" value="Viewing Room, # N/A, North facade"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Unreinforced platform construction, wood planking, flat roof"/>			 Bottle Village - Image		
Dimensions:	<input type="text" value="N/A"/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar						
Cracking	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
Roof						
Metal						
Corrosion	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Notes <div style="border: 1px solid black; height: 100px; width: 100%;"></div>						

Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="16:34"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze N, 72 F"/>			4595 Cochran Street Simi Valley, CA Ventura County, USA 34 N, 118 W		
Structure:	<input type="text" value="Viewing Room, # N/A, South facade"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Unreinforced platform construction, bottle masonry, flat roof (N facade of Cleo Bedroom)"/>			 <p>Bottle Village - Image</p>		
Dimensions:	<input type="text" value="N/A"/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input checked="" type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar Cracking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Roof						
Metal						
Corrosion	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
Notes <div style="border: 1px solid black; height: 100px; width: 100%;"></div>						

Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="16:39"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze N, 72 F"/>			4595 Cochran Street Simi Valley, CA Ventura County, USA 34 N, 118 W		
Structure:	<input type="text" value="Viewing Room, # N/A, East facade"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Unreinforced coarse bottle masonry (bottle wall along east edge)"/>			 Bottle Village - Image		
Dimensions:	<input type="text" value="N/A"/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input checked="" type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar Cracking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total <input style="width: 50px;" type="text"/>						
Roof						
Metal						
Corrosion	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Notes						
- East facade is bottle wall along east edge of property - Some cracking in mortar - No visible deformation of mortar						

Date:	<input type="text" value="6 March 2007"/>	Time:	<input type="text" value="16:07"/>	Grandma Prisbrey's Bottle Village		
Weather:	<input type="text" value="Sunny, slight breeze N, 72 F"/>			4595 Cochran Street Simi Valley, CA Ventura County, USA 34 N, 118 W		
Structure:	<input type="text" value="Viewing Room, # N/A, West facade"/>			<input type="button" value="Print Form"/>		
Type:	<input type="text" value="Platform construction, flat roof, bottle masonry"/>				Bottle Village - Image	
Dimensions:	<input 1="" 171="" 8"="" h,="" type="text" value="84" w"=""/>					
Overall Condition	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Overall Integrity	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Poor			
Walls						
Glass Bottles Broken	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Mortar						
Cracking	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Friable	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Framing (wood)						
Checking	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Collapse	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Rot & Termite	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Roof						
Metal						
Corrosion	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Wood						
Deformation	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Detachment	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Missing	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Total		<input type="text"/>				
						
Notes						
<ul style="list-style-type: none"> - West facade exhibits good condition and integrity - Asphalt sheeting on roof partially missing - No visible detachment or friability of mortar - Perhaps last structure built 						

Appendix D: Damage Atlas

Glass

Damage Atlas 3.2007

Type of Damage

Broken

Partial loss of 60% or less, or damage of the container. Discontinuous form and lacking in completeness from fragmentation.



Missing

At least 59% loss or more, or total absence of the container.



Mortar

Type of Damage

Cracking

Partial or complete fractures of varying width, depth and orientation. Fractures may be minor (network cracking), moderate or severe (deformation-displacement) in regards to structural performance



Missing

Complete or partial loss of at least 60% or more of the mortar matrix.



Mortar

Type of Damage

Friability

Loss of mortar cohesion between binder and aggregates resulting in granular disintegration. The material is easily reduced to a powder to the touch.



Mortar

Type of Damage

Deformation

Curve-like deviation from the original form of the masonry wall due material interface detachment from compression stress over time, or shear/lateral stress due to seismic activity.



Detachment

Partial or complete loss of bond between the glass and mortar matrix, or between the mortar and frame.



Framing

Type of Damage

Checking

Lengthwise splits and cracks in the wood members due to expansion and contraction from heat and humidity during seasonal fluxuations.



Rot/Termite

The decomposition of the wood from biological agents resuting in discoloration, softening and loss of structural integrity.



Framing

Type of Damage

Missing

Full or partial loss of 60% or or more of the wood frame resulting in structural instability.



Collapse

Complete failure of a framing system.



Framing

Type of Damage

Deformation

Movement of structural members or assemblies resulting in bending, warping, and dislocation.



Detachment

The partial or complete release of a framing connection from the original placement resulting in inadequate and uneven displacement of load, loosening of the frame, and structural instability.



Roof

Type of Damage

Corrosion

The chemical and eletrochemial reaction between the metal and the surrounding environment which produces deterioration of the metal and it's inherent properties.



Missing

Absence of 59% or less of the roofing material. Characteristics include discontinuous form and lacking in completeness. Some areas exhibit total absence of the roof.



Roof

Type of Damage

Deformation

Deviation from the original form of the roof due to material live load or exceedence of material performance resulting in structural stability.



Detachment

Partial or total release of any roof component resulting in a disconnect from the frame.

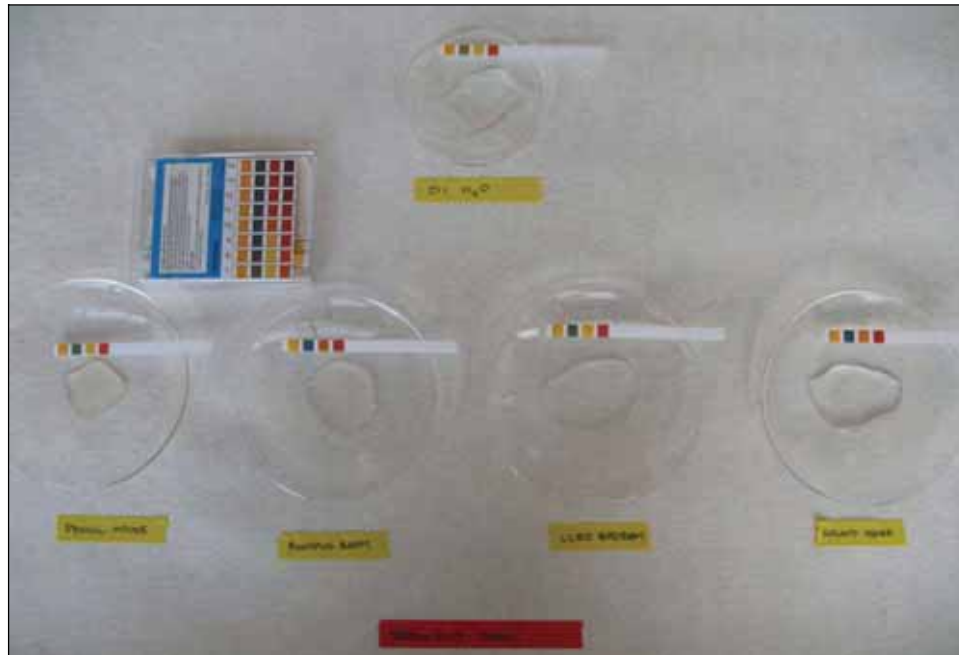


Appendix E: Material Analysis

Test for Carbonation and Alkalinity

Sample	pH
DI H ₂ O	7
Pencil House	6.9 -7.2
Rumpus Room	9.5
Cleopatra's Bedroom	6.9 – 7.2
Round House	9.5

pH test with mortar solution



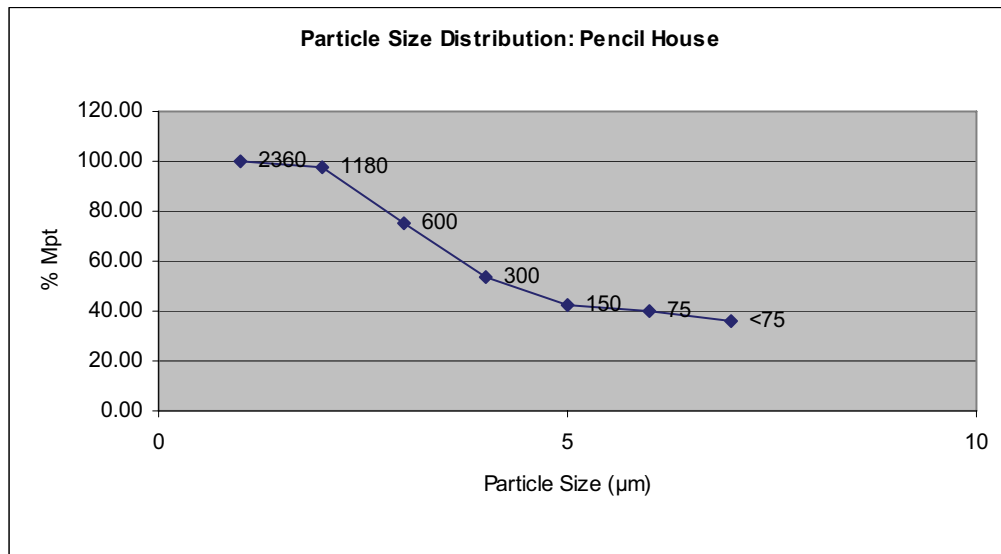
Whatman pH strip test & DI H₂O mortar solution.



Visual observation of samples

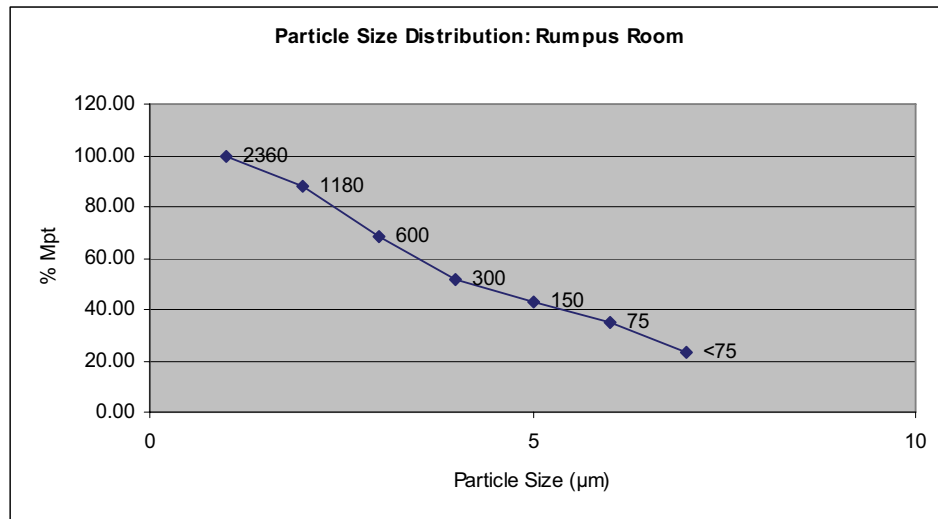
Gravimetric Mortar Analysis

Pencil House (ca. 1955-1956)						
Sieve Number	Screen Size (microns)	Ms+c (Sample & Container) (g)	Mr (Ms - Mc) (g)	%Mr	%Mrt	%Mpt
8	2360	2.02	0.09	0.37	0.37	99.63
15	1180	2.35	0.42	1.73	2.10	97.90
30	600	7.43	5.5	22.70	24.80	75.20
50	300	7.22	5.29	21.83	46.64	53.36
100	150	4.58	2.65	10.94	57.57	42.43
200	75	2.43	0.5	2.06	59.64	40.36
Pan	<75	3.01	1.08	4.46	64.09	35.91



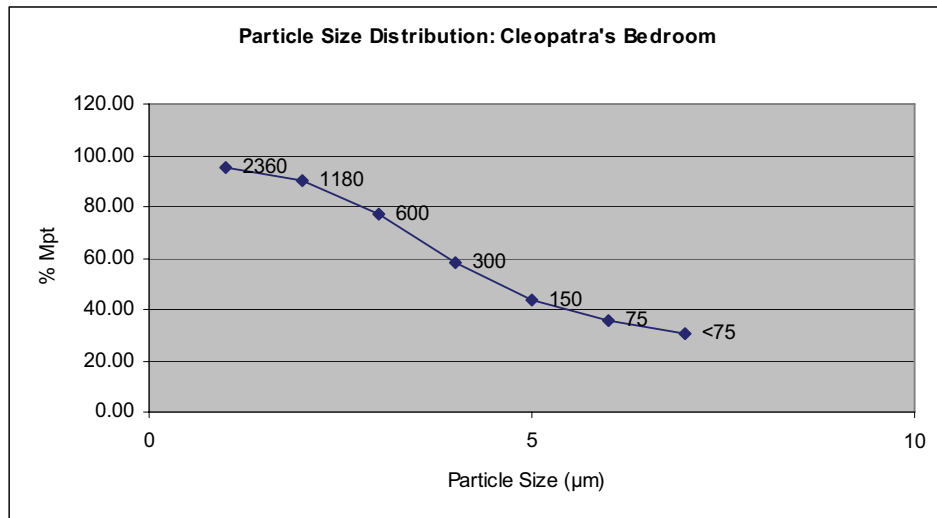
Grandma Prisbrey's Bottle Village University of Pennsylvania, M.S. Historic Preservation: Thesis			
<u>MORTAR ANALYSIS</u>			
Project/Site :	Grandma Prisbrey's Bottle Village		
Location :	Simi Valley, CA	Date Sampled :	6-Mar-07
Analysis Performed By :	Teresa S. Duff	Date Analyzed:	29-Mar-07 to 4-April -07
DESCRIPTION OF SAMPLE			
Type/Location :	Pencil House, W façade	Sample No.	N/A
Surface Appearance :	varying size voids, large to small particles		
Cross Section :	No visible layers, no inclusions		
Color :	light gray	Texture:	Semi-rough (120 grit)
Hardness :	3	Gross Wgt.:	24.23g
COMPONENTS			
Fines :	Color : white	Wgt.:3.7g	Wgt. %: 11%
	Organic Matter : None noted		
	Composition :		
Acid Soluble Fraction :	Wgt : 7.12g	Wgt. %: 11%	
	Desc. of reaction : moderate reaction to HCl, some effervescence with small bubbles	Filtrate Color: greenish yellow	
	Composition :		
Aggregate :	Color :grayish white	Wgt.: 15.79g	Wgt. %: 65%, Vol%: 61%
	Grain Shape : sub-angular to sub-rounded		
	Mineralogy : Predominately quartz		
	Sieve analysis :	<u>Screen</u>	<u>% Retained</u>
		8	1.7
		16	10.06
		30	19.75
		50	16.74
		100	8.91
		200	1.74
		pan	5.27

Rumpus Room (ca. 1955-1956)						
Sieve Number	Screen Size (microns)	M_{s+c} (Sample & Container) (g)	M_r ($M_s - M_c$) (g)	% M_r	%Mrt	%Mpt
8	2360	2.45	0.52	1.70	0.16	99.84
15	1180	5	3.07	10.06	11.76	88.24
30	600	7.96	6.03	19.75	31.51	68.49
50	300	7.04	5.11	16.74	48.25	51.75
100	150	4.65	2.72	8.91	57.16	42.84
200	75	2.46	0.53	1.74	65.21	34.79
Pan	<75	3.54	1.61	5.27	76.81	23.19



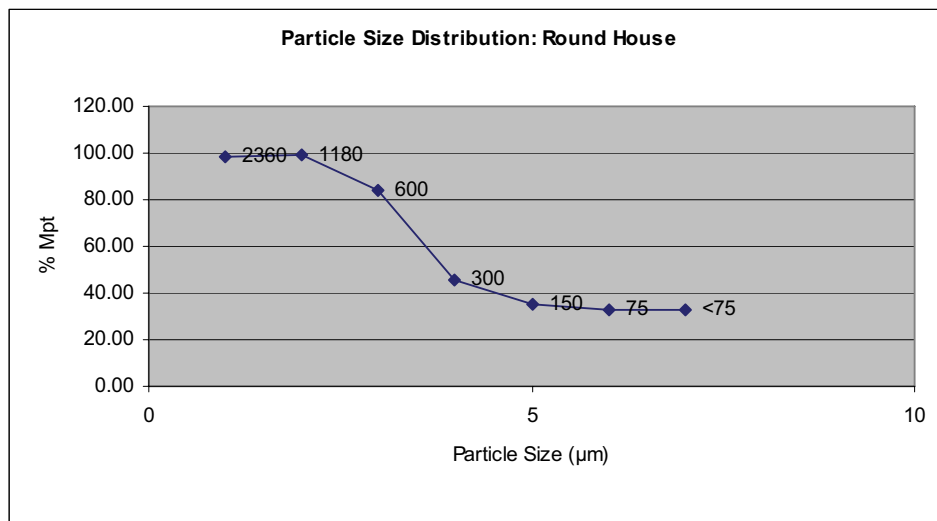
Grandma Prisbrey's Bottle Village University of Pennsylvania, M.S. Historic Preservation: Thesis			
<u>MORTAR ANALYSIS</u>			
Project/Site :	Grandma Prisbrey's Bottle Village		
Location :	Simi Valley, CA	Date Sampled :	6-Mar-07
Analysis Performed By :	Teresa S. Duff	Date Analyzed:	29-Mar-07 to 4-April -07
DESCRIPTION OF SAMPLE			
Type/Location :	Rumpus Room, W façade	Sample No.	N/A
Surface Appearance :	Dark gray, some small voids, rough, large, lumpy particles, large inclusion of green & white		
Cross Section :	No visible layers, no inclusions		
Color :	dark gray	Texture:	Rough (80 grit)
Hardness :	5	Gross Wgt.:	30.53g
COMPONENTS			
Fines :	Color : light gray/pinkish	Wgt.:3.7g	Wgt. %: 12%
	Organic Matter : None noted		
	Composition :		
Acid Soluble Fraction :	Wgt : 7.12g		Wgt. %: 24%
	Desc. of reaction : moderate reaction to HCl, some effervescence with small bubbles		Filtrate Color : greenish yellow
	Composition :		
Aggregate :	Color :5Y-7/3	Wgt.:19.71g	Wgt. %: 64%, Vol%: 48%
	Grain Shape : sub-angular (small) to sub-rounded (large)		
	Mineralogy : Predominately quartz		
	Sieve analysis :	Screen	% Retained
		8	1.7
		16	10.06
		30	19.75
		50	16.74
		100	8.91
		200	1.74
		pan	5.27

Cleopatra's Bedroom (ca. 1957-1958)						
Sieve Number	Screen Size (microns)	Ms+c (Sample & Container) (g)	Mr (Ms - Mc) (g)	%Mr	%Mrt	%Mpt
8	2360	2.99	1.06	4.63	4.63	95.37
15	1180	3.2	1.27	5.55	10.18	89.82
30	600	4.91	2.98	13.02	23.20	76.80
50	300	6.16	4.23	18.48	41.68	58.32
100	150	5.35	3.42	14.94	56.62	43.38
200	75	3.7	1.77	7.73	64.35	35.65
Pan	<75	3.03	1.1	4.81	69.16	30.84



Grandma Prisbrey's Bottle Village University of Pennsylvania, M.S. Historic Preservation: Thesis			
<u>MORTAR ANALYSIS</u>			
Project/Site :	Grandma Prisbrey's Bottle Village		
Location :	Simi Valley, CA	Date Sampled	6-Mar-07
Analysis Performed By :	Teresa S. Duff	Date Analyzed:	29-Mar-07 to 4-April -07
DESCRIPTION OF SAMPLE			
Type/Location :	Cleopatra's Bedroom, S façade	Sample No.	N/A
Surface Appearance :	very small voids, small particles, extremely friable to the touch		
Cross Section :	No visible layers, no inclusions		
Color :	dark white/light gray	Texture:	Friable (220 grit)
Hardness :	2	Gross Wgt.:	22.89g
COMPONENTS			
Fines :	Color : white/off-white	Wgt.:3.26g	Wgt. %: 14%
	Organic Matter : None noted		
	Composition :		
Acid Soluble Fraction :	Wgt : 3.8g		Wgt. %: 17%
	Desc. of reaction : moderate reaction to HCl, some effervescence with small bubbles		Filtrate Color : greenish yellow
	Composition :		
Aggregate :	Color :5Y-8/2, 5Y-7/2	Wgt.:15.83g	Wgt. %: 69%
	Grain Shape : sub-angular (small) to sub-rounded (large)		
	Mineralogy : Predominately quartz		
	Sieve analysis :	Screen	% Retained
		8	4.63
		16	5.55
		30	13.02
		50	18.48
		100	14.94
		200	7.73
		pan	4.81

Round House (ca. 1957-1958)						
Sieve Number	Screen Size (microns)	Ms+c (Sample & Container) (g)	Mr (Ms - Mc) (g)	%Mr	%Mrt	%Mpt
8	2360	1.98	0.05	0.28	1.49	98.51
15	1180	2.15	0.22	1.21	1.18	98.82
30	600	4.6	2.67	14.74	16.23	83.77
50	300	9	7.07	39.02	54.64	45.36
100	150	3.76	1.83	10.10	64.63	35.37
200	75	2.22	0.29	1.60	66.94	33.06
Pan	<75	1.99	0.06	0.33	67.27	32.73



University of Pennsylvania, M.S. Historic Preservation: Thesis			
<u>MORTAR ANALYSIS</u>			
Project/Site :	Grandma Prisbrey's Bottle Village		
Location :	Simi Valley, CA	Date Sampled:	6-Mar-07
Analysis Performed By :	Teresa S. Duff	Date Analyzed:	29-Mar-07 to 4-April -07
DESCRIPTION OF SAMPLE			
Type/Location :	Round House, SW façade	Sample No.	N/A
Surface Appearance :	very dark gray, small inclusions		
Cross Section :	No visible layers, small voids prevalent		
Color :	dark grayish sand, white sand, quartz particles	Texture:	semi-smooth (120 grit)
Hardness :	unknown	Gross Wgt.:	18.12g
COMPONENTS			
Fines :	Color : very light gray	Wgt.:1.22g	Wgt. %: 6%
	Organic Matter : None noted		
	Composition :		
Acid Soluble Fraction :	Wgt : 4.64g	Wgt. %: 25%	
	Desc. of reaction : moderate reaction to HCl, some effervescence with small bubbles	Filtrate Color : greenish/yellow	
	Composition :		
Aggregate :	Color :5Y-8/2, 5Y-7/1	Wgt.:12.26g	Wgt. %: 67%, Vol% N/A
	Grain Shape : sub-angular to sub-rounded		
	Mineralogy : Predominately white & smokey quartz, citrine		
	Sieve analysis :	<u>Screen</u>	<u>% Retained</u>
		8	0.28
		16	1.21
		30	14.74
		50	39.02
		100	10.1
		200	1.6
		pan	0.33

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