Three Farewells to Manzanar

The Archeology of Manzanar National Historic Site, California

Part I

by
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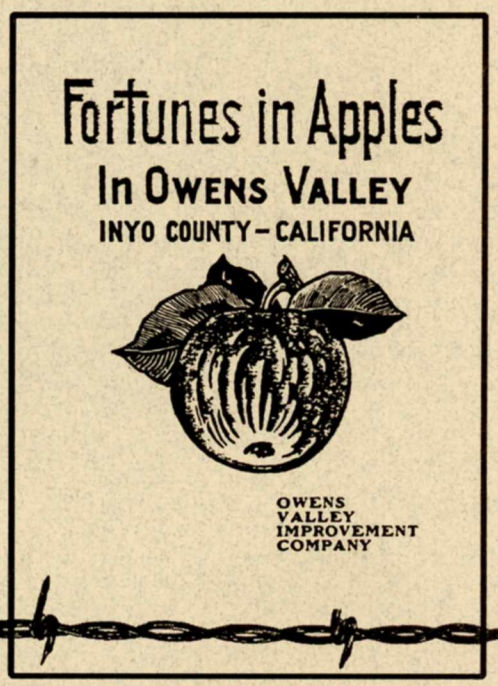

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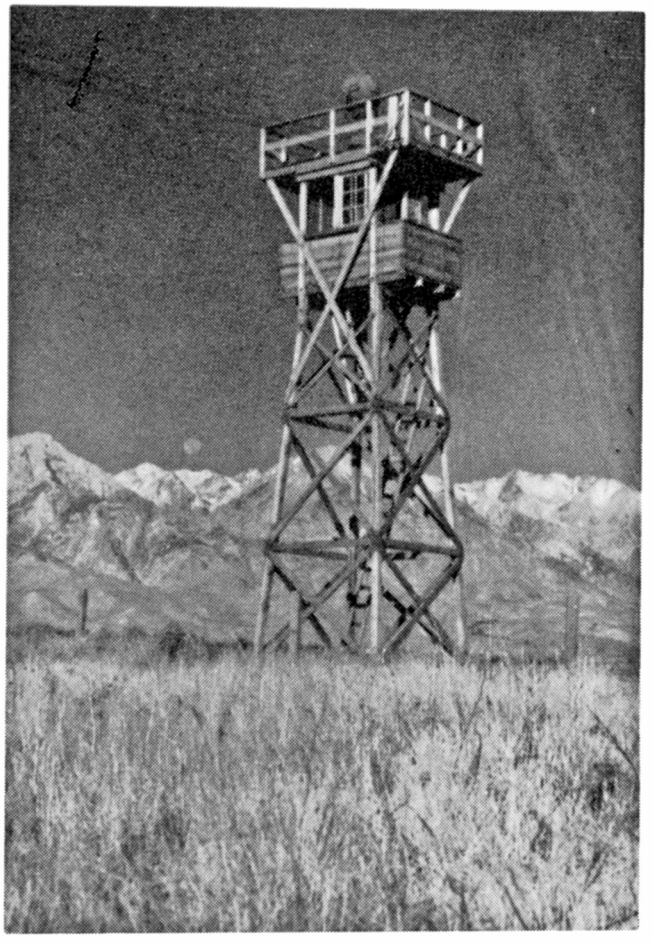

History, despite its wrenching pain,
Cannot be unlived, but if faced
With courage, need not be lived again.

Maya Angelou
On the Pulse of Morning
Inaugural Poem 1993

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PROJECT SUMMARIES

WACC Project Number: MANZ 1993 A.
Type of Project: Archeological survey.
Field Director: Jeff Burton.
Project Archeologists: Geri Antone, Lynne D'Ascenzo, Elaine Guthrie, and Jenny Waters.
Volunteers: Dick and Florence Lord.
Field Work Dates: April 6–30, 1993.
Person-days in Field: 140.
Project Location: Manzanar National Historic Site.
Project Scope: 670 acres within and outside the National Historic Site were intensively surveyed; 37 sites were recorded.
National Register Status: Manzanar Relocation Center listed July 30, 1979.
Collections Accession Information: MANZ Acc. No. 3, WACC Acc. No. 877, Photograph Acc. No. 93:4.

WACC Project Number: MANZ 1993 B.
Type of Project: Archaeological survey and testing.
Field Director: Jeff Burton.
Project Archeologists: Geri Antone, Ron Beckwith, Lynne D'Ascenzo, Elaine Guthrie, Laura Valdez, and Jenny Waters.
Volunteers: Dick and Florence Lord.
Field Work Dates: October 18–November 6, 1993.
Person-days in Field: 159.
Project Location: Manzanar National Historic Site.
Project Scope: 680 acres outside the National Historic Site boundaries were intensively surveyed; 36 sites were recorded. Within the National Historic Site, plane table and alidade mapping was completed at five relocation center features, controlled surface collections were made at five residential blocks and two town-era trash dumps, and twenty-six 1 m by 1 m units were excavated at four Native American Indian sites, four town-era sites, and three relocation center trash deposits.
National Register Status: Manzanar Relocation Center listed July 30, 1979.
Collections Accession Information: MANZ Acc. No. 4, WACC Acc. No. 876, Photograph Acc. No. 94:7.

WACC Project Number: MANZ 1994 A
Type of Project: Monitoring and site recording.
Field Director: Jeff Burton.
Project Archeologists: None.
Volunteers: Dick and Florence Lord.
Field Work Dates: March 16-18, 1994.
Person-days in Field: 5.
Project Location: Manzanar National Historic Site.
Project Scope: Ten acres were surveyed while recording six sites outside the National Historic Site.
National Register Status: Manzanar Relocation Center listed July 30, 1979.
Collections Accession Information: Photograph Acc. No. 94:8.

WACC Project Number: MANZ 1995 A.
Type of Project: Mapping and site recording.
Field Director: Jeff Burton.
Project Archeologists: Ron Beckwith and Erica Young.
Volunteers: Dick and Florence Lord.
Field Work Dates: April 28–May 12, 1995.
Person-days in Field: 53.
Project Location: Manzanar National Historic Site.
Project Scope: Ten acres were surveyed while recording three sites outside the National Historic Site. Within the National Historic site plane table and alidade mapping was completed at ten relocation center features.
National Register Status: Manzanar Relocation Center listed July 30, 1979.
Collections Accession Information: Photograph Acc. No. 95:9.

Frontispiece: Watch tower at Manzanar Relocation Center (Toyo Miyatake photograph, courtesy of the Eastern California Museum).

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Abstract

This report presents the results of archeological investigations at Manzanar National Historic Site in the Owens Valley of eastern California. The Manzanar Relocation Center was one of ten such facilities at which Japanese American citizens and Japanese immigrants were interned during World War II. The archeological work was designed to inventory and evaluate all historical and prehistoric archeological resources within the National Historic Site, as well as other archeological resources near the National Historic Site related to the relocation center. Three major categories of remains were encountered: (1) those associated with the Manzanar Relocation Center; (2) those associated with the early twentieth century abandoned Manzanar townsite; and (3) those associated with late prehistoric and early historical Native American Indian use of the area. In all, 15 Native American Indian sites, dozens of sites and features associated with the townsite and earlier ranches, and all of the known features of the relocation center have been fully recorded. This project also included test excavation at four of the Native American Indian sites, four sites associated with the town of Manzanar, and three relocation center features. In spite of historical and recent disturbance, the preservation of features and artifacts is far better than initially evident. Each of the identified components was found to have excellent archeological and interpretive potential.

マンザナー へろつの送別
マンザナー 国立歴史上の遺跡の考古学

この記事はカリフォルニア東部のマンザナー国立歴史跡の考古学的な調査結果を紹介したものです。マンサナー強制収容所は日系アメリカ人と日本からの移民が第二次世界大戦中に収容された１０の収容所の一つです。この考古学的な仕事は国立歴史跡内にあるすべての歴史的な、また有史以前の発掘物、そしてこれらと共に収容所と関係のある他の発掘物を目録したり、評価したりするために計画されました。この作業によってろつの主要な遺物のカテゴリーが発見されました。(1)強制収容所と関係のある遺物。(2)２０世紀初期に荒廃したマンザナーの町に関係のあるもの。(3)有史以前と以後の時代にアメリカインディアンが使用にいた場所と関係のあるもの。すべてのアメリカインディアンの１４の遺跡、マンザナー町遺跡と初期の牧場と関係のある多数の遺跡と遺跡物、そしてよく知られている収容所はすべて記録されています。この計画にはアメリカインディアンの4つの跡での試験的な発掘、マンザナー町に関係のある4つの遺跡、ろつの強制収容所の遺跡物での発掘が含まれていました。歴史的な、また近年の妨害にもかかわらず、遺跡物と古器物は発掘当初検証されたものより、はるかによく保存されています。確認されたそれぞれの遺跡物は考古学上の解釈にすぐれている可能性があることが発見されました。

Acknowledgments

Many people and organizations contributed to the completion of this report. Manzanar National Historic Site superintendent Ross Hopkins provided support and enthusiasm as well as supplemental funding. Tom Mulhern of the National Park Service's Western Regional Office (WRO) facilitated much of the early funding for this project. Roger Kelly, also of the WRO, provided initial support and suggestions for research. Permits for the archeological work were obtained from the Los Angeles Department of Water and Power and the Bureau of Land Management.

Field work was completed by Western Archeological and Conservation Center (WACC) archeologists Geri Antone, Ron Beckwith, Lynne D'Ascenzo, Elaine Guthrie, Laura Valdez, Erica Young, and Jenny Waters. Ron, Lynne, and Jenny also supervised. Again, I am indebted to volunteers Richard and Florence Lord, who contributed their time, expertise, equipment, and supplies to shoot and process the thousands of field photographs this project required.

Bill Michael, Director of the Eastern California Museum, was extremely generous with his time and resources, providing information as well as access to files about the relocation center and earlier occupations at Manzanar. Personnel at the following institutions also provided information: the University of California, Los Angeles, Special Collections; the University of Arizona, Special Collections; the National Archives; the Los Angeles Department of Water and Power; and the Inyo County Courthouse. The Los Angeles Times, the UCLA Geography Department, the Eastern California Museum, and Archie Miyatake gave permission to include historical photographs used in this report. Others who provided information or help during the course of the project include Ed Addeo, Keith Bright, Gordon Chappell, Julia Costello, Martha Davis, Mary DeDecker, R.E. Ellingwood, Sue Embrey, John Foster, Dan Fowler, Linda Greene, Curtis Gunn, W.W. Hastings, Paula Hubbard, Ron Izumita, Jim Kubota, Pete Kreider, Don Laylander, Gann Matsuda, Pete Merritt, Jr., Vernon Miller, Momoko Murakami, Patti Novak, Rose Ochi, Mas Okui, Dan Olsen, Jeff Reid, Ron Reno, Glenn Singley, Richard Stewart, Judy Torduff, Richard Weaver, and Bill Woodward.

Geri Antone and Lynne M. D'Ascenzo completed initial artifact processing. Ron Beckwith drafted most of the maps and drawings. Erica Young inked the figures in Appendix A. Dick and Florence Lord produced the artifact photographs and prints. The following people contributed chapters, sections, or appendices: Lynne D'Ascenzo, Irene Cohen, Mary Farrell, Elaine Guthrie, Richard Hughes, Takeshi Inomata, Teresita Majewski, Thomas Origer, Lynn Rogers, Wilber Sato, Jennifer Waters, and Jane Wehrey. Beta Analytic provided the radiocarbon dating analysis.

Others at WACC aided in the completion of this project. Keith Anderson provided initial direction. As project supervisor, George Teague's patience and flexibility allowed the report's completion. Steve Baumann, Ron Beckwith, Greg Fox, and Sue Wells provided technical and logistical support. Hank Baron, Debbie Deboutez, and Angela Nava took care of administrative tasks. Librarian Johanna Alexander hunted down many obscure references.

Gordon Chappell, Ross Hopkins, Roger Kelly, Tom Mulhern, Glenn Singley, and George Teague provided valuable comments on the draft final report, which was edited by Marci Donaldson. The Japanese language abstract is the product of the combined efforts of Erika Unangst and Ryoji Ouchi.

To these, and as always to my wife Mary and son Daniel, many thanks.

Jeff Burton

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Chapter 1

Introduction

Between April 1993 and May 1995, National Park Service archeologists from the Western Archeological and Conservation Center in Tucson, Arizona, conducted archeological investigations at Manzanar National Historic Site. This report presents the results of that work.

Manzanar National Historic Site was authorized by Congress on March 3, 1992. The National Historic Site is intended to "provide for the protection and interpretation of historic, cultural, and natural resources associated with the relocation of Japanese-Americans during World War II." (Public Law 102–248).

The National Historic Site is on land currently owned by the Los Angeles Department of Water and Power (LADWP). The National Park Service is in the process of acquiring the site and developing a General Management Plan, which includes proposals for visitor facilities and interpretation. Part of the planning process, the archeological work described in this report had two objectives: first, to document the current condition of the relocation center site and related features; second, to determine if other historical or prehistoric remains exist within the authorized National Historic Site boundary (Burton 1993, 1994). This information will be used to help gauge interpretive potential of individual features and protection measures needed during the development and maintenance of visitor facilities.

Background

Manzanar National Historic Site is located along U.S. Highway 395, between the towns of Lone Pine and Independence in Inyo County, California (Figure 1.1). The Manzanar Reloca-

Figure 1.1. Manzanar National Historic Site.

tion Center was listed on the National Register of Historic Places on July 30, 1979, for its association with events that have made a significant contribution to the broad patterns of U.S. history (Criterion A), specifically the internment of Japanese Americans during World War II. Being less than 50 years old at the time and therefore normally excluded from listing on the National Register, the relocation center was deemed to be of exceptional importance (Criterion G). The site gained National Historic Landmark status in 1985.

The Manzanar Relocation Center was one of ten camps at which Japanese American citizens and Japanese immigrants were interned during World War II. Executive Order 9066 allowed for people of Japanese ancestry residing on the West Coast to be placed in relocation centers. Construction at Manzanar began in March 1942; it remained in operation until late in 1945. At its peak, Manzanar held a population of over 10,000.

The authorized 550-acre National Historic Site includes the area once surrounded by barbed wire that formed the central portion of the relocation center and the adjacent cemetery. The living area consisted of 36 blocks, each with 14 barracks, a mess hall, a community building, a laundry, and latrines. Other blocks contained administrative buildings, warehouses, factories, and a hospital. Beyond the barbed wire were farm fields, hog and chicken farms, a reservoir, cemetery, and sewage treatment plant. In all, the Manzanar facility encompassed 6,500 acres.

The most visible remains at the relocation center today are a police post and a sentry house at the entrance, an auditorium (until recently used by Inyo County as a vehicle maintenance facility), and a monument at the cemetery. However, throughout the site there are dozens of concrete foundations, portions of the water, sewer, and road systems, remnants of rock gardens and ponds built by the internees, and other remains (Figure 1.2).

While Manzanar's best-known history is its most recent, the site also contains evidence of earlier historical eras, including Native American Indian use, late nineteenth century ranches, and the early twentieth century town of Manzanar.

The Manzanar vicinity had been used by Paiute and Shoshone peoples for centuries. When the Owens Valley was first visited by Euroamericans in the mid nineteenth century there were numerous large villages, with the inhabitants practicing horticulture as well as hunting and gathering. In 1933, ethnographer Julian Steward recorded three villages near the National Historic Site, and George Creek, to the south, was named for a Paiute Chief. Many Native American Indian sites are known in the area surrounding the National Historic Site and a prehistoric site had been previously identified within the relocation center by the California Department of Parks and Recreation during studies in the late 1970s (National Park Service 1989:2).

One of the earliest Euroamerican settlers in the Manzanar area was John Shepherd, who in 1864

Figure 1.2. Aerial view of Manzanar National Historic Site; north is to the right, the relocation center auditorium is in the left center of the photograph and a portion of the Manzanar Airport is at the bottom.

homesteaded 160 acres 3 miles north of George Creek. His cattle ranch eventually grew to over 2,000 acres. In 1905, pioneer land developer George Chaffey bought and subdivided the Shepherd Ranch and other adjacent ranches to found the town of Manzanar. By the 1920s the town boasted a general store, garage, town hall, two-room school house, over 25 homes, tree-lined streets, and nearly 5,000 acres of apple, pear, and peach orchards, and alfalfa fields. Remnant trees of these early orchards still exist today. As early as 1905 Los Angeles began acquiring water rights in Owens Valley and completed an aqueduct to Los Angeles in 1913. By 1933 the city owned 95 percent of all farm land and 85 percent of all town property in the valley. Like many small communities, the town of Manzanar was then abandoned and the land remained vacant until the relocation center was constructed.

Archeological Studies

Field work was designed to identify and evaluate archeological remains within and around the National Historic Site, and included survey of over 1,200 acres, site recording, mapping, subsurface testing, and photography. Over 350 person-days were spent in the field. At present the National Park Service controls none of the land at the National Historic Site (Figure 1.3); field work was conducted under permits from the Los Angeles Department of Water and Power and the Bureau of Land Management.

During the archeological survey, 84 archeological sites were discovered and recorded. Some of these sites are related to the relocation center, but many predate it. In all, 12 Native American Indian sites, dozens of sites and features associated with the town of Manzanar and earlier ranches, and all of the known features of the relocation center have been fully recorded. Within the National Historic Site, test excavations were undertaken at four Native American Indian sites, four sites associated with the town of Manzanar, three relocation center features, and a late 1940s dump.

Report Structure

In this report Chapters 2 through 7 provide contextual and background information. Chapter 2 describes the environmental setting. Chapter 3 is an overview of the Japanese American evacuation. Chapters 4 and 5 give details of the Manzanar Relocation Center itself. Chapter 6 provides historical information concerning the town of Manzanar and earlier ranches. Chapter 7 provides archeological and ethnographic information. The research objectives and methods are reviewed in Chapter 8.

The results are presented by temporal component in Chapters 9 through 14: Chapter 9 describes sites and features within the National Historic Site boundary associated with the relocation center; Chapter 10 describes sites associated with the relocation center outside the National Historic Site; Chapters 11 and 12 describes sites related to the town of Manzanar and earlier ranches; and Chapters 13 and 14 discuss Native American Indian sites. Conclusions and recommendations are given in Chapter 15. The results of specialist studies are included as appendices. Archeological site records are on file at the Western Archeological and Conservation Center and the California Historic Resources Information System (U.C. Riverside).

Terminology

The War Relocation Authority used euphemisms such as "relocation center" and "evacuees." The relocation centers certainly fit the dictionary definition of a concentration camp and use of that term does have historical precedent (Uyeda 1995:57). However, the term "concentration camp" has become almost synonymous with Nazi Death Camps and even the use of the relatively benign term "internees" in reference to Japanese Americans has resulted in controversy (e.g., Baker 1994:23-24). This report to a great extent uses the terminology originally coined by the War Relocation Authority because those terms are most common in the historical records.

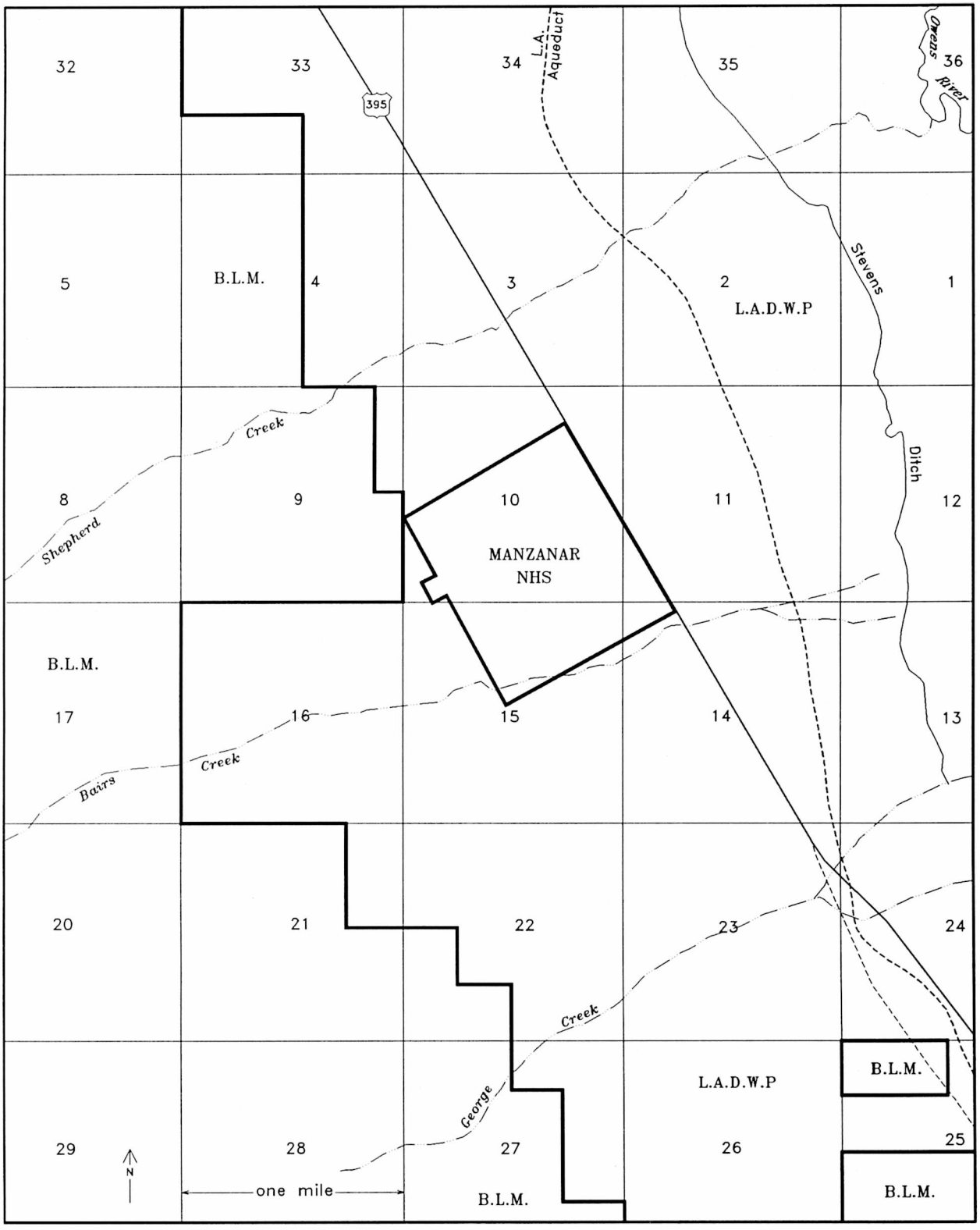


Figure 1.3. Land ownership in the vicinity of Manzanar National Historic Site.

Chapter 2

Environmental Setting

Jeffery F. Burton, Mary M. Farrell, and Patti J. Novak

Manzanar National Historic Site is located in east-central California, in southern Owens Valley. It lies along U.S. Highway 395, 16 miles north of Owens Lake, between the towns of Lone Pine and Independence. On the western edge of the Basin and Range province, the topography of the area is dramatic, with the steep Sierra Nevada to the west and the White-Inyo Range to the east. Mount Williamson, the second highest peak in the Sierra Nevada at 14,375 ft, is just west of the National Historic Site (Figure 2.1).

Similar Mesozoic rocks in both the Sierra Nevada and the White-Inyo Range indicate they were part of a single broad upwarp for much of the Tertiary period (Gillespie 1991:357). Uplift of the modern Sierra Nevada began about 10 million years ago (Whitney 1979:48) and geologists estimate the range attained its present height early in the Pleistocene (Gillespie 1991:361). The uplift continued as the Basin and Range province formed. The White-Inyo Range is also estimated to have been prominent by about 2 million years ago. The elevation range, from 3,600 ft at Owens Lake to over 14,000 ft in both the Sierra Nevada and White-Inyo Range, is due not only to mountain uplift, but down-faulting as well.

Measuring 120 miles long from Glass Mountain Ridge to Owens Lake, and 15 to 40 miles wide from crest to crest, the Owens Valley is a northwest-southeast trending structural trough that has dropped down as a deep narrow graben along faults that separate it from the Sierra Nevada and White-Inyo Range. This block drop is covered by sediments up to 9,000 ft deep, overlying bedrock that is far below sea level (Sharp 1972:141). Remnants of the Triassic to Jurassic metavolcanic rocks that overlay the Mesozoic granitic plutons can be found in the White-Inyo Range and in the Alabama Hills to the south.

Down faulting, which has continued to very recent times, was manifest in one of the largest earthquakes in California history. On March 26, 1872, the Owens Valley Earthquake, with a derived magnitude of 8 on the Richter scale, destroyed adobe buildings at Lone Pine and Independence and killed 27 people. Displacement along the fault was up to 23 ft vertical and 9 ft horizontal. One mile east of the National Historic Site the Owens Valley Fault shows 3 ft to 6 ft of vertical displacement.

In Owens Valley the Cenozoic has also been marked by volcanic activity, with many eruptions occurring along faults. There have been at least four separate episodes, all probably within the last 200,000 years (Sharp 1972:144). Volcanic cinder cones and basalt flows are to the north at

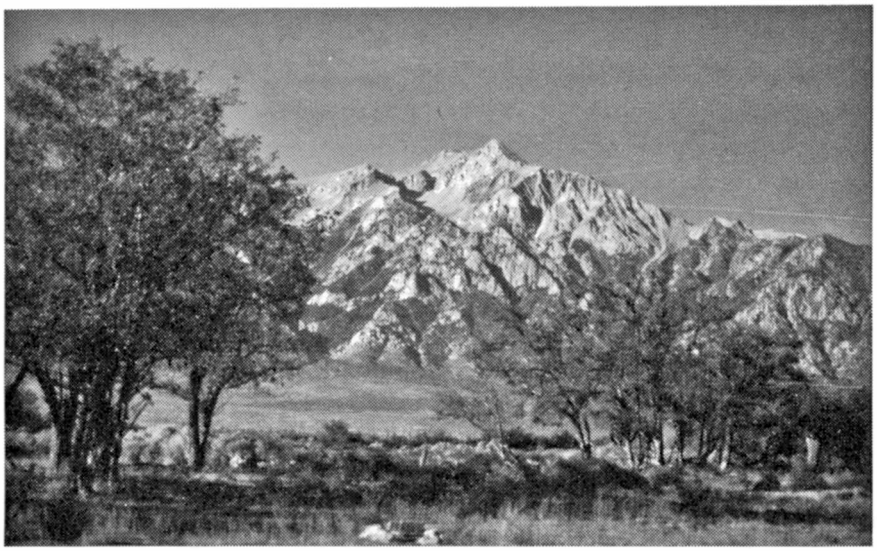


Figure 2.1. Mount Williamson.

Red Mountain and Crater Mountain, and obsidian occurs nearby at Fish Springs. Tool-making-quality obsidian is also available south of the Owens Valley in the Coso Mountains.

The ice ages of the Pleistocene have also influenced the landforms of the Owens Valley. Major fan-building episodes apparently correlate with glacial advances (Beanland and Clark 1994:6); alluvial fans along the Sierra Nevada extend over halfway across the valley and rise 1,000 ft to 2,500 ft above the valley floor. The fans converge to form a continuous apron or bajada with an average slope of 6 to 7 degrees.

The bajada is rocky with large boulders deposited by catastrophic mud flows, and soils are derived from sheet erosion of the debris. The entrenchment of creeks is a Holocene development (Knopf and Kirk 1918), and now the bajada is deeply dissected by perennial streams fed by snowmelt.

Some younger fans are forming, but generally deposition of new fans is at a standstill due to the relatively arid conditions (Pakiser et al. 1964). The Owens River, which drains an area of 3,300 square miles, lies close to the Inyo Mountains, and was moved eastward by the large fans built by streams flowing out of the Sierra Nevada (Sharp 1972:143). The Inyo Mountains support only small intermittent streams, and smaller fans and colluvial slopes occur along the Inyo Mountains and Alabama Hills.

The National Historic Site, at 3840 ft (1170 m) to 3970 ft (1210 m) elevation, is located where the Sierran bajada meets the valley floor. Soils, consisting of sands, gravels, and cobbles, are derived from Holocene and Pleistocene fan deposits, colluvium, and lake sediments.

At its height, pluvial Lake Owens was over 200 ft deep and covered an area of approximately 220 square miles. Lake deposits at its center have been determined to be over 750 ft thick (Pakiser et al. 1964). From 75,000 years ago to 10,000 years ago the lake overflowed to the south supplying a chain of lakes that culminated in a lake 600 ft deep and 100 miles long in Death Valley (Figure 2.2).

Wave-cut shorelines and beach terraces mark former lake levels. Seven of these strandlines have been identified and provisionally dated. The highest strandline, dated at over 25,000 years old, is at an elevation of 3880 ft, which would place the shoreline within the National Historic Site. The next strandline, around 25,000 years old, is at 3800 ft, the approximate contour of the Los Angeles Aqueduct. Between 12,000 and 10,000 years ago, the Great Basin underwent rapid

climatic changes, as alpine glaciers retreated and lakes shrank (Mehringer 1986). The 3760 ft shoreline, 10,000 years old, marks the point at which overflow from the lake ceased. A possible more recent overflow and strandlines at elevations of 3720 ft, 3680 ft, 3630 ft, and 3597 ft mark minor Holocene glacial advances (Beanland and Clark 1994:6).

In 1874, when the construction of the first large irrigation canals was begun, Owens Lake was 51 ft deep. By 1895 the lake was lowering at a rate of 30 inches a year due to agricultural diversions. In 1926 the L.A. Aqueduct was complete, and over 75,000 acres were under irrigation in the valley. As a result, by 1929 the lake was essentially dry (Babb 1992).

Today's climate is arid, with hot dry summers and cold winters. Although well-watered by Sierran streams, Owens Valley itself is in the rainshadow formed by the Sierra Nevada. Independence has a mean annual precipitation of just under 5 inches and Lone Pine approximately 6 inches. There are occasional summer thunderstorms, but the highest precipitation occurs between December and February as a result of Pacific storms. On the valley floor approximately 20 percent of precipitation falls as snow (Power and Klieforth 1991:21).

Temperatures range from over 100° F in the summer to less than 0° F in the winter, and the growing season averages 197 days (Basgall and McGuire 1988:8). Prevailing winds are from the north and south reflecting the topographic influence of the valley. The strongest winds are in late winter, spring, and fall and are associated with storm fronts. Peak gusts have been clocked up to 75 mph, however the valley is more known for its regular and moderate wind (Power and Klieforth 1991). Dust from the bed of Owens Lake, the largest single source of dust in North America, occasionally obscures the surrounding mountains (Gill and Cahill 1992).

Manzanar National Historic Site is located between two perennial streams which flow east from the Sierra Nevada: Shepherd Creek less than 1 mile north and George Creek 1¼ miles south (Figure 2.3). Both streams are diverted into the L.A. Aqueduct just east of the National Historic Site. The stream flow of Bairs Creek, which crosses the southwest corner of the National Historic Site, is intermittent in the site vicinity.

Historical accounts mention a flowing well in the north-central part of the Historic Site at the old Shepherd Ranch (Manzanar file, Eastern California Museum), and the Manzanar Free Press (November 28, 1942) mentions a pond in the same area that was dug where a spring was buried during construction of the relocation center.

Once there may have been several springs in the National Historic Site vicinity. Surface water from melting snowfields percolates through the coarse sediments of the bajada. This groundwater

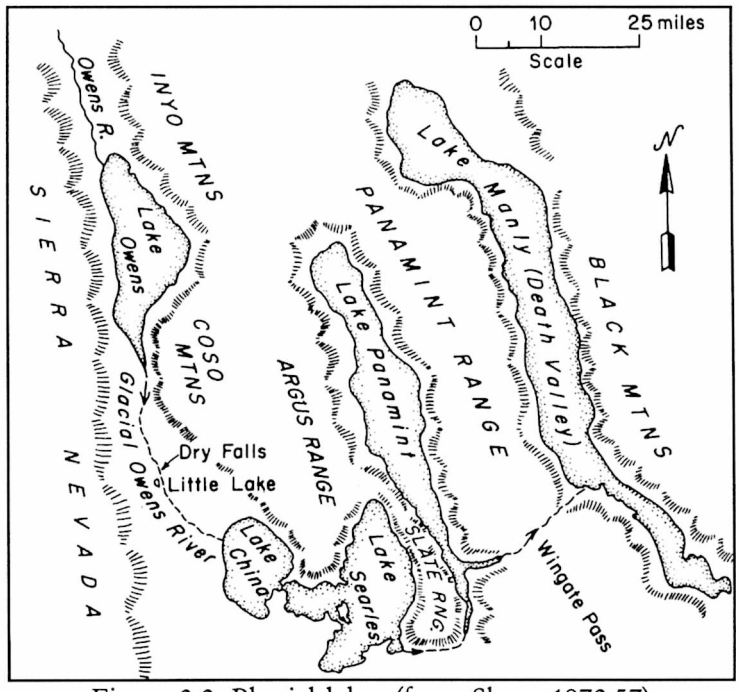


Figure 2.2. Pluvial lakes (from Sharp 1972:57)

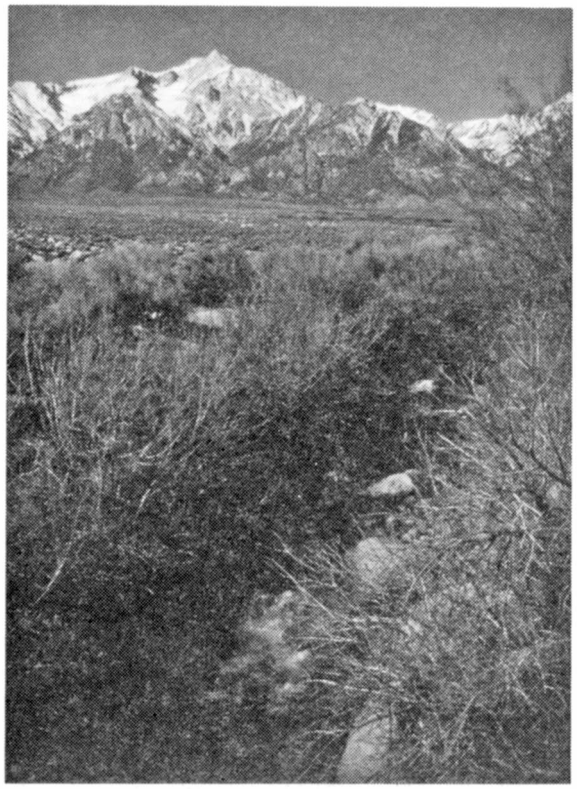


Figure 2.3. Shepherd Creek.

can surface as springs and seeps under several conditions. For example, springs are common in the Owens Valley where the slope of the surface topography becomes abruptly more gradual, as is the case at Manzanar. These small, variable-flow springs and seeps are susceptible to lowering of the watertable, caused by stream diversions and groundwater pumping. In the Owens Valley six major springs and an untold number of smaller springs no longer flow (DeDecker 1992; Scheidlinger 1992).

The National Historic Site is within a Los Angeles Department of Water and Power well field. When spring snowmelt produces more water than the aqueduct can carry, the high flows are spread across the bajada to recharge the aquifer. This flooding, in fact, affects the National Historic Site: in some areas tons of sediments are deposited, while gullies cut through other areas. When stream flows are lower, the groundwater is pumped to supplement the surface runoff to the aqueduct. Prior to construction of the second Los Angeles Aqueduct in 1970, this pumping was limited to drought years, but now it occurs seasonally (Groeneveld 1992).

Vegetation and Fauna

The great vertical relief of the Owens Valley and adjacent ranges supports diverse flora and fauna within a few miles of the National Historic Site. From the Sierra Nevada crest on the west to the Inyo Mountains on the east are several distinct plant communities, in general determined by elevation and the concomitant precipitation and temperature gradients.

The plant communities are described by Storer and Usinger (1963) and Whitney (1979) for the Sierra Nevada and Spira (1991) for the Inyo Mountains. Above 11,000 ft in the Sierra Nevada is Alpine Tundra. Between 9,000 and 11,000 ft is the Subalpine Forest, a sparsely forested zone of whitebark and foxtail pine and mountain hemlock. The Upper Montane Zone, between 8,000 and 9,000 ft, includes mixed red fir and lodgepole pine. The Lower Montane Zone, of mixed white fir and Jeffrey pine, occurs between 7,000 and 8,000 ft. Pinyon and juniper occur between 5,000 and 7,000 ft, while on the valley floor and lower foothills is Desert Scrub. In the Inyo Mountains the Pinyon-Juniper Woodland occurs between 6,500 and 9,500 ft, the Subalpine Zone (an open forest of limber pine and bristlecone pine) occurs at 9,500 to 11,500 ft, and Alpine Tundra lies above 11,500 ft. Significant stands of black oak occur in the valley along creeks north of Independence.

Manzanar National Historic Site lies within the desert scrub community. Plant species within this vegetation community vary according to elevation and soil substrate: at lower elevations greasewood and shadscale dominate, but at higher elevations these give way to spiny hopsage and Mormon tea, and then sagebrush and bitterbrush (Table 2.1). Within the National Historic Site the vegetation most certainly bears little resemblance to that prior to Euro-

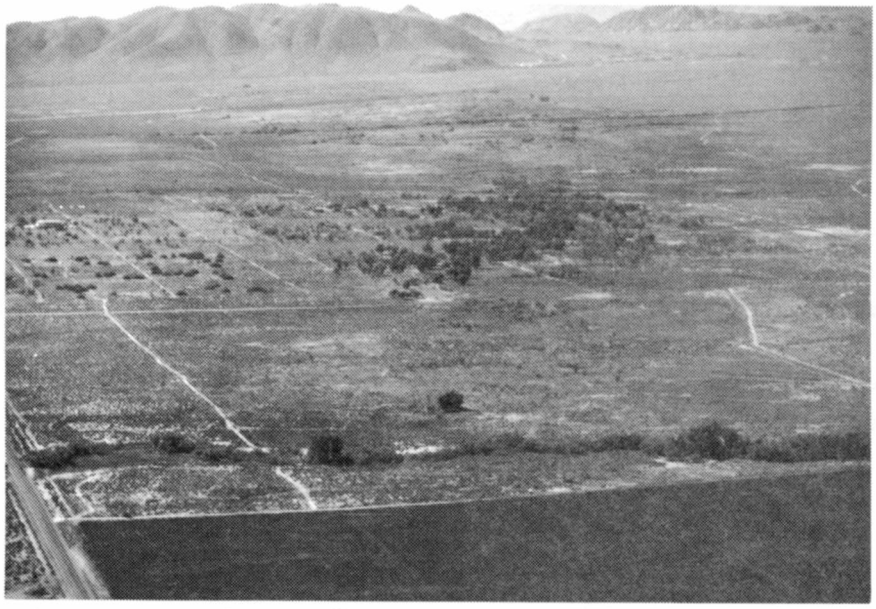


Figure 2.4. Aerial view of Manzanar National Historic Site showing band of trees through site, Shepherd Creek and cultivated fields in the foreground, and the Alabama Hills to the south.

american settlement. Over 100 years of ranching, agriculture, and groundwater pumping have spurred opportunistic native plants and introduced species (DeDecker 1988). The National Historic Site vicinity has been used for cattle grazing and as a sheep driveway since the mid-1800s, resulting in a decrease in livestock-preferred herbs and shrubs and an increase in sagebrush, rabbitbrush, and other species (Whitney 1979:481). In fact the most significant change in vegetation in Owens Valley from 1906 to 1981, as determined from aerial photographs, is the loss of grass (Jaques 1992). The dominant species today consist of introduced trees, rabbitbrush, saltbush, and weeds.

Over 18 species of non-native trees have been identified within the National Historic Site and extensive fields of rabbitbrush and dry barren areas are common. The trees, mostly black locust, cottonwood, tamarisk, and fruit trees from abandoned ranches, farms, and the relocation center, form a band across the site. Located just below the break in slope, these introduced species have likely survived by tapping into the high watertable (Figure 2.4).

Above the Los Angeles Aqueduct some water from George Creek is diverted to irrigate meadows for grazing, and wells supply water to irrigated fields north of Shepherd Creek. To the west of the National Historic Site on the rockier Sierran bajada, sagebrush and bitterbrush dominate a diverse assemblage of shrubs, wildflowers, and cactus. There are narrow riparian zones along Shepherd and George Creeks, and the upper portion of Bairs Creek, where willows, water birch, and some cottonwoods grow. Larger riparian zones occur along the Owens River and along lower, slow-moving reaches of its Sierran tributaries.

Major fauna present in the vicinity today include mule deer (*Odocoileus hemionus*), black bear (*Ursus americanus*), mountain lion (*Felis concolor*), coyote (*Canis latrans*), and pronghorn antelope (*Antilocapra americana*). There is a bighorn sheep (*Ovis canadensis*) Zoological Area 5 miles to the west of the National Historic Site that includes the entire front of the Sierra Nevada.

Other common animals are black-tailed jackrabbit (*Lepus californicus*), various cottontails (*Sylvilagus* spp.), woodrats (*Neotoma* sp.), bobcat (*Felis rufus*), kit fox (*Vulpes macrotes*), skunks (*Mephitis* spp.), raccoon (*Procyon lotor*), ground

squirrels (*Citellus* spp.), quail (*Lophortyx californicus*) and other game birds and waterfowl. A freshwater mussel (*Anodonta* sp.) occurs in slow-moving portions of the Owens River.

In the last century, some species have been reduced and others introduced. Grizzly bear (*U. horribilis*) may have been present in prehistoric times. Brine fly, an economically important aboriginal food, once was plentiful on Owens Lake but is now rare. Tule elk (*Cervus elaphus nannodes*), native to central California, were introduced into Owens Valley in the 1930s. Most fish in the area today are introduced species; natives include dace (*Rhynichthys* spp.), Owens pupfish (*Cyprinodon radiosus*), sucker (*Catostomus fumeiventris*), and Tui chub (*Siphateles bicolor*). Cut-throat trout (*Salmo clarkii*) may have been present in some isolated areas but the trout that dominate all of the nearby streams today were introduced from the west slope of the Sierra Nevada and elsewhere.

Table 2.1
Vegetation Identified During Survey of Manzanar National Historic Site and Environs.

Trees
Apple (*Pyrus malus*)*
Arizona Cypress (*Cupressus arizonica*)*
Black Walnut (*Juglans nigra*)*
Black Locust (*Robinia pseudoacacia*)*
Common Fig (*Ficus carica*)*
Elm (*Ulmus* spp.)*
Fremont Cottonwood (*Populus fremontii*)*
Garden Plum (*Prunus domestica*)*
Mulberry (*Morus* sp.)*
Northern Catalpa (*Catalpa speciosa*)*
Peach (*Prunus persica*)*
Pear (*Pyrus communis*)*
Poplar (*Populus* spp.)*
Saltcedar, Five-stamen Tamarisk (*Tamarix chinensis*)*
Siberian Elm (*Ulmus pumila*)*
Silver Maple (*Acer saccharinum*)*
Tree of Heaven (*Ailanthus altissima*)*
Velvet Ash (*Fraxinus velutina*)*
Willow (*Salix* spp.)

Shrubs
Allscale Saltbush (*Atriplex polycarpa*)
Bitterbrush (*Purshia tridentata*)
Brittlebush (*Encelia farinosa*)
Desert Peach (*Prunus andersonii*)
Domestic Grape (*Vitis* sp.)*
Four-wing Saltbush (*Atriplex canescens*)
Golden Rabbitbrush (*Chrysothamnus nauseosus*)
Great Basin Sagebrush (*Artemisia tridentata*)
Nevada Ephedra, Mormon Tea (*Ephedra nevadensis*)
Shadscale (*Atriplex confertifolia*)
Silver Lupine (*Lupinus albifrons*)
Spiny Hopsage (*Grayia spinosa*)
Sticky Rabbitbrush (*Chrysothamnus paniculatus*)
Wild Rose (*Rosa woodsii*)
Winter Fat (*Ceratoides lanata*)

Parasitic Plants and Fungi
Nevada Dodder (*Cusuta salina*)
Stalked Puffball (*Tulostoma poculatum*)

Cactus
Barrel Cactus (*Ferocactus acanthodes*)
Beavertail (*Opuntia basilaris*)
Teddy Bear Cholla (*Opuntia bigelovii*)

Forbs
Blazing Star (*Mentzelia nitens*)
Blue Flax (*Linum lewisii*)
Buckwheat (*Eriogonum spp.*)
Common Lambsquarters (*Chenopodium album*)*
Common Cocklebur (*Xanthium strumarium*)
Desert Dandelion (*Malacothrix glabrata*)
Desert Trumpet (*Eriogonum inflatum*)
Desert Wooly (*Eriophyllum wallacei*)
Douglas Pincushion (*Chaenactis douglasii*)
Evening Primrose (*Oenothera brevipes*)
Fiddleneck (*Amsinckia tessellata*)
Gilia (*Gilia latiflora*)
Heron Bill, Filaree (*Erodium texanum*)*
Hoary Cress (*Cardaria draba*)*
Mojave Aster (*Xylorhiza tortifolia*)
Red Indian Paintbrush (*Castilleja* sp.)
Russian Thistle (*Salsola kali*)*
Sacred Datura (*Datura meteloides*)
Sand Blossom (*Linanthus parryae*)
Scale Bud (*Anisocoma acaulis*)
Skeleton Weed (*Eriogonum deflexum*)
Tansy Mustard (*Descurainia pinnata*)
Western Ragweed (*Ambrosia psilostachya*)
White Forget-me-not, Cryptantha (*Cryptantha nevadensis*)
White Tidy-tips (*Layia glandulosa*)
Wild Heliotrope (*Phacelia distans*)
Wild Licorice (*Glycyrrhiza lepidota*)
Yerba Mansa (*Anemopsis californica*)

Grasses
Bamboo (*Phyllostachys bambusoides*)*
Common Reed (*Phragmites australis*)
Foxtail Barley (*Hordeum jubatum*)
Giant Wild Rye (*Leymus cinereus*)
Indian Ricegrass (*Oryzopsis hymenoides*)

* non-native

Chapter 3

Japanese American Relocation

Irene J. Cohen[1], *Jeffery F. Burton, and Mary M. Farrell*

On December 7, 1941, the United States entered World War II as Japan attacked the U.S. naval base at Pearl Harbor. At that time, nearly 113,000 people of Japanese ancestry, two-thirds of them American citizens, were living in California, Washington, and Oregon (Figure 3.1). On February 19, 1942, President Franklin D. Roosevelt signed Executive Order No. 9066 empowering the U.S. Army to designate areas from which "any or all persons may be excluded." No person of Japanese ancestry living in the United States was ever convicted of any serious act of espionage or sabotage during the war. Yet these innocent people were removed from their homes and placed in relocation centers, many for the duration of the war (Davis 1982:27). In contrast, between 1942 and 1944, 18 Caucasians were tried for spying for Japan; at least ten were convicted in court (Uyeda 1995:66).

To understand why the United States government decided to remove Japanese Americans from the West Coast in the largest single forced relocation in U.S. history, one must consider many factors. Prejudice, wartime hysteria, and politics all contributed to this decision (Hirabayashi and Hirabayashi 1984).

West Coast Anti-Oriental Prejudice

Anti-Oriental prejudices, especially in California, began as anti-Chinese feelings. Chinese immigration began around about the same time as the gold rush of 1849. At first, they were welcomed and considered exotic in cosmopolitan San Francisco. However, the Chinese were resented as a source of cheap labor, especially after the completion of the Union-Central Pacific Railroad in 1869, which had employed around 10,000 Chinese laborers. This economic grievance became an ideology of Oriental inferiority similar to existing American racial prejudices. This discrimination became legislated on both the state and federal level, including an immigration exclusion bill passed in 1882 by the U.S. Congress.

The experiences of Chinese immigrants foreshadowed those of Japanese immigrants, who began arriving about the same time the Chinese exclusion bill was passed. Japanese immigrants were called Issei, from the combination of the Japanese words for "one" and "generation;" their children, the American-born second generation, are Nisei, and the third generation are Sansei. Nisei and Sansei who were educated in Japan are called Kibei. The Issei mostly came from the Japanese countryside, and they generally arrived,

[1]portions of this chapter originally appeared in Cohen 1994.

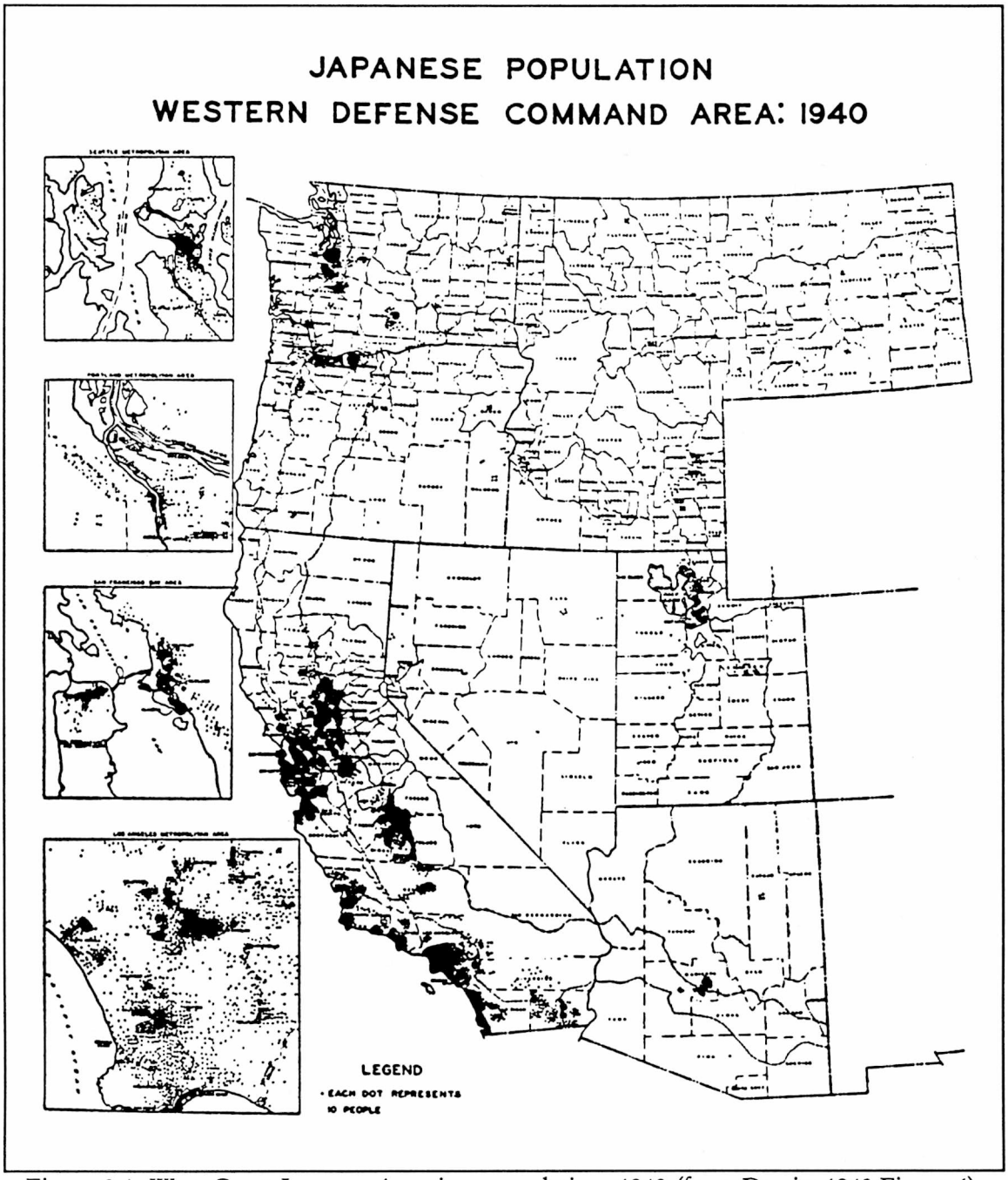


Figure 3.1. West Coast Japanese American population, 1940 (from Dewitt 1943:Figure 6).

either in Hawaii or the mainland West Coast, with very little money. Approximately half became farmers, while others went to the coastal urban centers and mostly worked in small commercial establishments, usually either their own or for other Issei.

Anti-Japanese movements began shortly after Japanese immigration began, based on existing anti-Oriental prejudices. However, the anti-Japanese movement became widespread around 1905, due both to increasing immigration and the first Japanese victories against Russia, when both the Issei and Japan began to be perceived as threats. Actions included the formation of anti-Japanese organizations, such as the Asiatic Exclusion League, attempts at school segregation (which eventually affected Nisei under the

doctrine of "separate but equal"), and a growing number of violent attacks upon individuals and businesses. President Theodore Roosevelt attempted to contain the anti-Japanese movement by negotiating the so-called "Gentlemen's Agreement" with the Japanese government, which limited immigration to the continental United States to laborers who had already been to the United States and "to the parents, wives and children of laborers already there."

California passed the Alien Land Law of 1913, prohibiting the ownership of agricultural land by "aliens ineligible to citizenship," i.e., Asians, and in 1920, a stronger Alien Land Act prohibited leasing and sharecropping as well. The presumption that Asians were aliens ineligible for citizenship stemmed from a narrow interpretation of the naturalization statute, which had been rewritten after the Fourteenth Amendment to permit naturalization of "white persons" and "aliens of African descent." This interpretation was legitimized by the Supreme Court in 1921, when Takao Ozawa was denied citizenship. However, the Nisei were citizens by birth, and therefore parents would often transfer title to their children. The Immigration Act of 1924 prohibited all further Japanese immigration, with the side effect of making a very distinct generation gap between the Issei and Nisei.

Many of the anti-Japanese fears arose from economic factors combined with envy, since many of the Issei farmers had become very successful at raising fruits and vegetables in soil that most people had considered infertile. Other fears were military in nature; the Russo-Japanese War proved that the Japanese were a force to be reckoned with, and stimulated fears of Asian conquest — "the Yellow Peril." These factors, plus the perception of "otherness" and "Asian inscrutability" that typified Caucasian racist views, greatly influenced the events following Pearl Harbor.

Preparing for War with Japan

While the events at Pearl Harbor came as a shock to Americans, many had wondered what would happen if Japan attacked the United States. The government had already investigated possible actions to take in case of war with Japan, and Japanese Americans speculated on what would happen to them, fearing, as early as 1937, that they would be "herded into prison camps — perhaps we would be slaughtered on the spot" (Daniels 1989). Some Nisei tried to accentuate their loyalty and Americanism, leading to generational conflict with their Issei parents. The Japanese American Citizens League (JACL), an influential all-Nisei organization, was representative of this attitude. The JACL creed, an optimistic, patriotic expression written by Mike Masaoka in 1940, was published in the Congressional Record for May 9, 1941 (Daniels 1989:24-25):

> I am proud that I am an American citizen of Japanese ancestry, for my very background makes me appreciate more fully the wonderful advantages of this nation. I believe in her institutions, ideals and traditions; I glory in her heritage; I boast of her history; I trust in her future. She has granted me liberties and opportunities such as no individual enjoys in this world today. She has given me an education befitting kings. She has entrusted me with the responsibilities of the franchise. She has permitted me to build a home, to earn a livelihood, to worship, think, speak and act as I please — as a free man equal to every other man.
>
> Although some individuals may discriminate against me, I shall never become bitter or lose faith, for I know that such persons are not representative of the majority of the American people. True, I shall do all in my power to discourage such practices, but I shall do it in the American way — above board, in the open, through courts of law, by education, by proving myself to be worthy of equal treatment and consideration. I am firm in my belief that American sportsmanship and attitude of fair play will judge citizenship and patriotism on the basis of action and achievement, and not on the basis of physical characteristics. Because I believe in America, and I trust she believes in me, and because I have received innumerable benefits from her, I pledge myself to do honor to her at all times and all places; to support her constitution; to obey

> her laws; to respect her flag; to defend her against all enemies, foreign and domestic; to actively assume my duties and obligations as a citizen, cheerfully and without any reservations whatsoever, in the hope that I may become a better American in a greater America.

At the same time as the JACL creed was written, the United States government was planning for World War II. The Alien Registration Act of 1940 required the registration and fingerprinting of all aliens over fourteen years of age. The Federal Bureau of Investigation (FBI) compiled a list of dangerous or subversive German, Italian, and Japanese aliens who were to be arrested or interned at the outbreak of war with their country. President Franklin Roosevelt received a secret report by Curtis Munson on the West Coast Japanese, which concluded that most were loyal. Moreover, it stated that most of the disloyal Japanese Americans hoped that "by remaining quiet they [could] avoid concentration camps or irresponsible mobs." However, Munson also noted that the West Coast was vulnerable to sabotage, since dams, bridges, harbors, and power stations were unguarded, which he felt was a threat because "there are still Japanese in the United States who will tie dynamite around their waist and make a human bomb out of themselves" (Daniels 1989:28 quoting Munson's report). Response to the report by Army Intelligence, although never sent in the confusion after Pearl Harbor, argued that "widespread sabotage by Japanese is not expected ... identification of dangerous Japanese on the West Coast is reasonably complete" (Daniels 1989:28).

In the Aftermath of Pearl Harbor

Beginning immediately after the attack on Pearl Harbor, the Justice Department organized the arrests of 3,000 of what it considered "dangerous" enemy aliens, half of whom were Japanese. Of the Japanese, those arrested included community leaders who were involved in Japanese organizations and religious groups. Evidence of subversive activities was not a prerequisite for arrest. At the same time, the Treasury Department froze the bank accounts of all enemy aliens and all accounts in American branches of Japanese banks. These two actions paralyzed the Japanese American community by depriving it of its leadership and financial assets.

In late January 1942 many of the Japanese arrested by the Justice Department were transferred to internment camps in Montana, New Mexico, and North Dakota. Generally, their families had no idea of their whereabouts until they were reunited up to six months later in relocation centers.

After Pearl Harbor, the shock of a sneak attack on American soil caused widespread hysteria and paranoia. It certainly didn't help matters when Frank Knox, Roosevelt's Secretary of the Navy blamed Pearl Harbor on "the most effective fifth column work that's come out of this war, except in Norway," even though he apparently already realized that lack of preparedness of the local military commanders was the major problem (Daniels 1989:35). This scapegoating opened the door to sensationalistic newspaper headlines about sabotage, fifth column activities, and imminent invasion, none of which had any factual basis, but which fed the growing suspicions about Japanese Americans (J.A.C.P. 1973). In fact, as far as Japanese attacks on the mainland were concerned, the military had already concluded that Japanese hit-and-run raids were possible, but that a large scale invasion was beyond the capacity of the Japanese military.

"Military Necessity"

Following the declaration of martial law in Hawaii after the attack on Pearl Harbor, all civilians were subject to travel, security, and curfew restrictions imposed by the military. Japanese fishing boats were impounded and individuals considered potentially dangerous were arrested (Ogawa and Fox 1991).

While politicians called for the mass incarceration of people of Japanese ancestry in Hawaii, the military resisted. One-third of the Hawai-

ian population was of Japanese ancestry and the military didn't have enough soldiers to guard them or enough ships to send them to the mainland (Weglyn 1976:87-88). More importantly, their labor was crucial to the civilian and military economy of the islands (Daniels 1993:48). In the end less than 1,500 (out of a population of 150,000) were confined and eventually removed to the mainland.

One of the key players in the confusion following Pearl Harbor was Lt. General John L. DeWitt, the commander of the Western Defense Command and the U.S. 4th Army. DeWitt had a history of prejudice against Japanese Americans, even those already in the Army, and he was easily swayed by any rumor of sabotage or imminent Japanese invasion (Daniels 1989:36).

DeWitt was convinced that if he could control all civilian activity on the West Coast, he could prevent another Pearl Harbor-type disaster. J. Edgar Hoover of the FBI ridiculed the "hysteria and lack of judgment" of DeWitt's Military Intelligence Division, citing such incidents as the supposed powerline sabotage actually caused by cattle.

Nevertheless, in his Final Report (1943), DeWitt cites other reasons for the "military necessity" of evacuation, such as supposed signal lights and unidentified radio transmissions, none of which were ever verified. He also insisted on seizing weapons, ammunition, radios, and cameras without warrants. He called these "hidden caches of contraband," even though most of the weapons were seized from two legitimate stores (Hersey 1988:22).

Initially, DeWitt did not embrace the broad-scale removal of all Japanese Americans from the West Coast. On December 19, DeWitt recommended "that action be initiated at the earliest practicable date to collect all alien subjects fourteen years of age and over, of enemy nations and remove them" to the interior of the country and hold them "under restraint after removal" (Daniels 1989:39). However, on December 26, he told Provost Marshall Gullion that "I'm very doubtful that it would be common sense procedure to try and intern 117,000 Japanese in this theater ... An American citizen, after all, is an American citizen. And while they all may not be loyal, I think we can weed the disloyal out of the loyal and lock them up if necessary" (Daniels 1989:40).

With encouragement from Karl Bendetson, the head of the Provost Marshall's Aliens Division, on January 21, DeWitt recommended to Secretary of War Henry Stimson the establishment of small "prohibited zones" around strategic areas from which enemy aliens and their native-born children would be removed, as well as some larger "restricted zones" where they would be kept under close surveillance. Stimson and Attorney General Francis Biddle agreed, although Biddle was determined not to do anything to violate Japanese Americans' constitutional rights.

However, on February 9, DeWitt asked for much larger prohibited zones in Washington and Oregon that included the entire cities of Portland, Seattle, and Tacoma. Biddle refused to go along, but President Roosevelt, convinced of the military necessity, agreed to bypass the Justice Department. Roosevelt gave the army "carte blanche" to do what they wanted, with the caveat to be as reasonable as possible (Hersey 1988:42).

Two days later, DeWitt submitted his final recommendations in which he called for the removal of all Japanese, native-born as well as alien, and "other subversive persons" from the entire area lying west of the Sierra Nevada and Cascade Mountains (Hersey 1988:43). DeWitt justified this broad-scale removal on "military necessity" stating "the Japanese race is an enemy race" and "the very fact that no sabotage has taken place to date is a disturbing and confirming indication that such action will be taken" (Hersey 1988:44).

On February 17, Biddle made a last ditch effort to convince the President that evacuation was unnecessary. In addition, General Mark Clark of General Headquarters was convinced that evacuation was counteractive to military necessity, as it would use far too many soldiers who could otherwise be fighting. He argued that "we will never have a perfect defense against sabotage except at the expense of other equally important efforts." Instead, he recommended protecting critical installations by using pass and permit systems and selective arrests as necessary.

Meanwhile, the Japanese American community, particularly the Nisei, were trying to establish their loyalty, by becoming air raid wardens and joining the army (when they were allowed to). Since so many in the Issei leadership had been imprisoned during the initial arrests, the Nisei organizations, especially the JACL, gained influence in the Japanese American community. The JACL's policy of cooperation and appeasement was embraced by some Japanese Americans, but vilified by others.

At first, there was no consistent treatment of Nisei who tried to enlist or who were drafted. Most Selective Service boards rejected them, classifying them as 4-F or 4-C (unsuitable for service because of race or ancestry), but they were accepted at others. The War Department prohibited further Nisei induction after March 31, 1942, "Except as may be specifically authorized in exceptional cases." The exceptions were bilingual Nisei and Kibei who served as language instructors and interpreters. All registrants of Japanese ancestry were officially classified as 4-C after September 14, 1942. (U.S.D.I. 1946).

While the military debated restrictions on Japanese Americans and limited their involvement in the war, public opinion was growing in support of interning all persons of Japanese ancestry (J.A.C.P. 1973). The message from the media was typified by the Los Angeles Times: "A viper is nonetheless a viper wherever the egg is hatched — so a Japanese American, born of Japanese parents — grows up to be a Japanese, not an American" (Hersey 1988:38).

Despite the attempts by Biddle, the JACL, and General Mark Clark, on February 19, 1942, President Roosevelt signed Executive Order 9066, authorizing the Secretary of War "to prescribe military areas in such places and of such extent as he or the appropriate Military Commander may determine, from which any or all persons may be excluded, and with respect to which, the right of any person to enter, remain in, or leave shall be subject to whatever restrictions the Secretary of War or the appropriate Military Commander may impose in his discretion. The Secretary of War is hereby authorized to provide for residents of any such area who are excluded therefrom, such transportation, food, shelter, and other accommodations as may be necessary in the judgement of the Secretary of War or said Military Commander... ."

In mid-February Congressional committee hearings headed by Californian John Tolan were held on the West Coast to assess the need for the evacuation of Japanese Americans. The overwhelming majority of the witnesses supported the removal of all Japanese, alien and citizen, from the coast. California Governor Culbert L. Olson and State Attorney General Earl Warren supported removal of all Japanese Americans from coastal areas, stating that it was impossible to tell which ones were loyal (Drinnon 1987:31-32). As *de facto* spokesmen for the Japanese community, JACL leaders argued against mass evacuation, but to prove their loyalty pledged their readiness to cooperate if it were deemed a military necessity.

Other events in California contributed to the tense atmosphere. On February 23 a Japanese submarine shelled the California Coast. It caused no serious damage but raised fears of further enemy action along the U.S. coast. The following night the "Battle of Los Angeles" took place. In response to an unidentified radar echo, the military called for a blackout and fired over

1,400 anti-aircraft shells. Twenty Japanese Americans were arrested for supposedly signaling the invaders, but the radar echo turned out to be a loose weather balloon (Davis 1982:43; Webber 1992).

Even prior to the signing of Executive Order 9066, the U.S. Navy had begun the removal of Japanese Americans from near the Port of Los Angeles: on February 14, 1942, the Navy announced that all persons of Japanese ancestry had to leave Terminal Island by March 14. On February 24 the deadline was moved up to February 27 (Daniels 1989:86). Practically all family heads (mostly fisherman) had already been apprehended by the FBI (Weglyn 1976:301) and the 500 families living there were allowed to move on their own anywhere they wanted. Most stayed in the Los Angeles area until they were again relocated by the U.S. Army.

Figure 3.2. Newspaper headline, February 27, 1942 (Dorothea Lange photograph, National Archives).

Evacuation

Even after Executive Order 9066, no one was quite sure what was going to happen (Figure 3.2). Who would be "excluded," where would the "military areas" be, and where would people go after they had been "excluded"?

DeWitt originally wanted to remove all Japanese, German, and Italian aliens. However, public opinion (with a few vocal dissenters) was in favor of relocating all Japanese Americans, but opposed to any mass evacuation of German or Italian aliens, much less second generation Germans or Italians. Provost Marshall Gullion, who had always supported relocation of Japanese Americans, had only figured on males over the age of fourteen — about 46,000 from the West Coast and 40,000 from Hawaii.

As the military negotiated possibilities, the Japanese American community continued to worry. Most followed the lead of the JACL and chose to cooperate with evacuation as a way to prove their loyalty. Others were opposed to evacuation and later sought ways to prevent it, some with court cases that eventually reached the Supreme Court.

DeWitt issued several Public Proclamations, but these did little to clear up confusion; in fact, they created more. On March 2, Public Proclamation No. 1 divided Washington, Oregon, California, and Arizona into two military areas, numbered 1 and 2 (Figure 3.3). Military Area No. 1 was sub-divided into a "prohibited zone" along the coast and an adjacent "restricted zone." Ninety-eight smaller areas were also labeled prohibited, presumably strategic military sites. The announcement was aimed at "Japanese, German or Italian" aliens and "any person of Japanese ancestry," but it did not specifically order anyone to leave. However, an accompanying press release predicted that all people of Japanese ancestry would eventually be excluded from Military Area No. 1, but probably not from Military Area No. 2.

On March 11 the Army-controlled Wartime Civilian Control Administration (WCCA) was established to organize and carry out the evacuation of Military Area No. 1. Public Proclamation No. 2, on March 16, designated four more military areas in the states of Idaho, Montana, Nevada, and Utah, and 933 more prohibited areas. While DeWitt pictured eventually removing all Japanese Americans from these areas, these plans never materialized.

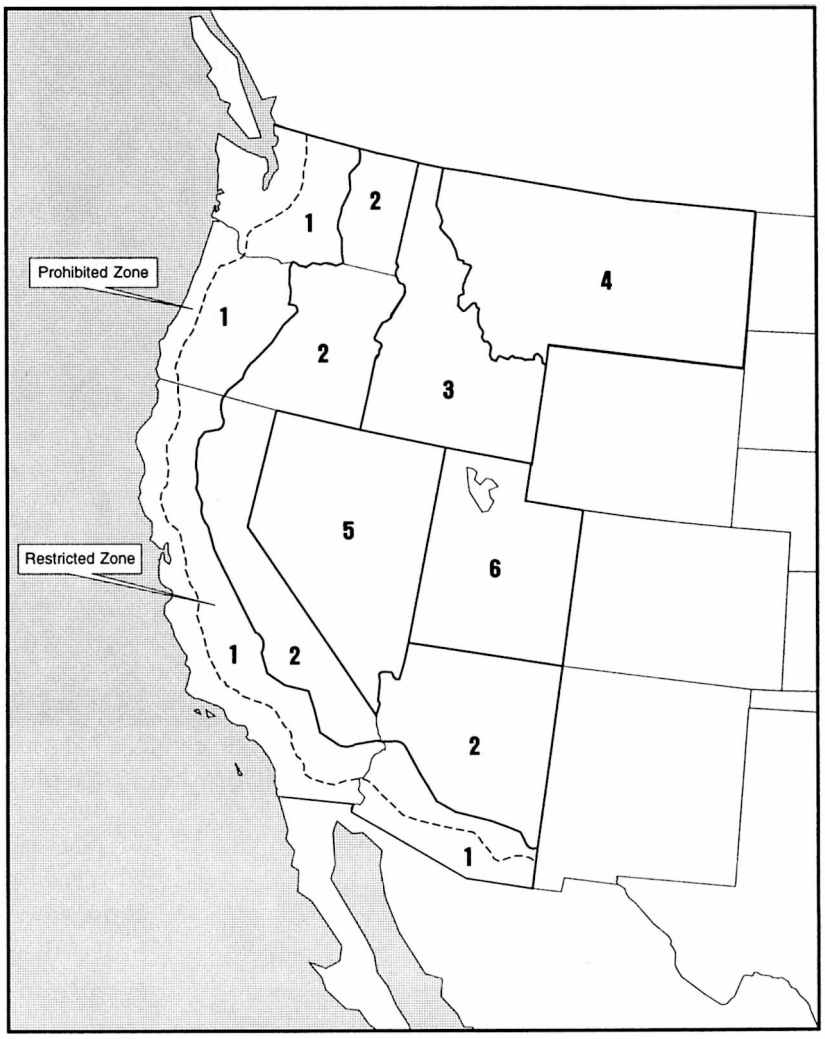


Figure 3.3. Military Areas of the Western Defense Command.

Public Law No. 503, approved on March 21, 1942, made violating restrictions in a military area a misdemeanor, liable up to $5,000 and/or a year in jail. Public Proclamation No. 3, effective March 27, instituted an 8:00 pm to 6:00 am curfew in Military Area No. 1 and prohibited areas for all enemy aliens and "persons of Japanese ancestry" and required that "at all other times all such persons shall only be at their place of residence or employment or travelling between those places or within a distance of not more than five miles from their place of residence."

The attempt at a voluntary evacuation was a miserable failure. Only 9,199 persons voluntarily moved out of Military Area No. 1: of these, 4,310 moved into the California portion of Military Area No. 2, 1,963 moved to Colorado, 1,519 moved to Utah, 305 moved to Idaho, 208 moved to eastern Washington, 115 moved to eastern Oregon, 105 moved to northern Arizona, 83 moved to Wyoming, 72 moved to Illinois, 69 moved to Nebraska, and 366 moved to other states (Figure 3.4; DeWitt 1943:107-111). The government had not made any plans to help people move, and since most Issei assets had been frozen at the beginning of the war, most families lacked the resources to move. Those who did attempt to leave the West Coast discovered that the inland states were unwilling to accept them. The perception inland was that California was dumping its "undesirables," and many refugees were turned back at state borders, had difficulty buying gasoline, or were greeted with "No Japs Wanted" signs (*L.A. Examiner* 3/24/42, 4/2/42, 4/21/42, 4/23/42).

Effective March 29, Public Proclamation No. 4 forbade all Japanese from leaving Military Area No. 1 until ordered. Further instructions established reception centers as transitory evacuation facilities and forbade moves except to an approved location outside Military Area No. 1.

The first evacuation under the auspices of the Army began March 24 on Bainbridge Island near Seattle, and was repeated all along the West Coast. In all, 108 "Civilian Exclusion Orders" were issued, each was designed to include around 1,000 people (Figure 3.5). After initial notification, residents were given six days in which to dispose of nearly all their possessions, packing only "that which can be carried by the family or the individual" including bedding, toilet articles, clothing and eating utensils. The government was willing to store or ship some possessions "at the sole risk of the owner," but many did not trust that option. Most families sold their property and possessions for ridiculously small sums, while others trusted friends and neighbors to look after their properties.

By June 2, 1942, all Japanese in Military Area No. 1, except for a few left behind in hospitals (*Time* 6/1/42), were in army custody. The image of the Japanese Americans is that they passively accepted evacuation. There is a Japanese philosophy "shikataganai" — it can't be helped. So, indeed the vast majority of the Japanese Americans were resigned to following the orders that sent them into the assembly centers. Only a few cases of resistance to the evacuation occurred. Three weeks after he was supposed to evacuate, Kuji Kurokawa was found, too weak to move due to malnutrition, hiding in the basement of the home where he had been employed for 10 years. He decided that he would not register or be evacuated, "I am an American citizen," he explained (J.A.C.P. 1973:18). Fred Korematsu changed his name, altered his facial features, and went into hiding. He was later arrested for remaining in a restricted area (Davis 1982:118). Hideo Murata, a U.S. Army World War I veteran, killed himself at a local hotel rather than be evacuated (Davis 1982:57).

The only known act of sabotage by a Japanese American was a product of the relocation process. When told to leave his home and go to an assembly center, one farmer asked for an extension to harvest his strawberry crop. His request was denied, so he plowed under the strawberry field. He was then arrested for sabotage, on the grounds that strawberries were a necessary commodity for the war effort (Hersey 1988:5). No one was allowed to delay evacuation in order to harvest their crops and subsequently Californians were faced with shortages of fruits and vegetables. Japanese Americans grew 95 percent of the state's strawberries and one-third of the state's truck crops (J.A.C.P. 1973:20-21).

Even though the justification for the evacuation was to thwart espionage and sabotage, newborn babies, young children, the elderly, the infirm, children from orphanages, and even children adopted by Caucasian parents were not exempt from removal. Anyone with 1/16th or more Japanese blood was included. In all, over 17,000 children under 10 years old, 2,000 persons over 65 years old, and 1,000 handicapped or infirm persons were evacuated (Uyeda 1995:32).

Assembly Centers

After reporting to collection points near their homes, each group was moved to hastily contrived reception or assembly centers (Table 3.1). Two centers on vacant land, at Parker Dam and in the Owens Valley, were originally intended for use as "Reception Centers" to expedite the voluntary evacuation. Both would later become WRA-run Relocation Centers as well (Poston and Manzanar).

The Parker Dam Reception Center was on the Colorado River Indian Reservation in Arizona. Permission from the Department of Interior was contingent on the center being a "positive program ... not merely ... a concentration camp" (Daniels 1989:88). The Owens Valley Reception Center was on land leased from the City of Los Angeles. The Owens Valley was (and still is) a major source of water for Los Angeles. City officials were worried that the evacuees would poison the water supply, but were assured that they would be kept under heavy guard (Daniels 1989:88).

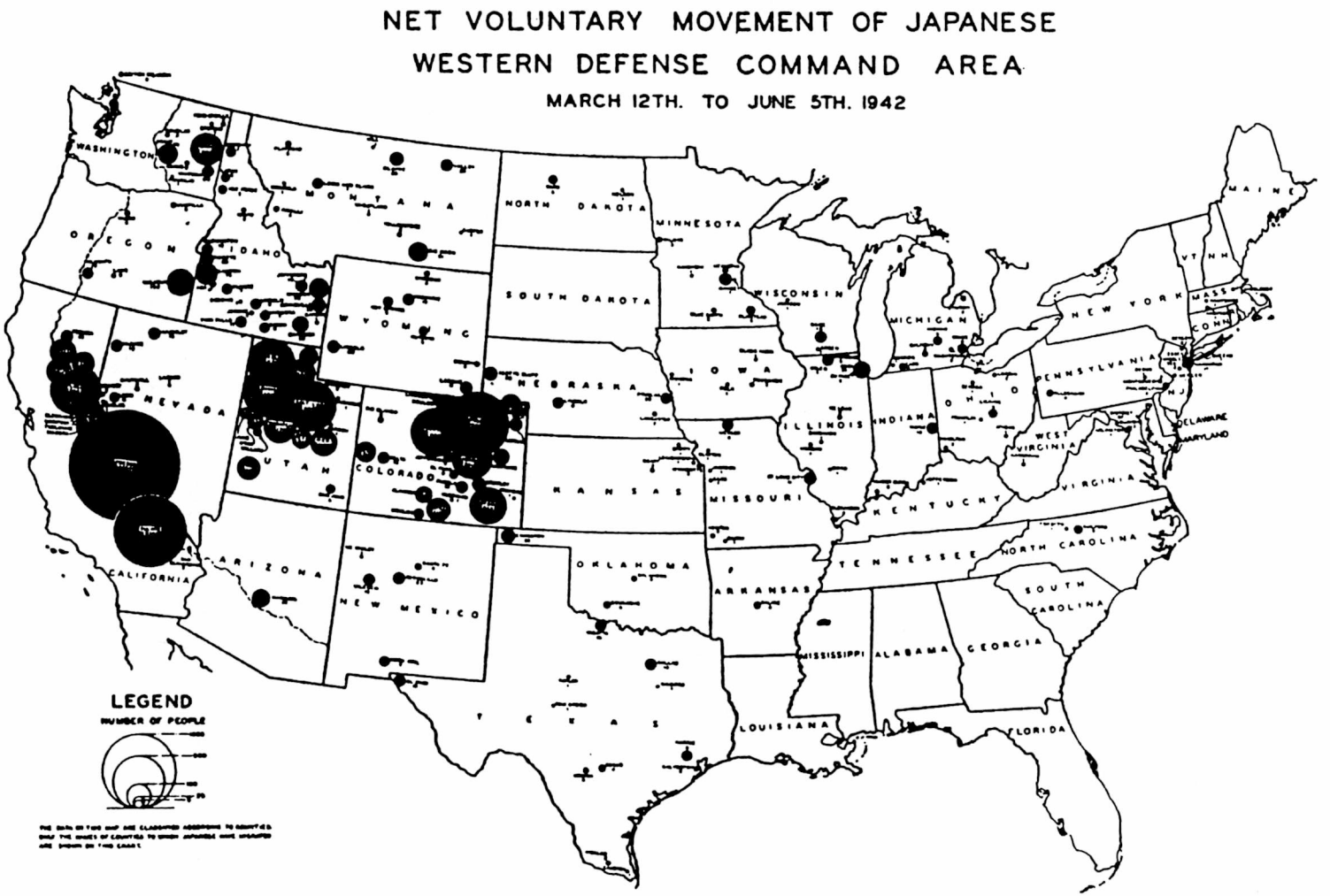


Figure 3.4. Net voluntary movement of Japanese Americans from Military Area No. 1 (from DeWitt 1943:Figure 11).

Table 3.1.
WCCA Assembly Centers (Tajiri 1990:107, 116; Thomas 1952:84).

Center	Date of first arrival	Peak population	Date of last departure	Primary Destination
Fresno, California	5-6-42	5,120	10-30-42	Jerome, Gila River
Owens Valley, California	3-21-42	9,666	5-31-42	same*
Marysville, California	5-8-42	2,451	6-29-42	Tule Lake
Mayer, Arizona	5-7-42	245	6-2-42	Poston
Merced, California	5-6-42	4,508	9-15-42	Granada
Parker Dam, Arizona	5-8-42	11,738	5-31-42	same*
Pinedale, California	5-7-42	4,792	7-23-42	Tule Lake, Poston
Pomona, California	5-7-42	5,434	8-24-42	Heart Mtn.
Portland, Oregon	5-2-42	3,676	9-10-42	Heart Mtn., Poston
Puyallup, Washington	4-28-42	7,390	9-12-42	Tule Lake, Minidoka
Sacramento, California	5-6-42	4,739	6-26-42	Tule Lake
Salinas, California	4-27-42	3,594	7-4-42	Poston
Santa Anita, California	3-27-42	18,719	10-27-42	Poston, six others
Stockton, California	5-10-42	4,271	10-17-42	Rohwer, Gila River
Tanforan, California	4-28-42	7,816	10-13-42	Central Utah
Tulare, California	4-20-42	4,978	9-4-42	Gila River
Turlock, California	4-30-42	3,662	8-12-42	Gila River

* administration transferred to WRA

Generally, the first to arrive at the reception centers were volunteers, mainly JACL leaders and their families. Since the Owens Valley and Parker Dam centers could only hold a small fraction of the West Coast Japanese and little time was available for additional large-scale construction, existing facilities were converted into temporary assembly centers.

Eleven of the assembly centers were at racetracks or fairgrounds. Others were at the Pacific International Livestock Exposition Facilities (Portland, Oregon), a former mill site (Pinedale, California), migrant workers camps (Marysville and Sacramento, California), and an abandoned Civilian Conservation Corps (CCC) Camp (Mayer, Arizona) (Thomas 1952:84).

Two additional assembly centers were partially readied. Toppenish, in eastern Washington, ultimately was not used because of unsuitable sanitation facilities, and because there was

Headquarters
Western Defense Command
and Fourth Army
Presidio of San Francisco, California
April 30, 1942

Civilian Exclusion Order No. 27

1. Pursuant to the provisions of Public Proclamations Nos. 1 and 2, this Headquarters, dated March 2, 1942, and March 16, 1942, respectively, it is hereby ordered that from and after 12 o'clock noon, P.W.T., of Thursday, May 7, 1942, all persons of Japanese ancestry, both alien and non-alien, be excluded from that portion of Military Area No. 1 described as follows:

All of that portion of the County of Alameda, State of California, within that boundary beginning at the point at which the southerly limits of the City of Berkeley meet San Francisco Bay; thence easterly and following the southerly limits of said city to College Avenue; thence southerly on College Avenue to Broadway; thence southerly on Broadway to the southerly limits of the City of Oakland; thence following the limits of said city westerly and northerly, and following the shoreline of San Francisco Bay to the point of beginning.

2. A responsible member of each family, and each individual living alone, in the above described area will report between the hours of 8:00 A. M. and 5:00 P. M., Friday, May 1, 1942, or during the same hours on Saturday, May 2, 1942, to the Civil Control Station located at:

530 Eighteenth Street
Oakland, California.

3. Any person subject to this order who fails to comply with any of its provisions or with the provisions of published instructions pertaining hereto or who is found in the above area after 12 o'clock noon, P.W.T., of Thursday, May 7, 1942, will be liable to the criminal penalties provided by Public Law No. 503, 77th Congress, approved March 21, 1942 entitled "An Act to Provide a Penalty for Violation of Restrictions or Orders with Respect to Persons Entering, Remaining in, Leaving, or Committing any Act in Military Areas or Zones," and alien Japanese will be subject to immediate apprehension and internment.

4. All persons within the bounds of an established Assembly Center pursuant to instructions from this Headquarters are excepted from the provisions of this order while those persons are in such Assembly Center.

J. L. DeWitt
Lieutenant General, U. S. Army
Commanding

*Reproduction of Civilian Exclusion Order No. 27. Each Order prepared in both poster and pamphlet size.

Figure 3.5a. Civilian Exclusion Order No. 27 (for Oakland, California), these were prepared by the U.S. Army in both poster and pamphlet size.

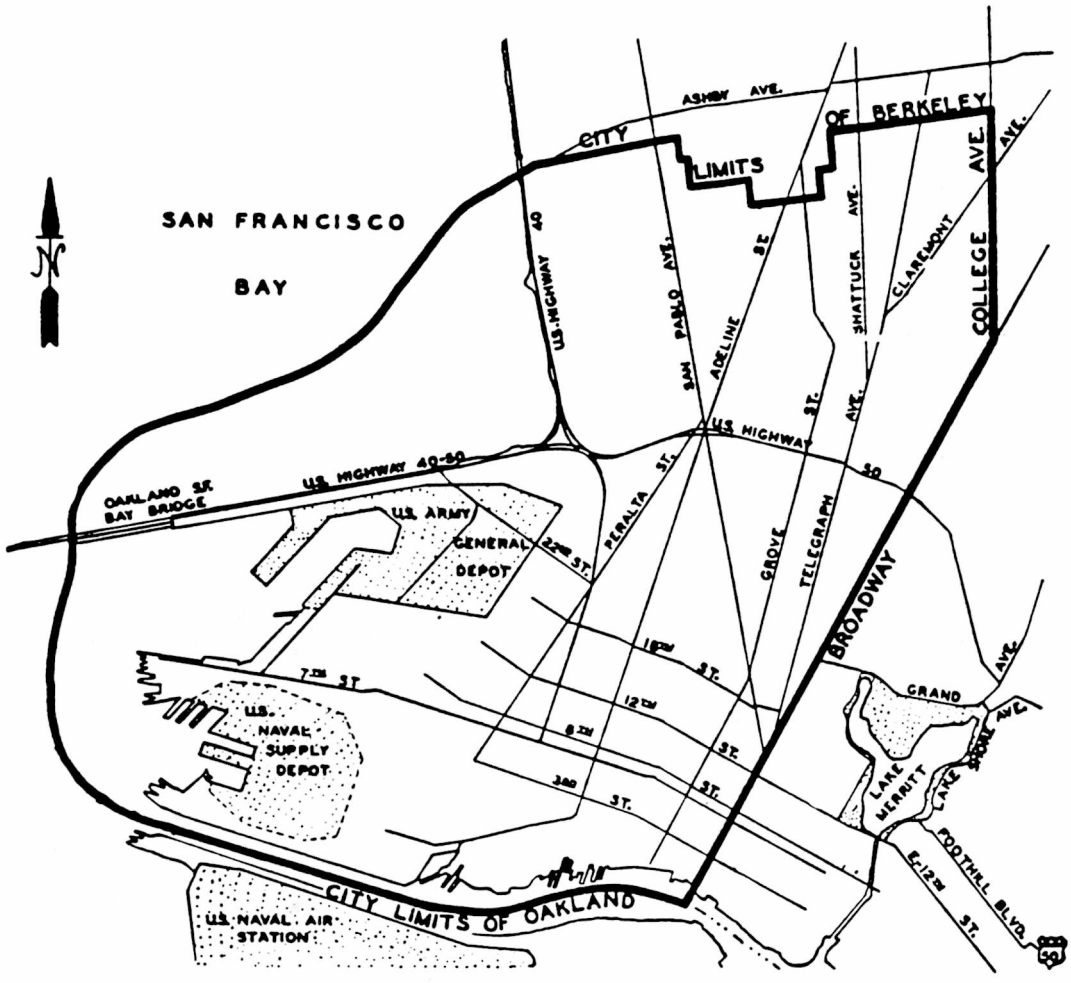


Figure 3.5b. Map included with Civilian Exclusion Order No. 27; if someone did not yet know where sensitive military facilities were, this map of Oakland included with the exclusion order pointed them out.

enough room in the California assembly centers for the evacuees. A refurbished CCC camp at Cave Creek, Arizona, was not needed due to considerable voluntary migration from the southern part of the state (DeWitt 1943:152).

Living conditions at the assembly centers were chaotic and squalid. Existing buildings were used, and supplemented with temporary "Theater of Operations"-type army barracks, 20 ft by 100 ft buildings divided into five rooms. These barracks were originally designed for temporary use by combat soldiers, not families with small children or elderly people (U.S.D.I. 1946).

At the racetracks, stables had been hastily cleaned out before their use as living quarters, but the stench remained. Still, the converted stables were described as "somewhat better shelter than the newly constructed mass-fabricated houses" (McWilliams 1942:361). At the Santa Anita Assembly Center 8,500 of the total population of over 18,000 lived in stables. At the Portland Assembly Center over 3,000 evacuees were housed under one roof in a livestock pavilion that was subdivided into apartments (DeWitt 1943:183).

The atmosphere in the assembly centers was tense (Figure 3.6). Many were demoralized, convinced that America would never accept them as full-fledged Americans. Some Nisei who had been very patriotic became very bitter and sometimes pro-Japanese. Many tried to do everything possible to make living conditions better, organizing newsletters and dances and planting victory gardens. Jobs were available in the assembly centers, but the decision was made that no evacuees should be paid more than an Army private (which was then $21 per month) to combat charges of coddling. Initially, unskilled laborers were paid $8 per month, skilled laborers $12, and professionals, $16. These were later raised to $12, $16, and $19, respectively.

Evacuees worked as cooks, mechanics, teachers, doctors, clerks, and police. At the Santa Anita and Manzanar assembly centers, camouflage net factories, managed by a private company under military contract, were set up. Only citizens could be employed on this war-related work.

Privacy at the assembly centers was next to non-existent, with communal lavatories and mess halls and thin walls in the barracks. Families were crowded into small apartments, usually 20 ft by 20 ft. The evacuees fixed up their new homes as best they could with salvaged lumber and other supplies that they could find, in an attempt to make them more liveable.

Shortages of food and other material and deplorable sanitation were common at many of the centers (Weglyn 1976:80-82). The 800 Nisei working at the net factory at Santa Anita conducted a sit-down strike complaining about, among other things (such as low pay and unfair production quotas), weakness due to lack of food (Weglyn 1976:81).

Opportunities for leaving the assembly centers were available. California educators made an

Figure 3.6. Guard tower at Tanforan Assembly Center (WCCA photograph from DeWitt 1943:Figure 23).

effort to send college-age Nisei to school. Few colleges were willing to accept them, but around 4,300 students were eventually released from the assembly centers to attend school. The war had created a massive labor shortage, so the WCCA agreed to allow seasonal agricultural leave for those they deemed loyal. Over 1,000 evacuees were granted temporary leave to harvest cotton, potatoes, and sugar beets.

The evacuees for the most part took their hardships in stride. However, the effects of overcrowding and stress became apparent at the Santa Anita Assembly Center on August 4, 1942. On that day a routine search for contraband (including Japanese language books and phonograph records), and an unannounced confiscation of hot plates turned violent. Rumors and complaints spread as crowds gathered. The internal police and suspected informers were harassed and one suspected informer was severely beaten. In the end 200 military police had to be called in to silence the 2,000 protesters (Davis 1967:79). That night the residents were confined to their barracks and no meals were served. The military patrolled inside the center for three days (Lehman 1970).

Setting up the Relocation Centers

To reduce the diversion of soldiers from combat, a civilian organization, the War Relocation Authority (WRA), had been created on March 19, 1942. Once the military made the decision to relocate Japanese Americans en masse from Military Areas No. 1 and 2, this civilian agency was left to figure out how to implement this policy. Milton S. Eisenhower, then an official of the Department of Agriculture, was chosen to head the WRA. Eisenhower initially hoped that many of the evacuees, especially citizens, could be resettled quickly. He expected that evacuees could be either directly released from the assembly centers and sent back to civilian life away from the military areas, or sent to small unguarded subsistence farms.

However, after meeting with the governors and other officials from ten western states on April 7, Eisenhower realized that anti-Japanese racism was not confined to California. No governor wanted any Japanese in their state, and if any came, they wanted them kept under guard. The common feeling was expressed by one of the governors: "If these people are dangerous on the Pacific coast they will be dangerous here!" (Daniels 1993:57). But, their chief concern was that the Japanese would settle in their states and never leave, especially once the war was over. However, at a meeting with local sugar beet growers on the same day, a different view prevailed. Desperate for labor, S.J. Boyer of the Utah Farm Bureau said that farmers "don't love the Japanese, but we intend to work them, if possible" (Daniels 1989:94).

Eisenhower was forced to accept the idea of keeping both the Issei and Nisei in camps for the duration of the war. The idea of interning innocent people bothered him so much, however, that he resigned in June 1942. He recommended his successor, Dillon S. Myer, but advised Myer to take the position only "if you can do the job and sleep at night" (Myer 1971:3).

Relocation Centers

The relocation centers were located in isolated areas, most in deserts or swamps, perhaps unwittingly following newspaper columnist Henry McLemore's vitriol, "Herd 'em up, pack 'em off and give them the inside room of the badlands. Let 'em be pinched, hurt, hungry and dead up against it" (McLemore 1942).

The assembly centers at Manzanar and Poston were redesignated relocation centers and eight new sites in seven states were selected (Figure 3.7; Table 3.2). Over 300 possible sites were reviewed; primary consideration was given to locations with railroad access and agricultural potential (Madden 1969:23-25). Site selection was made by the WRA, but site acquisition was left to the War Department. The

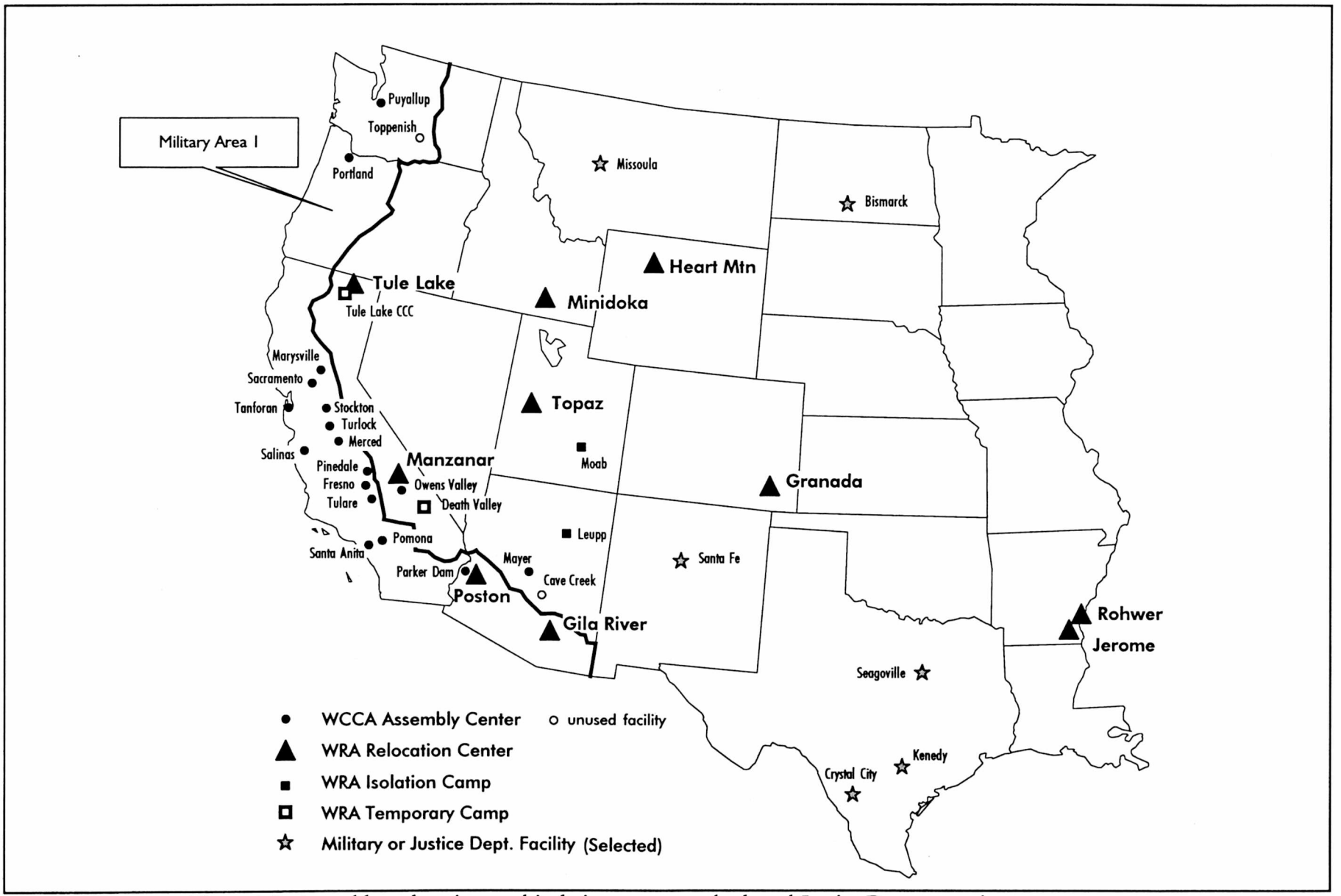


Figure 3.7. Assembly, relocation, and isolation centers and selected Justice Department internment camps.

Table 3.2.
WRA Relocation Centers (Daniels 1993:131; Thomas 1952:88).

Center	Date of first arrival	Peak population	Date of peak population	Date of last departure
Gila River	7-20-42	13,348	12-30-42	11-10-45
Granada	8-27-42	7,318	2-1-43	10-15-45
Heart Mountain	8-12-42	10,767	1-1-43	11-10-45
Jerome	10-6-42	8,497	2-11-43	6-30-44
Manzanar	3-21-42	10,046	9-22-42	11-21-45
Minidoka	8-10-42	9,397	3-1-43	10-28-45
Poston (Colorado River)	5-8-42	17,814	9-2-42	11-28-45
Rohwer	9-18-42	8,475	3-11-43	11-30-45
Topaz (Central Utah)	9-11-42	8,130	3-17-43	10-31-45
Tule Lake	5-27-42	18,789	12-25-44	3-20-46

were primarily on unused or underutilized federal lands. With the exception of the California Relocation Centers, all were in sparsely populated areas, making them some of the largest "communities" in their respective states.

The Tule Lake Relocation Center in California, the Minidoka Relocation Center in Idaho, and the Heart Mountain Relocation Center in Wyoming were located on undeveloped federal reclamation projects. The Jerome and Rohwer Relocation Centers in Arkansas were partially on land meant for subsistence homesteads under the Farm Security Administration; the balance of the site at Rohwer was bought from local farmers.

The Colorado River (Poston) and Gila River Relocation Centers in Arizona were both on Indian Reservations. Both Tribal Councils opposed the use of their land on the grounds that they did not want to participate in inflicting the same type of injustice as they had suffered, but they were overruled by the Army and Bureau of Indian Affairs (BIA). In fact, Eisenhower in a verbal agreement, had turned over administration of the Colorado River Relocation Center to the BIA. The WRA resumed control of the center when Myer became director.

The Central Utah Relocation Center (Topaz) had been part public domain, part county owned, and part privately owned. The Granada Relocation Center in Colorado had been privately owned and was purchased by the Army for the WRA (Daniels 1989; U.S.D.I. 1946). The Manzanar Relocation Center was located on unused land held by the City of Los Angeles for its water rights.

Evacuees at assembly centers which had only pit latrines or which presented a fire hazard were the first priority for transfer to the relocation centers (DeWitt 1943:280). In theory, evacuees would be sent to the relocation center with the climate most similar to their home, and each relocation center would have a balance of urban and rural settlers. Evacuees were transferred from

the assembly centers to the relocation centers by trains; this mass movement was carefully choreographed to avoid interrupting major troop movements.

The transfer process lasted from early June to October 30 (see Table 3.2). Following the transfer of evacuees and supplies to the relocation centers all but two of the assembly and reception centers were turned over to various Army agencies or the U.S. Forest Service (Table 3.3).

Concurrently with the transfers from the assembly centers, the military decided to remove all Japanese Americans from the remainder of California. The eastern portion of California had been designated Military Area No. 2, and was not supposed to be as sensitive as Military Area No. 1, where all Japanese had already been removed from their homes to assembly centers. But, within the California portion of Military Area No. 2 there remained two particularly dense concentrations of Japanese Americans immediately adjacent to Military Area No. 1, vital military installations, and important forests (Figure 3.8; DeWitt 1943:360). Over 9,000 people were directly moved from this area to the Tule Lake, Poston, and Gila River relocation centers between July 4 and August 11. This included many who had voluntarily moved out of Military Area No. 1 prior to Public Proclamation No. 1. Alaskan Japanese who were not picked up by the Department of Justice after the attack on Pearl Harbor were airlifted to Washington and then moved to Minidoka. Of the 151 people of Japanese ancestry removed from Alaska, about 50 were seal- and whale-hunting half-Eskimo or half-Aleut (Weglyn 1976:57).

Table 3.3.
Disposition of Assembly Centers (from DeWitt 1943:184).

Center	Transfer Date	New Using Agency
Fresno	11/9/42	4th Air Force Training Command
Marysville	6/16/42	VII Army Corps
Mayer	6/27/42	Forest Service
Merced	9/30/42	4th Air Service Area Command
Pinedale	8/6/42	4th Air Force
Pomona	9/4/42	Ordnance Motor Transport
Portland	9/30/42	Portland Port of Embarkation
Sacramento	7/30/42	Signal Corps
Puyallup	9/30/42	9th Service Command
Salinas	7/24/42	VII Army Corps
Santa Anita	11/30/42	Ordnance
Stockton	10/30/42	4th Air Service Area Command
Tanforan	10/27/42	Northern Calif. Sector, WDC
Tulare	9/15/42	VII Army Corps
Turlock	8/24/42	9th Service Command

Relocation Center Layout and Building Design

General plans for the construction of the relocation centers were developed prior to the establishment of the WRA. Initial facilities were constructed by the War Department, which also procured the initial equipment (Table 3.4). Per capita construction costs ranged from $376 at Manzanar to $584 at Minidoka. The total construction cost, for all centers, was over $56 million.

The relocation centers were designed to be self-contained communities, complete with hospitals, post offices, schools, warehouses, offices, factories, and residential areas, all surrounded by barbed wire and guard towers. Since the centers were supposed to be as self-sufficient as possible, the residential core was surrounded by a large buffer zone that also served as farmland. As at the assembly centers, the Military Police (MPs) had a separate living area adjacent to the relocation center, to reduce fraternization. The civilian employees also had living quarters available at the camp, but these were usually supplemented by whatever housing was available in the nearby towns.

The layout of the relocation centers varied, but certain elements were fairly constant. The perimeter was defined by guard towers and barbed wire fences. There was generally a main

Table 3.4. Quartermaster Property Shipped to Relocation Centers (DeWitt 1943: 276).

Item	Amount
Axes	2,635
Blankets	275,141
Boats, Gravy	19,915
Bowls, Sugar	21,002
Bowls, Soup	123,583
Buckets	9,478
Cans, 32 gallon	5,555
Cans, 10 gallon	4,159
Cleavers	604
Cots, Steel	117,393
Cups, Coffee	122,797
Dippers	5,166
Dishes, Vegetable	39,195
Dishes, Pickle	10,125
Forks	117,620
Forks, Meat	2,434
Graters	1,224
Griddles	1,240
Knives, Paring	3,518
Knives	121,114
Knives, Butcher	1,805
Ladles, Soup	3,518
Machines, Grinder	659
Mashers, Potato	1,207
Mattresses Covers	118,626
Measures, Quart	1,207
Openers, Can	1,179
Pans, Dish	5,228
Pans, Cake or Pie	18,116
Pans, Baking, Large	2,894
Pans, Frying	618
Picks, Ice	590
Pins, Rolling	592
Pitcher, Syrup	19,390
Pitchers, Water	19,774
Plates, Dinner	125,627
Platters, Meat	10,149
Pots, Mustard	19,879
Pots, 15 gallon	1,340
Pots, 10 gallon	1,292
Pots, 20 gallon	466
Ranges, Army No. 5	1,236
Saucers, Coffee	123,345
Saws, Butcher	625
Scrapers, Dough	586
Shakers, Salt	20,444
Shakers, Pepper	17,600
Sieves, Flour	594
Skimmers	1,521
Spoons	117,821
Spoons, Basting	1,348
Steels, Butcher	560
Tongs, Ice	639
Turners, Cake	2,507
Whips, Wire	1,213

entrance leading to the local highway, and auxiliary routes to farming areas outside the central core. Some of the major interior roads were paved, but most were simply dirt roads that were dusty or muddy depending on the weather.

The layout of the two Arizona relocation centers differed from the others. Located on dead end roads, rather than along a major highway, there were no watch towers and little or no barbed wire. The Poston Relocation Center consisted of three separate camps at five mile intervals (Poston I, II, and III) and the Gila River Relocation Center consisted of two separate camps (Butte Camp and Canal Camp).

Plans were based on a grid system of blocks. Block size varied in the non-residential areas such as the administrative area, warehouses, and hospital. The remainder of the central cores were made up of residential blocks separated by empty fire breaks. Each residential block consisted of ten to fourteen barracks, a mess hall, latrines for men and women, a laundry, and a recreation hall. Eventually, large sewage systems were built; sometimes these modern facilities (necessary because of the population density of the centers) aroused the ire and envy of the local rural residents, who relied on septic systems or outhouses.

The design of buildings for the relocation centers presented a problem since no precedents for this type of housing existed. Permanent buildings were not desired. The military had available plans for semi-permanent "Cantonment"-type buildings and temporary "Theater of Operations"-type buildings. A set of standards and details were developed by the Army, modifying the "theater of operations"-type buildings to make them suitable for housing women, children and elderly people while still meeting the requirements of quick construction, low cost, and restricted use of critical materials.

These standards and details of construction were put in place by the WCCA on June 8, 1942, and

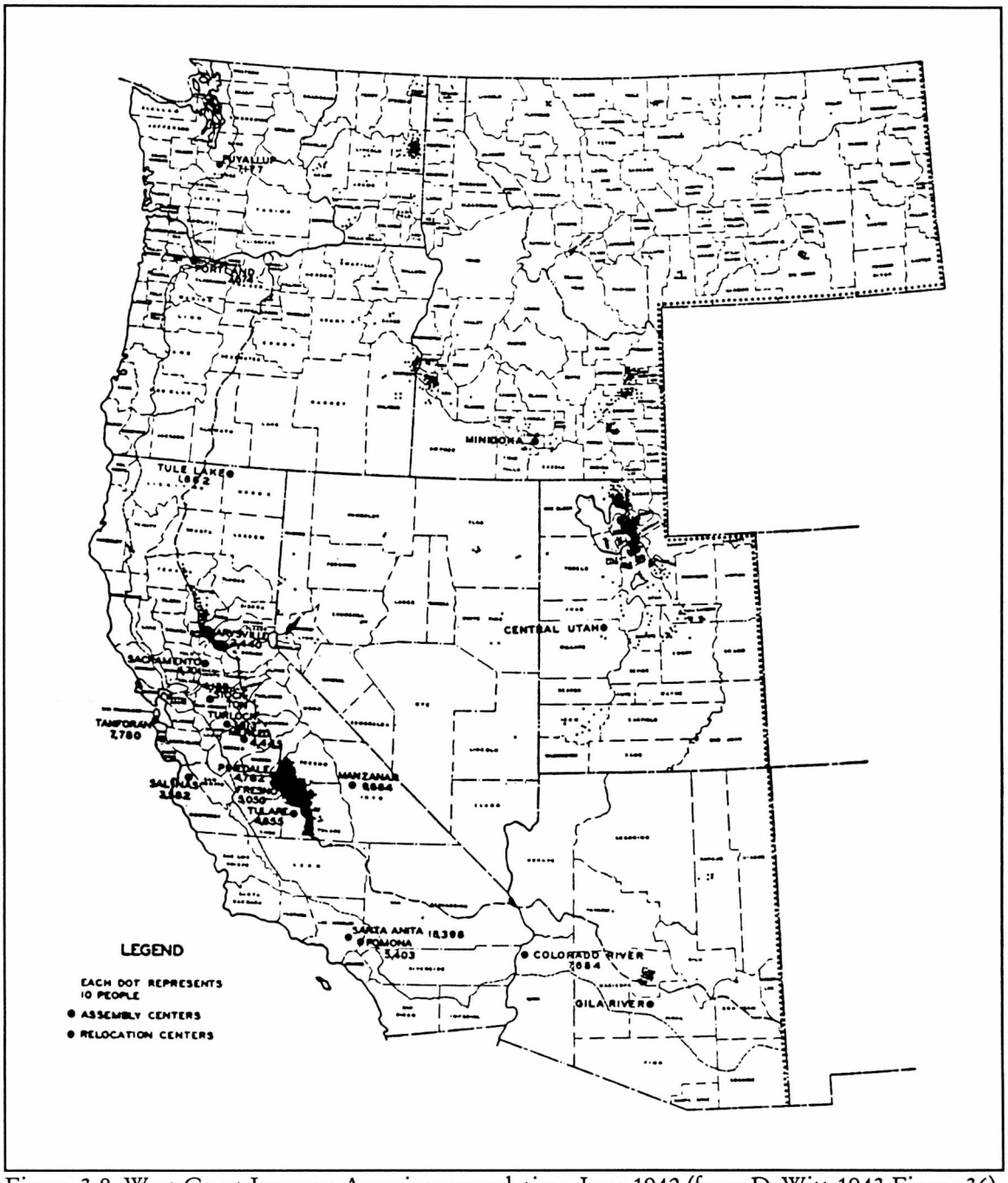


Figure 3.8. West Coast Japanese American population, June 1942 (from DeWitt 1943:Figure 36).

provided for uniform construction after that date. However, Manzanar, Tule Lake, Poston, and Gila River were already under construction. Construction also varied because different local Engineer Divisions interpreted the rather vague standards differently, and these local offices were responsible for developing or contracting out the plans and specifications for each center.

Local craftsmen were used, but the requirements were not very stringent; in Millard County, Utah, near the Topaz Relocation Center, the term "Topaz Carpenter" is still a derogatory term, since anyone who showed up at the site with a hammer would be hired. Supplies were also difficult to come by in such large quantities during wartime. In addition, some suppliers were reluctant to use valuable resources for "Japs,"

Figure 3.9. Rohwer Relocation Center under construction (WRA photograph from Kunitsugu 1990:14).

making construction somewhat makeshift at times (Figure 3.9).

The five room 20 ft by 100 ft plan of the assembly centers barracks were supplanted by 20 ft by 120 ft barracks plans with six variably-sized rooms. The barracks thus built followed standard plans, with different sized apartments to accommodate different sized families and groups of single people, with two apartments at each of the following sizes: 16 ft by 20 ft, 20 ft by 20 ft, and 24 ft by 20 ft. Partitions between the apartments extended only to the eaves, leaving a gap between the walls and the roof. Each apartment had a heating unit, either coal, wood, oil, or natural gas. Furnishings included a single drop light, army cots, blankets, and mattresses.

The exterior walls and roofs of the barracks were generally of boards covered with tarpaper on frames of dimension lumber. In the colder climates wallboard was provided for insulation. The raised floors were wood, which quickly shrank and allowed dust and dirt to fly all over the barracks. Eventually, "Mastipave" flooring was provided for use at the Tule Lake, Manzanar, Gila River, and Poston Relocation Centers to insulate the drafty floors. The window configurations varied, but were typically either sliding square windows or double hung, with divided lights. The gabled ends of the buildings had rectangular vents — a standard Army construction detail.

Other than size, barracks construction varied only at the Granada and Gila River centers. At Granada the barracks had weatherized wallboard exterior walls and brick floors. The barracks at Gila River had double roofs for insulation and white wallboard exterior sheathing. Clearly the Gila River Relocation Center, visited by Eleanor Roosevelt in April 1943, was a showplace (Figure 3.10; Inoshita 1995).

Most other buildings were variations on the same theme. Recreation halls and community buildings were basically the same as barracks, but 20 ft by 100 ft and without interior partitions. Mess halls were 40 ft by 100 ft, with a kitchen, store room, and scullery.

Block latrine and laundry facilities at the earlier constructed relocation centers differed little from that of the assembly centers. At Manzanar, Poston, Gila River, and Tule Lake there were three separate buildings in each residential block

Figure 3.10. Eleanor Roosevelt visiting the Gila River Relocation Center (WRA photograph, National Archives).

for the men's bathroom, women's bathroom, and laundry. These army-type facilities had no toilet partitions or bathtubs and very little hot water. A separate ironing room was added as an afterthought after numerous power outages. At Tule Lake later-constructed blocks had a combined laundry and ironing room and a combined men's and women's bathroom.

Block latrine and laundry facilities at the relocation centers built after the WCCA standards were established consisted of a large centralized H-shaped structure. One side of the building contained the block laundry, the other side contained the men's and women's bathrooms. The crossbar of the H contained the hot water heater. In addition to the standard toilets, sinks, and communal showers provided in the earlier constructed facilities, the women's bathroom was equipped with toilet stalls and four bathtubs.

Administration buildings were similar to internee barracks, but with white clapboard exteriors rather than tarpaper. Staff housing, also with clapboard exteriors, was divided into self-contained one, two, or three bedroom apartments each with its own kitchen and bathroom.

Community buildings such as schools and churches were left to be constructed by the internees, with the intention of initially using unused barracks. In general, schools at first used entire blocks of barracks. The block recreation halls, originally intended for use by that block, were usually converted to other general community purposes, such as churches or cooperative stores.

Buildings that were later designed or built by the internees were often far more individualistic, and often built of more permanent materials. For instance, school buildings at Poston were built of adobe brick made by the internees. These later buildings were usually set at angles to the uniformly gridded camp.

Agricultural enterprises at all of the centers provided much of each center's food, with surpluses sent to the other relocation centers. However, over 40 percent of the U.S. rice production went to the relocation centers (Smith 1995:185). Most of the centers also had hog and chicken farms, and beef or dairy cows were raised at Gila, Granada, Topaz, and Manzanar (Table 3.5).

The relocation centers were subject to the same rationing as the rest of the country. Victory Gardens supplemented the rations and evacuee crews recycled fats, metal, and other material considered vital to the war effort.

The WRA intended to have industries supporting the war effort at the relocation centers, but these plans were thwarted by industries and unions who feared unfair competition. The only venture that enjoyed even a modest degree of success was the short-lived manufacture of camouflage nets at three of the

Table 3.5.
Relocation Center Agricultural Enterprises, June 1944 (W.R.A. 1944).

	Field Acreage		Number of	Number of	Number of	Number of
	Vegetables	Field Crops	Hogs	Chickens	Egg Hens	Cattle
Gila River		1400	1106	3332	5252	1377
Granada	505	2185	1017	4712	2210	456
Heart Mtn	427	573	873	1437	8918	30
Jerome	123		701			
Manzanar	242	126	469	3869	4669	87
Minidoka	312	425	611	3249	3627	
Rohwer	202	375	411	1150		
Poston	1462	819	565	4275	5285	
Topaz	242	990	887	62	1285	377
Tule Lake	305	856	532			

centers (Figure 3.11; Smith 1995:176). The Manzanar net factory, supervised by the Corp of Engineers, was closed following a December 1942 riot. Privately run net factories at the Poston and Gila River relocation centers were discontinued in May 1943 after the completion of their original contracts.

Other war-related industries at the relocation centers included a ship model factory at Gila that produced models for use in training Navy pilots and a poster shop at Granada. Other planned industrial projects were put on hold, due to outside pressures and to encourage relocation out of the centers.

Industry for internal use included garment factories at Manzanar, Heart Mountain, and Minidoka, a cabinet shop at Tule Lake, sawmills at Jerome and Heart Mountain, and a mattress factory at Manzanar. In addition, factories for the processing of agricultural products were common at all of the centers. For instance, Manzanar made all the soy sauce it used (Smith 1995:244).

Figure 3.11. Camouflage net factory at the Gila River Relocation Center (WRA photograph, National Archives).

Life in the Relocation Centers

The physical surroundings, while not having as profound an impact as political and philosophical issues, had a great effect on everyday life. When the internees arrived at the camps, they found identical blocks of identical flimsy barracks. They quickly found ways to improve and personalize their new lodgings, first to make them habitable, and later to make them into homes. The physical changes the internees made in their environment were important ways of taking control over their own lives. The changes also helped personalize the identical barracks, to relieve the monotony.

Physical elements could also be reminders of their lack of freedom. The guard towers and especially the barbed wire fences delineated the difference between inside and outside the camps, freedom and confinement. Even a WRA report admits this: "... the contrast between the barbed wire and the confinement within Manzanar and the observable freedom and motion for those immediately outside, is galling to a good many residents" (W.R.A. 1943).

The weather was another element that greatly affected the evacuees' lives. Both contemporary and later accounts stress dust, mud and extremes in temperature that came as great shocks to West Coast residents used to much more temperate climates. The dust, caused by the massive disturbance of the soil from construction of hundreds of buildings at once, eventually settled, but the weather stayed the same.

Originally, block leaders were appointed by the relocation center director. But, the WRA decided that the evacuees should participate in governing their own communities as much as possible. WRA policy called for a community council with one elected representative from each block, an executive committee, and a judicial committee. Issei were not eligible to hold an elective office. Manzanar was the only center that never elected a council. Instead it relied on elected block leaders who served as an advisory group for the center director (Myer 1971:39-40; Smith 1995:253).

Some conflicts were caused by relocation, while others were merely brought to the surface. Many Japanese Americans had supported the United States and were loyal and patriotic until their government decided that they were untrustworthy and guilty until proven innocent. Their feelings of betrayal sometimes caused formerly loyal citizens to renounce their citizenship, in extreme cases, or merely to sympathize with the Japanese government. It was probably most difficult for the Issei, who often still had feelings of loyalty to Japan, even though they also felt American. Other Japanese Americans continued to feel loyal to their country, even though they had lost their homes and freedom. Their major goal was to find ways to prove their loyalty to the outside world.

Inter-generational tension was also a major problem in the relocation centers, especially since Issei and Nisei were very distinct generations. There was a large shift in the balance of power from the Issei to the Nisei, for many reasons. The majority of the Issei leadership had been arrested after Pearl Harbor, and the Nisei gained power and influence, both within families and in general. Once the relocation centers were set up, many of the Issei were released to join their families in the centers. However, use of the Japanese language was very restricted: all meetings had to be conducted in English, and all newsletters and other publications were in English. Since many Issei did not speak English, or were not very fluent, this was a further handicap. The Issei also often lost more in the arrests and relocation, since they usually had established farms or businesses. The Nisei usually had less to lose, and some saw the entire experience as an adventure or merely a temporary setback.

Resistance within the relocation centers took

many forms. Ethnic churches, Japanese language schools, and unofficial unions flourished, channeling resistance away from open rebellion. More overt resistance came in the form of strikes and protest demonstrations. How far these went depended on whether an acceptable compromise could be reached (Okihiro 1974).

In November 1942 Heart Mountain was beset by protests over the erection of a barbed wire fence and watchtowers around the relocation center. A petition signed by over half of the adults in the center stated that the fence was an "insult to any free human being." The fence stayed, but the protests continued (Daniels 1989:115).

That same month Poston came close to open revolt. When two suspected informers were beaten, administration officials arrested two Kibei men. Crowds demanded they be freed, workers went on strike, and the police station was picketed. Demonstrators flew flags that from a distance resembled the Japanese flag (Figure 3.12). However, the protest ended peacefully as the Issei leaders of the protest saw things getting quickly out of hand and a compromise settlement was reached.

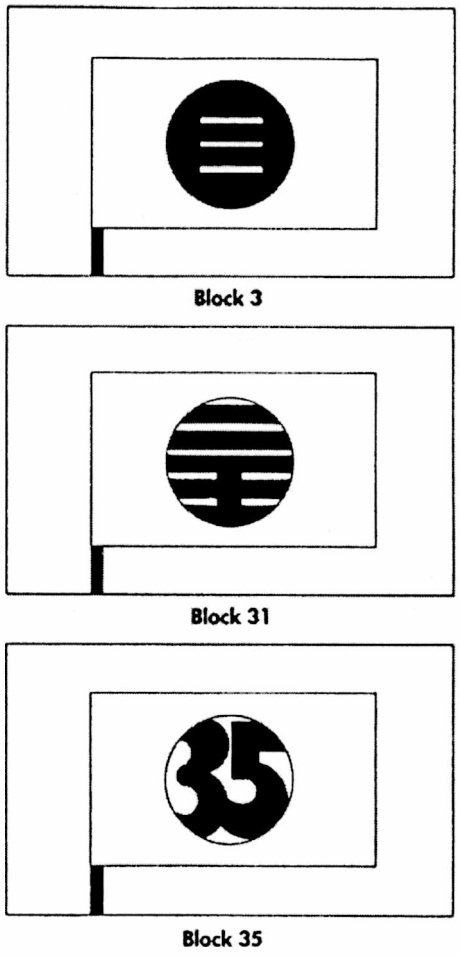


Figure 3.12. Examples of flags flown by center residents during the Poston strike (from Hirabayashi and Hirabayashi 1989:71).

The most serious disturbance erupted at Manzanar in December 1942, following months of tension and gang activity between Japanese American Citizens League (JACL) supporters of the administration and a large group of Kibei. On December 6, a JACL leader was beaten by six masked men. Harry Uneo, the leader of the Kitchen Workers Union, was arrested for the beating and removed from the center. Soon afterward, 3,000 to 4,000 evacuees held a meeting, marched to the administration area, and selected a committee of five to negotiate with the administration. In exchange for a promise of no more demonstrations, the center director agreed to bring Uneo back to the relocation center jail.

However, when Uneo was returned a crowd formed again. Fearing the worst, the director called in the military police, who then used tear gas to break up the crowd. When a truck was pushed toward the jail, the military police fired into the crowd, killing one and wounding at least ten others (one of whom later died).

A group of 65 "outspoken patriots" (Myer 1971:64) who supported the Manzanar administration were on a reported death list, including the JACL leader who had been beaten. For their protection, these evacuees were removed to an abandoned CCC Camp in Death Valley. Sixteen alleged troublemakers, including Uneo, were removed to local jails and then to another abandoned CCC Camp at Moab, Utah. This so-called "Isolation Center" was later moved

to an Indian boarding school at Luepp, Arizona, in April 1943.

Others from Manzanar and other relocation centers were also sent to the Isolation Center, for "crimes" as minor as calling a Caucasian nurse an old maid (Drinnon 1987:104). No formal charges had to be made, transfer was purely at the discretion of the relocation center director (Myer 1971:65). At Luepp, the military police outnumbered the inmates 3 to 1.

The Minidoka Center was continually plagued by strikes and protests. The internees organized a labor council, termed the Fair Play Committee, to represent them. The main objection was the low wage scale and the difference in wages between the evacuees and the Caucasian staff. A strike by evacuee coal workers was broken by employing other evacuees from the center who volunteered, and a strike by hospital workers was broken by sending the strike leaders to Luepp. Similar conflicts later arose with block maintenance staff, mail carriers, gatekeepers, telephone operators, warehouse workers, and other groups. A never-finished gymnasium stood as a reminder of administration-evacuee conflict. The construction crew walked out over a dispute about work hours and no volunteers could be found to replace them (Sakoda 1989:263).

Even with suspected troublemakers shipped out at a moment's notice, a crisis could erupt at anytime, as at the Topaz Relocation Center. On Sunday, April 11, 1943, 63-year-old James Hatsuaki Wakasa was fatally shot just before sunset by military police. Either distracted or unable to hear or understand the sentry's warnings, he was near the perimeter fence about 300 feet from the watchtower, when he was shot in the chest. The sentry, a disabled veteran of Pacific combat, indicated that Wakasa was trying to crawl through the fence and that he warned him four times before firing a warning shot (guards had fired warning shots on eight previous occasions).

The relocation center residents were shocked and outraged by the killing and a general alert was called by the military in case of trouble. However, relative calm prevailed as both the administration and the Topaz Japanese American leadership wanted to avoid a confrontation. After a brief work stoppage, compromises on the funeral location (near, but not at, the spot of death) and limits placed on military police were reached. The military were subsequently restricted in their use of weapons, no MPs would be allowed inside the center, and Pacific veterans would be withdrawn and no more would be assigned. Nevertheless, a little more than a month later, a sentry fired at a couple strolling too close to the fence (Taylor 1993:141).

Indefinite Leave Clearance

One of the goals of the War Relocation Authority was to determine which evacuees were actually loyal to the United States, and then to find places for them to work and settle away from the West Coast, outside of the relocation centers. At first, each case had to be investigated individually, which often took months, since each person had to find a job and a place to live, while convincing the government that they were not a threat. Eventually, to streamline the process, every adult internee was given a questionnaire entitled "Application for Indefinite Leave Clearance" whether or not they were attempting to leave. Unfortunately, these questionnaires had originally been intended for determining loyalty of possible draftees, and were not modified for the general population, which included women and Japanese citizens. The controversial questions were Numbers 27 and 28:

> No. 27: Are you willing to serve in the armed forces of the United States on combat duty, wherever ordered?
>
> No. 28: Will you swear unqualified allegiance to the United States of America and faithfully defend the United States from any and all attack by foreign or domestic forces, and foreswear any form

of allegiance or obedience to the Japanese Emperor, or any other foreign government, power, or organization?

The first question was a bit strange for women and the elderly, but otherwise relatively straightforward. However, the ambiguity of the loyalty question was especially inappropriate. For Issei, who were not allowed to become American citizens, saying yes effectively left them without a country. On the other hand, some of those who already felt loyal to the United States considered it to be a trick question. No one was sure what the consequences would be, but each family debated how to answer these questions.

Many of the relocation center directors saw the dilemma in the loyalty questionnaire and got permission from the Washington Office to change the wording. At Manzanar the wording was changed to "Are you sympathetic to the United States and do you agree faithfully to defend the United States from any attack by foreign or domestic forces?" With this change many Issei at Manzanar answered "yes" (Smith 1995:292-293).

However, even with the changed wording controversy remained. While some of the "no-no boys" were truly more loyal to Japan than to the United States, in many cases people compromised to keep families together. Others answered "no" as a way of protesting the injustice of the entire relocation rather than suggesting loyalty to Japan. Some did not want to imply that they wanted to apply for leave, since now that they were settled in the relocation centers, they considered them to be a safe haven and did not want to be forced out into the unknown. The questionnaire and segregation was one of the most divisive events of the entire relocation.

Those who answered "yes" to the loyalty questionnaire were eligible to leave the relocation centers, if they found a sponsor. One of the largest single sponsors, Seabrook Farms, was also one of the largest producers of frozen vegetables in the country. The company, experiencing a labor shortage due to the war, had a history of hiring minorities and setting them up in ethnic villages. About 2,500 evacuees went to Seabrook Farms' New Jersey plant. They worked 12-hour days, at 35¢ to 50¢ an hour, with 1 day off every 2 weeks. They lived in concrete block buildings, not much better than the relocation center barracks, and had to provide for their own food and cooking (Seabrook 1995).

Through the indefinite leave process, the overall population of the relocation centers was reduced. On June 30, 1944, the Jerome Relocation Center was converted into a POW camp for Germans, after the 5,000 residents remaining were transferred to other centers. This closure not only saved administration costs, but also was used to show that the relocation program was working. Over 18,000 evacuees moved out of the relocation centers in 1944. By the war's end over 50,000 Japanese Americans had relocated to the eastern U.S. (Table 3.6).

Canada, Latin America, and the Caribbean

The mass evacuation of Japanese Americans from the West Coast was only part of the removals undertaken throughout much of the Western Hemisphere. At the outbreak of World War II there were some 600,000 ethnic Japanese living in the Americas (Daniels 1991:132).

Canada, already at war with Germany and Italy, declared war on Japan within hours of the attacks on Pearl Harbor and British Hong Kong. Of the 23,000 people of Japanese ancestry in Canada, 75 percent were Canadian citizens. In the beginning, only Japanese aliens were arrested, but over 1,200 Japanese-Canadian fishing vessels, all owned by citizens, were impounded and later sold to finance the relocation (Daniels 1989:182-184; *Newsweek* 2/5/42).

Table 3.6.
Relocation Center Statistics (Tajiri 1990:117).

From		To	
WCCA Assembly Centers	90,491	West Coast	54,127
Direct Evacuation	17,915	Other U.S. Areas	52,798
Births	5,981	Japan	4,724
Department of Justice Camps	1,735	Department of Justice Camps	3,121
Seasonal Workers (WCCA)	1,579	U.S. Military	2,355
Institutions	1,275	Deaths	1,862
Hawaii	1,118	Institutions	1,322
Voluntary Residents	219	Unauthorized Departures*	4
Total	120,313	Total	120,313

* Smith (1995:419) characterizes these four people who left the centers without permission as three persons with a history of mental problems who disappeared and one person under suspicion of murder who likely fled.

By January 14, 1942, all Japanese alien males over 16 years of age had been removed from Pacific coast areas. When British Columbia politicians learned of the U.S. decision to evacuate all people of Japanese ancestry, including U.S. citizens, from the West Coast they demanded Canada do the same (Hirabayashi 1991).

A total evacuation was ordered on February 24. However, exceptions were made for those married to non-Asians (Daniels 1989:185). On March 16, eight days before the first evacuation of Japanese Americans by the U.S. Army, the removal of all Japanese-Canadians in British Columbia began. Over 21,000 were sent through the Hastings Park clearing station, the Canadian equivalent of an assembly center. From Hastings Park, half of the Japanese-Canadians were sent to Interior Housing Centers at six abandoned mining towns. The remaining were relocated to sugar beet farms, lumber camps, road construction camps, and other work camps in interior Canada. Even after the war, the Japanese-Canadians were not allowed to return to British Columbia until April 1949.

In Mexico people of Japanese ancestry along the Pacific Coast and the U.S. border were required by the Mexican government to liquidate property and move inland to resettlement camps (Weglyn 1976:57). They were eventually required to resettle in Mexico City or Guadalajara (Daniels 1991:132)

The U.S. pressured many Central and South American counties, even those not at war with Japan, to turn over Japanese immigrants and nationals to U.S. authorities for transportation to the U.S. (Weglyn 1976:57). The U.S. cited the safety of the Panama Canal as the rationale for this removal, but the use of the Japanese as pawns for exchange was not overlooked. During the early part of the war some 7,000 U.S. citizens had been captured by Japanese forces in the Philippines, Guam, Wake Island, and China.

In all, 2,264 Japanese were sent to the U.S. from Latin American and Caribbean counties; over 1,000 were from Peru (Gardiner 1991). Brazil's 300,000 Japanese, the largest population outside of Hawaii, were left largely alone (Daniels 1991:132), as were persons of Japanese ancestry in Chile and Argentina. Cuba incarcerated all adult male Japanese.

The first transfer to the U.S. occurred in April 1942 (L.A. Examiner 4/21/42). Most of the Japanese sent to the U.S. from Latin America were confined at Crystal City, Texas, a special family facility operated by the U.S. Immigration and Naturalization Service.

During the war the Swedish ship *Gripsholm* made two voyages to exchange 2,840 Japanese for American citizens. Nearly half of the Japanese exchanged were from Latin America. Alarmed at the number of Japanese being sent to the U.S. and with the exchange of citizens with Japan at a standstill, the Department of Justice ended the deportations to the U.S. in early 1943 (Weglyn 1976:63-64). After the war, many of the deportees were denied reentry to their sending country, and as a result many returned to Japan or stayed in the U.S. In 1946 many went to work at Seabrook Farms.

Tule Lake Segregation Center

Those who answered "no" to the loyalty questions were considered "disloyals." In response to public and congressional criticism, the WRA decided to segregate the disloyals from the "loyals." One of the Poston camps was originally chosen, but eventually, the disloyals were segregated to the relocation center at Tule Lake, which already housed the highest number of disloyals (Figure 3.13).

The half of the original internees at Tule Lake who answered "yes" to the loyalty questions were supposed to choose another relocation center to make room for more disloyals at Tule Lake. But 4,000 loyals at Tule Lake chose to stay; some didn't want to leave California and others were just tired of being pushed around (Myer 1971:77), so the loyal and disloyal remained together. The 1,800 disloyals at Manzanar could not moved to Tule Lake until the Spring of 1944, when additional housing was completed.

Ray Best, who had run the Isolation Centers at Moab and Luepp, was named the new director of Tule Lake. The 71 inmates at Luepp were transferred to Tule Lake (Myer 1971:77). Additional troops were assigned to Tule Lake, including eight tanks (Drinnon 1987:110). A

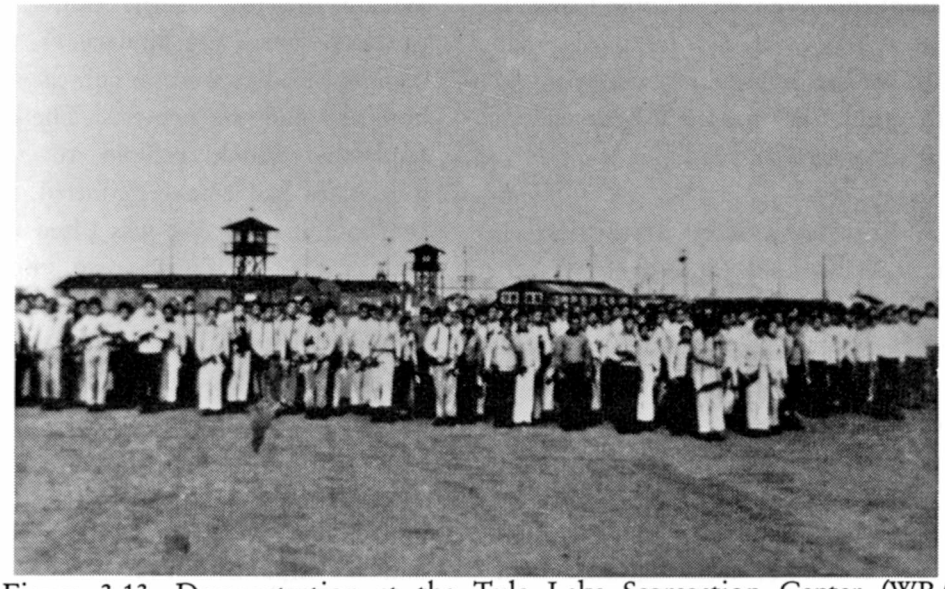


Figure 3.13. Demonstration at the Tule Lake Segregation Center (WRA photograph, National Archives).

"manproof" fence around the relocation center perimeter and more guard towers were eventually added as well.

The Tule Lake Segregation Center maintained the same internal democratic political structure as at the relocation centers, and the new arrivals attempted to gain control of center politics.

A tragic accident set off a chain of events that fueled dissension in the center, and culminated in the Army taking over control of the Tule Lake Segregation Center. On October 15, 1943, a truck transporting internees from agricultural fields overturned, killing one internee. The center administration was blamed since the driver was underage, and internees were outraged that the widow's benefits amounted to only 2/3 of $16, the deceased's monthly wage.

A massive public funeral was conducted without administration approval and ten days later agricultural workers decided to go on strike. The strikers did not want to harvest food destined for other centers. They saw themselves as the "loyals" and the pro-U.S. Japanese Americans at the other centers as traitors to Japan.

The administration brought in 234 loyals from other relocation centers to harvest the crops. For their protection, the loyals were housed outside the center at a nearby CCC camp. To add further insult, the strike breakers were paid $1 per hour rather than the standard WRA wages of $16 per month (Weglyn 1976:162).

When WRA Director Dillon Myer made a routine visit to Tule Lake on November 1, a crowd assembled in the administration area. During the assembly a doctor was beaten and some cars were vandalized. A group-appointed "Committee of 17" met with Myer, but all of their demands (including removal of director Best) were rejected. Further, future evacuee meetings in the administration area were forbidden. On November 4 the administration began work on a fence between the administration and internee areas.

That evening a crowd of around 400 tried to prevent trucks from being used to take food to the strike breakers (Weglyn 1976:163) and later the mob headed towards the director's residence. The Army, arriving with tanks and jeeps mounted with machine guns, used tear gas to disperse crowds throughout the center. Many internees were arrested and a curfew was established. The next day schools were closed and most work was stopped.

When an assembly called by the Army on November 14 was boycotted, more internees were arrested and martial law was declared. On November 26 a center-wide dragnet was conducted to find the leaders, who had been hidden by sympathetic internees.

A stockade was built in the administration area to house those arrested. The stockade had 12-ft-high wooden walls to obstruct the view and prevent communication with the rest of the center population. By December 1 the last of the leaders turned themselves in to authorities in a show of solidarity with those already arrested. On January 1 those incarcerated in the stockade initiated the first of three hunger strikes.

Within the rest of the center, however, the protests waned. On January 11, while over 350 dissident leaders were in jail, the center residents voted to end the protests. The vote was close (and one block refused to vote) but the moderates had retaken control. In response to the vote martial law was lifted on January 15. The center administration, except for the stockade, was returned to the WRA.

The April 18 Tokyo Declaration, in which the Japanese government officially protested the treatment of the disloyals, provided some recognition to those within the stockade. Shortly thereafter, 276 were released from the stockade and on May 23, 1944, Army control of the stockade was turned over to the WRA.

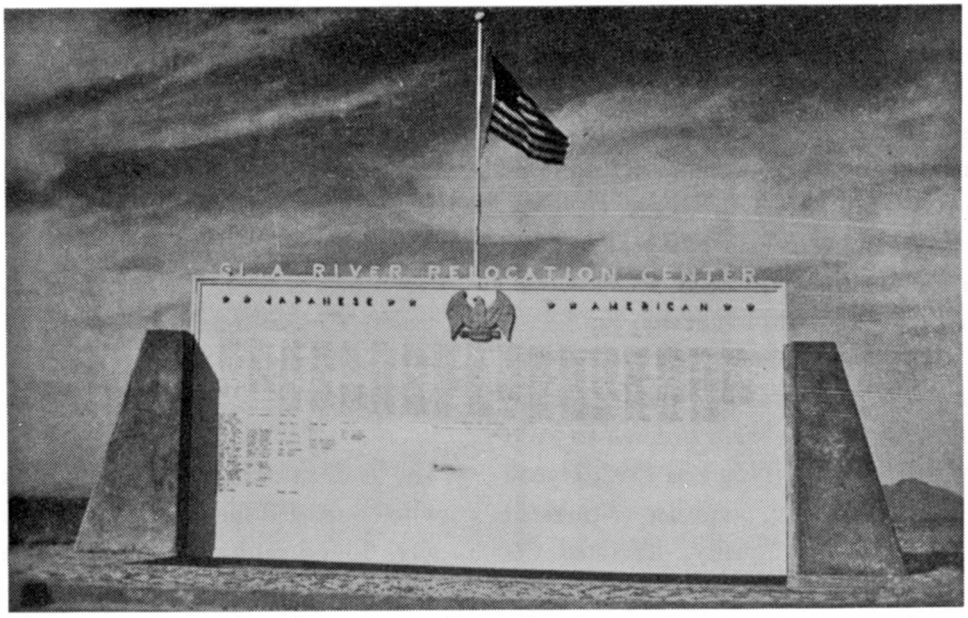


Figure 3.14. Honor Roll constructed by Gila River Relocation Center residents (WRA photograph, National Archives).

ventually, over 1,200 Issei were removed from the Tule Lake Segregation Center to Justice Department internment camps at Bismarck, North Dakota and Santa Fe, New Mexico (Culley 1991; Myer 1971:90). But, tension still ran high. On May 24, James Okamoto was shot and killed during an altercation with a guard, and in June the general manager of the Business Enterprise Association, one of the most stable elements in the internee community, was murdered.

On August 19, 1944, soon after the American Civil Liberties Union (ACLU) demanded to see those in the stockade, all were suddenly released and the fence removed. The stockade jail was used again for a short period in June 1945 when five teenagers were sentenced by the center director to the stockade for blowing bugles and wearing Japanese-style clothing.

Nisei in the Army

The initial aim of the registration questionnaire had been to determine loyalty of draft-age males before calling for volunteers for the army, and then to reinstate the draft for Japanese Americans. In early 1943, President Roosevelt declared that " ... Americanism is not, and never was, a matter of race or ancestry ... Every loyal American should be given the opportunity to serve this country wherever his skills will make the greatest contribution-whether it be in the ranks of our armed forces, war production, agriculture, government service, or other work essential to the war effort." While the initial call for volunteers resulted in a much smaller group than initially expected by the government, approximately 1,200 Nisei volunteered from the relocation centers at the initial registration.

These volunteers and the later draftees became the 442nd Regimental Combat Team. The 442nd combined with the 100th Infantry Battalion of the Hawaii National Guard, which had originally been transferred to the mainland and given only wooden guns to train with. The government had hoped creating a predominantly Japanese American unit would help impress the general public with Nisei patriotism and bravery, but some Japanese Americans opposed joining the army in a segregated unit.

The combined 100th and 442nd became the most decorated regiment in American history, with 18,143 individual decorations and 9,486 casualties in a regiment with an authorized strength of 4,000 men (Chuman 1976:179; Uyeda 1995:73). Both units fought in Italy and France, and were responsible for the rescue of the "Lost Battalion" of the 36th Texas Division. Ironically, the 522nd battalion of the 442nd/100th Regiment discovered and liberated the Dachau Concentration Camp, but were ordered to keep quiet about their actions (Noguchi 1992; Uyeda 1995:75). The next day, another American battalion arrived and "officially" liberated the camp.

In addition, more than 16,000 Nisei served in the Pacific and in Asia, mainly in intelligence and translation, performing invaluable and dangerous tasks. Not only were there normal risks of combat duty, they risked certain death if captured by the Japanese. Nisei women also served with distinction in the Women Army Corps, as nurses, and for the Red Cross.

In general, the initial Japanese American opposition to serving in the Army turned into pride in their accomplishments, partly through the efforts of the soldiers' families. Almost every camp built "Honor Rolls" listing men who were serving in the Army and many windows displayed service flags (Figure 3.14). Awareness of the accomplishments of the 442nd/100th outside the camps varied according to how closely one followed the news, but those who followed military progress closely were impressed by the accomplishments of the 442nd "Go For Broke" and the 100th Regiment.

While many Nisei joined the Army as a method of proving their loyalty, others resisted volunteering and the draft to protest the relocation. Nationwide, 293 interned Japanese Americans were tried for draft resistance (Daniels 1993:64). The best organized draft resistance was organized by the Fair Play Committee at the Heart Mountain Relocation Center, where 54 of 315 potential draftees did not show up for physicals (Daniels 1989:125). Committee leader Kiyoshi Okamota was branded disloyal and transferred to Tule Lake. Another leader, Isamu Horino, was arrested as he tried to walk out the front gate to dramatize his lack of freedom. Horino was also sent to Tule Lake. A third leader, Paul Nakadate, was sent to Tule Lake after an administration interrogation determined his disloyalty.

The 54 draft resisters, and nine additional people who counseled the resisters, were arrested. All 63 were found guilty in the largest mass trial for draft resistance in U.S. history. Seven members of the Fair Play Committee were found guilty of conspiracy, as well. However, the verdicts did not silence the resistance: 22 more Heart Mountain internees were later arrested for draft evasion.

Although 85 internees at Heart Mountain were convicted of draft evasion, more than 700 did report for physicals, and 385 were inducted. Of these, 63 were killed or wounded in combat (Daniels 1989:128).

Supreme Court Cases

The constitutional questions raised by the relocation of Japanese Americans was left to the U.S. Supreme Court to decide. The Hirabayashi, Korematsu, and Endo cases respectively dealt with the curfew, evacuation, and detention (tenBroek et al. 1954:211-223).

In *Hirabayashi v. United States* on June 21, 1943, the court unanimously decided that due to "the gravest imminent danger to the public safety" the military did have the right to enforce a curfew for a specific group of people, on the grounds of military necessity. They ruled that the curfew was not motivated by ethnic identity or race, but on an actual threat.

The final two cases were decided December 18, 1944. In *Korematsu v. United States*, in a split

decision, the court upheld the government's right to exclude people of Japanese ancestry from the West Coast based on military necessity. "Military necessity" was purposely not defined — if the military did it, it must have been necessary.

In *Endo v. United States* it was unanimously decided that Mitsuye Endo, a loyal U.S. citizen, should be released unconditionally, that is, without having to follow the indefinite leave procedure established by the WRA. The court stated that the WRA "has no authority to subject citizens who are concededly loyal to its leave procedure." The government therefore did not have the right to confine any loyal Japanese American. While sidestepping the constitutional question of the right of government to hold citizens without cause in wartime, it did in effect free all loyal Japanese Americans still held in Relocation Centers. The WRA had simply exceeded its authority.

Closing the Relocation Centers

During the war, the Japanese American internees had wondered what would be the ultimate fate of the relocation centers. Some expected them to close when the war ended, while others, particularly the elderly, felt the government owed them a place to stay, now that they had been forcibly removed from their own homes. Anticipating the Supreme Court decisions, on December 17, 1944 the War Department announced the lifting of the West Coast exclusion orders, and the WRA simultaneously announced that the relocation centers would be closed within one year. Initial reactions ranged from immediate return to the West Coast to vowing never to leave the centers.

Some of the first to return to the West Coast encountered violence and hostility and difficulty finding housing and jobs. Others had more success and encouraged people to leave the camps and return to the West Coast, as they did in increasing numbers. Many who feared returning to the West Coast found refuge in other parts of the country, especially Denver, Salt Lake City, and Chicago.

Internees had to relocate on their own. The WRA provided only minimum assistance: $25 per person, train fare, and meals for those with less than $500 in cash. Many left when ordered and by September 15,000 a month were leaving the various centers. But many had no place to go, since they lost their homes and businesses because of the relocation. In the end the WRA had to resort to forced evictions.

At the Minidoka Relocation Center, laundries, latrines, and mess halls were progressively closed until the few remaining people had to search for food to eat. Internees were given 2-week, 3-day, and 30-minute eviction notice. If they still did not leave on their own, the WRA packed their belongings and forced them onto trains (Sakoda 1989).

Eventually the centers were emptied out, and all were finally closed by the end of 1945. The Tule Lake Segregation Center, because many internees there had renounced their citizenship, operated longer, until March 20, 1946.

On July 1, 1944, Public Law 504 had allowed U.S. citizens to renounce their citizenship on U.S. soil during time of war. Of the 5,700 Japanese Americans requesting renunciation, 95% were from Tule Lake. A third of all those at Tule Lake applied for repatriation to Japan; 65 percent of those requesting repatriation were born in the U.S. (Daniels 1989:116). On February 23, 1946, the first 432 repatriates set sail for Japan. Over 4,000 would follow. However, over the next five years all but 357 would apply for a return of their U.S. citizenship (Smith 1995:444).

After the last internees were released, the centers were abandoned. If the land had been privately owned, the original owners were generally given the option to purchase the land. Otherwise, the

land reverted to the control of the previous land-managing agency (Table 3.7). Buildings were sold to veterans, auctioned off, or given to local schools and hospitals. On May 15 the last WRA field office was closed and on June 30, 1946, the WRA was officially disbanded.

Retrospect

Six of the former relocation centers are listed on the National Register for their historical significance. Two sites later became National Historic Landmarks: Manzanar, and the memorial cemetery at Rohwer. Plaques and small monuments are the only memorials.

Many of the former internees have returned to visit the camp sites, both as individuals and families and as organized pilgrimages. The Manzanar pilgrimage is one of the most established, taking place each spring.

People still debate whether the exclusion orders and the relocation centers were just, reasonable, constitutional, or justifiable wartime responses (Baker 1991, 1994; Smith 1995; Uyeda 1995). However, in 1982 the California legislature passed a bill to provide $5,000 restitution to 314 Japanese Americans who were fired from their state jobs in 1942, and in 1989 the U.S. government officially apologized and granted redress of $20,000 to each surviving internee.

Table 3.7.
Disposition of WRA Centers (Myer 1971:348).

Center	date of release	Agency designated for Disposal
Gila River	2/23/46	Government Land Office
Granada	1/26/46	Farm Credit Administration
Heart Mtn.	2/23/46	Bureau of Reclamation
Jerome	10/1/44	War Department
Manzanar	3/9/46	Government Land Office
Minidoka	10/1/44	Bureau of Reclamation
Poston	3/9/46	U.S. Indian Service
Rohwer	3/9/46	Government Land Office
Topaz	2/9/46	Farm Credit Administration
Tule Lake	5/4/46	Bureau of Reclamation

ıapter 4

The Manzanar Relocation Center

Jeffery F. Burton, Mary M. Farrell, and Wilber Sato

Manzanar was one of ten facilities at which Japanese American citizens and Japanese immigrants were interned during World War II. Manzanar, established as the Owens Valley Reception Center (Figure 4.1), was first run by the U.S. Army's Wartime Civilian Control Administration (WCCA). It later became the first relocation center to be operated by the War Relocation Authority (WRA). Begun in March of 1942, major construction was completed within six weeks, and within four months Manzanar's population was nearly 10,000 (*Manzanar Free Press* 7/31/42).

Beginnings

In February 1942, several prominent Owens Valley residents, including newspaper publisher George Savage of Independence, merchant Douglas Joseph of Bishop, Ralph Merritt of Big Pine, Judge William Dehy of Independence, and Dr. Howard Dueker and lumber company owner R.R. Henderson of Lone Pine, were summoned to a meeting in the valley with the U.S. Army. Not until the meeting, held on February 26, did the Army let the group know its agenda: an off-the-record discussion concerning the possibility of setting up a Japanese internment camp in the Owens Valley (Merritt 1946).

Tom C. Clark of the WCCA and U.S. Attorney General's office had made an earlier contact concerning the internment camp with Robert Brown of the Inyo-Mono Associates, an organization akin to a regional chamber of commerce. On Brown's advice, Clark chose to work through a citizens' committee to help counter any possible local opposition to the project (Garrett and Larson 1977:25). The committee took the name *Owens Valley Citizens' Committee*

Figure 4.1. Owens Valley Reception Center, March 1942 (WCCA photograph, Smithsonian Institution)

in part to suggest the civic responsibility of hosting the facility (Walton 1992:217).

Initially, the military wanted to house a population of 25,000 inmates, but the committee convinced the Army that only about 10,000 people could be accommodated in the valley. The next day, with committee chairman Ralph Merritt as guide, several potential sites were inspected. The tour ended with the selection of the abandoned Manzanar townsite as the location for the internment camp (Sibley 1945).

The selected site was on land owned by the city of Los Angeles and managed by the Department of Water and Power (LADWP). At first the local LADWP Chief Engineer refused to lease the 8,000 acres needed for the facility (Figures 4.2 and 4.3). However, the Los Angeles city council did not want to go on record opposing the Owens Valley internment camp, stating "we cannot tamper with the army." The city and the Army struck a deal in which the land would be leased for a "temporary" facility, and the Army would be responsible for guarding the LADWP waterworks and keeping the Japanese Americans under constant armed surveillance (*LA Examiner* 3/10/42).

Apparently not content with these assurances and ever fearful of losing their Owens Valley water rights, LADWP set the rent for the land at $90,000 a year (when it had been previously leased as grazing land for $2,000 a year) in hopes of dissuading the Army. A court order eventually fixed the lease at $25,000 a year.

The military told the Owens Valley Citizens Committee that they would send plans, contractors, and materials; Ralph Merritt was to oversee the work and make sure the camp was ready in six weeks (Sibley 1945). On March 3, a private contractor arrived in Owens Valley and began telling local residents that "16 miles of prison camps" would be built there. To counter the rumors, the Army and Citizens Committee met again on March 5, and on March 6 the plans for the internment camp at Manzanar were made public. The same day construction bids were opened (*Inyo Independent* 3/6/42).

On March 14 the first truckloads of lumber arrived at Manzanar and the next day ditches for water and sewer lines were dug. By March 17 the first building was completed; newspapers reported that two new buildings were being completed every hour (Merritt 1946).

First Arrivals

On March 21 the first Japanese Americans, 61 men and 21 women, made the 235-mile trip by bus from Los Angeles to Manzanar (*Manzanar Free Press* 3/20/43). The next day six more Japanese Americans arrived by private car. Organized by Father Hugh Lavery of the Maryknoll Japanese Catholic Church in Los Angeles, they had volunteered to go early to help build the camp (*Time* 4/6/42). The men were mostly plumbers, carpenters, and mechanics. The women were recruited to do office and first aid work (Tateishi 1984:223).

More volunteers soon followed. On March 23, 500 Japanese American men in 140 cars and trucks departed under military escort for Manzanar from Pasadena's Rose Bowl. Every tenth vehicle in the convoy was an Army jeep with two soldiers. There was also a Red Cross unit, a water truck, and a wrecking car with spare parts; three vehicles made it to Manzanar under tow. Reportedly the soldiers were not guards, "but there to help" (*LA Examiner* 3/24/42). Another 500 Japanese Americans, mostly older men, departed from Los Angeles by train for Lone Pine. A box lunch was provided and there was a doctor and a nurse as well as soldiers in each of the 13 coaches (*LA Examiner* 3/24/42).

By the time the volunteers arrived, 38 buildings had been completed at Manzanar. Water pipes had been laid, but there was no running water or roof on the mess hall (Figure 4.4). The

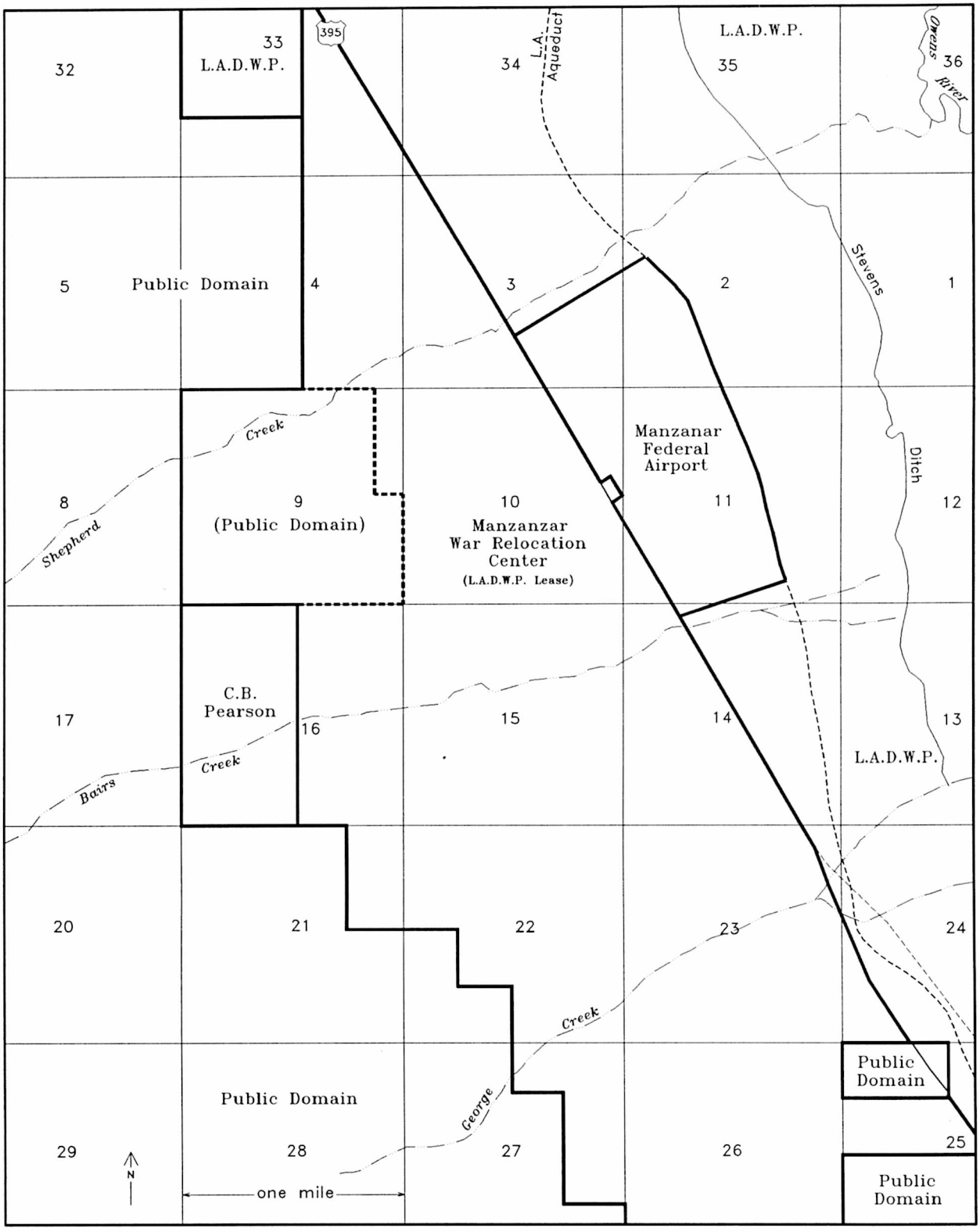


Figure 4.2. Manzanar Relocation Center lease area.

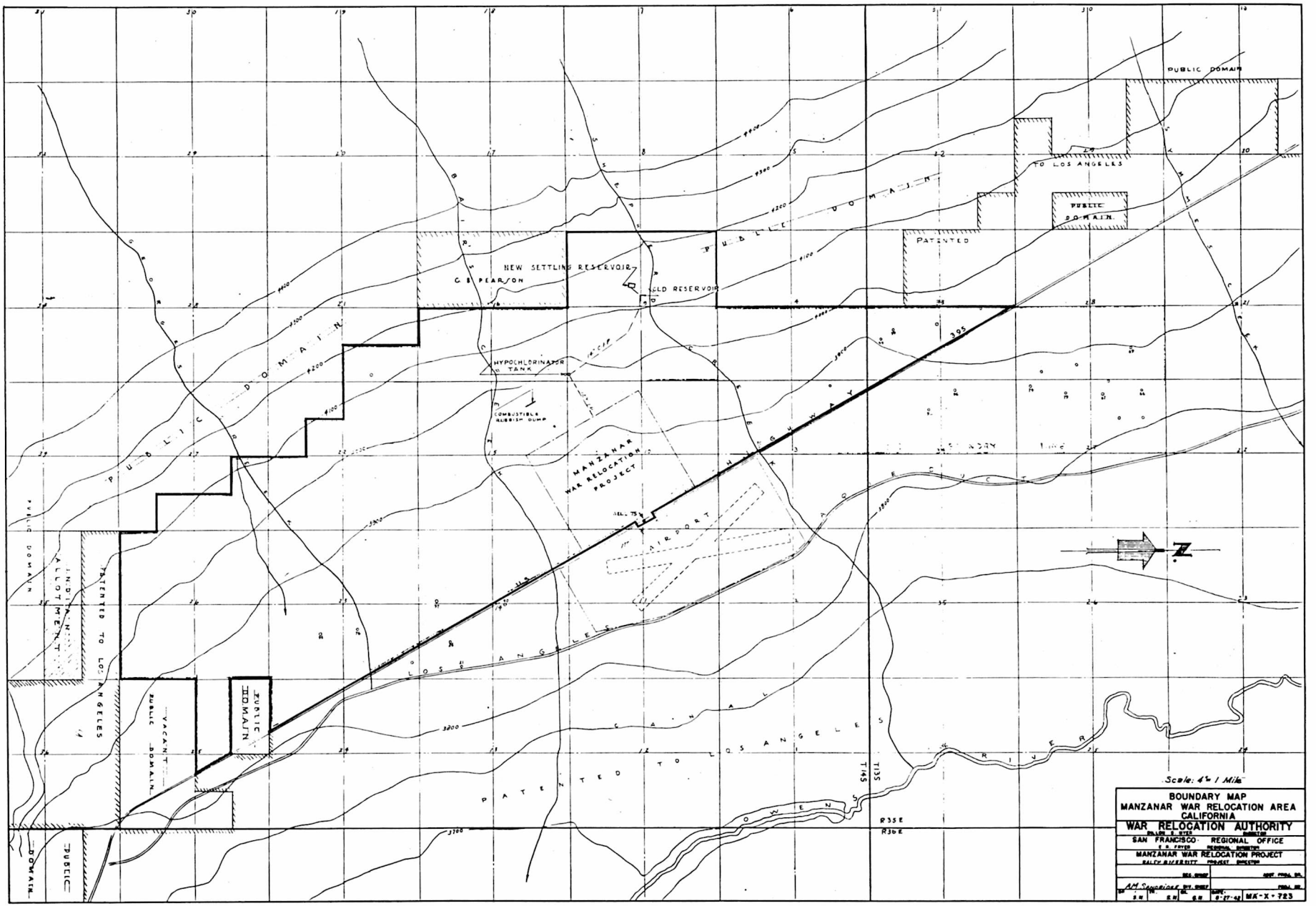


Figure 4.3. Boundary map Manzanar Relocation Center (National Archives, Cartographic Division).

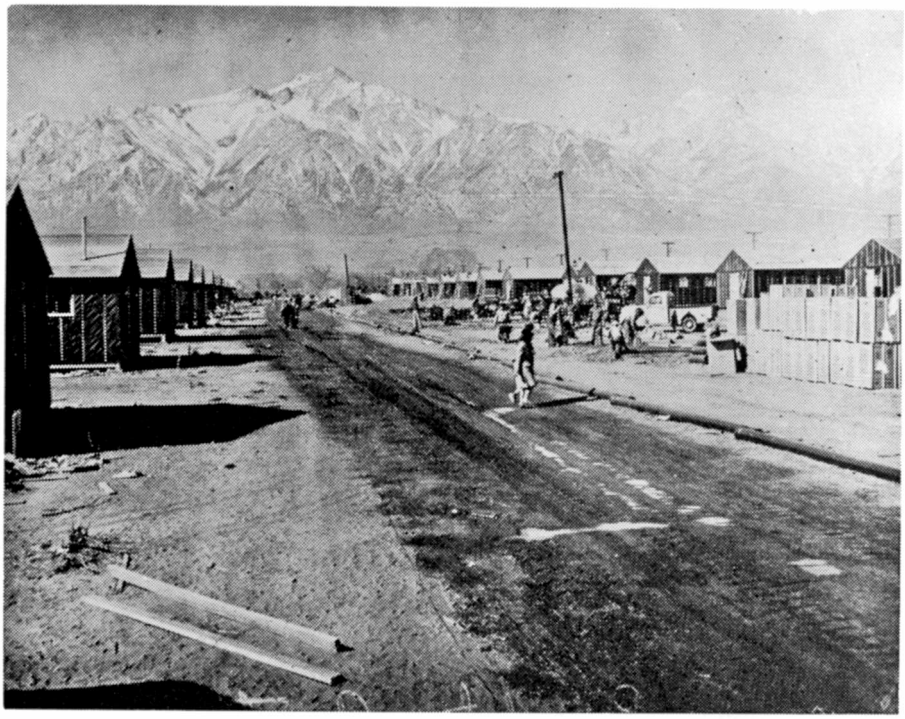


Figure 4.4. Construction underway at Manzanar (courtesy of Eastern California Museum).

sewer consisted of a portable outhouse and an open ditch running from Block 1 to Block 6 (*Life* 3/6/42; *Newsweek* 3/6/42; *Time* 3/6/42). On March 24, the Manzanar Information Office opened to serve the evacuees and organize workers for various jobs. A common complaint was the lack of toilet paper and privacy.

Filling the Center

Newspapers at the time reported that Manzanar was not a concentration camp in the Axis sense of the word; armed soldiers were reportedly stationed there to protect the Japanese Americans, not harass them. For example, the *Los Angeles Examiner* (3/24/42) stressed that Manzanar provided a "message to take across the Pacific to Japan. 'This ... is the way we do things in America'" (Figures 4.5 and 4.6).

Nevertheless, internment was certainly not voluntary. The first group of forced evacuees arrived at Manzanar on March 26. This group of 227 people represented all remaining Japanese Americans on Bainbridge Island, Washington; 34 had already been removed by the FBI and 13 had left earlier on their own. Nearly every family had to leave behind a pet (*LA Examiner* 3/31/42). A group from the Stockton area of central California arrived later, but in the end over 90 percent of the Manzanar population came from Los Angeles county (Hersey 1988: 78).

The *Los Angeles Examiner* (4/2/42) made light of the forced evacuation in an article entitled "Japs' Departure Like Excursion." The paper reported that 500, including 33 babies and a troop of boy scouts, were off for Manzanar with no tears and no apparent regrets. Quotes attributed to some of those boarding the trains sound much like propaganda: "it's our honeymoon trip" and "we haven't had a vacation in 15 years." Also mentioned was a man bedridden with asthma for 65 years that got well as soon as he arrived at Manzanar.

Up and down the West Coast, Japanese American were rounded up area by area, and transported 2,000 at a time so that the same Army troops could act as escorts. These groups were split up into smaller groups for transfer to

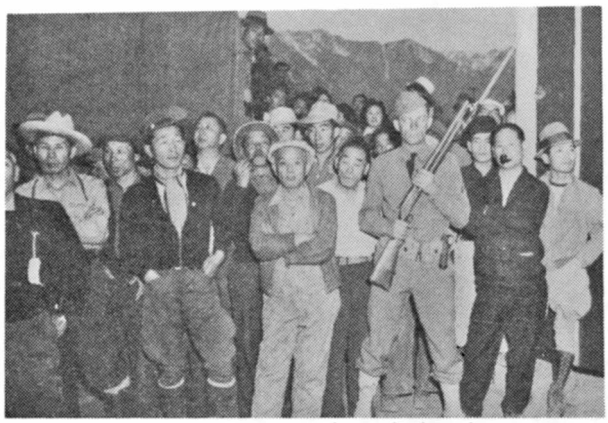


Figure 4.5. Evacuees gather behind sentry to scrutinize new arrivals (from Spicer et al. 1969:71).

Manzanar because of the limitations of train transportation. By mid April, up to 1,000 Japanese Americans were arriving at Manzanar a day (*LA Examiner* 4/19/42) and by mid May Manzanar had a population of over 7,000 (*Time* 5/18/42).

The residential blocks at Manzanar were filled as new evacuees arrived. For example, Bainbridge Islanders were placed in Block 3, and across from them were Terminal Islanders in Block 9. Block 22 was filled with people from west Los Angeles and Block 28 with people from San Fernando Valley (Sue Emery, Personal Communication, 1993).

Evacuees continued to arrive through the summer and fall. Since many of the evacuees went out on temporary leave to work on farms elsewhere in the country, the population of Manzanar did not peak until December. In October, the last of the large groups arrived at Manzanar with the transfer of 85 people from the Santa Anita Assembly Center.

Infrastructure

The initial cost of construction at Manzanar had been $3.5 million (Hersey 1988:85) and $900,000 a year went into Inyo County's economy via payroll, direct purchases, and visitors (Merritt notes in BLM Bakersfield District file). Merritt estimated that the cost per person per day at Manzanar in September 1944 was $1.07, including food, shelter, heat, lights, salaries, medical needs, and education (Merritt notes in BLM Bakersfield District file).

Original Construction (WCCA)

The relocation center was built by Los Angeles contractor Griffith and Company (Sandridge and Sisler 1946a). Construction proceeded 10 hours a day 7 days a week (Figure 4.7 and 4.8).

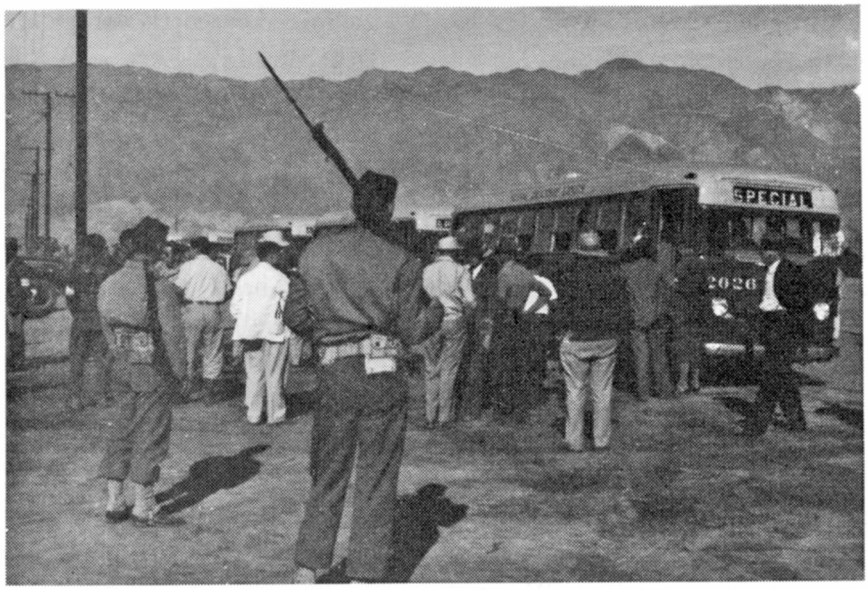


Figure 4.6. Arrival of evacuees (WRA photograph, UCLA Special Collections).

Figure 4.7. Early construction scene at Manzanar (courtesy of *Los Angeles Times*).

Figure 4.8. Construction at Manzanar (courtesy of Eastern California Museum).

A few local workers were hired but most of the construction crew came from the Los Angeles area. The influx of workers caused a housing shortage in the nearby towns of Lone Pine and Independence and many local residents made extra money boarding workers (Jones 1977:106).

The Japanese Americans who had come early to help construct the camp did not do construction they had volunteered for; instead they were relegated to clearing building sites and roads, and other menial labor.

Figure 4.9. 1942 Oblique aerial view of Manzanar (north to top; from DeWitt 1943:167).

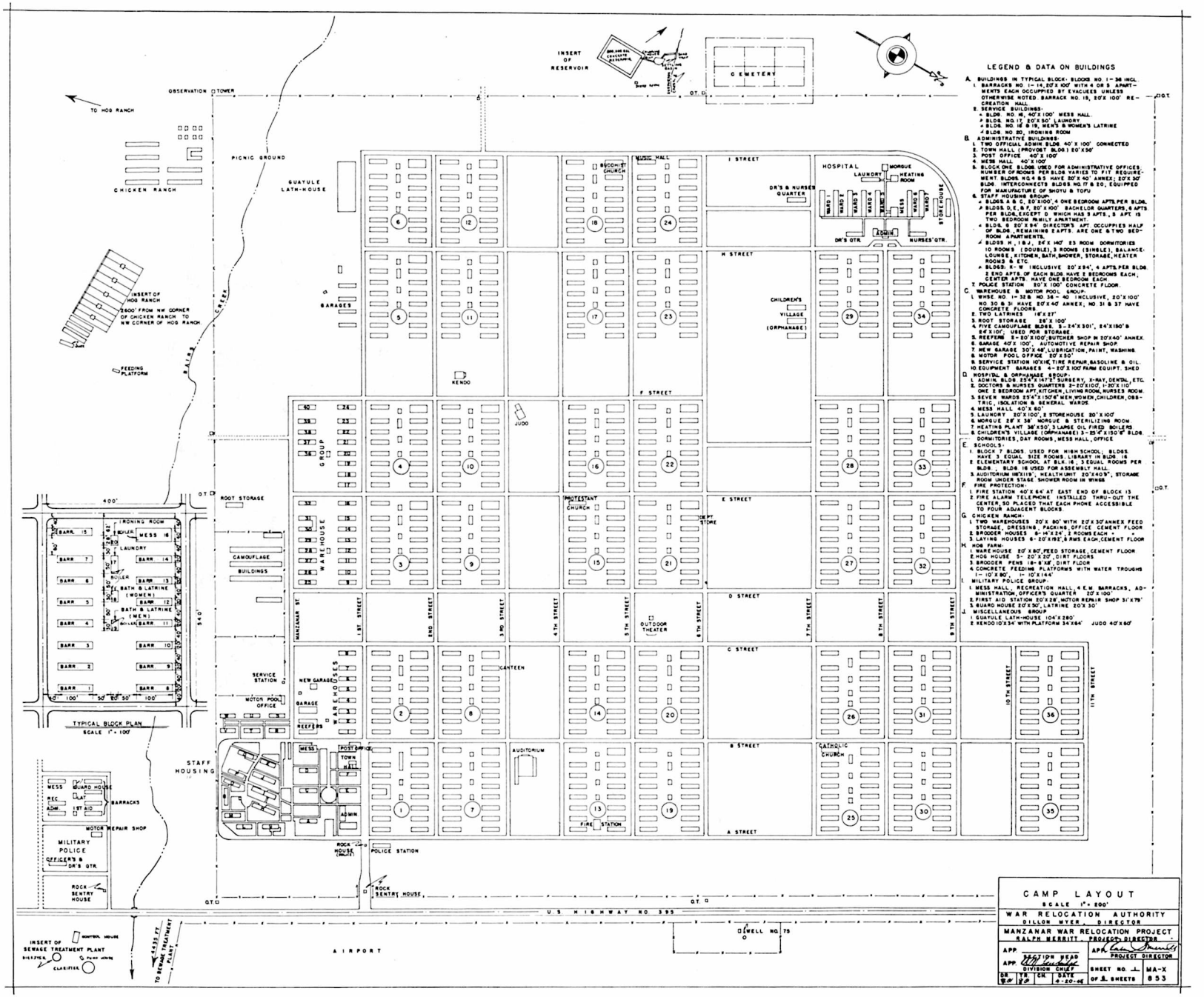


Figure 4.10. Camp layout (National Archives, Cartographic Division).

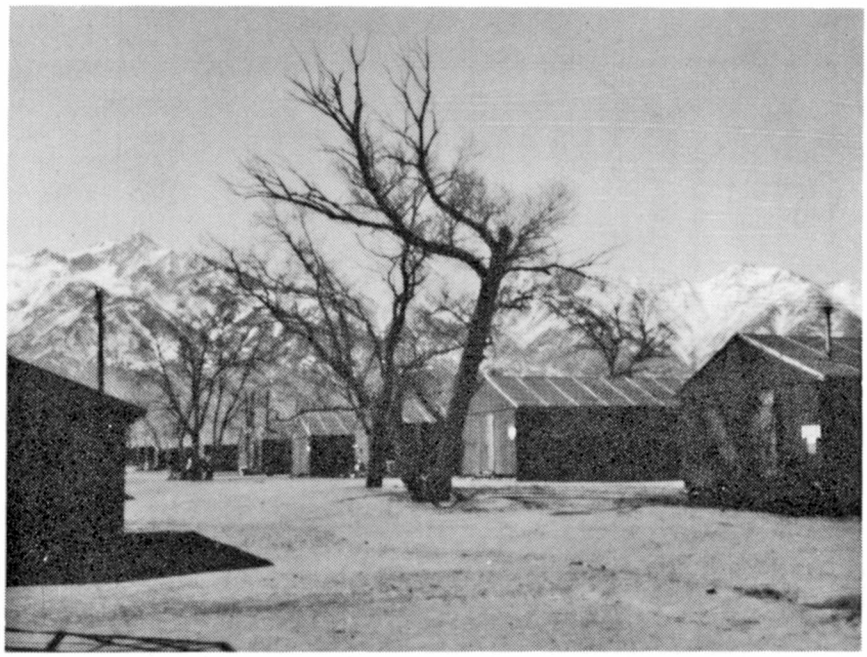


Figure 4.11. Evacuee barracks (WRA photograph, UCLA Special Collections).

The relocation center consisted of over 800 buildings (Table 4.1; Figures 4.9 and 4.10). Buildings in the administration area included two interconnected buildings for offices, a service station, two family apartments, two men's dorms, two women's dorms, a provost building (community government), a mess hall, and a reception building. Each of the 36 residential blocks contained 14 barracks, a mess hall, a combination block office and recreation hall, communal bathhouses, a laundry room, an ironing room, and a heating oil storage tank. The wood and tarpaper barracks were divided into four apartments each (Figure 4.11). The largest which could be assigned to a family was 20 ft by 25 ft. There was an average of eight people to an apartment. Furnishings provided included iron cots, straw mattresses, Army blankets, and a heater. Six buildings in the warehouse area were used to store evacuee property that had been shipped to Manzanar (Bromley 1946). On October 13, 1942, alone, 14 carloads of stored furniture were shipped to Manzanar.

After initial construction, various improvements were added using volunteer labor. For example, the July 16, 1942, Progress Report noted that rock sumps to drain water at the outdoor faucets were dug as sanitary and mosquito-abatement measures. Other improvements were designed to combat the harsh environment of the camp. Wallboard and linoleum were added to barracks to improve insulation and reduce dust. The July 23, 1942, Progress Report noted that the linoleum laying was one-third complete, and less than one month later the linoleum crew was half done (*Manzanar Free Press* 9/10/42). Other improvements were added by the evacuees to suit their needs. Storage cellars were hand-dug under barracks and mess halls and the residents of each block used their own money and labor to provide their mess hall with curtains (Block Manager's Daily Reports 1942-1945). In August, the first Japanese *furo* (bath) was constructed. Located in the Block 6 men's shower room, it consisted of an 8-ft-square by 3-ft-high cement tub. By the end of October 1942 over half of the residential blocks had Japanese baths.

Later Construction (WRA)

After initial construction, all additional official construction at Manzanar was completed using paid evacuee labor (Table 4.2; Figure 4.12). Major undertakings included construction of 18 residential buildings in the administration area for appointed personnel; construction of an auditorium (Figures 4.13 and 4.14); and the construction of chicken and hog farms. The auditorium, completed at a cost of $30,355, was dedicated in February 1944 (*Manzanar Free Press* 2/23/44).

Other new construction included a laundry in the staff housing area, a sentry post and police post at the relocation center entrance, a sentry post at the Military Police compound, and a residence for the chief medical officer and appointed nurses at the hospital. In the warehouse area a root cellar (Figure 4.15), two industrial latrines, and a garage for vehicle lubrication, washing, and painting were constructed. Most of this construction was wood frame, but the sentry and police posts were built of native stone.

Table 4.1
WCCA (contractor-built) Constructed Buildings at Manzanar Relocation Center.

Building	Number
Barracks	504
Latrine	72
Mess Hall	36
Recreation Hall	36
Ironing Room	36
Laundry	36
Administration	12
Hospital	16
Children's Village	3
Net Factory	5
Warehouse	40
Refrigerated Warehouse	2
Garage	4

WRA construction also included replacement of the Block 15 men's latrine that had been destroyed by a windstorm. Other minor improvements included a 9 ft by 22 ft addition to the Caucasian Mess Hall, a 6 ft by 6 ft heater room addition at the Children's Village, a 7 ft by 10 ft boiler room addition at the Military Police compound, and a 10 ft by 16 ft building west of the Motor Pool office. Small storage sheds, enclosed on two sides, were built at each of the fuel oil tanks (Figure 4.16). Duckboards (double flooring) were added to the food warehouses to comply with state law.

Also built were a dehydration plant for processing surplus vegetables, a 12-ft-square rice malt room at the north end of Camouflage Building No. 4, and a garbage can wash rack near the Hospital boiler. The garbage can wash rack, designed for cleaning 250 garbage cans a day, consisted of an 18 ft by 35 ft concrete platform, with a grease trap and sump connected to the main sewerline. An incinerator for hospital waste was built west of the garbage can washing rack. Made of native stone, it was 8 ft square by 6 ft high with a 12 ft high smokestack. The fire box was 4 ft wide by 5 ft deep by 3½ ft high, with a 4 ft concrete slab on each side and a 10 ft concrete slab at the front.

The water reservoir was enlarged from 540,000 to 900,000 gallons by raising the embankments. Five new fire hydrants were installed in the relocation center and four were installed at the chicken ranch. Most of the relocation center roads were oil-surfaced for dust abatement. Heavier duty roads at the entrance and in the warehouse area were surfaced with asphalt.

Utilities

The effort needed to construct this artificially created, densely populated city was equaled by the effort needed to maintain it. Over 500 evacuees were employed in maintenance and public works jobs to take care of water, electricity, plumbing, stoves, and garbage. (*Manzanar Free Press* 3/20/43). Most crews had a Caucasian foreman, no matter how experienced the crew members.

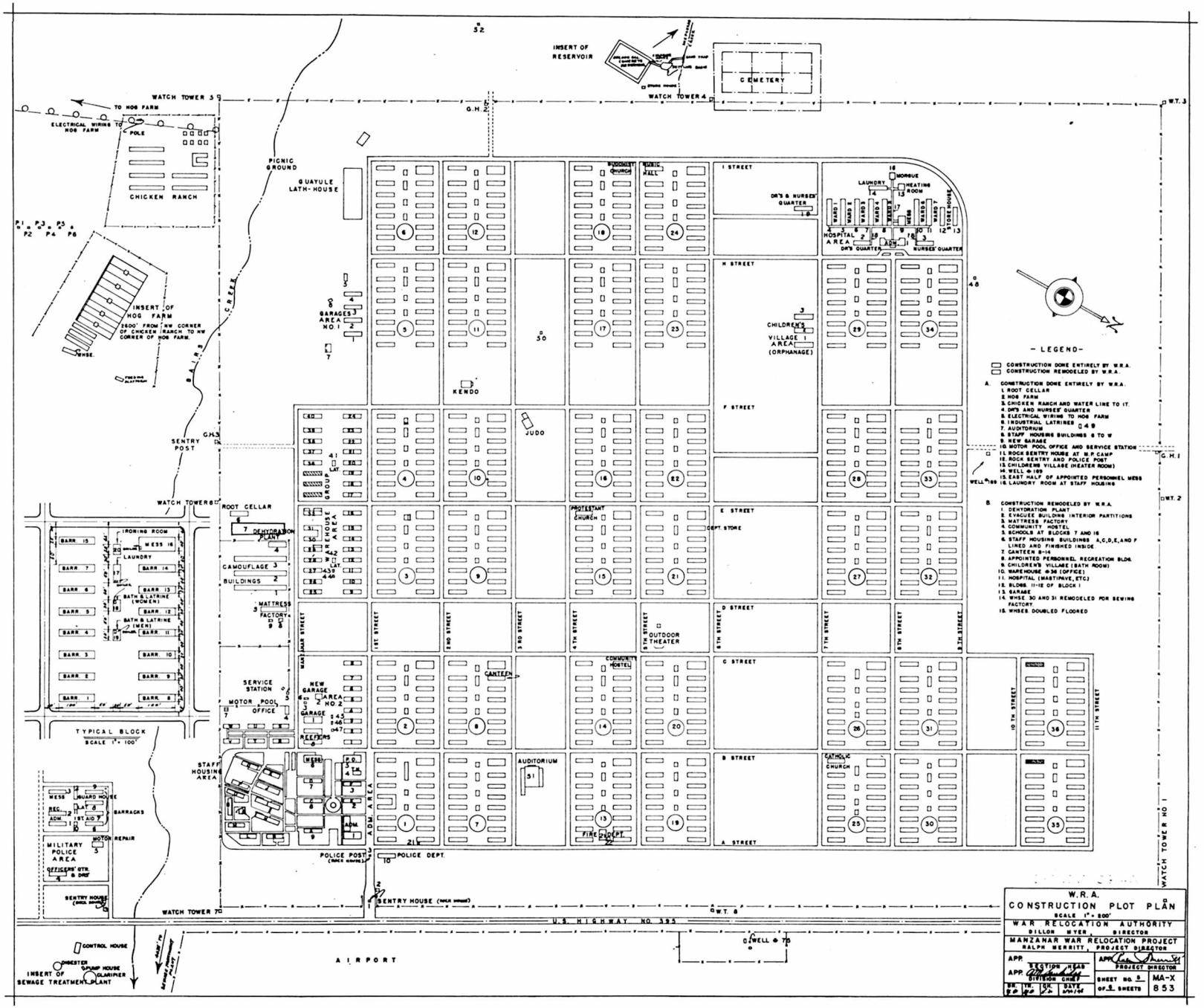


Figure 4.12. WRA Construction plot plan (National Archives, Cartographic Division).

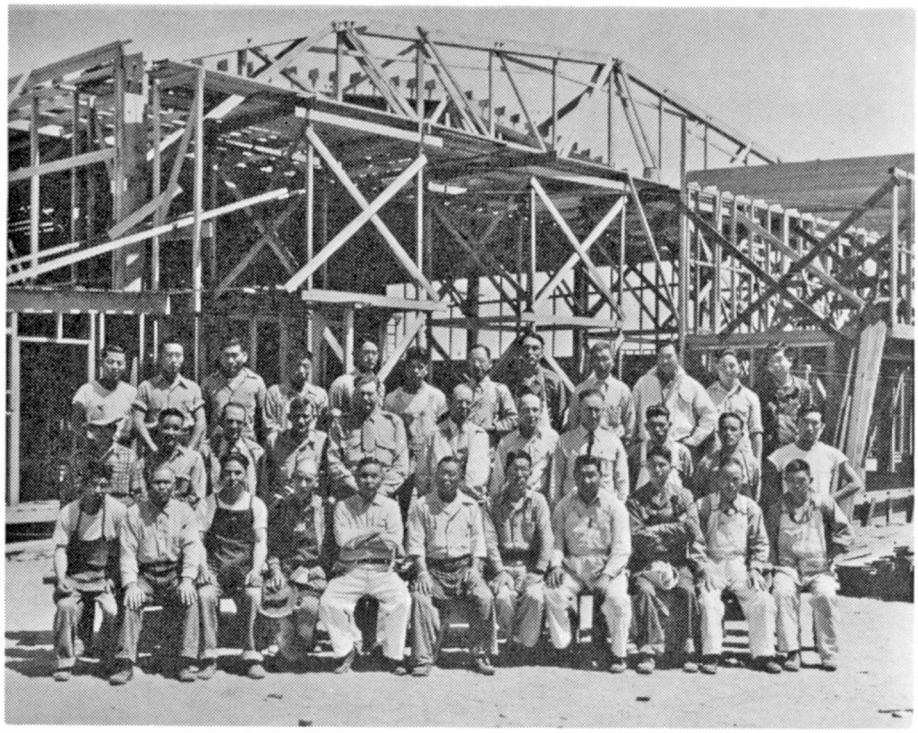


Figure 4.13. Evacuee construction workers at auditorium (courtesy of Eastern California Museum).

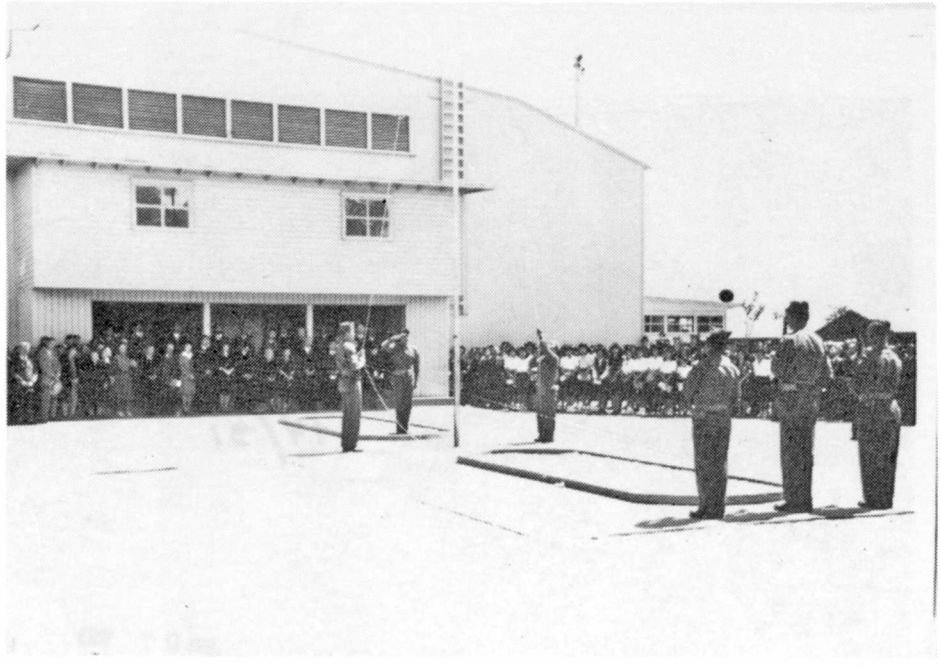


Figure 4.14. Manzanar Relocation Center auditorium (courtesy of Eastern California Museum).

Electricity for the relocation center was provided from the LADWP Cottonwood Creek powerhouse, but there was a dispute over the rate. LADWP wanted to charge the regular residential rate (which totaled $153,212.02 at closing), while the WRA wanted to pay only the lower industrial rate, since there were no individual meters. The WRA's offer of a $100,000.00 settlement was rejected by LADWP (*Manzanar Free Press* 5/23/45) and the bill was apparently never paid.

Figure 4.15. Root cellar (Toyo Miyatake photograph©, courtesy of Archie Miyatake).

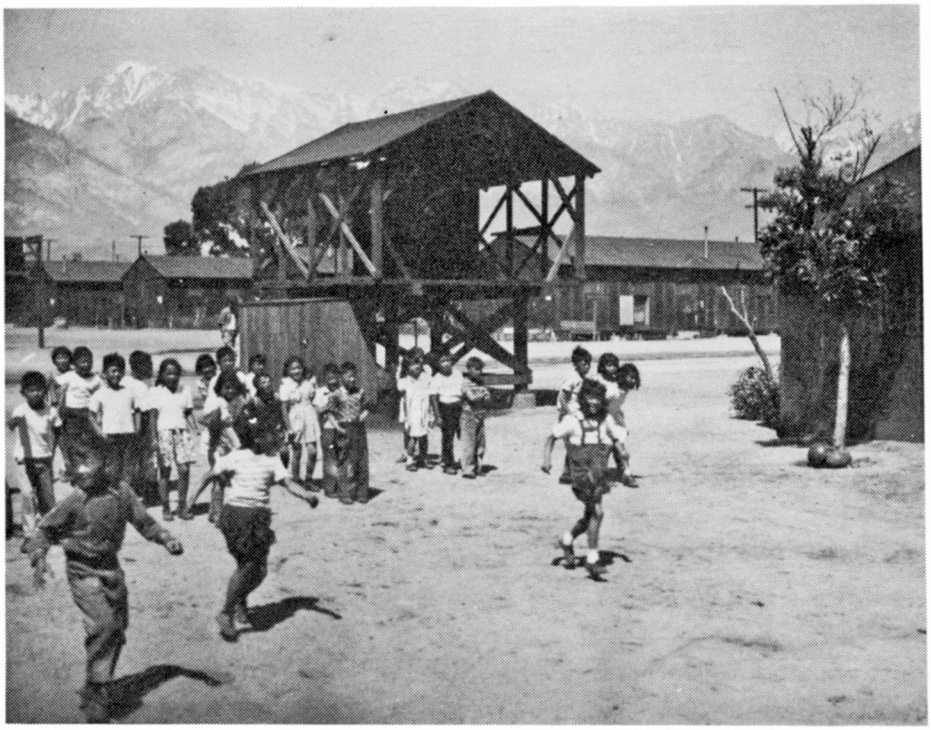


Figure 4.16. Heating oil shed (Toyo Miyatake photograph©, courtesy of Archie Miyatake).

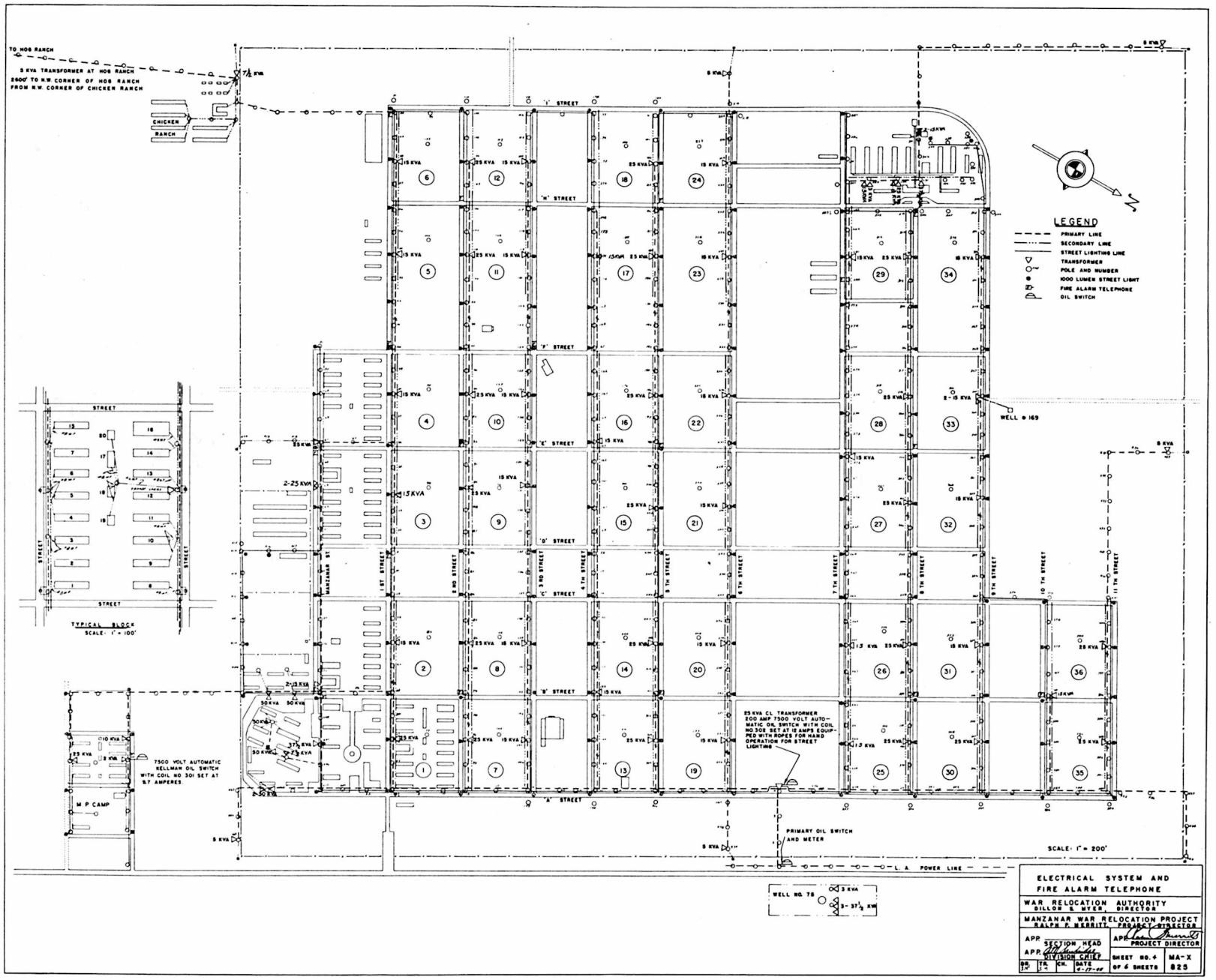


Figure 4.17. Electrical system and fire alarm telephone (National Archives, Cartographic Division).

Figure 4.18. Switchboard operator Trudee Osajima (WRA photograph, National Archives).

Table 4.2.
WRA (evacuee-built) Construction at Manzanar Relocation Center.

Project	Started	Completed
Staff Housing	1-15-43	3-31-44
Auditorium	1-28-44	9-30-44
Chicken Farm	7-8-43	12-31-43
Hog Farm	9-1-43	4-30-44
Root Cellar	7-5-43	10-23-43
Industrial Latrines	9-8-43	11-1-43
Garage	11-20-44	4-23-45
Caucasian Mess Hall	5-1-43	7-1-43
Sentry Posts	10-1-43	5-10-44
MP Boiler Room	6-1-44	7-5-44
Oil Sheds	4-8-43	12-2-43
Dehydration Plant	7-22-43	9-30-43
Malt Room	10-16-43	12-17-43
Block 15 Latrine	6-14-43	6-26-43
Warehouse Duckboards	8-1-44	10-6-44

Each apartment had one or two electrical outlets and a bare bulb hanging light fixture. Ironing rooms were added to the block facilities after ironing in the barracks blew out too many fuses. Street lights were mounted on powerpoles at the corners of each block and at the midsection of the long axis of each block (Figure 4.17). Every four blocks had a centrally located fire alarm telephone. The central 40-line telephone switch board apparently served mostly administrative functions (Figure 4.18).

Each residential block and the military police compound had a fuel oil storage tank and platform on 12-inch-square piers. Twelve of the tanks held 2,450 gallons and 25 held 1,250 gallons. There were also two buried 6,000-gallon tanks at the hospital boiler room. The distribution of oil to the tanks was handled by an evacuee crew of 51 men. The residents were expected to bring the oil to their individual heaters.

Most of the water system was constructed by contractor Vinson and Pringle of Los Angeles. Water was first diverted from a dam and settling basin on Shepherd Creek. From there it flowed through an open ditch to a 540,000-gallon concrete-lined storage reservoir, 120 ft by 180 ft in size. Two 14-inch calico gates regulated the water flow from the reservoir. One opened into a central spillway out of the reservoir and the other opened into a 14-inch-diameter welded pipe. The 4,650-ft-long pipeline brought the water to a 98,000 gallon steel storage tank which had an 8 ft by 22 ft chlorination house adjacent (Figure 4.19). The pipeline and steel tank were built by LADWP. From the steel tank a 12-inch-diameter pipe delivered the water to the relocation center. A 10,000 gallon redwood tank was built on the east side of US Highway 395 at Well No. 75 as a backup water supply.

Water was provided to staff residences, the hospital (including an automatic sprinkler system in the wards), the Children's Village, the mess halls, the communal bathrooms and laundries, 84 fire hydrants, and the exterior of each barracks (Figure 4.20). December 1943 water consumption was 953,745 gallons or 112 gallons per person. Consumption in July 1944 was 1,849,587 gallons or 212 gallons per person, the increase due to the watering of gardens and lawns (Engineering Folder, Merritt files, UCLA Special Collections).

Like the water system, sewerlines, manholes, grease traps, and the sewage treatment plant were constructed by contractor Vinson and Pringle of Los Angeles (Figure 4.21). Initially sewage was

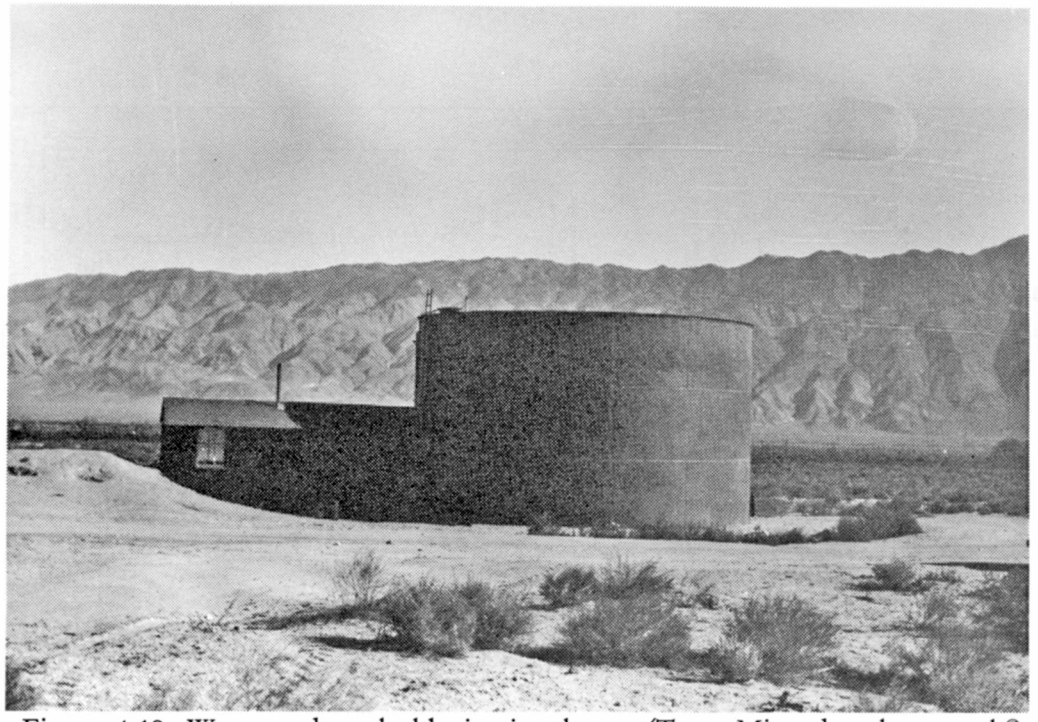


Figure 4.19. Water tank and chlorination house (Toyo Miyatake photograph©, courtesy of Archie Miyatake).

treated in a 100 ft by 20 ft by 6 ft deep septic tank. But, by the end of August 1942, a sewage treatment plant was completed 1½ miles east of the relocation center at a cost $147,000 (Merritt notes, BLM Bakersfield District Office, Project Plans and Reports file; Progress Report 4/16/42). This "state-of-the-art" sewage treatment plant was operated by six evacuees and an evacuee chemist under a Caucasian supervisor. To avoid any possible contamination to Los Angeles's water supply, LADWP required that the sewage from the relocation center be siphoned under the Los Angeles aqueduct rather than piped over it.

The 1.25 million gallon a day capacity sewage treatment plant included a control room (with an office, laboratory, metering room, and equipment storage), a grit chamber, a parshall flume, sludge and scum pumps, a 60-ft-diameter clarifier, a 40-ft-diameter digester, a chlorine contact tank, and four 50 ft by 100 ft settling ponds. The settling ponds were apparently never used: LADWP was concerned that the ponds would provide a breeding place for ducks that would then contaminate the Los Angeles aqueduct. Instead, in violation of State and County regulations, the liquid sewage was chlorinated and allowed to flow via an open ditch into the Owens River. This made more than a few people living downstream sick (*Owens Valley Progress* 6/11/43).

Each residential block had a garbage can rack near the mess hall for rubbish collection. Nine tons of garbage were removed and 130 garbage cans were washed each day (Engineering Folder 2/17/44 memo, UCLA Special Collections). Much of the waste was salvaged. Food scraps were sold under contract to a local hog farmer or later used at the relocation center hog farm. A crew of 19 Japanese Americans crushed tin cans for shipment and a crew of 16 removed grease from the approximately 100 grease traps in the center. The salvaged grease was mixed with waste from the butcher shop and dehydrated, deodorized, and packed in drums for shipment. Over 1,500 pounds of grease were collected each month.

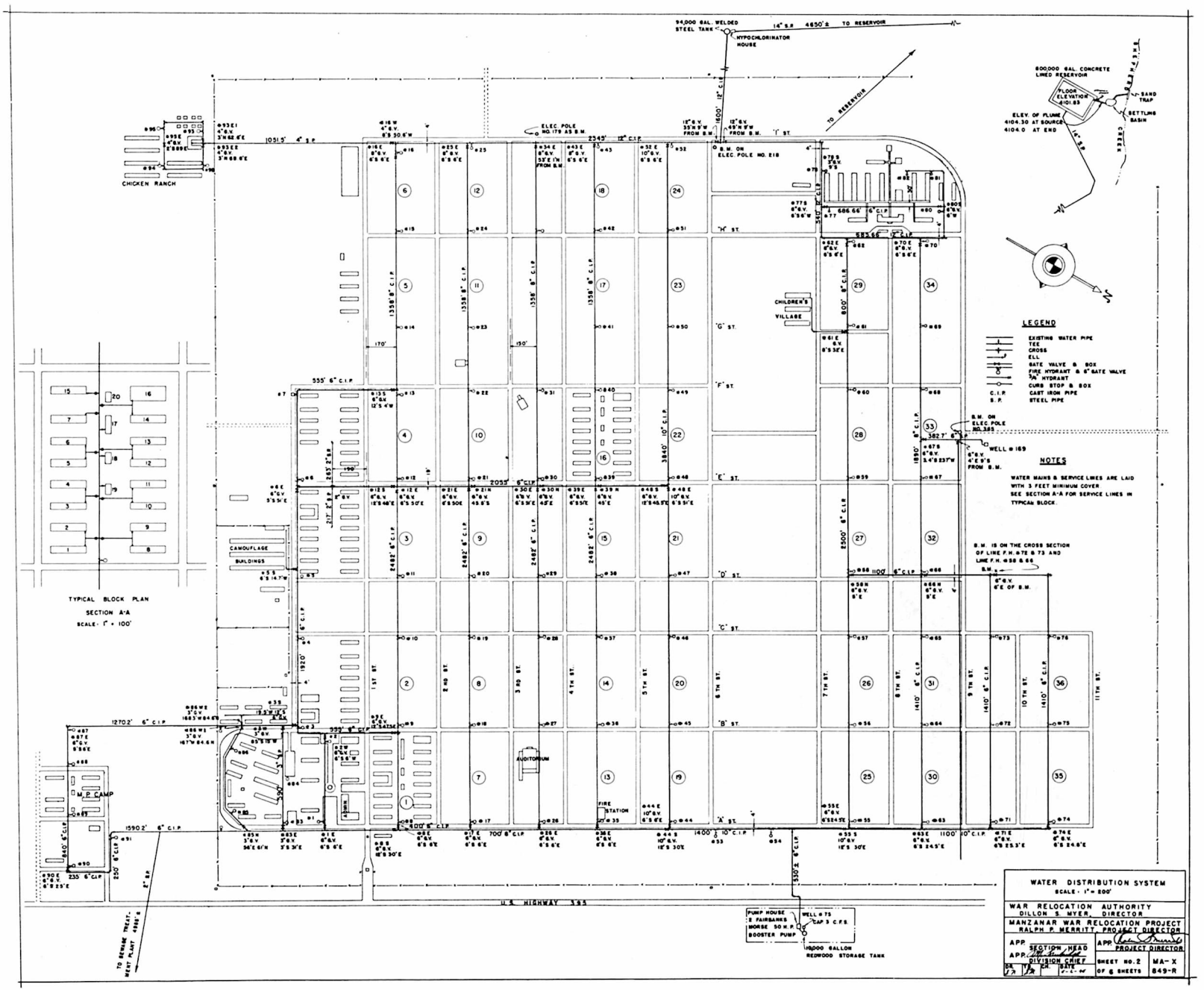


Figure 4.20. Water distribution system (National Archives, Cartographic Division).

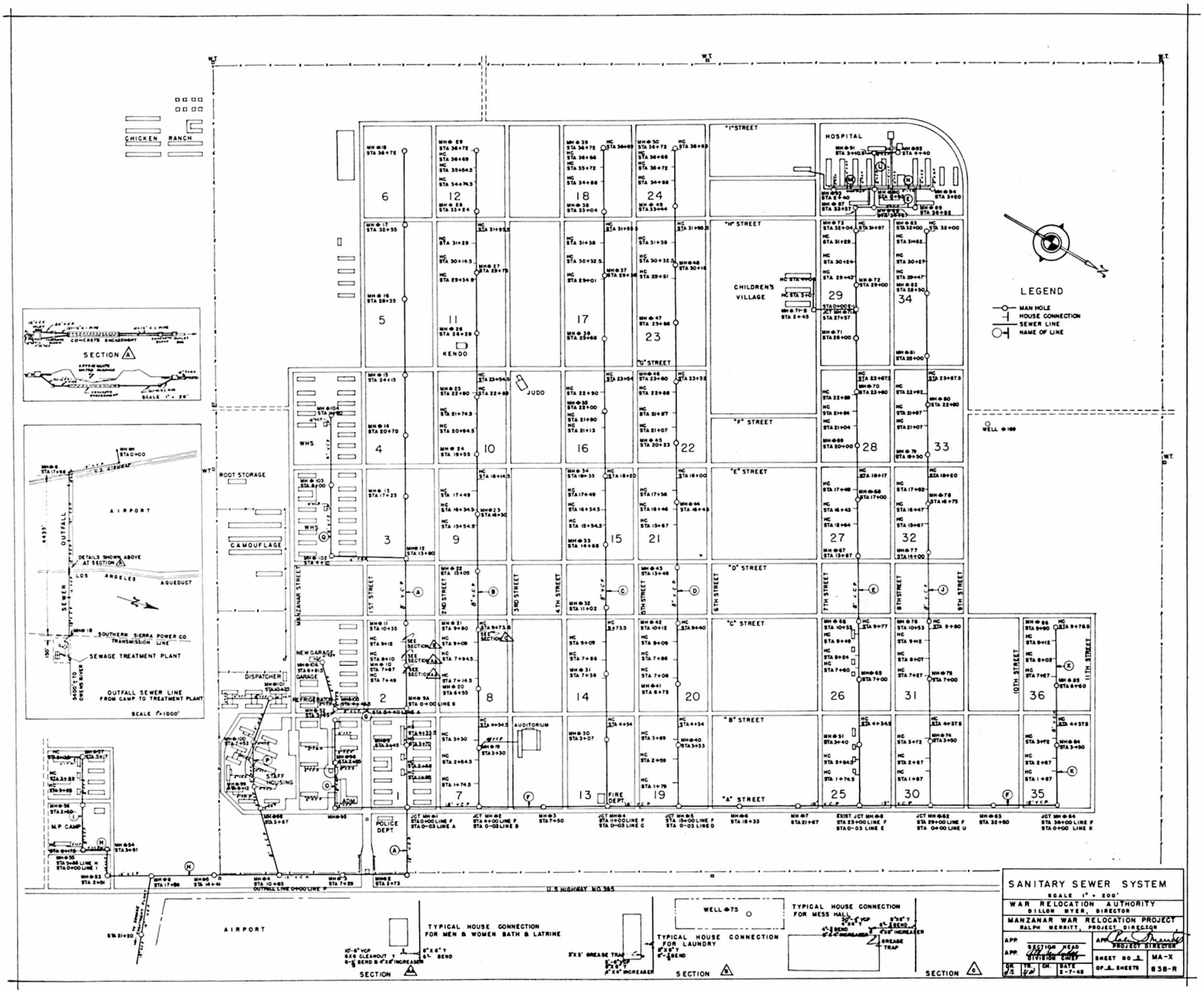


Figure 4.21. Sanitary sewer system (National Archives, Cartographic Division).

Motor Pool

The over 140 cars and trucks brought to Manzanar by the Japanese Americans were impounded and purchased by the government. Newer models were kept for use by the relocation center. Older vehicles were dismantled, workable parts salvaged, and the bodies crushed for scrap (Baxter 1942; Garrett and Larson 1977:84-85). A few cars were sold by the government and a Ford dealer in Lone Pine bought one or two (Garrett and Larson 1977:207).

In June 1942 the Manzanar Motor Pool consisted of five passenger cars, five panel trucks, 34 Army pickups, five rented pickups, three rented dump trucks, and a fire truck on loan from the Forest Service. In July, 31 passenger cars, six panel trucks, eight pickup trucks, and 17 stake-side trucks were received from the Pomona Motor Pool. These vehicles had been purchased by the Army from Japanese American evacuees housed at the Pomona Assembly Center for distribution to the relocation centers (MacNair 1945).

As of September 1942 there was still no garage or gas pump, and repairs were being made in the open by two evacuee mechanics (Quarterly Progress Report 9/30/42). Less than a year later 36 Army-type vehicles were recalled from Manzanar to Camp Haan, Riverside, without delay (Section Report 3/30/43). At the end of 1943 there were 106 vehicles in the motor pool including 28 passenger cars, five pickup trucks, 17 panel trucks, 20 1/2-ton Army trucks, 14 1½-ton Army trucks, 79 1½-ton stake-side trucks, four ambulances, and a rented dump truck. At the closing of the center in December 1945 there were 175 cars, 17 heavy vehicles, and an eight-car garage (MacNair 1945).

Military Police

One company of 99 men ("B" Company of the 747th Military Police Battalion) were stationed at Manzanar when it opened. Weapons included two heavy machine guns, four light machine guns, 89 shot guns, 21 sub-machine guns, and 21 rifles (Weglyn 1976:124). The Military Police were originally housed in a tent camp (Figure 4.22). Eventually, the Military

Figure 4.22. Military Police encampment, early 1942 (WRA photograph, UCLA Special Collections).

Police compound, located at the southeast corner of the Relocation Center, consisted of 12 buildings, including four barracks, an office, an administration and storage building, a recreation hall, a mess hall, a guardhouse, a first aid station, a latrine and bathhouse, and a motor repair shop (Engineering Section Final Report 1946).

At first the incarceration was enforced by walking sentries (Quarterly Progress Report 9/30/42). In response to public and congressional complaints that Manzanar should be surrounded with barbed wire at once, Karl Yoneda wrote the editor of *People's World* (4/28/42) "I want to state that we are well-guarded ... although [there is] no barbed wire, ... [we are] guarded by sub-machine guns in the hands of U.S. soldiers all around camp ... [and in the] past month watchtowers [have been built]."

The eight watchtowers, built by Lone Pine contractor Charles I. Summer, were completed on August 11, 1942. Supported by 6-inch-square posts set on 24-inch-square piers, the towers were 8 ft square at the bottom and 6 ft square at the top. They had two platforms: the lower one 6 ft by 10 ft and enclosed with sash windows, and the upper one 8 ft by 12 ft with an open railing and a 2,000 candle power searchlight (Engineering Section Final Report 1946; Figure 4.23, see Figure 4.15). The towers eliminated the need for sentries walking all four sides of the relocation center boundary. Only two beats on the west boundary were still being patrolled by the end of August.

The guards were instructed to shoot anyone who tried to leave the center or who refused to halt when ordered. During a severe dust storm two guards challenged each other until their identity could be determined (*Manzanar Sentry* 5/18/42). A more serious episode occurred on May 16, 1942, when Hikoji Takeuchi was shot by Private Phillips, a sentry. Takeuchi was seriously wounded but recovered. Takeuchi claimed the sentry told him it was okay to go collect wood from a scrap pile, then whistled him back, and shot him while he returned. The guard said that he ordered the Japanese to halt, but the Japanese stated to run away, so he shot him (WRA Report 8/30/42). The guard's story does not appear to be accurate given that Takeuchi was wounded in the front and not in the back.

A five-strand barbed wire fence around the relocation center was completed by Los Angeles contractor C.J. Paradis by the end of 1942 (Gordon Chappell, personal communication, 1996). The fencing project included the removal

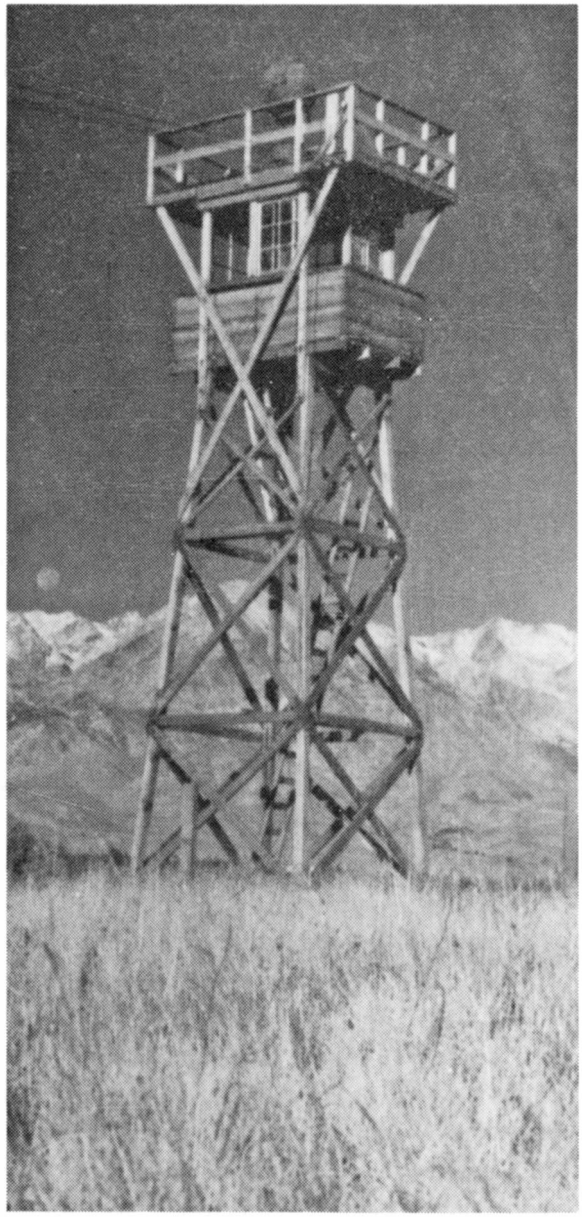


Figure 4.23. Watchtower along western boundary (Toyo Miyatake photograph, courtesy of Eastern California Museum).

of 5,000 linear ft of old fencing and the installation of 18,871 linear ft of new fencing (Sandridge and Sisler 1946). In September the Army considered the construction of an additional watchtower to the west of Manzanar to prevent the evacuees from going on further fishing trips (Progress Report 9/21/42). Evacuee swimming and fishing in the nearby creeks was a subject of constant complaints from both LADWP and local residents.

The intensity of the Military Police's vigilance abated over time. By June 1943 the Military Police force was reduced from three officers and 134 men to two officers and 64 men (Semi-Annual Report 6/30/43) and the watchtowers were no longer staffed full time. By December 1943, the guard towers were abandoned, the perimeter was no longer patrolled, and only two security posts were being maintained (Semi-Annual Report 12/31/44). The windows of the watchtowers were subsequently removed because of children shooting marbles and rocks at them with slingshots (Ross Hopkins, personal communication. 1996).

A year later the Military Police were reduced to two officers and 40 men. This left the Military Police with barely enough personnel to support themselves and the only sentry was a soldier stationed at the relocation center entrance to help control traffic.

Most of the incidents the Military Police dealt with were minor infractions of administrative rules. For example, the *Manzanar Free Press* reported on August 11, 1943, that five persons were arrested by the Military Police for being out of bounds at a picnic area.

It was standard policy for the Military Police to confiscate knives, flashlights, radios, and other prohibited items on arrival (Tateishi 1984:17). But one evacuee, who was returning to the center after being on furlough for the beet harvest, remembers that the guards also confiscated the candy, cookies, and sugar he had acquired in Montana (Stanley 1994:62). Since the possession of these articles was legal, the confiscation would seem to have been due to harassment or greed.

Administration

Once the camp was constructed, administration of the center was shifted from the Army's Wartime Civil Control Administration (WCCA) to the War Relocation Administration. On May 20, 1942, the WRA replaced Clayton Triggs, who was previously a Civilian Conservation Corps administrator (Garrett and Larson 1977:26), with Roy Nash, the former superintendent of a large Indian Agency in California. Nash carried over only six of the WCCA staff. Soon after his arrival, Nash gave a speech to the evacuees in which he said they could go to the mountains for recreation. He also discontinued the use of searchlights at night (Progress Report 4/15/42).

The *Inyo Independent* (4/10/42) reported that the boundaries at Manzanar were extended west four miles into the foothills of the Sierra Nevada, for picnics and outings. To appease LADWP, no swimming would be allowed and fishing would require a State license. But there soon were complaints that people were swimming in creeks feeding the aqueduct and the community reservoir (*Inyo Independent* 7/17/42) and the boundary extension was cancelled (Progress Report 7/16/42). Nash was reprimanded for his liberalism, and had to countermand his order.

Other complaints from Inyo County residents forced the cancellation of a 24-hour shift for the reservoir maintenance crew, and resulted in restrictions on working at a farm to the south (Progress Report 9/8/42). Early on, a local newspaper editorial complained that Nash allowed a trip to Darwin to get Joshua trees for landscaping when gas rationing was in effect. By the end of September, 1942, Roy Nash had resigned to take a position with the

Bureau of Economic Welfare in Washington.

Harvey Coverley (to 11/5/42) and Solon Kimball (to 11/19/42) served as acting directors until a replacement for Nash could be found. In an apparent bid to placate local residents, Ralph Merritt, who had been chairman of the Owens Valley Citizens Committee that selected the Manzanar site, was named the new director. Merritt, who had been ranching in Yerington, Nevada, for 10 years, was an experienced administrator. During World War I, he was the Federal Food Administrator for California. Between 1912 and 1920, he was Comptroller of the University of California, and President of the California Rice Growers Association. He headed Sun-Maid for nine years in the 1920s. Merritt served as Director of Manzanar until the center was dismantled in 1946.

Under Merritt's administration the Caucasian staff at Manzanar was expanded from 97 in October to 141 in December, 1942 (Quarterly Report 10/112/31/42). By the end of 1944, the staff would reach 158, including 25 local residents (Merritt notes, BLM Bakersfield District files). But even this number was inadequate to run a city of 10,000 people, and evacuees were assigned to help (Spicer et al. 1969:76-77).

In October, 1942, Manzanar's designation had been changed from a "temporary" Assembly Center to a "permanent" Relocation Center. The *Manzanar Free Press* reported that WRA director Dillon Myer visited in October 1942, confirming that "Manzanar is a permanent relocation center." However, Myer's announcement and Merritt's appointment did not quell the evacuee's fears that they might be uprooted again at any time. The Administration's January 30, 1943 Project Report noted that a rumor about Manzanar closing had been traced to a letter from LADWP reminding the Army that they were assured that Manzanar was merely a processing center for *temporary* internment. But some Manzanar residents appeared to have settled in by the end of March 1943, when the Block Manager's Report for Block 22 reported that he liked the new director, and "if things get too pleasant, than maybe we will all want to stay here for the rest of our lives like the Indians."

The Manzanar Riot

Within weeks of Ralph Merritt's arrival he was confronted with one of the most severe crises of the relocation process. Although referred to in the press as a "pro-Axis" demonstration (Associated Press 12/6/42), the "Manzanar Riot" was actually the culmination of tensions that had been accumulating over many months. There was no evidence to indicate that the Manzanar incident was in any sense a "celebration" of the anniversary of Pearl Harbor as was reported in many newspapers (WRA Report 1942, UCLA Special Collections).

Hansen and Hacker (1974), in a reevaluation of the events leading up to the riot, point out long-standing differences in the Japanese American community which resulted in different responses to the evacuation. The Issei, who had been discriminated against the entire time they were in America, tended to see it as one more example of prejudice; their reaction to this, as to previous ostracism, was to retrench into their Japanese cultural ethnic identity. The Nisei, born in the United States and therefore U.S. citizens, tended to identify with American culture, but because of discrimination depended upon the Issei and the ethnic Japanese community economically and socially.

One subset of the Nisei, members of the Japanese American Citizens League (JACL), tried to prove loyalty by acquiescing to, and even abetting, the evacuation. In this way, they tried to exonerate the Japanese American community from irresponsible charges of subversion, but "more ominously, they cooperated with authorities as security watchdogs," even forming an "Anti-Axis Committee" that helped the FBI identify and locate potentially dangerous Issei (Hansen and Hacker 1974:125).

Once the evacuation was underway, JACL members volunteered to go early to camps to prove their superpatriotism. Because of their early arrival and eagerness to cooperate, they were rewarded with supervisory and white-collar jobs, given a voice in shaping policy, and even encouraged to influence other evacuees through control of relocation center newspapers, such as the *Manzanar Free Press* (Hansen and Hacker 1974:128).

Other Nisei saw their evacuation and confinement as repudiation of their attempts to Americanize themselves. In the face of this unjustified discrimination, they turned toward the Issei with new respect for, and understanding of, the Issei's cultural entrenchment.

The tensions between the JACL and other Japanese Americans was exacerbated by difficulties arising from internment. The JACLers were seen as traitors, not only to Japanese ethnicity, but also to the Japanese American community they hoped to integrate with mainstream American culture.

Stress within the Manzanar Relocation Center arose from fundamental issues such as the loss of income and property as a result of evacuation, the separation of Japanese aliens from their families, and the uncertainty about the future of Japanese Americans in the United States. This basic discontent, which underlay and underscored problems of daily life in the relocation center, touched everything from the WRA administration to discrimination in jobs, food, and pay. These attitudes were summed up by one block manager, who charged then Director Nash and Assistant Director Campbell with a lack of interest in the Japanese Americans' welfare, manifest in ever-changing WRA policy, delays in wages and clothing allowances, and pay lower than the $54.00 per month promised. Other complaints concerned the overbearing attitude of Campbell, the discrimination between citizens and non-citizens, and the presence of administration informants (Block Manager's Daily Reports 1942).

The evacuees did not regard the young JACL leaders, whom the administration relied upon, as representatives. Aliens were excluded from positions of importance in the relocation center administration, and thus from the best-paying jobs. In fact, many of the later arrivals felt they were discriminated against in employment opportunities, complaining that by May all the good jobs had been taken and all that were left were mess hall and clean-up jobs.

Favoritism toward JACLers was even perceived in food distribution. For example, Block 1, where the *Manzanar Free Press* and other offices were located, reportedly had better food in their mess hall. Such discrepancies might seem unimportant if supplies were basically adequate, but there were shortages that shook the evacuees' confidence in the administration: meat was always in short supply and in August and September sugar shortages worsened. More damning, in October and November oil shortages forced the closing of some kitchens (Block Manager's Daily Reports 1942). Further discrepancies in supplies fostered rumors of misappropriation of food and suspicions that informers were operating within the center.

Other incidents contributed to a lack of faith in the relocation center administration. For example, Tom Watanabe turned against the administration after the death of his wife and newborn twins in the Manzanar Hospital in August (Smith 1995:261-264; Tateishi 1984:95).

In the months preceding the riot, public meetings turned into shouting sessions; there were beatings, and death threats against the pro-administration Nisei were common (Houston and Houston 1973:53). In June, John Sonoda, an Employment Division worker, was beaten by five men for showing favoritism to Nisei in hiring. Scavenger (recycling and garbage collection) trucks with Kibei crews flying Black Dragon flags tried to stop work at the net

factory, threatened workers, and even attempted to run people over (Houston and Houston 1973:155). An incendiary blaze was set November 27 at the coop store (Block 21 Block Manager's Daily Report 11/28/42; *Manzanar Free Press* 12/9/42). Some saw the store as a symbol of JACL collusion.

The WRA's attempt to establish self-government only aggravated the factiousness. The first block managers were appointed by the administration based on block residents' recommendations. Originally the WRA required that block managers be U.S. citizens. In August, in many blocks, residents forced their appointed pro-administration block managers to "resign." In new elections Issei and Kibei were elected. For example in Block 4, the administration-appointed block manager (Karl Yoneda) lost to an Issei who received 93 percent of the vote.

Since JACLers were no longer "electable" as block managers, Frank Masuda and Mike Masaoka, both prominent in Japanese American Citizens League, formed the Manzanar Citizens Federation to work harmoniously with the administration and support JACL objectives. But with the widespread suspicions and mistrust of the administration, Masuda and Masaoka were accused of betraying fellow evacuees and currying favor with the administration (Smith 1995:261-264).

Two other outspoken Japanese Americans that sided with the administration were Tokuttaro Slocum and Karl Yoneda. Slocum, who was raised by a Caucasian family, was a World War I U.S. Army veteran who had obtained American citizenship under a special act of Congress. His retort to those questioning his enthusiasm for incarceration was: "I'll tell you why I'm here, I'm here because my commander-in-chief, the President, ordered me here" (Hansen and Hacker 1974:131). He headed the Manzanar Work Corps, and had helped the FBI locate dangerous Issei in Los Angeles before the evacuation. He also served as an FBI informant while in the relocation center.

Karl Yoneda, married to a Caucasian women and seen by most Japanese Americans as very un-Japanese, was an avowed communist. He joined with the pro-administration faction over the question of Japanese Americans serving in the military, supporting the formation of a volunteer unit.

For some, including the "Blood Brothers," "Black Dragons," and other gangs anti-administration feelings evolved into pro-Japan, pro-Axis political leanings. A Nisei, Joe Kurihara, became the most prominent spokesperson for the pro-Japan faction. Like Slocum, Kurihara was a World War I veteran (Houston and Houston 1973:54). However, after the government refused to make any exception to the evacuation for veterans who had already proved their loyalty by serving during World War I, he became embittered and vowed to become 100 percent Japanese. At Manzanar he organized the Manzanar Welfare Association to counter the Manzanar Citizens Federation.

Other groups were only anti-administration rather than pro-Japan, such as the Mess Hall Workers' Union (Spicer et al. 1969:136). The union was organized by mess hall worker Harry Ueno in October 1942, when he decided that the JACL-supported Fair Practice Committee of the Work Corps would not fairly represent workers (Embrey et al. 1986:106).

Ueno had been checking actual sugar deliveries against reported deliveries, and believed there were too many discrepancies to be written off to sloppy bookkeeping. Ueno publicly accused Assistant Director Campbell and Chief Steward Winchester of theft of meat and sugar for the black market. His charges were widely believed by residents and even the FBI gave them some credence, sending agents to question him about his complaints. Reportedly, soon afterward Campbell tried to get Ueno to leave Manzanar by promising him a good job with a millionaire

friend (Smith 1995:261-264).

The immediate spark that touched off the Manzanar riot (or more appropriately the Manzanar revolt) was the arrest and removal from the relocation center of Harry Ueno on the suspicion of having taken part in a beating of Fred Tayama, a suspected informer. Many evacuees refused to believe Ueno was guilty, others felt that even if he were guilty he should not be punished for assaulting a known informer (Houston and Houston 1973:156), and practically all were against his removal from the relocation center for trial as they believed the matter should be handled within the center itself, as had all previous incidents.

Tayama had owned a chain of restaurants in Los Angeles, and was unpopular with many residents of the community even before evacuation because he was believed to be an informer. On the evening of December 5, 1942, Tayama, who had just returned from a JACL national convention at Salt Lake City, was assaulted in his Manzanar apartment by six masked men. He identified one of the men as Ueno, who was then arrested. Ueno was questioned by the internal police in the presence of Acting Director Campbell (Levine 1995:76-83). When Ueno could not establish an alibi, Campbell (in his authority as Acting Director) decided Ueno should face trial outside the relocation center and transported him to the Independence jail. Several other suspects were questioned that night, but only one of them was detained and he was kept in the relocation center jail.

At 10 a.m. the next day a meeting of about 200 of Ueno's fellow Block 22 residents and a few Kitchen Workers' Union members met at the Block 22 mess hall to discuss a plan of action. A possible strike was mentioned, but any decision was put off until a meeting scheduled for 1:00 p.m. Word of that meeting spread throughout the relocation center and over 2,000 evacuees showed up. The meeting was then moved from the mess hall to an adjoining fire break.

Spokesperson Joe Kurihara and others demanded the unconditional release of Ueno, and investigation of Manzanar conditions by the Spanish Consul, which was representing Japan in diplomatic actions and had inspected other relocation centers. Meeting participants also pressed for further action against suspected informers. A committee of five, including Kurihara, was appointed to negotiate with the Project Director.

A detail of evacuee police had been sent to the meeting, but returned reporting that they were not wanted and had been asked to leave. Director Merritt and the Acting Chief of Internal Security then decided to attend the meeting and instructed Campbell to ask the Military Police company to stand by in case of trouble. Merritt reached the meeting just as it was breaking up, and was informed that the purpose of the meeting was to protest the arrest of Ueno and demand his release.

The Committee of Five and Merritt went to the administration building, followed by a large group of evacuees. At the same time a dozen soldiers armed with submachine guns arrived and lined up between the police station and the administration building. The Committee of Five demanded the release of Ueno, but Merritt refused to negotiate with the crowd present and demanded that it disperse. When the Military Police commander heard the demands of the Committee, he sent for more soldiers; during most of this period there were about 30 soldiers present.

The crowd sang patriotic Japanese songs, shouted *banzai*, taunted the soldiers, and even threw some sticks and stones at them. (Embrey et al. 1986:59; Houston and Houston 1973:54-55). As a compromise measure, Merritt led the Committee of Five away from the crowd and after some discussion arrived at an agreement. Ueno would be returned to Manzanar within an hour after the crowd dispersed, and would be tried in such manner as Merritt decided; the crowd would

disperse immediately; there would be no more mass meetings; the residents would make no attempt to release Ueno from jail; all future grievances would be taken up through recognized committees; and the Committee of Five would help find the assailants of the beaten man.

Kurihara then addressed the crowd in Japanese to explain the terms of the agreement. The speech was received with considerable enthusiasm and applause. Merritt questioned the evacuee Chief of Internal Security concerning the speech, and he said it was "all right." It was discovered later, however, that this man knew very little Japanese and did not understand what had actually been said. As a matter of fact, Kurihara had spoken in a Hawaiian dialect that very few even in the crowd understood. Most only knew that they should disperse and regroup at Mess Hall 22 at 6:00 p.m. (Weglyn 1976:133). The crowd dispersed, but not until all of the soldiers were first withdrawn to a road outside the relocation center.

At 6:00 p.m. the crowd gathered in a firebreak just across from the hospital. A death list was drawn up, which included Tayama (the beating victim), JACL leaders, *Manzanar Free Press* staff, and members of the internal security police force. Other demands made included the removal of Campbell, Chief Steward Joe Winchester, and Public Works Chief Engineer Harvey Brown (Hansen and Hacker 1974:141).

Several hundred men then went to the hospital to demand the surrender of Tayama, but he had hidden himself. Convinced that Tayama had been removed earlier, the mob then broke into smaller groups looking for Slocum, Yoneda, and others on their death list. Meanwhile, a larger crowd converged on the police station to demand the release of Ueno. Ueno shook hands with some of the crowd through the police station window and rebuffed their suggestions that he escape by climbing out the window (Levine 1995:79).

At this point the Military Police commander was requested to send in a military guard and to take responsibility for order in the center. For a short time after the arrival of the soldiers the crowd was quiet. The commanding officer talked to the Committee of Five in the police station, reminding them of their agreement made during the afternoon; then he addressed the crowd. Giving up hope of dispersing the crowd peacefully, he gave the order to throw tear gas grenades. The crowd scattered, but a strong wind minimized the effect of the gas, and in a few minutes the crowd came back.

There are different accounts of what happened next, but several reports agree that someone started a truck toward the jail and the mounted machine guns of the Military Police and jumped out. An officer of the Military Police, unable to see that the car was driverless, opened fire with his machine gun. The soldiers took the shots for a signal to start firing, and some of them fired their shotguns into the crowd. When the smoke and dust cleared away, the injured were carried into the police station and taken by ambulance to the hospital. Ueno had jumped out the window to help carry the injured into the jail (Tateishi 1984:200; Embrey et al. 1986:58). A 17-year-old boy had been killed instantly. A 21-year-old man, shot through the stomach, died in the hospital several days later. Nine other evacuees were wounded, one evacuee was treated for exposure to tear gas, and a Military Police corporal was wounded by a ricocheting bullet.

The Committee of Five was immediately arrested. Mess hall bells rang as the Military Police, augmented by local National Guard volunteers, patrolled the streets inside the center trying to restore order (Embrey et al. 1986:62; Houston and Houston 1973:55). Several times tear gas was used to break up crowds and impromptu meetings at mess halls (Tateishi 1984:98; Weglyn 1976:124).

During the night, gangs armed with knives and other weapons searched for individuals on the

publicized death list. However, Japanese Americans sympathetic to the JACLers had infiltrated the 6:00 p.m. meeting and the administration quickly removed the intended victims and their families. Sixty-five people (including Tayama and another badly beaten man) were rescued that night and housed in the military police compound (Smith 1995:261-264). Three days later they were transferred to a former CCC camp in Death Valley where they would live for the next 2½ months. On February 15 they were escorted to the train station at Las Vegas, bound for jobs on the east coast.

According to newspaper reports, the next day 14 Japanese American Boy Scouts stood off an angry mob of evacuees attempting to seize the American flag at the administration building (Associated Press, 12/10/42). A new Committee of Six was elected, but when they tried to meet with Merritt they were promptly arrested. After the shooting, Ueno, the Committee of Five, and two others were taken to the Bishop city jail where they were kept under military guard until they were transferred to Lone Pine (Embrey et al. 1986:62, Appendix 20; Levine 1995: 80). In all 15 "troublemakers" were removed from the relocation center and held in local jails (Weglyn 1976:125). In January they were sent to Department of Justice camps if they were Issei (aliens) or to a WRA isolation center at Moab if they were Nisei or Kibei (citizens).

The breadth of the revolt is evident in that only two of the 16 arrested and removed from the relocation center were from the same residential block (Ueno and another were from Block 22). And, there was widespread support for the "troublemakers:" the Block 22 Manager noted (Block Manager's Daily Report 12/26/42) that he received many bags to be taken to those arrested, and another block manager (Block 25[?] Block Manager's Daily Report 12/29/42) related that $2.00 had been collected to buy items at the canteen for them.

Most work in the relocation center stopped for several weeks (Garrett and Larson 1977: 132-133; *Manzanar Free Press* 3/20/43). Oil delivery and kitchen crews resumed work, but all other work was suspended by the administration until after Christmas, since evacuees refused to show up (Hansen and Mitson 1974:127). The camouflage net factory was never reopened.

On December 29, there was a funeral for the two killed in the riot. It was held at Reynolds Ranch, 3 miles away, to forestall another riot or demonstration. The mess hall bells rang at 2:00 p.m. in commemoration (Block Manager's Daily Reports January 1943). With the JACLers gone to Death Valley, the Issei assumed their traditional leadership role. "In response to their endangered ethnicity, they exhibited heightened ethnic consciousness and behavior" (Hansen and Hacker 1974:141).

Photographing Manzanar

Due in part to the efforts of Director Ralph Merritt, the Manzanar Relocation Center was one of the most photographed of the relocation centers. In addition to many newspaper and magazine photographers that visited Manzanar during its operation, famed photographers Dorothea Lange, Ansel Adams, and Toyo Miyatake all took numerous photographs at Manzanar.

The WRA hired Dorothea Lange to document both the evacuation procedure and life in the relocation centers. Perhaps her earlier work documenting displaced farm families and migrant workers during the Great Depression had suggested that she might be adept and sympathetic in documenting the displaced Japanese Americans. However, outraged over the injustice taking place around her, she quickly found herself at odds with her employers. As a result, many of her photographs were censored. In her photographs she attempted to juxtapose images of human courage and dignity with the physical evidence of the indignities of incarceration. Having visited all of the reloca-

tion centers from their initial dusty beginnings, it was not hard to invoke the harsh environment, hard work, and drudgery of relocation center life (see Conrat and Conrat 1992). A large portion of Dorothea Lange's photographs are at the Library of Congress.

Toyo Miyatake was a professional photographer living in Los Angeles when he and his family were forced to relocate to Manzanar. Using a lens and film holder he smuggled into camp, Miyatake built a box camera out of scrap wood and pipe. After about nine months his camera was discovered. Instead of having him arrested, Ralph Merritt allowed Miyatake to send for his photography equipment stored in Los Angeles. To bypass military regulations forbidding Japanese Americans to take photographs, Merritt assigned a Caucasian worker to release the shutter after Miyatake positioned his camera. After awhile even that facade was dropped. Miyatake's photographs capture much of the daily flavor and beauty of life at Manzanar. However, many of his candid views also reveal Manzanar as a place of incarceration. The watchtowers and barbed wire fence figure predominantly in many of his photographs. Toyo Miyatake's several thousand negatives taken during his time at Manzanar are preserved at his son Archie's photograph studio in San Gabriel, California.

Ansel Adams first came to Manzanar to photograph Ralph Merritt's son's wedding. Ralph Merritt Jr. was married on the patio of his father's home at Manzanar. Adams and Ralph Merritt Jr. both were working at Yosemite National Park at that time and Adams knew Ralph Merritt Sr. through Sierra Club activities. According to Ralph Merritt Jr. (personal communication, 1993), the wedding was postponed for a few hours when Adams ran off to take photographs of a fire at the mattress factory. Ralph Merritt Jr. later got a job at the relocation center. In the late summer of 1943 Adams was invited back by Merritt Sr. to photograph the relocation center (Adams 1985:257-258). Moved by the human story unfolding at Manzanar and wanting to make more of an effort in support of the war, Adams accepted the offer. The WRA provided food and lodging for Adams and his wife, but he received no pay for his work. To help cover his expenses, Adams sold photographs to the evacuees and staff (*Manzanar Free Press* 2/2/44).

WRA regulations forbade depictions of the guard towers and barbed wire, leading Adams to emphasize positive views of relocation center life (Spaulding 1995:201-206). To stress the loyalty of the Japanese Americans in his photographs, Adams chose to show work activities. His many portraits depict people who looked friendly, honest, strong, and confident; a view at odds with the racial stereotypes of the time. Adams prepared an exhibit at Manzanar and another for the Museum of Modern Art in New York City (Adams 1985:263; *Manzanar Free Press* 1/26/44). In 1944 he published "Born Free and Equal," a photographic essay of life at Manzanar. "Born Free and Equal" sold at the Manzanar coop for $1.00, but outside the center many copies were burned to protest Adams's sympathetic treatment of the Japanese Americans. Adams did not renew the copyright on his book and donated the negatives to the Library of Congress in the hope that one day the work would be viewed more objectively (Armor and Wright 1988:xviii). As an aside, Ansel Adams made two of his more famous photographs while staying at Manzanar: *Mount Williamson, the Sierra Nevada, from Manzanar* and *Winter Sunrise, the Sierra Nevada, from Lone Pine.*

Life in Manzanar

Following the Manzanar Riot, most shortages were alleviated. Evacuees settled into routines governed more by mess hall schedules than normal family life (Figure 4.24). Evacuee accounts depict life at Manzanar as constrained:

> It was hot! Manzanar's weather was 110 degrees. The dusty barracks stood frying like brown pancakes in the shimmery heat. Now and then a

truck roared by. A soft peal of a saxophone playing "Idaho" came from a distance. Plunk, plunk of the "Go" rock on the board could be heard as two men carefully laid down that previous price. Occasionally one of them drew his tired hand across his perspiring forehead. Then he automatically reached for a rosy-colored glass perched on the steps. He raised the sparkling liquid to his dry lips and murmured: "Too bad they don't sell beer here." He leaned back in his chair and carelessly threw the rest away.

The girl reading quietly on the shady side of the grass turned when she heard the splash of water. Her brows drew together and she glared at him as if to say that he had disturbed her peace.

The mail boy threw up a cloud of dust as he shuffled along. He was hot and tired. Here, at last, was his last barrack and his last mail for the day.

Suddenly a sound could be heard. The mess hall bells were ringing. The girl gathered up her books and hurried into the house.

> *Town Scene*, Anonymous (*Manzanar Free Press* 3/20/43).

Manzanar life is easy but it isn't living ... Life out here isn't easy but it's life in America!

> Shizuo Hori, in a letter to friends at Manzanar after relocating to Chicago (*Manzanar Free Press* 3/20/43).

Figure 4.24. Manzanar in winter (Ansel Adams Photograph, Library of Congress).

Manzanar reached its peak population of 10,121 inmates in December 1942 (Myer 1971:Appendix F; Figure 4.25). Two-thirds of Manzanar's residents were U.S. citizens, one-half were women, and one-quarter were school-age children. Most came from Los Angeles and San Fernando Valley, but others were from the San Joaquin Valley, Washington, Oregon, and Hawaii.

During the relocation center's operation 549 were born and 138 died. The number of births per month rose the first 9 to 12 months after the evacuees arrived and then tapered off as young couples found work outside the center. After an initial rise, the number of deaths per month stayed roughly the same, in spite of decreasing population, because the elderly would not (or could not) leave the center (Figure 4.26).

Manzanar's population varied in response to temporary furloughs, permanent relocations, and involuntary transfers (Figure 4.27). Temporary leave or furloughs were granted to alleviate manpower shortages caused by the war; labor was needed to save the harvest in western states (*Inyo Independent* 11/5/42). In the fall of 1942, over 1,200 Manzanar men were recruited to harvest sugar beets and potatoes in Idaho and Montana (*Manzanar Free Press* 9/25/42). They returned in November and December (*Manzanar Free Press* 11/14/42, 11/21/42). In 1943 and 1944, about 500 men left to harvest crops in Idaho, Montana, Colorado, and other states (*Manzanar Free Press* 5/12/43, 9/15/43, 12/9/44).

Evacuees could get out of Manzanar permanently on "indefinite leave" by joining the military, attending college, or getting a job outside the West Coast exclusion area. The latter two routes required a sponsor. In early 1944 the *Manzanar Free Press* (2/12/44) reported that 1,168 had relocated; by the end of March 1944, 1,317 had relocated (*Manzanar Free Press* 3/29/44). Only 42 (2 percent of those eligible at Manzanar) volunteered for military service (Hansen 1995:vi).

Some evacuees were involuntarily transferred from Manzanar early on: 15 were moved to the WRA's Moab isolation center, and 65 were moved to Death Valley due to the Manzanar Riot. Another 10 "troublemakers" identified by an informant were sent to Moab on February 24, 1943 (Drinnon 1987:103). Over 20 women and

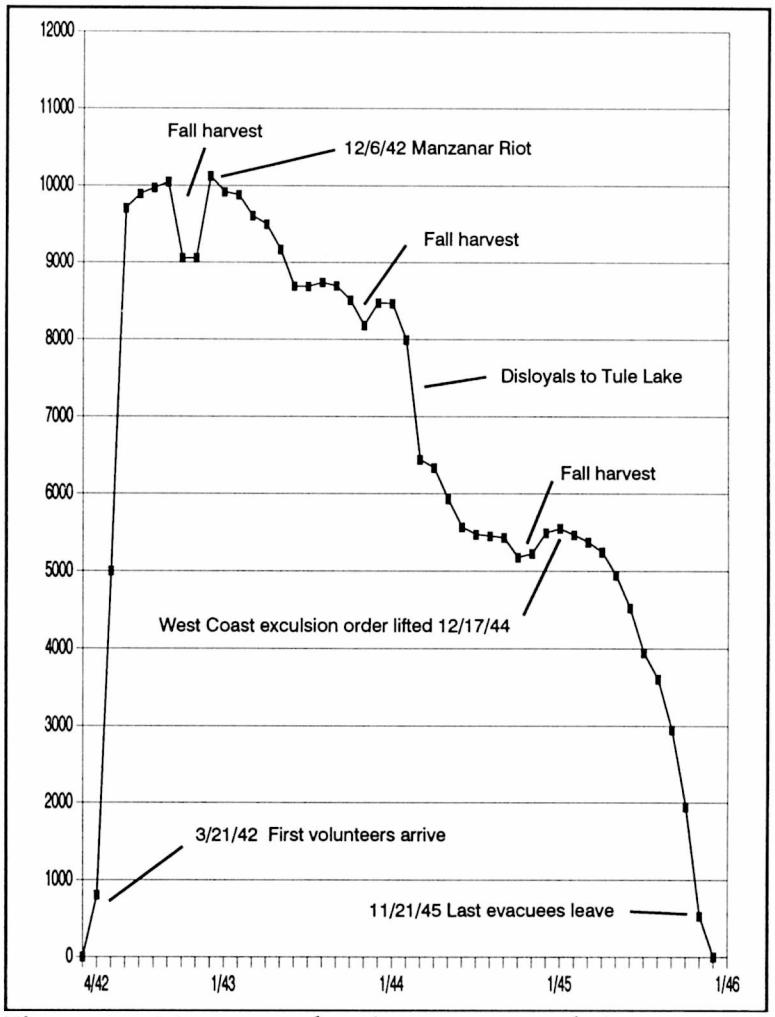


Figure 4.25. Manzanar Relocation Center population 1942-1945 (compiled from WRA records, *Manzanar Free Press*, and other sources).

children were transferred to the Department of Justice Crystal City Internment Camp in Texas to be with their husbands and fathers (*Manzanar Free Press* 6/5/43).

In early 1943, all of the evacuees at Manzanar from Washington State were moved to the Minidoka Relocation Center in Idaho (Progress Report 2/24/43). This transfer was made at their own request, not only because they wanted to be a little closer to home, but also because they were always at odds with their Terminal Island neighbors (Sue Embrey, Personal Communication, 1993).

The largest impact on Manzanar's population was an unexpected result of the WRA's goal to find places for Japanese Americans to work and settle away from the West Coast. To streamline the process, every adult evacuee was given a questionnaire entitled "Application for Indefinite Leave Clearance" whether or not they were attempting to leave.

As discussed elsewhere (Chapter 3, above), those who answered "no" to the loyalty questions were considered "disloyals." In response to public and congressional criticism, the WRA decided to segregate the "disloyals" from the "loyals." Disloyals were to be sent to the relocation center at Tule Lake, which already housed the highest number of disloyals, by October 23, 1943 (*Man-*

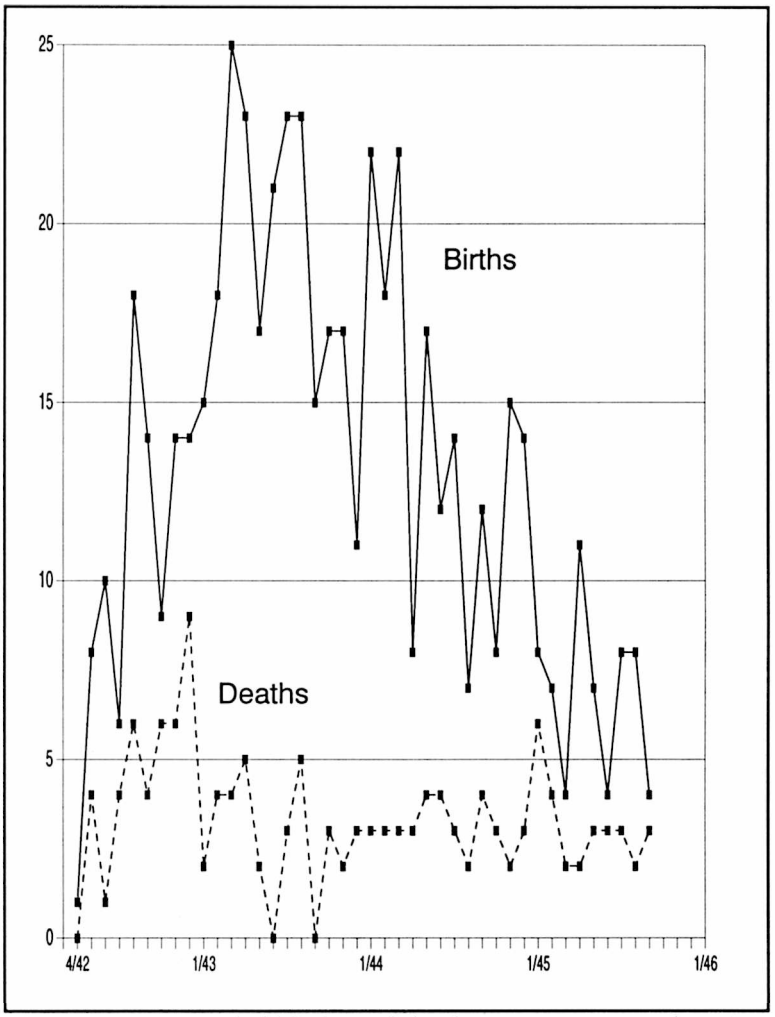


Figure 4.26. Recorded births and deaths at Manzanar Relocation Center (compiled from WRA records, *Manzanar Free Press*, and other sources).

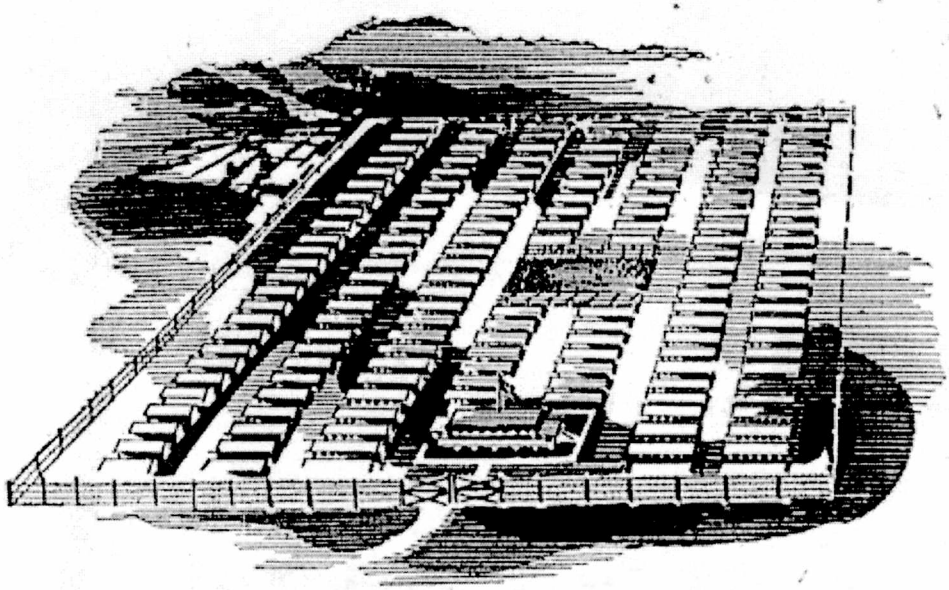
zanar Free Press 8/1/43). However, the segregation was delayed until additional housing was completed at Tule Lake. Beginning February 20, 1,850 Manzanar residents were transferred to Tule Lake in groups of 500 (*Manzanar Free Press* 1/29/44). By June 1944, 12 percent of the Tule Lake population consisted of people originally interned at Manzanar.

After these transfers and relocations, the population of Manzanar stabilized at a little over 5,000. Many of those remaining preferred to wait out the war in California, closer to their former homes rather then relocate to the Midwest or East Coast.

Internal Security

The problem of keeping the law-abiding Japanese American citizens and immigrants inside the relocation center was undoubtedly minimal compared to the problems of keeping order within the compound itself, where 10,000 people from various walks of life were thrown together in cramped quarters with little privacy.

Organized in April 1942, the internal police force was made up of 115 evacuees and a Caucasian Police Chief. The police carried billy clubs and the chief carried a hand gun. The Police Department was reorganized in early 1943 into a smaller force consisting of around 35 men and a female secretary (Figure 4.28).



YOU DON'T NEED TO WAIT ANY LONGER TO GET OUT

Every evacuee has been looking forward to the day when he could permanently leave the relocation center that has been his temporary residence, but not a real home, these long and tiresome months.

"Some day," he has said, "I'll leave here . . . to return to my former home, or to start over in a new and friendly community. Some day I'll be a part of America again . . . to produce or fight for it."

Well, that day has come to those who will take it. . . Here's how: Get yourself a job on a farm . . . to begin with. Sign up for thinning and blocking beets; that's one of the first jobs of the season.

Pick yourself a friendly community, where a variety of crops are grown. Then work through the spring and summer, taking the crops as they come along . . . returning to sugar beets in the fall.

HERE ARE THE REWARDS:

1 Freedom to work for yourself and your family at prevailing high wages (rates of minimum pay for beet workers are guaranteed by Federal order);

2 Adequate housing (the Federal government requires every farmer to supply this before his offer of employment can be officially approved);

3 A new chance to make friends for yourself and for all other persons of Japanese birth or ancestry;

4 A stepping stone to permanent year-round employment in agriculture or industry;

5 Healthful employment . . . for yourself and for other members of your family, if you have one, even down to fourteen-year-old boys and girls;

6 An opportunity to produce more food for freedom, thereby helping America win the war and the peace to follow;

7 A means of earning money for an education or for profitable investment, now or in the future.

SUGAR BEETS are the best way out for the greatest number of evacuees. When you accept a beet contract, take one with the organization that pioneered the way for evacuee job seekers nearly a year ago; take one with an organization that can give you a wide choice of locations and climates.

Utah-Idaho Sugar Company has factories in five states from the Dakotas to the Pacific Coast. Thousands of growers in hundreds of western communities are looking for evacuee help. We can put you in touch with the right place for you. For complete information see your project employment director or write to this pioneer sugar company.

UTAH-IDAHO SUGAR COMPANY

Home office: Salt Lake City, Utah. Factories in Utah, Idaho, Montana, South Dakota, Washington.

Figure 4.27. Advertisement in *Manzanar Free Press* (3/20/43).

Figure 4.28. Manzanar internal police force (WRA photograph, National Archives).

The first police station was located in Apartment 1 of Building 1 of Block 7. It was later moved to a newly constructed building at the relocation center entrance. In July an iron jail cell, on loan from Inyo County, was added (Progress Report 7/20/42). In 1942 and 1943 old Civilian Conservation Corps (CCC) trucks were used to patrol the center, but by the end of 1944 they were replaced by sedans (Gilkey 1945). Additionally, four horses, stabled at Reynolds Ranch on George Creek, were used to patrol a picnic area south of the relocation center (*Manzanar Free Press* 9/10/43).

Crimes ranged from fishing without a permit and petty theft, to attempted rape, and a murder-suicide that left two children orphaned. The crime rate at Manzanar was no higher than that of an average small American city (Myer 1971:37), in spite of the fact that in addition to state and federal laws there were 35 potential offenses specific to Manzanar and punishable by disciplinary action of the Project Director. Arrest warrants were to be issued only by the Project Director. Most cases were heard by a Judicial Commission composed of three evacuees and three members of the Caucasian staff. Only

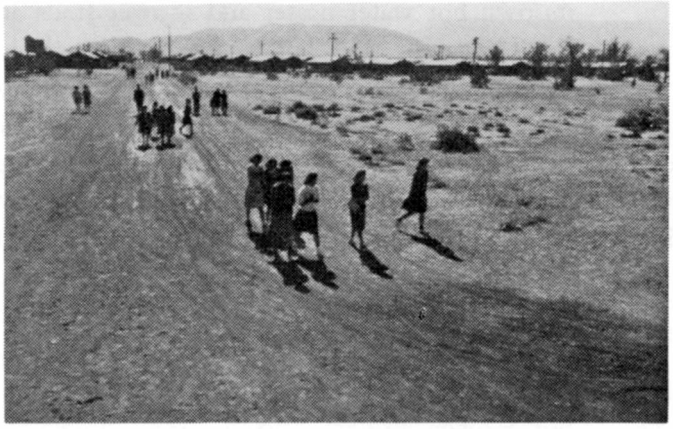


Figure 4.29. People walking, firebreaks on either side (Ansel Adams Photograph, Library of Congress).

major crimes were referred to courts outside the relocation center (Armor and Wright 1988:117).

Fire Protection

The Fire Station, staffed 24 hours a day by three shifts, was located in a specially constructed building on the east side of Block 13. Equipment included a hose truck and two modern fire trucks equipped with a pumper capable of throwing 500 gallons of water a minute (*Manzanar Free Press* 9/10/43).

Each block had an organized fire brigade and fire marshals were in charge of four blocks each. Barracks had fire extinguishers and every four blocks had a centrally located fire alarm telephone. The hospital wards had an automatic sprinkler system for extra protection.

Because a fire in any of the closely spaced and highly flammable buildings could threaten the entire camp, fire breaks were designated between every two blocks. These were left undeveloped, or used for victory gardens or athletic fields (Figure 4.29).

The Fire Department fought both structural and brush fires. The largest brush fire, likely caused by careless picnickers, consumed 1,500 acres one mile southwest of the relocation center (Progress Report 3/30/43). The fire threatened the Reynolds Ranch, but quick action by the Fire Department and 400 volunteers (including evacuees, staff, and Military Police) saved the ranch. The largest structural fire started on the south end of Warehouse 34 and destroyed three warehouses (*Manzanar Free Press* 8/2/44).

Internal Government

The residential block was the central unit of daily life for the Manzanar evacuees. WRA policy promoted evacuee self-government, following a charter drafted by a committee of WRA-appointees. However, the Manzanar charter was never approved by the general evacuee population. Opposition centered on the way the committee members were appointed (17 Nisei selected by the relocation center administration), and because the charter was seen to foster discrimination between citizens and non-citizens. So at Manzanar, each block had an elected block manager who had legislative as well as administrative functions.

Originally the block manager had to be a U.S. citizen to hold office. The first block managers at Manzanar were appointed by the administration based on block residents' recommendations. The first truly democratic election of block managers took place in four blocks in late June 1942 (Armor and Wright 1988:116). Initially, all persons over 16 years of age could vote, but later the age minimum was raised to 18. At Manzanar the U.S. citizenship requirement was generally disregarded as it became increasingly clear that most Nisei could not win a free election. In 1943 the requirement that block managers be citizens was dropped at all of the relocation centers (Myer 1971:38-40).

The Block Manager's duties included dealing with the administration, funneling evacuee complaints and disseminating information to the block residents. All meetings and paperwork had to be in English so the administration could monitor what was said. The Block Manager also

supervised grounds and building maintenance, and assured the daily needs of the block residents were met. Items distributed by the Block Manager included light globes, soap (laundry, facial, and hand), toilet paper, cots, blankets, fuses, brooms, mops, rakes, shovels, and lawn seed (Block Manager Daily Reports 1942-1945).

Medical Care

The first hospital at Manzanar consisted of a portion of Building 2 in Block 1. It had five beds and no toilet, washing facilities, or sterilizing equipment. In March 1941 the hospital was moved to its own barracks in Block 7. By April three more barracks in Block 7 were appropriated for hospital use (Little 1945) and there were two outhouses (Ishimaru 1987:55). The U.S. Army Quartermaster Corps furnished supplies and equipment.

In July, 42 patients were transferred to a newly completed 250-bed hospital located in the northwest corner of the relocation center. The new hospital included 17 buildings: an administration building, two staff apartment buildings (one for nurses and one for doctors), seven wards, two warehouses, a mess hall, a laundry, a heating plant, and a morgue. Covered and enclosed walks with linoleum-covered wood floors connected each of the buildings. Following the construction of the hospital, an apartment building for Caucasian staff was built south of the hospital in a firebreak.

The hospital administration building housed offices, medical, dental, and optometry clinics, a pharmacy, an x-ray room, and an operating room. Ward 1 was for female patients, Ward 2 was for male patients, Ward 3 was for women's TB cases, Ward 4 was for men's TB cases, Ward 5 was used for classrooms and a laboratory, Ward 6 was for children, and Ward 7 was an isolation ward for patients with contagious diseases.

Each of the medical staff apartment buildings had its own hot water heater and shower stalls and the Caucasian staff apartment building had a bathtub. The four general wards, the isolation ward, and the mess hall also had their own hot water heaters. The laundry had bins for soiled linen, a 300-gallon-capacity hot water heater, two washers, two tumblers, two extractors, four roll-flat ironers, ironing boards, and storage shelves. The heating plant had a bathroom, two feed pumps, a 10,000-gallon-capacity surge tank, two 6,000 gallon oil storage tanks, and three 74 horsepower boilers (Fixed Asset Inventory, 11/15/45). The morgue was capable of handling four bodies at a time, but embalming was done in nearby towns.

In addition, a barracks across the street from the hospital was used as a hostel for aged and infirm ambulatory cases. The hostel, with a capacity of 34, had a men's and a women's side. Residential blocks 28, 29, 33, and 34 were under the jurisdiction of the hospital and barracks were assigned to those who needed to be close to the hospital for medical needs (*Manzanar Free Press* 6/16/42).

The first Caucasian doctor and nurses arrived in October, 1942. The hospital staff grew to include a Caucasian Chief of Staff, six evacuee doctors, 20 nurses (both evacuee and Caucasian), two x-ray technicians, five dentists, a dental technician, and an optometrist (Armor and Wright 1988: 105). The evacuee staff, which included graduates from USC, Rush Medical School, and John Hopkins, were all paid $19 a month. The Caucasian staff were paid a normal "outside" salary. One of the dentists, a Japanese American from Salt Lake City, had voluntarily come to Manzanar because he felt that Manzanar would be a safer place for his family to live (*Manzanar Free Press* 9/17/42).

The 250-bed hospital was never more than 50 percent occupied (Armor and Wright 1988:89). Health records indicate that, in spite of adverse conditions, Manzanar suffered no more sickness and disease than a comparable normal community of similar size with only a few exceptions

(Little 1945). The rates of syphilis and gonorrhea were very low, tuberculosis (TB) was relatively high as was the number of ulcers. The low rate of venereal disease was credited to the high moral standards of the Japanese Americans and the ulcers to the constant stress of everyday life at Manzanar. The high TB rate was attributed to its occurrence among elderly people with dormant cases aggravated by the forced evacuation and camp conditions (White 1945). However, recorded TB deaths included several people in their 20s. One of the most common recurring health problems was the outbreak of food poisonings at the mess halls. But, even these became less common as conditions improved (White 1945).

Figure 4.30. Monument in cemetery (Ansel Adams Photograph, Library of Congress).

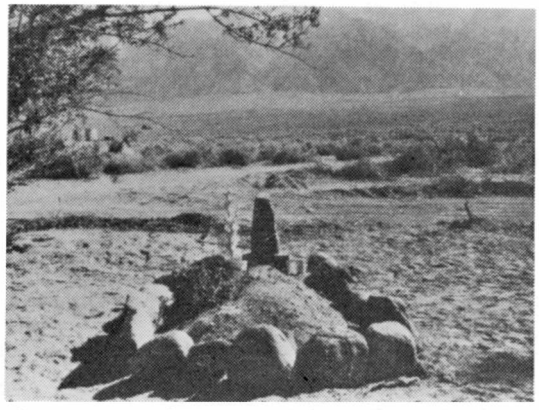


Figure 4.31. First grave, Manzanar Cemetery (from Spicer et al. 1969:206).

Cemetery

A cemetery for the relocation center was located on the western perimeter, just outside the fenced central area. A commemorative monument was built in the cemetery by 60 members of the Buddhist Young People's organization and Block 9 residents, under the supervision of Ryozo Kado. It was completed in August 1943 (Figure 4.30). WRA blueprints indicate the cemetery was subdivided into six equal-sized units each of approximately 1/2 acre. Apparently only one of these units was used.

Over 135 people died at Manzanar during operation of the relocation center. However, only 28 of these were buried in the relocation center cemetery; the others were shipped elsewhere for burial. All of the Manzanar burials were cremations. The bodies were sent to local funeral homes for cremation and returned to the relocation center for funeral services and burial. The first burial in the relocation center cemetery was on May 10, 1942 (Figure 4.31). After the relocation center closed, all but six of the burials were moved to other cemeteries and the remaining plots were fenced (Merritt, memorandum dated 1/7/46).

Religion

There were three churches at Manzanar: one Catholic, one Buddhist, and one Protestant. Catholic and Protestant congregations first met on March 29, 1942, the second Sunday after the first volunteers arrived at Manzanar. Shintoism was banned by the WRA administration, but within 3 months a Buddhist Church was in operation. The administration's attempt to discourage religions seen as too-Japanese backfired: Buddhist church attendance soared, with higher proportions of Japanese Americans attending services in the relocation centers than in the cities prior to the evacuation (Okihiro 1984). At Manzanar, Buddhist church attendance averaged 2,000 a week, nearly as many as the Protestant and Catholic churches combined (*Manzanar Free Press* 3/20/43).

Recreation

The WRA established a Recreation Department at Manzanar in the hopes of building morale. The Department sponsored athletics, entertainment, arts and crafts, libraries, boy and girl scout troops, and a nursery school (*Manzanar Free Press* 3/20/43).

Major developed areas included a picnic area and golf course at Bairs Creek, several other picnic areas, a sports complex in the firebreak between Blocks 8 and 14, and an outdoor theater (Figure 4.32). In addition, there were two football fields and several softball diamonds in other firebreaks. By the summer of 1943 a baseball diamond with a backstop, announcer's stand, and bleachers was constructed in the firebreak between Blocks 19 and 25. Nearly every residential block had its own volleyball court, a majority had basketball courts (Figure 4.33), and some had playground equipment.

The sports complex in the firebreak between Blocks 8 and 14 included three basketball courts, five volleyball courts, and four tennis courts. The basketball and tennis courts were surfaced with clay obtained from deposits along the Owens River (Nielsen and Fox 1945). Construction of the golf course was begun in August 1942 under the direction of Mrs. Kay Morimoto, a medalist and finalist in many national golf tournaments (*Manzanar Free Press* 8/17/42). The 9-hole course had narrow fairways and the greens were made of oiled sand (Nielsen and Fox 1945). Baseball was by far the most popular team sport at Manzanar. Manzanar boasted three hardball teams, 12 men's softball leagues (with over 100 teams), and three women's softball leagues (14 teams). There were also three track teams, 14 women's volleyball teams, and seven women's basketball teams. Other sports included boxing, wrestling, judo, and kendo. The judo hall, begun in June 1942 in a barracks apartment, was later relocated to its own building with showers and twice expanded (Nielsen and Fox 1945). For Kendo, a traditional Japanese martial art, a raised wooden platform 35 ft by 60 ft with a dressing room at one end was built in the spring of 1943. After the "disloyals" were segregated to Tule Lake in 1944, interest in Kendo died off.

The first outdoor theater at Manzanar was located in the southwest corner of the relocation center. Grading was completed in July (Progress Report 7/24/42) and it was officially dedicated in the fall of 1942. It had a 40 ft by 60 ft stage and benches for 2,000 people. Materials were paid for by profits from the Manzanar Cooperative. The theater was only used twice, once for its dedication and once for an address by WRA Director Dillon Myer to high school students. Most considered it too far away to be convenient and a more centrally-located temporary stage was used instead.

A second outdoor theater built was used mostly for movies sponsored by the Manzanar Cooperative. It consisted of a 20 ft by 30 ft stage set against the recreation barracks in Block 16. The stage faced towards temporary seating in an empty firebreak.

The Recreation Department also sponsored a Toy Loan Library, started to remedy a shortage of toys for young children. The toys were purchased by the residents, partly with money received as Christmas gifts in 1943 from national church groups. In the wartime economy, few types of toys were available. Most toys on the market were war toys, not particularly appealing to the evacuee children. It was impossible to get enough dolls or trains, but there were ample games and puzzles (Carter 1943).

The Bairs Creek Picnic Area was located in the southwest corner of the relocation center. When the camp boundary, as defined by the sentry patrol line, was moved south 100 yards in the spring of 1942, a stretch of Bairs Creek was incorporated within the camp area. After assurances that the creek area would remain open to the evacuees, the evacuees started construction of a picnic area. The picnic area had walkways, bridges, and open-air fireplaces, and became so

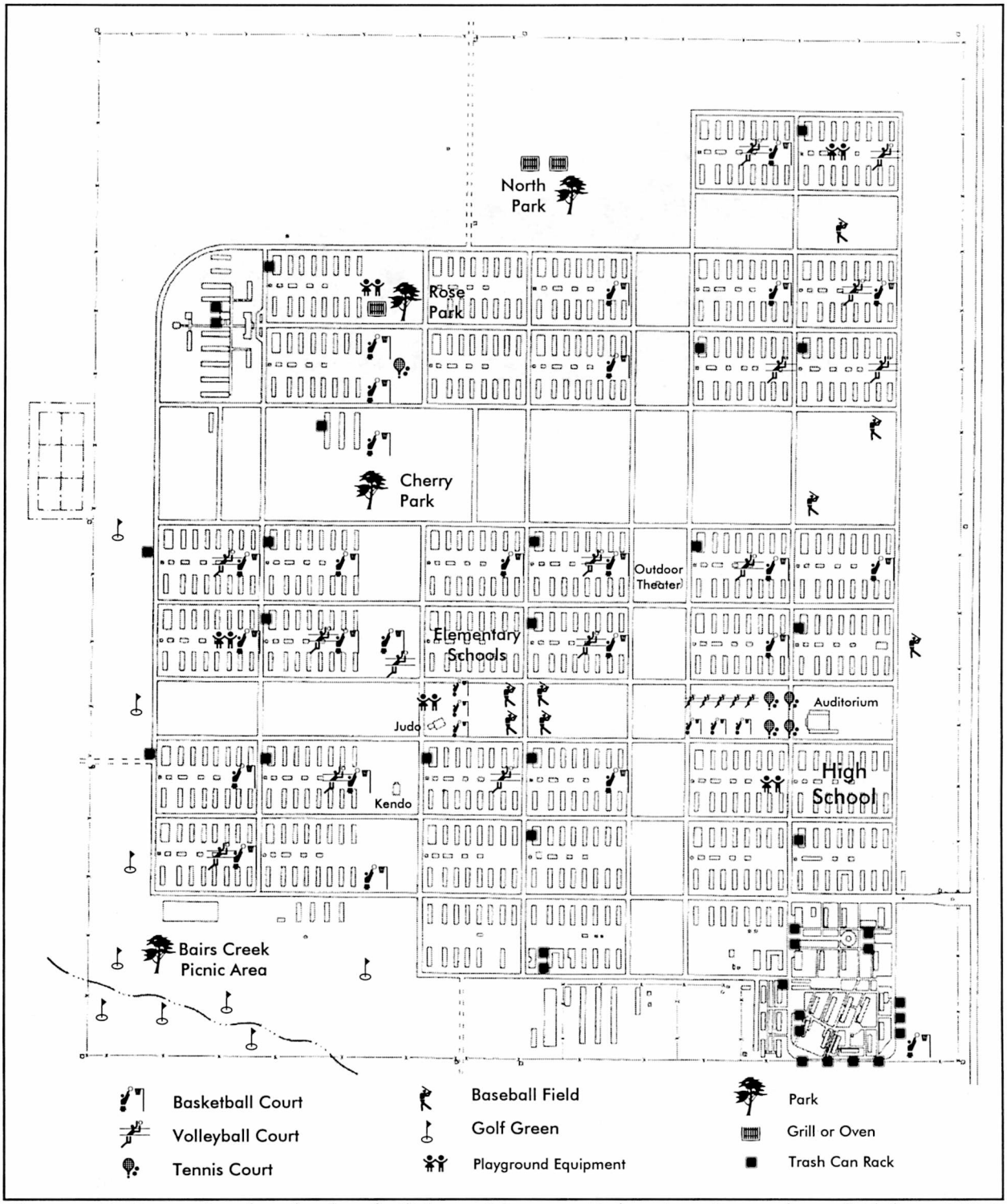


Figure 4.32. Recreational and other facilities at Manzanar Relocation Center (complied from WRA maps, Block Manager's Daily Reports, and other sources).

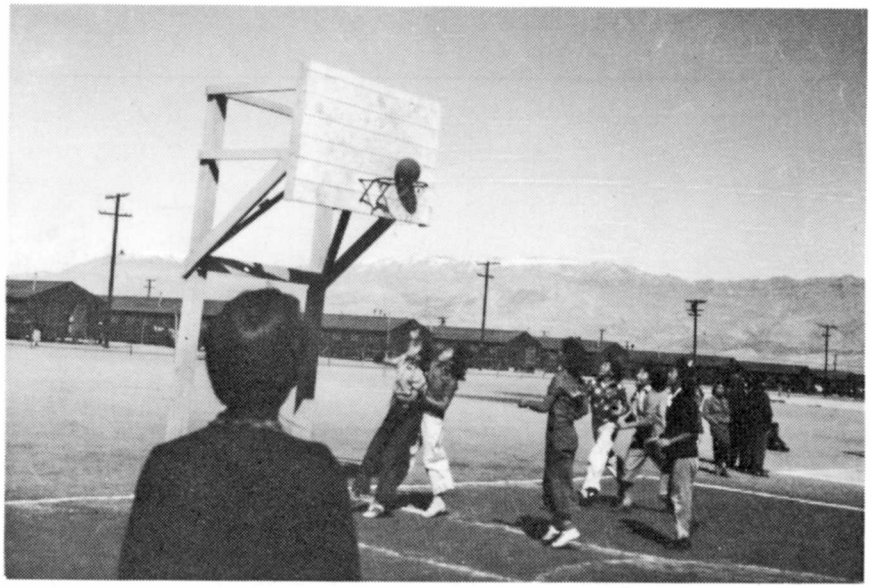


Figure 4.33. Basketball court (WRA photograph, National Archives).

popular that a permit system had to be started to limit use.

Rose Park was located in the firebreak between Blocks 33 and 23. It was begun in the fall of 1942 with domestic rose buds grafted to native root stock. Eventually, it included over 100 species of flowers, two small lakes, a waterfall, a bridge, a Japanese tea house, a dutch oven, and pine trees. Construction was under the supervision of Tak Muto. One of the lakes was reportedly located over a natural spring that was covered over when the relocation center was constructed (*Manzanar Free Press* 11/28/42). The park was renamed Pleasure Park and later Merritt Park in honor of the camp director.

Cherry Park was located south of the Children's Village. It was begun when a nursery wholesaler offered to donate 1,000 cherry and wisteria trees to Manzanar if they were used in one area as a park. Holes were dug at the park for swimming pools, but due to water shortages and LADWP concerns over contamination to the Los Angeles Aqueduct, they were instead seeded with grass.

North of the residential area, but still within the fenced relocation center boundary, North Park was located in an area where a farmhouse once stood (Nielsen and Fox 1945). Two rock fireplaces for picnics were constructed in the grove of large cottonwoods that remained from the farm.

Two parks were located outside the fenced area of the relocation center. As restrictions on the Japanese Americans were relaxed and they were allowed to leave the relocation center in the daytime, two new picnic areas were developed 1/2 mile and 1 mile south of the relocation center. Both had large trees and one was crossed by George Creek. The "South Parks" opened in early 1943 under a permit system, and were patrolled by mounted police to enforce regulations (*Manzanar Free Press* 9/10/43).

Groups were also eventually allowed to make day and overnight trips into the mountains, first only under Caucasian escort and later on their own (Houston and Houston 1973:77). It was on one of these outings that the only "unauthorized departure" from Manzanar occurred. On August 2, 1945, Giichi Natsumura (age 47) got separated from his group on a sketching and painting excursion on 11,000-ft-high Mount Williamson and died of exposure. His body was found in a sheltered area on September 3 by local residents on a fishing trip (*Manzanar Free Press* 9/8/45). The discoverers led a group of Japanese Americans back to the site a few days later so they

Figure 4.34. Evacuee mess hall (WRA photograph, National Archives).

could remove a lock of hair and some finger nail clippings for a memorial service (Mary DeDecker, personal communication, 1995).

Meals

With over 1,500 workers, the mess halls were the single largest employer at Manzanar (Levine 1995:76). An average of 26,000 meals were served each day, prepared in 34 kitchens (Merritt notes, BLM Bakersfield District files)[1]. Food was purchased through the U.S. Army Quartermaster Corps and later supplemented by produce and livestock raised on evacuee-run farms. Shortages arose early since the Army was not accustomed to supplying the needs of families, babies, and the Japanese diet (Figure 4.34).

The cost per person for meals varied from 26 to 34 cents per day (Merritt notes, BLM Bakersfield District files). Wartime rationing was strictly observed. To combat coddling charges, WRA news releases commonly reported that there were "no steaks, eggs, or butter at relocation centers" (e.g. *Fresno Bee* 1/31/43).

All of the mess halls were under the direction of a single Caucasian steward. The cooking and other functions were done by an evacuee kitchen crew under the direction of an evacuee chef. According to Spicer et al. (1969:109-111), good chefs were in great demand and some assumed dictatorial powers over their block residents: any objections were simply overcome by the chef threatening to quit.

Education

The WCCA made no provisions for schools. At first there were three serious problems facing the establishment of schools in the relocation centers: there were no buildings, no personnel, and no supplies or textbooks. The first school was begun by the evacuees themselves in the corner of a barracks (*Manzanar Free Press* 3/20/43). Later, the WRA recruited Caucasian teachers. The evacuees were only to serve as assistants, but because of teacher shortages they occasionally assumed full teacher responsibilities (Armor and Wright 1988:107-113).

[1]Three evacuee mess hall buildings were used for other functions: the Block 14 mess hall was used as a hostel, the Block 16 mess hall was used as an assembly hall, and the Block 18 mess hall was used as a Buddhist Church.

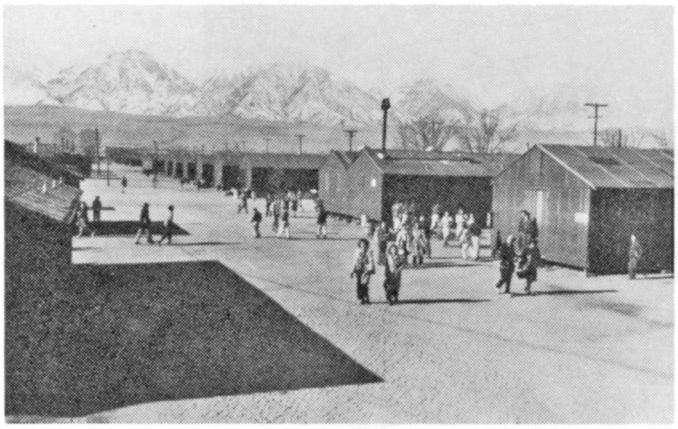


Figure 4.35. High School Recess Period (Ansel Adams Photograph, Library of Congress).

Eventually Manzanar's schools were accredited by the State of California. At its peak over 1,300 were enrolled in elementary school, over 1,400 were enrolled in high school, and over 2,000 took adult education classes. Vocational, English language, and "Americanization" classes were the most popular adult classes (Merritt notes, BLM Bakersfield District file).

The High School incorporated all of Block 7, plus the mess hall, ironing room, and barracks 15 of Block 2 (Merritt Scrapbook Jan-Aug. 1944, UCLA Special Collections; Figure 4.35). The first high school graduation was on March 7, 1943, in the Block 1 Mess Hall. Block 16 was used for elementary schools and a Community Center.

As at any typical American school, the Manzanar schools had their own youth groups, clubs, athletic program, sport teams, and cheerleaders. But, on only one occasion were the teams allowed to play another school. In October 1944 the Manzanar high school football team beat Big Pine high school team 33-0 and the junior high team won 26-0 (*Valediction* 1945) in games played at Manzanar. After the losses, the Bishop school board, afraid of community agitation, cancelled their scheduled game against Manzanar, despite protests by Bishop students (*Manzanar Free Press* 2/3/45).

By 1944 permanent placements outside the relocation center had caused enrollment to drop: 1,195 were in elementary school, 970 in high school, and 1,005 in adult education classes (Merritt notes, BLM Bakersfield District file).

Post Office and Bank

The Manzanar branch post office was established April 1, 1942 with six employees (*Manzanar Free Press* 3/20/43; Figure 4.36). On a daily basis the post office handled an average of 1,500 letters, 350 parcels, 10 registered letters, and $500 worth of money orders.

After a couple of false starts, the Bank of America opened a branch office at Manzanar in July 1942. The bank was located in Apartment 4 of Barracks 8, Block 21 (*Manzanar Free Press* 6/18/42, 7/9/42).

Figure 4.36. Manzanar Post Office (WRA photograph, National Archives).

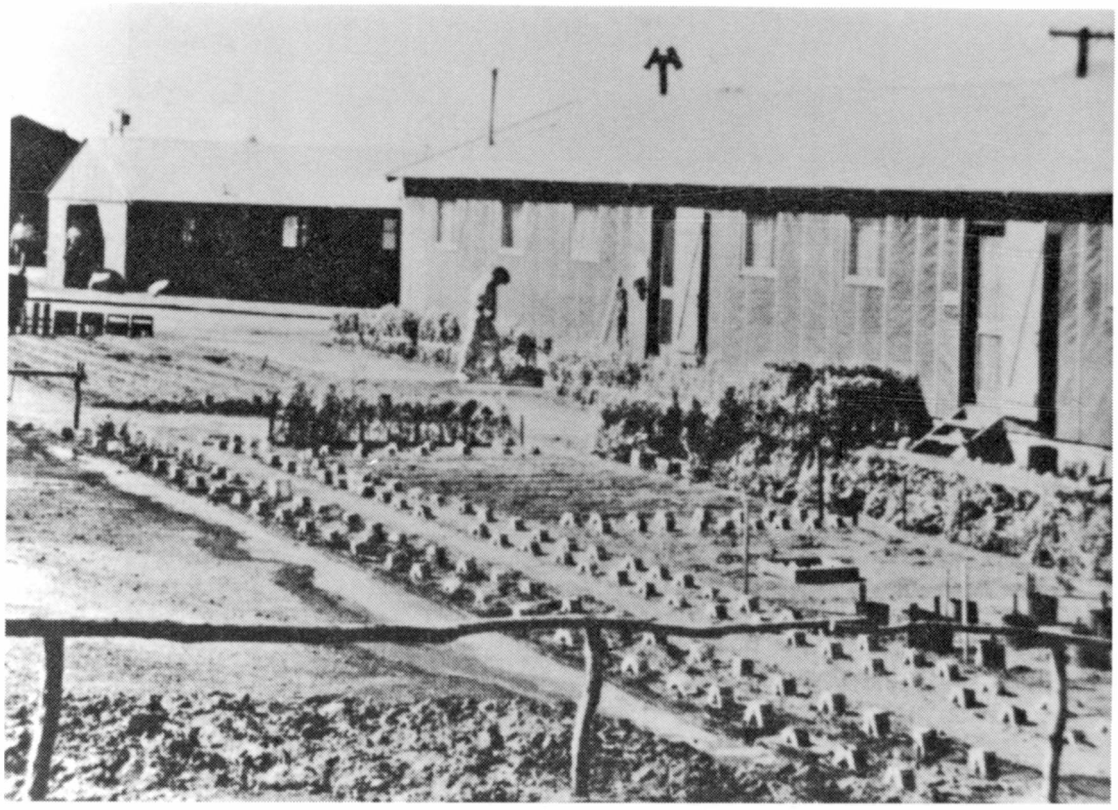


Figure 4.37. Barracks gardens and landscaping (WRA photograph, National Archives).

Victory Gardens

The August 4, 1942, issue of the *Manzanar Free Press* reported flourishing victory gardens within the relocation center. Some had been started before June 1942 (Block Manager's Daily Reports 1942). Mr. Ushijima, a resident of Block 24, had several vegetable patches in the firebreak south of Block 17 (an area noted for its black soil). Soon the firebreak was completely filled with small gardens. A dense thicket of wild rose was removed and planted elsewhere by rose expert Mr. Kuichiro Nishi who purchased cultivated roses to bud on the wild root stock. Some of the roses were left in neat rows (Nielsen and Fox 1945). The firebreak was divided off into individual plots 10 ft by 50 ft and 30 ft by 50 ft in size. Water for irrigation was obtained from a fire hydrant. Over 120 families worked these plots paying membership dues (*Manzanar Free Press* 10/25/44); six other tracts within the relocation center were worked on a community basis.

Ornamental Gardens and Landscaping

Soon after their arrival the evacuees planted trees and grass. By July over 100 lawns had been started with seeds obtained through mail order or from the WRA (Progress Report 7/23/42; Figure 4.37).

William Katuski, a former Bel Air landscaper, is credited with starting the first ornamental garden at Manzanar. His garden, in front of his home between Buildings 5 and 6 in Block 24, had four small lakes with miniature bridges and three large Joshua trees (Figure 4.38). He also planted six smaller Joshua trees off the west side of Building 5. He began in April 1942, first carrying rocks in from around the relocation center by hand and then by wheelbarrow. The Joshua trees were obtained from Death Valley, 65 miles away (*Manzanar Free Press* 6/30/42).

Joshua trees were also planted in an upraised rock-walled traffic circle constructed by the evacuees in the administration area (Figure

Figure 4.38. William Katuski's garden (Building 5, Block 24) in 1942 (WRA photograph, UCLA Special Collections).

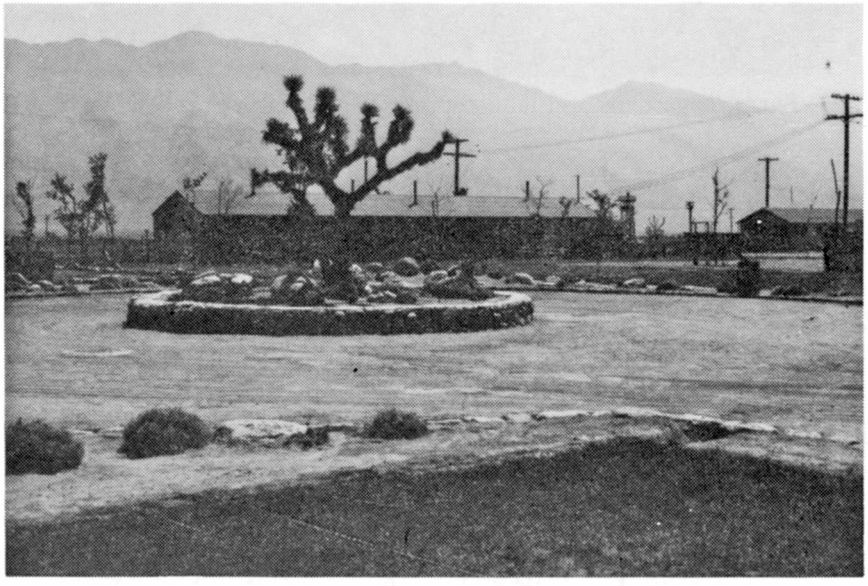


Figure 4.39. Traffic circle in administration area (WRA photograph, UCLA Special Collections).

4.39), and numerous cactus plants were planted along the entrance road. However, plans for a waterfall and pond in front of the administration building were upset — the area was needed for a new wing of the administration building instead. The partially dug pond was refilled and rock garden specialist Ryozo Kado said he would "start all over" at an approved site in the new hospital area (*Manzanar Free Press* 7/1/42). Tak Muto finished a rock garden next to his residence in Block 15 by the end of July (Block 15 Block Manager's Daily Report 7/31/42) and would later supervise the construction of one of the largest parks at the relocation center (Rose Park).

By August there were 155 lawns between barracks, a half dozen fish ponds with carp, and several rock gardens. The only lawn mower available in Lone Pine was purchased for center

Figure 4.40. Portion of Block 15 garden complex (WRA photograph, UCLA Special Collections).

use (*Manzanar Free Press* 8/5/42).

The first community or "block" pond was begun in Block 22 by Harry Ueno, a kitchen worker, who wanted to provide a pleasant setting for those standing in line at the mess hall. In July, Akira Nishi, a former nursery owner, offered to help with the design of the pond which Ueno had begun on his own. According to Ueno, he could get a permit for only three sacks of cement. Knowing this was not enough, he instructed the person picking up the cement to not turn over the permit. Eventually 23 bags of cement were acquired with the same permit to finish the pond (Emery et al. 1986:29; Titus 1983). Indeed, the Block 22 Block Manager's daily reports, which were supposed to report all supply acquisitions, lists only three sacks of cement for the month of July (Block Manager's Daily Reports July 1942). Two more sacks of cement are listed in the daily reports for August 8; it seems likely these were used to finish the pond's bridge, which is inscribed "Aug. 9, 42."

Other kitchen crews soon followed Ueno's example (Figure 4.40). On August 5, the Block 6 kitchen crew started work on a rock garden and pond between its mess hall and Building 14. Also in August, the Block 34 Block Manager reported that "The men in our block are hard at work on building a fish pond and garden in front of the mess hall. Mr. Kubota, Mr. Kayahara, and Mr. Murakomi are more or less supervising the project."

On August 12, 1942, the *Manzanar Free Press* reported:

> Fish ponds have been constructed in many blocks. One of the most beautiful is found at Block 15 ... Roy Suguwara, former gardener, and Keichiro, former flower grower, designed and constructed the pond. The Public Works Division, however, discourages the building of more ponds because of a cement shortage.

That same day the Block Manager's daily report for Block 24 noted that "Mr. Harvey Brown [of the WRA staff] mentioned 700 sacks of cement stolen by residents ... [I] can not believe this to be true, ... told him he should check incoming articles to see if correct amounts are being delivered" (Block 24 Block Manager's Daily Report 8/12/42).

Manzanar Children's Village
by Wilber Sato[2]

The Children's Village at Manzanar was established primarily because of the Army's insistence that children of Japanese ancestry not be excluded from the evacuation order even if they lived in orphanages or with Caucasian parents. Social welfare agency representatives concurred, in part, because they felt that the three Japanese American orphanages in California could not be sustained. First, they could not continue to exist because the army insisted that there would be no exemption from evacuation for the Japanese American staff. They were aware, also, that financial contributions could not continue because heads of household and community leaders were interned, bank accounts were frozen, curfew was imposed, people lost jobs and businesses suffered from all of the above reasons, as well as racial hysteria. They also felt that the children would be victims of discrimination if left behind and would also feel isolated, abandoned and estranged from the only community they had ever known.

Though this rationale may be applicable to the children in the Japanese American orphanages, it did not address the plight of children who lived with Indian tribes in Alaska or in multiracial orphanages or children receiving care by Caucasian foster parents. Indeed, the evacuation orders destroyed the support system for these children.

After several meetings, Manzanar was agreed upon as the site of the Children's Village, and on April 26, 1942, a meeting was held at Manzanar to finalize plans. The barracks provided for the evacuees were deemed unsuitable for young children: floors were rough, and there was no insulation or plumbing. Therefore, for the Children's Village, three new one-story buildings with running water, baths, and toilets were constructed.

One building contained an office, superintendent's apartment, a recreation room, a kitchen, and a dining room (Figure 4.41). Another was divided into three wards: a nursery, a small children's dormitory, and a girl's dormitory. The third building was also partitioned to form three sections: a dormitory for small boys, another for older boys, and a storeroom. Each dormitory also contained a small area furnished with a table and chairs to provide some relief for the older children from the noise and bustle of the younger children.

The Children's Village buildings were completed in June 1942 and the children were brought by bus from the Los Angeles Maryknoll Home, the Japanese American Children's Home, and from other orphanages and foster homes on June 23. The children from the San Francisco Salvation Army Home followed a week later. The first contingent consisted of 61 children, but 101 children would eventually be housed at the Children's Village .

The effect of the incarceration in a prison camp, the lack of a parental support system, and the effect of the institutionalization, isolation, alienation, insecurity and stress on the lives of these children are unknown. One story is related in H. E. Whitney's 1947 University of California master's thesis, *Care of Homeless Children of Japanese Ancestry.* She tells the story of a child raised by Caucasian foster parents since early infancy. The child was ordered to Manzanar in June, 1942, when he was six years old. The family made every effort to have the child returned but were refused. Finally, after the December 1944 Supreme Court decision in Endo, declaring that the War Relocation Authority had no right to detain or restrain the movement of loyal citizens, the boy was returned to his foster parents in August, 1945. The Army's refusal now seems cruel or at the very least insensitive, since the Army had the power to grant exemptions from the exclusionary orders.

[2]Wilber Sato is a former Manzanar internee.

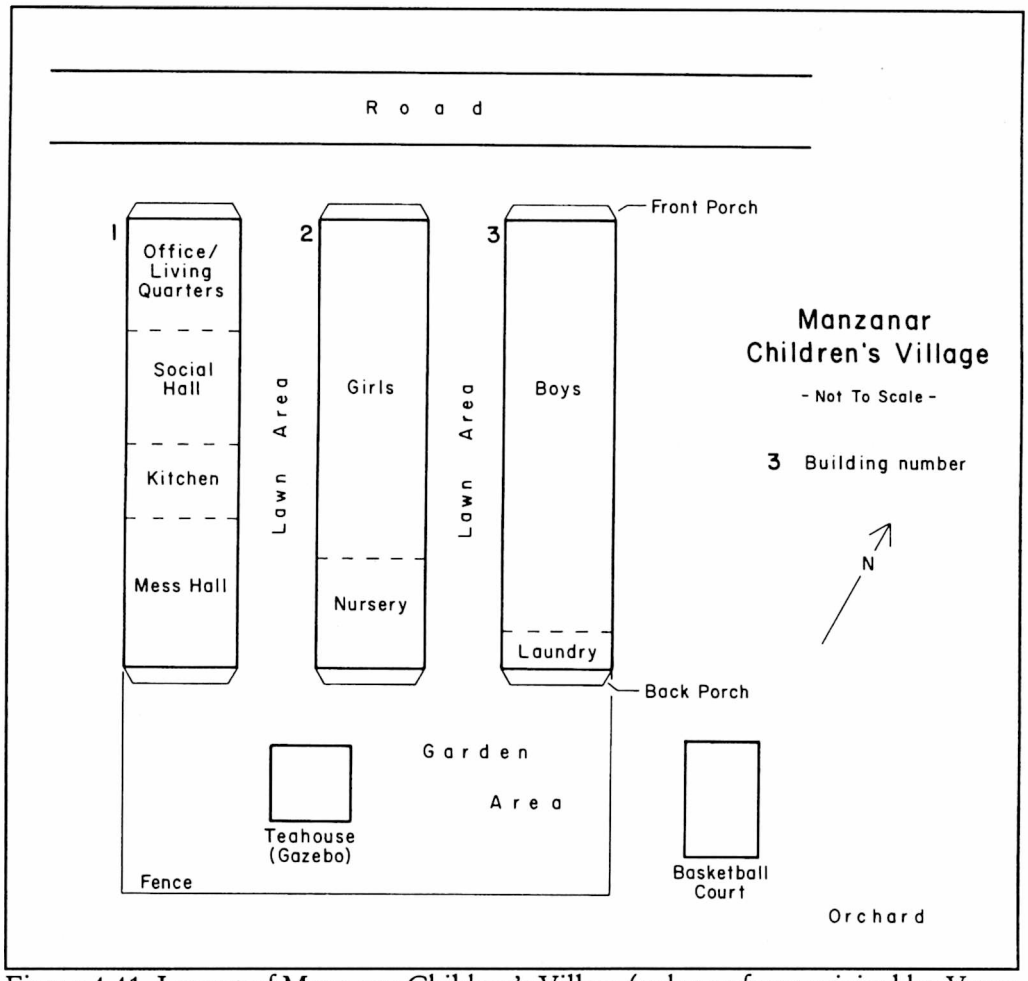


Figure 4.41. Layout of Manzanar Children's Village (redrawn from original by Vance Nobe, California State University, Fullerton, 2/27/93).

We now know that many exemptions were granted for people in sanatoria and hospitals. Their fate and their stories have only recently come to light in poignant memoirs. WRA statistics revealed in H. E. Whitney's study indicate that 209 "homeless or otherwise" children were left behind in sanatoria, mental hospitals, penal institutions, general hospitals and orphanages. Whitney comments, "It is unfortunate that we cannot know more of these children who were not sent to Children's Village, but a study of those who did enter that institution may give us a fairly complete picture of the background and future of many."

In this regard, it is instructive to note that of the 101 children, disposition at or before closing of the Village was as follows: 48 were returned to parents or relatives; 17 were relocated or placed in wage homes; four were adopted; four were placed in hospitals; 26 were returned to counties of origin for further disposition; and two were placed directly in foster homes. The children originally came from Alaska, Washington, Oregon and California, but were dispersed to the following states: California, Oregon, Alaska, Colorado, Idaho, Illinois, Michigan, Nebraska, Nevada, New Hampshire, Utah and Wisconsin. It is well known that the WRA wanted to scatter Japanese Americans to solve the racial problems of the country. But this policy also meant the demise of culture and community, and promoted

isolation, and the loss of pride and self-respect. It is not known whether this program of dispersal was operative in the placement of children of the Children's Village, nor do we know the effect of the dispersal on individual children.

To provide for the nurturing and protection of its children is one of the most important responsibilities of any society. The military and the WRA ordered homeless children into the Manzanar Children's Village, transported them hundreds of miles, provided medical treatment, housing, food, clothing, supervision, custody in the penal sense, and in many cases acted as adoption agency. All of these acts were done without consultation or permission from the child's parent or guardian. Indeed, many of the children had no guardian appointed to protect their rights or interests. In the cases where children were wards of the Juvenile Courts, the geographic distance prevented the exercise of protective rights.

Although it was the general belief of the welfare community that the children were the wards of the federal government, the WRA's attitude was reflected in their official policy that denied any legal responsibility for the children. The WRA declared that it acted only as a boarding home for the children. It is understandable, then, that the WRA was negligent in locating and reuniting surviving parents with their children; that they kept inadequate records; failed to provide the case work counseling for the protection of the children and that all of these circumstances contributed to inordinate costs and delays in placing the children.

Of the 101 children who passed through the Children's Village, half were orphans. Fifty percent were under seven years of age. Twenty-nine percent were under four years of age. There were 54 boys and 46 girls and one child of undetermined sex because of inadequate records. Fourteen children were of mixed race. Peak population of the Children's Village was 67 in July of 1943. Forty-three children were discharged in June, July, and August 1945, at the time of the closure of the Children's Village. The Children's Village was in existence for 39 months and many of the children suffered institutionalization not only for that period but for much of their childhoods.

Manzanar Cooperative Enterprise, Inc.

Basic supplies needed for daily living, from toothbrushes and razors to shoestrings and thread, were not supplied by the administration. By the end of March 1942, the WCCA opened a small store with a very limited stock. Several Nisei, who had been successful merchants before the evacuation, formed the Manzanar Cooperative. Every adult could join, at a cost of a $5.00 contribution toward the working capital of the coop. From these humble beginnings, by the summer of 1944 the coop had grown to a $1-million-per-year enterprise (Armor and Wright 1988:100; Figure 4.42).

The first coop enterprise was a canteen and general store that replaced the WCCA-run store. In May grocery and household items were moved to a general store in Block 21. A fish market was established, since the mess halls did not serve enough fish to satisfy Japanese American tastes. Originally the fish, with a high mark up due to spoilage during shipment to Manzanar, was sold in the canteen. Fish sales were moved to a nearby laundry room because of the smell.

Eventually, the coop also ran two gift shops, a beauty parlor, a barber shop, a dressmaking shop, a shoe repair shop, a watch repair shop, a mail order counter, a sporting goods store, and a laundry (Wenter and Fox 1945). Flowers were in such high demand that a flower shop was started. Since cut flowers were not available for sale, artificial flowers (chiefly paper) were sold and even rented. A photography studio operated from April 1943 to September 1945. The coop also sponsored outdoor movies

paid for out of the general operating fund. All coop business paid rent to the government for use of government buildings (Armor and Wright 1988:97-101).

Management of the *Manzanar Free Press*, a newspaper written and edited by the evacuees, was also assumed by the coop. The newspaper office was housed in Building 1 of Block 1, the first building constructed at the relocation center. Begun by a group of ex-newspapermen (Armor and Wright 1988:121), the newspaper's first issue consisted of four mimeographed pages published on April 11, 1942. By July, the newspaper was printed and distributed three times a week. The printing, done by Chalfant Press in Lone Pine, was paid for by national advertising (*Inyo Independent* 7/24/42). Originally only in English, after the second year the WRA allowed a mimeographed Japanese-language insert. The administration had the power to censor, but very little censorship was needed (Armor and Wright 1988:133).

Agriculture

Agricultural endeavors at Manzanar included both farming and animal husbandry. It was the WRA's policy that each relocation center be as self-sufficient as possible, producing and storing its own food. Non-food crops were also raised, including medicinal herbs that were in short supply because of the war, and guayule, the first crop planted.

Guayule Project

Some Manzanar evacuees conducted experiments on extracting rubber, needed for the war effort, from guayule (*Parthenium argentiatum*), a small woody shrub native to the southwestern United States. The project was supported by the California Institute of Technology.

In early April 1942, waste cuttings and seedlings arrived from Salinas nurseries (*Manzanar Free Press* 3/20/43; *Time* 5/18/42). A 104-ft-by-280-ft lath house and propagating beds were built in the southwest corner of the relocation center adjacent to Block 6. A laboratory was set up in the Block 6 ironing room, and the guayule project office was established in the Block 35 ironing room. Field plots were located in various areas.

The project was under the direction of Dr. Kenzie Nozaki, with Walter Watanabe in charge of nursery propagation, and Masuo Kudani, geneticist, in charge of breeding and flower biology. Chemist Shinpei Nishimura developed the method of extracting the rubber (Nomura 1979). However, these efforts were eclipsed by other technology, as synthetic rubber produced from petroleum soon became readily available.

Farming

On April 15, 1942, the first evacuee crew was sent outside the relocation center to clear brush for farming. A 120-acre field south of the relocation center was cleared, eight miles of old ditch were reconditioned, two miles of new canal were dug, and on May 16 planting was begun, with over 20 varieties of crops grown the first season (Figures 4.43 and 4.44). Twelve mules that understood only commands in Japanese were brought in to work the fields (*Manzanar Free Press* 6/6/42). However, with only one plow available the evacuees had to work in three shifts (Armor and Wright 1988: 92) until a tractor could be rented.

The farm field was soon overrun with jackrabbits destroying beans, radishes, and other vegetables. Two rabbit drives were conducted over the summer. Over 1,000 residents participated in the first rabbit drive, killing 250 rabbits (Progress Report 7/21/42). In addition, several hundred more rabbits were shot over the summer (Quarterly Progress Report 9/30/42). The rabbit problem was finally solved with the purchase of five greyhounds and afghans.

In June, 100 agricultural workers quit because of the requirement that they be escorted by

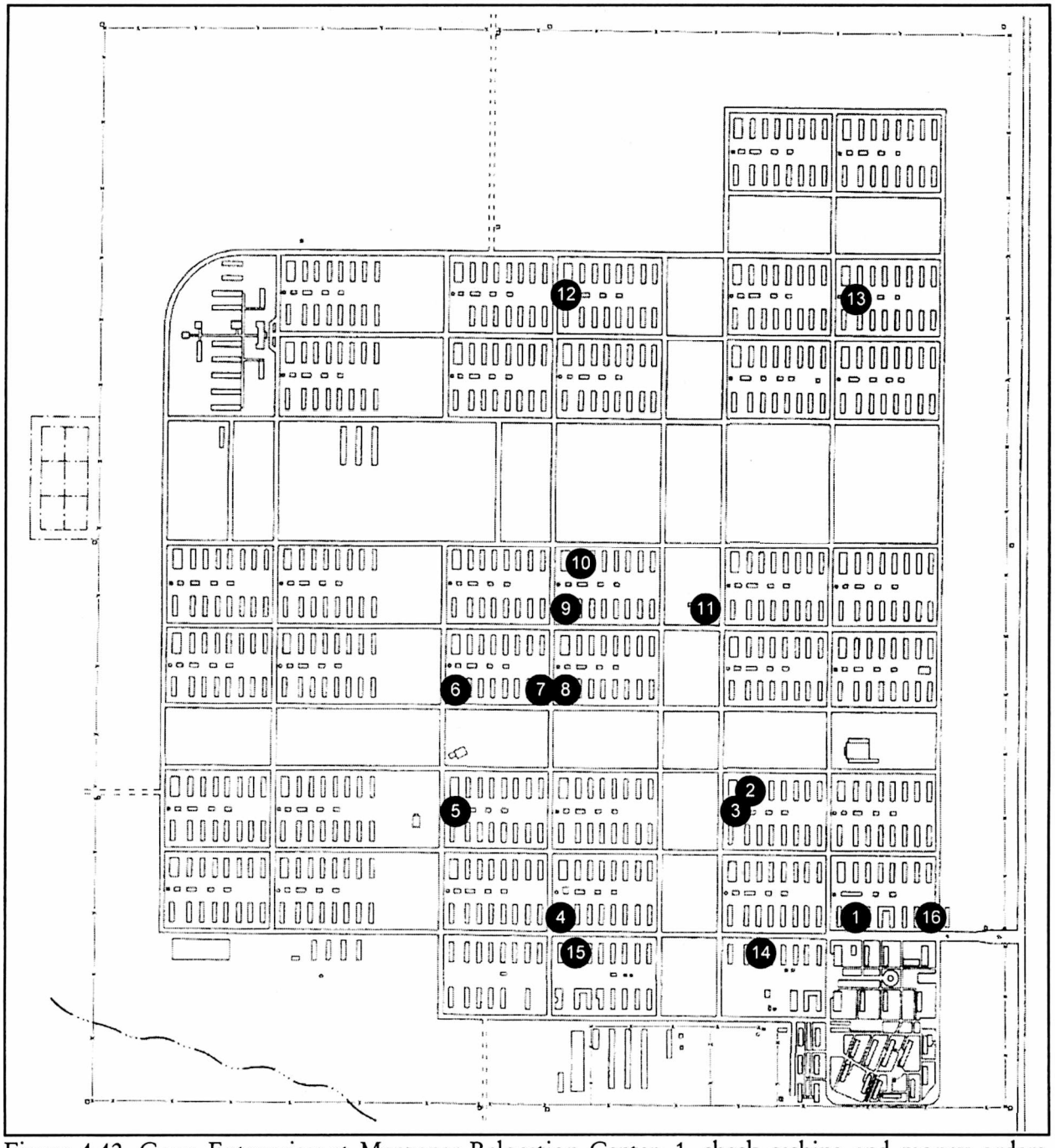


Figure 4.42. Coop Enterprises at Manzanar Relocation Center; 1. check cashing and money orders, 2. canteen, 3. fish market, 4. gift shop, 5. watch repair, laundry, mail order, 6. gift shop, 7. flower shop and sporting goods store, 8. beauty parlor, 9. barber shop, 10. general store, 11. outdoor movies, 12. dressmaking shop, 13. photography studio, 14-15. warehouses, 16. Manzanar Free Press (complied from Wenter and Fox 1945).

Caucasian supervisiry escorts, whom they considered unqualified and a waste of money. The administration soon approved farm work outside the relocation center without escort, and in the fall replaced the Caucasian foremen with evacuee foremen.

Over 700 tons of vegetables, with an estimated value of $43,500.00, were harvested the first year (*Manzanar Free Press* 3/20/43; Table 4.3). In addition, 600 apple and 400 pear trees, previously neglected, yielded $2,000 worth of fruit (Second Quarterly Report 9/30/42; Figure 4.45). All produce was consumed at the relocation center except for three carloads of Swiss chard and two carloads of watermelons sent to other centers. The surplus watermelons were traded to the Tule Lake Relocation center for cabbage, turnips, and spinach (*Manzanar Free Press* 9/17/42).

In 1943 the WRA initiated condemnation procedures, and the court set water rates favorable enough to expand irrigation farming. An additional 170 acres south of the relocation center and 150 acres to the north were cleared for farming, and a new system of lined ditches and pipelines was constructed (Progress Report 4/30/43; Figures 4.46 and 4.47). Dams were built on Shepherd and George Creeks and two bridges were built on a farm road over the North and South Fork of Shepherd Creek (McConnell and Hill 1946).

Wells were needed to supplement runoff, because the snowpack melted too fast. For example, only half of the water needed for the north 150 acres was available as runoff (Progress Report 9/30/43). Three LADWP wells were used for irrigation, Numbers 76, 92, and 95. Another well (Number 99) was also prepared for use but could not be employed due to a cracked casing.

During the course of the farming operation over 30 crops were grown (Merritt notes, BLM Bakersfield District files). Vegetables and grains included bell pepper, chili pepper, hot chili, tomato, cucumber, winter squash, egg plant, turnip, *gobo*, onion, carrot, Chinese daikon, radish, *takana*, potato, sweet potato, Swiss chard, cabbage, spinach, lettuce, watermelon, cantaloupe, honeydew melon, corn, *goma* (sesame), soy bean, green bean, and mungo bean (Figure 4.48). The least successful included mungo bean, soy bean, and head lettuce; the low humidity of the Owens Valley was blamed for the poor production (Project Report November 1943).

In addition to the guayule rubber project, several other plants were cultivated to help offset war-related shortages. Under the auspices of the State of California Drug and Oil Plant Project 50,000 pyrethrum plants (used in insecticides), and modest amounts of coriander, lavender, camphor, thyme, coriander, and guar were grown (Merritt 1946).

No crops were planted in 1945, and most major equipment was turned over to Property Control on April 7, 1945 (McConnell and Hill 1946). The final inventories recorded four track-laying tractors and 20 wheeled tractors (all second hand), and 22 miles of lined ditches and pipelines constructed (Engineering Folder memo 2/17/44; Figures 4.49 and 4.50). Because many of the improvements were constructed of cheap wartime materials that required a lot of maintenance, it was suggested that the irrigation system would be of little or no value within three years (Manzanar Fixed Assets Inventory 11/15/45).

Table 4.3.
Manzanar Relocation Center Farm Production.

	1942	1943	1944
acres planted	120	440	310
tons produced	717	1,666	1,490
used at Manzanar	89%	95%	94%

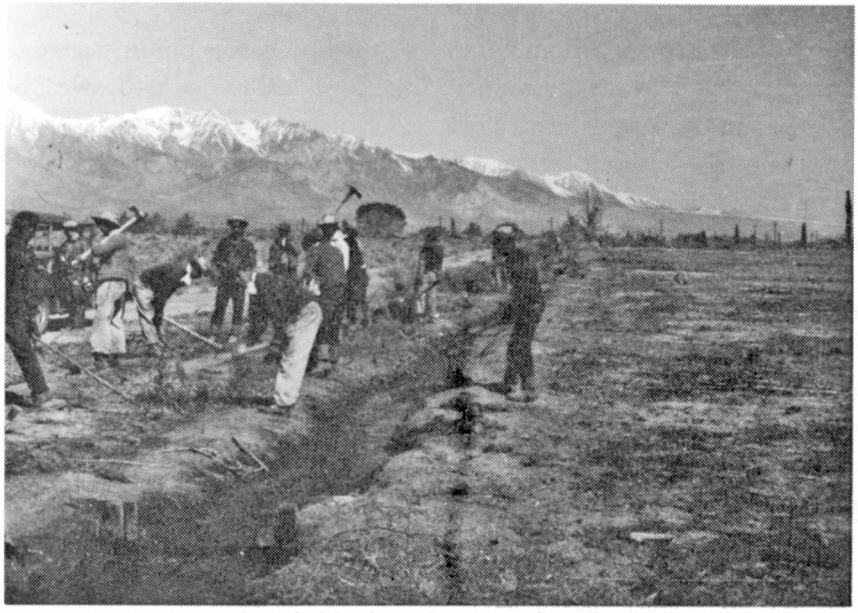


Figure 4.43. Preparing fields for planting (WRA photograph, UCLA Special Collections).

Figure 4.44. South farm field (WRA photograph, UCLA Special Collections).

Chicken Ranch

The evacuee-constructed Chicken Ranch was begun August 8, 1943, and completed December 31, 1943. Records indicate there were between 20 to 28 men on the Chicken Ranch payroll (McConnell and Hill 1946). Structures at the Chicken Ranch included a combination office, egg and feed storage, and slaughter house (with a butane-fired scalding kettle), 48 hen houses, 16 brooder houses, and an incinerator.

Each brooder house had a kerosene-burning heater which could accommodate 500 hatchlings. Each hen house, 20 ft by 24 ft in size with a 20 ft by 24 ft outside "run," held 175 birds. The concrete foundations of these buildings projected 6 inches above the floor at the walls for flood protection.

Figure 4.45. Warning sign in orchard (WRA photograph, UCLA Special Collections).

In August 1943, 12,000 unsexed day-old chicks were purchased to stock the Chicken Ranch. Half of the feed needed was acquired from other relocation centers. The first harvest (2,077 chickens) was served for New Year's Dinner. In April 8,000 more chicks were bought and by June 5,000 more chickens had been eaten (*Manzanar Free Press* Dec 22, 1944 (McConnell and Hill 1946; Table 4.4). In anticipation of the relocation center's closing, all meat birds were slaughtered by the end of 1944; layers were kept until November 1945.

Hog Farm

Clearance from LADWP for a hog farm was obtained on August 31, 1943 and construction began the next day (*Manzanar Free Press* 9/4/43). LADWP had been concerned that the daily washing of the hog pens would contaminate the aqueduct, so the hog farm was located 1 mile south of the relocation center in an area approved by LADWP. The farm was to be solely a feeder project, with no breeding allowed due to LADWP opposition.

Six pens, with concrete floors on one side for feeding, were finished December 10, 1943, but the entire project was not completed until April 30, 1944. Farrowing pens and houses were built as a unit with a capacity of 500 hogs. Eventually, there was also a 20 ft by 80 ft feed storage building with a concrete floor and 6-inch-high curb. Water for the hog farm was piped in from George Creek.

In October the first hogs, purchased from Gardnerville, Nevada, arrived (*Manzanar Free Press* 10/23/43; Progress Report 7/30/43). The hogs were fed the relocation center's edible garbage, which previously had been sold to a local hog farmer under a 60-day contract (Progress Report 1/30/43). Over 2,000 hogs were raised over the course of the project (Table 4.5). Hogs left at the close of the relocation center were sold to local farmers in November 1945.

Table 4.4.
Relocation Center Chicken and Egg Production.

	Number of Eggs	Number Slaughtered
1943	unknown	2,077
1944	53,420	6,881
1945	60,435	0

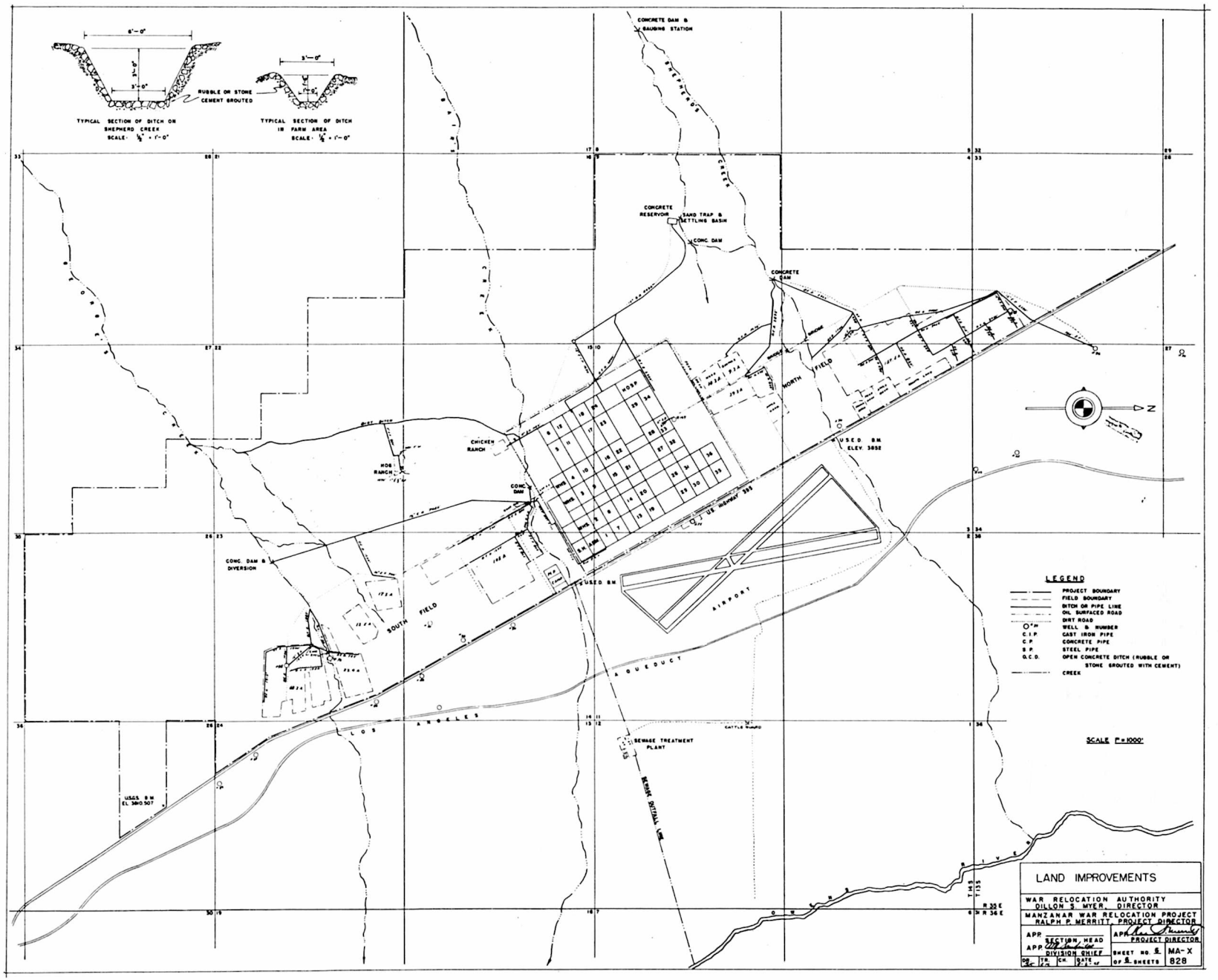


Figure 4.46. Land improvements (National Archives, Cartographic Division).

Figure 4.47. 1944 aerial photograph of Manzanar Relocation Center showing farm fields north and south of the relocation center (north to top; courtesy of LADWP Bishop Office)

Cattle Ranch

In December 1943, 199 cows were purchased to start a meat herd; no dairying was attempted. Ninety-five more cows were purchased in March, and in 1944 76 calves were raised. The cattle grazing area was located along George Creek. The high cost of feed prohibited maintaining the herd in peak slaughtering condition, so the entire project was disbanded in December 1944 (McConnell and Hill 1946).

Figure 4.48. Potato field (Ansel Adams Photograph, Library of Congress).

Figure 4.49. Benji Iguchi, on tractor in field (Ansel Adams Photograph, Library of Congress).

Table 4.5.
Relocation Center Hog Production.

Year	Number Purchased	Number Slaughtered
1943	300	0
1944	1,484	1,217
1945	536	849
totals	2,320	2,066

Industry

The primary work at Manzanar was to be industrial rather than agricultural. However, complaints from labor unions over unfair competition (e.g. *LA Times* 8/13/43) soon forced the WRA to limit industrial production to items slated for internal use. Given the wages paid the evacuees, it is no wonder labor unions feared unfair competition: $12 per month for unskilled labor, $16 a month for skilled labor, and $19 a month for professional and administrative work.

The chief industrial projects at Manzanar included a garment factory, a mattress factory, a food processing unit, and a short-lived camouflage net factory. Other smaller-scale industries included a furniture shop, an alterations shop, a typewriter repair shop, a sign shop, and a domestic sewing machine repair shop. In 1943 alone, industry at Manzanar produced goods that, if purchased wholesale, would have cost $166,276.00 (Merritt notes, BLM Bakersfield District files). The Industrial Unit was disbanded in the summer of 1944 due to personnel shortages caused by the rapid rate of departures (Sandridge and Sisler 1946b).

Garment Factory

The garment factory was the first industrial project to get underway at Manzanar. Started on May 23, 1942, in the Block 2 ironing room by 10 women with a borrowed portable sewing machine, the garment factory was to make clothing needed at Manzanar and other relocation centers (*Manzanar Free Press* 11/10/43).

By January 1943, the garment factory was relocated to Warehouses 30 and 31, and 38 industrial machines replaced borrowed domestic machines (*Manzanar Free Press* 3/20/43). Eventually the garment factory employed an average of 65 people. Chief products were work clothes, hospital uniforms, aprons, towels, dust masks, shirts, pants, blouses, and coats. Over the course of its operation the garment factory produced over 52,000 items (Figure 4.51). The clothing was issued through the relocation center or sold through the Manzanar coop; some items were sent to the Topaz and Tule Lake relocation centers (Progress Report 7/30/43; Semi-Annual Report 12/31/44).

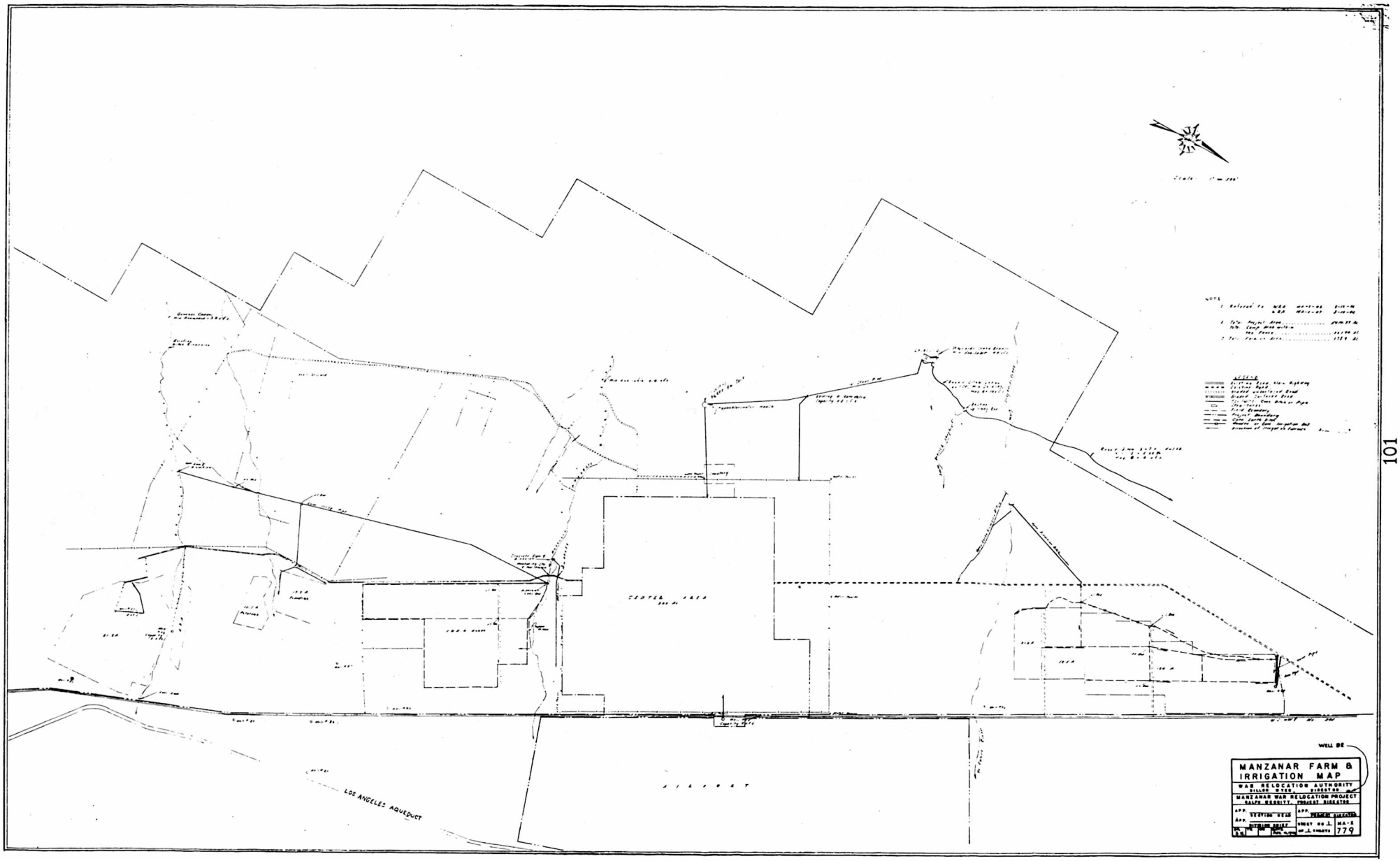


Figure 4.50. Manzanar farm and irrigation map (National Archives, Cartographic Division).

Figure 4.51. Garment worker Mary Nagao, former Los Angeles housewife (National Archives).

Figure 4.52. Making camouflage nets (WRA photograph, National Archives).

Camouflage Net Factory

The Camouflage Net Factory was run by the Southern California Glass Company under contract with the U.S. Army Corps of Engineers. The Army chose to run the net factory under private contract to circumvent the low wages that were required in WRA-sponsored work. Since net production was considered essential war work, higher salaries (but still lower than comparable "outside" wages) were deemed necessary to insure production. Even so, the managing company made exorbitant profits, a fact the embarrassed company attributed to the military (Russell 1993:70-73).

The camouflage net factory included three 300 ft by 24 ft by 18 ft tall buildings for net garnishing (Figure 4.52), a 24 ft by 100 ft enclosed shed with an attached 60 ft by 100 ft open shed for net cutting, and a 150 ft by 24 ft shed for

storage. Two of the net garnishing buildings had 12 ft by 20 ft additions. Net production began in June 1942 (*Manzanar Free Press* 6/11/42). The factory employed up to 1,000 evacuees and produced 2,000 to 10,000 nets a month (Armor and Wright 1988:117). Only U.S. citizens could be hired for this war-related work.

The net factory was a major source of conflict within the relocation center, because of the wage discrepancy and the hiring discrimination against non-citizens, and because many thought such direct support of the war effort was inappropriate for those adversely affected by wartime hysteria. The conflict was one of the contributing factors in the December 1942 Manzanar Riot, after which the net factory was permanently closed (Third Quarterly Report 12/31/42).

Mattress Factory

The easternmost building of the camouflage net factory complex (the 24 ft by 150 ft storage shed) was remodeled by the WRA for use as a mattress factory. The factory was destroyed by a fire in 1943 (P. Merritt, Jr., personal communication, 1993). During its operation the factory employed a crew of 19, and produced 4,020 mattresses (Sandridge and Sisler 1946b).

Food Processing Unit

The food processing unit, which made all of the Japanese food consumed at Manzanar, included a *shōyu* factory, a bean spout plant, a tofu plant, a food storage and dehydration unit, a pickling plant, a *miso* factory, and an apiary.

The *shōyu* factory was set up in the Block 1 laundry and ironing rooms, and was ready for production by mid-October 1942 (*Manzanar Free Press* 10/15/42). An addition was built to connect the two buildings, and the women's bathroom was converted to a laundry (half of Block 1 was offices and the other half was mostly occupied by single men) (*Manzanar Free Press* 9/21/42). Between 2,000 and 5,000 gallons of soy sauce was produced a month (*Manzanar Free Press* 3/20/43).

The bean sprout plant, begun in late October 1942, produced 1,600 pounds a week (Quarterly Report 12/31/42). The tofu plant was started in March 1943 to help alleviate the shortage of meat. The first tofu was served in the mess halls on August 12 (Block 30 Block Manager's Daily Report 8/12/43).

In 1943 the vegetable storage and dehydration unit dehydrated 25 tons of vegetables and stored 386 tons for winter use. The pickling plant pickled 54 tons in 1943.

Only by chance, did the food processing unit include an apiary. In the fall of 1942 a swarm of wild bees was caught by an ex-beekeeper. The beekeeper was then added to the food processing unit, with pay. In February, 25 hives were set out (*Manzanar Free Press* 11/10/43). These grew to 50 hives. The first harvest yielded 170 gallons of honey, which was distributed to the mess halls.

Closing Manzanar

With the lifting of the West Coast exclusion order in December 1944, the evacuees began to leave Manzanar in large numbers. The WRA scheduled Manzanar to close by the end of November 1945, by which time all evacuees would be forced to leave. The Industrial Division had already been disbanded due to a lack of personnel no crops were planted after January 1, and the relocation center newspaper was down to five staff members.

The Children's Village was scheduled to close by the end of the 1944-1945 school year. The children's case histories were forwarded to State Welfare Departments on the west coast, who then assumed responsibility for their placement. The Nisei couple who had run the

Figure 4.53. Abandoned barracks at Manzanar Relocation Center (courtesy of *Los Angeles Times*).

village for most of the internment had already left for New York in the fall of 1944 (Semi-Annual Report 6/30/45).

Mess Halls 5 and 30 were closed in May (*Manzanar Free Press* 5/9/45), Building 15 in Block 35 was torn down for use as crating (Manzanar Free Press 7/21/45), and the Coop was set to close by September 15 (*Manzanar Free Press* 8/11/45). The barracks were evacuated block by block, according to a closure schedule drawn up by the relocation center administration. People in blocks scheduled for closing who did not leave the relocation center by the designated time were moved to other blocks. Blocks 35 and 36 were closed August 18, Blocks 31 and 26 were closed August 25, and Blocks 33 and 28 were closed September 1 (Manzanar Free Press 7/18/45, 7/25/45, 8/1/45). By mid October, with the closure of Blocks 25 and 30, only 1,926 people were left in the relocation center (Figure 4.53).

On October 19, the last issue of the *Manzanar Free Press,* now only an 8½-inch-by-11-inch mimeographed sheet, reported that five bus loads of Terminal Islanders (251 people) were departing for Long Beach. Some residents, rather than take the WRA-provided bus to Los Angeles, purchased cars in Lone Pine for the journey home (Houston and Houston 1973:108-109).

Manzanar was the sixth relocation center to close. On November 21, nine days ahead of schedule, the last evacuee left Manzanar. The *San Francisco Chronicle* (11/22/45) marked the occasion with an article reporting that Manzanar closed yesterday "marking the rehabilitation of 8,065 persons who spent the war years there." On June 28, 1946, Manzanar's records were transferred to federal depositories and the General Land Office was made the designated agency for the disposal of Manzanar.

From the beginning, the Manzanar staff and some of the evacuees were hopeful that permanent buildings could be erected and the facility converted to a veterans' hospital after the war. This, it was thought, would "prevent this boom town from falling into the decay of another ghost town when it is all over" (Baxter 1942). The *Manzanar Free Press* (7/1/44, 8/16/44) championed the drive to convert Manzanar to a

Figure 4.54. Relocation Center Auditorium, ca. 1945 (Toyo Miyatake photograph©, courtesy of Archie Miyatake).

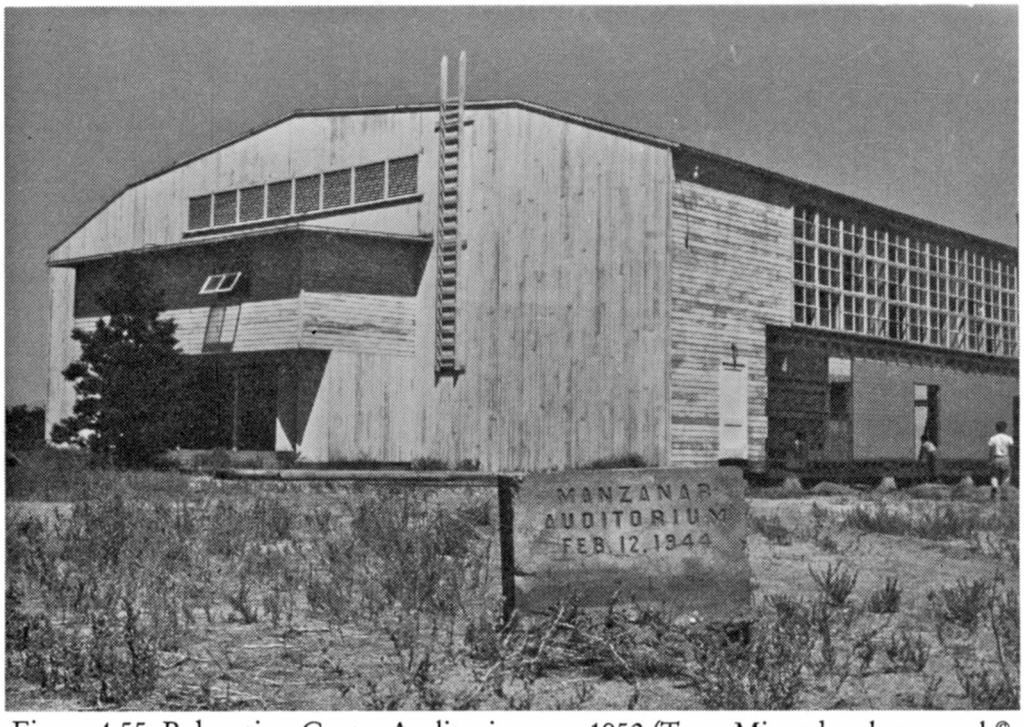


Figure 4.55. Relocation Center Auditorium, ca. 1952 (Toyo Miyatake photograph©, courtesy of Archie Miyatake).

veterans' rehabilitation center, and the idea was supported by Mount Whitney VFW Post 265.

The Veterans Administration had indicated it would consider the idea in the near future.

An editorial in the *Owens Valley Progress Citizen* (11/9/45) recommended Manzanar be used to alleviate the valley's housing shortage, and noted that the area could well use the hospital. The Los Angeles County Board of Supervisors proposed that the State of California buy the relocation

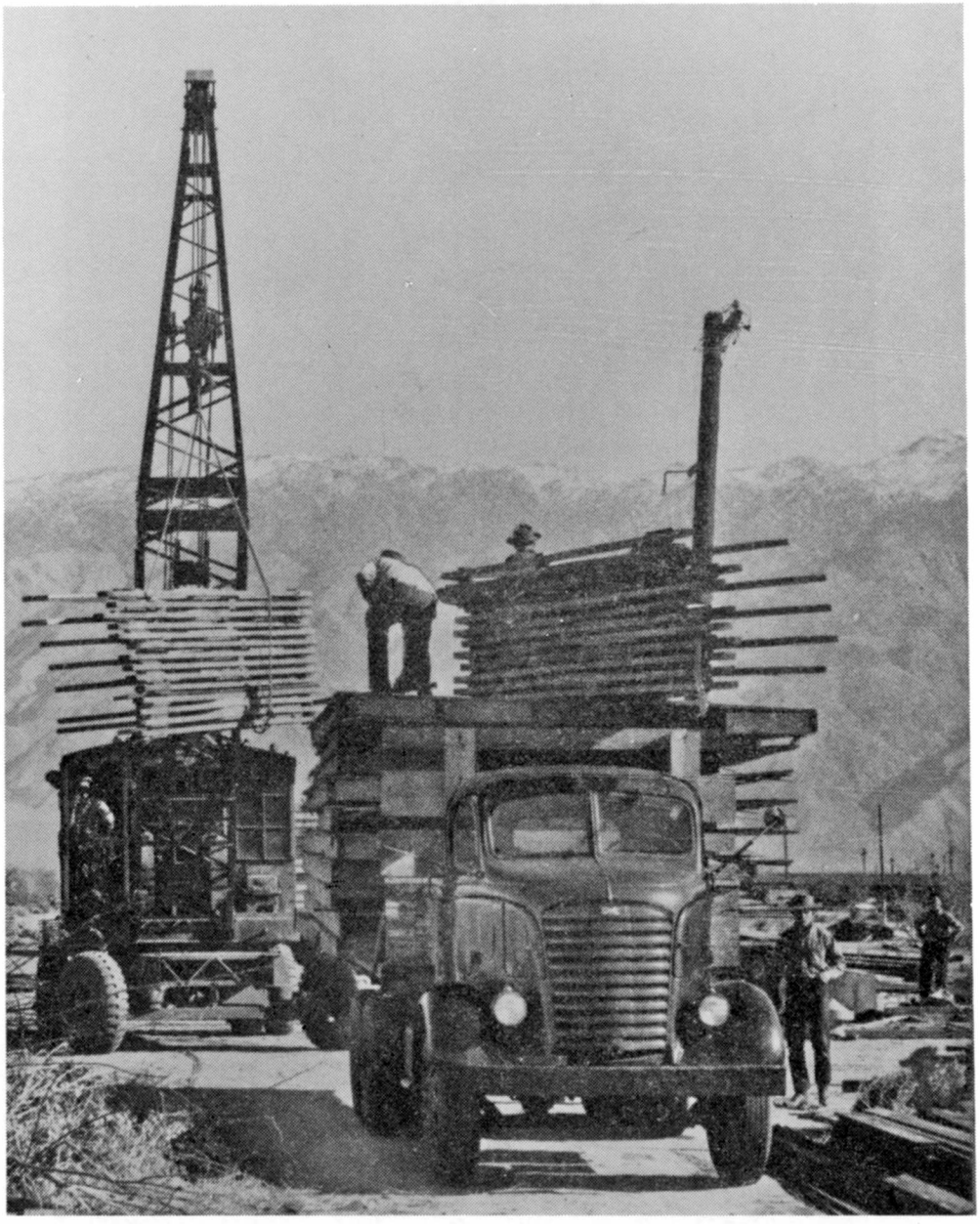


Figure 4.56. Hauling materials from Manzanar (courtesy of *Los Angeles Times*).

center to house the "2,000 sick and indigent Japanese who are expected in Los Angeles shortly" (*Manzanar Free Press* 7/28/45), perhaps referring, ironically, to those evacuees who would not be able to start over after the financially devastating forced evacuation and internment.

In the end none of these grand schemes materialized, beyond using the administration and staff housing area for a few years for veterans' housing and the auditorium as a social hall. In 1946 the *Los Angeles Times* (12/2/46) reported 30 families were living in the staff quarters and that 35 more families would soon follow.

LADWP records on file in Bishop, California, indicate that buildings remaining in the southeast corner of the relocation center (the administration and staff housing areas) were used for a Veterans Housing Project. Records show 126 veterans and other people living there in August, 1948. But the veterans resided at Manzanar for only a couple of years. The 1951 LADWP records indicate looting of these buildings,

Figure 4.57. Demolition in progress (courtesy of *Los Angeles Times*).

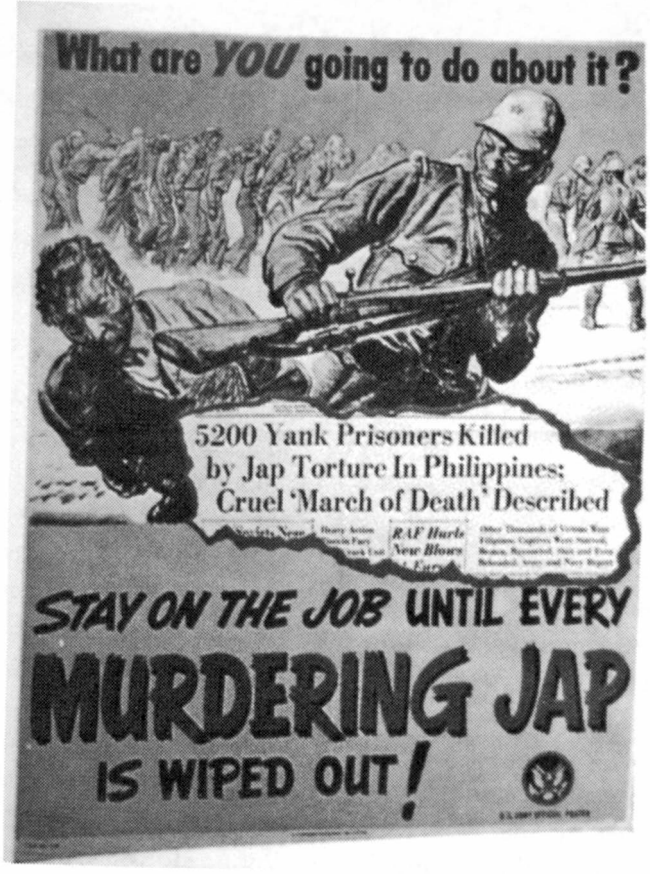
suggesting they had been abandoned by that time (Wehrey 1993).

Inyo County purchased the relocation auditorium for $6,500 shortly after the center closed and leased it to the Independence Veterans of Foreign Wars about 1946. The auditorium was used by the VFW as a meeting hall and community theater until November 5, 1951 (Wehrey 1993; Figure 4.54 and 4.55).

Salvage of the relocation center's buildings and materials was administered by the War Assets Administration. Between November 15 and 27, 1946, veterans could buy a dismantled barracks for $333.13. Fifty-two barracks were bought by Bishop residents, 32 by Lone Pine residents, 27 by Inyokern residents, 20 by Ridgecrest residents, 12 by Bridgeport residents, and 12 by Los Angeles residents. A veteran from Norwalk bought a hospital ward. Many of these buildings can still be identified in the local area (Eastern California Museum files).

On December 2, 1946, except for a few buildings in the administration and staff housing area, Manzanar was completely dismantled (Figures 4.56 and 4.57). School property was transferred to the Carson City, Nevada, Indian Agency and a Navy base at Inyokern. About $14,000 worth of equipment was given to the newly organized Northern Inyo Hospital at Bishop. The Birmingham Veterans hospital in Van Nuys received huge quantities of lumber, plumbing, and medical supplies. Plumbing and lumber were also sent to a veterans hospital at Sawtelle. Much of the remaining salvaged material went to Federal Public Housing Administration projects in Utah, Arizona, and southern California.

Manzanar was abandoned once more. "Pleasure Park was overrun with weeds and the once-verdant nursery was being returned to the desert" (*LA Times* 12/2/46).


What are YOU going to do about it?
5200 Yank Prisoners Killed by Jap Torture In Philippines; Cruel 'March of Death' Described
RAF Hurls New Blows
STAY ON THE JOB UNTIL EVERY
MURDERING JAP
IS WIPED OUT!

Chapter 5

Manzanar From the Inside

Roy Nash

Roy Nash was the first director of the Manzanar Relocation Center under the War Relocation Authority. He wrote "Manzanar From the Inside" in July 1942 for an address given in San Francisco to the Commonwealth Club of California, a non-profit public affairs forum founded in 1903. The concluding section "Manzanar Tour" was written in mid-1944 by either Director Ralph P. Merritt or a member of his staff. Generally factual, these accounts provide insight into how the WRA wanted Manzanar to be seen by the general public. For a view of Manzanar from the internee's perspective see Jeanne Wakatsuki Houston and James D. Houston's "Farewell to Manzanar."

Fellow Members of the Commonwealth Club, in a recent broadcast from Manila, three American internees told how well they are being treated there. In signing off, the announcer said: "What a contrast to the barbarities being inflicted upon the Japanese in California!"

The war is world-wide and our treatment of the Japanese in California has world-wide significance. "It is a token of our good faith; it is a crucial test of the validity of our war objectives." So I welcome this opportunity to interpret the actuality of a War Relocation Center housing 10,000 evacuees, all of who are free to listen over the radio to what I shall have to say.

On March first, Mount Williamson looked down upon sagebrush and the abandoned apple orchards of Manzanar. By June first there had come into being a city of ten thousand people, a stranger boom town than ever sprang up along the Mother Lode in '49. A phenomenon unique in American history. A camp upon which impinged the barbed shafts of bigotry and qualified Christianity; yet a camp in itself industrious, creative, and even understanding of the military necessity in which it had been sired (Figure 5.1).

Figure 5.1. Welcome to Manzanar (Ansel Adams photograph, Library of Congress).

I propose swiftly to outline some things which the eye sees at Manzanar, and then characterize important unseen values involved in the picture.

Housing

There is nothing beautiful about Manzanar except its background of the Sierra Nevada. The sun rising out of Death Valley looks down upon a square mile of barracks arranged in nine great wards separated by wide fire breaks, each made up of four identical blocks. In each block, sixteen identical buildings 20 by 100 feet, of the simplest board and tar paper construction; what the Army calls the 'Theater of Operations type. Fourteen are living quarters, one of double size — a mess hall, the last a recreation hall. In the center of each block are latrines and shower baths with abundant hot water, for men and for woman; a wash-house with tubs where clothing can be laundered (Figure 5.2); an ironing room where they can be dried.

Figure 5.2. Laundry room (WRA photograph, UCLA Special Collections).

The typical dormitory is divided into four apartments 20 by 25 feet, each housing a family group of four to six; 21 people to the average building, 300 to the block, 36 blocks to house 10,000 people.

The furniture on arrival consisted of an iron cot, a straw filled tick, and three army blankets for each evacuee. Before winter sets in, the government will furnish celetex or similar insulating material so that the inmates can line their own apartments against the cold; and their personal and household effects are to be brought from the warehouses where they now are stored.

Into these barracks the Wartime Civilian Control Administration, chiefly during the months of April and May, poured 10,000 human beings. From Bainbridge Island in Puget Sound some of them came, and fisher folk from Terminal Island; but for the most part Manzanar was filled by evacuees from Los Angeles proper. To understand Manzanar, it is essential at the start to get the overall picture of the make-up of this population group.

Aliens and Citizens

I need not remind the audience that an immigrant born in Japan cannot become an American citizen, with one very special exception to be mentioned later. So it is that 35 percent of our population is still alien: 2,100 men, 1,300 women, mostly well along in years.

No less then 65 percent of Manzanar's population are American citizens, born in the United States. Twenty-three hundred of them are children under 16; forty-one hundred are between 16 and 65 years of ago; not a single one of the native-born is over 65.

Occupations and Skills

Upon arrival at Manzanar, this mass of humanity immediately was classified as to skill and past occupations. Only four categories list more than 200 names:

Clerks	750
Farmers	613
Gardeners	400
Students of college age	211

The balance are listed in no less then 186 occupational classes. So Manzanar was born with an exceedingly wide range of skills with which to work, plus executive ability, most of the professions, and many of the arts.

I hate to talk about human beings in terms of statistics. When I tell you that the list of valets includes Selznick's, John Barrymore's, and Charlie Chaplin's; that our five doctors of medicine stem from the Universities of Southern California, Rush Medical, and Johns Hopkins, you will gather what I might do if time permitted me to deal with personalities.

Manzanar at Work

To what use can this wealth of talent be put on a sagebrush plain with a short growing season? The net factory is one answer (Figure 5.3). Five hundred American citizens stand daily in great sheds, weaving burlap patterns into nets which hang from a twenty-foot ceiling; patterns for summer, patterns for winter, patterns for the desert. Camouflage nets which go out from Manzanar by the carload to gun emplacements on the far-flung battle lines. Five hundred nets a day go out from Manzanar. Boys and girls mostly in their early twenties work to the music of a phonograph carried by a loud speaker, their own equipment. They work with masks over their mouths against the dust. They work for the prize of a watermelon for the crew that puts out the most. They work with pride because camouflage net processing has been classified as skilled work and draws a monthly cash allowance of $16, where unskilled workers make only $12. They work perfectly aware that they are contributing to America's war effort, and all they ask is that their follow citizens may hear, and some day understand.

All workers on anything thus connected with the war effort must be American citizens. The only man who is sullen and hurt about this net-making for Uncle Sam's armies is the old Japanese who came to America in his youth. He wants to work at the nets, but he is an "alien" and the Geneva Convention forbids his labor on anything connected with the war.

Another large group of workers moves each morning into the fields south of the Center, where the sagebrush has been stripped from three hundred acres, irrigation ditches lined out, and crops put in. In spite of a late start there are fields of sweet corn, cucumbers, melons, radishes, turnips, tomatoes, all of which go to the mess halls of Manzanar as fast as harvested.

Figure 5.3. Camouflage net factory (Dorothea Lange photograph, National Archives).

They have worked over the old orchards of Manzanar which had been abandoned for over ten years; pruned, irrigated, and helped them to produce.

The largest single group of workers in this city is engaged in catering to community wants: food must be cooked for 10,000 mouths; latrines must be swept and washed; paper gathered; garbage dumped. Today our garbage goes into an open trench; tomorrow it will go into hogs. Carpenters are at work on offices, on quarters for personnel, on partitions for the women's latrines. Carpenters next week will be at work in school houses and a clothing factory. Painters, plumbers, electricians, auto mechanics are at work at their trades. They are putting linoleum down on

every floor of the entire camp, against the cold and summer dust. A crew of civil engineers is running a line of levels to ascertain the possibility of diverting Symmes Creek into our water system. Men are fencing the center proper; men are marking the entire boundary of the 6,000 acre Relocation Area. Guarded by a Caucasian, a crew goes daily to the depot at Lone Pine ten miles away to unload freight. Ten miles is the limit of activity outside of the camp, except for 150 agricultural workers who went to southern Idaho to answer an urgent call of the sugar beet growers.

I drove up to see them a few weeks ago. In the little town of Rupert, in the Twin Falls district of the Snake River Valley, it was on a Sunday, we found these men from Manzanar lying on the grass in the public park; some were eating in the best restaurant when we went in to lunch; others were seen coming out of the movies; and they told me they had been made more than welcome in the town's churches.

But to return to Manzanar. One project it has which is unique. Under the direction of a scientist from the California Institute of Technology, an experiment in handling Guayule under all sorts of closely controlled conditions is full of promise for the rubber industry of the future.

It is not only the men who work at Manzanar. Long before the arrival of sewing machines, there was one warehouse where women gathered daily to sew by hand aprons for the net workers, nursery aprons for the youngsters, curtains for the women's shower baths. As soon as we got word that a large clothing factory was to be established at Manzanar, three hundred women ranging in age from 16 to 60, enrolled in classes six days a week in sewing, pattern making, and drafting. One of the teachers, Miss Ogura, was formerly a professional designer with a custom clientele in Pasadena; the other a former costume designer for the Parker Shops in Hollywood.

The point I wish to stress is that Manzanar is not a concentration of idlers and boondogglers. When in full production next summer, this project will have under cultivation about 1500 acres, the produce all to be consumed on the premises or shipped to other relocation centers. We intend to raise hogs, chickens, and rabbits for our own consumption. Primarily, however, it will be a manufacturing center. By September 15th, a clothing factory designed to supply all those relocation areas will be in full swing. Brooms, needles, soy bean products, and mattresses are among the scheduled factories to be put in operation. These will utilize every bit of labor available in the camp, both men and women.

The work day at Manzanar is eight hours, five days a week; four hours on Saturday. Work is voluntary. Tangible return to the worker is food, shelter, medical attention, undoubtedly clothing next winter, plus a "cash allowance" — we do not call it a wage — of $12 a month for common labor; $16 a month for such skills as nursing, net making, foremen, mechanics; $19 a month for such professional work as that of the doctors who man our hospital.

And in filling positions throughout the whole administrative staff, the policy has been to use evacuees whenever qualified, keeping the Caucasian personnel to a minimum.

Manzanar at Play

If Manzanar works with a will, Manzanar also knows how to play. These barren sand lots opened up as fire breaks promptly became recreation areas. And what do you suppose is the "recreation" of the old people of the generation which came years ago from Japan, the aliens of the camp? Victory Gardens in the recreation area, the greenest spot in Manzanar, where 300 families cooperate in weeding, irrigating, and cultivating. Every bit of food so produced lessens the cost of this camp to Uncle Sam.

Athletics are as popular with the young as gardens with the old. No less than 100 softball teams have been organized and it is a poor night when a dozen games are not going on simultaneously (Figure 5.4). After vain efforts to secure a wrestling mat, the boys went into the desert, cut four gnarled trees for corner posts, lugged in sand to soften the fall, and lo! a wrestling arena where nightly may be seen the various types of oriental wrestling as well as catch-as catch-can. There was no basketball court, but a basket nailed to a cottonwood tree serves just as well for goal.

Figure 5.4. Women's softball team (WRA photograph from Myer 1971:56).

A former employee of the Paramount studies, a free lance Hollywood technical director, and the former proprietor of a Los Angeles amusement hall got together and organized the Community Players. I have seen as many as 1500 sitting on the bare ground of a Sunday night before their improvised stage, enjoying a program of magician's tricks, harmonica solos, songs, dancing, one act comedies, and Hawaiian melodies.

Up in the southwest corner is the only running water within the Center proper, and there they have developed a picnic ground where watermelons can be cooled in Bairs Creek, with rustic bridges and pits for weeny roasts. An open fire, a hot dog, and music under the stars.

No description of Manzanar at play can omit mention of their music. I quote from a news item for June 16th:

> Approximately 1000 music lovers gathered under the cottonwood trees in the firebreak between blocks 10 and 11 on Sunday night for the first in a weekly series of recorded symphony programs. Waxed discs of Strauss, Debussy, Tchaikovsky, and other masters were heard over the public address system.

The public address system is their own; the records are their own; the idea was their own.

What songs would you expect to hear at a Community Sing in a relocation center? America, the Beautiful; Home on the Range; Oh, Susanna, and Loch Lomond.

Manzanar has produced a cowboy trio that would be good in any man's town; numerous string quartettes that at least go well with a hot dog and a picnic fire; hula dancers and Hawaiian crooners who remind one poignantly of the outposts of our tropical empire.

Here as elsewhere in America, however, the most popular music is that of the dance. I attended a Bruin-Trojan dance sponsored by former students and alumni of U.S.C. and U.C.L.A. One hundred and sixty couples were there. With a few daubs of paint on electric globes they had softened down the light; with strips of colored paper they had broken the harsh lines of the bare barracks; paper flowers of their own fabrication were apricot of color. What of the dancers: their clothes were neat, plain American; their slang was pure American; their gum chewing would mark them American in any part of the seven seas. They danced the dances of Hollywood and Wilshire Boulevard: tango, rhumba, jive, and jitterbug. And they danced well.

Health

One that particular night, about midnight, a policeman entered the dance hall and touched Dr. James Goto on the shoulder. I followed him to the "hospital," watched him get into his white robe and scrub up. The operating room was the end of a barrack constructed of green lumber that had opened wide cracks to the wind and the dust. But the cracks had been stuffed and the place washed out with a hose. The lights were adequate, the room temperature right, the operating table reasonably steady. Deft nurses had sterilized his instruments and threaded his needles. A graduate of Rush Medical, also an evacuee, did a spinal anesthesia. Then Doctor Goto stepped to the table and proceeded to perform an appendectomy, assisted by his wife, also a doctor of medicine and a graduate of the University of Southern California. When we went off to bed at 2:00 a.m., she stayed on to deliver the newest addition to Manzanar's growing population.

Staffed by five evacuee doctors, three graduates of the University of Southern California, one from Rush Medical, the fifth, a doctor of public health from Johns Hopkins, with five graduate evacuee nurses, this hospital of barracks, between March 22 and June 30, handled 6,528 out-patients and 568 in-patients. There were 116 surgical cases, 19 births, 28,000 typhoid inoculations. Practically the entire population was immunized against smallpox. Nearly 2,500 received dental treatment by dentists who were using their own equipment, and of course without charge. Over 500 food handlers and diet girls were examined: 111 Wassermans were taken. Of five deaths within that period, not a single one was chargeable either to contagious disease or to surgery. An outbreak of athlete's foot was the only thing approaching an epidemic since the opening of the camp.

We moved last week into a new 250-bed hospital where the sand does not blow through the walls and where blood-stained sheets do not have to be laundered by hand. But so long as hard work, well performed, commands the respect of men, what went in that makeshift hospital at Manzanar during the first four months under the guidance of skillful, hard- working Dr. James Goto, is something of which California may well be proud.

The health of Manzanar at the start is about the health of the average population group of 10,000 in California. But being concentrated within a square, with parents on the lookout for communicable disorders and a modern hospital with which to combat disease, it should be possible for our medical staff to locate and isolate every case of active tuberculosis; and to wipe out venereal disease 100 percent. Disease from malnutrition cannot occur. We are segregating those cases which require special diet in a block adjacent to the hospital.

Food and Water

In this item of public health, food, water, and sanitation are basic. Our water supply comes from the snow of the high Sierra, down Shepherd Creek, and through a chlorinator. It is analyzed twice each month by the Department of Public Health of the State of California. One of the wells of the Los Angeles water system, with a flow sufficient for all domestic needs, is also tied into our system for fire protection and as insurance against drought. Manzanar uses well over a million gallons of water a day; more then 100 gallons per person. Most of this, of course, is for irrigation and for watering the lawns which are beginning to spring up between barracks all over the camp.

The food of Manzanar is simple, but abundant, well-cooked, and nourishing. To meet the taste of many of the evacuees, rice is substituted for other starch staples, and condiments to which they are partial are purchased. Food costs the United States a fraction over 38 cents per day per person, plus the labor of evacuee cooks and

helpers. In our refrigerating plant there is generally hanging several carloads of meat; and there are refrigerators of generous dimensions in each mess hall.

Sewage Disposal and Sanitation

If food and water can be called excellent, sewage disposal at Manzanar must be labeled superb. There is nearing completion a plant for treating liquid sewage which is the last word in scientific perfection. Camp sanitation also is good, latrines are cleaned daily; trash cans stand between barracks and are used. We have an unsolved rat problem, but flies are well under control. The camp, its residents, and the clothes they wear all impress the visitor as neat and clean.

Education

Granted a roof against the rain, and food, the average American family thinks next of education. It is not different at Manzanar. Dr. Genevieve Carter came down from Berkeley to look over this newest regrouping of California's population, was persuaded to accept the post of Director of Education, and left almost immediately to recruit teachers. When she returned a fortnight later she found no less than 2000 pupils organized in classes under volunteer instructors. Mothers had not been slow to grasp at opportunity. With no chairs provided, they lugged their own to the recreation rooms or found scrap lumber to make benches. The schools of Los Angeles sent up text books by the hundred so that pupils who had been torn from their schools in March could make up lost ground. These volunteer classes are now regularly at work under the guidance of three Caucasian teachers.

There is another education group which typifies much of the spirit of Manzanar. It is headed by Mrs. Nishikawa, a master of arts from Berkeley Theological Seminary; indeed, to her all credit is due. Its purpose is Americanization of older evacuees who never learned the language of the country of their adoption; who today, for the first time, are finding sufficient leisure to study the basic English required for life in camp; and to learn something of the Constitution of the United States, of American history, and of the spirit of American institutions.

Seven nursery-kindergarten schools are in daily session, conducted for youngsters from three to six years of age. Approximately fifty children are in daily attendance at each nursery.

"Our biggest problem," writes Mrs. Kitagawa, "is the lack of materials such as paper for cutting and drawing, clay, as well as swings, jungle jims, educational toys, and partitions to separate our different age groups." Nevertheless, the work goes on.

Our latest addition to the children's group in Manzanar are some 70 orphans from the Southern California Japanese Children's Home, the Catholic Maryknoll Home in Los Angeles, and the Salvation Army Home in San Francisco.

In the future and still to be built are two elementary schools, the Manzanar High school, and an auditorium which will seat 1000 students. The work of construction will be done entirely by evacuee labor. These schools will be part of the public school system of California; teaching standards must measure up in every way. Not many of the evacuees have teaching credentials, so the schools for the most part must be staffed by Caucasians. The bill, of course, will be paid by the United States and not by Inyo County.

For those college students whose courses were suddenly interrupted, two things are contemplated: some will be permitted and assisted to complete their work at mid-western universities; for others, university extension courses will be held at Manzanar.

Block Leaders

One of the announced policies of the War Relocation Authority is that evacuees shall have an opportunity to participate in the government of the Center. Our block leaders represent Manzanar's initial step in this direction. Chosen from time to time as one block after another filled up, some by an elective process, some by appointment, collectively they serve as a temporary municipal council pending the organization of a formal interior government.

Each block leader has an office within his block and upon his shoulders devolves all manner of duties. His is the responsibility of seeing that latrines are kept clean, that burnt-out fuses and light globes are replaced, that the night check is made which tells us daily whether or not anyone has left camp, that fire hazards are not permitted to accumulate. If someone plays the saxophone too late at night, he listens to the complaints next morning. Roof repairs, family disputes, interpretation of government policy are among his functions. His office distributes soap, mops, buckets, blankets, grass seed, and brooms. The organization of Boy Scouts, the calling of block meetings, the writing of letters for the illiterate, all those duties and many more fall upon the broad shoulders of the block leaders.

It is a trait of human nature the world over to look to maturity for leadership. I have pointed out how the elders among these evacuees are, of necessity, aliens. Ted Akahoshi is typical. They call him the "Mayor of Manzanar." Ted is a graduate of Stanford University in the class of 1913; a member of Stanford's Rugby team in 1912 and '13, formerly executive secretary of the Wholesale Japanese Produce Commission Merchants Association in Los Angeles. His is able, sane, and fair. But he is an alien; and there are those among the American-born who would throw off the leadership of their elders. It is just one of the many knotty problems with which a project director has to deal.

Law and Order

This whole question of internal government is one which has not yet assumed definite shape at any Relocation Center. Fortunately, law and order has so far been an insignificant problem. By and large, these evacuees are an exceedingly well-behaved group. The lawyers are not entirely agreed as to just where we would go if this were not the case. Federal Courts have no machinery for handling petty crimes and misdemeanors outside of the National Parks, where United States Commissioners take jurisdiction. The county government in Owens Valley is not particularly eager to be burdened with Manzanar's cases. So, after once calling the Justice of Peace to dispose of the proceeds from a stud poker game raided by the interior police, we finally set up a mechanism of our own.

The block leaders chose three, one a lawyer, one a social worker, all citizens; and the administration appointed three employees. Those six constitute a sort of grand jury which hears evidence and makes recommendations to the Project Director. The latter may not impose a fine, but he may impose a jail sentence. A serious crime would, of course, be tried in the county seat at Independence.

Order is maintained at Manzanar by an interior police force of some seventy evacuees headed by five Caucasians, a chief and four lieutenants, so that one is on duty at police headquarters at all time of the day and night. No one carries arms within the Center.

Military Police

The Relocation *Center* is that district, approximately a mile square, in which all the buildings of Manzanar are located. It is fenced with an ordinary three-strand barbed-wire fence across the front and far enough back from the road on either side to control all automobile traffic. Four towers with floodlights overlook the center (Figure 5.5). The Relocation *Area* is the

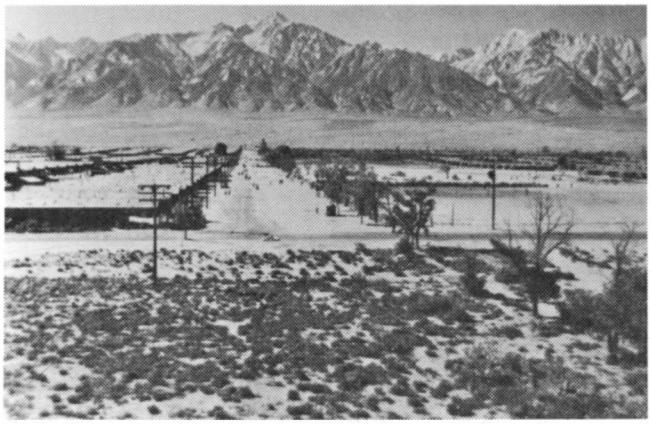


Figure 5.5. City in the desert (view from watchtower) (Ansel Adams photograph, Library of Congress).

whole 6,000 acre tract of which the Center is but a part.

As soon as the boundaries of the area are completely marked, evacuees will be permitted to move therein between daylight and dark. There is a company of Military Police stationed just south of the Center, whose function it is to maintain a patrol about the entire area during the day; and to man the towers and patrol the Center at night. A telephone is being installed in each tower so that if a fire breaks out, it can immediately be reported. The whole camp is under the eyes of these sentries. While evacuees are required to be within the camp itself, there is no curfew.

Freedom at Manzanar

It is the desire and the intention of the War Relocation Authority to grant evacuees every freedom consistent with military necessity. The first is the right to publish their own newspaper. The *Manzanar Free Press*, first published as a mimeographed sheet on April 11, has developed into a four-page printed tabloid supported entirely by advertising and subscriptions. It is published three times a week. We intend that it shall be free in fact as well as in name; a press with full editorial freedom to criticize at will, and subject only to the restraints which all American journalism accepts as a necessity in time of war.

The second freedom is the right to receive news of the outside world. Newspapers from San Francisco and Los Angeles to New York are on sale daily at the Manzanar canteen, and all current magazines which are in demand. While short-wave radio sets are barred, there is no restriction to listening to whatever an ordinary receiving set may gather from the air. There is entire freedom to write and to receive uncensored mail. The Manzanar post office is a branch of the Los Angeles post office, and is reported no differently from any branch.

Freedom of religious worship is an actuality much prized. On the establishment of the camp, the gates were besieged by representatives of every seat with which Los Angeles abounds; so the rule was laid down that the demand for a particular pastor must come from a group within the camp. Catholics, Episcopalians, Methodists, Quakers, hold services regularly (Figure 5.6), so do those of the Buddhist faith. Only Shintoism is barred.

Figure 5.6. Catholic Church (Ansel Adams photograph, Library of Congress).

Every Tuesday the local bank opens an office in Manzanar and does a regular banking business. The business of Manzanar is not to be snoozed at. The monthly payroll is around $75,000; sales at our community stores gross around $2,000 a day.

These stores are among the most interesting developments at Manzanar. When the Army

canteen which functioned under the Wartime Civilian Control Administration pulled out, we were offered $50,000 for the concession. This, of course, was refused. Instead, we gave out the word that the evacuees were going to run their own stores. Without any guarantee by government or anything in the nature of collateral, Los Angeles merchants promptly stocked the stores with some $20,000 worth of merchandise. They were not taking much of a chance.

Thirteen tons of watermelons have been sold between Tuesday and Saturday. Two hundred boxes of oranges and ten cases of grapefruit were sold each week. One hundred seventy-five cases of soda pop are received every other day. Sales in the clothing department are not quite so active, but still substantial. Thirty thousand dollars a month passes over the counter.

These stores are about to be organized as community cooperatives. For the past three weeks, evening meetings have been held to educate interested groups in the mechanics and principles of cooperatives. When I left Manzanar, they were debating whether to use profits to reduce prices to the consumer or to devote a considerable share to community relief needs.

In addition to stores, it is proposed to organize barber and beauty shops, shoe repair shops, and later on a theater as cooperative community enterprises.

Manzanar Rumors

No description of Manzanar would be complete without mention of the luxuriant crop of rumors which circulate both within and without the Center. No tale is too wild to be believed.

"If prices go up or if there's a food shortage on the Coast," says rumor, "they're going to forget us here. We'll starve. There's not even a day's supply on hand." And we find sack after sack of rice hidden away in the frightened man's apartment.

"Say, there was a riot at the net factory yesterday. Everybody walked out; they had to call the soldiers out." Investigation shows a gang of 16-year old youngsters calling from the side lines, "Come on, let's go play baseball."

The one that really startled me was the day an official in the United States Public Health Service came rushing into Manzanar to inquire about the "terrible epidemic." "We heard that there had been two hundred deaths." At that particular moment in history, Manzanar had yet to experience its first death.

I have before me a rather penetrating memorandum laid on my desk by an intelligent young reporter on the subject of these unsubstantiated fears:

"Are the Isseis, or the Niseis, generally more disconsolate over their confinement here?" he asks. "Each time we hear the young people's cases, of what wonderful career opportunities they had just before the war broke out, we think that their cases are the tragic ones. When we hear how the elderly residents are withdrawing within themselves like the taunted snails, we think their cases are the tragic ones.

"An elderly Japanese block leader candidate came to our office last night and leisurely monologued for three hours, telling us his entire career in America from the time of his arrival in this country to the time of his arrival at Manzanar. His narrative does not differ too greatly from those of other Isseis.

"The point is, his casual reference to the attitudes of the elderly Japanese indicated to us how deeply humiliated, disappointed, and unreconciled they are to the turn of events which brought them and their children here. Silently, it would seem, they are apologizing to their children for the misfortune they brought upon their off-spring citizens of this country.

"From morning to night, (I am still quoting) they bear in mind that they must be humble ... The opinions of the Isseis, they often feel, need not be taken into account here because they are enemy aliens, because they are old.

"This attitude tends to create pessimism; which in turn disinclines them from seeking to learn about the progress of this project and its facilities. Because they do not try to know, to keep up with the developments here, they create within themselves the cancerous growth of uncertainty.

"From such an attitude, for instance, comes the frenzied desire of some families to hoard dozens of sacks of rice ... ."

It would be quite wrong, however, to end on that melancholy note, for it is not the dominant note of Manzanar. The morale of these evacuees on the whole is excellent. The camp has reacted eagerly to every opportunity to show its Americanism and pride in this country. A memorable scene occurred on "I am an American Day" when a Japanese Boy Scout troop led the hundreds assembled in the pledge to the flag and in singing the national anthem. I believe nearly three thousand poppies were sold in Manzanar for the American Legion and the Veterans of Foreign Wars. When a committee of leading citizens representing all Owens Valley appealed to the block leaders to participate in the national bond campaign, they challenged Bishop, the Valley's largest town, to a race. Except for the fact that the government was three months late in paying off for work performed, I am sure Manzanar would have won. As yet another evidence that these evacuees are still an integral part of America, at the last registration of youths between the ages of 16 and 20, four hundred and thirty-two young men of Manzanar were registered for the draft.

Of more significance than any of these, however, was a petition being circulated last week asking the President of the United States for permission to volunteer and fight on the European front. It was not an idle gesture. It was the deliberate act of mature men, American men, born in California, who know no other country than these United States, and who are willing to lay down their lives for their country's cause. There are many men in Manzanar whose loyalty is no more to be questioned then that of any of us here.

Tokie Slokum is in Manzanar. He was regimental sergeant major in the regiment made famous in the last war by Sergeant York. He successfully fought through Congress for himself and similar aliens who served in the United States Army, for their right to American citizenship. He accepts his evacuation to Manzanar as the contribution of a loyal American citizen to the winning of the present war.

Upon that note, I close. For the government of the United States which I have the honor to represent, I desire to report the words of the Authority's first director, Milton Eisenhower, the brother of the General who commands in the European theater of operations: "For the War Relocation Authority," he wrote, "I wish to say that we intend to demonstrate to the world — to our friends and to our enemies alike — that this nation, grim in the fight it is waging, can at the same time be tolerant, patient and considerate in handling this human problem of wartime migration and resettlement."

Manzanar Tour — 1944

Beginning in front of the Administration Building we find on our left, as we face the entrance gates, Block 1 (Figure 5.7), an Administrative block housing offices, and here we name and point out a few. Turn South at the Police Station, we parallel the highway and pass the staff quarters on the right, pointing out the three buildings which house the teachers. The gardens on our left are the staff victory gardens.

Figure 5.7. 1st Street (administration area to left) (Ansel Adams photograph, Library of Congress).

Continuing our swing through the Caucasian quarters, we pass the food storage houses on our right, then the garage where all WRA vehicles are repaired and maintained. We point out the dispatcher's office and the Motor Pool on our left. We travel straight ahead between the warehouses and the camouflage buildings to the Superintendent of Manufacturing office at Warehouse 31. We take our visitors inside to let them see the only garment factory among the relocation centers. Here is made all of the work clothing for the other WRA centers and, as we take them down between the power machines, by the repairing room, through the hand alteration section to the cutting room, we explain that we had but one trained power machine operator at the beginning and that all of the people now working were trained right here at Manzanar. These people, like all of our employees, work 44 hours a week and are paid $16.00 a month plus $3.75 as a clothing allowance. Those who are in a supervisory capacity or who are professional workers, such as doctors or dentists, receive $19 a month. Remember that our visitors are not familiar with many of the facts of Manzanar which appear and seem so obvious and common to us. They need to be told, sometimes, that people are not forced to work and that we do our best under our limitations to provide as normal a community life as possible.

If Mr. Haberle, Superintendent of Manufacturing, has the time to assist you, ask him to accompany you and our visitors to the food processing department, at Camouflage No. 4. It's here that the brine-pickled products, so much a part of the Japanese food culture, are prepared. Here, also, rice is cooked, is allowed to stand to form a vegetable mold, is mixed with other rice and Mongo beans and is ground to form Miso, a flavoring used in all the kitchens. There is a large jar of Miso in this building which may be shown to our visitors. If we go to the south end of the building, we will pass the cooking and steam vats, where the rice and other foods are prepared; and we will reach the open doors of the dehydrator, where we dehydrate our surplus vegetables each fall and use them in the mess halls during the winter. Our visitors would be interested to see some jars of dehydrated products which you will find at the south end of the dehydrator.

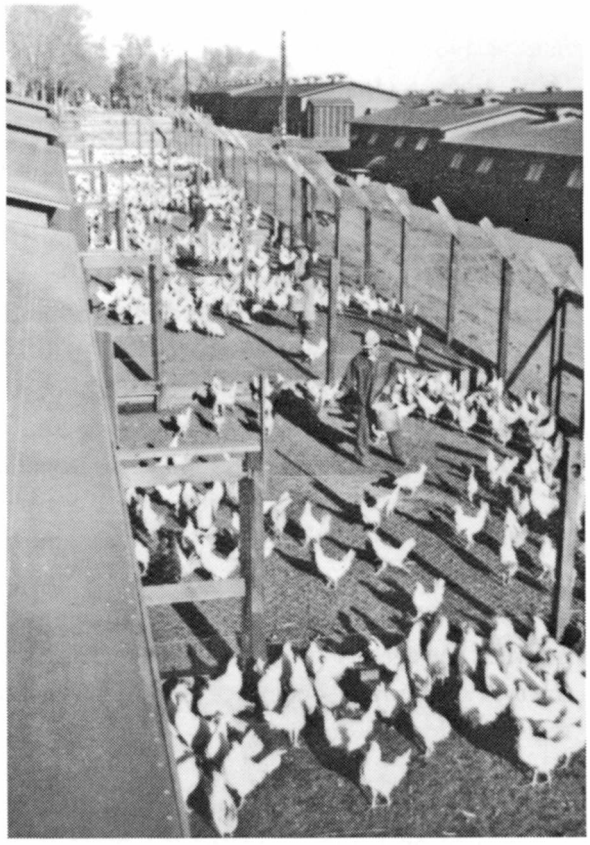


Figure 5.8. Poultry Farm (Ansel Adams photograph, Library of Congress).

Returning to the car, we go out the south gate and down along the agricultural fields, explaining to our visitors as we go that 85 percent of our vegetable consumption is produced right here at Manzanar. Drive along the fields for about one-half mile, then turn around and take our visitors to the chicken project (Figure 5.8). Inform them, when you arrive, that we produce all the eggs we consume. Someone will ask if we hatch our own chickens and the answer is "no." We buy them as chicks and raise them to their egg-laying stage. Cockerels are slaughtered for meat.

After showing our visitors the chicken project, next lead them to the much discussed hog project (Figure 5.9). Here, as with the chickens, we do no breeding but purchase small feeder hogs and, upon delivery, place them in the pens to your left as you enter the project grounds. As they grow older and fatter and more succulent, they are moved to the front pens until ready for slaughter. The feed is garbage from the mess halls and it isn't necessary to grain-feed our hogs before slaughter (as is generally done to firm the flesh) because our garbage contains such a high percentage of rice. The feeding platforms are concrete and are cleaned and hosed two to three times a day and the grounds of the pens are cleaned and raked two to three times a week. The hog project provides Manzanar with all the pork it consumes.

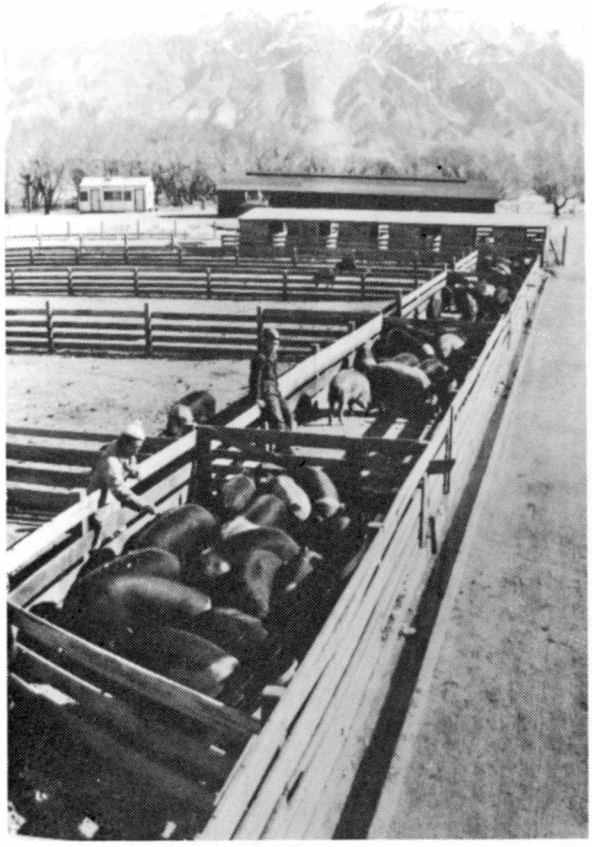


Figure 5.9. Hog Farm (Ansel Adams photograph, Library of Congress).

We did have 400 head of cattle to provide beef for the mess halls. The last of these is being slaughtered and the project will be discontinued, because the price of army third grade beef is more economical. Returning from the hog project, remain outside the wire fence and drive along the west boundary of the center proper. Point out the domestic water supply tank and explain that all water is chlorinated and is taken from the stream which come from the snow of the Sierras and for this privilege we pay the City of Los Angeles.

Turn in at the west gate and drive toward the hospital. Show our visitors the victory gardens in the fire break, and stop at the oil tank at Block 24, because it is time to explain to our friends how a typical block is laid out and how it operates. The present population of 5,500 people is divided into blocks. Explain what each apartment is like, tell about the life of the block and point out the block mess hall, latrines, and laundry room. Describe to our visitors how the apartments are heated in the winter. Tell how each block elects a block manager who meets with other block managers and Mr. Merritt in the regular Town Hall Meetings.

Taking our visitors by, but not into the hospital, tell them what it contains: the laboratory, wards, dental clinic, eye, ear, nose and throat clinic, crippled children's clinic, out-patients clinic, new baby room, x-ray, and surgery. Drive to the east side of Mess Hall No. 34 to show our visitors an example of what some of the blocks have done with the area next to the mess halls. From there

you should go to Pleasure Park (Figure 5.10), informing the visitors that the Rose Garden was donated by a very fine evacuee horticulturist who budded his plants on the root systems of the Sierra Wild Rose. Explain that the park was designed and created by volunteer evacuee labor and was finished last year.

From Pleasure Park you should introduce our visitors to Mr. and Mrs. Matsumoto, head of the Shonien or Children's Village. Here are housed all of the orphans in all the ten centers, under the supervision of Mr. and Mrs. Matsumoto, who formerly supervised a similar institution in Los Angeles. You will find Mr. and Mrs. Matsumoto only too happy to show our visitors through the Children's Village.

Leaving the Children's Village, I think our visitors would next like to be taken back to the Guayule Propagation Project across from Block 6 where we grow the rubber-containing Guayule bush. This bush at two years contains in its stems, but not in its leaves, about 12 percent rubber in coagulated form; that is, the Guayule rubber is not derived from a latex or milk secretion as is tropical rubber but is found in coagulated form in each plant cell. Our problem at Manzanar has been to find the proper method of holding the alkaline-acid balance and to develop a method of separating the coagulated rubber from the plant fibers. This we have done, and, if you will take our visitors by the open air theater to the rubber extraction plant in Ironing Room No. 35, someone will be happy to explain the mechanical process involved. It is interesting to add that we are growing certain drug, medicinal plants and herbs for the supply of which this country has had to depend upon imports up to the war. Pyrethrum is used to make sprays, to kill insects. Camphor, thyme, coriander, and guar are either in the lath house or growing in the North Farm.

Leaving Block 35, drive along the road which passes the Fire Department in Block 13 until you reach the Community Auditorium. This is the last major construction at Manzanar and, although the plans for it had been long drawn up, it's construction was not begun until it was found to be needed without doubt.

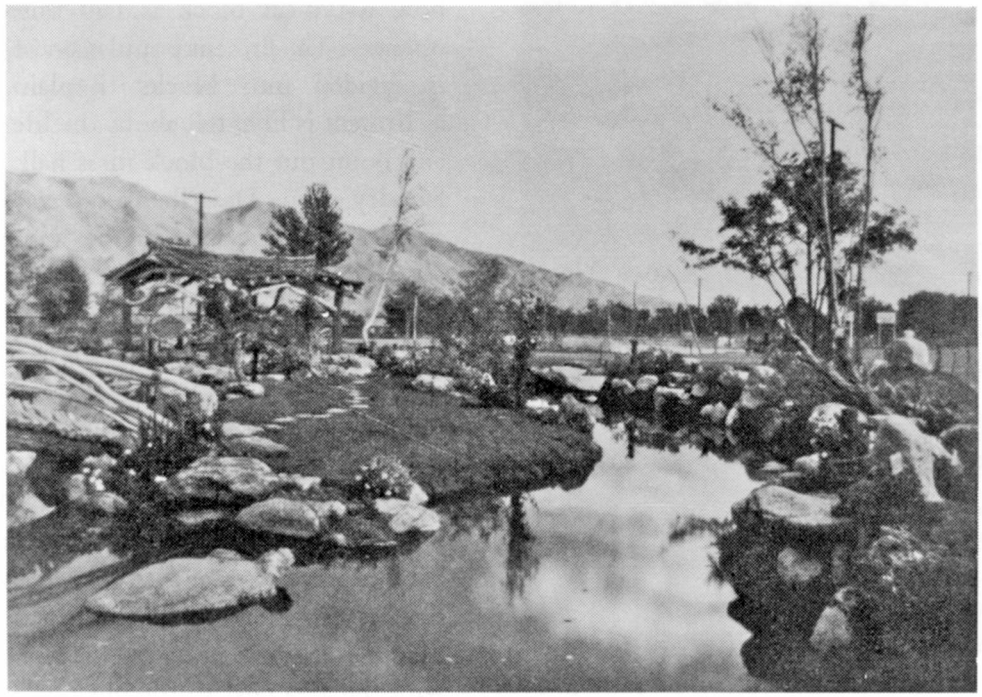


Figure 5.10. Pool in Pleasure Park (Ansel Adams Photograph, Library of Congress).

Chapter 6

History Background

Jeffery F. Burton and Jane C. Wehrey[1]

Valleys east of the Sierra Nevada were traversed by Euroamericans as early as 1829-1830, when the British trapper Peter Skene Ogden passed through the Owens Valley. Expeditions by Joseph W. Walker from 1833-1843 led to the occasional use of the eastern Sierra valleys as part of an immigrant trail (Busby et al. 1980:37-39). In 1845 Walker led an official mapping party through the area. John C. Fremont also came through the valley later that same year, naming the valley, river, and lake after Richard Owens, a guide on. some of his other trips. Owens was not on that trip, however, and never saw the area named for him (Chalfant 1922:98; Sauder 1994:22).

Prospecting and mining in the eastern Sierra region began in the 1850s. As the gold fields on the west slope of the Sierra Nevada were played out and taken over by large companies, individual prospectors looked to other areas rather than return to the east. In response to the growing economic interests, the first public land survey in the area was begun. In 1855, Von Schmidt was commissioned to map lands east of the Sierra. In Owens Valley, Von Schmidt unknowingly recorded Paiute irrigation ditches (Lawton et al. 1976). At this time there was no white settlement in the region and Von Schmidt declared the area "worthless to the white man, both in soil and climate" (Sauder 1994:23). During additional work in 1856 Von Schmidt's opinion of the Owens valley apparently changed. His classification noted many areas of "first rate soil," the largest being in the vicinity of present-day Independence (Sauder 1994:23-25).

In 1859 Capt J.W. Davidson was sent from Fort Tejon on a punitive military expedition to the Owens Valley to investigate charges that local Indians were rustling horses. It quickly became apparent to Davidson that the Paiute were not responsible. Davidson gave glowing reports on the grazing potential of the valley that likely influenced many to explore the area further (Wilke and Lawton 1976).

The Owens Valley was used as a transportation route to the gold strikes to the north in the Mono Basin. In 1859 the first cattle herd was brought into the valley; the herd grazed for a while near Lone Pine then was sold to miners in the Coso area, 50 miles southeast. In 1860 the discovery of the Coso Mine brought more prospectors to the region, and the first mining district east of the Sierra was organized in 1861 (DeDecker 1966). Cattlemen and farmers soon followed.

[1]portions of this chapter originally appeared in Wehrey 1993, 1994.

The first permanent herds of cattle were brought into Owens Valley in 1861 to supply the growing mining camps of the region. Four settlements were begun: Allen Van Fleet built a house near present-day Laws, Samuel Bishop and his wife started a ranch near present-day Bishop, Charles Putnam built a cabin and trading post at what would later become the town of Independence, and Barton and McGee started a ranch near present-day Lone Pine.

Indian Wars

Cattle grazing, along with the cutting of pinyon for lumber and firewood by miners and ranchers, greatly reduced the Paiute food supply by the winter of 1862. Descriptions of the ensuing battles between the Paiute and the new settlers are given in numerous accounts (e.g. Chalfant 1922, Wright 1879). The winter of 1862 was especially severe and in order to survive the Paiute began killing cattle for food.

A Paiute was shot and killed while herding off a lone steer. A few days later a cowboy working for Van Fleet was captured and killed in retribution. Conflicts with ranchers continued, but prospectors were generally left alone (McGrath 1988:18). Paiute leaders Captain George and Captain Dick agreed to end the fighting: George indicated that the score was even and that the Paiute would live in peace and not kill any more cattle for food. However, within two months hostilities broke out again when Indians drove off 200 head of cattle. Indians from other areas, including Kern and Tulare bands, joined in the fighting, and the white settlers estimated there were from 500 to 2,000 in all.

On March 17, 1862, a detachment of U.S. Army soldiers stationed at Camp Latham (near present day Santa Monica) were ordered to the Owens Valley via Fort Tejon to verify the reports of Indian attacks (Cragen 1975:6). Meanwhile, in Owens Valley, the white settlers grouped at Putnam's Store on Independence Creek, fortified their position, and then attacked a group of Indians in the Alabama Hills, destroying their food stores and killing several Paiute. The militia group then moved north towards Bishop's Ranch to attack a group of Indians reported in the area. In the ensuing "Battle of Bishop Creek" on April 6, 1862, the militia attacked a group of 500 Indians led by Joaquin Jim, a Paiute (or Western Mono) chief whose lands included Round and Long Valleys. But the militia, outnumbered 10 to 1, were forced to withdraw.

The next day the retreating militia was met by 35 soldiers under the command of Colonel Evans who were heading north to engage the Indians. The larger force made an unsuccessful attack north of Round Valley: snow, skirmishes, and an Indian ambush, coupled with dwindling supplies, forced the whites to withdraw. The force returned to Putnam's store, and on April 13 the Army troops left the valley, joined by dozens of civilians, 4,000 cattle, and 2,500 sheep (McGrath 1988:33). By the end of April, the Paiute were in sole possession of the valley.

In June, Colonel Evans returned with a force of 200 soldiers, destroyed Paiute food caches, and attempted to engage the Paiute in battle. Evans established Camp Independence on July 4, 1862, at Oak Creek four miles north of Putnam's Store. The first buildings at the camp were little more than dugouts in the creek bank. Adobe buildings were completed by the end of 1862.

On October 6, Indian agents arranged a peace treaty, with Captain George and three other Paiute headmen agreeing to be held as hostages in exchange for provisions. The miners and cattlemen returned. Thomas Edwards drove cattle into the valley and furnished beef for the military. He acquired the Putnam Ranch and began laying out a town. Recorded in 1866, Independence was the first official townsite in Inyo County (Cragen 1966).

The first of March 1863, Captain George escaped and began raids on mining camps. New battles ensued and 36 Paiute were killed in a single

battle at Owens Lake, where many were shot while trying to escape by swimming across the lake. On April 24 Army reinforcements arrived and a ruthless new commander, Captain Moses A. McLaughlin (Busby et al. 1980:57) took command. McLaughlin employed a new strategy, moving soldiers into the mountains at night to flush the Paiute into the valley. Fighting continued until June 1863, when over 400 Indians surrendered at Camp Independence after the destruction of their food stores. Others soon followed. In all, 60 whites and over 200 Indians had been killed.

The nearly 1,000 Indians gathered at Camp Independence were force-marched to a reservation at Fort Tejon, over 175 miles south. Over 100 died or escaped along the way. With warfare seemingly over, Camp Independence was abandoned. However, some of the Indians who escaped the forced removal, including Joaquin Jim, continued fighting (McGrath 1988:22). As more Indians returned and attacks increased, the Army was again ordered to Owens Valley.

This second phase of fighting culminated on January 5, 1864, when 32 local militia (including two ranchers from the George's Creek area, John Kispert and John Shuey) surprised a group of Paiute at Cottonwood Creek, killing 41 men, women, and children. Shortly afterward, the Army reoccupied Camp Independence. There was little confrontation after the Army arrived, and hostilities ended with the death of Joaquin Jim at Casa Diablo Hot Springs in the winter of 1865-1866. Over the next few years most of the dislocated Paiute returned; however, they then were largely dependent on the Anglo economy. By that time, farming was well established in the Owens Valley. Most Paiute found jobs as farm and ranch laborers, while a few found work as miners, on road crews, and even as longshoremen at Owens Lake.

On March 26, 1872, the Owens Valley was rocked by a major earthquake. The worst destruction was at Lone Pine (population 300) where every adobe building collapsed, killing 26 and injuring 60. The Inyo County Courthouse was heavily damaged and nearly all of the adobe buildings of Camp Independence were destroyed (Cragen 1975). The destroyed buildings at Camp Independence were replaced with wooden buildings. But Camp Independence was permanently closed on July 10, 1877. The hospital building was sold for $290.00 and moved to the town of Independence in 1883. The Commander's Quarters was sold for $345.00 and moved to Independence in 1889 (Cragen 1975). The Robinson House in Independence was built of lumber from dismantled camp buildings (Hoffman 1984:40). Only a school building, a few dugouts, and the cemetery remain.

Early Settlement

With the ending of hostilities, Euroamerican settlement of the region continued unabated. Wide-spread prospecting resumed and mining provided an early incentive for development. Four small towns were soon founded on the east side of valley to support the miners. The towns, Owensville, Chrysopolis, San Carlos, and Bend City, enjoyed their peak years from 1864 to 1866 (Figure 6.1). These towns were slowly abandoned in favor of farming communities on the west side of the valley, such as Bishop, Big Pine, Aberdeen, Independence, George's Creek, and Lone Pine.

The richest strike ever made in Inyo County was at Cerro Gordo in the Inyo Mountains. Silver was first discovered there by a Mexican miner in 1865, and by the fall of 1868 hundreds had flocked to the area. In 1870 there were nearly 1,000 claims and a small town at Cerro Gordo (Likes and Day 1975). Towns sprung up around Owens Lake to support Cerro Gordo. By 1872, Stevens sawmill at Horseshoe Meadows, high in the Sierra Nevada, sent timber via a flume down to Owens Lake. Charcoal kilns were built at the flume's terminus in 1876, and steamboats carried lumber and charcoal across the lake to Cerro Gordo.

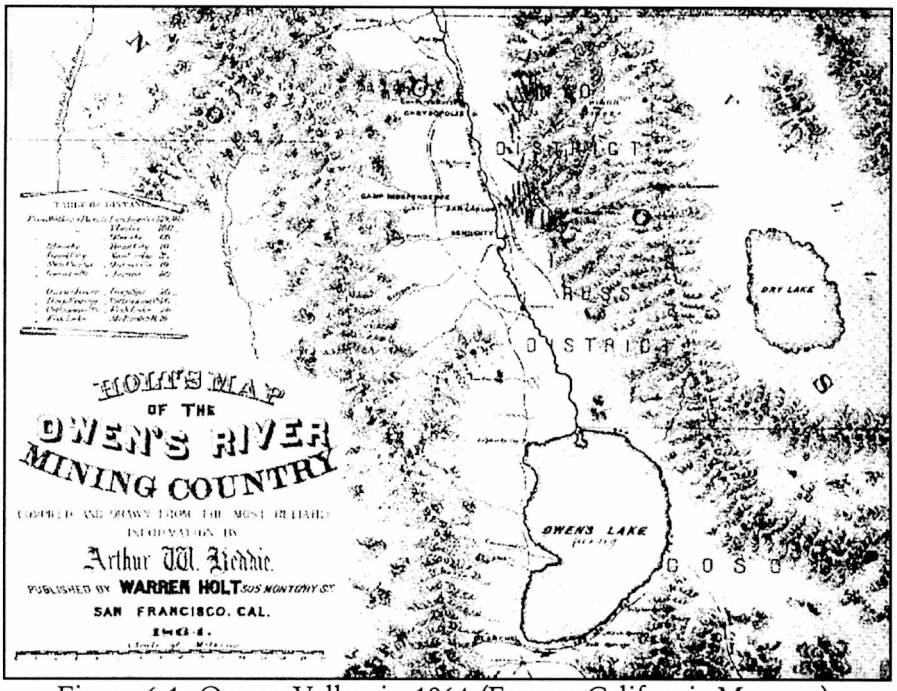


Figure 6.1. Owens Valley in 1864 (Eastern California Museum).

But the easily mined silver was soon depleted, and by 1879 Cerro Gordo was virtually a ghost town, with only intermittent and small-scale mining occurring in the area to the early 1900s. Cattle ranching, farming, and lumber production soon became the region's main source of commerce.

The first land claims were filed under the Homestead Act of 1862 and the Preemption Act of 1864, which allowed settlers to buy up to 160 acres of public domain land at $1.25 per acre. Both acts required the claimant to live on and improve their claim. The old irrigated fields of the Paiute were generally the first areas to be homesteaded (Sauder 1994:27). Entries peaked in 1873, and by the end of that year nearly all of the choice, well-watered areas were taken. The Desert Land Act of 1877, under which 640 acres could be acquired if irrigated, sparked a new land rush in Owens Valley. By 1885 seven major canals had been built in the valley and newspapers reported the imminent demise of Owens Lake due to the diversion of Owens River water (Babb 1992).

After 1880, the decline of mining in Inyo County greatly reduced the demand for local farm goods. With inadequate access to other markets, the southern Owens Valley went into an economic depression. In anticipation of future mining production, a narrow gauge railroad was built on the east side of the valley. The Benton to Laws segment of the Carson and Colorado Railroad was constructed in 1882 and the Laws to Keeler segment was completed by 1883 (Turner 1964). The anticipated mines never materialized, but the railroad did provide an available, albeit expensive, means of transporting farm and ranch products to market.

In an attempt to offset high transportation costs, the 1890s saw the enlargement and specialization of farms in the Owens Valley. With the newly completed railroad, cattle proved to be the cheapest product local farmers could export. Many farms turned to raising alfalfa and grazing cattle. In the early 1900s there was some economic improvement due to new mines at Goldfield and Tonopah, Nevada. But for the most part the southern Owens Valley never regained the prosperity of the 1860s and 1870s (Sauder 1994:74).

George's Creek

At the beginning of Euroamerican settlement in Owens Valley, the area west of the present-day Los Angeles aqueduct from George Creek on the south to Shepherd Creek on the north was known as George's Creek. By the early 1860s the first cattlemen had arrived in the area in search of pasture for their cattle. At George Creek they found a Paiute settlement of about one hundred inhabitants. The headman, known to the settlers as Captain George (for whom the creek was named), was later to earn the respect of both Indians and whites as an exceptional leader both in peace and in war.

The principal Euroamerican settlement in this area was located on George Creek, below the Paiute settlement. The principal north-south wagon road through Owens Valley ran up the western side of the valley, along the base of the Sierran bajada, well above the marshy land of the river bottom (Costello and Marvin 1992:34-35). The road meandered somewhat as it connected the various settlements, ranches, and springs in the valley (Figure 6.2).

The "Half-Way House," a stage stop half way between Lone Pine and Independence, was built on the north side of George Creek in 1860. The stage stop was closed after the Carson and Colorado Railroad was completed in 1883, and between 1883 and 1889 the stage stop building was used as school. A new school was built to the north and across the road and the former stage stop was then used as a home for teachers. In 1910 Los Angeles took possession of the building and used it to house crews working on the LA aqueduct (Wood 1977a:94). The school was closed due to a lack of students in 1922 and the remaining students were transferred to the school at the town of Manzanar (Wood 1977a: 94).

Among the first Euroamerican settlers in the George's Creek area were John Kispert and John Shepherd. John Kispert and a friend passed through the Owens Valley en route to trap in Southern California in 1859. Two years later Kispert returned and located 400 acres on George Creek and claimed all of its water rights. He built a small rock and adobe home and grew barley for the mines. In 1869 he brought his 16-year-old bride, Augusta, to his ranch from Minnesota. Captain George had a small ranch nearby that he later sold to Kispert. In 1873, following the Owens Valley earthquake, Kispert replaced his adobe cabin with a two-story wood frame Victorian-style house. After his death his wife sold the ranch to her son Charles and ran a boarding house in Independence until 1920 (Wood 1977b:113-114).

John Shepherd, originally from Canada, arrived in the Owens Valley in 1864. After mining and hauling freight for a while, he maintained the stage stop at George's Creek and homesteaded 160 acres about two miles north of the Kispert Ranch (Cragen 1975:136). While not along a creek, the area appears to have been well-watered: later historical accounts mention an artesian well under a big cottonwood tree near the old Shepherd Ranch (Gates 1977:105; Blanche Franier Wellington, Eastern California Museum files). Harriet Chaffey Payne, who lived in the house from 1905 to 1907, describes a flume and waterwheel near the house (Payne 1960).

Shepherd built a small cabin of adobe brick covered with white plaster made from alkali collected from the east side of the valley (Shepherd File, Eastern California Museum) and brought his 18-year-old wife Margaret and two children from Visalia to live there. He began a cattle ranching operation and grew alfalfa and grain for export to nearby mines.

After the Owens Valley earthquake, Shepherd built a nine-room two-story Victorian-style ranch house (Figure 6.3). Wood for its construction was brought by wagon from Los Angeles and its elaborate white gabled exterior became a landmark in the southern Owens Valley. An ornate fountain graced its front entrance and the house was surrounded by apple, walnut, cottonwood,

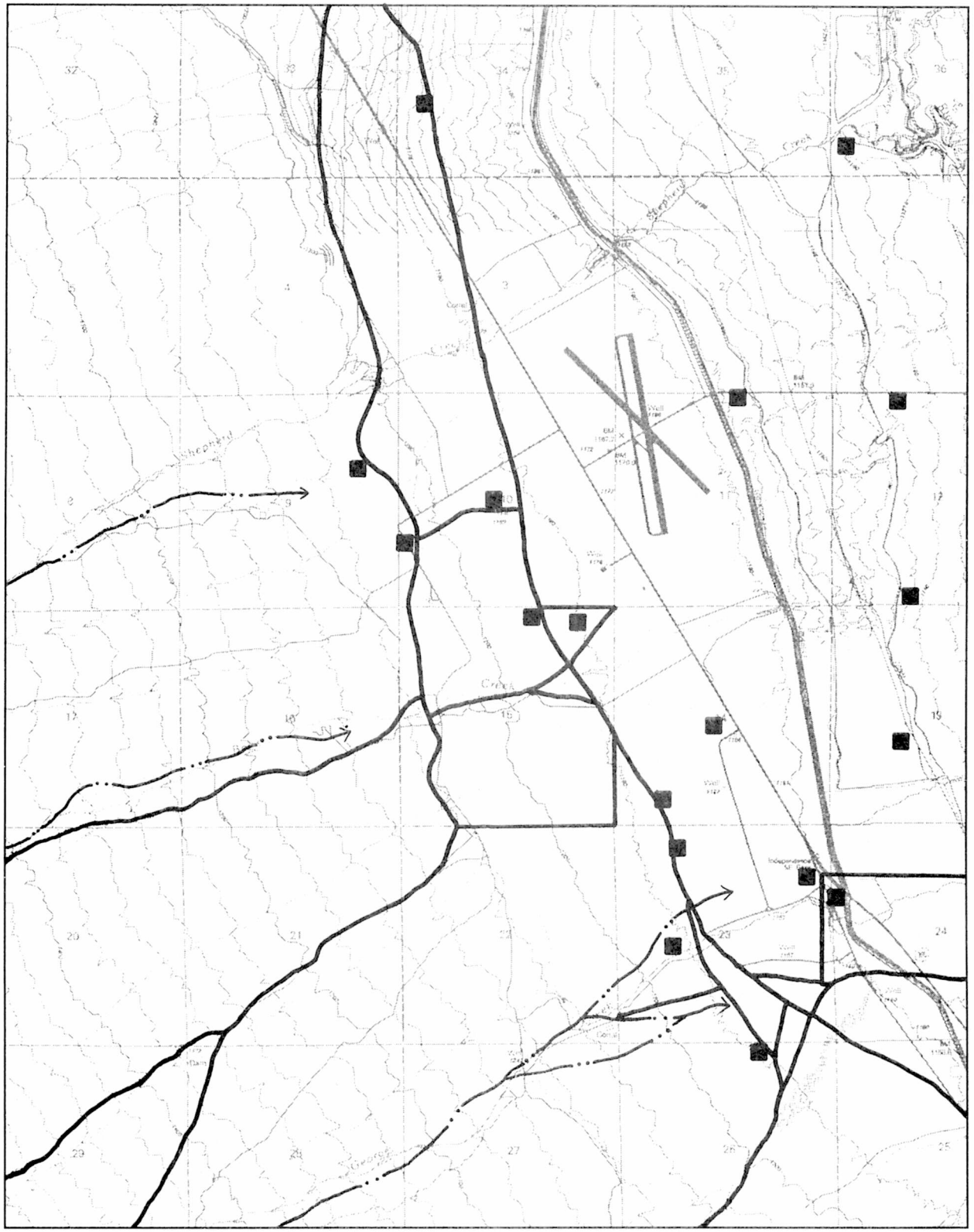


Figure 6.2. Structures (squares), roads (solid lines), and water courses (broken lines) from 1907 USGS 30 minute map of Manzanar and vicinity (base map adapted from 1982 USGS 7.5 minute maps Bee Springs Canyon, Independence, Manzanar, and Union Wash, California).

Figure 6.3. John Shepherd's house (courtesy of Eastern California Museum).

and poplar trees. The Shepherds had eight children, and the Shepherd Ranch became the center of much spirited social life and a stopping place for travelers and teamsters (Cragen 1975: 166).

Following disagreements over water rights, John Shepherd eventually bought out other ranchers in the area. His holdings grew to over 2,000 acres and two-thirds of the water rights on Shepherd Creek (Figures 6.4 and 6.5). One of John Shepherd's sons, James Edward "Ed," built a house south of the Shepherd Ranch on land patented in 1872.

In 1874 Shepherd obtained the contract to build a toll road from Owens Lake to the mining towns of Darwin and Panamint City. Shepherd employed a large Paiute work crew under the supervision of Captain George (Cragen 1975:166; Walton 1988:29). The road was finished by the end of 1875 and Shepherd served as toll collector (Cragen 1975:155).

Shepherd also hired Paiute from a large camp to the west of his ranch. Located above irrigated land the camp consisted of tents and shelters made from tule reeds. Nearby was a reported burial ground (Manzanar File, Eastern California Museum). Some of the women winnowed grain and performed domestic tasks, while the men did irrigation work and other ranch chores. As was the custom in the valley, many of the Paiute took the Anglo surname of their employer, a sign of respect on the part of the Indians and of the paternalistic relationship which developed.

According to his daughter, when John Shepherd died hundreds of Indians came to the Masonic Hall where his body was lying in state to hold their own ceremony prior to the funeral (Gunn 1951). However, relations may not have been always amicable. Walton (1992:106, 109) interprets a fire started at the Shepherd Ranch by a Paiute worker as likely arson. Hay stacks, a hay press, granaries, and stables were threatened.

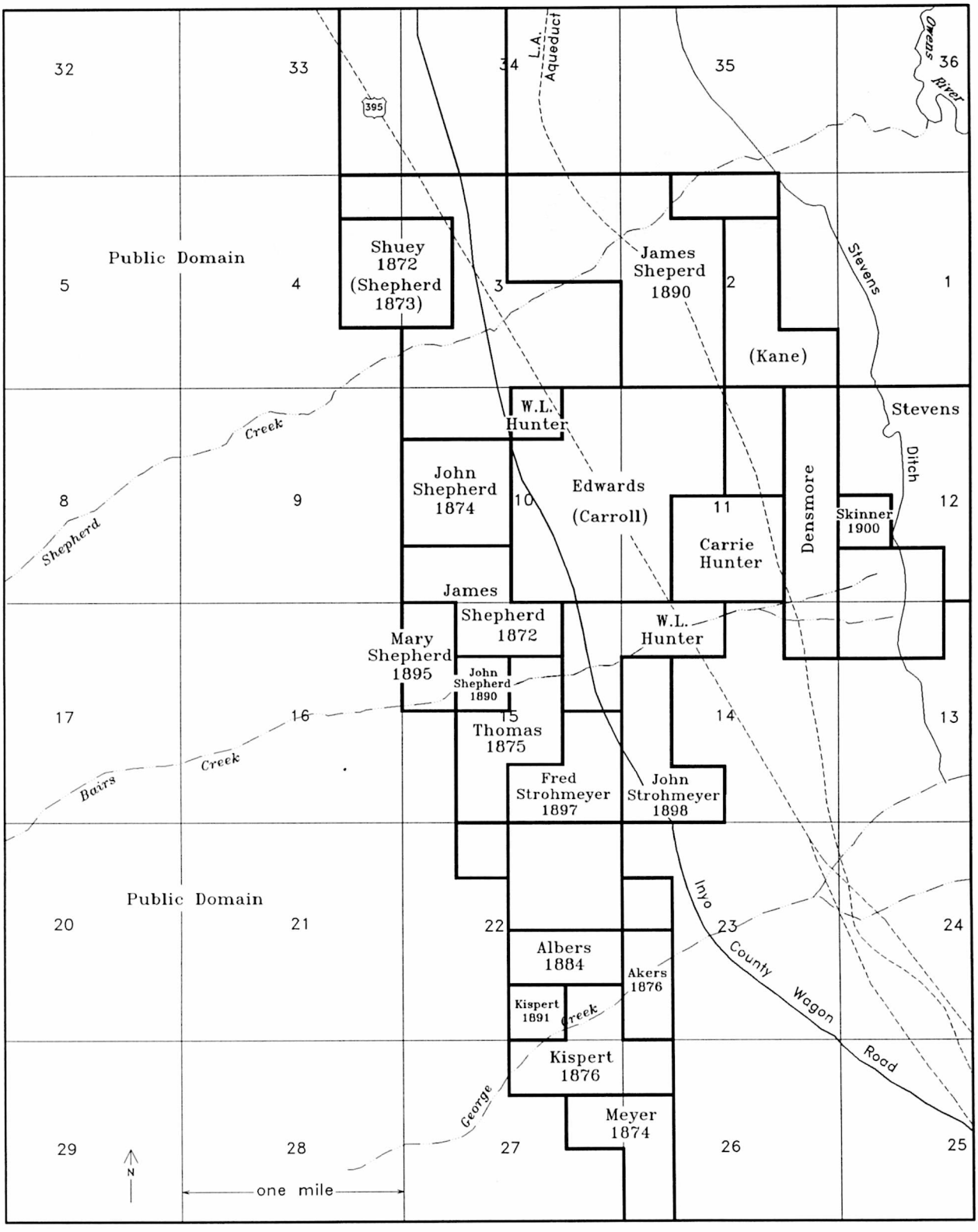


Figure 6.4. Land ownership in the Manzanar area, 1900 (data for eastern portion of map is incomplete).

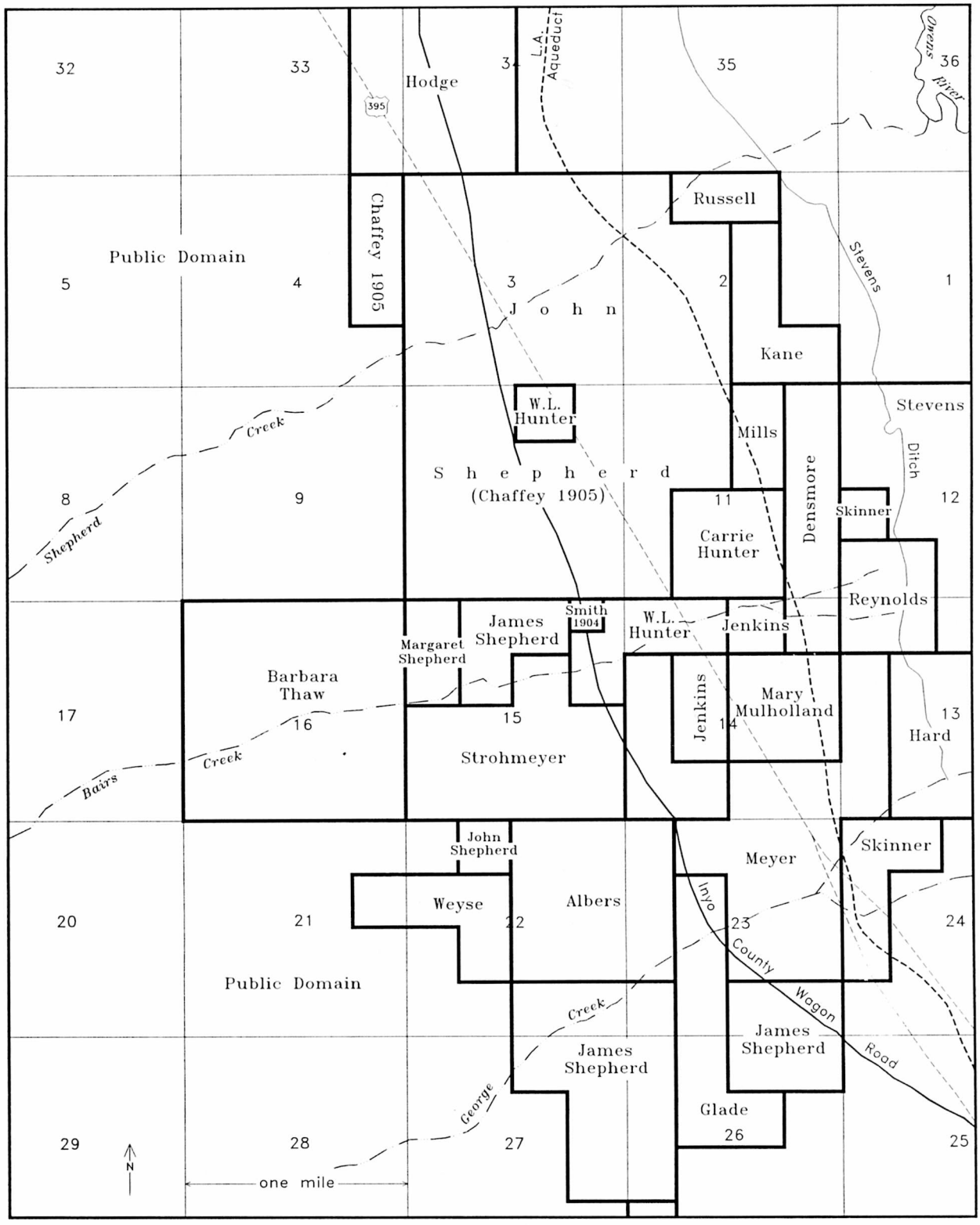


Figure 6.5. Land ownership in the Manzanar area, 1905 (data for eastern portion of map is incomplete).

The Paiute became an indispensable part of the labor force and contributed to the success of the Owens Valley farms and ranches with their knowledge of irrigated agriculture (Michael 1993). The Paiute fields appropriated by early homesteaders were irrigated with water diverted from Sierran streams. In 1887 the Owens River itself was tapped to bring water to the George's Creek area. Col. Sherman Stevens, C.A. Skinner, and Mr. Jenkins began construction of a ditch (Stevens Ditch) to take water from the river above Independence and convey it south. The ditch was 15 miles long and reached an area east of the George's Creek settlement by 1893.

Perhaps the most well-known resident of the George's Creek area was the author Mary Austin, who lived there in 1893. She and her husband, Stafford Wallace Austin, came to Inyo County in 1892. Wallace was to manage an irrigation project to be built by his brother Frank near Lone Pine (Hoffman 1984:102). The project failed due to lack of capital and Wallace disappeared, possibly to go prospecting. Mary stayed on in Lone Pine a while, but was unsure when or whether Wallace would return. Pregnant with her only child, she returned to Bakersfield to live with her family.

When Wallace Austin reappeared and got a teaching job at George's Creek in the spring of 1893, Mary re-joined him. In her autobiography, Mary Austin mentions a Paiute camp up George Creek and sheepherders stopping at the creek on the way to and from summer pastures (Austin 1932:248). The following school year the Austins moved to Lone Pine for a better paying teaching job. Wallace later became the registrar at the U.S. Land Office in Independence. Mary's experiences in the valley provided material for *The Land of Little Rain* (1974) and numerous short stories.

There were other pioneering families in the George's Creek area. An oral history from John Shuey describes his family's early homesteading efforts along a now non-existent smaller creek north of the Manzanar area (Manzanar file, Eastern California Museum).

William Lyle Hunter, who operated a pack train to Cerro Gordo, moved his family to George's Creek in 1866. Elected county clerk in 1884, he was later appointed county supervisor. He also owned the Hunter Mountain Ranch in the Panamint Range, where he employed a large group of Indians (Greene 1981). Hunter died in 1902 at the age of 59 (Spear 1977:163-164).

John H. Lubken homesteaded on George Creek in 1862. He later traded his ranch to John "Hans" Myers for the Lone Pine Brewery. Although heavily damaged in the 1872 earthquake, the brewery generated a modest profit until it was closed in 1894.

The Los Angeles Aqueduct

Dozens of books and articles deal with the acquisition of water rights in the Owens Valley by the city of Los Angeles. Among the most prominent are those by Hoffman (1984), Kahrl (1982, 1988), Nadeau (1950), Sauder (1994), and Walton (1992). The following is a general summary of the water story from these accounts and others as it pertains to the early twentieth-century history of Manzanar.

The Owens Valley was one of eight areas in California chosen by the newly-formed U.S. Reclamation Service (USRS) to investigate for large-scale irrigation suitability (Vorster 1992: 275). Studies of water flow and availability began in June 1903 (Miller 1977:66), and Owens Valley residents hoped that eventually all of the Owens River would be impounded, so that thousands more acres could be brought under irrigation. But J.B. Lippincott, who headed the studies, soon recommended that the USRS data be turned over to Los Angeles.

The idea to transport Owens Valley water to Los Angeles via an aqueduct was conceived by former Los Angeles mayor Fred Eaton and

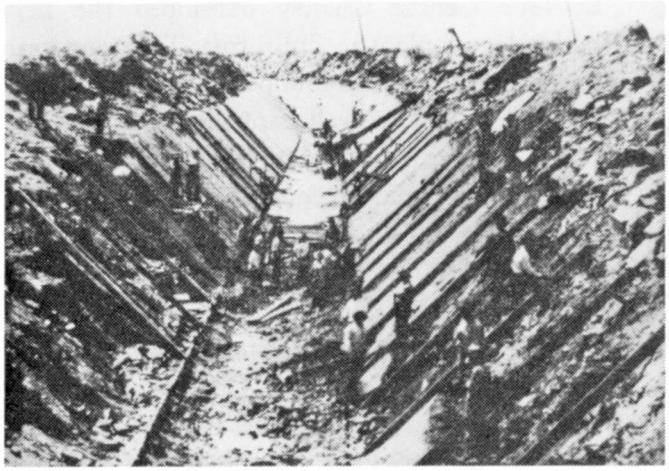


Figure 6.6. Los Angeles Aqueduct under construction (LADWP photograph).

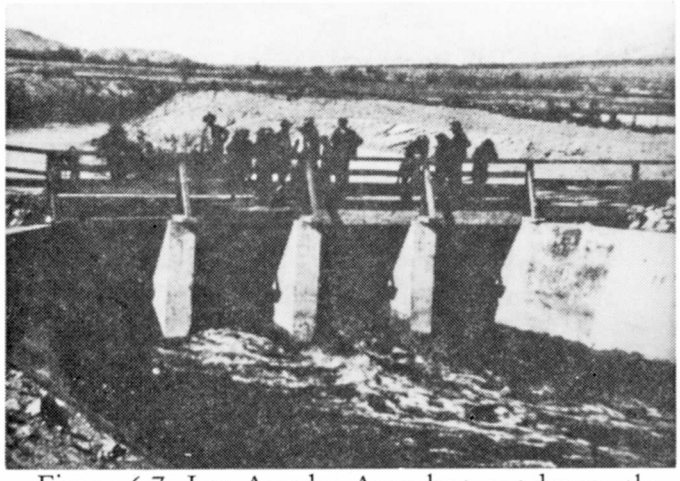


Figure 6.7. Los Angeles Aqueduct outake on the Owens River (LADWP photograph).

implemented by Eaton and Los Angeles chief engineer William Mulholland. Eaton had first traveled to the Owens Valley in 1892 as a potential investor for Frank Austin's Lone Pine irrigation project, which also brought Wallace and Mary Austin to the valley (Hoffman 1984:102). The project was never funded. Perhaps coincidentally, Wallace later became one of the most outspoken critics of Los Angeles's actions (Hoffman 1984:101-102).

In 1904, agents acting on behalf of Los Angeles (including Fred Eaton and William Mulholland) began buying the water options and rights-of-way necessary for the aqueduct. The agents were careful not to say for whom they were working until July 1905 when Los Angeles's plans were made public. The U.S. Reclamation Service formally withdrew from the Owens Valley Project in 1907.

Lands had been withdrawn by the U.S. Reclamation Service prior to the beginning of their studies in the Owens Valley and Long Valley; Lands along the Owens River withdrawn by Executive Order in 1906 totaled 298,880 acres. Additional withdrawals were made for watershed protection in 1907 and 1908 with the establishment of the Inyo National Forest (Martin 1992). Ostrom (1953:127) notes that by 1945, "the Federal Government had withdrawn 672,954 acres of public land from homestead entry to protect Los Angeles' water rights."

Construction of what was for a time the longest aqueduct in the world began in 1907 (Figure 6.6 and 6.7). Aqueduct construction fostered an extension of the Southern Pacific Railroad, and construction camps of up to 2,000 workers each were established along its route (Kilgore 1988). In 1910 the Southern Pacific was completed to its northernmost point at Owenyo, five miles north of Lone Pine where it connected to the old Carson and Colorado narrow gauge line which had been purchased by Southern Pacific in 1900 (Los Angeles Board of Public Service Commissioners 1916:93). The aqueduct was completed in 1913, ahead of schedule and under budget (Vorster 1992:275).

George Chaffey and the Owens Valley Improvement Company

The announcement of the Los Angeles Aqueduct project coincided with noted developer George Chaffey's (Figure 6.8) attempts to develop Sierran streams for a new agricultural "Irrigation Colony" in the Owens Valley. George Chaffey was a successful water developer in his own right. He was born in 1848 in

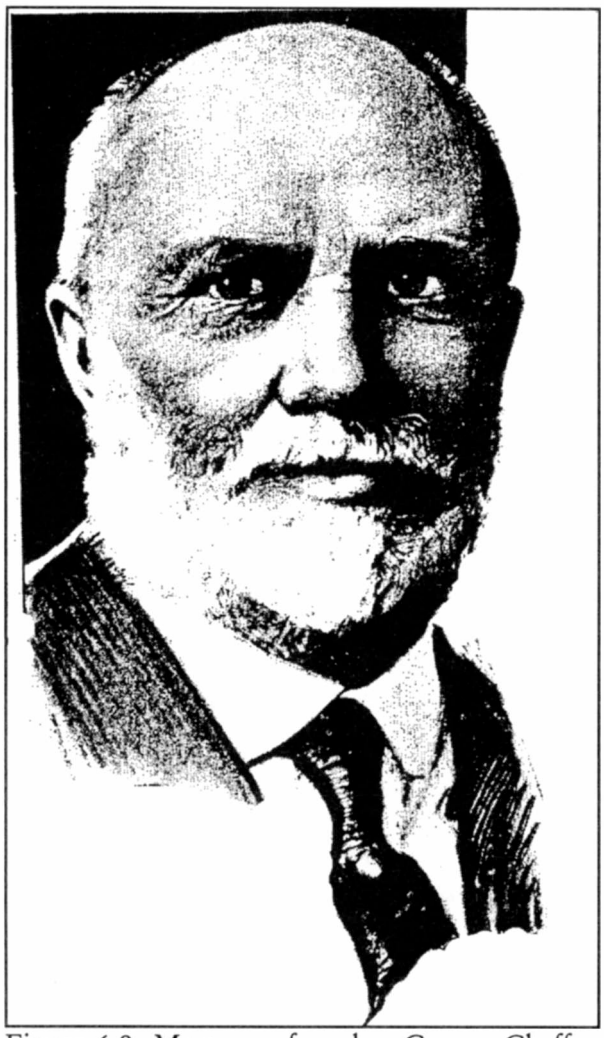


Figure 6.8. Manzanar founder, George Chaffey ca. 1910 (from Alexander 1928).

Brockville, Canada. In 1878 his father retired to Riverside and brought two of his sons and a daughter with him. George visited once and never returned to Canada, but instead went into business with his brothers. In 1881 the Chaffey Brothers founded Etiwanda, an irrigation colony in southern California. The colony was subdivided into 10-acre blocks, and water was transported to houses and fields in cement pipes, an innovation for the time. The Chaffeys revolutionized irrigation systems in California by assuring equal access to water for all users in their communities. Water rights were held by a mutual water company, with each landowner getting one share per acre. Landowners shared equally in good years and droughts, and cooperated rather than competed for water.

In 1882 George Chaffey developed the first hydroelectric plant in California. The same year the Chaffey Brothers founded Ontario, California, and became so well-known that in 1886 the brothers were recruited to work in Australia setting up irrigation colonies at Mildura and Renmark.

In 1898, George Chaffey returned to Ontario, then in the midst of a water shortage due to rapid growth and a drought. Chaffey gained new renown by securing additional water supplies for the city. In 1900-1901 he pulled the California Development Company from near bankruptcy, completed the first canal from the Colorado River to the Imperial Valley, and founded the towns of Mexicali, Calexico, and Imperial.

In the early 1900s George Chaffey started the First National Bank of Imperial, the First National Bank of Ontario, the American Savings Bank of Los Angeles, and the First National Bank of Upland, and set up developments in the East Whittier and the La Habra Valley areas of southern California (Alexander 1928).

In September 1905 Chaffey took options on Cottonwood Creek 20 miles south of Manzanar. He intended to use the water for another large irrigation project and to generate hydroelectric power for an electric railroad to Los Angeles. Earlier, in July, George's brother, Charles Francis Chaffey, had purchased the Shepherd Ranch and the water rights to Shepherd and Bairs Creeks for a reported $25,000. Charles moved his family of eight to the ranch in September where they lived until 1907. After that a succession of company farm superintendents took over management of the property and lived at the ranch.

The Chaffeys formed the Sierra Securities Company, with George Chaffey as president. Over the next five years, properties adjacent to the Shepherd Ranch were acquired for a total of about 3,500 acres (Figure 6.9). The *Inyo Independent* (September 16, 1910) stated that Chaffey's

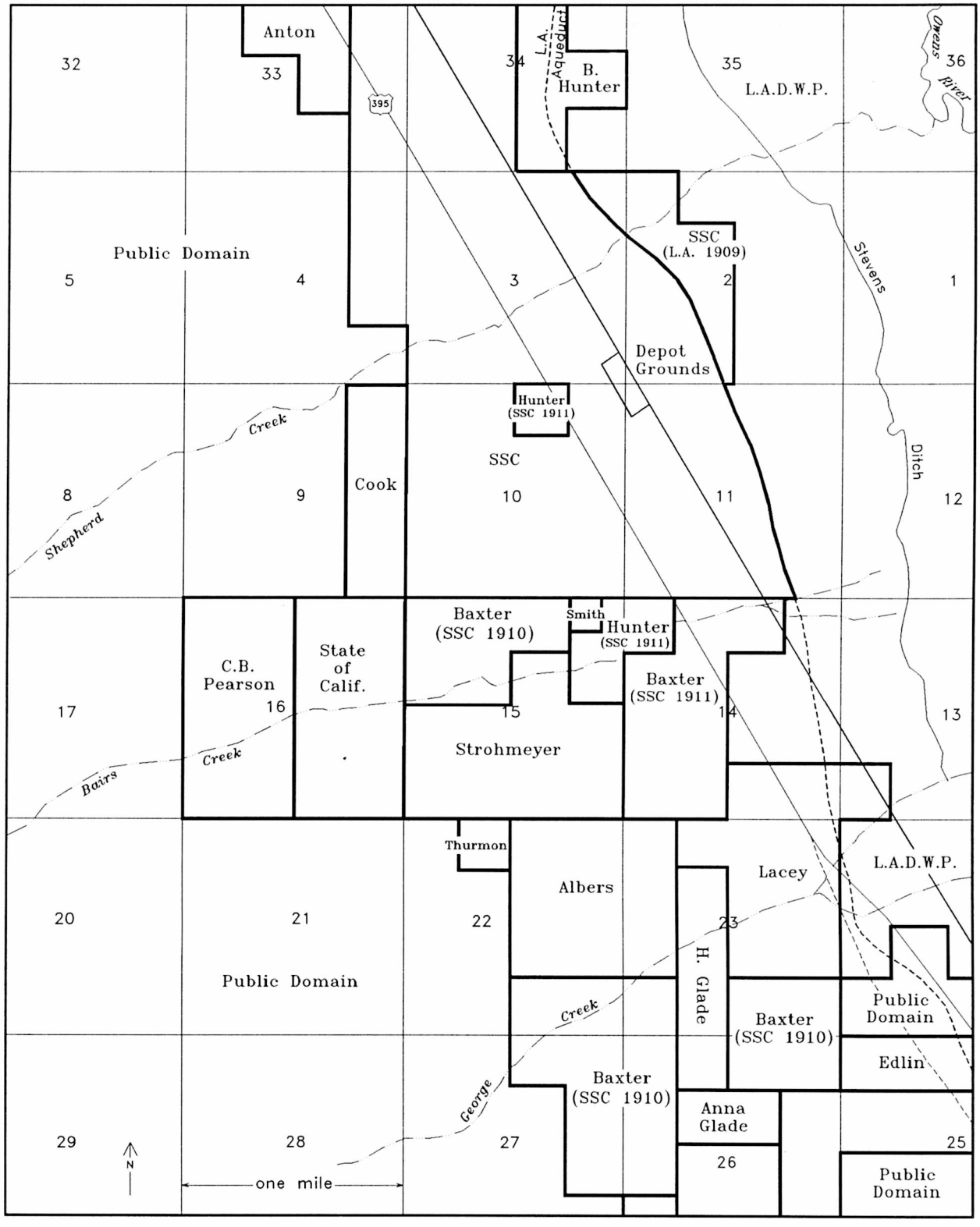


Figure 6.9. Land ownership in the Manzanar area, 1910.

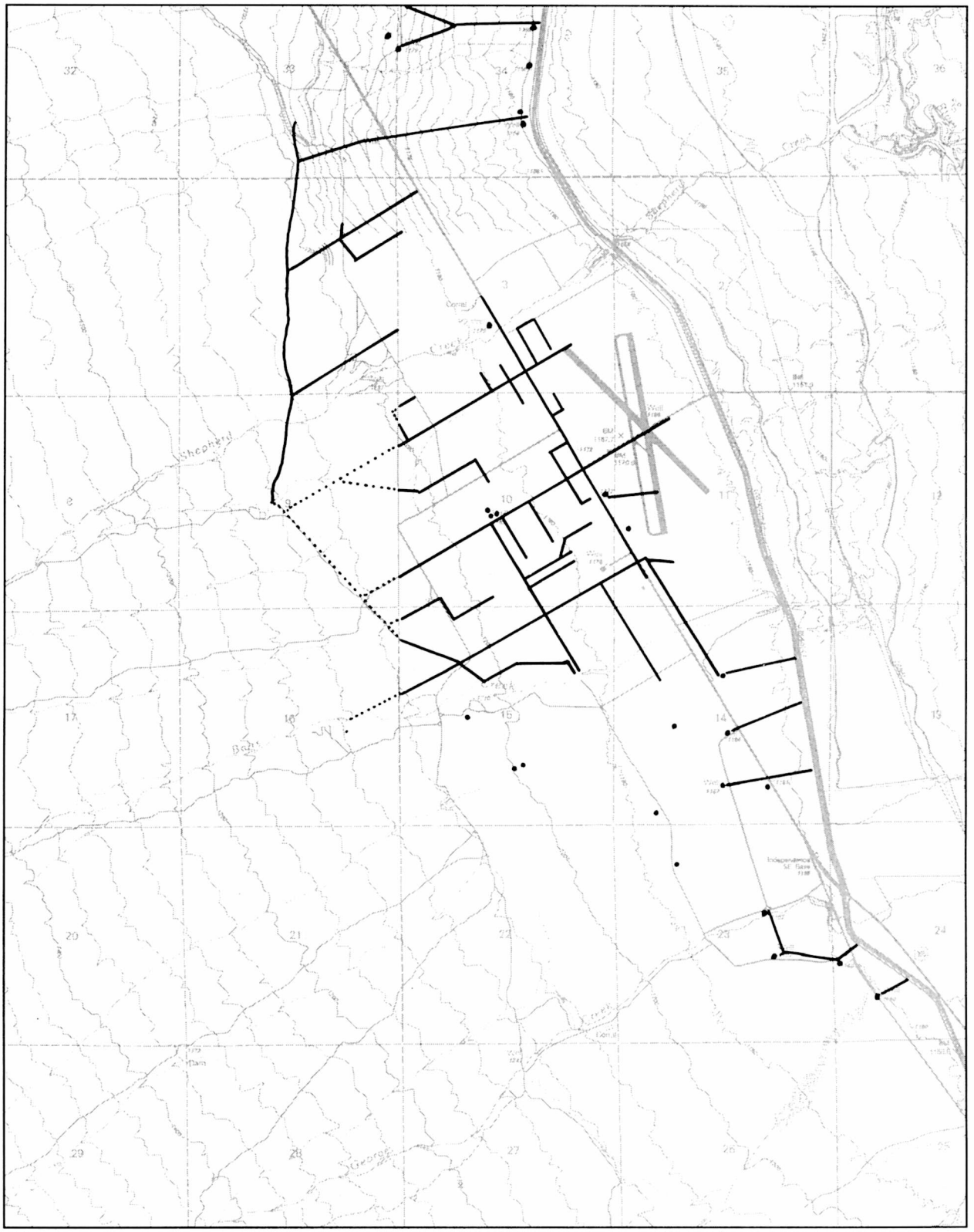


Figure 6.10. Manzanar Irrigation system and other pipelines and wells in the Manzanar area (information compiled from 1929 LADWP plat maps; base map adapted from 1982 USGS 7.5 minute maps Bee Springs Canyon, Independence, Manzanar, and Union Wash, California).

interests owned "one-third of the water in George's Creek, all of Bair Creek, all of Shepherd Creek and two-thirds of Independence Creek. Besides this they have a natural artesian belt three miles long running along the property."

Land holdings and water rights were transferred from the Sierra Securities Company to the Owens Valley Improvement Company (OVI), formed by the Chaffeys in September 1910. A concrete pipe manufacturing operation was begun and a system of concrete and steel gravity-flow irrigation pipes was constructed to carry water from Shepherd and Bairs Creeks to the development, which was to include both farms and a townsite (Figure 6.10).

Plat maps for the Owens Valley Improvement Company's Subdivision No. 1 (2,000 acres), Subdivision No. 2 (1,000 acres), and the Manzanar townsite were prepared in August 1910 and filed November 15, 1910. The 3,000 subdivision acres were divided into 140 lots. The townsite, composed of 160 acres within Subdivision No. 1, was divided into 312 smaller lots (Figures 6.11 and 6.12).

The townsite was centered on Independence Avenue (now U.S. Highway 395) and Francis Street (presently the Manzanar-Reward Road), and surrounded by the larger farm parcels. The main north-south road in the area was originally one mile east of downtown, but was moved to be more centered on the subdivision (Inyo County Recorders Office Records). Streets laid out parallel to Independence Avenue included Inyo Avenue (one mile east), Baxter Avenue (one mile west), and Western Avenue (two miles west). East-west streets, at one mile intervals from north to south, were named Hord, Spring, Nanson, Centre, Francis, Valley, Whittier, and Shepherd.

Called the Manzanar Irrigated Farms, the development was advertised by agents in San Francisco and Los Angeles and promoted through brochures which touted the potential for success and wealth at the new colony because of its fine soil, abundant water, favorable climate, and proximity to markets. Parcels of ten, twenty, and forty acres were offered for sale at $150 and up. Parcels included ownership of one share per acre in the Manzanar Water Company and the services of a *zanjero*, or water distributor. Irrigation water was to be delivered to the highest point of each parcel; water for domestic use would come from wells.

Planting of apple and pear trees was begun by the Owens Valley Improvement Company and by 1912 over 20,000 trees had been planted. The Owens Valley Improvement Company would plant and care for apple trees for absentee landowners (Sauder 1994:128).

A general store, blacksmith shop, and community hall were built. By 1912 most of the roads were graded, Baxter Avenue was no longer swampy, and a bridge over Stevens ditch was completed (Letter to OVI president and board of directors, May 16, 1912, Eastern California Museum files). The Manzanar railroad station (originally named Francis) was a modified boxcar four miles east of town along the narrow gauge Carson and Colorado track (Figure 6.13); a wagon and team of mules made round trips for freight and passengers.

Buyers, some with little or no previous agricultural experience, arrived from points as distant as Missouri and Indiana and from nearby Independence and Lone Pine. While most had purchased the property they farmed, others farmed lands for absentee owners. Primary agricultural products were apples, pears, peaches, alfalfa, grain, poultry, and honey. Initially, markets for these products were in the neighboring towns and the mining areas in the eastern Owens Valley and Nevada. As the mines went into decline, however, more of the products left the Valley by railroad, either through Tonopah and Goldfield to northern markets, or to Mojave and Los Angeles. The trip south, however, was made

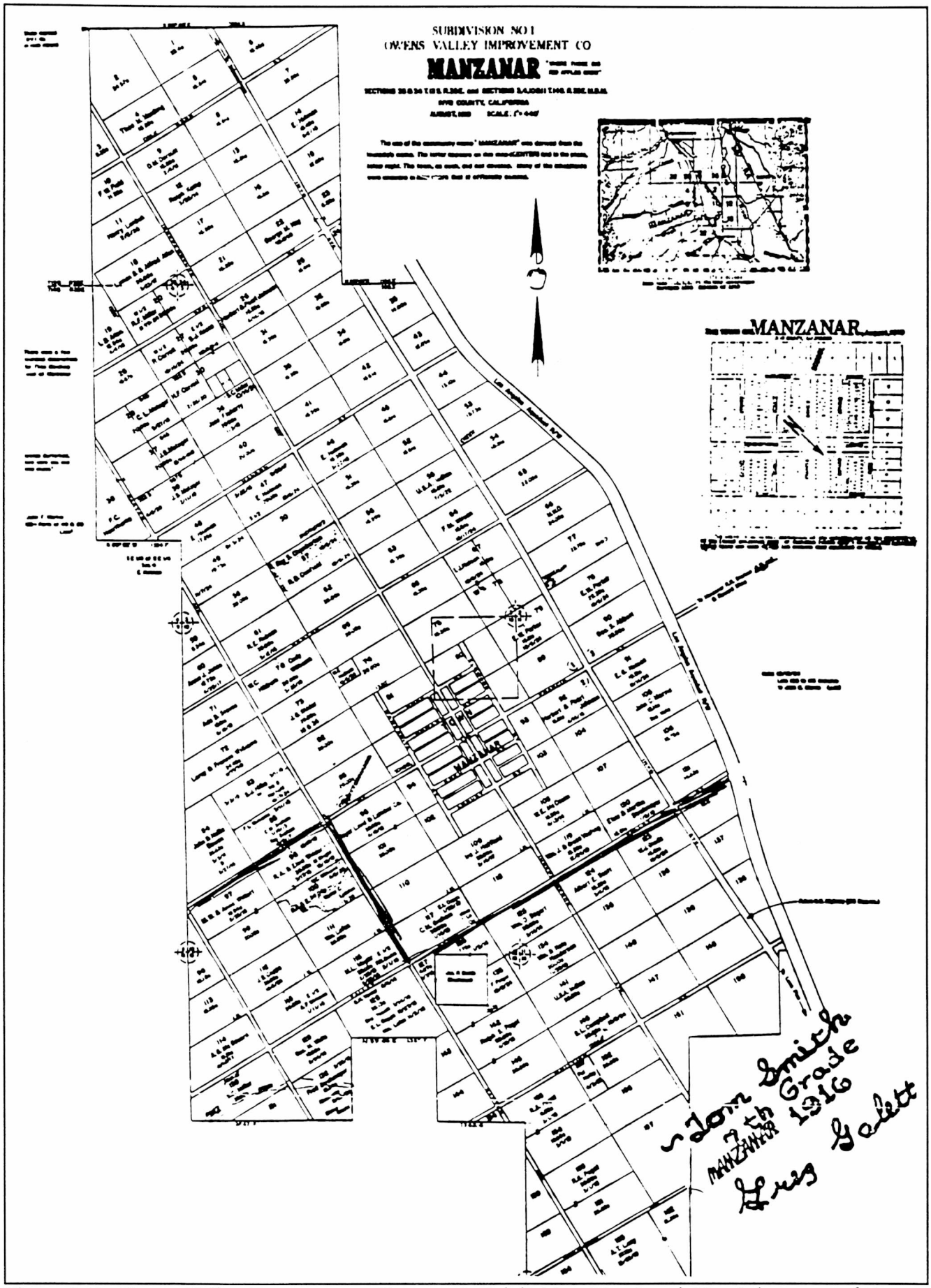


Figure 6.11. Owens Valley Improvement Company's Subdivision No. 1 and No. 2 (courtesy of Eastern California Museum).

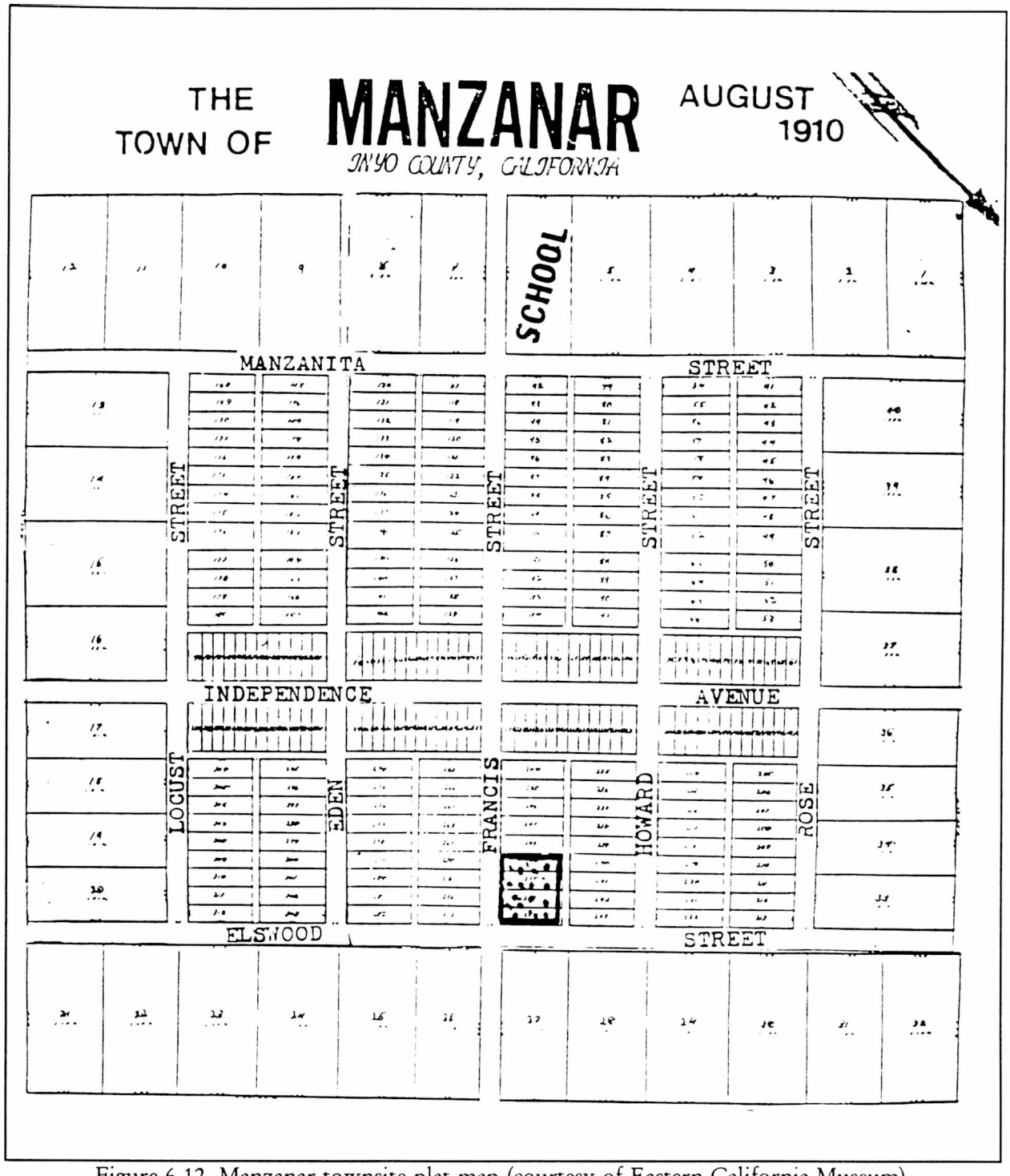


Figure 6.12. Manzanar townsite plat map (courtesy of Eastern California Museum).

in unrefrigerated cars and required costly reloading from the narrow to the broad gauge line at Owenyo or hauling to Lone Pine to pick up the broad gauge directly.

The irrigation system devised by Chaffey was the first water conservation project in Owens Valley; previously only unlined ditches were used. Even so, there were early problems in supplying irrigation water to the new arrivals. In a letter to OVI president George Chaffey and the board of directors (OVI, May 16, 1912, Eastern California Museum files), it was noted that two shareholders claimed they had no water last year and

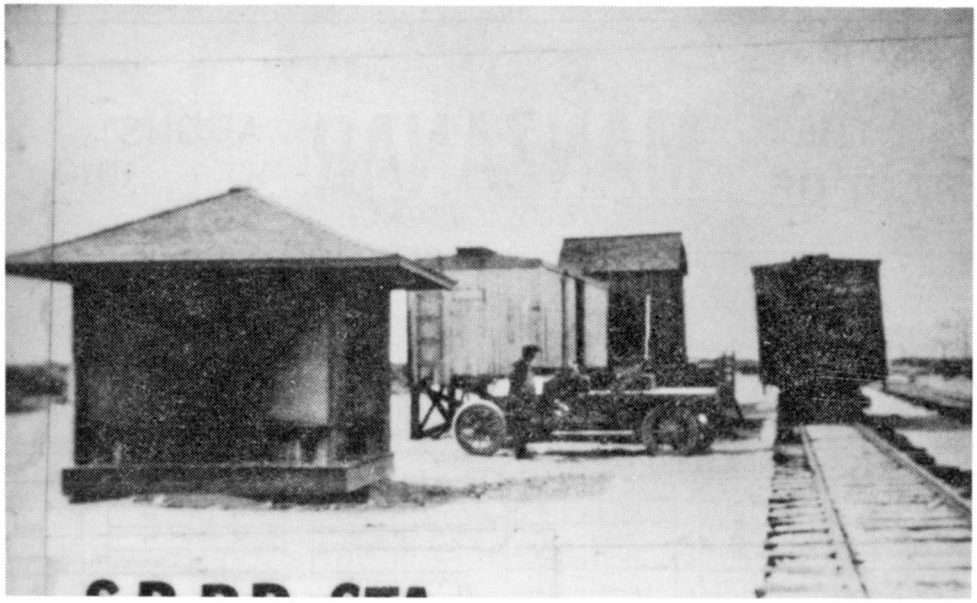


Figure 6.13. Manzanar Railroad Depot (courtesy of Eastern California Museum).

could not plant crops, and two others did not have their promised connections.

In 1912, the Manzanar School District was formed with one teacher in the elementary school and another added later. High school students were bused to Independence. In 1916, a reported 29 pupils were enrolled; by the early 1920s, enrollment exceeded of fifty students as the school reached its peak enrollment following the closure of the school at George's Creek.

A lively social life grew up in the community and centered around the town hall, where Farm Bureau meetings were followed by potluck dinners and dancing to live music provided by local musicians. Other community activities included town picnics in a grove of cottonwood trees (possibly at the old Shepherd Ranch), ice-skating on the Los Angeles aqueduct, and baseball games with the Manzanar team in uniform against nearby towns.

In July 1916 the Manzanar Water Company was bought by the Owens Valley Improvement Company which then constructed a large system of inverted tile drainage ditches (California Development Board 1917; Gorman 1967; Smith 1977). The system, the only one of its kind in the Owens Valley, was designed to stop the build-up of alkali which had made large areas elsewhere in the valley unproductive (Kahrl 1982:256-257).

The Town of Manzanar

The 1920 Census shows a total Inyo County population of 7,031 residents and a Manzanar population of 203. Of the 57 Manzanar-George's Creek area households surveyed, 42 were owners of their property, and 15 were renters. Nine Indians were listed; the rest of the population was white, with predominantly northern European ethnic backgrounds. Most gave farming as their occupation. (Census Bureau 1920).

By the 1920s Manzanar boasted a general store/post office, a town hall, a garage, an ice cream stand, a cannery, a lumber yard, a two-room school house, and over 25 homes (Figure 6.14 and 6.15). Apples, pears, peaches, potatoes, alfalfa and other crops were grown on nearly 5,000 acres surrounding the settlement (Gorman 1967; Manzanar file, Eastern California Museum).

The store was located on the northwest corner

Figure 6.14. Oblique aerial view of Manzanar, ca. 1930 (Geography Department Archives, UCLA).

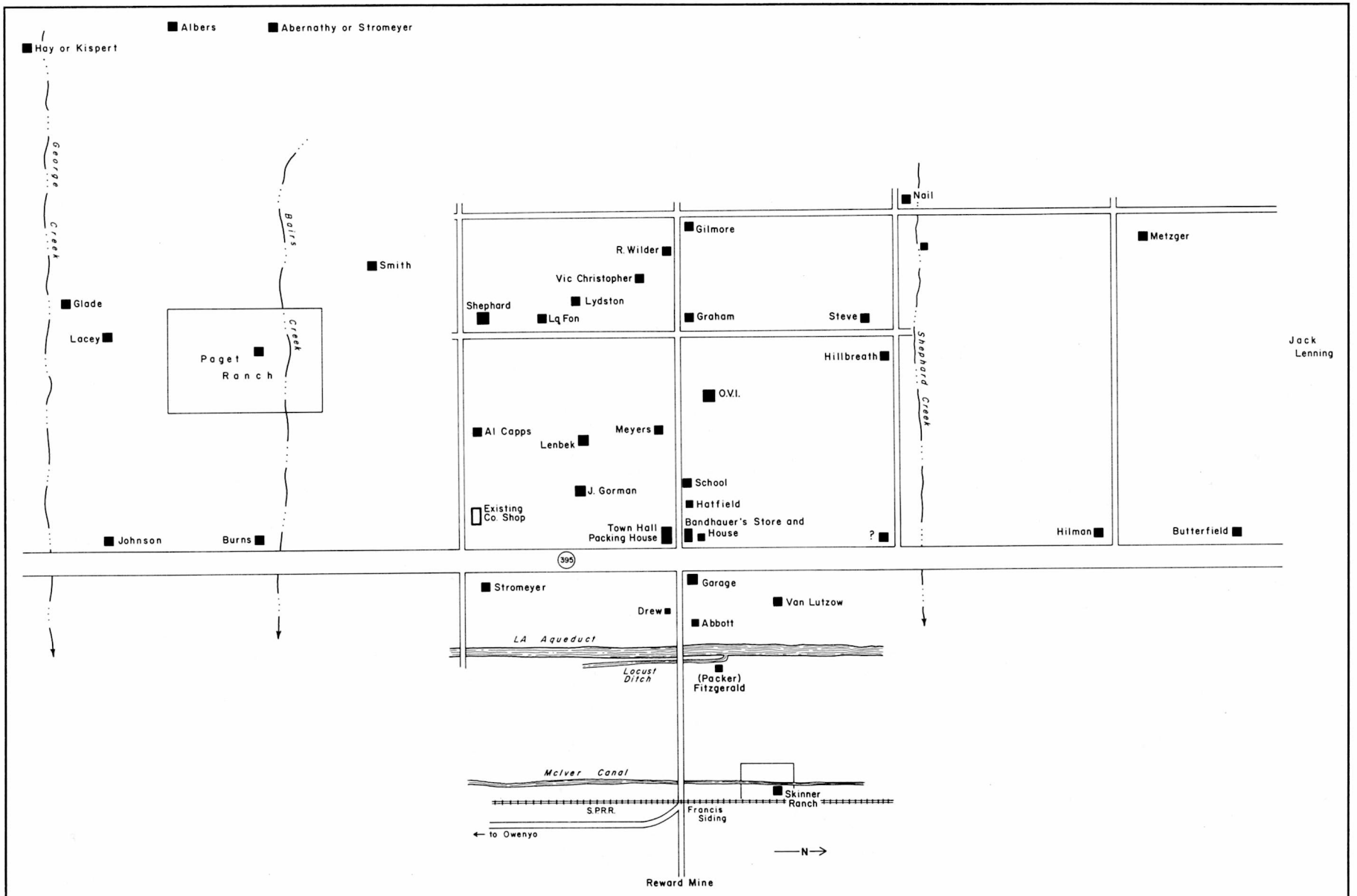


Figure 6.15. Manzanar as remembered by past residents Vic Taylor and Anna Kelly (drafted from original at Eastern California Museum).

Figure 6.16. Manzanar Store (courtesy of Eastern California Museum).

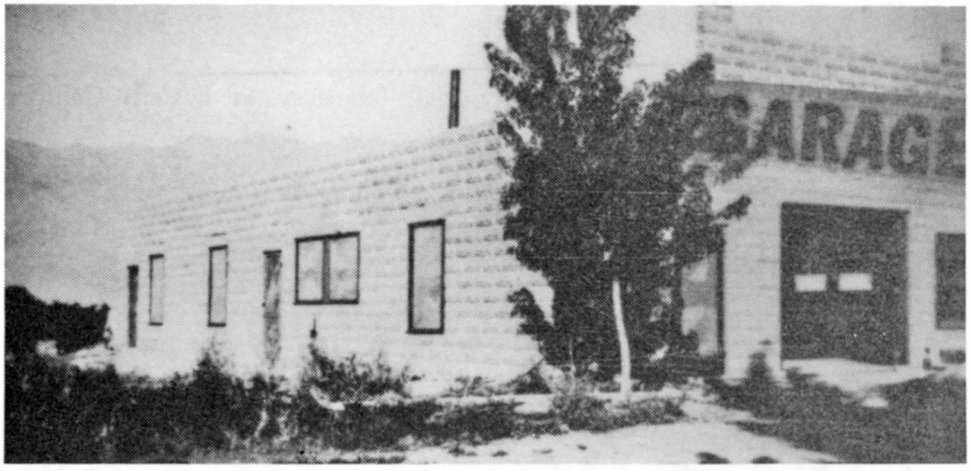


Figure 6.17. Manzanar Garage (courtesy of Eastern California Museum).

of Francis Street and Independence Avenue (Figure 6.16). It also served as the town post office and had the area's only telephone. Originally owned by the Hatfields, it was purchased in 1918 by the Bandhauer family, who owned it until 1924 when the property was purchased by Los Angeles. The Bandhauers constructed a home on the north side of the store facing the main highway about 1918. Just north of the store was a small lean-to known as the "Wickiup," which served ice cream and cold drinks to travelers passing through on the main road between Lone Pine and Independence. A short-lived blacksmith shop was located north of the Wickiup.

East across the highway from the store was a garage with gas pumps. Its construction date is unknown, but it was built, according to the Shelley family who owned it, of blocks made from native sand and cement (Figure 6.17). South of the store, at the southwest corner of Francis Street and Independence Avenue, was the community hall (Figure 6.18). The community hall also functioned as a packing house, and housed OVI offices, a library, and living quarters. Called simply "The Hall" by the locals, it was also the scene of weddings, funerals, church services, and Ladies Aid Society meetings.

Differing accounts place the cannery just south of the Community Hall on Independence Avenue or to the west on Francis Street. The Water Company Office was a small building, by

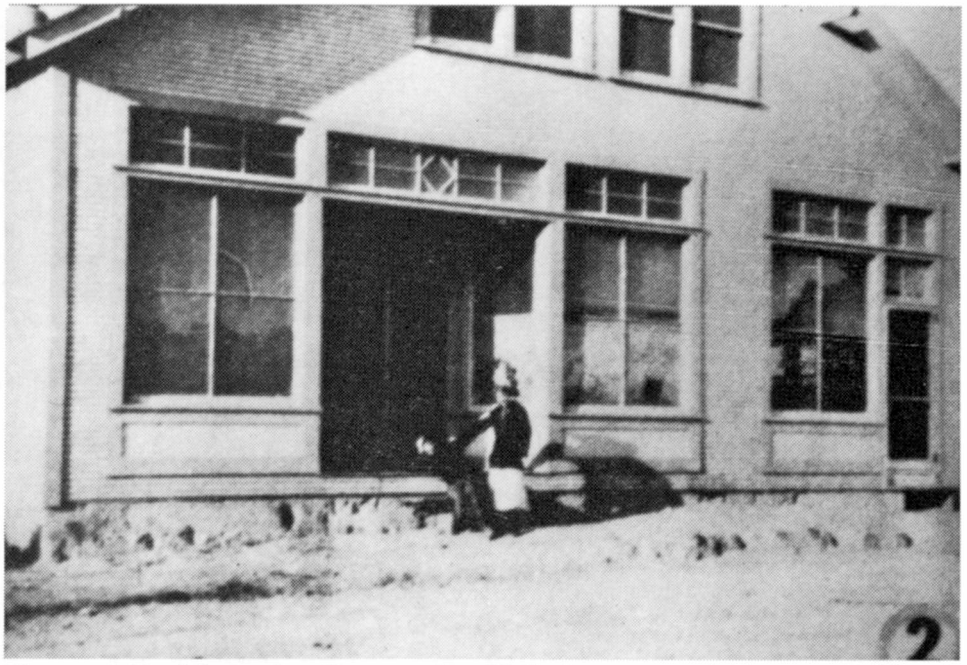


Figure 6.18. Manzanar Community Hall (courtesy of Eastern California Museum).

Figure 6.19. Manzanar School (courtesy of Eastern California Museum).

some accounts located west of the Community Hall on Francis Street; either this building or the cannery was destroyed by a windstorm in 1923. Two lumber yards are mentioned in oral histories of the Manzanar area; one was owned by G. W. Dow, but no mention of any structures connected with either have been found. The Manzanar School, constructed in 1911-1912, was located west of downtown on Francis Street (Figure 6.19). Between the School and downtown was the Lacey House.

Homes in the surrounding subdivision included corrals, small fields, fruit orchards, and vegetable gardens. The R.A. Wilder Home was located on the south side of Francis Street, about one-half mile west of the school. A frame structure, it burned in 1921 and was replaced with a concrete block home, reportedly one of a few built at that time (Smith 1977:104-105). It was known for its indoor plumbing. The Wilder's block house, and probably the others, was built by Roy Wellington, who came to Manzanar for the construction

and left in 1923 (Ruth W. Perry, Eastern California Museum files).

Sir Ralph Paget, an English diplomat, purchased 100 acres at Manzanar and developed a pear orchard. John Rotharmel of Bavaria managed the ranch for Paget, who visited only a few times to much fanfare (Elinore Rotharmel, Eastern California Museum files).

The Owens Valley Water War

There was an uneasy coexistence between Owens Valley residents and Los Angeles from 1913 to 1919, when the city only exported surplus water. Local farmers prospered as farm prices rose with the increased demands of World War I.

But Los Angeles, after several years of drought and exponential population growth, determined it needed to increase its delivery of water from the Owens Valley beyond the initial water rights purchased in the 1910s. The city began buying up more land in Owens Valley in order to secure additional stream and groundwater rights. By 1919 there were 50 wells for emergency aqueduct use on city land in the Owens Valley (Finley 1926). Air compressors were installed to augment the artesian flow and in 1924 Los Angeles began continuous groundwater pumping. By 1926 over 50 new wells were constructed in the Independence area alone (Kahrl 1982:254).

Owens Valley residents began to see a threat to their livelihood, and initiated a resistance movement with two objectives: to restrain city purchases and to insure continued agricultural production in the valley. The first phase of the resistance movement relied on conventional protests and legal challenges.

In 1923 Los Angeles began large-scale land and water rights purchases and broke three small diversion dams to reclaim water. Valley residents alleged that Los Angeles was "checkerboarding," i.e. buying up scattered parcels that would pressure adjacent neighbors to sell. Further, Los Angeles's actions were seen as destroying not only farming and ranching operations in the Owens Valley, but also the businesses that had developed in the towns to serve them. Even those residents who had abandoned hope of retaining agricultural production in the valley believed that Los Angeles should pay reparations for lost businesses as well as lost fields. Many residents just wanted out under reasonable terms.

On May 21, 1924, an open revolt was signaled when the Los Angeles Aqueduct was dynamited near the Alabama Gates. On November 16, 1924, several hundred valley residents took control of the Alabama Gates and diverted the entire flow of the aqueduct back into the Owens River (Walton 1988). As planned, local law enforcement agencies refused to intervene: the locals hoped the Governor would send state troops, which would help publicize their cause, but in vain.

Convinced they had won concessions, the crowds dispersed after a meeting between leaders of the resistance movement and Los Angeles officials. The concessions, mostly vague promises that Los Angeles would look into the matter of reparations, served to placate the valley residents and send the sympathetic press back home.

With the pressure off, Los Angeles stepped up purchases, determined to buy enough of the valley to reduce opposition. While reparations as such did not materialize, these purchases partially arose out of valley residents' litigation and demands that Los Angeles take action to alleviate the hardships brought on by the loss of jobs and the depreciation of remaining properties. Los Angeles eventually purchased nearly all the remaining farm properties and 88 percent of the town properties in the Owens Valley (Ostrom 1953).

Meanwhile, the aqueduct was guarded by a private police force of up to 500. Nevertheless, sabotage continued: in 1927 alone there were

over seven dynamitings of the aqueduct. Local resistance finally collapsed with the failure of the Watterson Brothers' Inyo County Bank. The Watterson Brothers, leaders and major financiers of the resistance movement, were charged and convicted of embezzling $800,000 of bank funds. The bank funds were mostly the savings of Owens Valley residents, put there following the sale of their properties to the City. The loss of many citizens' financial viability and the betrayal of the trust that people had in the Wattersons was an important morale factor in the collapse of the resistance, and created even more bitterness and hardship in the Valley.

Farewell to Manzanar

Shortly after Manzanar was founded in 1910 Los Angeles started litigation against George Chaffey's Owens Valley water rights filings. Settlement of the legal battles split the water rights to the creeks supplying Manzanar between Manzanar and Los Angeles. But the court-ordered compromise did not provide enough water to assure Manzanar's growth.

Contrary to the glowing promises of the development's promoters, Manzanar had not prospered as expected. By the 1920s less than half of the subdivision lots, and only about one-third of the smaller town lots, had been sold (Figures 6.20 and 6.21).

The quality of Owens Valley fruit was renowned throughout the state, and the quantity in a good year was beyond expectations. But late frosts and untimely strong winds prevented the farmers from realizing consistent profits over the years. In addition, the problem of distant markets persisted as freighting costs increased and competition from the Imperial and San Joaquin Valleys forced lower profits onto the Manzanar farmers.

Meanwhile, J.B. Lippincott had left the U.S. Reclamation Service and was working for Los Angeles. His fight against Chaffey on Los Angeles's behalf included character assassination (earlier Lippincott had so embarrassed Wallace Austin that Austin resigned his job). Lippincott alleged that Chaffey was only a land speculator waiting to sell out to Los Angeles, and accused Chaffey of fraud in his earlier endeavors (Kahrl 1982:220-221).

Beginning in 1921, post war depression hit farmers hard and within a few years many were willing to sell out for the high amounts Los Angeles was offering (Vorster 1992:279). Caught between economic difficulties and dwindling confidence in the future, Manzanar residents became more receptive to Los Angeles's overtures.

In 1922 Los Angeles acquired a toe-hold in the Manzanar community with the purchase of the Wilder Farm (the Wilder House was later used by the LADWP Manzanar farm superintendent). Manzanar's fate was sealed on January 31, 1924, when Los Angeles bought the Owens Valley Improvement Company, which owned the Manzanar Water Company. The *Inyo Register* reported on December 4, 1924, that Manzanar was "doomed to destruction," since Los Angeles had bought the streams used for its irrigation. The "two-teacher school will next year have but seven pupils."

Property owners at Manzanar had lived with the possibility of this action for many months, and reactions to it ranged from relief and eagerness to sell to anger and a feeling that they had been betrayed by Los Angeles, by the OVI, and even by their neighbors. Over 37 other Manzanar area properties were purchased by Los Angeles in 1924 (Table 6.1). Many were sold with the provision that the residents would keep their property until the fruit harvest, although there was no guarantee of water (Inyo County Recorder's Office Records).

Only a few Manzanar residents sold out to Los Angeles in 1925 and 1926, but many did in 1927, with the collapse of the resistance movement.

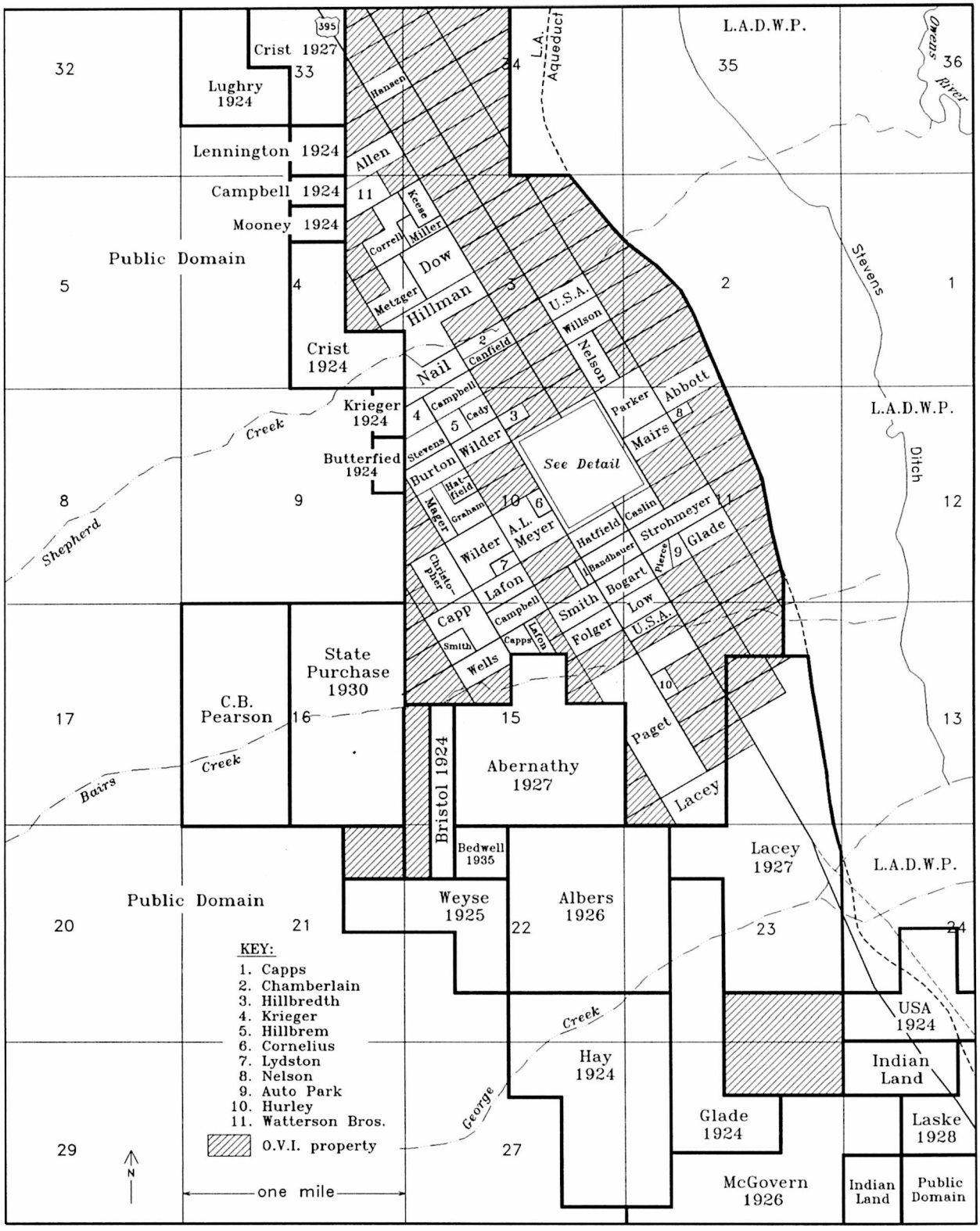


Figure 6.20. Land ownership in the Manzanar area, 1920; with date of purchase by Los Angeles.

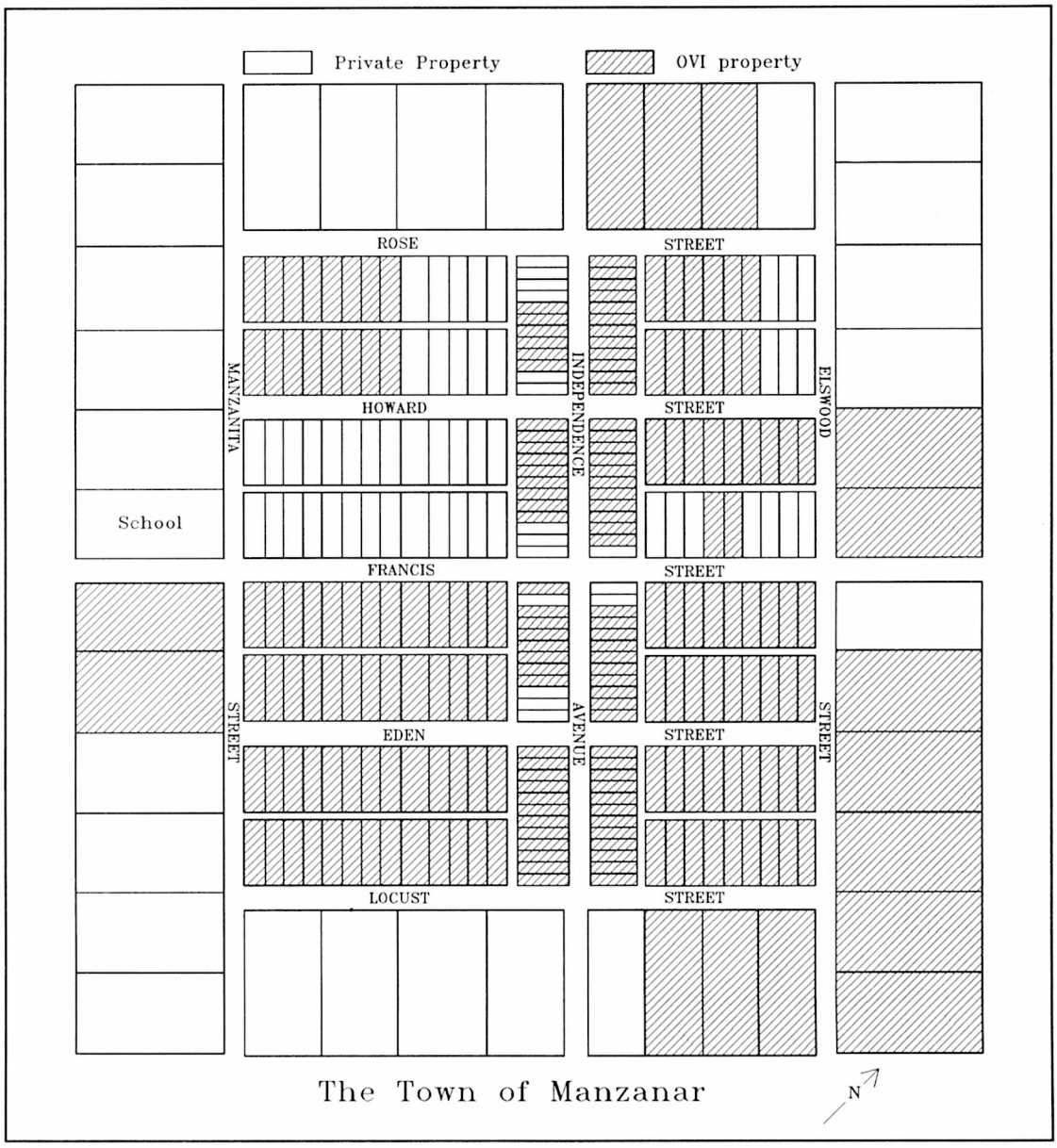


Figure 6.21. Private property and Owens Valley Improvement Company owned lots within the Manzanar townsite, ca. 1910.

The few remaining properties left in the Manzanar area were purchased by Los Angeles in 1929.

Los Angeles as Landlord

In a 1926 report, LADWP pointed out the deficiencies of the land they had acquired at Manzanar: out of 3,500 acres, only 1,200 acres were developed, and these were in poor condition because of the acute water shortage just prior to the city's purchases in August 1924. Over 80 acres of pear trees had to be removed because of blight, and there was only enough water to irrigate 1,000 acres (*LA Times* 6/13/26; Eastern California Museum files).

By 1927 Los Angeles had become owner and

absentee farmer of most Manzanar properties. Many farmers who had sold to the City immediately leased their properties back and continued farming; a farm superintendent was hired by Los Angeles to oversee those properties under cultivation and now without farmers, and tenants were actively sought. The reasons for this policy are not entirely clear from the sources at hand. Perhaps the value of the agricultural enterprise at Manzanar could not be discounted as a means of recouping some of the costs of the land purchases. In addition, there was certainly the public relations aspect of keeping the farmers in business and maintaining agriculture in the valley wherever possible.

Vic Christopher, who had previously managed the Owens Valley Improvement Company, was kept on as the farm supervisor for Los Angeles, occupying the former Wilder home (*LA Times Farm and Orchard Magazine* 11/20/27). The City continued to run the packing house, hiring local and out of state workers and shipping the fruit out of the Valley under its own label.

Los Angeles was even willing to invest in its Manzanar holdings, replacing a one mile-long section of one of the towns pipelines with a concrete-lined ditch. Los Angeles reportedly made a $14,134.47 profit from its Manzanar farms in 1927 (*LA Times Farm and Orchard Magazine* 11/20/27).

Many of the houses vacated by the farmers were rented to LADWP employees and other workers from Independence; several were purchased and moved to Independence and Lone Pine.

Abandonment

"Ten years ago, this was a wonderful valley ... now this is the valley of desolation."

Will Rogers referring to the Owens Valley, August 25, 1932

In 1930 LADWP adopted a policy of abandoning its Owens Valley ranches and farms to conserve water. Leases were not renewed, groundwater pumping was increased, and orchards and farmlands were allowed to dry up. With the final decline of agriculture in the Owens Valley, its economy after the mid-1930s then shifted to an emphasis and eventual dependency on tourism and recreation.

The post office at Manzanar was closed on January 1, 1930, and in 1934, the last two families at Manzanar moved to Lone Pine. In 1935 the Manzanar School District joined with the Independence School District to become a unified district, and the Manzanar school was closed. In 1936 John Shepherd's daughter, Eva Lee Gunn, asked her friend Ralph Merritt to drive her to Manzanar so she could watch the intentional burning of her old home (*LA Daily News* 3/25/42).

On October 6, 1941, by a resolution of the Inyo County Board of Supervisors, all streets, alleys, and lanes in the town of Manzanar were officially abandoned. In 1942, a request for a petition seeking the abandonment of the Manzanar townsite by the Los Angeles Department of Water and Power for tax purposes was deferred "pending the national emergency." World events assured Manzanar would not be abandoned for long ... .

Table 6.1.
LADWP land purchases in the Manzanar vicinity (T14S, R35E, MDM) between 1920 and 1929 (compiled from LADWP plat maps, LADWP Land Division files, Inyo County Recorder's Office Records, and other sources).

Property	Year Purchased	Section(s)	Acreage	Purchase Price
Abbott, G.	1926	2, 11	20	$6,300
Aberrathy, A.	1927	15	279	$42,000
Albers, C.	1926	22, 23	360	$65,000
Bandhauer, R.	1925	10, 11	26	$13,000
Bogart, W.	1927	10, 11	20	$8,000
Bristol, R.	1924	15	40	$1,670
Burton, M.	1924	10	40	$4,500
Butterfield, C.	unk	9	20	$300
Cady, M.	1925	10	10	$2,500
Campbell, L.	1924	10, 15	23	$13,000
Capps, J.B.	1924	15	17	$4,000
Capps, E.C.	1924	15	10	$6,500
Caslin, W.M.	1924	11	16	$1,875
Careu, P.	1924	3, 4	25	$4,500
Chamberland, R.	1927	3	10	$1,500
Christopher, V.	1924	10	60	$12,500
Cornelius, L.	unk	10	5	$2,500
Correll, P.	1924	4	30	$3,545
Crist, C.	1924	4	160	$2,400
Dow, G.	1924	3	40	$17,800
Folger, F.	1924	15	20	$4,000
Glade, N.	1924	11	16	$2,600
Glade, W.	1924	23	120	$4,000
Graham, R.	1924	10	18	$6,500
Hatfield, I.	1925	10	38	$8,250
Hay, T.	unk	22, 23, 26, 27	400	$51,500
Hillbrem, W.	1924	10	10	$4,500
Hillman, E.	1924	3, 4	60	$7,065
Hurley, P.	1924	14	5	$1,000
Keese, S.	1924	3	15	$4,000
Kreider, C.	1924	9, 10	33	$7,000
Lacey, A.	1927	14, 23	460	$83,500
Lafon, W.	1924	10, 15	27	$8,000
Lenbek, H.	unk	10	5	$7,000
Lennington, B.	1924	4	7	$3,000
Low, G.	1924	11, 14, 15	50	$11,250
Lydston, W.	1924	10	5	$2,300
McSaca, J.	1927	3	30	$8,250
Mager, J.	unk	10	5	$2,000
Mairs, J.P.	1924	11	17	$5,700
Manzanar Church	unk	10	<1	$400
Metzger, J.	1927	4	20	$8,250
Meyers, M.	1924	10	40	$14,000
Miller, S.	1929	3	10	$575
Mooney, T.	1924	4	20	$900
Nail, L.	1925	3, 10	32	$8,250
Nelson, E.	1929	11	5	$1,500
Nelson, I	1924	3	16	$3,750
OVI Company	1924	various	2,270	$320,220
Paget, R.	1924	14, 15	120	$40,000
Parker, G.	1924	11	33	$9,000
Parker, E.	1924	10	33	$4,000
Pierce, B.	unk	11	10	$987
Smith, P.N.	1924	15	10	$2,000
Smith, J.P.	1924	10, 15	20	$8,000
Strohmeyer, E.	1927	11	33	$13,000
Stevens, A.	1924	10	34	$22,000
Tournite	unk	10	<1	unk
U.S.A.	1928	3, 14	30	$3,650
Watterson Bros.	1927	4	20	$2,800
Willson, E.	1924	3	15	$2,650
Wilder, J.G.	1924	10	20	$5,400
Wilder, R.A.	1922	10	35	$17,000

Chapter 7

Ethnography and Prehistory

Jeffery F. Burton and Mary M. Farrell

To provide a contextual framework for consideration of the Native American Indian sites at Manzanar National Historic Site, an overview of the ethnography of the Owens Valley is provided, previous archeological work in the region is summarized, and the prehistory of the Owens Valley is reviewed. For a summary of Native American consultations and an ethnographic assessment the reader is referred to Van Horn (1995).

Ethnography

Ethnographic information on the inhabitants of the Owens Valley is found in works by Coville (1892), Irwin (1980), Kroeber (1925), Merriam (1955), Steward (1930, 1933, 1934, 1938, and others), and Stewart (1939, 1941). There are several excellent reviews of what is known about the ethnography of the region in Forest Service (Bettinger 1982a) and Bureau of Land Management overviews (Busby et al. 1980). No attempt is made here to recapitulate all known ethnographic information, but rather what follows is an outline of a few ideas that are especially pertinent.

The predominant inhabitants of the eastern Sierra region at the time of Euroamerican contact were the Paiute and Shoshone, Numic speakers of the Uto-Aztecan language family. The Owens Valley Paiute term for themselves meaning, of course, "the people" has been transcribed as *ni-mi* (Walter 1986:35) and *Nüm*^{ü} Steward (1933: 235).

The territory of the Owens Valley Paiute encompassed the area bounded on the west by the Sierra Nevada crest, Owens Lake to the south, the crest of the Inyo Mountains to the east, and Long Valley on the north (Steward 1933, 1938). The Miwok, Western Mono, and Tübatulabal occupied the lands to the west, the Shoshone were to the south and east, and the Mono Lake Paiute lived to the north.

The Owens Valley Paiute were relatively sedentary for a Great Basin group, with year-round occupation in permanent villages located along streams flowing from the Sierra Nevada. Short-term visits were made to temporary camps for resource procurement.

Walter (1986) points out, however, that all ethnographic information about the Owens Valley Paiute was gathered after they had moved to camps near towns to earn their living doing ranch work and domestic labor. Some of the settlement and migration patterns noted were likely already influenced by this wage labor. Archeologists have been testing the settlement model forwarded by Steward to see how well it

fits the data for the protohistoric and earlier periods. For example, Bettinger (1982b) has found some archeological evidence of territoriality among the Owens Valley Paiute.

The Manzanar Area

Manzanar National Historic Site is situated between two sub-groups recognized by Steward (1933:map 1): the *Tunuhuwitu*, centered on Oak Creek north of the present town of Independence, and the *Pakwazinatu*, placed along the southern margin of Owens Lake. Steward shows three villages in the area between Shepherd and George Creeks, from north to south: *Tanova witü* (salt brush place), *Tüpüzi witü* (a type of seed plant [probably *Brodiaea capitata*] place), and *Tsagapü witü* (black willow place) on the north side of George Creek (Figure 7.1).

But the area depicted in Steward's map is so large that locations are only very general. In fact, in a later publication, Steward (1938) reverses the location names: *Tüpüzi witü* is shown on George Creek and *Tsagapü witü* is on Shepherd Creek. A third, unnamed village is shown on George Creek, a little down stream from *Tsagapü witü*. In any event, the villages may have been allied, sharing territory and cooperating in irrigation projects and rabbit hunts (Steward 1938:51). Steward estimated their combined population at 200.

Historical accounts mention a village at George Creek (the creek being named for Paiute leader Captain George) and a village above the Shepherd Ranch (Eastern California Museum files).

Sociopolitical Organization

Wilke and Lawton (1976) estimate an indigenous population of 2,000 for the Owens Valley as a whole, based on information from the 1859 Davidson expedition. A single large village or a group of smaller allied villages (25 to 250 people, including a number of families) formed an autonomous district. The more populated and larger districts were generally located in the northern Owens Valley, where several streams converge; the smaller districts occurred in the southern Owens Valley, where streams were spaced farther apart.

Each district was led by a person Steward (1933) called a headman; historical accounts also use the terms "captain" and "chief." Unlike that of other groups in the region, leadership among the Owens Valley Paiute was hereditary (Liljeblad and Fowler 1986). Headmen were responsible for organizing communal work projects, such as irrigation, and may have been responsible for the redistribution of resource surpluses, as well as to fulfill other social functions (for a more complete discussion, the reader is referred to Bettinger and King 1971). Leadership was not autocratic, however, as decisions were subject to popular approval.

Hunting by individuals was not bound by territorial restriction, but communal hunting took place only within a district's recognized territory. This territory was controlled and would be defended against other groups encroaching. During the war with white settlers, districts banded together: the Big Pine headman led northern groups, and the George's Creek headman led southern groups (Steward 1938).

Subsistence

Major resources exploited in the Owens Valley include seeds, roots and greens, pine nuts, irrigated plants, insects, small game, fish, deer and mountain sheep, antelope and jackrabbit, and waterfowl. The population occupied permanent villages, but small groups made frequent short-term visits to temporary camps for resource procurement.

Temporary riverine camps were used in the spring for communal fishing, collecting roots and greens, trapping small game, and collecting freshwater mussels.

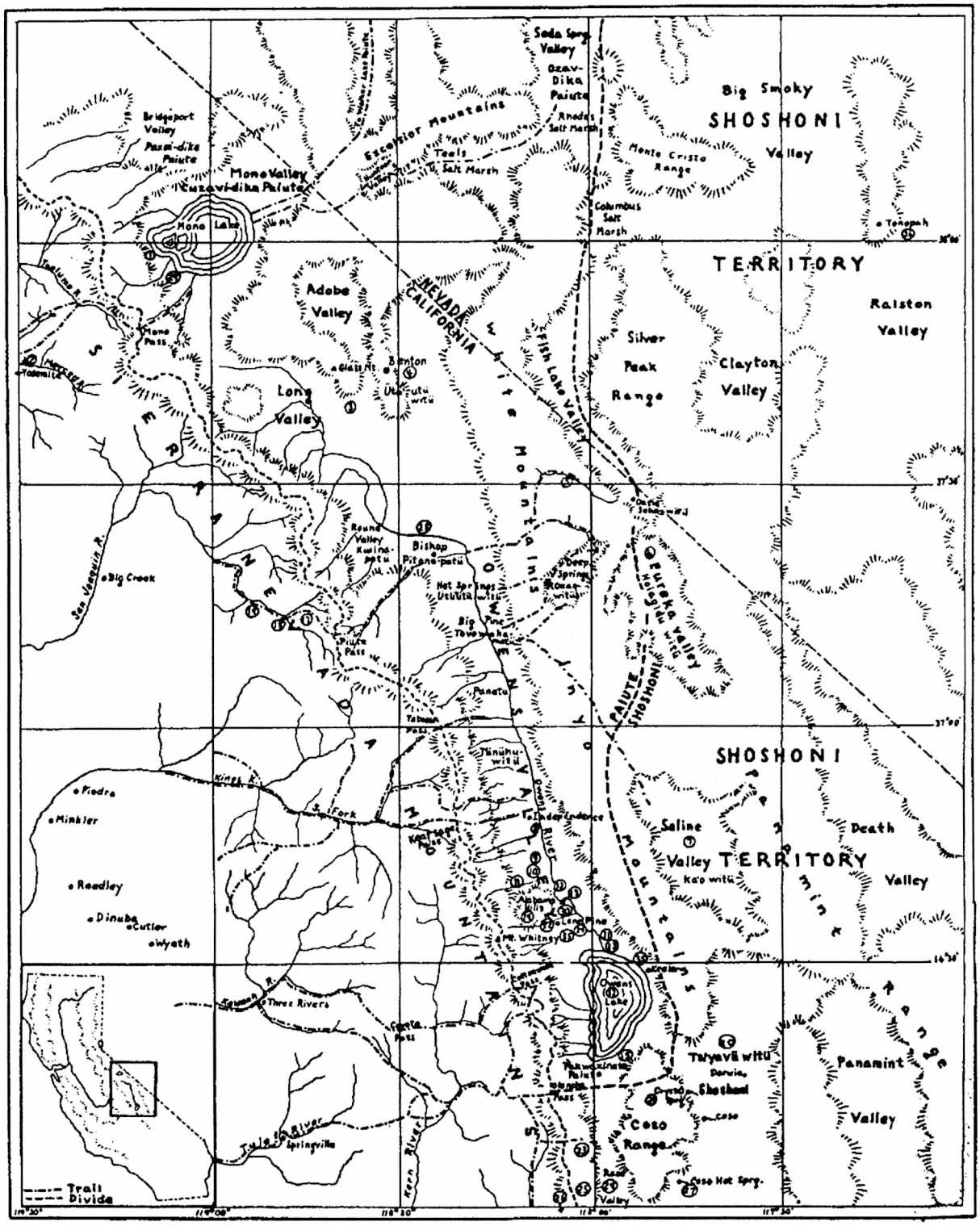


Figure 7.1. Paiute subdivisions and boundaries (from Steward 1933:Map 1).

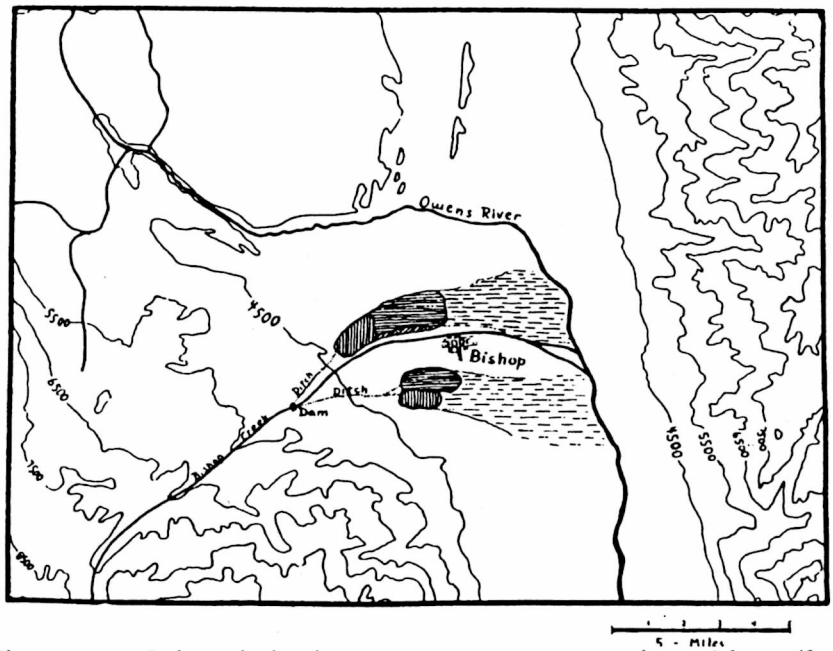


Figure 7.2. Paiute irrigation system near present-day Bishop (from Steward 1930:150).

Summer and fall were geared toward stockpiling food for winter. Rice grass, chia, small game and fish, and seeds from rushes along creeks were early summer resources, and a variety of seeds, gathered with seed beaters and collecting trays became available in mid-summer on the valley floor.

In late summer small groups would establish camps north of Owens Valley to collect Pandora moth larvae (*Coloradia pandora*). This moth uses Jeffrey pine as a host during part of its two-year life cycle: larvae hatch and ascend the trees to spend the winter, descending in late summer to burrow into the ground. The caterpillars were trapped on their descent, collected from trenches dug around bases of trees, and roasted, dried, and stored.

Temporary camps at Owens Lake were used to collect brine-fly larvae and pupae (*Hydropyrus hians*). Adult flies lay eggs that overwinter in the lake; the larvae develop into pupae washed ashore by the millions. These were collected from windrows along the shore, dried, and stored.

In the fall small groups of two or three families would establish temporary camps in upland pinyon groves to harvest pinyon (*Pinus monophylla*) nuts. Depending on the abundance of the crop, the groups would either overwinter there or transport the harvest to the valley villages.

Fall also included a week of gambling, dancing, communal rabbit and antelope drives, and deer hunting. Food stored over the summer and fall supplied most of the winter meals.

Irrigation

Bettinger (1982a:25) asserts that in initial labor investment, irrigation exceeded all other subsistence activities. That the irrigated crops were important is substantiated by the hunger and violence that arose when the first white settlers' cattle invaded the fields.

Communally constructed and maintained systems of ditches and diversion dams tapped Sierran streams to flood areas of wild plants for later harvesting (Lawton et al. 1976). Although this horticulture apparently did not include the

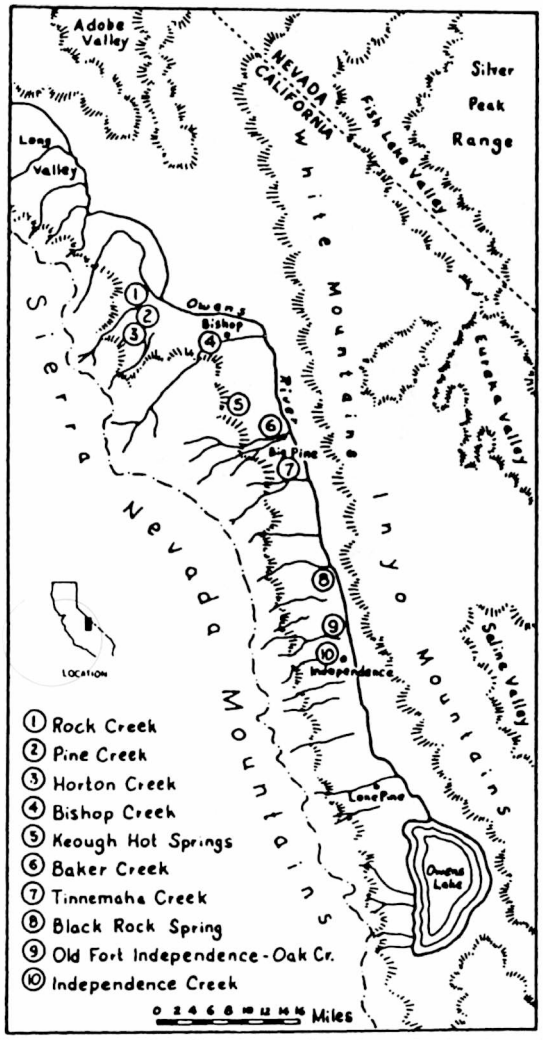


Figure 7.3. Distribution of Paiute irrigation in the Owens Valley (from Lawton et al. 1976: Figure 11).

sowing of seeds, the irrigation increased plant productivity and likely expanded the range of favored plants beyond what would have occurred naturally. The principle irrigated crops were yellow nut-grass (*Cyperus esculentus*) and wild hyacinth (*Dichelostemma pulchella*), but other food plants were encouraged as well (Lawton et al 1976). Tilling of the soil was accomplished using a digging stick when tubers were dug up.

The nature and extent of the irrigation systems in the Owens Valley is unclear. Those ditches recorded vary in length from 3/10 mile to 8 miles long, and fields near Bishop were two and five square miles in size (Bettinger 1982a:25; Steward 1930; Figure 7.2). There were at least seven and perhaps as many as ten separate irrigation systems (Figure 7.3), each associated with a group of allied villages, with an estimated 7,400 irrigated acres in late precontact times (Bettinger 1982a; Steward 1933; Walter 1986:63).

Evidence is lacking for irrigation south of Independence Creek (Steward 1930, 1933; Lawton et al. 1976), but the similar environmental conditions, subsistence strategies, sociopolitical structure and cultural ties suggest irrigation was likely practiced in the southern Owens Valley also.

Exchange

Although the Owens Valley Paiute did exchange their brown ware pottery for Saline Valley salt, they traded little with other groups in the Great Basin. Instead they focused their attention across the towering Sierra Nevada, making trips in summer and fall when the mountain passes were free of snow. The closest trans-sierran trade routes to the George Creek and Manzanar area are Kearsarge Pass, west of Independence, and Cottonwood Pass, west of Lone Pine.

The Owens Valley Paiute traded salt, pinyon pine nuts, seeds, obsidian, sinew-backed bows, rabbitskin blankets, deerskins, moccasins, mountain sheep skins, fox skin leggings, balls of tobacco, baskets, basketry water bottles waterproofed with pitch, wooden hot rock lifters, and red and white paint pigments. In exchange they received shell money (disc beads, tubular clam beads, and more recently glass beads), acorns and acorn meal, finely-constructed Yokut baskets, cane for arrow shafts, and manzanita berries (J. Davis 1961; Steward 1933).

Figure 7.4. Owens Valley Paiute winter house (A.A. Forbes Photograph, Natural History Museum of Los Angeles County).

Death

When someone died, relatives could not touch the dead body. Men were hired to wrap the body in an animal skin blanket to take the body to the cemetery. Friends and relatives would gather in the evening with some of the deceased person's property (clothes, weapons, and utensils) which would be burned at the grave. Hired singers would sing while the mourners danced. At midnight, the deceased's personal property was burned so the ghost could use them and the survivors could forget their grief. Choice articles might be saved and burned a year later (Steward 1933: 297).

Houses

Steward (1933) reports a number of house types for the Owens Valley Paiute. Men generally built the houses, but in the event of divorce the house was considered the property of the woman.

The mountain house (*wogani*), used during the fall pine nut harvest, had two central posts, 6 to 7 ft tall, set 15 ft apart. Sloping side beams rested on a central cross beam (forming a tent shape) and were covered with pine boughs.

Winter valley houses (*toni* or *siwanopi,* house of straw) were 9 to 10 ft high and 15 to 20 ft in diameter, constructed with a cone of poles encircling a pit about 2 ft deep. The pole superstructure was covered with woven grass matting, overlapped like shingles (Figure 7.4), although occasionally willow boughs, leaves, and soil were used as sheathing. The doorway faced east and there was a central firepit.

The winter cook house (*hava toni*; grass house) was the same as a winter house but without the pit. The houses were primarily used for shelter during bad weather; most activities occurred outside, often in windbreaks constructed of willow branches placed close together in a semicircle.

The summer house (also called *hava toni*), primarily used for shade, were open brush huts,

Figure 7.5. Owens Valley Paiute summer house (A.A. Forbes Photograph, Eastern California Museum).

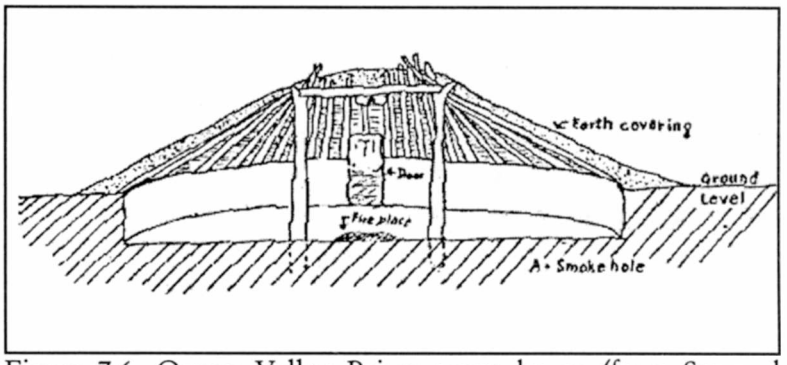


Figure 7.6. Owens Valley Paiute sweat house (from Steward 1933:Figure 4).

dome-shaped, and 8 to 15 ft in diameter. Their construction was much less formal than that of winter houses; matting and tree boughs were interwoven between pole wall supports (Figure 7.5).

Sweat houses (*musa*) were larger and more substantial then *toni* (Steward 1933:265-266). Sweat houses were owned and used by a village or a group of allied villages, with construction directed by the headman. Located near a water source, they were circular, 25 ft in diameter, with two central posts. Poles covered with grass, and dirt formed the sides and roof. There was a central smoke hole and firepit, and a doorway facing east, accessed by a dugway (Figure 7.6).

Sweats were a secondary function; the *musa* served mainly as a meeting house and a dormitory for young and old unmarried men (Liljeblad and Fowler 1986:423). Steward (1938: 55) notes that "until recently there were sweat houses at

Fort Independence, George's Creek, Lone Pine, Big Pine, and possibly Manzanar. They have fallen into disuse."

Other Material Culture

Basketry manufactured both by coiling and twining was used for storage, carrying, water bottles, seed beaters, collecting trays, winnowing trays, hats, cradleboards, and mats (Steward 1933:270-274).

Pottery, the manufacture of which is well-documented in Owens Valley, was used for cooking and storage. Narrow strips of clay were applied to a pancake-shaped base and smoothed by hand. Most vessels had flat bottoms and straight or flaring sides. Steward (1933:266) noted that "pottery making ... formerly limited to a few women, is now nearly forgotten."

Milling equipment included manos and metates, and mortars and pestles, with mortars made of both stone and wood. Simple small bows and sinew-backed game bows were used with arrowshafts of three-foot willow or cane (with a willow foreshaft). Split hawk or eagle feathers, bound with sinew, were used for fletchings.

Clothing was minimal in warm weather, with skirts for women and buckskin breechcloths and shirts for men. Moccasins and sack-like sagebrush socks were worn for snow protection. Rabbitskin blankets were worn in cold weather; made by men, each required the fur of 50 to 75 rabbits, cut into strips and twisted into soft ropes that were then woven together.

Prehistory

Archeological work in the Eastern Sierra has been summarized in several major region-specific overviews. Overviews by Bettinger (1982a), prepared for the Forest Service, and Busby et al. (1980), prepared for the Bureau of Land Management, discuss work in the Owens Valley and Mono Basin. Other Bureau of Land Management overviews cover areas north, south, and east of the Owens Valley (Garfinkel 1980; Hall 1980; Norwood et al. 1980). Jackson (1985) provides a brief discussion of archaeological work in Long Valley and the Mono Basin in his survey report on several timber compartments conducted for the Inyo National Forest. The following is a brief outline of archeological work in the region; recent work and studies especially pertinent to the prehistory of the Manzanar area are discussed in somewhat greater detail (Figure 7.7).

Owens Valley

It was the aboriginal rock art of Owens Valley that first attracted the interest of early researchers. Dr. Loew, with the 1876 Wheeler Expedition, described rock art near Benton (Busby et al. 1980:187), and Mallery (1886, 1893) included rock art from both Inyo and Mono counties in his monumental thesis on North American Indian rock art. Although Steward focused on ethnography and did not elaborate on archaeological sites, he did write of rock rings and petroglyphs in the Owens Valley (Steward 1929). Systematic archeological research began with the work of Elizabeth and William Campbell. In the 1930s they reported on early sites associated with ancient terraces of Owens Lake (Antevs 1952; Campbell 1949).

Harry Riddell and Francis Riddell conducted far-ranging surveys in the Owens Valley (Riddell and Riddell 1956; Riddell 1958). H. Riddell conducted one of the first excavations of a protohistoric site in the Great Basin at the Cottonwood Creek Site south of Lone Pine. The site consists of 11 house pits (one likely the remains of a sweat house), several bedrock milling features, and a shallow midden deposit (30 inches deep). Excavation included a block exposure within the midden deposit and the partial excavation of a house depression. Chared remnants of willow poles were found evenly

spaced around the edge of the excavated depression. Artifacts recovered from the site (most from the surface) include 58 projectile points, over 900 sherds, 12 manos, a possible metate fragment, two fragments of tubular pumice pipes, an abrading stone, three stone pendant fragments, 10 scrapers, two drills, 145 steatite beads, 51 olivella beads, nine glass beads, a mussel shell fragment, bits of pigment, two charred acorn halves, and a charred pinyon shell. Virtually all of the projectile points collected were Desert Side-notched or Cottonwood Triangular types. The site (the type site for Owens Valley Brown Ware pottery) was interpreted to be a Paiute winter village, abandoned prior to A.D. 1850.

Large-scale survey work includes Von Werlhof's (1965) study of Owens Valley rock art and an extensive sample survey by Bettinger (1975) in the central Owens Valley. Based on his survey, Bettinger (1975, 1976, 1977a, 1979, 1982a) identified four chronological periods for the Owens Valley:

> Clyde (3500-1200 B.C.) — indicated by Little Lake series projectile points.
>
> Cowhorn (1200 B.C.-A.D. 600) — indicated by Elko series projectile points.
>
> Baker (A.D. 600-1300) — indicated by Eastgate and Rose Spring series projectile points.
>
> Klondike (A.D. 1300 to historical times) — indicated by Cottonwood and Desert Side-notched projectile points.

During these periods, prehistoric subsistence focused primarily on lowland plant resources (Bettinger 1982b:111). However, Bettinger (1975, 1976, 1978, 1979, 1982a) discerned three adaptive changes: (1) a shift from intensive riparian exploitation to desert scrub exploitation in the Cowhorn phase; (2) the inception of pinyon nut exploitation in the Baker phase; and (3) the decline in large game hunting after A.D. 1000.

Increased population, growing territorial restrictions, climatic change, and environmental degradation have been postulated as possible causes for these shifts. According to Bettinger and Baumhoff (1982:495-503), the shift from riparian to desert scrub resource utilization may indicate social changes associated with the Numic incursion into Owens Valley. In their theory, the postulated "Numic subsistence strategy" (termed "processor") included intensive plant utilization, decreasing big game hunting, and increasingly restricted seasonal and annual movement between resource areas. The processor strategy replaced the "Pre-Numic strategy" (termed "traveler") of utilizing low cost, widely dispersed resources.

Based on lexicostatistical estimates the Numic groups began their rapid spread across the Great Basin from the Owens Valley, Death Valley, and Coso areas between A.D. 1250 and 1450. While it is uncertain just when this subsistence pattern evolved, Bettinger and Baumhoff suggest a well-developed processor strategy was most likely fully established in the Owens Valley as early as A.D. 950 (1982:197). Therefore, it has been suggested that the Baker period be regarded as Numic or proto-Numic, the Clyde and Cowhorn periods as pre-Numic and the Klondike period as Numic (Bettinger, Delacorte, and McGuire 1984).

Subsequent excavations in the Owens Valley have tested and refined Bettinger and Baumhoff's model. In the first large-scale mitigation project in the Owens Valley, Bettinger et al. (1984a) conducted excavations at the Partridge Ranch Site south of Bishop. The site is located at the base of a gently sloping alluvial fan overlooking Freeman Creek. The data recovery, conducted for a highway widening project, included excavation of 24 cubic meters.

The cultural deposits at Partridge Ranch were up to 70 cm deep. Recovered material included six Elko projectile points, four Rose Spring points, one Desert Side-notched point, one Humboldt biface, 42 other bifacial tool fragments, ten unifaces, nine roughouts, a chopper, over 5,000 flakes, 52 manos or mano fragments, seven

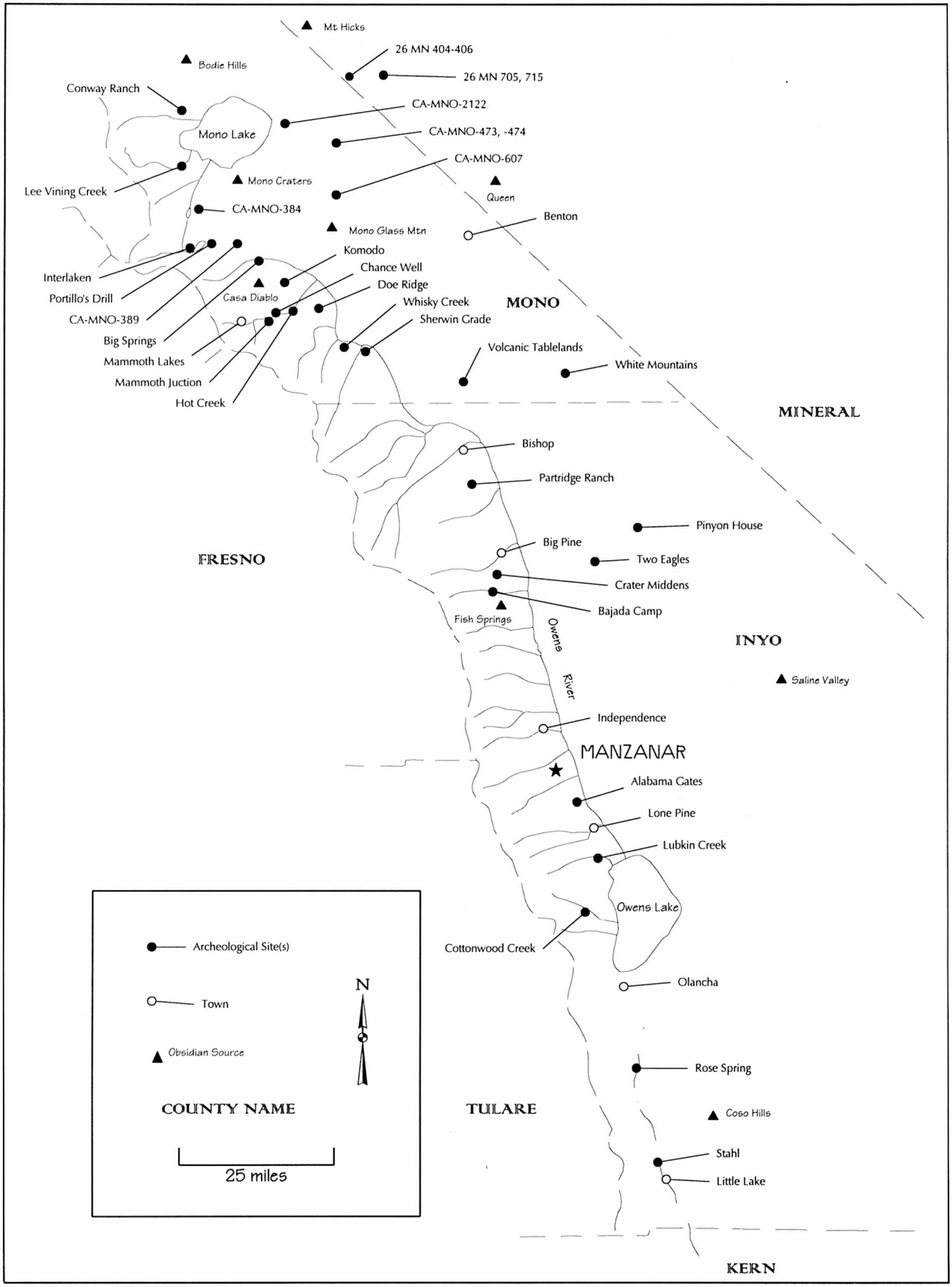


Figure 7.7. Places, archeological sites, and obsidian sources mentioned in text.

metates, 13 battered cobbles, 36 worked bone fragments, 1,320 other bone fragments, an atlatl weight, an abrader, two beads (glass and stone), and three sherds.

Based on projectile point styles, obsidian hydration analysis, and one radiocarbon date, the site appears to have been occupied primarily between 1200 B.C. and A.D. 600 (Cowhorn Period). Relatively low frequencies of hunting-related artifacts and faunal remains suggested the site was occasionally used as a short-term base camp for hunting. The site functioned mainly as a locus for specialized plant procurement and processing, most likely focusing on wetland resources. Evidence of caching and specialized use was interpreted as supporting the idea of pre-Numic specialized task groups residing at temporary camps for subsistence activities, rather than at village settlements.

In 1985, Burton (1986a, 1992b) conducted limited testing at Bajada Camp (CA-INY-2596), a small site located on the rocky Sierran bajada southeast of Big Pine. Archaeological work at the site consisted of an intensive surface collection and excavation of thirty-four 1 m by 1 m units (5.1 cubic meters). Excavation revealed that in most of the site the artifacts were confined to the current ground surface, but that the cultural deposit extended over 1 meter deep in the central portion of the site. Artifacts recovered include five projectile points, 29 bifaces, five cores, six retouched pieces, 2,581 pieces of debitage, an abrader, three manos, a chopper, 11 sherds, and six small bone fragments. The varied artifact assemblage and other data suggest the site was a hunting camp and that the artifacts represent a hunting tool kit; even the manos exhibited wear that suggested they were spent plant-processing tools recycled for hunting-related tasks. Temporally sensitive artifacts, site structure, and obsidian hydration analysis indicates a single-component site that was occupied during the early Baker period.

The Lubkin Creek Site, south of Lone Pine, has been the scene of the most intensive work conducted in the Owens Valley (Basgall et al. 1986; Basgall and McGuire 1988). Over 80 cubic meters were excavated, including 12 houses and 21 other features. Recovered items included over 200 typeable projectile points, 200 point fragments, 750 bifaces, 900 flake tools, drills, unifaces, and cores, over 40,000 flakes, 187 manos, 110 metates, 1,689 sherds (plus 5,837 sherds collected earlier during survey work by Riddell), 240 beads (glass, stone, and shell), seven basketry fragments, 147 modified bone fragments, 29,000 other bone fragments, and numerous other artifacts and samples.

Through artifact styles, obsidian hydration analysis, and radiocarbon dating, several discrete components were identified at the Lubkin Creek Site. Materials dating to the Clyde period were sparse, with a narrow artifact assemblage consistent with hunting by small groups. Four houses dated to the Cowhorn period. The structures and associated artifacts suggest the site was used as a seasonal base camp. Moderate amounts of pinyon pine remains indicate pinyon pine nuts were in use by 2000 B.P.

Baker period material was scarce, suggesting only ephemeral occupation from A.D. 600 to 1300. The main use of the site dates to the subsequent Klondike period, for which multiple seasonal occupations and three residential areas were identified. Associated with the Klondike period component is a huge inventory of ground and battered stone, and bedrock milling features. Subsistence focused on the procurement of waterfowl, mollusks, and seeds. Abundant obsidian from the Coso source in the late prehistoric occupation was interpreted to indicate the emergence of formalized exchange relations. In all, the archeological data for the Klondike period exhibited dramatic parallels with the ethnographic situation recorded by Steward (Basgall 1991).

Expanding on earlier work at the Lubkin Creek Site, Bouey (1990) completed surface collection and excavation of eleven 1 m by 1 m units in a different portion of the site in preparation for a county road realignment. The investigated area contained a shallow midden deposit and numerous bedrock milling features. Artifacts recovered include nine Desert Side-notched points, six Cottonwood Triangular points, five Humboldt Basal-notched bifaces, 31 bifaces, 34 flake tools, two cores, 2,736 flakes, 49 battered cobbles, 13 metate fragments, nine mano fragments, nine other ground stone fragments, 359 sherds, four shell beads, 479 mussel shell fragments, six fragments of modified bone, and 1,607 other bone fragments. Although the presence of Humboldt bifaces suggests an earlier component, this area of the site mainly contained a discrete Klondike component. No houses were encountered in the excavated areas, suggesting only short-term use.

Excavations at three late prehistoric sites in the general vicinity of Big Pine (Crater Middens, Pinyon House, and Two Eagles), were undertaken by Bettinger (1989). Bettinger's research at these sites again tested the idea of distinctive Numic and pre-Numic adaptive strategies. All three were seen to fit the Numic pattern of heavy reliance on plant resources, little reliance on big game hunting, and constricted population movement.

Pinyon House, located in the Inyo Mountains east of the valley floor, includes two standing structures, seven depressions, and five rock rings. Seven of these features were excavated. Artifacts recovered include 78 projectile points (51% Desert series, 21% Rosegate series, 5% Elko, and 1% Little Lake), 179 bifaces, one Humboldt biface, eight flake knives, 96 roughouts, nine projectile point blanks, 98 unifaces, 18 cores, nearly 6,000 flakes, 42 milling slabs, 11 manos, 66 sherds, two hammerstones, two abraders, four incised stones, 10 shell beads, eight wood artifacts (including pinyon hooks), seven worked bones, 424 other bone fragments, and abundant pinyon cone fragments. Historical artifacts recovered include two gray enamelware pieces, six tin cans, remains of three glass bottles, nine "Levi Strauss" clothing rivets, and two glass buttons.

The data were interpreted to indicate that between 3000 B.C. and A.D. 300, the Pinyon House site was used as a short-term hunting camp. The main occupation occurred from A.D. 300 to 1930, when the site was used as a pinyon camp. Although the bulk of the macrofossils are pinyon nuts and cone fragments, the artifacts indicate a variety of tasks occurred during this latter time period.

Two Eagles is located at the foot of the Inyo Mountains. Thirteen of 28 rock rings at the site were excavated. Recovered materials include 60 projectile points (58% Desert series, 37% Rosegate series, 3% Elko), 72 bifaces, 39 roughouts, four drills, three core tools, a chopper, nine cores, about 3,000 flakes, seven blade-like flakes (some with ground edges), 212 millingstones (mostly flat slabs and blocks), nine manos, 127 sherds, a vesicular basalt pipe blank, five pendant fragments, three incised stones, 43 quartz crystals, 10 quartz cull fragments, a stone bead, three shell beads, a bone bead, three other worked bones, 212 unmodified bone fragments, and a few charred plant remains.

The Two Eagles site data were taken to indicate sporadic use as early as 1200 B.C., but most occupation occurred from A.D. 600 to historical times. During the later occupation the site was occupied seasonally by small groups of families for seed procurement. Emphasis on seed procurement apparently increased through time, while hunting and other activities declined.

Crater Middens is a large village site at the foot of the rough lava slopes of Crater Mountain. The site includes five distinct middens, 17 rock rings, and numerous bedrock milling features. Six houses were excavated, and midden areas were tested. Groundstone artifacts recovered include

363 millingstones, 213 manos, 128 battered cobbles, and 13 pestles. Flaked stone includes 223 projectile points (51% Desert series, 24% Rosegate series, 4% Elko, 1% Humboldt), 536 bifaces, 14 flake knives, 337 roughouts, 21 point blanks, 179 unifaces, 11 choppers, and over 54,000 flakes. Other artifacts include 593 ceramic sherds, four shaft smoothers, two steatite pipes, a steatite cylinder, 10 pendants, 30 shell beads, 63 glass beads, 17 steatite beads, three quartz crystals, 269 worked bone specimens, over 7,500 unmodified bone fragments, and 259 shell fragments. Floral remains of 24 different plant species were recovered, with 60 percent of the remains belonging to four species: blackbrush (*Coleogyne ramosissima*), ricegrass (*Oryzopsis hymenoides*), blazing star (*Mentzelia albicaulis*), and Mormon tea (*Ephedra* sp.).

Historical artifacts thought to be associated with the aboriginal occupation of the site included two pieces of worked glass, 13 other glass fragments, two cans, four cartridges, a marble, and a fragment of glazed pottery. The site was interpreted to have been a central place within a large settlement-subsistence system, occupied essentially year-round from as early as A.D. 1 to historical times.

Survey and excavation in the White Mountains 60 miles north of Manzanar have disclosed a remarkable change in aboriginal adaption beginning about 1,400 years ago in an environment generally considered to be marginal (Bettinger 1990, 1991). Over a dozen village sites have been found between 10,000 and 12,600 ft in elevation. Many of these sites are fairly large and all have distinct house features.

Lichenometric measurements, (Bettinger and Oglesby 1985), radiocarbon assays, and time sensitive artifacts date the appearance of these village sites to sometime between A.D. 600 and 1000. Faunal material is dominated by bighorn sheep and marmot; primary floral remains included roots, seeds, pinyon nuts, and limber pine (*Pinus flexilis*) nuts.

These village sites signal a major change in alpine use. Hunting blinds and tool scatters, apparently used by small hunting parties, appeared beginning as early as 3000 B.C. But this pattern of limited and specialized use was replaced by a more intensive and generalized use in which both plants and animals were important. The seasonally-used villages that appeared were intensively occupied, perhaps in response to population pressure, by families, groups of families, and possibly entire bands.

Basgall and Giambastiani (1992) report on three seasons of archeological work north of Bishop on the Volcanic Tablelands, another area commonly considered marginal. Excavation and controlled surface collection were conducted at seven sites, including two sites with rockshelters and three sites with rock art. Excavation focused on house features, but extramural areas were also tested. Excavated volume ranged from 2.5 to 16.3 cubic meters per site (47 cubic meters in all). Recovered were 265 projectile points, 741 bifaces, 83 formal flake tools, 771 casual flake tools, 40 cores, over 53,000 flakes, over 1,100 pieces of ground and battered stone, 141 sherds, 27 beads (shell, glass, bone, stone) and over 6,400 bone fragments.

The earliest site investigated, thought to pre-date 5,000 B.P., is located in a wetland area next to a spring. The site contained stemmed bifaces and 18 basal fragments of a point defined as "Fish Slough Side-notched." Although this type has been previously subsumed under the Elko Side-notched category, obsidian hydration values of the points from the Fish Slough site are greater than Little Lake and Elko points, and suggest the type is considerably earlier.

Clyde period components were identified at four sites, but were scattered and mixed with later Cowhorn material. Cowhorn age components were identified at six sites interpreted to be small residential base camps occupied by family groups. Baker period materials were also found at six sites, all but one were mixed with later

Klondike components. Klondike period sites included midden, numerous milling features, threshing floors (slick bedrock surrounded by rocks that likely anchored brush windbreaks), and all of the excavated house features.

The dryland seed processing focus of the Volcanic Tablelands sites appears to have changed very little though time. However, the appearance of specialized bulk seed processing features and houses for longer-term occupation suggest the intensity of site use increased in the Klondike period.

Delacorte and McGuire (1993) discuss test excavations at 20 sites along a proposed underground fiber optics line in Owens and Rose Valleys. Five of the sites are near Big Pine, two are between Manzanar and Lone Pine, eight are between Lone Pine and Olancha, and five are in Rose Valley. Chronometric information was derived from obsidian hydration analysis, radiocarbon assays, and time-sensitive artifacts (including 88 projectile points, 13 shell beads, three steatite beads, eight bone beads, 166 glass beads, and 347 ceramic sherds).

One of the earliest sites in the study was CA-INY-3766, located east of the Alabama Hills and considered pre-Cowhorn in age. The bifaces, flake tools, and core-related artifacts of diverse lithic materials and sources suggested small broadly ranging social groups.

Cowhorn components were identified at 12 sites. The large diverse collection of flaked and ground stone artifacts recovered from these components was interpreted to indicate a highly mobile and expansive settlement-subsistence economy, with inhabitants sustaining a relatively fixed migration pattern, perhaps moving between five or six villages.

Baker components, dominated by casual flake tools and formalized ground stone artifacts, were identified at eight sites. Delacorte and McGuire interpret the site data as signifying increasing settlement centralization, and a shift towards intensive land use focused on increased use of small animals and plant resources.

Klondike components encountered at 10 sites were relatively mixed and small, but artifact inventories were seen to parallel those at preceding Baker period sites. The shift toward intensive land use continued, with specialized extractive localities occupied by small family-sized groups for the collection of mussels and seeds.

Two of the investigated sites had early historical (protohistoric) components, characterized by essentially aboriginal tool-kits with a few Euro-american artifacts. Deposits formed after 1870 contained primarily store-brought, manufactured goods with only a few traditional artifacts. Transitional sites with worked glass or metal points were not encountered, suggesting acculturation was both widespread and rapid. But house style, some ground stone types, basketry, and the use of traditional native plant and animal resources continued into the first part of the twentieth century.

Delacourte et al. (1995) tested 12 sites along U.S. Highway 395 in the Alabama Gates area between Manzanar National Historic Site and Lone Pine. Thirty-one well-dated components were identified during the testing.

Twelve Clyde period components were discovered, the largest sample yet investigated in the Owens Valley. Since the project area did not seem unusually favorable for Clyde period use, Delacorte et al. suggested that relatively low numbers of Clyde period sites elsewhere was a factor of site visibility. These early sites would be more likely obscured by alluvial fan development at the base of the Sierra Nevada. The Alabama Gates area, in contrast, is protected from Sierra Nevada alluvial fans by the Alabama Hills.

The Alabama Gates Clyde period components consisted of medium sized, low density sites, with a diverse and generalized artifact assemblage that included cores and flake tools, an assortment of bifacial tools, and only small amounts of expediently used ground stone. A variety of faunal remains was recovered, but there were surprisingly few birds compared to later assemblages. There were few differences between sites at different locations, which suggested use by mobile groups who transported their entire tool kit between a series of sporadically occupied locations.

Only one Cowhorn Period component, a house floor, was encountered at the 12 tested Alabama Gates sites. Still, Delacourte et al. were able to infer that the house data corroborate trends observed at other sites. That is, during the Cowhorn phase biface types were standardized and there was a shift to larger bifaces, and to formal and more diverse groundstone. Subsistence focused on dryland and wetland seeds, lagomorphs, birds, and fish; large mammals were poorly represented.

Late prehistoric components (two Baker and 11 Klondike) were identified at three types of sites: (1) mussel procurement sites with flakes, sherds, and shell, (2) temporary camps, with similar artifacts but with the addition of groundstone and a longer occupation, and (3) permanent occupation sites with houses and a full range of artifact types. These site types indicate more variability in settlement patterns than the large multi-family villages noted by Steward (1933, 1938).

Other data from the late prehistoric sites supported inferences about a shift to expedient flake technology and reduction in biface size; groundstone shows a similar trend with the (re)introduction of expedient types. Plant and animal remains indicate intensification in resource extraction, with the focus on riverine and wetland resources, such as fish. Seeds were limited to four wetland taxa (*Chenopodium, Rosa, Scirpus,* and *Typha*), and the use of shellfish intensified in the Klondike period. Occupation was more intensive, and less mobile than earlier.

Rose Valley

Major work in the Rose Valley region south of Owens Lake includes that of Grant et al. (1968) and Whitley (1987) on the rock art of the Coso Range and vicinity, and survey and excavations for the US Naval Weapons Center (e.g. Hildebrandt and Gilreath 1988). Borden (1971) reports on the Lake Mohave Complex Rose Valley Site. Drover (1979b) conducted small-scale excavations at four sites near Red Hill.

Work at two sites in Rose Valley has been pivotal in Great Basin archeology, and is summarized here. Harrington's (1949, 1951, 1952, 1953, 1957) extensive excavations at the Stahl Site, near Little Lake, provided substantial data on the Archaic period and refined the temporal placement of Pinto projectile points. Several excavations in Rose Valley have concentrated on the Rose Spring Site (Lanning 1963; Riddell 1963; Clewlow et al. 1970; Yohe 1992). One of the first deeply-stratified sites to be excavated in the Great Basin, the Rose Spring Site has provided data on a long temporal sequence, which helped define and date several projectile point styles.

The Stahl Site, near Little Lake, helped determine the temporal placement of Pinto projectile points, which previously had been ambiguously associated with Pleistocene fauna (cf. Campbell and Campbell 1935). In addition, the excavation recovered numerous and varied artifacts, house remains, and storage pits, allowing interpretation of a mixed economy based primarily on deer hunting (Warren and Crabtree 1986:187).

Excavations were begun in 1948 by Harrington. Four distinct strata were encountered. The top 3 to 4 inches consisted of soft sand, containing Pinto and later material. Below this a firmer stratum 6 to 9 inches thick contained Pinto and other material interpreted to be early. The third

layer, 11 to 18 inches thick, was much firmer and darker, and contained not only abundant artifacts but numerous holes interpreted to be posthole formations outlining circular or elliptical houses. The final stratum was the hardpan (Harrington 1957).

Artifacts included a variety of flaked and ground stone artifacts. Beads and sherds, attributed to late Shoshone occupation, were found near the surface. A significant part of the assemblage was the projectile points: 497 Pinto points were recovered, which Harrington divided into five morphologically defined subtypes still cited today. Other points included 36 leaf-shaped, 90 Lake Mohave/Silver Lake, 13 wide-stemmed points, four "arrowpoints," and several unclassified specimens.

Because there was not enough material recovered for radiocarbon dating, Harrington employed geomorphological analysis to estimate the age of the site. The underlying hardpan was attributed to flash floods from the Sierra Nevada during dry periods after the Pleistocene. Therefore, Harrington reasoned that the site occupation may have been associated with a rainy period toward the end of the drought, ca. 3000 to 4000 years B.P. As corroborating evidence, he cited work at a rockshelter near Moapa, Nevada, where Pinto points were found associated with hearths radiocarbon dated to 3870±250 and 4040±300 B.P. (Harrington 1957).

The site data supported several interpretations: the Pinto Culture was seen as widely distributed, from central California to southern Arizona, and as far north as northern Nevada. Harrington figured the Pinto Basin had been occupied during a period with greater precipitation than at present, possibly a "Little Pluvial" at the end of the "Great Drought" 3000-4000 B.P.

Harrington's temporal ascriptions were supported by Heizer and Hester's evaluation of radiocarbon dates associated with the Pinto point type elsewhere (1978), which suggest a date of 3000 to 700 B.C. Warren and Crabtree (1986) have modified this slightly, using paleoenvironmental data developed by Mehringer (1977) on the "Little Pluvial," to suggest a time range of 5000 to 2000 B.C. The Pinto point type found at the Stahl Site is now more commonly designated Little Lake, following Bettinger and Taylor's (1974) suggestion that designating points of the Stahl Site as Pinto obscures important differences in form and distribution between these points and the original, possibly older Pinto points found throughout lower southeast California and Arizona.

The Rose Spring Site, the type site for Rose Spring and Cottonwood projectile point styles, is located 10 miles north of the Stahl Site. Harry Riddell excavated three test units and one burial at the site in 1951. Francis Riddell resumed the work in 1956, excavating a trench and a large exposure. Both excavations utilized 1 ft levels and 3/8 inch screen, but were not reported until 1963 by Lanning.

In 1961 Davis excavated one 5 ft by 15 ft unit in 6-inch intervals to a depth of 11 ft. Five strata were discerned, including two midden strata separated by sand. Cultural material recovered included 172 sherds (170 within the upper 24 inches of deposit), two clay pipes, one pumice pipe, 18 manos, five metate fragments, three pestles, grinding slabs, debitage, and 319 complete and fragmentary projectile points. Although most of the points were classified as Rose Spring and Cottonwood types, a nearly complete sequence of other point types was also recovered (Lanning 1963).

The Rose Spring Site was interpreted as a hunting camp due to the preponderance of projectile points. When Lanning's report was published, the Rose Spring Site was the only deeply stratified site in the Great Basin with an unbroken series of point types. Lanning identified four distinct components, including Pinto (Little Lake), Elko, Eastgate/Rose Spring, and Cottonwood/Desert Side-notched, and estimated

the age of the different periods based on comparison with other sites in the Great Basin. The point types defined as Rose Spring still stand, although work has been done in the subsequent years to refine the typology. Samples collected by Riddell and Davis for radiocarbon dating confirm Lanning's sequence (Clewlow et al. 1970:21-21), and other researchers have confirmed similar dates and sequences through correlation with other sites in the Great Basin. Recent work by Yohe (1992) at the Rose Spring Site supports Lanning's original chronology, as well as the general temporal sensitivity of most accepted Great Basin projectile point types.

Long Valley

Emma Lou Davis (1964) conducted one of the first extensive archeological surveys in the region, recording 165 sites north of the Owens Valley in Long Valley and the Mono Basin. Based on her survey and ethnographic work, Davis developed a site typology encompassing pine nut collecting sites, lakeshore sites, summer base camps, caterpillar collection sites, quarry and/or workshop sites, spring camps, and winter camps.

In 1977, Bettinger (1977a) conducted a systematic stratified random sample of the Long Valley "Known Geothermal Resource Area." Through this work, Bettinger was able to develop a model to predict site density and formed a site classification based on the presence of nine types of cultural material such as projectile points and groundstone. In addition, Bettinger discussed subsistence and settlement patterns and apparent changes through time.

There have been numerous project-specific surveys in the Long Valley area, including surveys for Forest Service timber sales (e.g. Basgall and Jobson 1986; Burton 1980; Jackson 1985; Turner et al. 1978). Most apparent from the Long Valley survey data is the importance of *Piagi* (pandora moth larvae) procurement (Weaver and Basgall 1986) and the ubiquity of archaeological sites near the Casa Diablo obsidian quarries (Faust 1992; Weaver et al. 1982).

The importance of the Casa Diablo obsidian source is also evident in excavation data. Most excavation work has focused on the Mammoth Lakes area. Excavations at sites that are predominately obsidian stoneworking with only minor evidence of subsistence activities include: Forest Service Forty (CA-MNO-529; Basgall 1983), Mammoth Creek (CA-MNO-561; Burton 1994a; Hall 1983), Camp High Sierra (CA-MNO-1529; Basgall 1984b), CA-MNO-11, -823, -1644, and -1645 (Bouscaren and Wilke 1987), CA-MNO-1654 (Weaver et al. 1984), Casa Diablo Hot Springs (CA-MNO-2183; Hall 1987), CA-MNO-574, -577, -578, and -833 (Adams 1986; Goldberg et al. 1990; Mone 1986), and CA-MNO-1202 (Moore and Raven 1991; White 1990). These stoneworking sites indicate that the production of obsidian bifaces for trade peaked during the Newberry and early Haiwee periods (equivalent to the Cowhorn and early Baker periods in the Owens Valley).

Excavations at other sites in the Mammoth Lakes area have revealed a variety of subsistence, residence, and exchange activities. Excavated rockshelters include CA-MNO-455 and -472 at Hot Creek (Davis 1964), Mammoth Creek Cave (CA-MNO-11; Enfield and Enfield 1964), Little Hot Creek (CA-MNO-615; see Jackson 1985), and Little Antelope Valley (CA-MNO-616; see Jackson 1985). Subsistence activities are represented at temporary camps where both obsidian reduction and subsistence activities occurred, such as Triple R (CA-MNO-714; Bettinger 1980; Jackson 1986), the Minaret Road Site (CA-MNO-2482; Burton 1991a), and those in the Royal Gold (Burton 1990) and Sherwin Ski (Burton 1994b) project areas. A variety of activities occurred at large sites with middens, such as the Snowcreek Site (CA-MNO-3; Burton and Farrell 1990), CA-MNO-905 (Burton n.d.), the Hot Creek Hatchery Site (CA-MNO-611; Tadlock and Tadlock 1972), the Mammoth Junction Site (CA-MNO-382; Burton 1985b; Michels 1964;

Sterud 1965), and CA-MNO-722 (Ericson 1977:328; Leonard 1974; Meighan and Vanderhoeven 1978:37-38).

Data compiled from these sites suggest subsistence activities generally increased though time from the earliest occupation to the beginning of the late prehistoric period. The Little Lake (Clyde) period occupation was sparse, and focused on meadow resources. Primary artifactual remains reflect core reduction and expedient flake production. During the Newberry and early Haiwee (Cowhorn-Baker) periods, there was intensive obsidian biface production for trade. During the late Haiwee period both biface production and subsistence were intensive.

At higher elevations there was apparently a shift from plant exploitation by large groups during the Little Lake and Newberry periods to hunting by small groups and individuals during the Haiwee period (Burton 1994a:89). There is less evidence of Marana (Klondike) period occupation in the Mammoth Lakes region. Biface production at the Casa Diablo quarries appears to have waned, and subsistence-related activities may have shifted from previously used meadow resources. Pinyon collecting appears to have become more important in the Long Valley area during the Marana period.

Excavations at the large multi-component Chance Well Site (CA-MNO-458/630) were conducted by Burton (1983, 1985a) for the Mammoth Geothermal Project. Located along lower Mammoth Creek at the confluence of Hot Creek, the site is adjacent to a hot spring, and has a commanding view of an extensive meadow. Features recorded at the site included rock rings, a midden deposit, dense chipping debris, and over 60 bedrock mortars (the greatest number at an Eastern Sierra site [Haney 1992]).

Excavation at the site included sixteen 1 m by 1 m units (8.3 cubic meters) and fifty-one 25 cm by 25 cm shovel test units (1.5 cubic meters). Recovered artifacts included 21 Desert series projectile points, seven Rosegate series points, four Elko series points, one Little Lake point, two wide-stemmed points, six point fragments, four Humboldt bifaces, 27 other bifacial tools, 96 preforms, roughouts, and blanks, 97 retouched pieces, 18 cores or core fragments, over 28,000 flakes, 11 metates, 11 manos, a possible pestle, a chopper, three hammerstones, a battered cobble, seven abraders, seven tinklers (clothing ornaments or charmstones), a scraper-plane, two steatite disk beads, a steatite vessel sherd, a brown ware sherd, 45 fire-cracked rocks, 52 animal bone fragments, and abundant charred pinyon pine cone fragments. Temporally sensitive artifacts and features, obsidian hydration analysis, and radiocarbon assays were used to infer shifts in site use through time.

In the late prehistoric period the Chance Well Site was occupied year-round, the locus of a wide range of subsistence activities, including pinyon collecting. The artifact assemblage exhibited west slope as well as Great Basin influences For example, shaped manos from earlier occupations were scavenged and recycled for stone-boiling. The site is likely the location of the village of *Panwihumadu* mentioned by Steward (1938).

The Chance Well Site was also used earlier, in the Newberry and early Haiwee periods, as a quarry-workshop, possibly part of a west slope dominated exchange system. Subsistence activities during this earlier use were focused on meadow resources rather than pinyon nuts.

At Doe Ridge, east of the Mammoth Lakes Airport, Burton (1986b) completed an archeological survey of 570 acres and shovel-tested nine sites for a proposed golf course development. All of the sites appear to be temporary camps, most related to hunting activities. Temporally diagnostic artifacts and obsidian hydration results indicate use from as early as 9600 B.C., with most sites occupied between 1200 B.C. and A.D. 1000 (Newberry and Haiwee periods). Two sites, both in pinyon woodland, were used until A.D. 1300.

The earliest site investigated for the Doe Ridge project, CA-MNO-2247, was a small site located on a ridge, overlooking a portion of Long Valley. Artifacts at the site included a Lake Mohave-like point, a biface fragment, a basalt core fragment, and 76 flakes (52% obsidian, 42% dark gray chert, 4% basalt, 1% rhyolite). Many of the flakes exhibited use wear, indicating an expedient flake technology. The unusually high percentage of non-obsidian material (47% vs. less than 5% at most sites in the region) has been noted at other early sites in the region, and has been attributed to wide-ranging mobility patterns. The Mohave-like point from the Doe Ridge site, of Fish Springs obsidian, had an obsidian hydration value of 13.1 microns; using the most recent rate determined for Fish Springs obsidian (see Delacorte et al. 1995), this calculates to 7,750 B.P. Casa Diablo obsidian specimens from the site had large rim values suggesting a ca. 6,000 B.P. date.

CA-MNO-819, at Big Springs near the Casa Diablo obsidian source, was tested by the Forest Service. Results summarized in Jackson (1985: 145) suggest the dense debitage and numerous bifaces are indicative of biface production for trade. The narrow range of hydration values (2.5 to 3.5 microns) suggests a relatively short, ca. 200-year occupation span, somewhat later in time than biface production at sites to the south (i.e. Haiwee rather than Newberry).

Burton and Farrell (1991) reported on excavations at Whisky Creek Rockshelter (CA-MNO-2518), a small overhang in southeastern Long Valley. Sixteen 1 m by 1 m units (7.2 cubic meters) yielded four Desert Side-notched projectile points, a Cottonwood Triangular point, a Rosegate series point, two point fragments, four bifacial tools, 21 retouched pieces, a chopper, three core fragments, 605 pieces of debitage, two metate fragments, an abrader, a cupped stone, a possible hammerstone, five ceramic sherds, 20 glass beads, 28 fire-cracked rocks, floral remains (charred remains being mostly grass seeds) and faunal remains. Four hearths were encountered.

Chronometric and other data indicate two distinct occupations at Whisky Creek Rockshelter. The first use, beginning as early as 500 B.C., is most evident on a bench below the shelter. There, evidence suggests biface reduction, which continued until A.D. 1000. The later occupation, evident in the shelter itself, occurred after A.D. 1000, with most intensive occupation after A.D. 1300. During this time, the shelter was used sporadically by small groups as a temporary camp during the summer, for a wide range of subsistence-related activities. The rockshelter was used until the 1840s, but apparently was permanently abandoned soon after that.

Although most excavations in Long Valley have been at sites that postdate ca. 5000 B.C., extensive work has been conducted at one early site. From the Komodo Site (CA-MNO-617), located on an old terrace of Long Valley Lake, a large assemblage of basally thinned, concave base bifaces was recovered (Basgall 1984a, 1988; Bettinger 1977a). Originally called Clovis points, they are now cautiously referred to as "Great Basin Concave Base" variants which may be similar to Black Rock Concave Base points and other later points in the Great Basin. Obsidian hydration analysis results were 2 to 3 microns greater than Little Lake points from the same general area and of the same obsidian. The site, therefore, was interpreted to be between 7000 and 9000 years old (Basgall et al. 1986:15).

Mono Basin

Several large scale surveys have been undertaken within the Mono Basin and environs. C. Meighan (1955) surveyed five areas, totaling approximately 43 square miles, in Mono County. Meighan's work was the first professional survey in Mono County, recording over 350 sites. Meighan noted a wide range of site types, with the highest site density in pinyon groves. Although Meighan believed nearly all

his sites were protohistoric, the figures in his report depict projectile point types now known to span over 5,000 years of prehistory.

A sample survey was conducted by Kobori et al. (1980) for the Bureau of Land Management's Coleville and Bodie Planning Units, which included lands in the Mono Basin, found evidence of occupation from between 9,000 and 6,000 B.C. to the present. The earliest evidence is in the form of isolated Black Rock Concave Base and Northern Side-notched projectile points; more substantial sites, with Pinto, Elko, Rose Spring, Eastgate, Desert Side-notched, and Cottonwood projectile points, were dated to after 5,000 B.C. Kobori et al. (1980) noted that the upper desert scrub and pinyon-juniper vegetation zones were most intensively used and that the site distribution in the pinyon-juniper appeared to be clustered, suggesting specialized exploitation of resources. Further, pinyon-juniper exploitation apparently occurred substantially earlier than Bettinger's research (Bettinger 1979) indicated for the Owens Valley, to the south.

Hall (1980) conducted a large sample survey of the Bodie Geothermal Resource Area for the BLM, recording over 250 sites north of the Mono Basin. Hall's sites, some as old as 5,000 to 6,000 years, included both long- and short- term camps, isolated rock rings, hunting blinds, quarries, and isolated artifacts. Hall interpreted the results to indicate three primary prehistoric land-uses: fall pinyon pine nut harvesting, summer to early fall deer and mountain sheep hunting, and obsidian quarrying for both local use and export. Hall, like Kobori et al. (1980) and Meighan (1955), noted that the highest site density was in the pinyon vegetation zone, but Hall's results indicated a dispersed distribution rather than the clustered distribution suggested by Kobori et al. (1980).

Jackson (1985) conducted an intensive survey of over 26,000 acres of timber compartments for the Inyo National Forest on lands south of Mono Lake. Over 142 sites and 139 isolates were recorded. These included 16 occupation sites, 100 temporary camps, and 27 task-specific sites. Notably, in the one compartment in the Mono Basin, located just east of Mono Craters, only one prehistoric site was located in over 5,500 acres, although numerous historical sites were recorded. Jackson's survey included the surface collection of artifacts, on-site analysis of flaked stone technology, limited test excavations, and extensive sourcing and hydration analysis of collected obsidian specimens. Based upon this work Jackson was able to draw inferences about 7,000 years of land use in the region and suggest future research directions.

Numerous sites have been recorded as a result of other Forest Service surveys in the region for timber sales and other, smaller projects. Over 50 percent of the timbered area in the Mono Basin south of Mono Lake has been surveyed; results of these surveys point out the widespread aboriginal use of the area (Weaver et al. 1982). In addition to these broad-scale surveys, numerous small project-specific surveys have been completed in the region (e.g. Burton 1987; Clay and Hall 1988; Peak 1975). Davis reported on petroglyphs located near the top of the Mono Craters, and suggested that they may have functioned in girls' puberty ceremonies (1961).

Compared to the number of archaeological surveys in the Mono Basin, excavations are few. E. L. Davis (1959) briefly reported on the excavation of a site (CA-MNO-384) near Grant Lake. A test pit was excavated beneath a fire ring that contained two metates, two rock bowls, and two manos. Three more metates, two manos, a large bowl, two projectile points, and a drill were found in the top 15 inches below the ground surface. At 32 to 38 inches depth a child burial was found, with bone awls, a bone pendant, abalone shell, and 70 olivella shells. The presence of well-preserved bone and shell indicated to Davis that the burial was late prehistoric or protohistoric. Davis also conducted surface collection at the site, reporting over 70 artifacts. Figures in the report indicate

that Desert Side-notched, Rosegate, and Humboldt Concave Base projectile points, and obsidian roughouts were collected.

An analysis at the Bodie Hills obsidian quarry (Singer and Ericson 1977) indicated that the primary items produced there included partially finished bifaces and complete blades. Singer and Ericson interpreted obsidian hydration data to demonstrate that quarrying for export began well before 2000 B.C., with a peak in production at about 1300 B.C. to 650 B.C. and a substantial decline circa A.D. 500. T. Jackson (1984) has questioned Singer and Ericson's sampling methodology and dating results, and cites evidence of continued importation of Bodie Hills obsidian to the west slope of the Sierra Nevada into early historical times.

Bettinger (1973) conducted excavations at a site near June Lake (Portillo's Drill Site; FS# 05-04-51-05). Activities represented at the site include tool manufacturing and repair, and food preparation. The recovery of a single temporally diagnostic point (Desert Side-notched, A.D. 1300 to 1850) precluded definitive dating of the site; the excavation was completed before widespread use and refinement of obsidian hydration analysis as a chronometric technique.

Excavations by Peak and Gerry (1976) at the shallow site CA-MNO-607 in Adobe Valley, southeast of Mono Lake, recovered numerous obsidian roughouts, indicating quarry activities and tool manufacture. Peak and Gerry interpreted the single temporally diagnostic point, an Elko contracting stem point, as suggesting use of the site ca. 3000 B.P. (Peak and Gerry 1976:21). Although no sourcing or hydration analysis was conducted, the obsidian most likely was procured from Glass Mountain, the nearest obsidian source.

Garfinkel (1980b) conducted test excavations at a sparse obsidian flake scatter, CA-MNO-389, just beyond the southern edge of Mono Basin in Long Valley. The site was determined to have no subsurface cultural material and little potential for research, although the majority of obsidian had been procured from the Casa Diablo source. The site's single temporally diagnostic artifact, a Rose Spring Corner-notched point, suggested use of the area ca. A.D. 600 to 1300, and the site's location in the Jeffrey pine forest suggested its use may have been related to *Piagi* harvesting (Pandora moth larvae).

One of the best-documented excavations in the Mono Basin was conducted at the Lee Vining Creek Site, CA-MNO-446 (Bettinger 1981b). Eight 1 m by 1 m units (9.4 cubic meters) were excavated, revealing a cultural deposit over one meter deep. Recovered were 19 projectile points (mostly Elko series), 28 bifaces, two drills, 19 unifaces, six cores, over 15,000 flakes, six milling stones, five manos, an abrader, a cobble tool, two hammerstones, a tinkler, and a quartz crystal. The site was interpreted as having been used for the production of stone tools for trade and food processing. Shifting frequencies in stone sources and in major artifact categories tend to support the notion that hunting and trade were especially important between 1000 B.C. and A.D. 700, following which plant procurement and camp maintenance became dominant site activities.

Hildebrandt (1981) conducted extensive subsurface testing at Interlaken (CA-MNO-338) in the southwest portion of the Mono Basin. Work consisted of surface examination and excavation of 33 auger holes. Three temporally diagnostic projectile points recovered included a Humboldt, an Elko contracting stem, and an Elko-like point. While Hildebrandt made no site specific interpretations, he suggested general research questions for the region and determined that the site contained cultural material up to over a meter deep in a small area.

One of the most interesting excavations within the Mono Basin to date is the work of Matranga and Stearns (1982), who conducted test excavations at three sites along State Route 359 in

Nevada in anticipation of highway construction. The sites, 26MN404, 26MN405, and 26MN406, consist of sparse to heavy density lithic scatters with groundstone, rock rings, and house pits. Of sixteen 1 m by 1 m units excavated at 26MN404, only one had material below 20 cm. A house feature was exposed but not excavated. The site was interpreted to have been a temporary camp utilized for pinyon exploitation.

Artifacts recovered from five 1 m by 1 m excavation units and surface work at 26MN405 included one drill and three points (including one Humboldt). All worked artifacts, and 87 percent of the debitage, were of chert, in comparison with site 26MN404, where artifacts were approximately 50 percent obsidian. The site was interpreted to be a temporary hunting camp.

At 26MN406, sixty-six 1 m by 1 m units were excavated, with the majority of cultural material recovered from above 20 cm depth. However, deeper artifacts, including four untypeable points, three Humboldt projectile points, two metates, and several manos, were associated with the remains of a house structure which had burned. Charcoal samples radiocarbon dated to 2780±110 years B.P. and 2880±85 years B.P. Large game dominates the faunal assemblage, with few rabbits represented. Faunal evidence also suggested fall or winter occupation, and provided no evidence of group drives. The site was interpreted to be related to pinyon procurement, suggesting that pinyon exploitation began over 2500 years ago in the area. In addition, results suggest that the Humboldt Basal-notched points may have a wider temporal range than previously thought (cf. Bettinger 1978).

Napton and Greathouse (1986) conducted investigations at another obsidian quarry, Mt. Hicks, in western Nevada, and helped to estimate the distribution of Mt. Hicks obsidian through surface collections and excavations at Mt. Hicks and Alkali Lake, northeast of Mono Lake. It appears that the westward distribution is less extensive than the northward and eastward distribution.

Northwest of Mono Lake, Burton (1987) completed an archeological survey of 1,000 acres and shovel-testing of 12 sites for a proposed resort development at Conway Ranch. Temporally diagnostic artifacts and features and obsidian hydration results indicate use from as early as 3500 B.C. up to the historical period. While the Newberry and Marana periods were well represented, evidence of use during the Haiwee period was scant. There was evidence of obsidian production for trade during the Newberry period, and to a lesser extent, during the Marana period. There appears to have been a change in emphasis at sites through time, from early subsistence dependent upon hunting to a more diverse subsistence pattern with a new emphasis on plant foods.

For the Oxbow Geothermal Project, surface collection and excavation (124 cubic meters, including 10 structures) was completed at 23 sites located along a proposed power transmission line between Bishop, California, and central Nevada (Hall 1986, 1990, 1991). Some of the most interesting sites investigated during this project are within the Mono Basin.

Two sites (CA-MNO-473 and CA-MNO-474), located on a terrace of ancient Lake Russell (Mono Lake), apparently predate ca. 7,500 B.P. Both sites contained small assemblages (800 items from CA-MNO-473 and a only little over 150 items from CA-MNO-474), including a few bifaces and simple flake tools, five milling stones, and faunal remains. While most of the formal tools were of obsidian, the debitage was mostly chert (Hall, personal communication, 1989). The projectile points include a Great Basin Concave Base point (western Clovis) and 16 Great Basin Stemmed series points. Obsidian hydration values were greater than 7.0 microns.

Evidence of use of the Oxbow project area during the Little Lake period was limited to an occasional projectile point and large obsidian

hydration rim measurements at five of the 23 sites, suggesting a highly mobile, wide-ranging adaptation.

The Newberry period and later sites suggest repeated occupations focused on particular resources, especially pronghorn and pinyon pine nuts. A couple of highly specialized sites in Anchorite Pass (Nevada) were utilized sometime between 2,500 and 1,500 B.P. Site 26MN705, with hundreds of projectile point fragments, bifaces, and only a few flakes, was interpreted as a kill site. A butchering site, 26MN715, yielded points, bifaces, flakes, and nearly 25,000 antelope bones. A nearly intact game drive enclosure dating to the late prehistoric/early historical period was also recorded.

Arkush (1986, 1989, 1990) has conducted intensive work at a protohistoric-historical village east of Mono Lake (CA-MNO-2122). The site includes the remains of at least ten house structures, various activity loci, and three game drive corrals. Faunal remains at two of the drive structures indicate they were used for communal pronghorn procurement.

A Sketch of Owens Valley Prehistory

Information compiled from the various excavations and surveys provides a glimpse of prehistoric lifeways in the region. Paleoindian and Mohave complex (pre-3500 B.C.) sites are indicated by Great Basin Concave Base, Mohave, Silver Lake, and Fish Slough Side-notch ed points (Figures 7.8 and 7.9). Within Owens Valley proper, Paleoindian sites are limited to a few potential early sites at Owens Lake (Antevs 1952) and isolated Clovis points found in surface contexts (Amsden 1937; Campbell 1949; Davis 1963).

The earliest sites investigated in the region, thought to pre-date 7,500 B.P., include two sites in Long Valley and two sites in the Mono Basin. Three of these are on ancient lake terraces and one is located on a ridge. The sites contained small artifact assemblages that included bifaces, simple flake tools, faunal remains, and occasionally millingstones. The high percentage of non-obsidian material noted at these early sites has been attributed to wide-ranging mobility. Projectile points include Great Basin Stemmed series points (Mohave and Silver Lake) and Great Basin Concave Base points, which appear related to Clovis points.

The Clyde period (3500 to 1200 B.C.), indicated by Little Lake and Pinto series points and Humboldt Concave Base bifaces (Figure 7.10), is characterized by high mobility; free-ranging groups maintained base camps adjacent to riparian areas, and made frequent short-term use of riparian and desert scrub temporary camps. In a wide-ranging adaptation, high elevations were used for hunting and plant gathering. Sites dating to the Clyde period are generally sparse, with a narrow artifact assemblage consistent with use by small highly mobile groups. The Stahl Site excavated in the 1940s, still remains the only large Clyde period site investigated. Other sites dated to between 3500 and 1200 B.C. are located within desert scrub, wetland, and forested areas, suggesting use of a variety of ecological zones for temporary camps. One of these sites contained numerous basal fragments of a point type recently defined as Fish Slough Side-notched.

Structures and associated artifacts at Cowhorn period (1200 B.C. to A.D. 600) sites, indicated by Elko Series projectile points (see Figure 7.10), suggest use as seasonal base camps or temporary hunting sites. Moderate amounts of pinyon pine remains at the Lubkin Creek Site in the southern Owens Valley may indicate pinyon pine nuts were being collected by A.D. 1. Biface types were standardized and there was a shift to larger bifaces; ground stone became formalized and diverse. Subsistence focused on dryland and wetland seeds, lagomorphs, birds, and fish; large mammals are poorly represented.

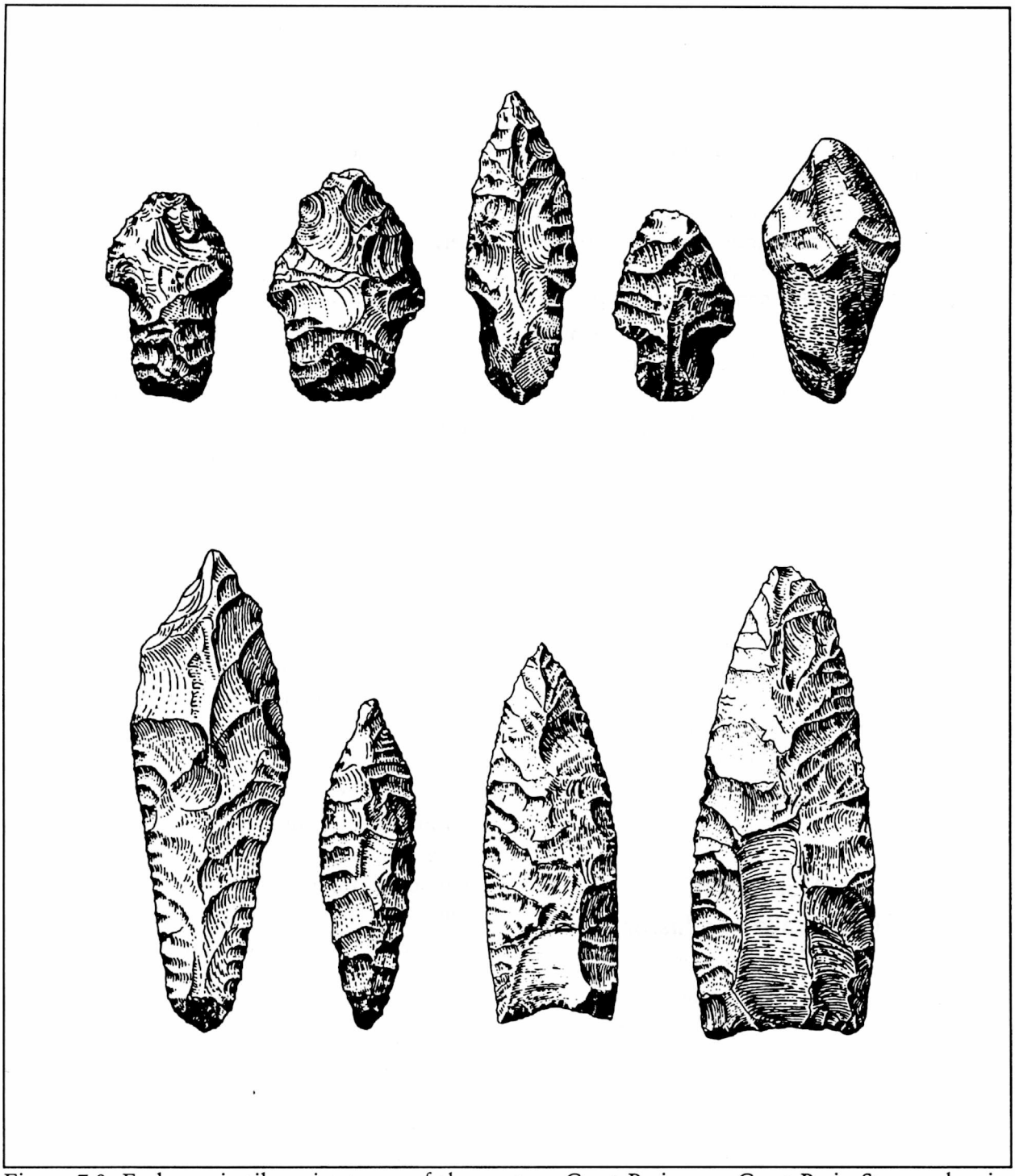


Figure 7.8. Early projectile point types of the western Great Basin; a-e. Great Basin Stemmed series (Mohave, Silver Lake, Parman), f-g. Large unnamed stemmed, h-i. Great Basin Concave Base (western Clovis) (approximately actual size; adapted from Jennings 1986:Figures 3 and 4).

North of the Owens Valley in the Mono Basin, data from the Lee Vining Site suggest hunting and trade were especially important during the Cowhorn period. Intensive Casa Diablo obsidian biface production has been well-documented for this time period in Long Valley. Hunting blinds and tool scatters, apparently used by small hunting parties, become common in higher elevations.

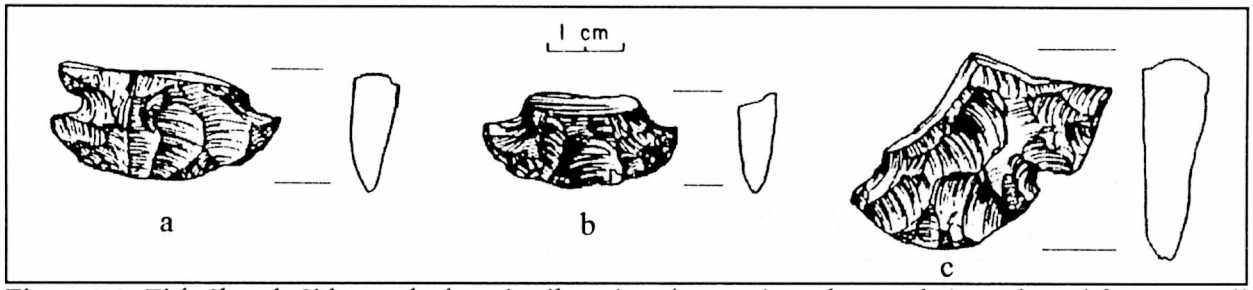


Figure 7.9. Fish Slough Side-notched projectile points (approximately actual size; adapted from Basgall and Giambastiani 1992:Figure 4.6).

Baker period (A.D. 600 to 1300) sites are indicated by Eastgate and Rose Spring series projectile points and Humboldt Basal-notched bifaces (see Figure 7.10). At many sites in the Owens Valley and Mono Basin, Baker period material is scarce suggesting only ephemeral occupation. In other sites, the Baker component is mixed with later materials, obscuring subsistence and technology patterns.

Available data indicate Baker components are dominated by casual flake tools and shaped groundstone artifacts. There appears to be increasing settlement centralization, and a shift towards intensive land use focused on increased use of small animals and plants. Occupation sites at Mammoth Lakes suggest the Medieval warm period (A.D. 900-1350; see Moratto et al. 1978) opened new areas for plant exploitation, while high elevations continued to be used for hunting.

Klondike period (A.D. 1300 to ca. 1840) sites are indicated by the presence of Desert Side-notched and Cottonwood projectile points (see Figure 7.10) and Owens Valley Brown Ware ceramics. The trend toward intensifying land use in the Owens Valley continued, with some villages occupied essentially year-round. Many specialized sites were occupied by small family-sized groups, indicating more variability in settlement patterns then the large multi-family villages noted by Steward (1933, 1938).

Collection of seeds and pinyon pine nuts intensified, and specialized extractive localities were established for mussel procurement and waterfowl hunting. Seed collecting expanded into marginal areas, including high elevations, and specialized bulk seed processing features appear. Game drive enclosures were constructed to capture antelope. *Piagi* (Pandora moth larvae) were collected in great numbers in the Jeffrey pine forest, a practice which may have begun in an earlier period.

Klondike period artifact inventories are seen to parallel those at preceding Baker period sites, but there may have been a greater shift to expedient technologies with the (re)introduction of casual groundstone types.

The limited amount of work conducted at protohistoric sites (pre-1860) suggests they are characterized by essentially aboriginal tool-kits with a few Euroamerican artifacts. At many protohistoric sites in the Eastern Sierra glass trade beads are the only non-aboriginal artifacts present, suggesting that precontact industries such as flaked stone remained intact during the protohistoric period. However, by the historical period (ca. 1860-present), every aspect of aboriginal culture had been modified to some extent. Aboriginal sites occupied after 1870 contain primarily store-bought, manufactured goods with only a few traditional artifacts. This change appears to have been fairly complete and rapid, since transitional sites with worked glass or metal points have not been encountered. However, house style, some groundstone types, basketry, and the use of traditional native plant and animal resources continued well into the twentieth century.

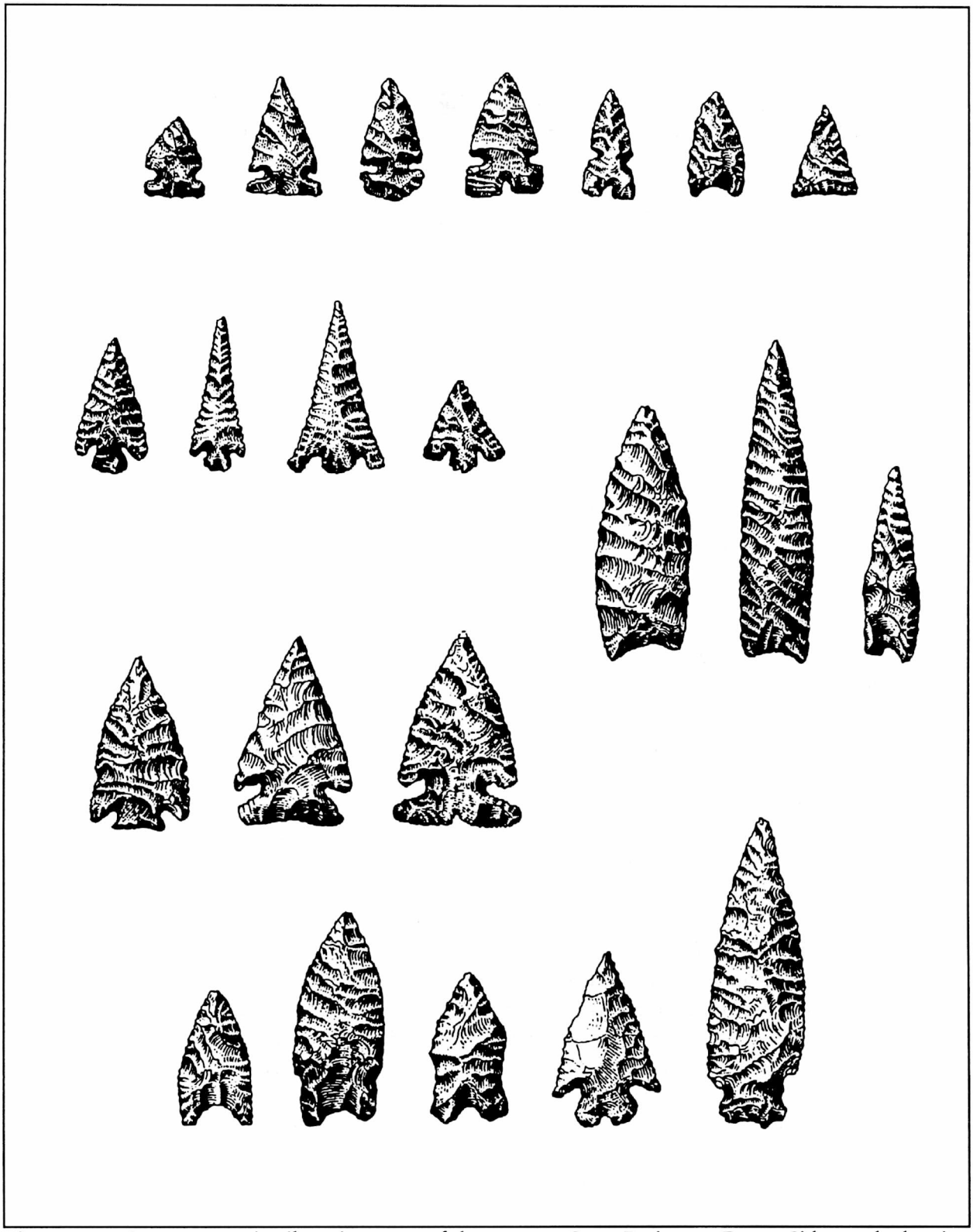


Figure 7.10. Common projectile point types of the western Great Basin; a-e. Desert Side-notched series, f-g. Cottonwood Triangular, h-k. Rose Spring-Eastgate series (Rosegate), l-m. Humboldt Concave Base, n. Humboldt Basal-notched, o-q. Elko series, r-v. Little Lake (Pinto) series (approximately actual size; adapted from Jennings 1986:Figures 3 and 4).

Chapter 8

Research Objectives and Methods

Between 1993 and 1995 the National Park Service completed four archeological projects at Manzanar National Historic Site. This work included archival research, intensive survey of over 1,200 acres, detailed feature recording and mapping, repeat photography, controlled surface collection, and subsurface testing. The primary goal of the archeological work was to identify all archaeological resources in and near the Historic Site related to the World War II-era Manzanar Relocation Center. When it became clear that there were numerous prehistoric and historical sites within the National Historic Site that predated the relocation center, the scope of work was expanded to include gathering sufficient data to assess the research potential of both historical and prehistoric resources (and hence National Register eligibility), make informed recommendations regarding future management of these resources, and acquire information useful in interpreting the full history of the Manzanar area.

During the course of field work 82 archeological sites were discovered and recorded. Some of these are related to the World War II-era relocation center but many are older. Three major temporal components were encountered: the relocation center itself; sites associated with the town of Manzanar or earlier ranches; and Native American Indian sites. Fifteen Native American Indian sites, dozens of sites and features associated with the townsite and earlier ranches, and all of the known features of the relocation center have been fully recorded. Excavations were undertaken at four of the Native American Indian sites, eight features associated with the town of Manzanar, and three small relocation center trash deposits.

Research Objectives

The archeological work at Manzanar included site recording, surface collection, and excavations. Specific objectives were designed to meet the goals stated above: (1) ascertain the horizontal and vertical extent of the sites; (2) investigate site structure and assess integrity; (3) identify and determine the age of occupation(s); and (4) define the quantity and quality of data categories present. This information would in turn be used to assess each site's ability to address research questions related to the relocation center, the early townsite, and the Native American Indian occupation, as outlined below.

Manzanar War Relocation Center

In *Historical Archeology of Confinement: Manzanar Case Study*, Kelly (1992) sets an intellectual framework for Manzanar studies and suggests

that archeological data from the relocation center itself might address several questions about confinement. In a supplemental research design Kelly (1993) identifies other issues such as ethnicity and perceived threat. A growing body of literature concerns resistance (e.g. Nishimoto 1995; Okihiro 1973, 1984). Even basic questions about subsistence and living conditions may be important not only in themselves, but also for their implications. For example, Tamir et al. (1993) have conducted a seminal study of a portion of the Gila River Relocation Center in Arizona, in which they conclude the relocation center artifact assemblage can be best described as "ordinary" and, with the exception of Japanese ceramics, "could have been discarded by any number of contemporary American communities" (Jensen 1993:128).

Comparison of archival, oral history, and archaeological records may corroborate or contradict previous interpretations. For example, discrepancies exist between local residents and others (Letters to the Editor, *Inyo Register* 8/27/95; Baker 1994:98) who remember one or two watchtowers and Japanese American evacuees who remember the eight watchtowers as depicted on War Relocation Authority blueprints. Archeological remains associated with watchtowers could provide evidence to resolve this discrepancy.

Specifically, research questions formulated for the Manzanar Relocation Center focus on several interrelated themes, such as confinement, ethnicity, resistance, and subsistence.

Confinement

How does Manzanar fit within Kelly's Control Continuum Model? This model suggests there will be archeological correlates to different situations in which populations are detained, ranging from most confined (e.g. prisons, POW camps) to least confined (e.g. religious utopian communities, military forts, and pioneering camps). Evidence from Manzanar may help address how confinement structures the physical evidence of occupation, whether confinement produces adaptive behavior identifiable in the archeological record, and how the confined group differs from the administrative and guard population.

Ethnicity

Since the Manzanar residents were confined because of their ethnic background, in what ways and to what degree, did they manifest their ethnicity? Do evacuee-constructed features, such as landscaping, gardens, and irrigation systems reflect their Japanese heritage?

Resistance

Contemporary accounts and subsequent analyses document obvious episodes of resistance, such as the Manzanar Riot/Rebellion, as well as more subtle forms of resistance, such as an increased interest in Japanese culture. Is there evidence of resistance in the archeological record, for example sabotage of facilities or equipment, deliberate waste, or pro-Japanese graffiti?

Daily Life

What was day-to-day life like — how was it affected by the war? Is there evidence of the persistence of family life in a forced communal setting (e.g. hot plates, family china), or other evidence of individualism? How do evacuee-built features at Manzanar compare to the other relocation centers — do features and trash reflect specific professions or backgrounds?

The relocation centers were designed for self-sufficiency as much as possible; how successful was Manzanar in this regard? Is there evidence of many imported goods, and did the proportion of imports change through time (e.g. after farms were established or when the relocation center emptied out and the potential work force was reduced)? Are resources, such as concrete and other building materials, distributed equally?

During the war and to this day, many believed that the evacuated Japanese Americans were "coddled" in the relocation centers (Roosevelt

1945; Baker 1991, 1994). Part of this impression resulted from the large quantities of food shipped to the relocation center to support 10,000 people (Garrett and Larson 1977:108, 143, 161). Is there evidence of any extravagance, such as expensive cuts of meat, or excessive waste?

Manzanar Townsite

Research domains for the earlier settlement at Manzanar are derived from those suggested by Burton (1990, 1992b) for sites in the eastern Sierra and by Ayres and Seymour (1993), Buckles et al. (1981), Greenwood and Foster (1987), Hardesty (1991), Morris (1990), and Stein (1990) for sites in the American West. Central to these questions is the comparison of archival, oral, and archeological data sets and the integrity of the archeological remains.

Frontier Urbanism

Do frontier towns represent transplanted eastern urbanism without adaptation to a specific environment? What is the relationship between urban and rural areas? Hardesty (1991) notes that during the Nineteenth century change was often more rapid in the countryside than in towns, because of rural ties with urban capitalism. Can change in economic pursuits and the effects of transportation improvements be seen in the archeological record? Can town growth (such as the change from large ranches to small farms at Manzanar) be discerned archeologically? Can any adaptational responses to urbanism be identified? Can differences in economic status be identified? Can the degree of self-sufficiency vs. dependency be measured?

Economics and Land Use

What are the characteristics of boom-bust cycles? How does the retraction and expansion of capital for mining and ranching (often from distant sources) affect the local economy and culture? How rapidly did change in styles or technology reach the eastern Sierra? How are economic ties to metropolitan areas structured? How accurately does the historical record reflect actual land use patterns and economies?

Irrigation and Water Control

Anthropologists and historians have argued that the organization of irrigation and other water development projects fosters the development of stratified societies. Irrigation and water control have been crucial in the history of the eastern Sierra, not only for local ranchers and farmers but also for the development of Los Angeles. How has water development contributed to changes in society in the eastern Sierra? How has it affected patterns of land use? What were the effects of the large scale transfer of water to Los Angeles on the rural society of the Manzanar townsite?

Native American Indian Sites

As a result of previous archeological work in the region, numerous research questions have been identified for Native American Indian sites. The following are adapted from Burton (1990).

Subsistence Change

Bettinger (1975, 1976, 1977a, 1982a) has interpreted archaeological evidence as indicating changes in subsistence through time. Bettinger and Baumhoff (1982) relate some of these changes to the Numic invasion/incursion, and postulate that a different Numic subsistence strategy supplanted the pre-Numic strategy. Other researchers (Hall 1981; Munday and Lincoln 1979; Bouscaren et al. 1982; cf. Bettinger 1979, 1981) have questioned whether there is sufficient evidence to support these inferences. Other researchers have postulated subsistence intensification through time (Basgall and McGuire 1988); did these changes reflect more labor-intensive strategies, or involve more marginal resource areas? Data on subsistence would be available in floral and faunal remains and tools related to subsistence (e.g. projectile points, milling equipment, hearths).

Social Organization and Territoriality

The documented presence of craft specialization and hereditary headmen in the Owens Valley argues for established sociopolitical complexity in the protohistoric period (Bettinger and King 1971). What is the geographic range and antiquity of this complexity? Estimates vary from late prehistoric times (Bouey and Basgall 1984), to as early as 5000 B.P. (Bettinger 1983). Territoriality is manifested in the degree of resource protection or restriction. Bettinger (1982b) has postulated that Owens Valley groups were territorial, based on the distribution of artifacts made of Fish Springs obsidian. Does the distribution of Fish Springs and other obsidian at Manzanar reflect that predicted by Bettinger's model? Is there other evidence of territoriality? Did territoriality change through time?

Regional and Inter-regional Exchange Systems

What was the direction and intensity of exchange? Who were the producers, and who were the consumers? Were trade items obtained directly by visiting groups or through exchange with the local inhabitants or middlemen? What is the antiquity of formalized exchange systems; estimates vary from as early as 3500 B.P. (cf. Bettinger 1982a; Hughes and Bettinger 1984), to as recent as the late prehistoric (Basgall 1983; Bouey and Basgall 1984). Shell and stone beads have been equated with a local money economy in late prehistoric times, based on extensive intravalley trade (Bettinger 1982b; Bettinger, Delacorte, and McGuire 1984); how would this money economy be reflected in the archaeological record? How would it have affected local subsistence and trade? Exchange system data can be found in artifacts that reflect trade (e.g. nonlocal material or manufacture).

Regional Chronology

Researchers have provided and refined a basic chronology useful for the Western Great Basin (Bettinger and Taylor 1974; Heizer and Hester 1976; Thomas 1981). However, refinement of this chronology is desirable because of the morphological and temporal overlap of projectile point types in the Inyo-Mono region (Jackson and Bettinger 1985:49-50; Flenniken 1985; Flenniken and Raymond 1986). Further, some types, such as Great Basin Stemmed series projectile points, are less well defined. Other temporally diagnostic artifacts, such as shell beads, have been dated primarily in contexts outside east-central California, often using highly variable radiocarbon associations. Chronometric data can be derived from sites that permit temporal control (e.g. time sensitive artifacts, organic materials suitable for radiocarbon dating, or obsidian for hydration dating).

Acculturation and Adaptation

What are the mechanisms of acculturation and adaptation when groups of different cultural backgrounds (e.g. Anglo settlers and native Paiute) meet? Do the subsistence or settlement patterns exhibited differ from earlier sites? Initial data from the region (Arkush 1987b, 1989; Burton 1985; Burton and Farrell 1991; Delacorte and McGuire 1993) suggest that profound changes in Native American Indian settlement in the Owens Valley did not occur until after the 1860s. This evidence needs to be augmented in order to examine the effects of the Euroamerican incursion on local native groups.

Methods

The strategies and methods used during the various phases of field work, analysis, and research are discussed below.

Archival Research

Prior to field work a records check was completed in person at the Eastern Information Center of the California Historic Resources Information System located at the University of California, Riverside. In addition, queries were made with California State Parks, CALTRANS, the Bureau of Land Management (BLM) Bishop Resource Area Office, the Inyo National Forest, and archeological consulting firms known to have ongoing research interests in the region.

Previously, two archeological surveys had been completed on the eastern boundary of the National Historic Site along portions of US Highway 395 (Burton 1990, Weaver 1992). During one of these projects (Burton 1990), the relocation center was briefly recorded and assigned the trinomial designation CA-MNO-3802/H. The only other survey in the immediate vicinity was of a 40-acre parcel of BLM land just northwest of the National Historic Site (Clough and Ridgeway 1978). During these surveys eight archeological sites were recorded in the vicinity of the National Historic Site. They include a concrete foundation and associated artifact scatter, several historical trash dumps, a large historical Native American Indian village, two small sherd scatters interpreted to be pot busts, a lithic scatter, and an isolated pair of milling slicks. In addition, information from California State Parks indicated that a prehistoric site was discovered at Manzanar, but not recorded, during their preliminary studies in the 1970s.

Additional information on the Manzanar Relocation Center and town of Manzanar was obtained from a number of sources after or at the same time as field work progressed. Blueprints and photographs of the relocation center were acquired from the National Archives in Washington, D.C., and every issue of the Manzanar Free Press available on microfilm was reviewed. Also examined were collections and records at the Eastern California Museum, the Inyo County Courthouse, University of California, Los Angeles, and the University of Arizona. The Los Angeles Department of Water and Power (LADWP) proved to have a wealth of information on the town of Manzanar, including plat maps, photograph albums, aerial photographs, and land assessments. The plat maps, compiled in 1929, show roads, fences, pipelines, powerlines, previous land ownership, and major crop types for most developed areas of the Owens Valley. The photograph albums include photographs of every structure (including sheds and outhouses) owned by LADWP as of 1929.

Field Methods

Field work was conducted by a team of up to eight crew members under the supervision of the author. Field work consisted of five primary tasks: survey and site recording, detailed feature mapping, repeat photography, controlled surface collection, and subsurface testing. Each is described below.

Survey and Site Recording

The entire 550-acre authorized National Historic Site was intensively surveyed to identify the presence and extent of historical and prehistoric remains, locate internee-constructed features, and identify areas and features for more detailed work. Within this area survey proceeded by relocation center blocks. Each block was walked by a team of two to three archeologists walking parallel zig-zag transects no greater than 2 or 3 m apart. Major vegetation, artifacts, features, and disturbed areas were noted and plotted on detailed *Block Survey Records* developed especially for this project (Figure 8.1). Information from the Block Survey Records was then transferred to a map of the National Historic Site prepared from an enlarged aerial photograph.

Areas adjacent to the western and southern boundaries of the National Historic Site (approx. 430 acres; Figure 8.2) were surveyed to determine the extent of the relocation center dump and to record related features such as the military police compound and chicken ranch. These areas were surveyed by a two to three person crew walking parallel transects at intervals no greater than 15 m. Reconnaissance was also conducted to locate other outlying features associated with the relocation center. This included the reservoir, hog farm, airfield, sewage treatment plant, numerous ditches, and farm fields. Although the general locations of these features were known, some survey was needed to find and record them (approx. 220 acres, plus 9.5 linear miles of ditch [about 50 acres]).

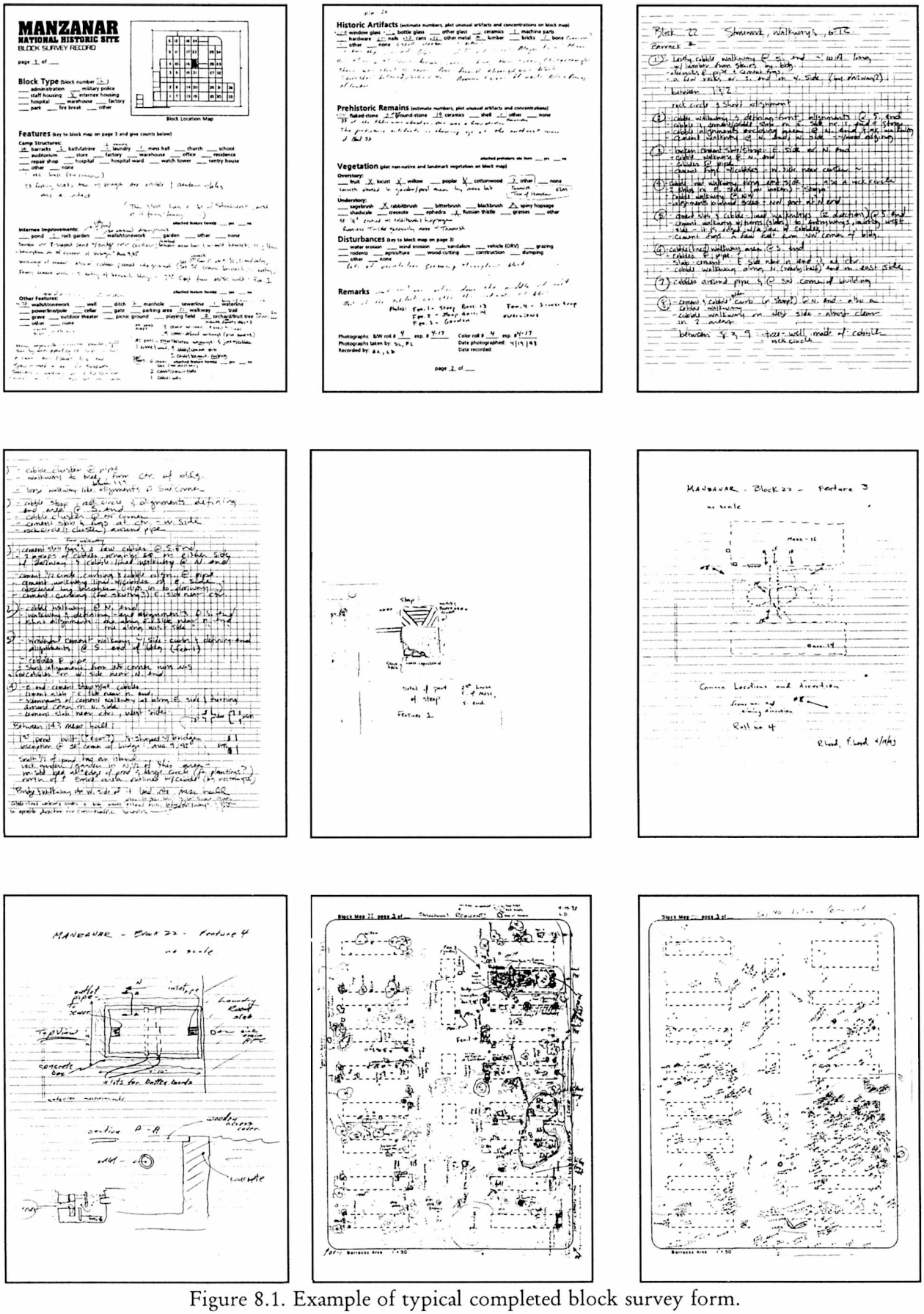


Figure 8.1. Example of typical completed block survey form.

Most relocation center features within the authorized National Historic Site boundary were designated site MANZ 1993 A-30. Exceptions were the relocation center cemetery and a dump with a post-relocation center component. For clarity, distinct "features" predating the relocation center were recorded as separate sites even though they overlap (or underlie) the central area of the relocation center (MANZ 1993 A-30). This seemed justified given the complexity of the area and the size and recent age of the relocation center itself. Also recorded as separate sites were linear sites associated with the relocation center even if they begin or end within site MANZ 1993 A-30.

Generally, historical site boundaries were defined to include a discrete area or group of features thought to represent one occupation. Prehistoric sites within the survey area were generally defined following the Eastern Information Center's site density criteria for Inyo and Mono County (15 items per 100 square meters, or a feature). Site numbers designate the National Park Service unit, project year, project designation, and sequential number. For example, MANZ 1993 B-1 is the first site recorded during the second project conducted at Manzanar National Historic Site in 1993. However, in this report the relocation center and other historical sites are referred to by their original names whenever applicable. Located sites and features were plotted on USGS 7.5' maps and aerial photographs. Site information was recorded on standard Archeological Site Survey Records. Prehistoric material not meeting the site density criteria was noted and plotted on the *Block Survey Records* or appropriate USGS 7.5' map. Site records were submitted to the CHRIS clearinghouse for trinomial designations. A concordance of site numbers is provided in Appendix P.

Detailed Mapping

The main purpose of this task was to record in detail features that either have significant interpretive potential or that appeared most susceptible to vandalism. This recording consisted of plane-table and alidade mapping, compass and tape mapping, and bi-pod aerial photography as appropriate (Figures 8.3 and 8.4).

Sixteen areas or features within the National Historic Site and six features outside were mapped in detail. These include the relocation center entrance, the director's residence, the administration building, the service station and motor pool area, the fire station, remains of the judo building, two elaborate ponds in the barracks area, a pond and garden complex at the relocation center hospital, a series of foundations west of the hospital, the chicken ranch, three buildings and the apron at the airport, a foundation and headworks at the sewage treatment plant, three town-era foundations, and a town-era dam (Table 8.1, Figure 8.5). Bi-pod aerial photography was completed at many of these and several other features.

To facilitate mapping and bi-pod photography the overlying sand, duff, and brush was removed from many of these features. The amount of material removed varied considerably. In some cases the removal of sediments required as much time as the subsequent mapping. For example, one foundation, the 1,064-square-foot morgue, was covered by up to 30 cm of sediments (approximately 25 cubic meters in all; Figures 8.6-8.9). Sediments and brush were removed with hand tools. Artifacts encountered during this work were noted with selected items collected.

Repeat Photography

In addition to photographs taken during the normal course of field work, views in historical photographs were retaken from the same vantage point. We were fortunate in that there is an abundance of historical photographs available from both the relocation center and town of Manzanar. These photographs were helpful in identifying enigmatic features such as parks, picnic areas, and athletic fields. Recent vegetation growth and other impacts were also apparent.

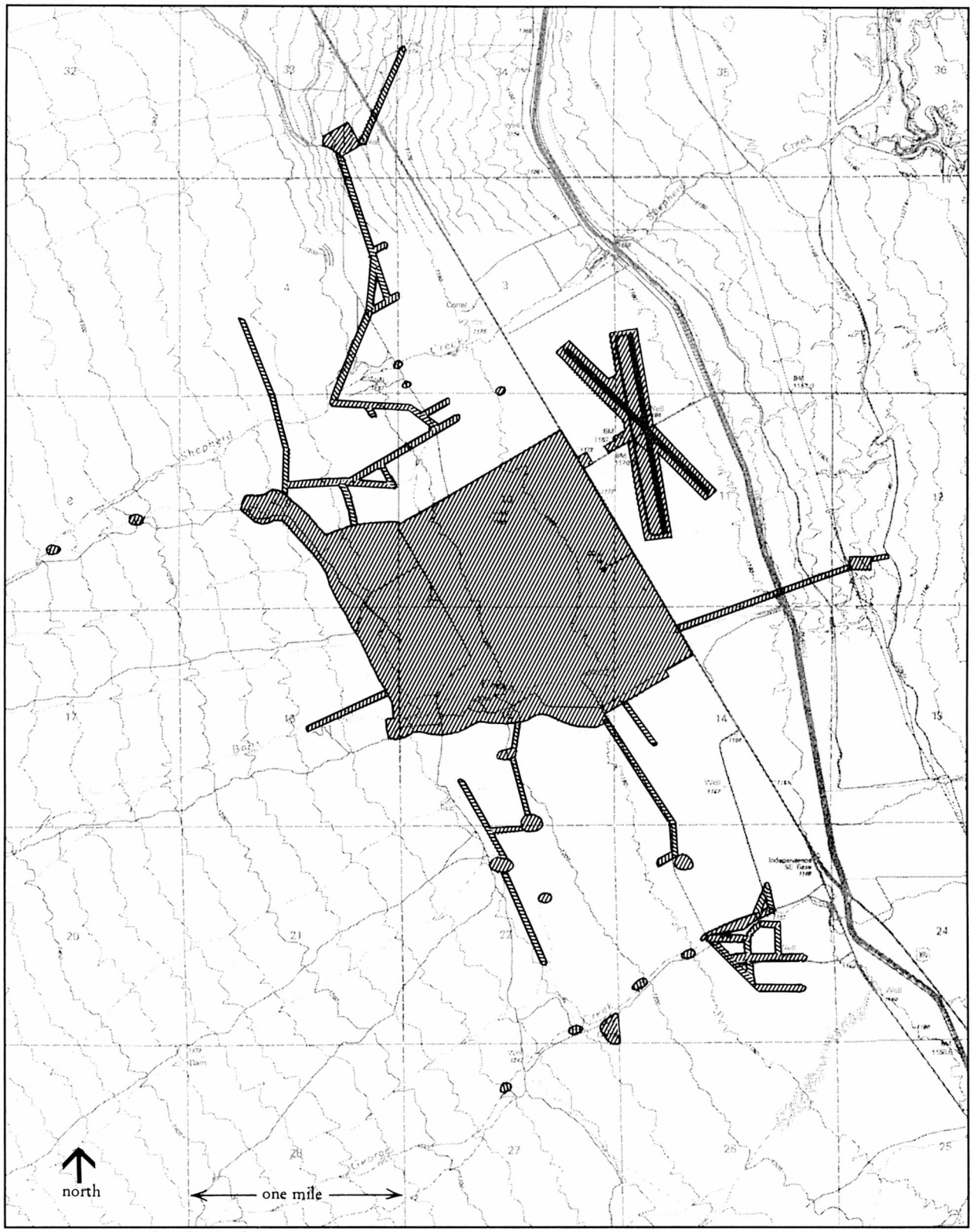


Figure 8.2. Archeological survey coverage at Manzanar National Historic Site and environs (adapted from 1982 USGS 7.5 minute maps Bee Springs Canyon, Independence, Manzanar, and Union Wash, California).

Figure 8.3. Plane-table mapping of hospital laundry room foundation.

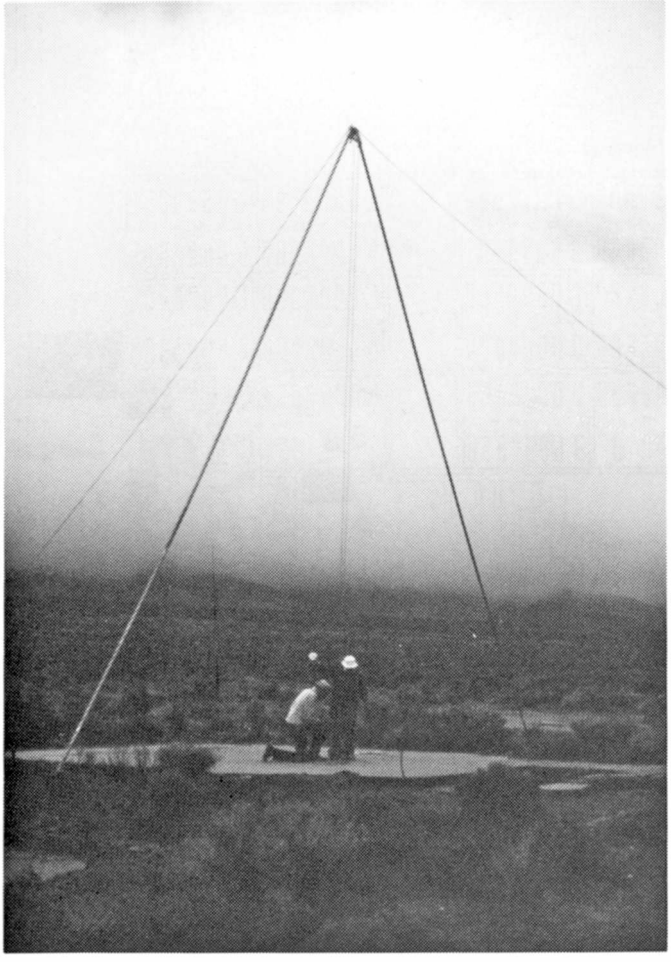


Figure 8.4. Overhead bi-pod photography at garbage can washing rack foundation.

Relocation center photographs include numerous examples taken by Ansel Adams, Toyo Miyatake, Dorothea Lange, and the relocation center staff (Adams 1985:257-265; Armor and Wright 1988; Merritt file, UCLA Special Collections; Taylor 1942). There are two other major sources for photographs dating to the town era. First, the LADWP valuation records include photographs of all structures present in 1929, from residences to latrines and sheds made of scrap wood. Second, there are numerous photographs in the Manzanar file at the Eastern California Museum in Independence.

Controlled Surface Collection and Tabulation

Controlled surface collection and tabulation was confined to the historical components (Figure 8.10); historical disturbance was deemed too extensive to make controlled surface collection at the Native American Indian sites informative. For the relocation center component, this task entailed the tabulation of all artifacts within four relocation center barracks blocks (Blocks 12, 13,

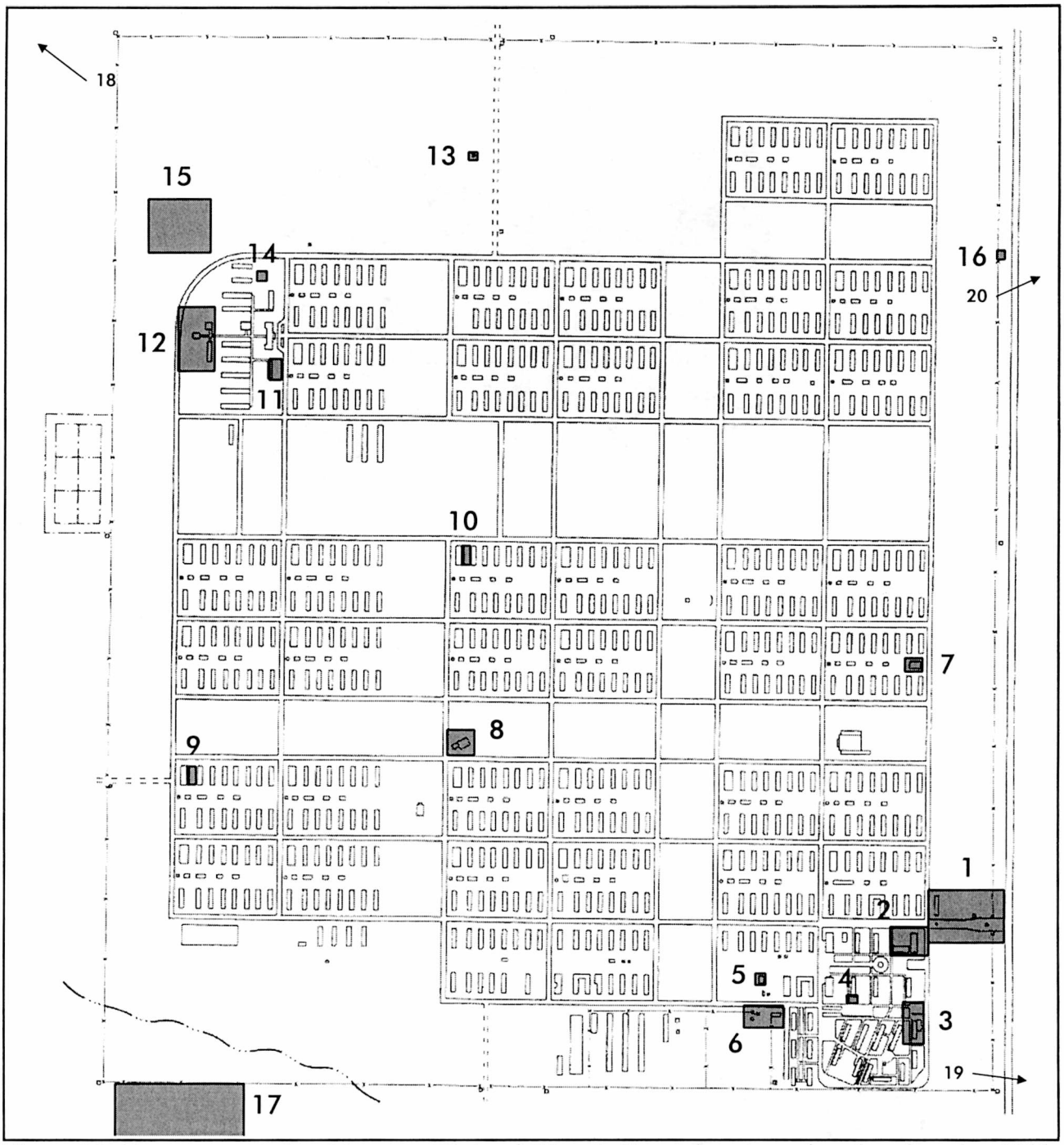


Figure 8.5. Features mapped at Manzanar National Historic Site and environs (numbers keyed to Table 8.1).

Table 8.1.
Detailed Mapping at Manzanar National Historic Site and Vicinity (numbers keyed to Figure 8.5).

1. Entrance and Police Station (MANZ 1993 A-30, Features P-21 through P-26).
2. Administration Building Area (MANZ 1993 A-30, Features A-1, A-13, and A-14).
3. Director's Residence (MANZ 1993 A-30, Features S-1 and S-19).
4. Apartment "D" Patio (MANZ 1993 A-30, Feature A-8).
5. Automotive Service Garage (MANZ 1993 A-30, Feature G-4).
6. Service Station and Motor Pool Office (MANZ 1993 A-30, Features Se-1 through Se-6).
7. Fire Station (MANZ 1993 A-30, Feature 13-1).
8. Judo House (MANZ 1993 A-30, Features J-1 through J-3).
9. Block 12 Pond (MANZ 1993 A-30, Feature 12-1).
10. Block 22 Pond (MANZ 1993 A-30, Feature 22-3).
11. Hospital Pond (MANZ 1993 A-30, Feature H-5).
12. Hospital Auxiliary Buildings (MANZ 1993 A-30, Feature H-8 to H-11, H-20, and H-21).
13. Foundation (MANZ 1993 A-30, Feature P-7).
14. Christopher House (MANZ 1993 A-9).
15. Gilmer Farm (MANZ 1993 A-6).
16. Manzanar Store (MANZ 1993 A-16, Feature 2).
17. Relocation Center Chicken Ranch (MANZ 1993 A-31)
18. Town Water System Intake Dam (MANZ 1993 B-29, Feature 12).
19. Sewage Treatment Plant Control Room and Headworks (MANZ 1993 B-28, Features 1 and 2).
20. Manzanar Airport Buildings and Apron (MANZ 1993 B-27, Features 1 through 4).

14, 21) and the staff housing area. These blocks were subdivided into smaller units for tabulation (Figure 8.11). Three trash scatters associated with the town of Manzanar that appeared to be primarily surface in nature also were selected for examination. Artifacts within three contiguous 1 m by 2 m units were tabulated at each of these features.

Following Stein (1988) the following guidelines for artifact collection were used:

Ceramics - all but small undecorated fragments were collected.

Glass - fragments with embossed or painted writing, bottle bases, and fragments with neck finishes were collected. Other glass fragments and flat (window) glass were tabulated by color and type with only selected pieces collected.

Nails - wire nails were tabulated and not collected. Cut nails were collected.

Cans - these were recorded in field as to form, shape, size, method of opening, and reuse, with only representative examples collected.

Lumber - these items were tabulated, measured, and not collected.

Other artifacts - common artifacts, such as coat hangers, screws, and light bulbs, were identified, tabulated, and not collected. Unusual and rare items were collected.

Subsurface Testing

Twenty-six 1 m by 1 m test units were excavated at sites within the authorized boundary of Manzanar National Historic Site (Figure 8.12). Tested areas included four Native American Indian sites, a sample of pre-relocation center town features, and three features associated with the relocation center (Table 8.2).

Subsurface testing of the relocation center component at Manzanar was limited in scope. Two units were excavated at a small landfill (MANZ 1993 A-37) west of the relocation center hospital and one unit each was excavated at two small trash deposits located just north of Block 35 (Features P-18 and P-19).

Four sites were selected for testing to assess the data potential of the town-era component at Manzanar. Two units were excavated at the Gilmer Farm (MANZ 1993 A-6) in the northwest portion of the National Historic Site, two artifact scatters at the OVI Headquarters/John Shepherd Ranch (MANZ 1993 A-13) in the North Park area of the relocation center were tested, two small trash deposits in "downtown" Manzanar (MANZ 1993 A-16) were tested, and one unit was excavated in the central portion of the National Historic Site near the former location of the Campbell/Ed Shepherd House (MANZ 1993 A-28).

Four of the five Native American Indian sites within the National Historic Site were tested. Two units were excavated at MANZ 1993 A-1, five units at MANZ 1993 A-2, two units at MANZ 1993 A-3, and six units at MANZ 1993 A-4. Due to extensive historical disturbance,

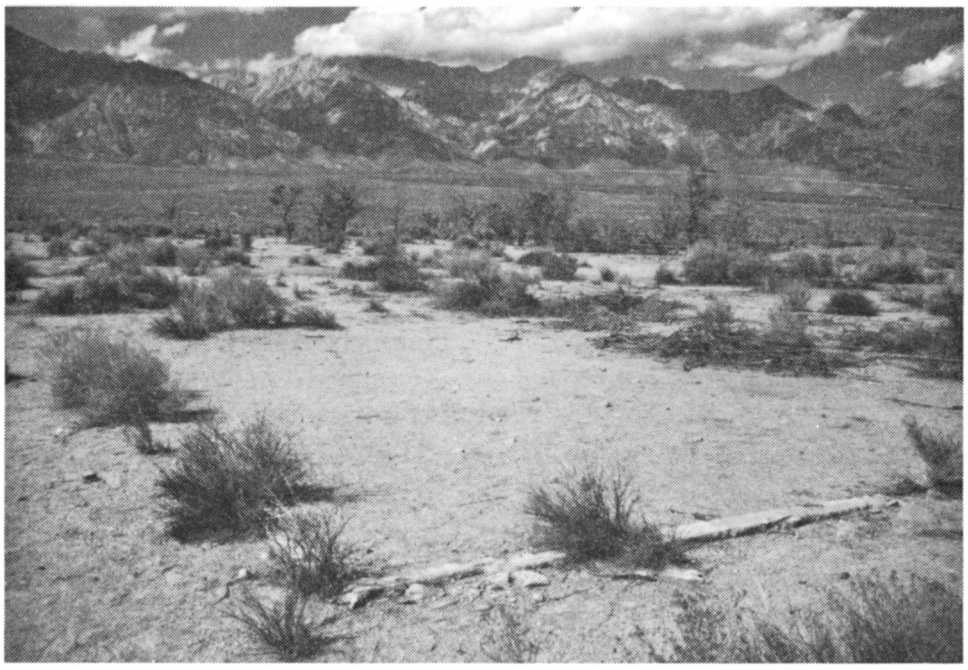


Figure 8.6. Relocation center morgue foundation prior to removal of overburden.

Figure 8.7. Clearing overburden from morgue foundation.

testing at the fifth site (MANZ 1993 A-19) was not considered crucial at this time.

Excavation units were aligned with magnetic north. The highest corner of the unit was designated the unit datum and was considered the "0-elevation." Excavation proceeded in arbitrary 10-cm levels. The units were excavated mainly by shovel, but trowels, dustpans, and small picks were used as needed.

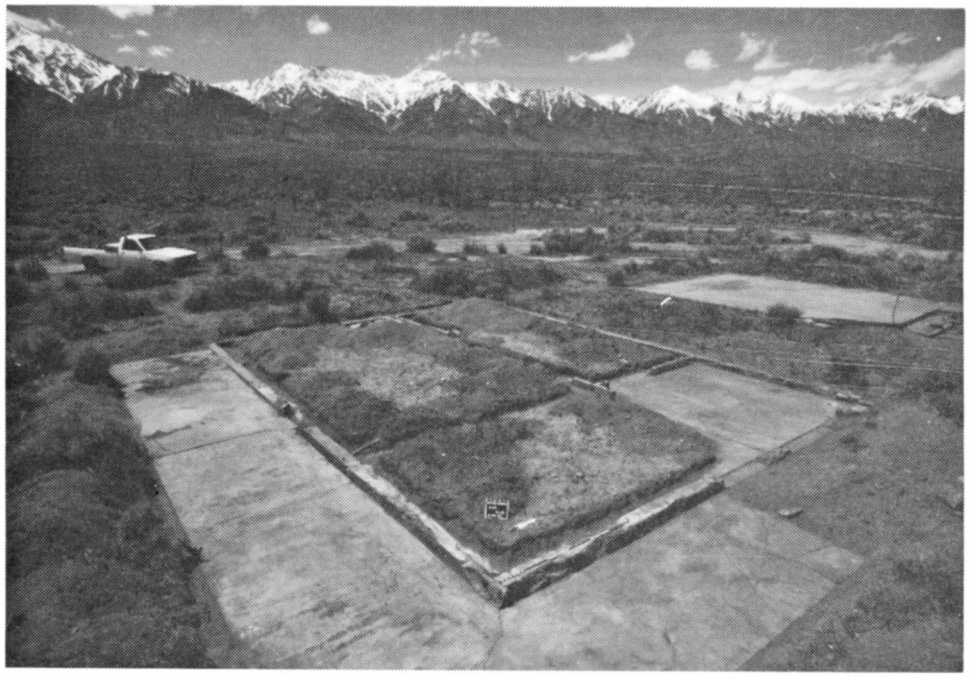


Figure 8.8. Morgue foundation partially cleared of overburden.

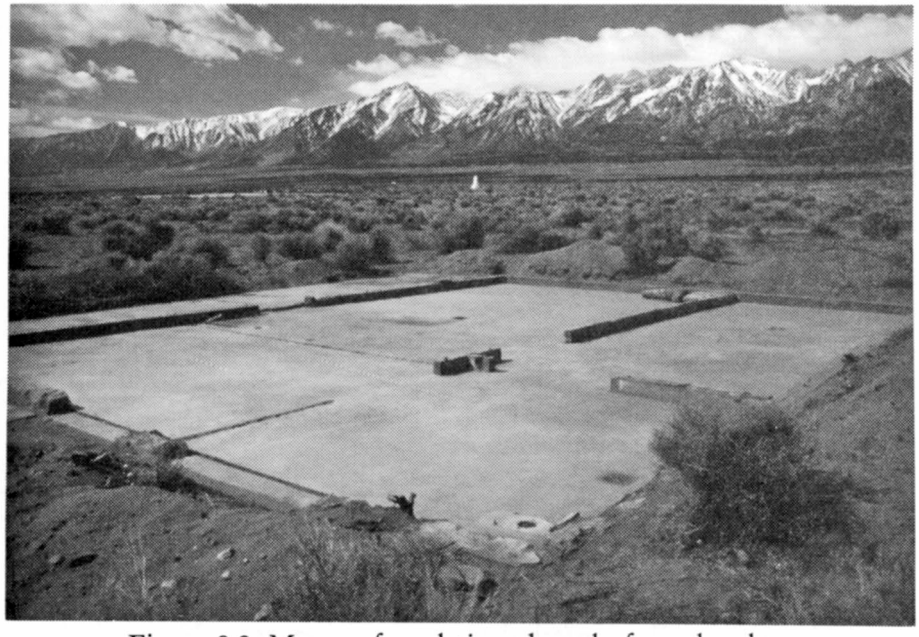


Figure 8.9. Morgue foundation cleared of overburden.

All sediments were screened through 1/4- or 1/8-inch-mesh hardware cloth (Figures 8.13 and 8.14). All artifacts and ecofacts remaining in the screens were collected. Each class of material (e.g. lithics, ceramics, glass) was bagged separately by unit and level. Disturbed deposits within excavation units, either from rodents or other causes, was excavated and screened separately if possible. Radiocarbon, pollen, and flotation samples were collected as appropriate. Due to

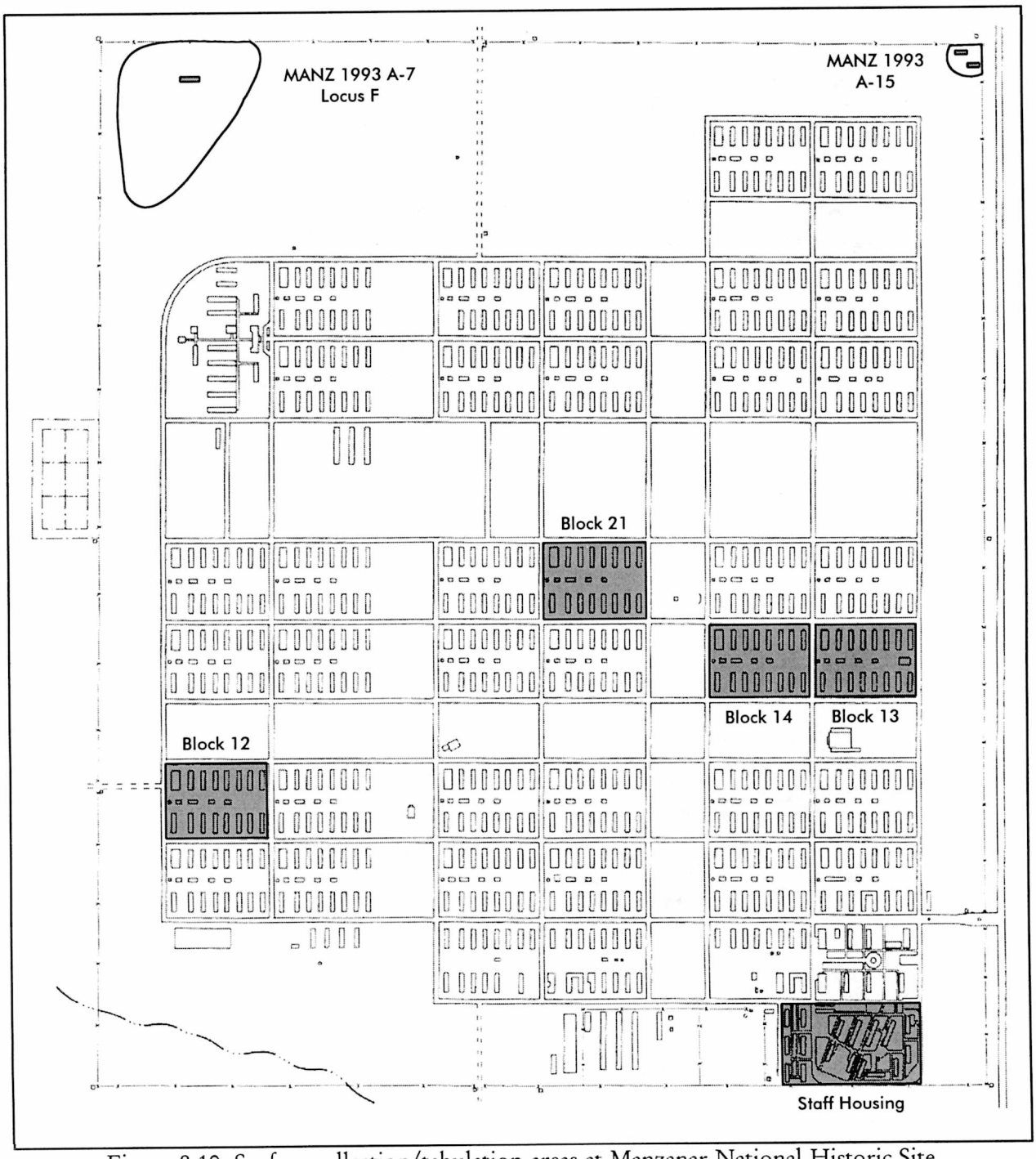


Figure 8.10. Surface collection/tabulation areas at Manzanar National Historic Site.

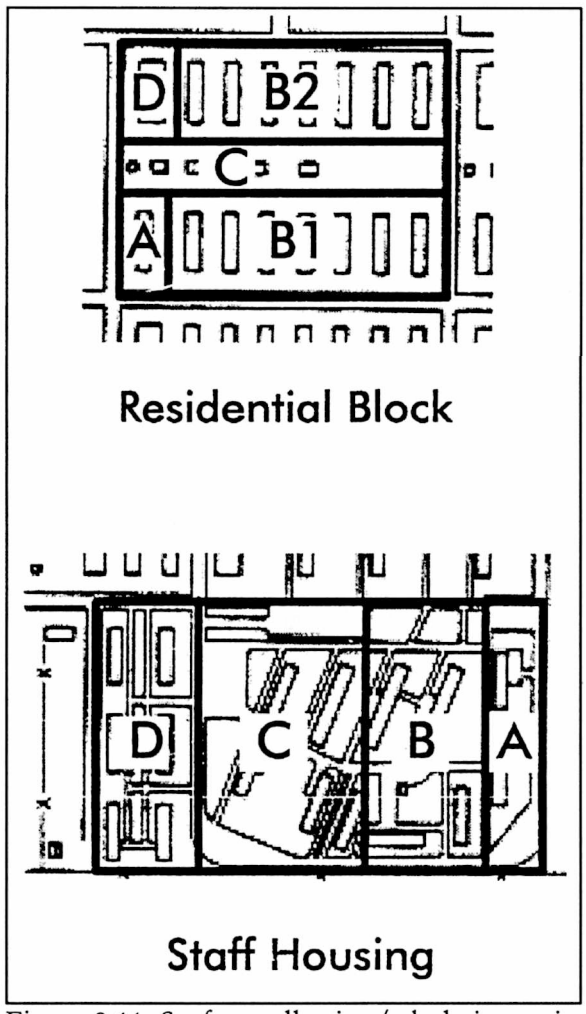


Figure 8.11. Surface collection/tabulation units at residential and Staff Housing blocks.

time constraints and the large amount of historical remains encountered in one of the excavation units (number 26), some items, such as can and glass fragments, were inventoried and discarded in the field with only representative samples collected.

Excavation data were recorded in the field on standardized unit level forms (Figure 8.15). Soils were described according to texture, color (using Munsell soil color charts), and depth. Units were excavated to "sterile" soil (operationally defined as levels exhibiting a significant drop in cultural material). Following excavation, a profile of at least one wall of each 1 m by 1 m excavation unit was drawn and photographed, and time markers (1993 pennies and other items) were placed at the bottom. All units were backfilled to approximate pre-excavation ground surface contours.

At one of the sites (MANZ 1993 A-4), a burial was discovered during excavation. After the remains were encountered surrounding sediments were excavated only enough to determine if the bones represented an intact burial, and if so, to determine ethnicity and temporal period of the remains. Human bone itself was not moved, and associated artifacts were drawn and photographed then replaced and the whole inhumation reburied.

Table 8.2.
Distribution of 1 m by 1 m Excavation Units at Manzanar National Historic Site.

NPS Site Number	Temporal Component	Number of Units
MANZ 1993 A-1	Native American Indian	2
MANZ 1993 A-2	Native American Indian	5
MANZ 1993 A-3	Native American Indian	2
MANZ 1993 A-4	Native American Indian	6
MANZ 1993 A-6	Town of Manzanar	2
MANZ 1993 A-13	Town of Manzanar	2
MANZ 1993 A-16	Town of Manzanar	2
MANZ 1993 A-28	Town of Manzanar	1
MANZ 1993 A-30, Fea. P-12	Manzanar Relocation Center	1
MANZ 1993 A-30, Fea. P-18	Manzanar Relocation Center	1
MANZ 1993 A-37, Locus A	Manzanar Relocation Center	1
MANZ 1993 A-37, Locus C	Post-Relocation Center	1

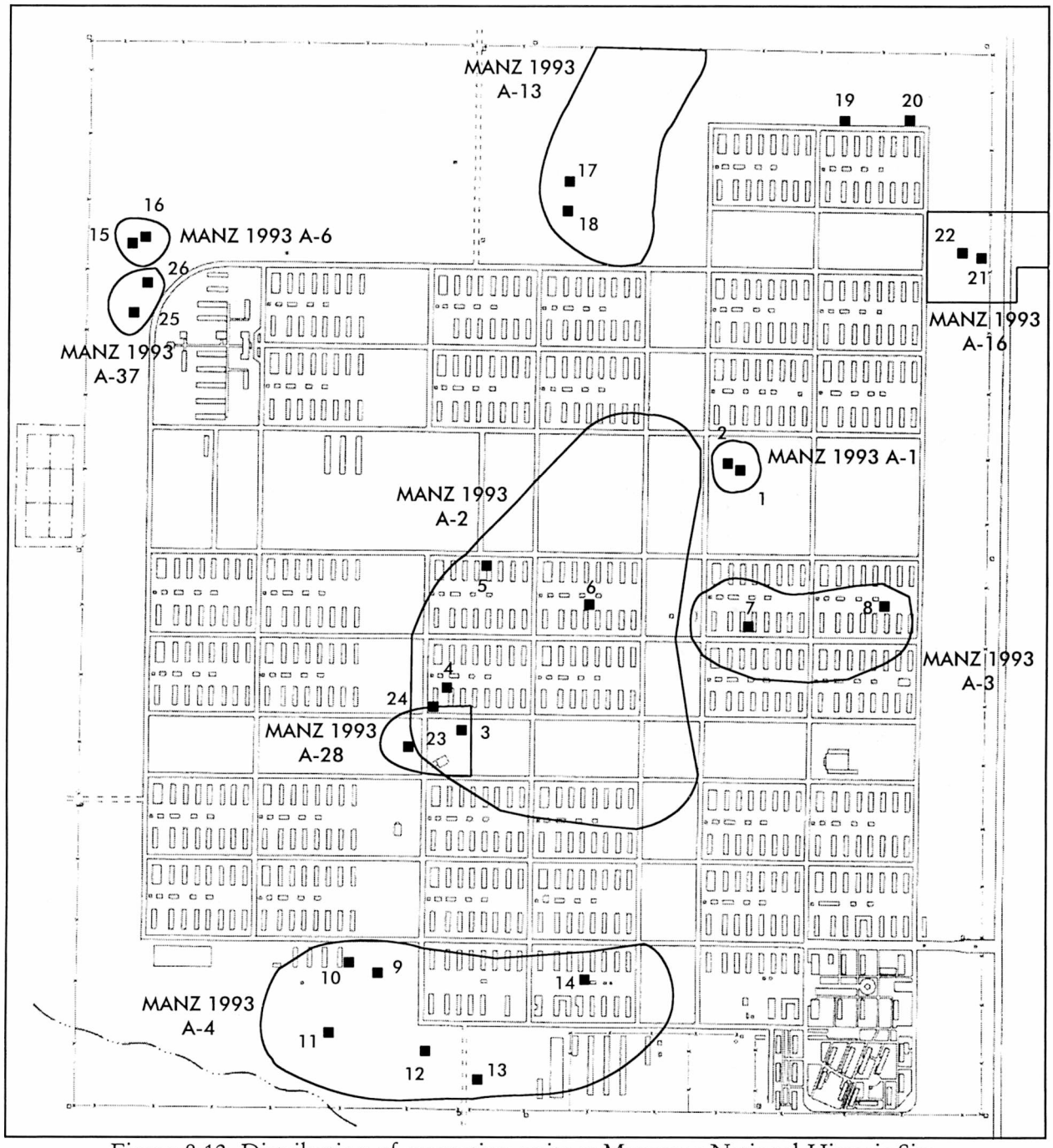


Figure 8.12. Distribution of excavation units at Manzanar National Historic Site.

Figure 8.13. Excavation of Unit 12 at site MANZ 1993 A-4.

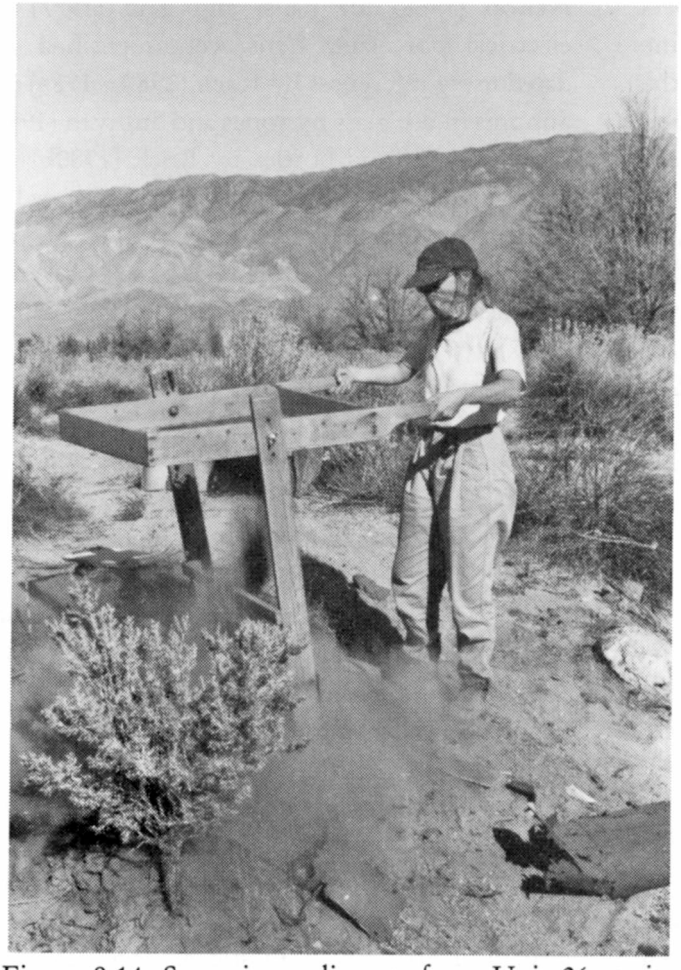


Figure 8.14. Screening sediments from Unit 26 at site MANZ 1993 A-37.

Laboratory Methods, Cataloging, and Curation

Collected materials were transported to the Western Archeological and Conservation Center (WACC) upon completion of field work. Artifacts were cleaned and treated for emergency conservation as needed. Sherds, lithics, and glass were cleaned using tap water and a small amount of isotonic soap. Bone, wood, and metal were dry-cleaned using brushes and toothpicks. Artifacts and samples not sent to specialists for analysis were analyzed at WACC.

Materials requiring specialized analyses were sent to the following persons: historical ceramics to Teresita Majewski (Statistical Research), buttons to C. Lynn Rogers (Carson City, Nevada), and pollen samples to Suzanne K. Fish (Arizona State Museum). Samples for radiocarbon dating were sent to Beta Analytic (Coral Gables, Florida). Obsidian samples were sent to Richard Hughes (Geochemical Research Laboratory, Rancho Cordova, California) for x-ray fluorescence analysis (chemical-sourcing) and

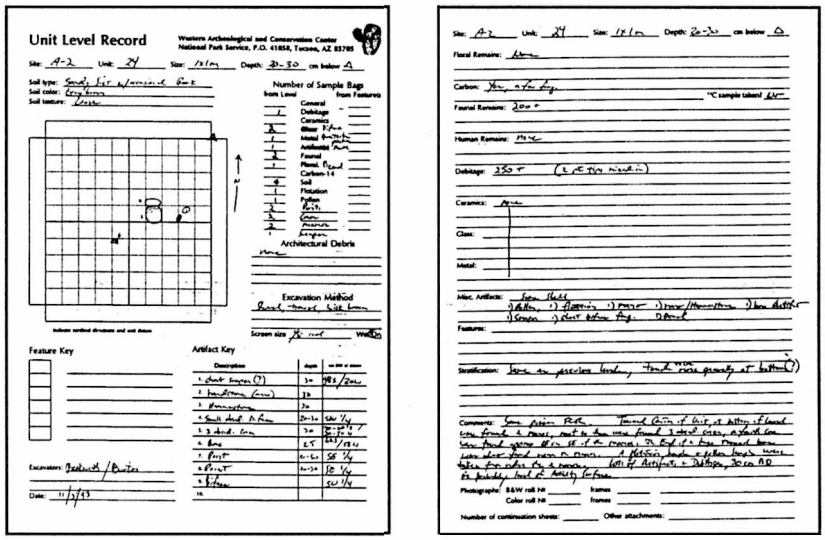


Figure 8.15. Example of a typical completed unit level record.

to Tom Origer (Sonoma State University) for hydration analysis (dating).

All artifacts and samples were catalogued into the Automated National Catalog System (ANCS) and assigned permanent catalog numbers. However, due to time and editorial constraints the ANCS catalog numbers are not used in this report; temporary numbers assigned in the field are used instead. All artifacts, specimens, and samples are curated to National Park Service standards in the WACC Museum Collections Repository (Accession Numbers 876 and 877). Photographic materials are curated in the WACC library (Accession Numbers 93:4, 93:7, 94:8, and 95:9). Site and feature records, maps, and field notes are curated in the WACC Division of Archeology archives (Project Numbers MANZ 1993 A, MANZ 1993 B, MANZ 1994 A, and MANZ 1995 A).

Analytical Procedures

Artifacts were analyzed by provenience for function, use, cultural association, chronological implications, spatial patterning, and intra-assemblage patterning.

Historical Artifacts

Several references were consulted to aid in the identification and dating of historical artifacts. Crown Publishers (1969), Fontana and Greenleaf (1962), Gillio et al. (1980), Hull-Walski and Ayres (1989), Israel (1968), and Schroeder (1971, 1973) provide general information on a range of artifact classes and types. Other sources are more specific, for example APT (1980) for hardware, Nelson (1968) for nails, and Tod (1977) for electrical porcelain. Cans were identified and dated using references by Rock (1980a, 1984) and Simonis (n.d.); glass by Jones and Sullivan (1989); beverage and food bottles by Rock (1980b) and Toulouse (1971); and pharmaceutical and medical items by Cook (1948), Hoover (1975), and McPherrin (1947). References for ceramics included those by Baldinger (1995), Barber (1967), Cameron (1986), Chipman (1992), Danckert (1981), DeBolt (1994), Gates and Ormerod (1982), Godden (1964, 1993), Greer (1981), Hamer and Hamer (1986), Ketchum (1971), Kovel and Kovel (1953, 1986), and Lehner (1988). Japanese ceramics were identified using references by Gorham (1971), Schiffer (1986), and Stitt (1974). Button references included Albert and Adams (1970), Albert and Kent (1949); Anonymous (1983), Cray (1978), Gehret (1976), Luscomb (1979), and others.

After preliminary identification and dating, the historical artifacts were classified and analyzed by function following a system devised by Blee (1987) and Rhodes (1988). These classes include structural artifacts, domestic artifacts, personal

artifacts, artifacts associated with other activities, and unclassified artifacts. Within each of these functional groups artifacts are further subdivided into more specific classes.

Structural artifacts are items associated with the physical presence of a building or other structure. They may have been used in its construction, use, or repair, or resulted from its demolition. Included in this group are structural materials, window glass, hardware, nails, and artifacts associated with utilities. The structural materials class includes brick, mortar, lumber, tile, flashing, roofing material, and other similar items. The hardware class includes construction hardware (excluding nails covered separately below), door and window hardware, cabinet hardware, and miscellaneous fasteners and fittings. Artifacts classified under utilities would include electrical porcelain, electrical wire, light bulbs, water and sewer pipe, and fragments of bathroom fixtures.

Domestic artifacts are those that result from the daily routine operation of a household, and that tend to have been owned and used by most members of a household. These include items used for the storage, preparation, serving, and consumption of food and beverages. Household furnishings and pharmaceutical items are also included here. Color, shape, and other attributes were used to assign bottle function (Jones and Sullivan 1985; Lorrain 1968). All nonidentifiable curved glass fragments are included in the domestic artifact group and are classified based solely on color (cf. Rhodes 1988:204; Teague and Shenk 1977:114); black, green, and brown glass are included under beverage storage, while clear and aqua glass are included under food storage.

The beverage storage class includes items used in the storage of beverages, such as alcohol and soda bottles. Color and lip morphology are used to further separate types. The food storage category includes both metal fragments from items such as cans, lids, and caps, and glass fragments from colorless glass jars and bottles which were commonly used for condiments. Aqua glass, generally used in milk bottles, is also included here. Food preparation artifacts are those items associated with the making of food, such as frying pans and other cook wear. Food serving artifacts are those generally associated with the serving and eating of food, including table service items such as plates, bowls, glasses, cups, and utensils. Pressed, etched, and cut glass fragments are assumed to be part of this class unless they can be identified as otherwise. The furnishings class includes household furnishings and housekeeping items, such as stove parts, bed parts, parts of other furniture, clothing irons, clothes hangers, and clothes pins. Pharmaceutical items include drug and syrup bottles, fragments of blue and white glass, and medical waste.

Personal artifacts are items that were most likely to have been individually owned and may have been carried around on one's person. This includes clothing, jewelry, grooming and hygiene items, and money. The clothing class includes cloth and leather fragments, buttons, rivets, buckles, and safety pins. Grooming and hygiene items include perfume bottles, razors, razor blades, toothbrushes, toothpaste and lipstick tubes, and shampoo containers.

Activities group artifacts includes those that might have been used in specialized activities which occur outside the normal household routine. Examples include military buttons, ammunition, toys, writing and printing equipment, harness fittings, miscellaneous tools, and artifacts associated with leisure activities. Examples of artifacts associated with leisure activities include phonograph record fragments, camping equipment, and tobacco tins.

Unclassified artifacts include unidentified artifacts as well as artifacts with potentially multiple functions (such as smooth wire) which hindered placing them in a particular category, and artifacts too fragmentary or altered to further classify.

Prehistoric Artifacts

Prehistoric artifacts were classified following the analytical procedures and nomenclature used by other researchers in the Owens Valley (e.g. Bettinger 1989; Basgall and McGuire 1988; Delacorte and McGuire 1993). Artifacts were first divided into categories based on gross morphology and presumed function. Subsequent analyses vary by artifact category, but include determination of material type, metric attributes, and condition and classification using established Great Basin typologies.

Lithic Material Classification

Flaked stone was first sorted by material type: cryptocrystalline, basalt/igneous, or obsidian. Obsidian was further differentiated to source based on visual inspection.

The cryptocrystalline material category, for this analysis, includes chert, chalcedony, and jasper. Chert colors are highly variable ranging from very light tan and gold to gray and brown, and include fine-grained to coarse-grained specimens. Chalcedony is light-colored/white, translucent, and extremely fine-grained. Jasper is fine-grained and red or gold in color. These materials are apparently cobble-derived and were probably obtained from the alluvial fans and stream terraces in the surrounding area.

Basalt and igneous rock quarries have been less intensively studied than obsidian quarries, but several potential sources lie within the Owens Valley. Basalt lava flows occur 15 miles north of Manzanar between Sawmill and Big Pine Creeks and 50 miles south of Manzanar near Coso Junction and Little Lake.

Obsidian, by far the most common flaked stone material at prehistoric sites in the Owens Valley, is available at several locations in the region. The closest sources to the Manzanar area include Fish Springs, 23 miles north near Big Pine, and the Coso Volcanic field, 50 miles south. Other obsidian sources commonly represented at sites in the Owens Valley include Casa Diablo (75 miles northwest of Manzanar), Mono Glass Mountain (75 miles north-northwest), Queen (85 miles north), and "Queen Imposter" (from a presently unknown location).

To estimate the relative frequency of the different obsidian sources all recovered obsidian artifacts were visually sourced following the criteria in Bettinger, Delacorte, and Jackson (1984), Burton (1990), and Clay and Hall (1988) (Appendix J). To provide a check of the visual sourcing a small sample of obsidian was also submitted for chemical source analysis (Appendix K). To provide chronometric data, obsidian attributed to the Fish Springs source was submitted for obsidian hydration analysis. The hydration rim values were converted to calendar dates using the hydration rate for Fish Springs obsidian used by Delacourte and McGuire (1993) of radiocarbon years B.P. = $120.23x^{1.62}$.

Projectile Points

Projectile points are bifacially flaked tools presumed to have been used to tip darts or arrows. Analyses of associated chronometric evidence have indicated that point styles changed through time, with shape and size varying with projectile type, hafting technique, and other factors (see Figures 7.8-7.10).

Desert Series

Desert Series projectile points include Desert Side-notched, Cottonwood Triangular, and Cottonwood Leaf-shaped types. The Desert Side-notched type was defined by Baumhoff and Byrne (1959), Lanning (1963), and Thomas (1981); they are described as "small triangular points with notches high on the side" (Lanning 1963:253), that weigh less than 1.5 grams with a basal width/maximum width ratio greater than 0.9 (Thomas 1981:18). Heizer and Hester (1978: 163-165) propose a date range of A.D. 1100/1200 to historical times for this type based on radiocarbon results. However, A.D. 1300 to historical times is the more commonly accepted date range for the western Great Basin (Bettinger and Taylor 1974; Thomas 1981). Baumhoff and Byrne

(1959) further divide Desert Side-notched points into four subtypes, based on variations in shape: the Sierra subtype with notched bases, the General subtype with concave bases, the Delta subtype with V-shaped bases, and the Redding subtype with bell-shaped bases and comma-shaped notches.

Cottonwood Triangular points are defined by Heizer and Baumhoff (1961:128), Lanning (1963), Bettinger and Taylor (1974), and Thomas (1981). They are "small, unnotched, thin triangular points" that weigh less than 1.5 grams, are less than 4 mm thick, and have a basal width/maximum width ratio greater than 0.9 (Thomas 1981:16). The time range for these points is generally agreed to be from A.D. 1300 to the historical period.

Cottonwood Leaf-shaped points are small convex-sided points with convex, straight, rounded, or pointed bases; maximum width is near the base (Jackson and Bettinger 1985; Lanning 1963: 253). The type has the same time span (post A.D. 1300) and stylistically tends to intergrade with Cottonwood Triangular points.

Rosegate Series

The Rosegate series was defined by Thomas (1981) to include both Rose Spring and Eastgate series points because of their contemporaneous time span (A.D. 700 to 1300) and conterminous distribution in the Great Basin. In addition, morphological characteristics of the two series grade into each other. Both series have been said to look like small Elko points; this similarity has been inferred to indicate the adaptation of the older point style for use with the bow and arrow. Thomas's definition quantifies criteria set by Lanning (1963), to include points with basal width less than or equal to 10 mm, a proximal shoulder angle between 90 degrees and 130 degrees, and a neck width less than or equal to the sum of the basal width plus 0.5 mm (Thomas 1981:19).

Elko Series

The Elko series was first described by Heizer and Baumhoff (1961) to include Eared, Corner-notched, and Contracting Stem types; Heizer, Baumhoff and Clewlow (1968) added an Elko Side-notched type to the series. Bettinger and Taylor (1974) consider the Elko series a time-marker for the Cowhorn (Newberry) period, from 1200 B.C. to A.D. 600. Thomas (1981) generally agrees with this time span for most of the types in the series with two exceptions: he believes the Elko Side-notched point could be as late as A.D. 1300; secondly, he believes the Contracting Stem variety is much older, and includes them with Little Lake Split Stem points in his "Gatecliff" series, dating from 3000 B.C. to 1300 B.C. Some researchers feel that Thomas's re-classification of the Elko series does not apply to the Long Valley area, and have used the original classification scheme (e.g. Jackson 1985). Elko series points are generally large (over 3 grams, according to Jackson and Bettinger [1985:57]), triangular, and stemmed. The use of the atlatl is inferred for Elko series points, and the different basal forms (subtypes) may indicate different hafting methods (Jackson and Bettinger 1985:57).

Little Lake Series

The Little Lake type is described as "large and shouldered, with nearly parallel sided stems and notched or concave bases" (Jackson 1985:55). Originally termed "Pinto," (Harrington 1957; Campbell and Campbell 1935), Lanning named the type "Little Lake" after discovering more occurrences of the points in the Owens Valley (1963:251). Bettinger and Taylor (1974) suggest a date range between 4000 and 1200 B.C.; Bettinger (1975) subsequently revised the beginning date to 3500 B.C. Thomas (1981) includes the Pinto type in his Gatecliff series, dated between 3000 and 1300 B.C.

Bifacial Tools

Finished bifacial tools have a thin lenticular cross-section, symmetrical edges, and a regular flaking pattern with flake scars indicating the

predominant use of pressure flaking. Bifacial tools have been interpreted as general purpose tools, perhaps for butchering, drilling, and light woodworking. However, as Jackson (1985) points out, a working taxonomy has not yet been developed for finished tools in the Inyo-Mono region; it is not known whether differences in form among finished bifacial tools are functionally significant.

Drills

Drills have narrow, parallel, lateral edges at the distal end, which can sometimes flare to a broader base.

Humboldt Bifaces

Humboldt bifaces were first defined by Heizer and Clewlow (1968) as lanceolate to triangular, with three subtypes based on basal characteristics: Concave Base A, Concave Base B, and Basal-notched. Thomas defines the series as "unnotched, lanceolate, concave-base projectile points of variable size" with a basal width/maximum width ratio less than or equal to 0.90, a basal indentation ratio less than 0.98, and weight generally greater than or equal to 1.5 grams, length greater than or equal to 40 mm, and thickness generally greater than or equal to 4.0 mm (Thomas 1981:17).

Although Humboldt bifaces are often considered a poor time marker, different time spans have been proposed for the three subtypes. Heizer and Clewlow suggested 2500 to 1200 B.C. for the Concave Base A, post-A.D. 600 for Concave Base B, and pre-A.D. 600 for the Basal-notched. Some researchers suggest that these points may indicate specialized use in communal hunting situations (Thomas 1981; Jackson 1985). Bettinger and Taylor (1974) proposed that the Basal-notched form is actually a knife, dating between A.D. 600 and 1300. Other research suggests that the Humboldt series were contemporaneous with the Elko Series, from 1200 B.C. to A.D. 600 (Jackson 1985).

Preforms

Preforms represent an unfinished product and were a major item of trans-sierran trade (Basgall 1982, 1983; Bouscaren et al. 1982; Jackson 1985: 142-161). Characteristics of preforms include a lenticular cross-section, centered edges, predominate use of percussion flaking, and a thickness/width ratio generally less than 0.3.

Scrapers

Scrapers have invasive, contiguous retouch along one or more edges. They are relatively thick and steep-angled.

Flake Tools

The flake tool category includes both retouched and use-modified specimens. Since the morphological characteristics of purposefully made flake tools (retouched flakes and pieces) and use-modified flakes overlap in reality, the categories are combined here. Both represent a significantly less "intensive" tool technology than that of the formal tools discussed above.

An artifact is considered a flake tool if an edge exhibits three or more contiguous flake scars which may also show use-wear, or if there is a single "notch" which exhibits use-wear. These may be the result of deliberate flaking to create or maintain a desired working edge (Crabtree 1982:50) or the result of crushing during use. Flake tools were used for simple cutting and scraping tasks, such as butchering or the manufacture and repair of baskets. They consist largely of minimally worked flakes suitable for quick use and discard; flaking can occur on one or more edges.

Cores and Core Fragments

Cores are cobbles, blocks, or large flakes of lithic material from which tools, and hence flakes and debris (debitage), were produced. An artifact is considered a core if it exhibits one or more negative flake scars (Crabtree 1982:43). Cores generally are "irregular to cuboidal in configuration, exhibit multiple negative flake scars (typically on three or more adjoining facets), and

have considerable cortex coverage" (Basgall 1983:62-64).

Bifacial or bi-directional cores have flakes removed from two directions (Crabtree 1982:16). Unidirectional cores have flakes removed from one direction (Crabtree 1982:57). Irregular cores or multidirectional cores have flakes removed in more than two directions (Crabtree 1982:43). Exhausted cores are subjectively defined as cores from which all useable flakes have been removed, as a result of diminished amount of material, reduction in platform size, or the development of step or hinge fractures (Crabtree 1982:83).

Core fragments are pieces of shattered core, broken along flaws or some other structural weakness during reduction. They are generally blocky in form, and exhibit at least one negative flake scar.

Debitage

Debitage includes flakes of lithic material resulting from tool manufacture or core reduction. Debitage is a useful indicator of lithic technology and past behavior (Berry 1984; Rozen 1981; Schiffer 1976; Sullivan and Rozen 1985). Collins (1975) and Berry (1984) discuss the potential complexity in the life of a flake; it is still not well understood how to determine all of the natural and cultural transformation processes that may be affecting flaked stone assemblages. However, because debitage usually remains at the area of manufacture, it would seem a more reliable source of manufacturing data than finished tools (Collins 1975:19).

Owens Valley Brown Ware

As defined by H. Riddell (1951) on the basis of some 900 sherds from CA-INY-2, Owens Valley Brown Ware is a plain, unslipped, unpainted pottery, manufactured by coiling and scraping (except for the base, which is molded from a single lump of clay), and fired in an oxidizing atmosphere, "although often uncontrolled"; core colors are light red or brown to light gray or black; core texture ranges from fine to coarse and temper includes "very fine rounded quartz sand to large rounded quartz sand; mica [is] present in amounts from small to very noticeable," and walls are weak to medium strong; the surface is dull and ranges in color from reddish brown to brown on the exterior and light gray to black on the interior; vessel walls tend to be 3-8 mm thick and are undecorated except for occasional fingernail indentations along the top of the rim or just the rim on the interior or exterior.

Owens Valley Brown Ware is generally considered to date to between A.D. 1300 and historical times (Riddell and Riddell 1956; Lanning 1963; Bettinger 1977a, 1989). However, the beginning date of brown wares in the Owens Valley may have been much later. Riddell (1951) dates the appearance of Owens Valley Brown Ware at CA-INY-2 sometime after A.D. 1650. Chronological evidence from recent excavations at CA-INY-30, a large prehistoric residential site with abundant Owens Valley Brown Ware pottery (Basgall and McGuire 1988), suggest that brown wares were not present at that site until after A.D. 1650 as well (Rhode 1994).

Groundstone Artifacts

Groundstone artifacts are implements that have been shaped primary by grinding. This class of artifacts includes, but is not limited to, manos, metates (milling slabs), mortars, pestles, abraders, and pipes (Fratt 1992a; Johnson 1993). Changes in groundstone technology through time have been interpreted as responses to changes in subsistence. For example, an increase in variation may imply an increase in specialization, while an increase in number may suggest an increase in the amount of use (Fratt 1992b:18).

A mano is a stone held in one or both hands and moved across the surface of a larger stone (metate) to grind or pulverize seeds or other materials. Several mano types are commonly encountered at archeological sites in the Inyo-

Mono region. On the most basic level these can be categorized as shaped or unshaped. Unshaped manos consist of cobbles unmodified except through use. Shaped manos exhibit pecking and grinding around their circumference and vary in outline from round to subrectangular. In general, round manos are used with basin metates and oval and subrectangular manos with trough or slab metates. Use-wear can occur on one or more surfaces; unifacial manos have only one grinding surface, bifacial manos have two opposite grinding surfaces. Preliminary data suggest that in the Sierra Nevada bifacial oval-shaped manos pre-date A.D. 600 (Burton 1985a, 1985b; Goldberg 1984).

As the name implies, trough metates have a linear grinding surface enclosed on two sides, the ends may or may not be open. The grinding surface of a basin metate is a round or oval depression. Slab metates have a flat grinding surface. Typically, basin and slab metates are only minimally shaped.

Mortars have a concavity in one surface that was used with a pestle for the pounding and grinding of soft foods and other materials. Mortars exhibit varying degrees of shaping and include bedrock examples. Pestles are relatively thin, elongated, cylindrical stones whose blunt ends show evidence of pounding or crushing. On the west slope of the Sierra Nevada, where they are more common, bedrock mortars are characteristic of the Raymond and Madera phases at Buchanan Reservoir, and date from A.D. 300 to 1850 (Moratto 1984). In the Inyo-Mono region bedrock mortars are typically associated with late prehistoric material, dating post A.D. 600 (Basgall and McGuire 1988; Bouey 1990; Bettinger 1989; Burton 1985a, 1987, 1990, 1995; Haney 1992)

Other Artifact Classes

In general, the identification of other artifact classes followed that used by other researchers in the region. The primary sources consulted include Bennyhoff and Hughes (1987) for shell beads and Basgall and McGuire (1988), Bettinger (1989), Bettinger, Delacorte, and McGuire (1984), Burton (1985a), Goldberg et al. (1986), Johnston (1993), and Moratto (1984) for various other artifact types.

Chapter 9

Relocation Center Sites
Within Manzanar National Historic Site

In all, the Manzanar Relocation Center encompassed some 6,500 acres. The authorized 550-acre National Historic Site includes only the residential and administration areas, once surrounded by barbed wire, and an adjacent cemetery. Most of the features and artifacts within the National Historic Site dating to the use of the relocation center were recorded as a single site, MANZ 1993 A-30. However, the cemetery and a dump with a post-relocation center component were recorded as separate sites (MANZ 1993 A-33 and MANZ 1993 A-37, Figure 9.1). Beyond the barbed wire were other facilities, described in Chapter 10.

Pre-relocation center historical sites and Native American Indian sites within the National Historic Site boundary were recorded as separate sites and are described in Chapters 11 and 13. Detailed site records are on file at the California Historic Resources Information System's (CHRIS) Eastern Information Center (University of California, Riverside) and at the Western Archeological and Conservation Center (Tucson, Arizona).

Relocation Center Central Area
(MANZ 1993 A-30)

The central portion of the relocation center covers an area of approximately 540 acres. Paved roads divide the central portion of the relocation center into 67 blocks, including 36 residential blocks, two staff housing blocks, an administrative block, two warehouse blocks, a garage and warehouse block, and a hospital block. The 24 remaining blocks, located throughout the center, served as firebreaks (Figure 9.2).

Facilities included over 500 barracks, three doctors' and nurses' quarters, 20 staff apartment buildings, two staff dormitory buildings, five administration buildings, 44 warehouses, 75 latrines, 38 mess halls, 38 laundry rooms, 36 ironing rooms, 35 community buildings, eight hospital buildings, a morgue, a heating building, eight watchtowers, three perimeter guardhouses, a sentry post, a police post, five factories, six garages, a motor pool office, a service station, an auditorium, three orphanage buildings, two outdoor theaters, seven small unidentified buildings, a golf course, Judo and Kendo buildings, a lath house, athletic fields, victory gardens, ponds and gardens, and electrical, sewer, and water systems.

All but three of the over 1,600 buildings originally at the site have been removed (Figure 9.3). Building designations below are based on locations and names depicted on relocation center blueprints (see Chapter 4). The central portion of the relocation center encompasses

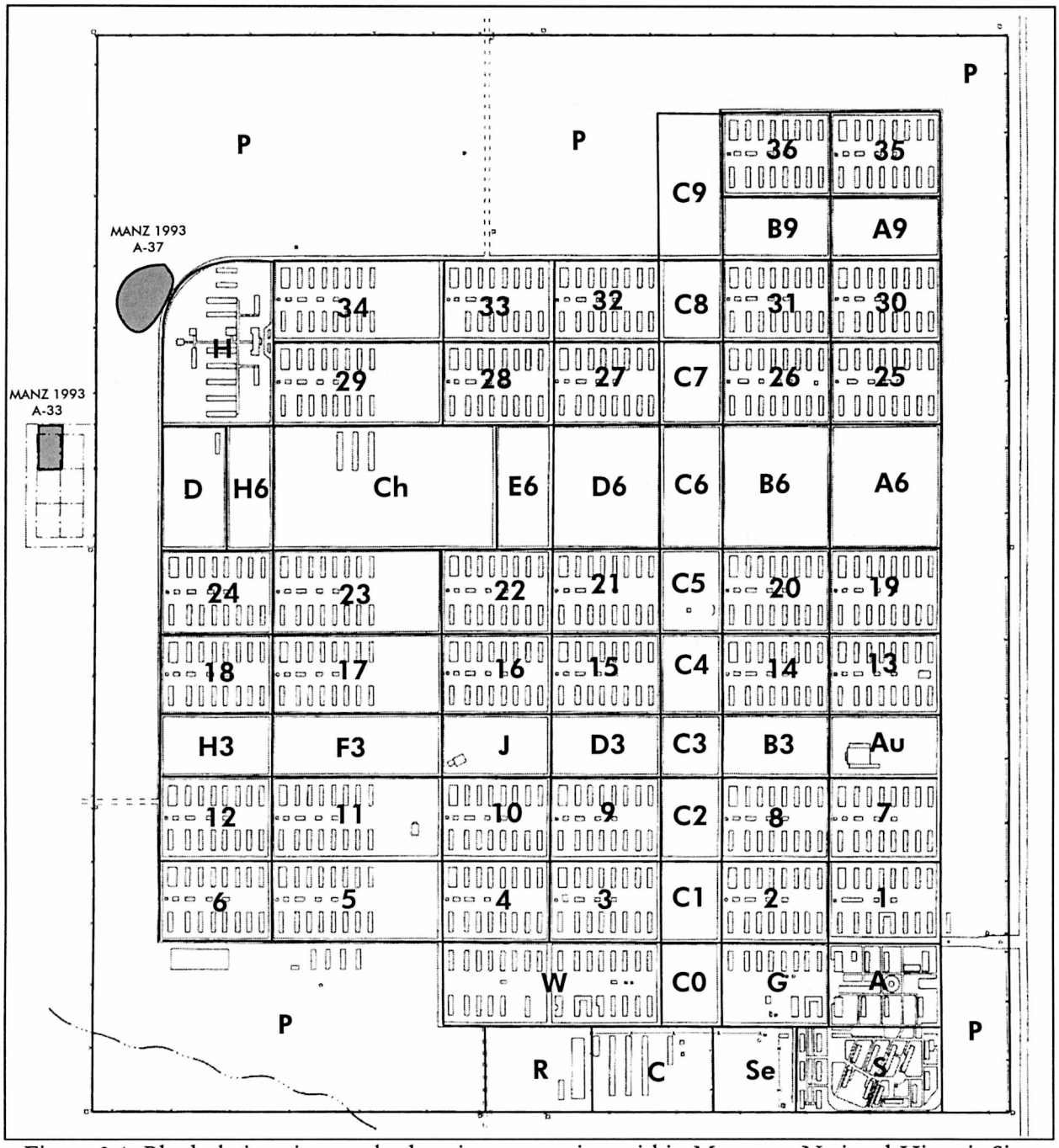


Figure 9.1. Block designations and relocation center sites within Manzanar National Historic Site.

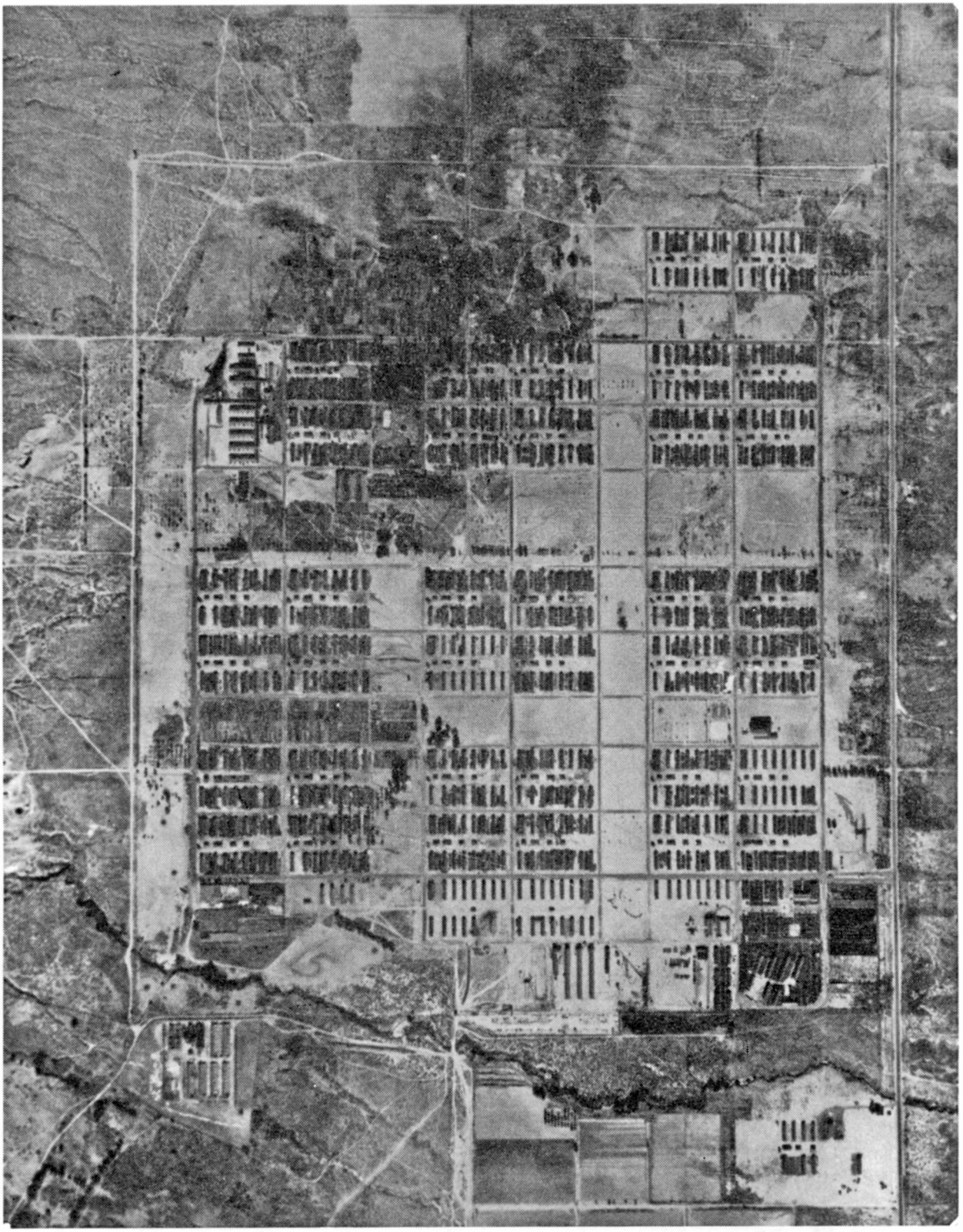


Figure 9.2. 1944 aerial photograph of Manzanar Relocation Center (north to top; courtesy of LADWP Bishop Office).

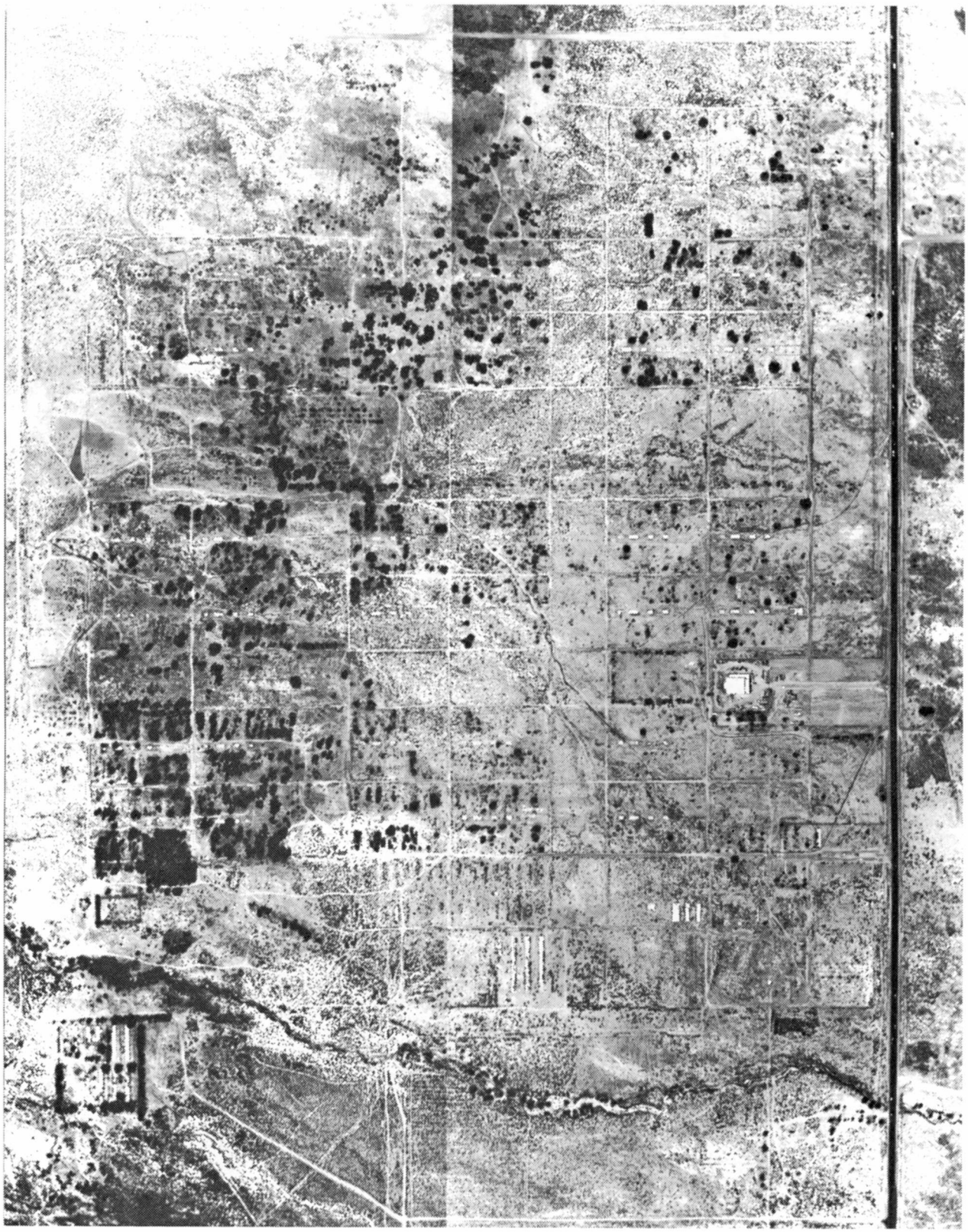


Figure 9.3. 1992 aerial photograph of Manzanar Relocation Center (north to top).

over 800 archeological features and includes the three standing buildings, concrete and rock walls, concrete slab foundations, concrete perimeter foundations, concrete footing blocks, roads and parking areas, concrete and asphalt sidewalks, concrete steps and stoops, manholes, sewer and water lines, rock alignments, ponds and gardens, orchards and other historical vegetation, ditches, victory gardens, athletic fields, and charcoal, rubble, and trash concentrations.

Archeological features identified within the central portion of the relocation center are discussed by block designation below (see Figure 9.1). The block designations for the residential blocks are derived from the original numbers assigned by the War Relocation Authority (WRA). Other blocks are identified by major buildings or function. The firebreak designations used in this report are taken from the names of the road intersection at the southeast corner of the firebreak. For example, "Firebreak B4" is northwest of the intersection of "B" Street and 4th Street.

All visible archeological features were recorded. It is important to note, however, that only some of the features were given separate feature number designations. Numbered features tend to be evacuee-constructed landscaping and adjacent architectural elements, which formed integrated and individualistic patterns in fairly discrete spaces. In addition, all photographed remains were given feature numbers. Detailed block survey records and photographs are on file at the Western Archeological and Conservation Center.

By far the most prevalent artifact types present (over 75 percent of all artifacts observed) are window and bottle glass fragments and wire nails. However, a tremendous variety of artifacts dating to the relocation center use was encountered. Artifacts noted during survey are listed by block below. A summary of makers' marks from ceramics, glass, metal, plastic, and other items is provided in Table 9.1. Note, some pre-1940s and more recent artifacts that could not be differentiated from the relocation center era items are probably included in the block lists and Table 9.1. Charcoal, primarily from the burning of building debris after the closure of the relocation center, was noted in virtually all areas of the site, scattered and in concentrations.

Five blocks were subjected to intensive surface collection and tabulation (see Chapter 8). These results are summarized in Tables 9.2–9.6. Although the summarized categories are not completely equivalent to survey categories reported in the text below, the tabulations provide a comparison between the survey estimates and the more systematic counts made during the inventory. As would be expected, in most cases small quantities of artifacts were estimated fairly accurately; larger quantities were underestimated but appear to fall within similar orders of magnitude. Some rare categories of artifacts found during the intensive surface collection (e.g., ammunition) had been overlooked during survey.

Impacts

Almost all buildings were sold and removed after the relocation center closed. The integrity of the features remaining at the site varies with impacts from a variety of sources. For example, the auditorium had been modified for use as an Inyo County Maintenance Facility and the staff and administration areas were used as veterans' housing for a short period. Remaining architectural elements have been subject to scavenging and water pipes have been periodically salvaged by the Los Angeles Department of Water and Power (LADWP) for local town water systems. Concrete slabs in Blocks 1 and 7 have been broken up, with some of the rubble apparently removed.

There are also broader on-going impacts, both natural and human-caused. For example, natural gully erosion, alluviation, and sheet wash has been accelerated by LADWP's practice of spreading water across the area to re-

Table 9.1.
Marks Noted on Artifacts at the Relocation Center Central Area (MANZ 1993 A-30).

Glass

...te Battery Corp... ...ledo, Ohio ...
Anchor Hocking Glass Corp. hallmark (1938+)
Antelope (soda)
Aristocraft
Armstrong Cork Co. hallmark
Ball (1888+)
Balm Barr
Barq's (soda)
Ben-Hur Mustard
Ben-Hur Coffee
Best Foods
Boyd (canning jar lid liner)
Bubble-up (soda)
Canadian Club
Canada Dry Ginger Ale
Celo Cola
Chesebrough Mfg. Co., New York
Clorox
Coca Cola (Bishop, Calif. and Safford, Ariz.)
Crown Products Corp.
Cutter Laboratories, Berkeley, California
Diamond Glass Co. hallmark (1924+)
Dr. Lyon's Tooth Powder
Duraglass (1940+)
Fairmount Glass Co. hallmark (1945-1960)
Federal Law Forbids ... (1933-1964)
Glass Containers Inc. hallmark (1945+)
Good Housekeeping Tested and Approved
Glube Bottling Co. Property, Los Angeles, Cal.
Hazel-Atlas Glass Co. hallmark (1920-1964)
Hostess Shape
Illinois
Jergens Lotion
Knox Bottle Co. hallmark (1924-1968+)
Lambert Pharmaceutical Co.
Latchford Glass Co. hallmark (1957+)
Latchford-Marble Glass Co. hallmark (1939-1957)
LaVita (soda), Placentia, California
Log Cabin Syrup
Lone Pine Dairy
Lummis Glass Co. hallmark (1940-1955)
Made in Japan (sake bottle)
Maywood Glass Co. hallmark
Mission (soda), Bishop
Mission Dry
Nehi (soda; 1940-1956)
Old Quaker (whiskey bottle)
Owens Illinois Bottle Co. hallmark (1932+)
Peerless Distiller, Vancover, Canada
Pompeian Olive Oil
Purex (1915+)
Pyrex (multi-dose vaccine bottle)
Regal Amber Brewing Company
Sake Brewing & Ice Company Ltd, Honolulu, Hawaii
Scotland
Seaboard Glass Co. hallmark (1943-1947)
Seven-Up (1937+)
Sparklett's
Squirt
Syracuse
T C W CO CLUIT USA (multi-dose vaccine bottle)
Thatcher Glass Manuf. Co. hallmark (1900+)
Wilson Club (soda)

Ceramics

...n ware ...Enton ... Ltd England
Germany
Homer Laughlin Made in U.S.A. M 42 N6 (1942; also some with 1943 date)
John Maddock & Sons England Vitr...
Johnson Bros England (1883-1913)
Knowles China
M Japan
Made in Japan (pitcher)
McNichol China USQMC ...Mar. 10, 1944
O.P.CO Syracuse
Shenango China Newcastle Pa
Sterling China Company L Vitrified East Liverpool Ohio
TEPCO China USA
Wallace RH China

Other

...let (razor blade fragment)
1: Mark Fero... Chilled Steel Made .... A. (pen nib)
AC-MB (spark plug)
Alligator (electrical porcelain knob)
Arrow H&H U.S.A. (electrical plug prong)
Autolite (spark plug)
Delco Moraine Pro U.S.A. 5453829 (rubber knob)
Ford (spark plug)
Garlock Sym 2150/7735 (tarpaper)
Keep Cover Tightly Closed (metal pry top lid)
Klockner Duisburg Tricon 80 Rod 2/4 Lot 651 (metal plaque)
L L C 6 (military shell casing)
Leviton (electrical porcelain switch)
Magne Hydrox Contents 5 onc... Distributed by Sears, Roebuck Chicago, ILL (paper label)
Motor Service (oil can top)
N.Y.A. 20063 Calif. (metal tag)
Old Dutch Cleanser (can top)
Pacific States Provo, Utah (fire hydrant and metal waterline access cover)
PCP CELSIOR (brick)
Product of Norway (rectangular meat can)
S-M-A Always Pack Tightly in Cup (small metal cup)
Schick (razor blade dispenser)
Sqibb (plastic cap)
Stanley SW Made in U.S.A. (metal latch handle)
Studebaker (hubcap)
The America... Thermos Reg Us O Vacuum Bottle B 34 Norwich Conn (insulated bottle)
Valet Auto Strop (metal razor strap end)
Victor 800 (copper part)
VITOO (brick)
WATER Art Concrete Wks Pasadena (concrete cover)
White Rock Ginger Ale, White Rock Bottling Co. ... Los Angeles, CA., by Authority of White Rock Corp. ...Reg. U.S. Pat. (steel can)

Figure 9.4. Gully erosion in western portion of Manzanar National Historic Site.

charge the watertable. Water from these diversions enters the National Historic Site at three locations along the western boundary, and resulting flooding affects over 75 percent of the relocation center blocks (Figures 9.4 and 9.5). To combat this flooding Inyo County has built water control ditches and berms throughout the site to protect its maintenance facility and Highway 395.

Other impacts include new roads, a powerline, and two recently drilled and capped wells that have caused visual and as well as ground disturbance. Grazing, wood cutting, off-road driving, hunting and target shooting, vandalism, and casual artifact collecting also occur periodically.

Roads

The relocation center road grid was laid out parallel with Highway 395, at 31½ degrees west of north rather than aligned with true north. Some roads coincided with earlier roads from the town of Manzanar, which were also aligned with the highway.

Relocation center roads were generally 20 ft wide. The entrance road was asphalt surfaced, while other roads had only a bituminous prime or penetration coat (11/17/45 blueprint). North-south roads were identified by letters (A Street, B Street, etc.) starting on the east, and east-west streets were numbered (1st Street, 2nd Street, etc.) starting with the relocation center entrance road. The one road south of 1st Street was named Manzanar Street. 9th Street coincided with "Francis Street" the main east-west artery of the former Manzanar townsite.

Today much of the relocation center road grid remains, but many of the roads in the western third are buried or overgrown with vegetation. Other roads are cut by gullies and major portions of two roads (1st and 7th Streets) have been destroyed by gully erosion. (Figure 9.6).

Administration Block

Relocation center blueprints depict nine buildings in this block: an L-shaped Administration Building (made of two 40 ft by 100 ft wings), a Town Hall (20 ft by 50 ft), a Post Office (40 ft by 100 ft), a Mess Hall (40 ft by 100 ft), and five Staff Apartment Buildings (each 20 ft by

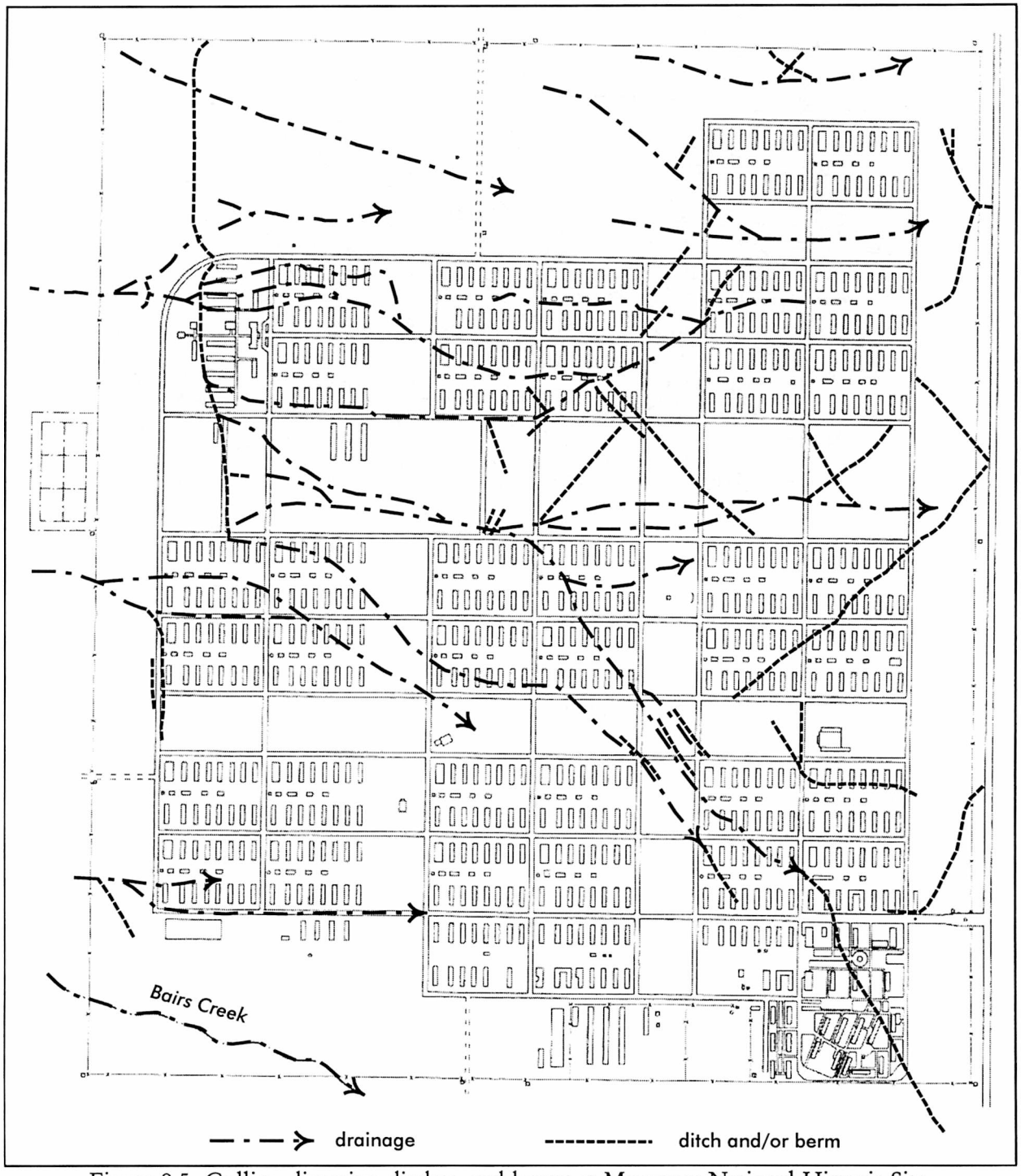


Figure 9.5. Gullies, diversion ditches, and berms at Manzanar National Historic Site.

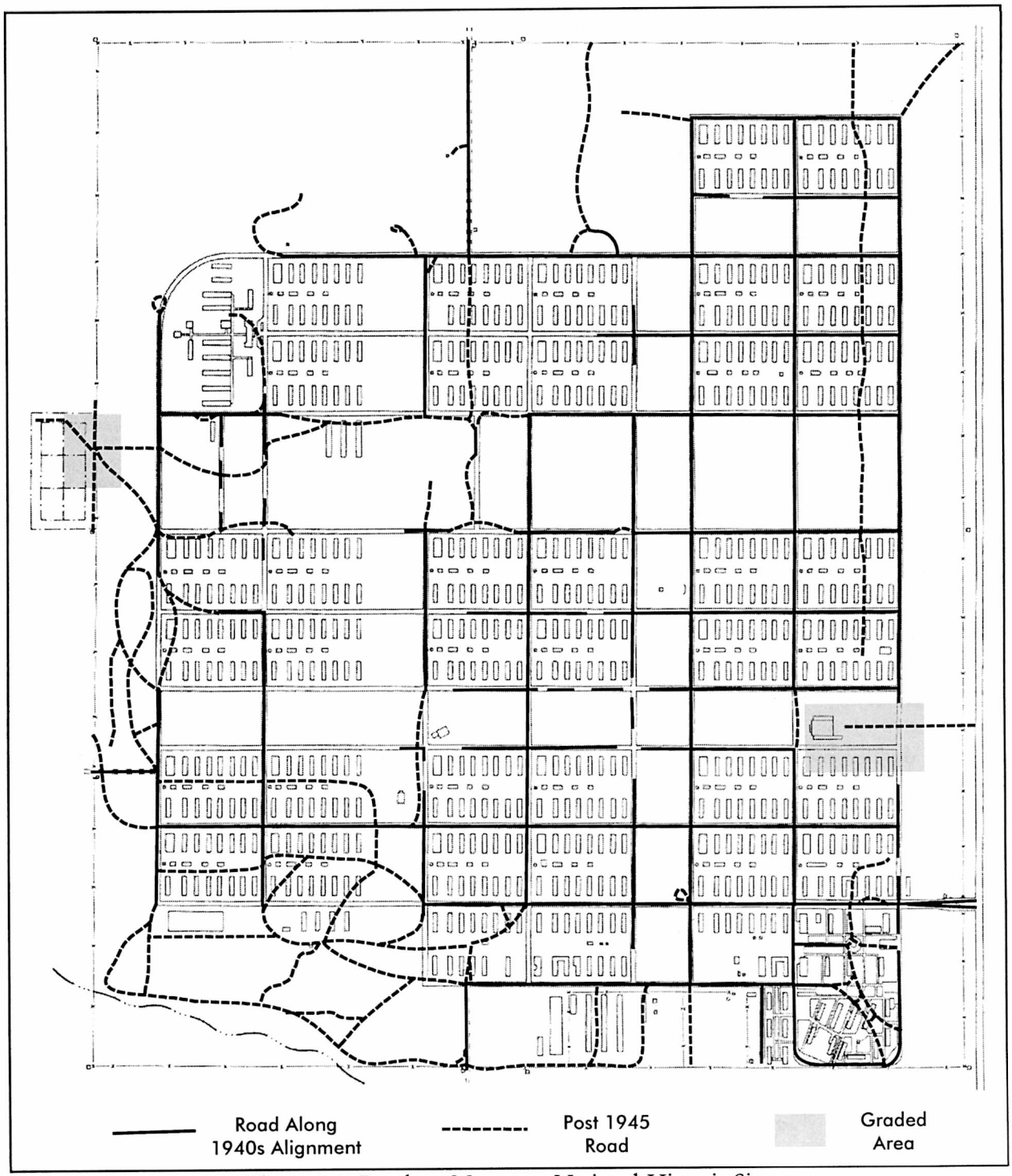


Figure 9.6. Roads at Manzanar National Historic Site.

100 ft). Two of the apartment buildings (Buildings A and C) have four 1-bedroom apartments each, two (Buildings E and F – "Bachelor Quarters") have six 1-bedroom apartments each, and one (Building D) has four 1-bedroom apartments and one 2-bedroom apartment. Although space was left between Buildings A and C, Building B was never built.

The Administration Building was mapped in detail (Figure 9.7). Its former location is outlined by an L-shaped rock alignment (Feature A-14). Within the rock alignment there are four concrete footing blocks and a concrete foundation that apparently once held a safe (Feature A-13). On the building exterior on the north side there are two circular planters and a sidewalk incorporating a diamond-shaped planter with a metal flagpole base (Feature A-1, Figure 9.8). These indicate this was the main entrance to the building.

Remains at the Staff Mess Hall consist of seven concrete footing blocks, a larger center slab or footing, and an 8 ft by 22 ft concrete slab at the north end of the building (Feature A-2). This slab is divided by a low curb; there is a cement ring and a rust stain from a water heater on one side and foot and boot prints and inscribed Japanese characters on the other (see Appendix A).

The only remains at the Town Hall Building and the Post Office are landscaping features: both have rock alignments at their north end and the Town Hall Building has a concrete sidewalk (Features A-9 and A-10). Remains at Apartment Building A include a concrete walkway and steps on the west side (Feature A-4), a concrete water heater slab on the east side, and two concrete footing blocks.

Remains at Apartment Building C include a concrete walkway and steps, and a concrete and rock pedestal on the west side (Feature A-6, Figure 9.9). The pedestal, 30 inches high with a simulated wood grain top, may have once held a sign. Other remains include three small concrete slabs of unknown function that would have been within the interior of the building (Feature A-7), a concrete water heater slab on the east side of the building, and six concrete footing blocks.

Apartment Building D has a large concrete and rock wall (2½ ft to 5 ft high) enclosing a concrete slab patio at the south end of the building (Feature A-8, Figure 9.10), concrete walkways and rock alignments on its west side, a concrete water heater slab on the east side, and three concrete footing blocks. Remains at Apartment Building E consist of a concrete water heater slab and two concrete footing blocks. There is barely a trace of Apartment Building F.

Feature A-5 consists of a 30-ft-diameter rock and concrete planter 18 inches high within a traffic circle southwest of the Administration Building (Figure 9.11). It has 13 inscriptions listing Japanese American names, hometowns, and dates (see Appendix A). Feature A-3 consists of a 40 inch by 60 inch concrete slab located west of Apartment Building A. It is divided into six panels; two are inscribed with the name Kubota and one has a "4/1/42" date (Figure 9.12). Kubota made many of the better-constructed rock and concrete landscape features of the relocation center, however the function or use of this slab is not clear. There is an upright pole nearby that may be associated with the feature.

Other features include a concrete ditch and a storm drain along the southern edge of the block (Feature A-11), storm drains on the east and west sides of a road at the northeast corner of the block (Feature A-12), rock alignments bordering roads and parking areas (Features A-15 through A-18), remnants of paved roads and parking areas, and three manholes. Many of the rock alignments have traces of white paint.

Historical artifacts noted during the survey within this block include over 350 window glass fragments, at least 300 bottle glass fragments, five white stoneware ceramic fragments, over 1,600

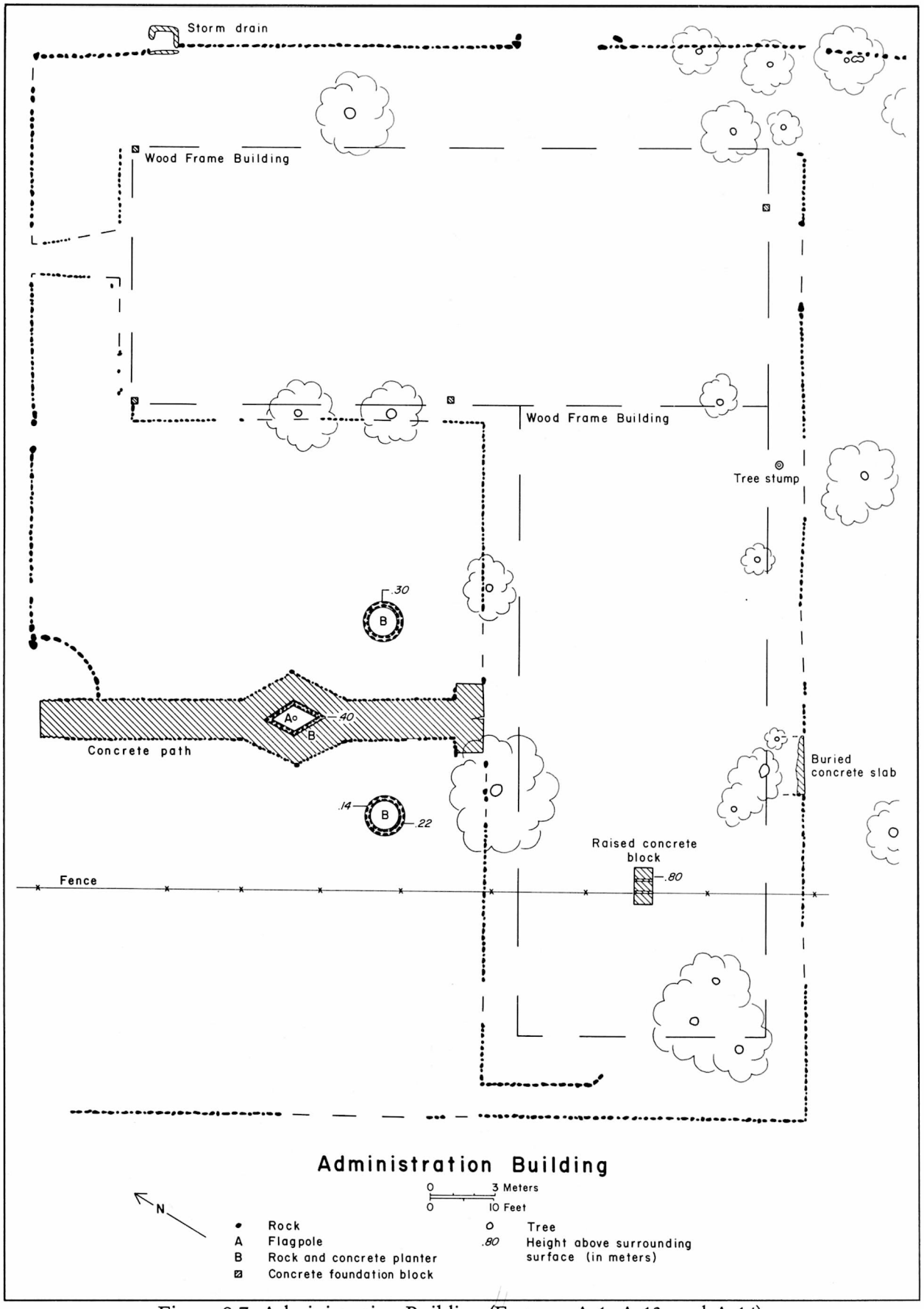


Figure 9.7. Administration Building (Features A-1, A-13, and A-14).

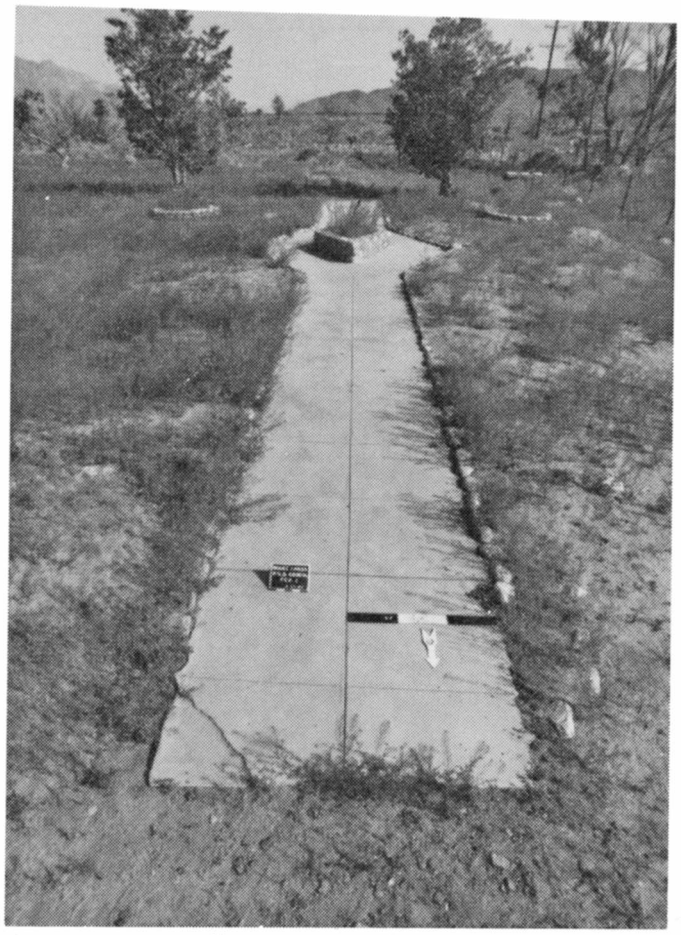


Figure 9.8. Walkway at Administration Building (Feature A-1).

wire nails, 35 sanitary seal cans, crown caps, a rubber hose, tarpaper, sheet metal, chicken wire, and about 90 lumber fragments.

Auditorium Block (Firebreak A3)

Relocation center blueprints indicate only an auditorium building in this block. The Inyo County Road Department, which used the auditorium block until 1994, added a small storeroom, several small sheds, and a fire hydrant (Figure 9.13). The hydrant was likely moved from the location shown on the 1945 WRA blueprint which is 250 ft east along the same pipeline.

The Auditorium (Feature Au-1) is a 12,500-square-foot wood frame building with horizontal siding on the north, west, and south sides and vertical siding on the west side (Figures 9.14–9.17; Appendix O). It consists of a central 82 ft by 125 ft (10,250 square ft) structure (auditorium) with a low-pitched gambrel roof. There is a 20 ft by 30 ft two-story extension with a shed roof on the west side (entry and projection booth) and a 15 ft by 110 ft one-story wing with a shed roof along the north side (dressing and

Figure 9.9. Walkway and steps at Apartment Building C (Feature A-6).

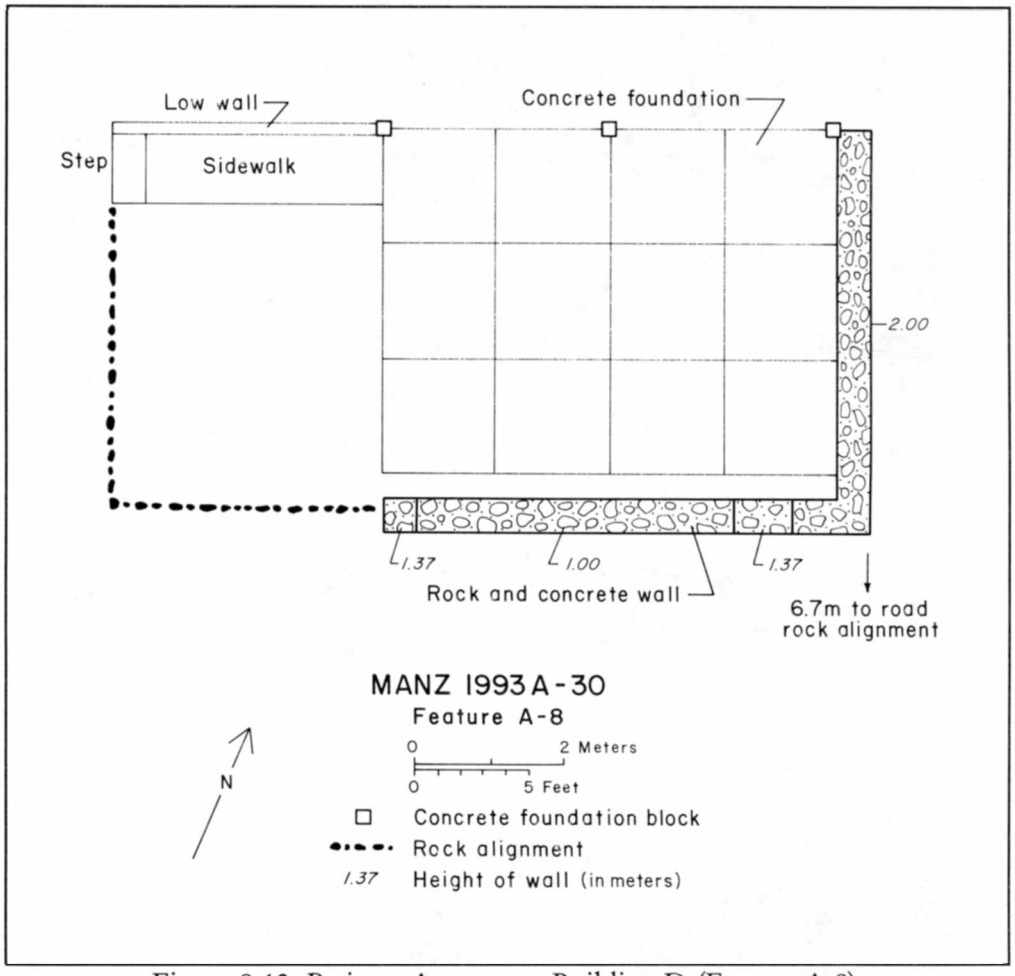


Figure 9.10. Patio at Apartment Building D (Feature A-8).

Figure 9.11. Traffic Circle in Administration Block (Feature A-5).

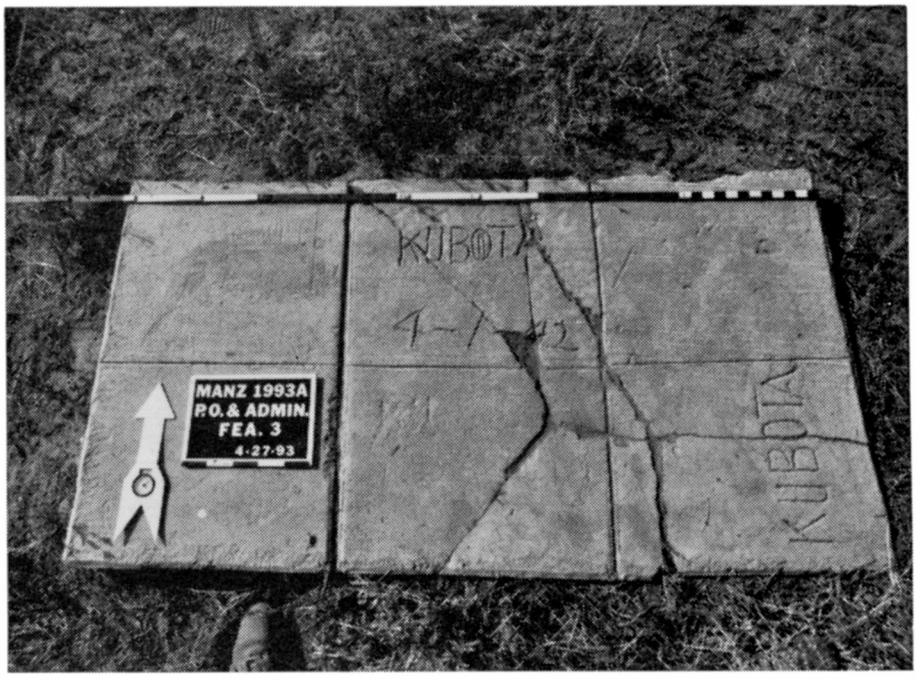


Figure 9.12. Concrete slab within Administration Block (Feature A-3).

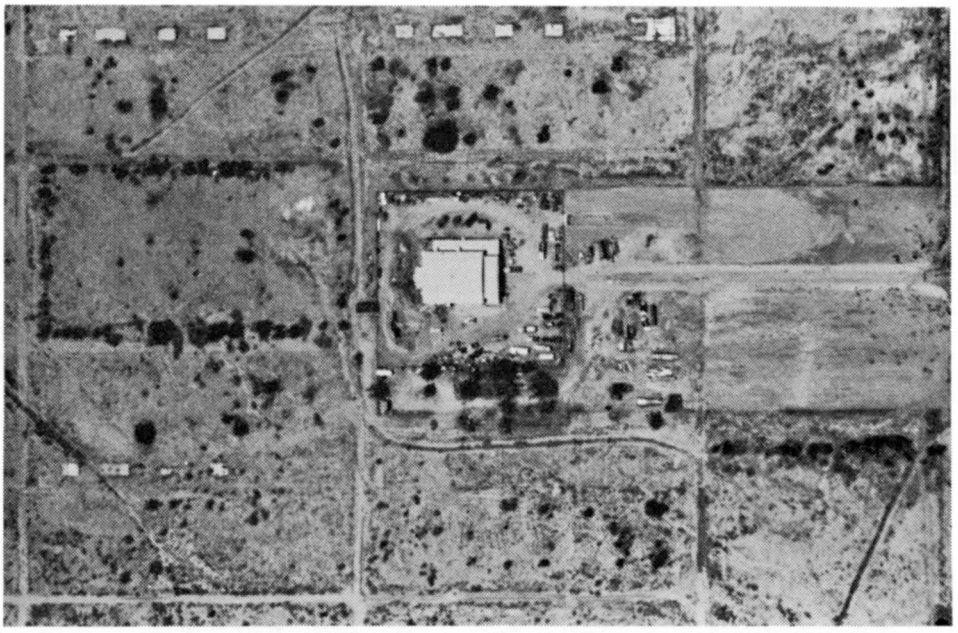


Figure 9.13. 1992 aerial photograph of Relocation Center Auditorium and environs (north to top).

rest rooms). A similar wing along the south side of the building has been removed. The building has been further modified for use as a vehicle maintenance facility by the Inyo County Road Department. The auditorium wood floor has been replaced by a concrete slab and the stage at the east end of the auditorium has been removed and replaced by a large rolling truck door. Photographs on file at Manzanar National Historic Site taken by Toyo Miyatake in the late 1940s-early 1950s indicate that the south wing and wood floor of the auditorium were already removed prior to that time (see Figure 4.55).

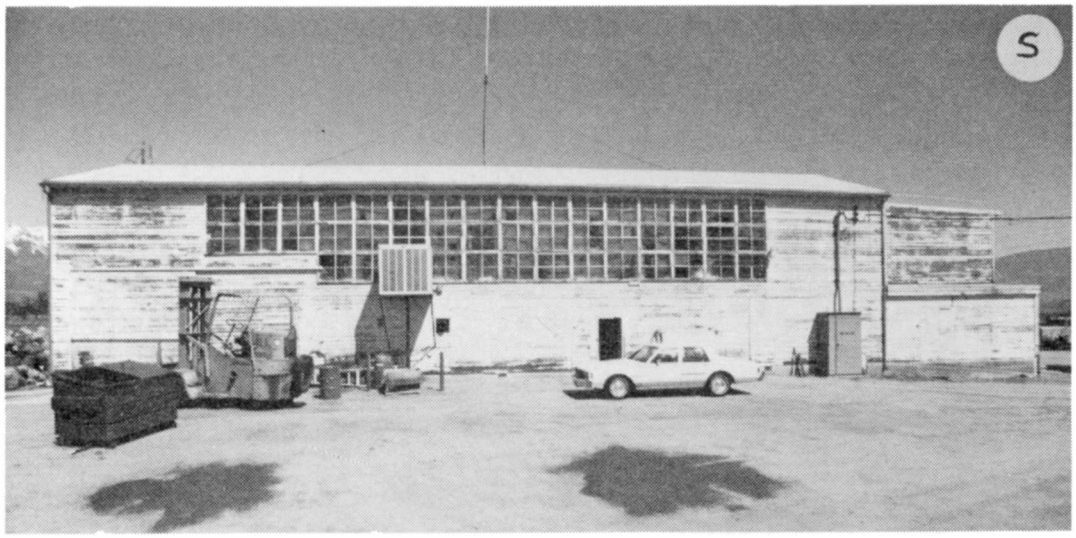


Figure 9.14. Auditorium (Feature Au-1), south side.

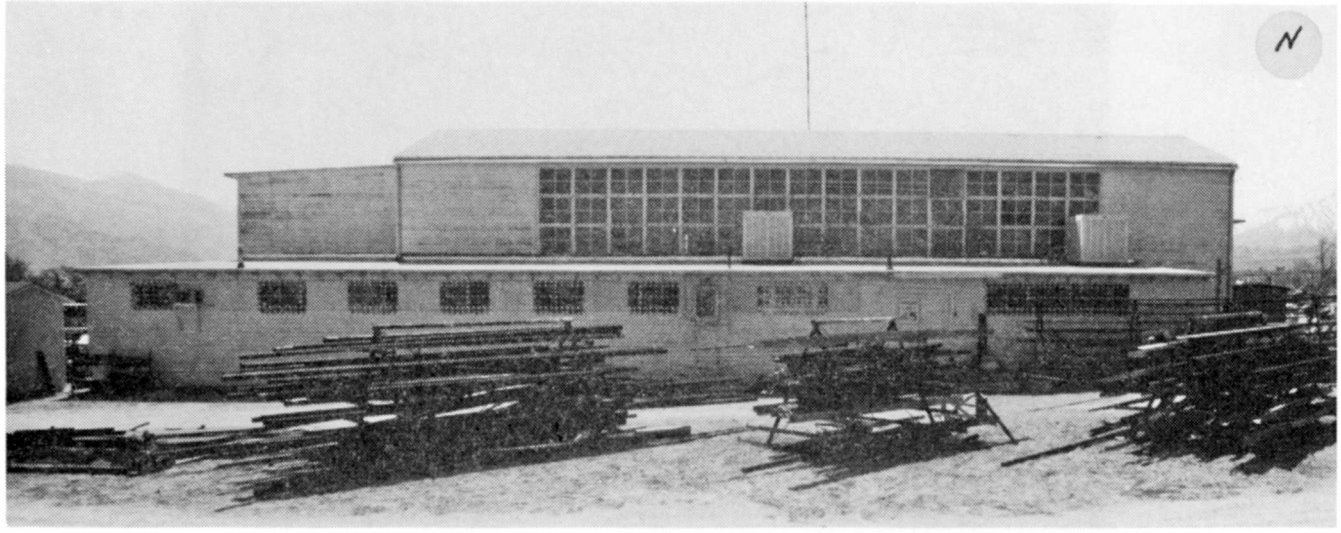


Figure 9.15. Auditorium (Feature Au-1), north side.

West of the auditorium is a small one-room wood frame building with gable roof (Feature Au-2). It is currently used for paint storage. Reportedly it is an old kitchen from the Independence jail. It was moved to its present location in 1964 (Bill Michaels, personal communication, 1994).

Historical artifacts noted during survey include window and other glass fragments, over 500 wire nails, and a screen door spring. Also noted were numerous other artifacts likely associated with the County Maintenance Facility. Most of this block appears to have been repeatedly bulldozed. A large recently-placed mound of fuel-contaminated dirt and boulders on the west side of the Auditorium was designated Feature Au-3. The mound, as well as Feature Au-2 and other sheds and equipment within this block, were subsequently removed by Inyo County before vacating the property in 1996.

Camouflage/Mattress Factory Block

Relocation center blueprints depict five buildings in this area: a Camouflage Factory (consisting of three separate 24 ft by 300 ft buildings), a Mattress Factory (24 ft by 150 ft), and a Dehydration Plant (24 ft by 100 ft). The Mattress Factory burned down in 1943 (Ralph

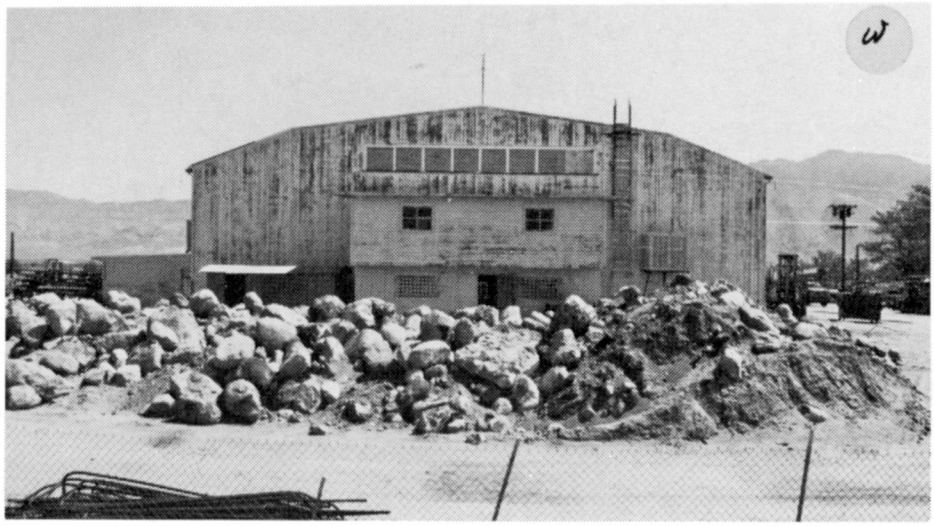


Figure 9.16. Auditorium (Feature Au-1), west side.

Figure 9.17. Auditorium (Feature Au-1), east side.

Merritt, Jr., personal communication, 1993).

Concrete slab foundations 24 ft by 300 ft remain at the Camouflage Factory (Features C-1, C-2, and C-3). One has numerous rust stains from steel drums on its north end. Another has an attached concrete slab 2 ft by 3 ft on its west side. This small slab, possibly an entry, has an incomplete inscription (MAR. 30th 194..).

The Mattress Factory location is indicated by rock and concrete alignments at its north end (Feature C-4). A dirt road now runs the length of the building site. The Dehydration Plant foundation consists of a 24 ft by 100 ft concrete slab (Feature C-5). Southwest of the Camouflage Factory are two small U-shaped concrete foundations, possibly tank supports (Feature C-6), and a concentration of over 200 plain white stoneware ceramic fragments (Feature C-7).

Other historical artifacts noted in this block during survey include hundreds of window glass fragments, hundreds of bottle glass fragments (300 clear, 100 green, 75 brown, 35 white, 6 aqua), around 100 stoneware ceramic fragments, electrical porcelain knobs, hundreds of wire nails, 35 sanitary seal cans, over 150 lumber fragments, three large pieces of sheet metal, a sheet metal machine tag (embossed with "Klock-

ner Dusiburg Tricon 80 Rod"), two barrel hoops, a metal button, plastic comb, the swivel end of a double razor strap (embossed with "Valet Razor Strop"), fragments of automobile taillight covers, fragments of ceramic plumbing fixtures, tarpaper, roofing, lumber fragments, rubber pieces, a battery, wire, an 8-ft-long wood telephone pole, and salt-glazed, clay, and concrete pipe fragments.

Children's Village Block

Manzanar was the only relocation center with an orphanage. Most of the orphans came from the Maryknoll Children's Home in Los Angeles, others included Japanese American children adopted by Caucasian parents (see Chapter 4). The "Children's Village" at Manzanar was located in Firebreak F6, the largest firebreak within the relocation center. Relocation center blueprints depict three 25 ft by 150 ft buildings in this block. Building 1 (as designated on the blueprints) was the boys dormitory, Building 2 was the girls dormitory and nursery, and Building 3 housed the mess hall, kitchen, social hall, office, and staff living quarters.

There are 19 foundation blocks at the location of Building 1 (Feature Ch-4), nine foundation blocks and a concrete stoop at the location of Building 2 (Feature Ch-5), and 14 foundation blocks at the location of Building 3 (Feature Ch-6). These footing blocks, measuring approximately 16 inches square, are larger than those at other building locations. Many footing blocks appear to have been recently removed. Gully erosion has destroyed the original road to the north of the Children's Village; a replacement dirt road now crosses the building locations.

Over 50 pear trees are in the northeast quarter of the block, the best pre-relocation center orchard remaining today (Features Ch-1 and Ch-2, Figure 9.18). During the use of the relocation center these trees were maintained by the evacuees. In the central area of the block there is a large dirt tank (Feature Ch-3) and a large shallow depression, possibly a pond (Feature Ch-7).

The area west of the shallow depression is likely the location of a known pre-relocation center farm (Lyndstrum Farm, see Chapter 11). Other than large cottonwood and elm trees at this location, no features associated with that farm were found, but some of the artifacts noted in this block may be associated with it.

Two piles of prehistoric artifacts were found in this block. A woodcutter from Lone Pine, Mr. Armstrong, was observed dumping prehistoric artifacts that he claimed his children had collected over the years. He was in the process of cleaning up his yard and decided to dump the artifacts at Manzanar since he was coming to Manzanar to collect firewood. To keep the artifacts from eroding over the area, WACC staff scraped up and dumped both piles into a concrete weir box just south of the Manzanar Relocation Center cemetery. Materials moved included 25 buckets-full of mostly debitage and cores, with some biface fragments, ground stone fragments, hammerstones, and sherds. Mr. Armstrong used to own the Little Lake Hotel and it is possible that much of the material came from that area.

Historical artifacts noted in this block during survey include 55 bottle glass fragments (30 brown, 10 green, 15 clear), 20 wire nails, three cans, a door hinge, a metal strap, a perforated metal strap, wire, concrete pipe fragments, 10 lumber fragments, and a brick.

Doctors and Nurses Quarters Block

Relocation center blueprints indicate a 20 ft by 110 ft building south of the hospital in the west half of Firebreak H6 was used as doctors and nurses quarters. Feature D-1 is an 18 ft by 4 ft sidewalk and a stoop on the building's east

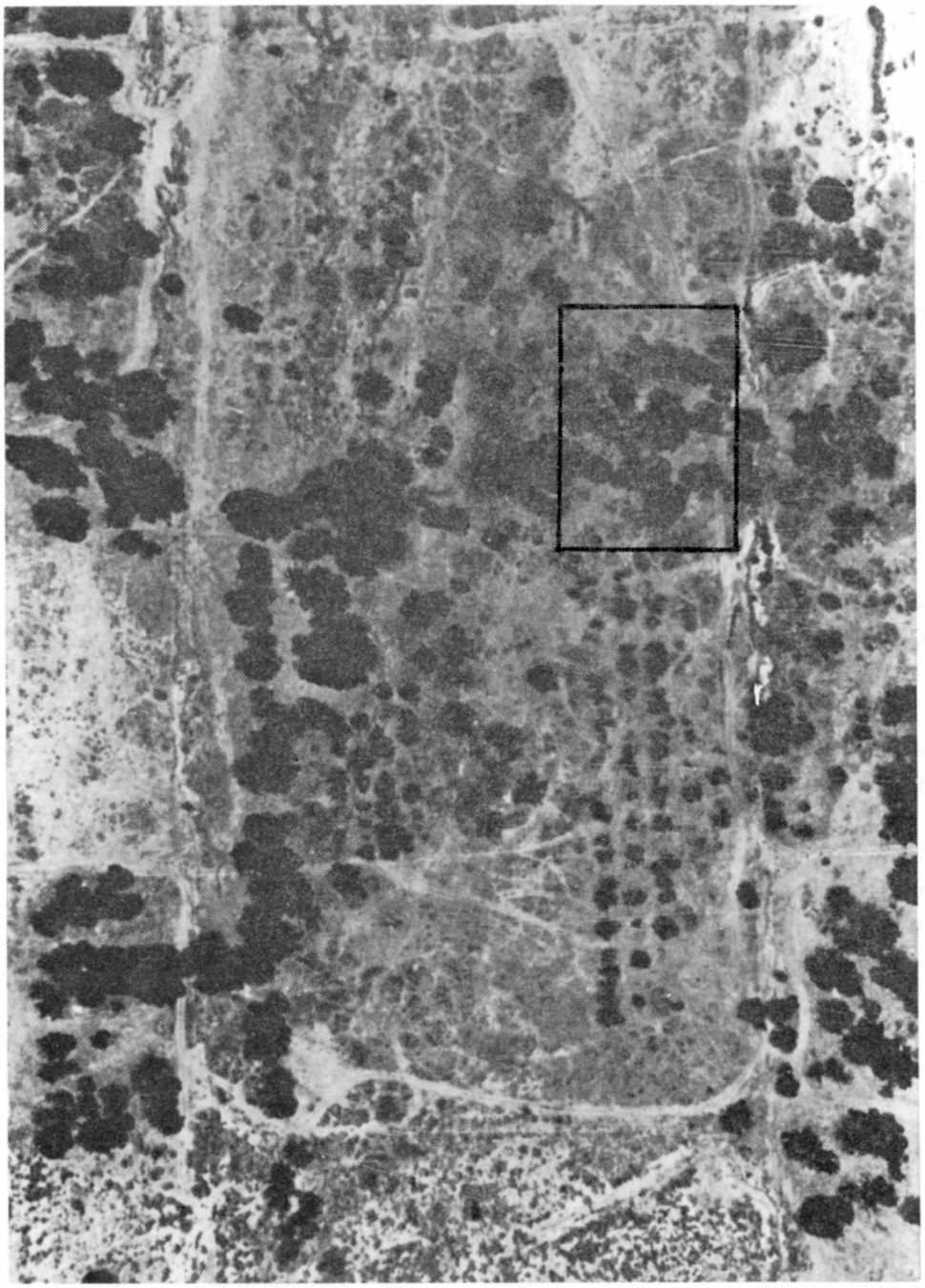


Figure 9.18. 1992 aerial photograph of Children's Village Block (Children's Village location highlighted; north to right).

side, Feature D-2 is a 7-ft-square concrete slab entry on its west side, and Feature D-3 is a 5 ft by 8 ft concrete slab entry on its south side.

To the southwest of the building location there are dead apple trees and stumps (Feature D-4). The south half of the block contains a few live apple trees, numerous stumps and dead trees, and traces of irrigation ditches (Feature D-5). These are apparently remnant pre-relocation center orchards maintained by the evacuees.

Artifacts noted in this block include clear glass jug fragments, a plastic bottle cap, 10 sanitary seal cans, a crown cap, two lengths of water pipe, barbed wire, and clay sewer pipe fragments.

Garage Block

Relocation center blueprints depict from 13 to 16 buildings in this block. Identified buildings include a refrigerated warehouse (a U-shaped building consisting of two 20 ft by 100 ft buildings connected by a 20 ft by 40 ft butcher shop addition), an automotive repair shop (40 ft by 100 ft), a garage for automotive lubrication, painting, and washing (30 ft by 48 ft), and eight warehouses (each 20 ft by 100 ft). Other buildings include two small unnamed structures shown on one blueprint (dated 4/20/45) and five small unnamed structures shown on another (dated 3/14/45).

Remains of the refrigerated warehouse consist of two parallel 20 ft by 100 ft foundations (Features G-1 and G-2). Both are perimeter foundations into which a concrete slab was later poured. The refrigeration equipment was apparently at the north end of each slab, where there is a waste pipe, two other pipes, a floor drain, and a remnant dividing wall. One of the slabs has numerous rust stains from steel drums.

The automotive repair shop remains (Feature G-3) consist of a 40 ft by 100 ft concrete slab with a dirt and asphalt ramp at the north end. The automotive service garage (Feature G-4) consists of a 30 ft by 48 ft concrete slab divided by low concrete walls into three equal-sized rooms that open to the east. One of the rooms has two large floor drains, one has the remains of a truck lift, and one has no floor features. Attached to the rear of the building is a small slab, possibly for a bathroom (Figures 9.19 and 9.20). In the south-central portion of the block there is a 6 ft by 10 ft concrete slab with the center portion broken out (Feature G-5). Its central location suggests it may have been a latrine.

Other features include three concentrations of rocks and boulders, two manholes, and concrete footing blocks at the locations of Warehouses 1 (n=1), 2 (n=3), 5 (n=3), 6 (n=2), 7 (n=6), and 8 (n=24).

Historical artifacts noted in this block include over 600 window glass fragments, over 430 bottle glass fragments (mostly from soda bottles), a mirror fragment, eight ceramic fragments, four electrical porcelain knobs, over 735 wire nails, 25 cans, crown caps, jar lids, wire, pipe, washers, a glass marble fragment, 30 lumber fragments, six bricks, and salt-glazed sewer pipe fragments.

Hospital Block

The hospital was located in the northwest corner of the relocation center. Relocation center blueprints depict 16 buildings connected by covered wooden walkways in this block (Figure 9.21).

Buildings in the main area of the hospital included an administration building (25 ft by 147 ft), a doctors quarters (20 ft by 100 ft), a nurses quarters (20 ft by 100 ft), seven wards (each 25 ft by 150 ft), a mess hall (40 ft by 60 ft), and two storerooms (each 20 ft by 100 ft).

Behind the hospital to the west were a laundry (20 ft by 100 ft), a heating plant (38 ft by 50 ft), and a morgue and sterilizing room (28 ft by 38 ft). On the north side of the morgue an additional structure, a garbage can washing rack, is noted on a blueprint dated November 13, 1945 (WRA file, UCLA Special Collections).

Hospital Area

Concrete footing blocks remain at the administration building (n=27), doctors quarters (n=6), nurses quarters (n=10), mess hall (n=18), Wards 1 (n=3), 2 (n=6), 3 (n=15), 4 (n=28), 5 (n=40), 6 (n=2), and 7 (n=11), and Storerooms 1 (n=6) and 2 (n=7). Other formal features include three intact manholes, a destroyed manhole, and a pulled manhole with an intact brick and concrete lining (Feature H-6, Figure 9.22).

Figure 9.19. Garage foundation (Feature G-4).

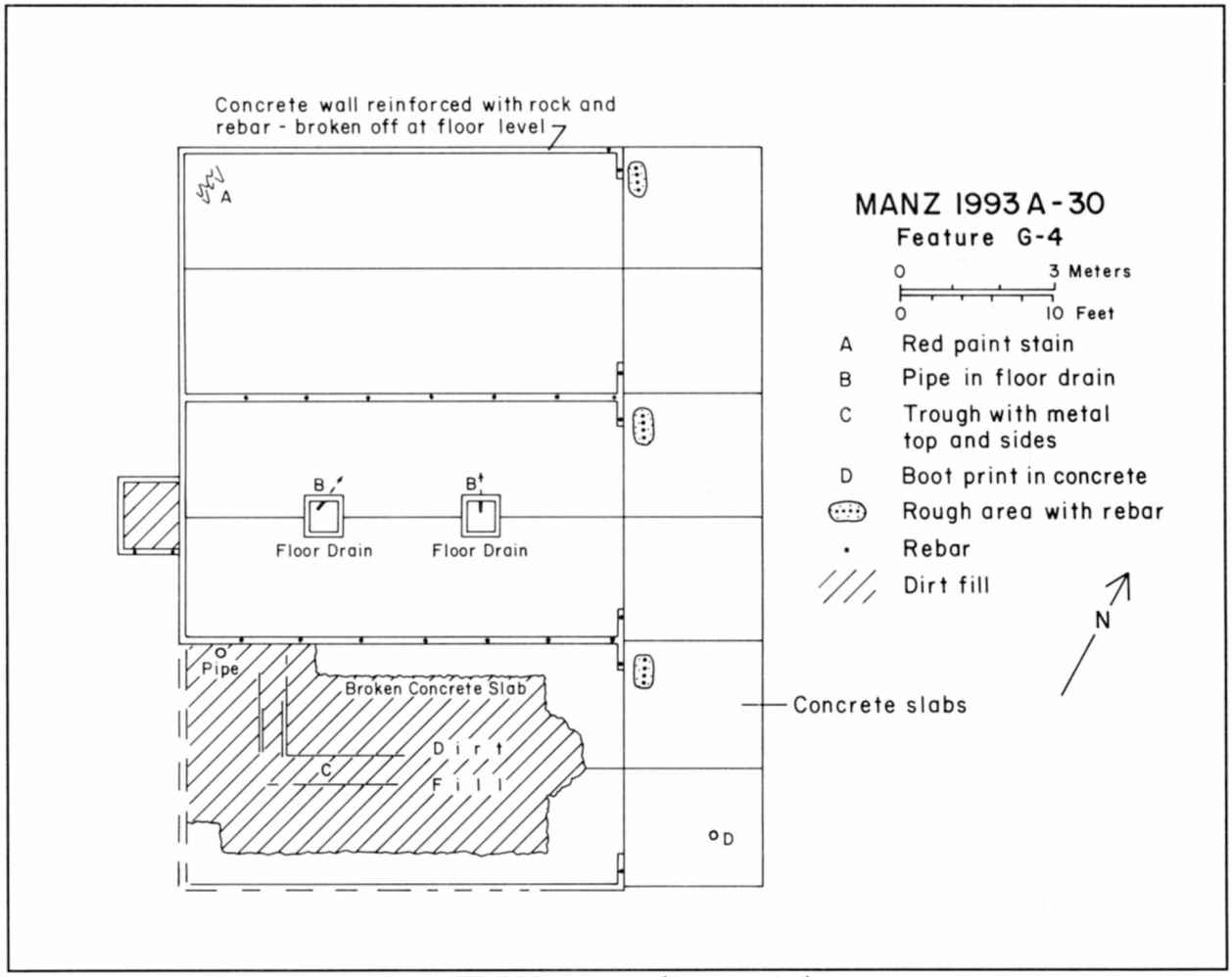


Figure 9.20. Garage (Feature G-4).

Figure 9.21. 1944 aerial photograph of Hospital Block (north to top; courtesy of LADWP Bishop Office).

The most significant remains in this block are those built by the evacuees. These include a massive rock and concrete retaining wall located between the administration building and the wards, and a garden complex in the southeast portion of the block.

The 3-ft-high rock and concrete retaining wall (Feature H-1) is partially buried and has been cut in two areas by gullies. The wall incorporates a concrete bench with a simulated wood finish located in front of and between Wards 4 and 5 (Feature H-2, Figure 9.23) and curving rock and concrete steps to each of the wards (Features H-4, H-7, H-12, H-13, and H-14, Figure 9.24). The steps to two of the wards (Wards 6 and 7)

Figure 9.22. Pulled manhole in Hospital Block (Feature H-6).

Figure 9.23. Bench in Hospital Block (Feature H-2).

have been destroyed.

The elaborate garden complex (Feature H-5), located on the east side of the Doctors Quarters, includes a large concrete-lined pond, a stream, and dispersed boulders. Uncovered during mapping of this feature were two winding concrete walkways, boulder stepping stones, wood-reinforced pathway steps, rock borders, and other landscape features (Figures 9.25-9.27).

Other evacuee-constructed landscape features in this block include a rock alignment along the road east of the hospital (Feature H-15), four rock circles around dead trees between Wards 4 and 5 (Feature H-16), and a rock circle and a few rock clusters in the administration building area.

Auxiliary Buildings

The concrete slab foundations of the hosptial laundry room, hospital heating plant, morgue, and garbage can washing rack were cleared of sand and debris and mapped in detail (Figure 9.28). In addition to these, a concrete side-

Figure 9.24. Steps in Hospital Block (Feature H-12).

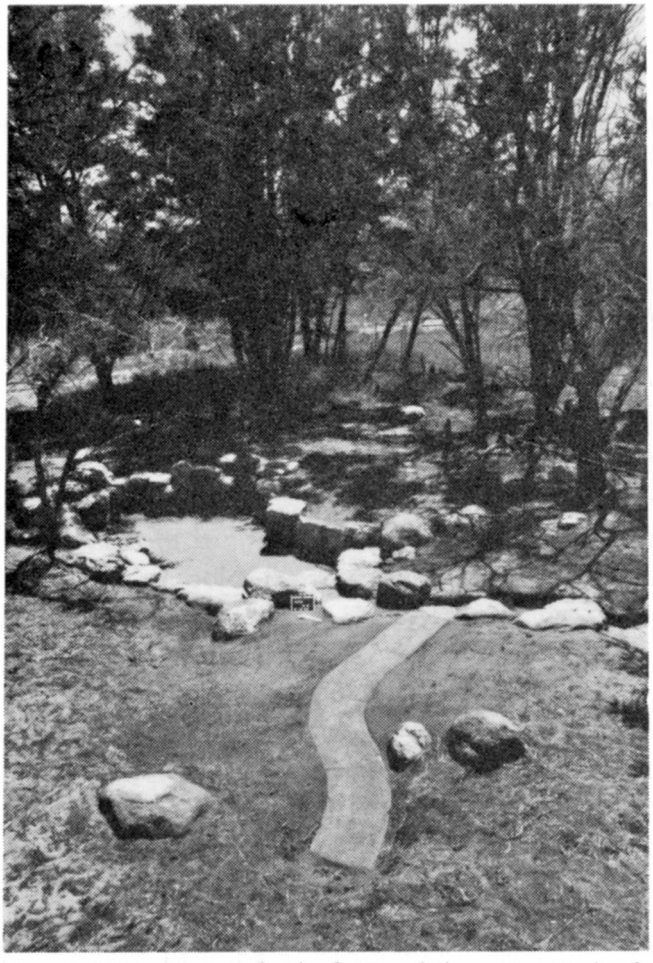


Figure 9.25. Hospital Block Pond (Feature H-5) after removal of debris.

walk was also uncovered. There is a large area of mostly buried asphalt in the northwest portion of the block, north of the heating plant and wash rack. The function of this asphalt is unknown, it may have been a paved parking area or paved to control dust.

The hospital laundry foundation consists of a 20 ft by 100 ft concrete slab (Feature H-11; Figures 9.29 and 9.30). It appears to have been one large room. It has remnants of two of the original three entries, drain troughs (Figure 9.31), a fat trap, equipment mounts and stains, and protruding bolts. A drainage groove carved into the slab and a brick holding tank appear to be later additions due to a leaking water heater. The laundry slab is enclosed on three sides by a massive 1½-ft-high rock and concrete retaining wall (Feature H-8, Figure 9.32); there is a cobblestone entryway with steps centered on the east side and a concrete entry ramp on the south end.

Remains at the hospital heating plant (Feature H-10) consist of a 36 ft by 38 ft concrete slab that incorporates two rooms divided by low concrete walls, and an attached 4 ft by

Figure 9.26. Hospital Block Pond (Feature H-5) after removal of debris.

8½ ft bathroom slab (Figures 9.33 and 9.34). There is a concrete entry ramp on the north side. The large central room has the remains of three brick-lined boiler fireboxes, concrete equipment mounts, protruding bolts, and floor drains (Figure 9.35). The smaller room has equipment mounts, protruding bolts, and a floor drain (Figure 9.36). Though heavily damaged, the bathroom slab still has a toilet waste pipe and other floor features (Figure 9.37).

In order to map the morgue foundation (Feature H-20) up to 30 cm of sediments (approximately 25 cubic meters in all) had to be removed. The 28 ft by 38 ft concrete foundation is divided into four rooms by low concrete walls. Three of the rooms have at least one floor drain, two rooms have embedded equipment mounts, and two had toilets (Figures 9.38 and 9.39). The toilets are indicated by obvious toilet waste pipes and bolts, and adjacent to one of these can be seen traces of a wood frame partition wall. On the floor of the largest room five hardened bags of cement mix were uncovered.

A 90-ft-long sidewalk (Feature H-21) attached to the south and east sides of the morgue leads toward the hospital laundry room. It measures from 4 ft to 7½ ft wide and has six inscriptions, including one in Japanese (see Appendix A). The sidewalk was almost competely buried by sand prior to mapping.

The garbage can washing rack foundation (Feature H-9) consists of a 20 ft by 35 ft concrete slab foundation with two concrete rings to support garbage cans, a drainage trough, and a large grease trap (Figures 9.40–9.42).

Artifacts

Three artifact concentrations (Features H-17 through H-19) were identified in the northwest corner of the hospital block. Feature H-17 contains hundreds of pieces of bottle glass (100+ clear, 100 brown, green, blue, and white; includes food jars, soda bottles, a milk bottle lip), cut glass, pipette fragments, a large square can, an electrical porcelain knob, green glazed whiteware, and yellowware (one with an East Liverpool, Ohio mark). Feature H-18 contains clear, brown, and green glass (includes "Seven-Up," "Nehi," "Coke," and other soda bottles, a "Jergens" lotion base, glass bowl fragments, and vials), undecorated fine stoneware, two blue-

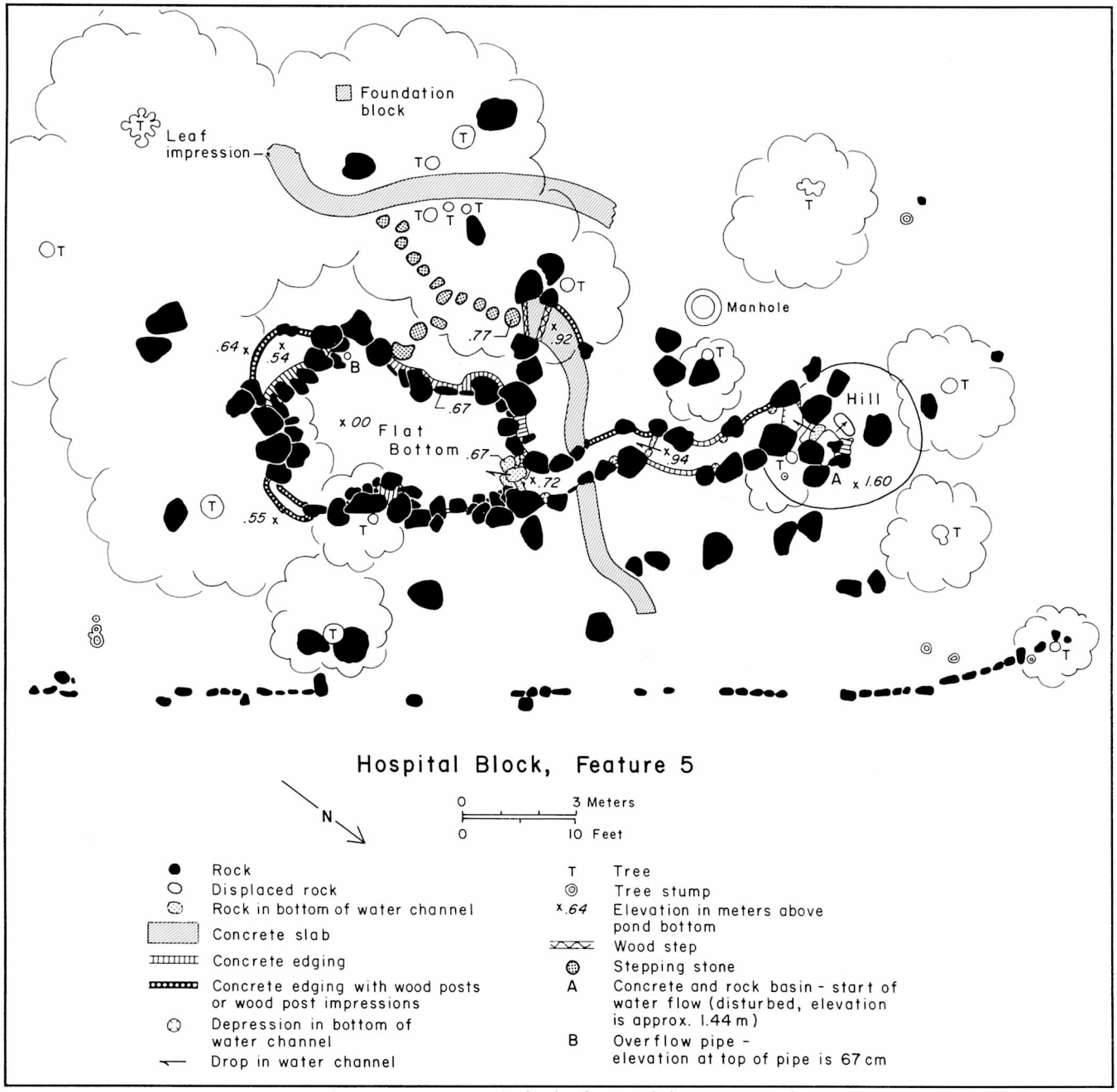


Figure 9.27. Hospital Block Pond (Feature H-5).

glazed whitewares, five transfer print whitewares, and a yellowware brown-glazed mixing bowl rim. Feature H-19 contains clear, brown, and blue bottle glass, a clear liquor bottle top, whiteware ceramic fragments, a stoneware mug fragment, a beer can with church key opening, a sanitary seal can, a few nails, and shingles.

Other historical artifacts and ecofacts noted in this block during survey include 70 window glass fragments, hundreds of bottle glass fragments (mostly clear and brown with some green, white, blue, and purple), glass vials, pipette fragments, 60 ceramic fragments (whiteware, stoneware, transfer print), an electrical porcelain knob, 250

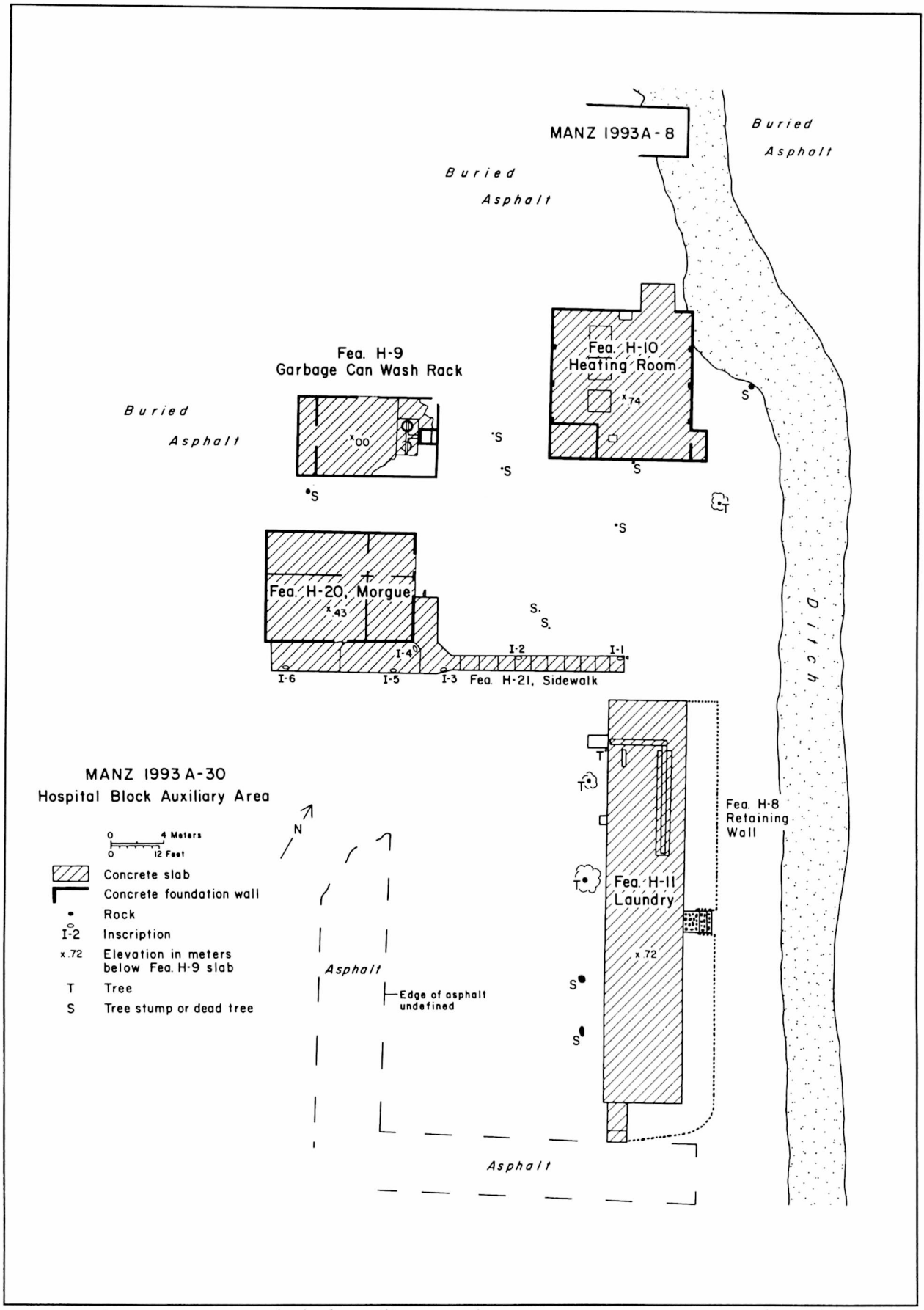


Figure 9.28. Hospital Block auxiliary area (Features H-8 to H-11, H-20, and H-21).

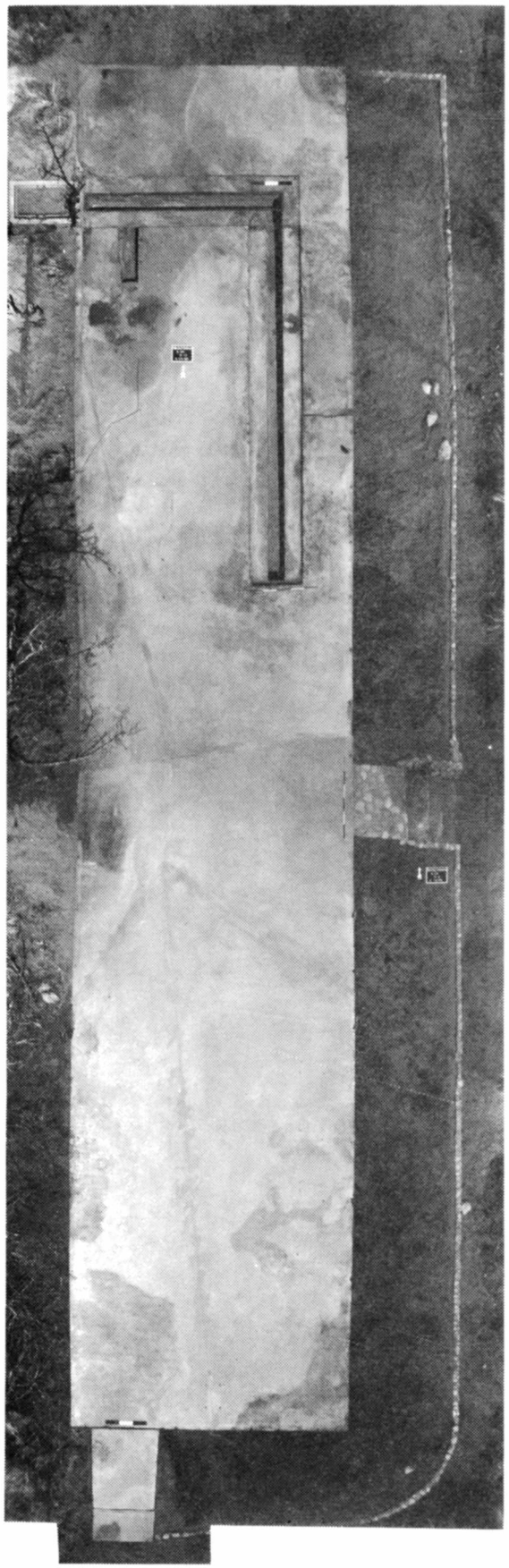


Figure 9.29. Overhead bi-pod view of Hospital Block Laundry (Feature H-11).

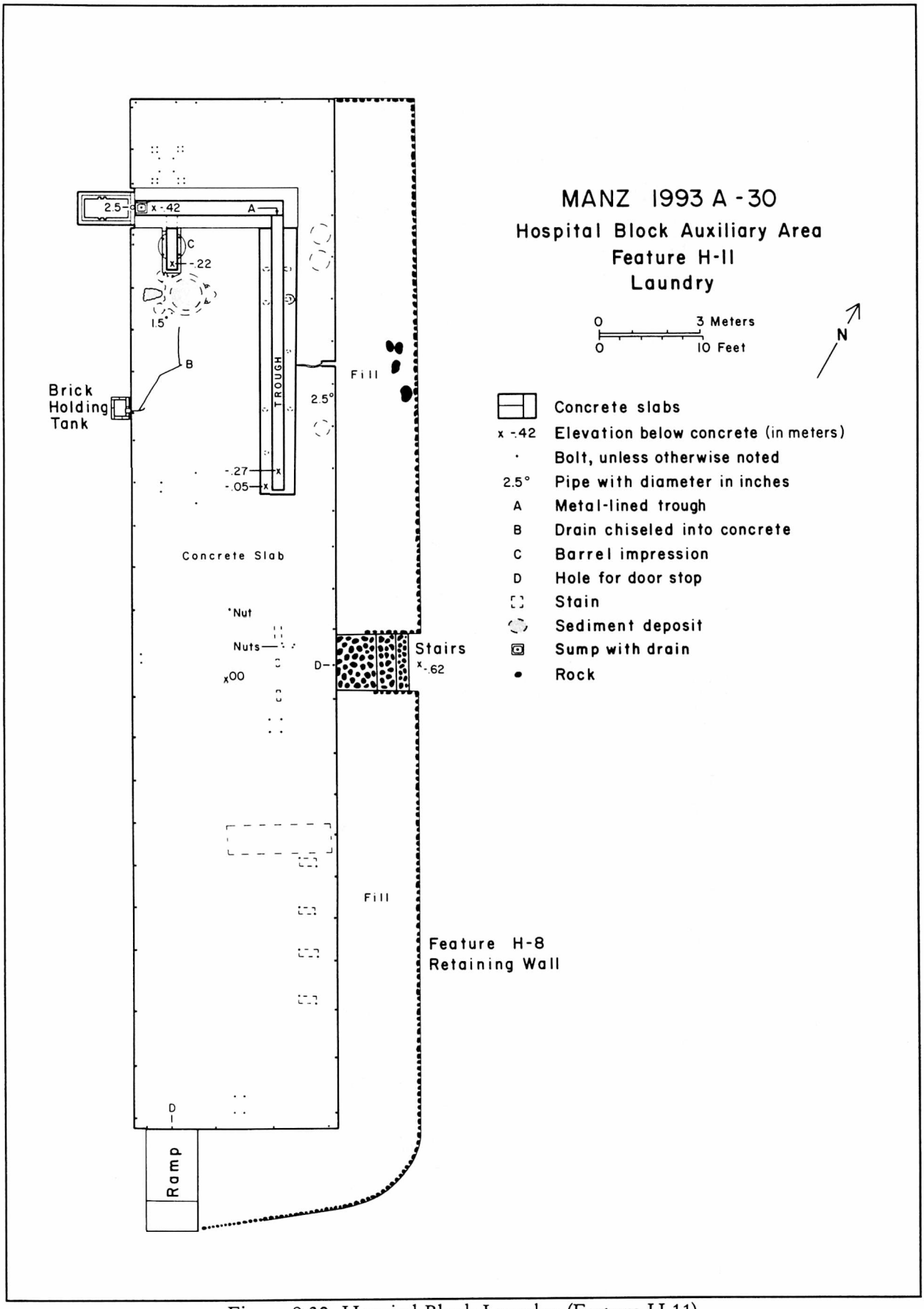


Figure 9.30. Hospital Block Laundry (Feature H-11).

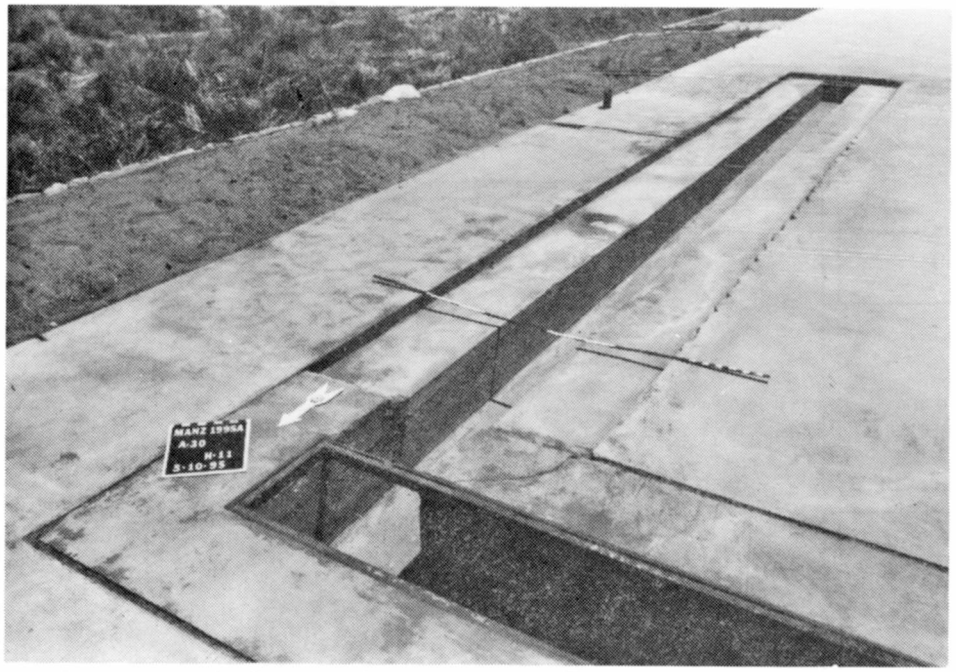


Figure 9.31. Detail of Hospital Block Laundry foundation (Feature H-11) after removal of debris.

Figure 9.32. Steps and retaining wall at Hospital Block Laundry (Feature H-8).

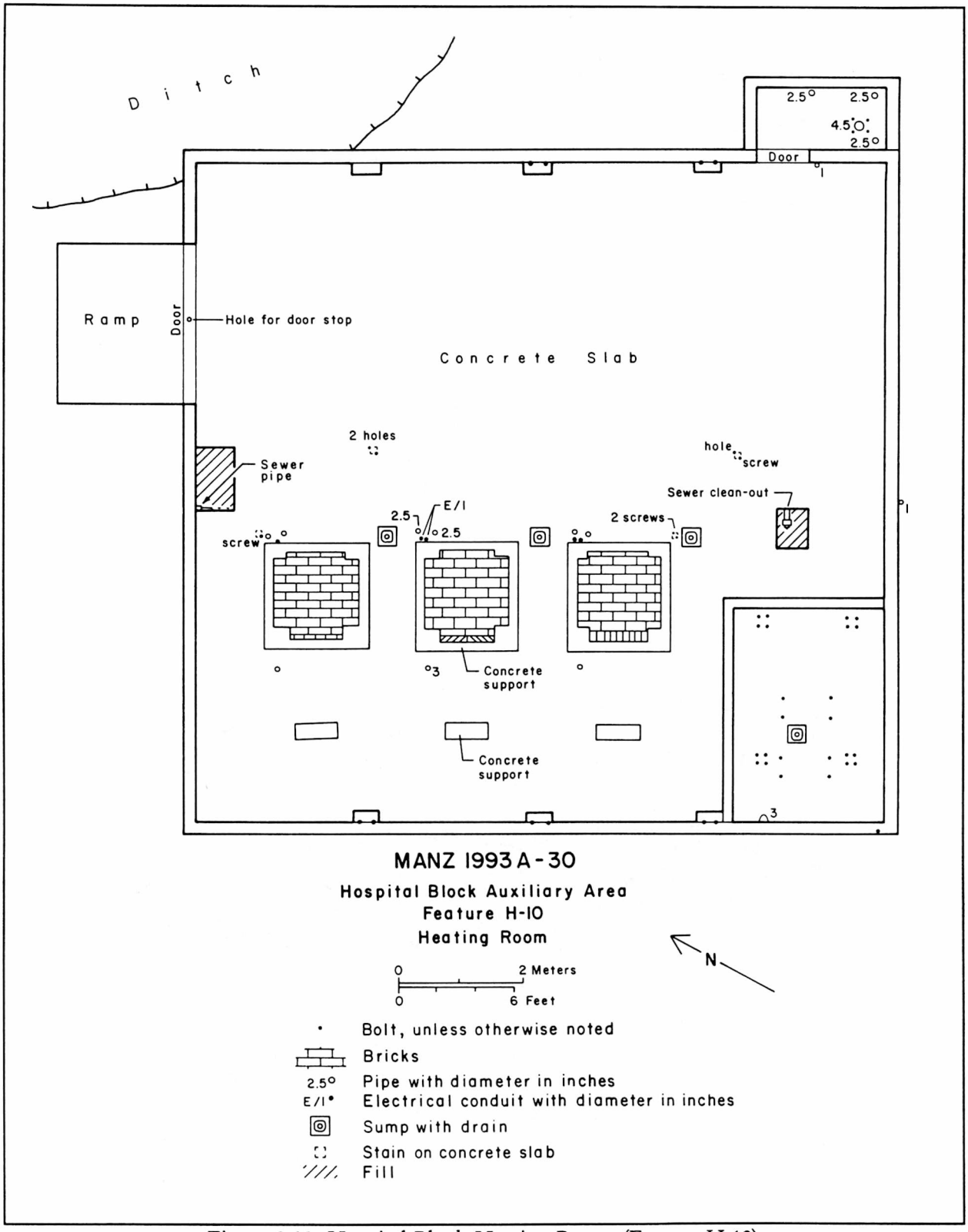


Figure 9.33. Hospital Block Heating Room (Feature H-10).

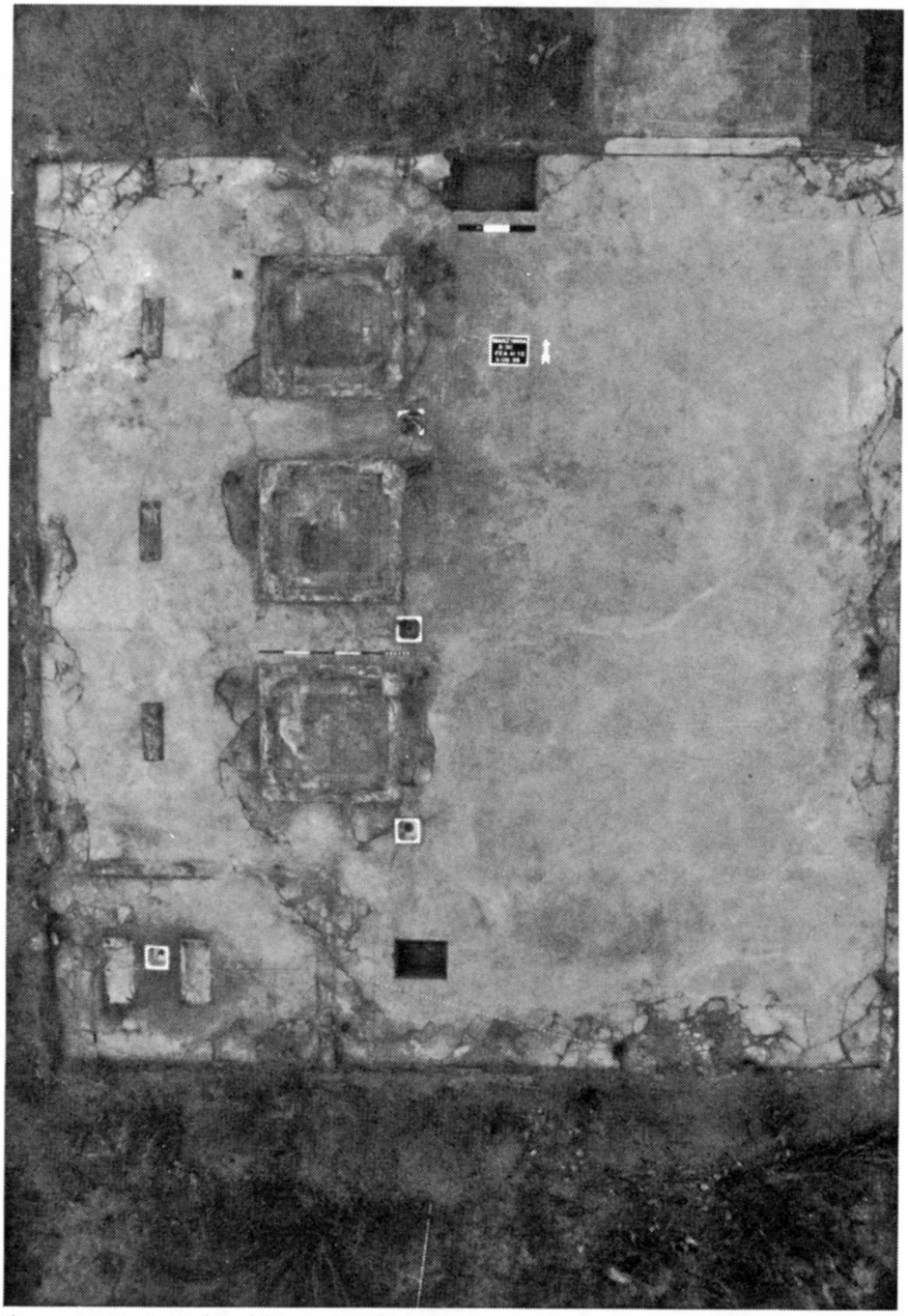


Figure 9.34. Overhead bi-pod view of Hospital Heating Room (Feature H-10).

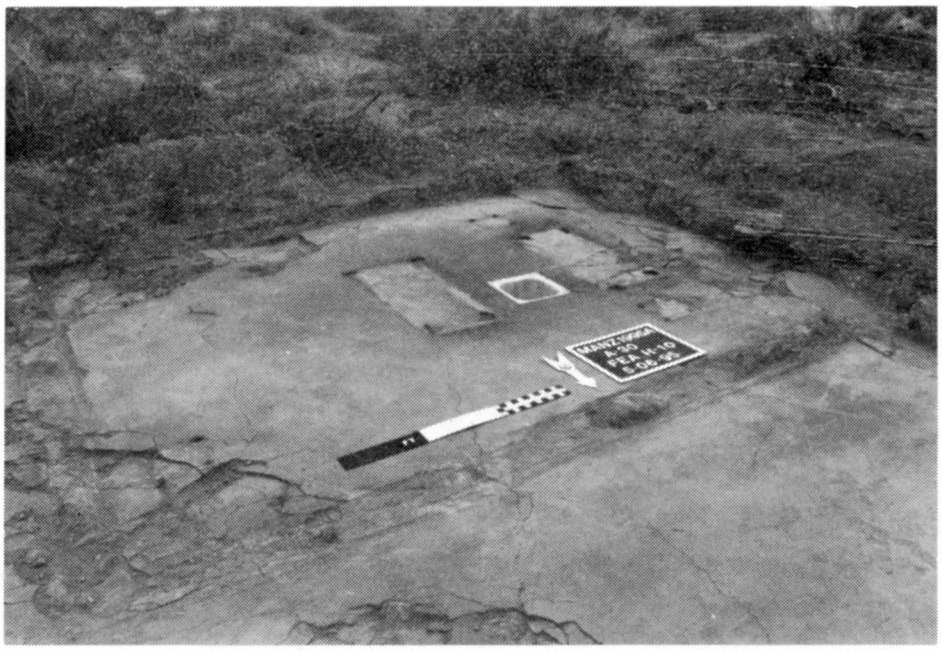


Figure 9.35. Detail of Hospital Heating Room (Feature H-10) after removal of debris.

Figure 9.36. Detail of Hospital Heating Room (Feature H-10) showing boiler foundation after removal of debris.

Figure 9.37. Detail of Hospital Heating Room (Feature H-10) showing bathroom after removal of debris.

wire nails, 35 sanitary seal cans, 14 hole-in-top cans, jar and bottle lids, canning jar lids, a measuring cup for mixing baby formula (embossed with "S-M-A always pack tightly in cup"), pipe fittings, a pickaxe blade, stovepipe, a trunk latch, 1/8-inch-thick phonograph record fragments, a group of mica washers bound with a thin copper wire, cable, rebar, tarpaper, roofing, 30 bricks, over 100 lumber fragments, and a few bone fragments.

Fifteen glass marbles and a few nails and can fragments were found while clearing debris from the hospital pond for mapping. Also encountered during cleaning of the slabs west of the hospital were many structural artifacts, such as nails, bolts, hinges, lumber bits, and roofing fragments, a concrete access hole cover (Figure 9.43), a few small machine parts, and a military button (from the laundry room).

Two foundations in the Hospital Block that predate the relocation center were recorded as separate sites (Christopher and Wilder Houses; see Chapter 11). While no discrete artifact scatter or concentration associated with these foundations was identified, some of the artifacts noted in this block (such as purple glass and some of the whiteware ceramics) are likely related to these sites.

Judo House Block

The Judo House, located in Firebreak E3, was a 45 ft by 70 ft roofed structure with a raised wood floor and screened sides. An enclosed room for equipment storage was on the south side of the Judo House. Both were built by the Japanese American evacuees. Its location took advantage of several large cottonwoods and other trees and a foundation from a pre-relocation center building (Ed Shepherd House, see Chapter 11). Also in this block, according to relocation center blueprints, were three basketball courts, two softball fields, and playground equipment.

No evidence of the playing fields was encountered. Decorative rock alignments enclose both the Judo House and the storage room and there is a circle of rocks to the northeast (Figure 9.44). At the Judo House

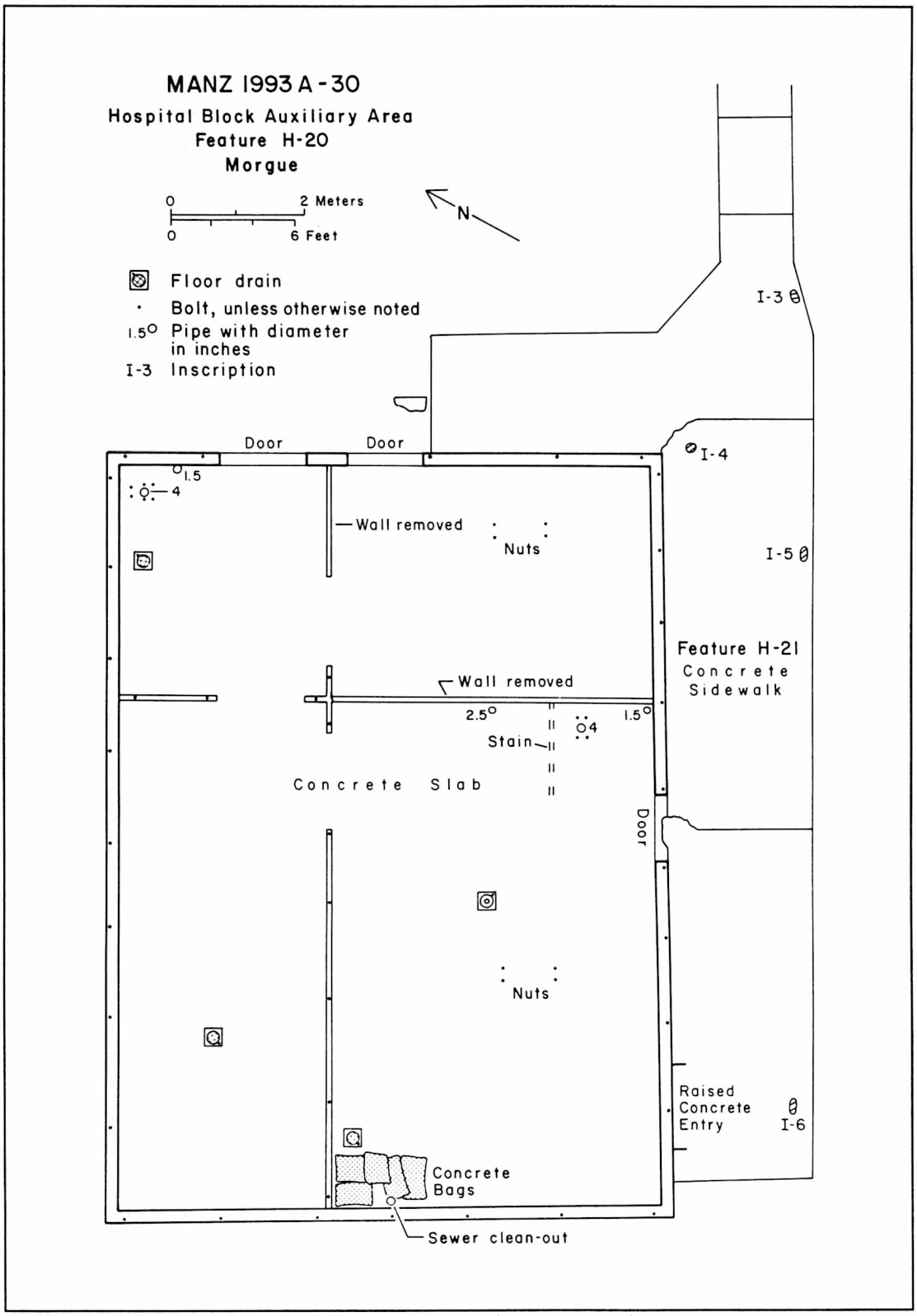


Figure 9.38. Morgue (Feature H-20).

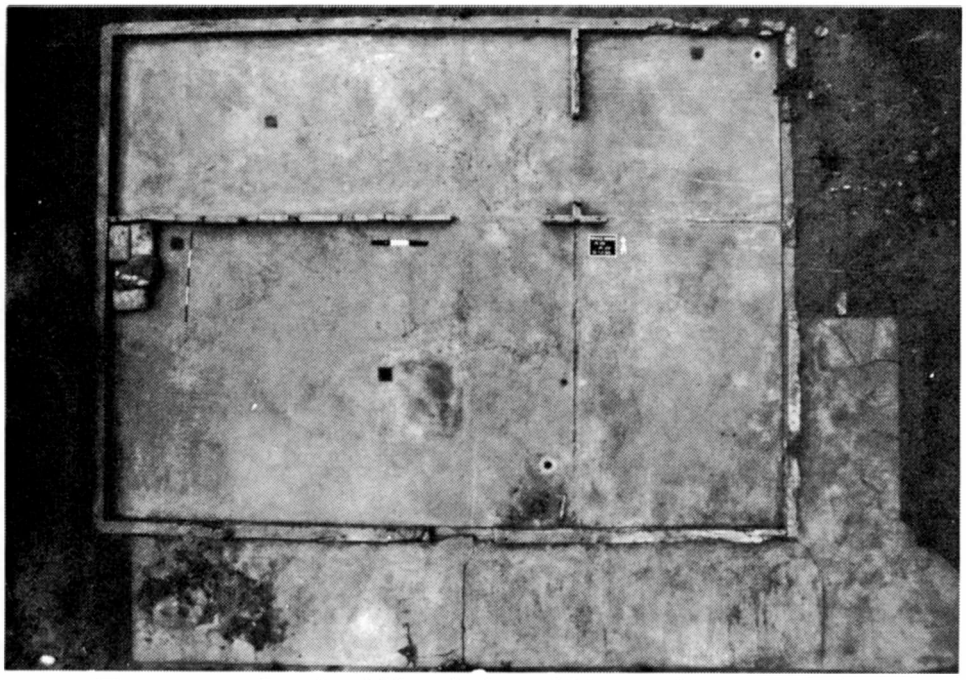


Figure 9.39. Overhead bi-pod view of Morgue (Feature H-20).

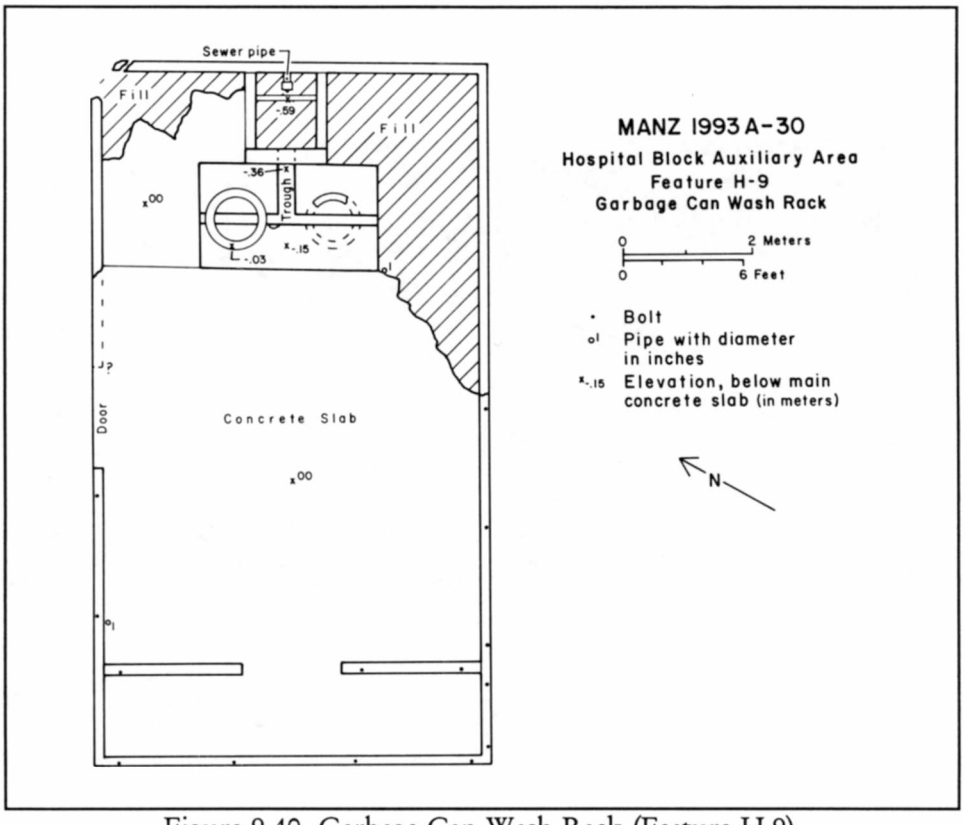


Figure 9.40. Garbage Can Wash Rack (Feature H-9).

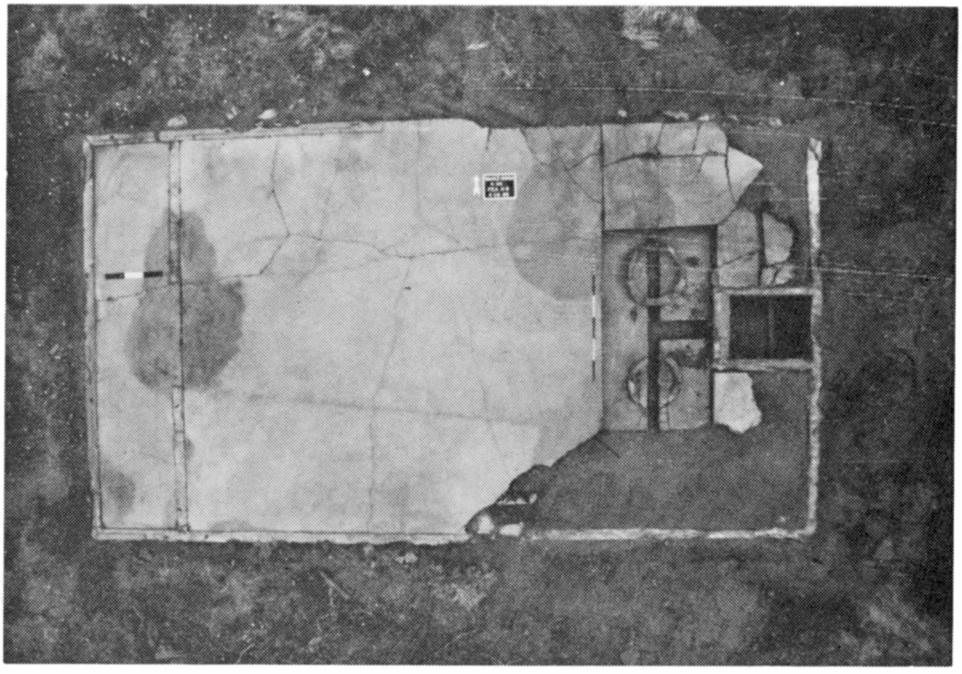


Figure 9.41. Overhead bi-pod view of Garbage Can Wash Rack (Feature H-9).

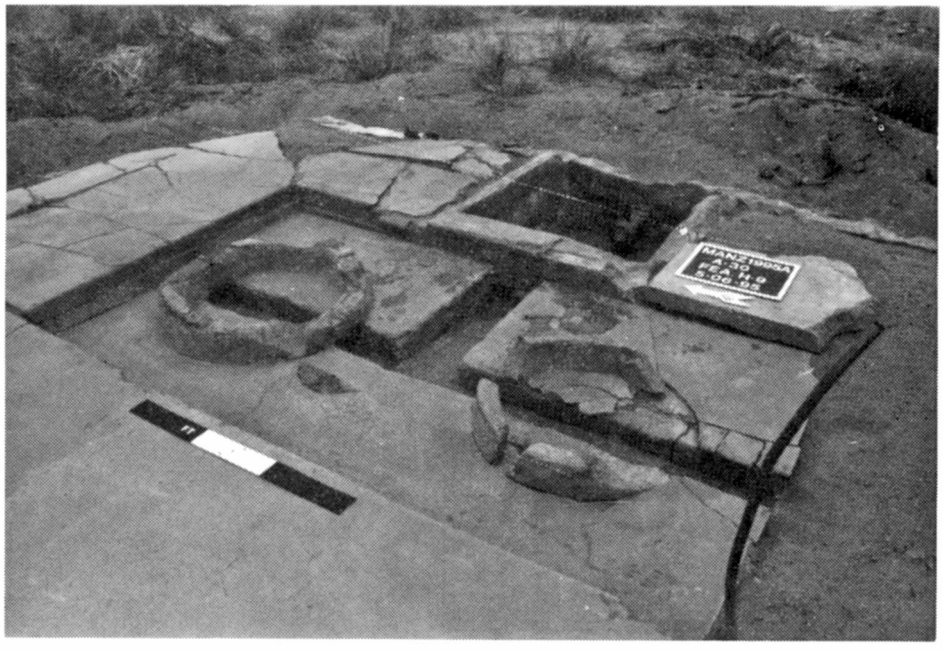


Figure 9.42. Detail of Garbage Can Wash Rack (Feature H-9) after removal of debris.

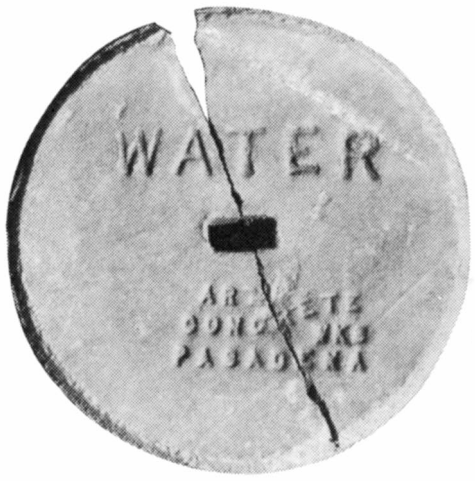


Figure 9.43. Concrete water access hole cover found during Feature H-9 cleaning.

itself there are remnants of a concrete edge around its outside perimeter and a 2 ft by 45 ft concrete slab at its north end (Feature J-2). To the south are three contiguous concrete slabs from a pre-relocation center building that were reused in place as the foundation for the attached storage room. Concrete stoops were added to the east and north sides of the slabs (Feature J-1) and two elaborate rock-lined cobble and concrete walkways lead to the storage room (Feature J-3, Figure 9.45).

Historical artifacts noted during survey include approximately 100 bottle glass fragments (includes five purple), fragments of a purple drinking glass, a blue transfer print ceramic, about 100 wire nails, a few sanitary seal cans and metal parts, brick fragments, an electrical porcelain knob, roofing, crown caps, a shoe heel tap, a 1929-S penny, and stove pipe. This block partially overlaps and incorporates the Campbell/Ed Shepherd House (site MANZ 1993 A-28), which predates the relocation center, and some of the artifacts noted may be associated with that site.

Root Storage Block

Relocation center blueprints depict from one to four buildings in this block, located on the southern edge of the relocation center. A 26 ft by 100 ft building is shown on four WRA blueprints, on three it is labeled "Root Storage" but on the fourth (8/1/43) it is labeled "Ice Storage." It is not clear if there was a completed building at the noted Garment Factory location. It is labeled and shown as a 48 ft by 300 ft building on an 8/1/43 blueprint, however no building is shown on a 4/20/45 blueprint and what may be only a perimeter foundation is shown on a 3/14/45 blueprint. A rectangular outline, but no building, can be seen on a 1944 aerial photograph. The "bakery" and another small unnamed structure shown on the 8/1/43 blueprint were apparently never built.

Remains at the Root Storage Building consist of a dirt mound at its south end and a small depression and sinkholes, possibly indicating an infilled basement (Feature R-1). The dirt mound may be from an entry ramp or from fill used to level the building foundation. The Garment Factory location also has a dirt mound at its

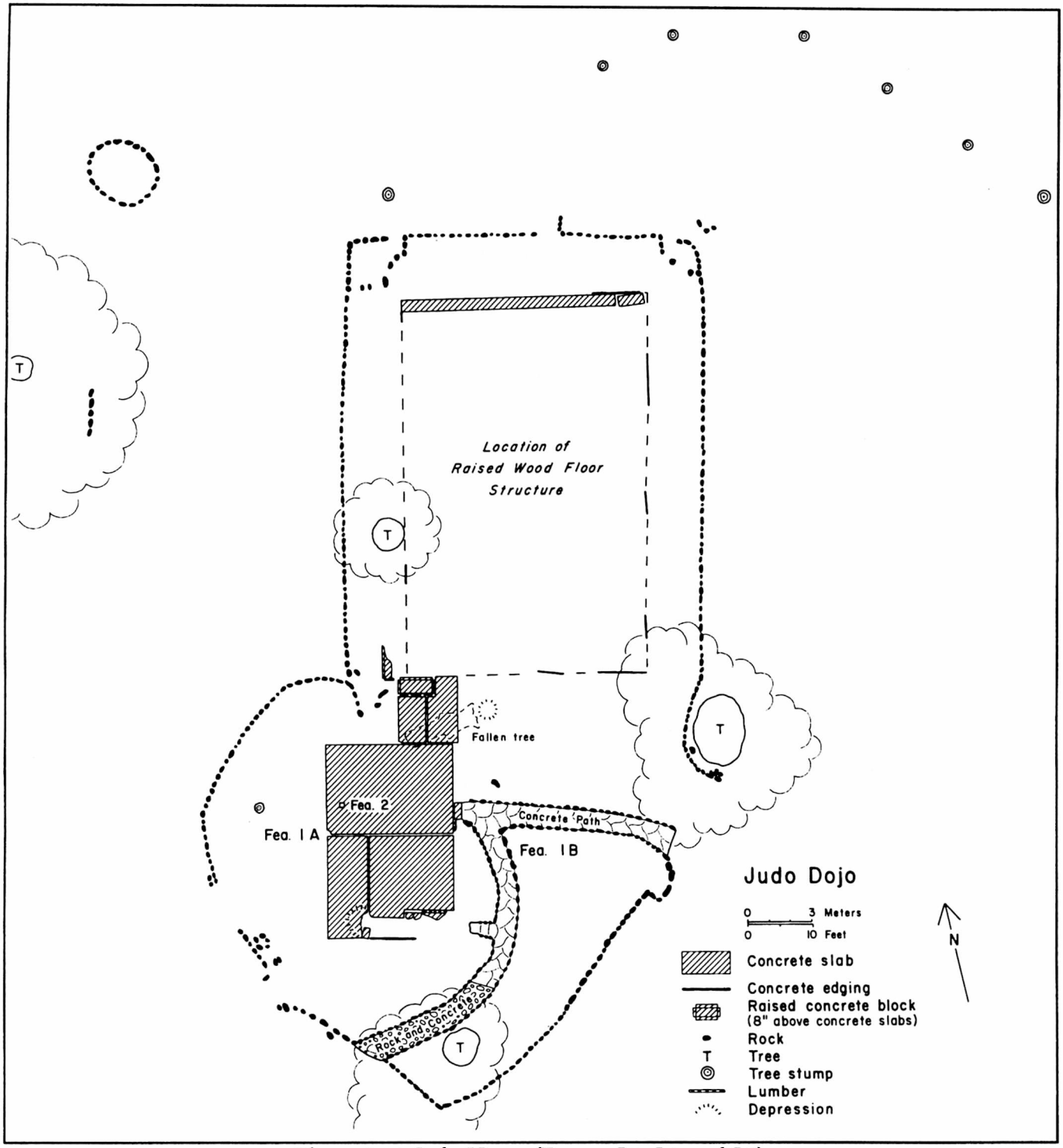


Figure 9.44. Judo House (Feature J-1, J-2, and J-3).

south end, and remnants of a concrete border, possibly from a perimeter foundation, at its northeast corner and along its east side (Feature R-2). Two concrete weir boxes at the west end of the block were recorded as part of site MANZ 1993 A-29.

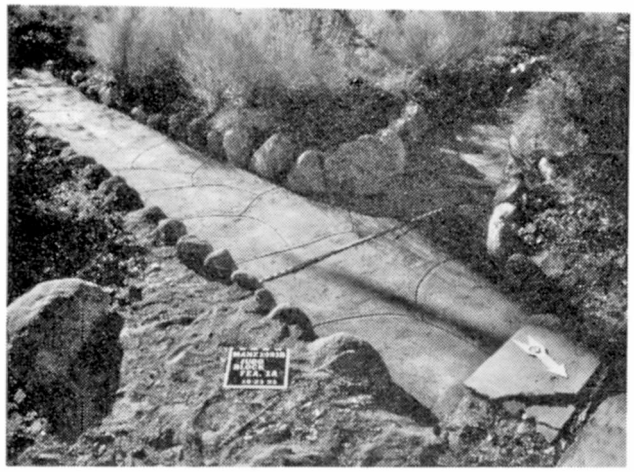


Figure 9.45. Walkway at Judo House after removal of debris (Feature J-3).

Historical artifacts noted in this block during survey include approximately 250 window glass fragments, 300 bottle glass fragments (200 clear, 35 brown, 40 green, 5 purple, 2 blue), seven ceramic fragments (white and yellowware), 200 wire nails, 15 sanitary seal cans, four condensed milk cans, jar and can lids, wire, an oil filter, 10 bolts and screws, 15 nuts and washers, other hardware, rubber fragments, a glass marble, a metal button, a 10½-inch-long antenna and mounting bracket, 15 fragments of ceramic plumbing fixtures, five lumber fragments, 15 fragments of salt-glazed sewer pipe, and over 50 bricks.

Service Station/Motor Pool Area

Relocation center blueprints depict three to four structures in this area: the Service Station (10 ft by 16 ft), the Motor Pool Office (20 ft by 50 ft), and a small unnamed structure. Another small structure (apparently a gas pump) is shown on the 3/14/45 blueprint.

Features in the northern portion of this area were mapped in detail (Figure 9.46). The only feature outside of the mapped area was an asphalt driveway at a former structure location in the far southeast corner of the block.

The Service Station foundation (Feature Se-2) consists of a 10 ft by 16 ft concrete slab with an asphalt ramp on the east side. Initials and a date were found inscribed in one corner of the concrete foundation (see Appendix A). Nearby is a 3 ft by 10 ft concrete slab with a 1-ft-deep circular pit in the center, extruding pipes and wires, and two 7-ft-tall steel posts, which likely supported a gas pump (Feature Se-1, Figure 9.47). Between the gas pump and the road there is a shallow depression, possibly left from the removal of an underground gas storage tank (Feature Se-6). To the south of the gas pump is an imbedded upright concrete pipe, possibly a pipeline access hole (Feature Se-5).

The Motor Pool Office location (Feature Se-3) is indicated by concrete stoops on the north and west sides of an apparent 20 ft by 50 ft building pad and a surrounding rock alignment. An inscription and a hand and a foot print are on the west entry slab (see Appendix A). A road apparently ran between the Motor Pool Office and the Service Station. Recorded there was a pipe flush to the ground centered between two tall poles (Feature Se-4). These are likely the remains of an entrance gate to the motor pool parking area.

Historical artifacts noted during survey in this block include hundreds of window glass fragments, hundreds of bottle glass fragments (200 clear, 100 brown, 50 green, 5 "Coke," 1 purple), light bulb glass, automobile windshield and taillight glass, a brown-glazed ceramic, a whiteware ceramic, 10 sanitary seal cans, a pocket tobacco can, a paint can, several beer cans with church key openings, light bulb bases, a crown cap, jar and can lids, a fuse, nuts, bolts, washers, screws, rubber fragments, tarpaper, and lumber fragments.

Staff Housing Blocks

Relocation center blueprints depict 17 buildings in these areas. This includes 14 staff apartment buildings (each 20 ft by 94 ft), three

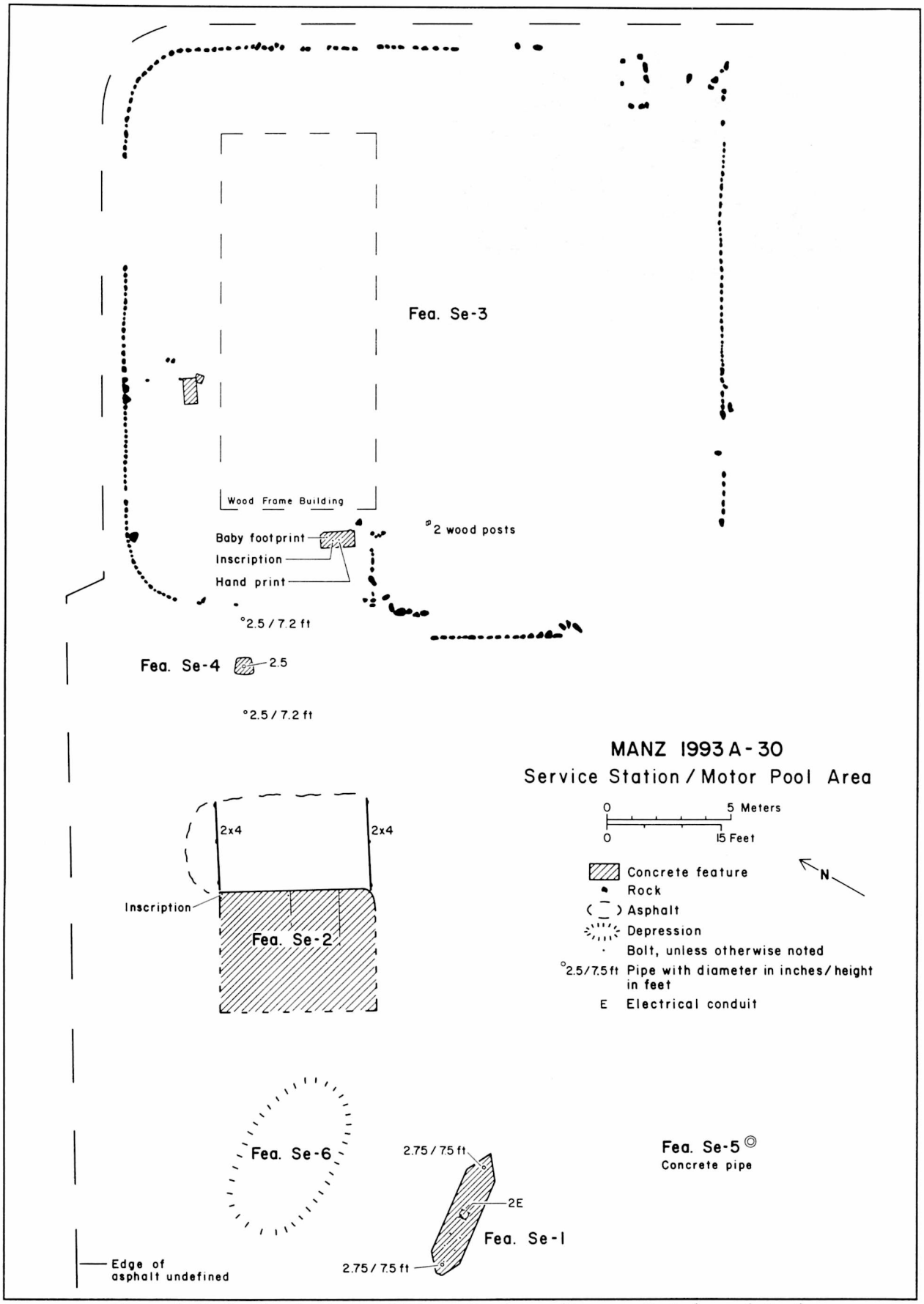


Figure 9.46. Service Station and Motor Pool area (Features Se-1 through Se-6).

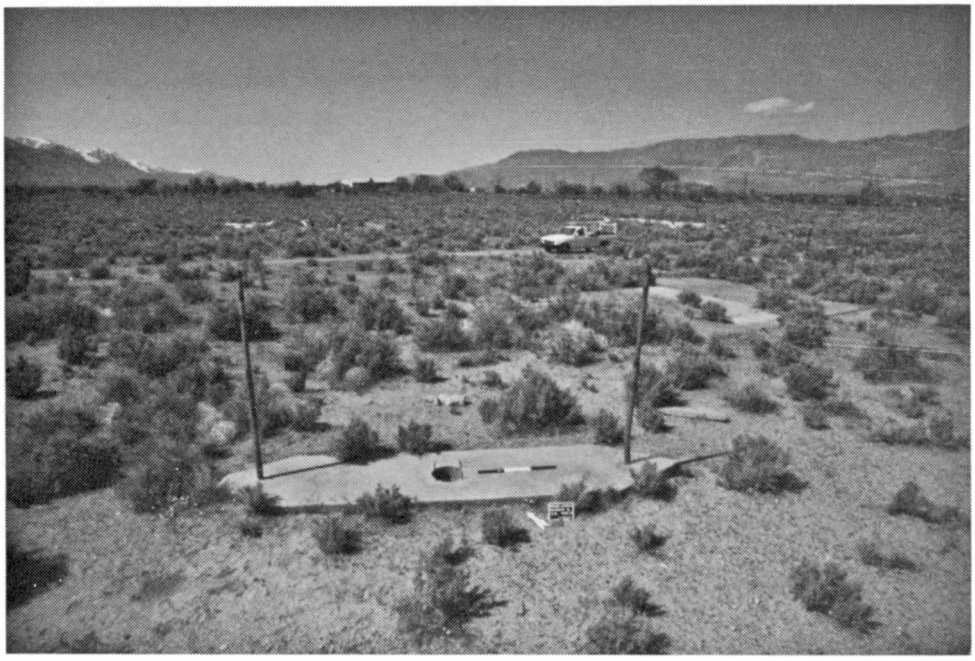


Figure 9.47. Foundation of Service Station gasoline pump (Feature Se-1).

dormitories (each 24 ft by 140 ft), and a laundry (16 ft by 20 ft). The apartment buildings were designated G through W. Building G had three apartments: the director's residence, a 1-bedroom apartment, and a 2-bedroom apartment. Buildings K-W each had four apartments; the two end apartments had two bedrooms each and the two center apartments had one bedroom each. The two dormitories (Buildings H-J) had ten double rooms, three single rooms, a lounge, a kitchen, a bathroom, a storage room, and a heater room.

This block has been impacted by several informal roads and a powerline (Figure 9.48). The most prominent feature remaining is a patio at Building G. It consists of a 3-ft to 6-ft-high wall of granite boulders and concrete surrounding a concrete slab on the east side of the Director's Residence (Feature S-1, Figure 9.49 and 9.50). The wall, similar in workmanship to one in the Administration Block, was built by Japanese Americans hired by the Project Director (Pete Merritt, Jr., personal communication, 1993). Also at the building site are three concrete sidewalks (entries) on the west side, a small water heater slab on the east side (Figure 9.51), and 11 concrete footing blocks (Figures 9.52 and 9.53). There is a rock-outlined asphalt parking area to the north (Feature S-19).

Small concrete slabs for water heaters are also adjacent to each of the remaining 13 apartment buildings (Figure 9.54) and concrete footing blocks remain at Buildings G (n=11), O (n=1), P (n=1), R (n=26), and W (n=5). There are rock alignments and concrete steps at Buildings N and Q (Feature S-2), a rock alignment at Building J, and four sets of concrete steps and a cobblestone entryway at Building K (Feature S-3). A concrete and rock ditch and a rock alignment (Feature S-11) encircles Buildings R through W. The laundry room consists of a 16 ft by 20 ft concrete slab with a 1½-ft-square central floor drain (Feature S-6, Figure 9.55).

There is a rock-lined ditch along the road south of Buildings V and W (Feature S-9) and a storm drain southeast of Building V (Feature S-10). A mostly buried concrete ditch (Feature S-8) of uncertain vintage crosses the southern portion of the block. It would have been under Buildings M, O, and P.

Other features recorded include a concrete slab

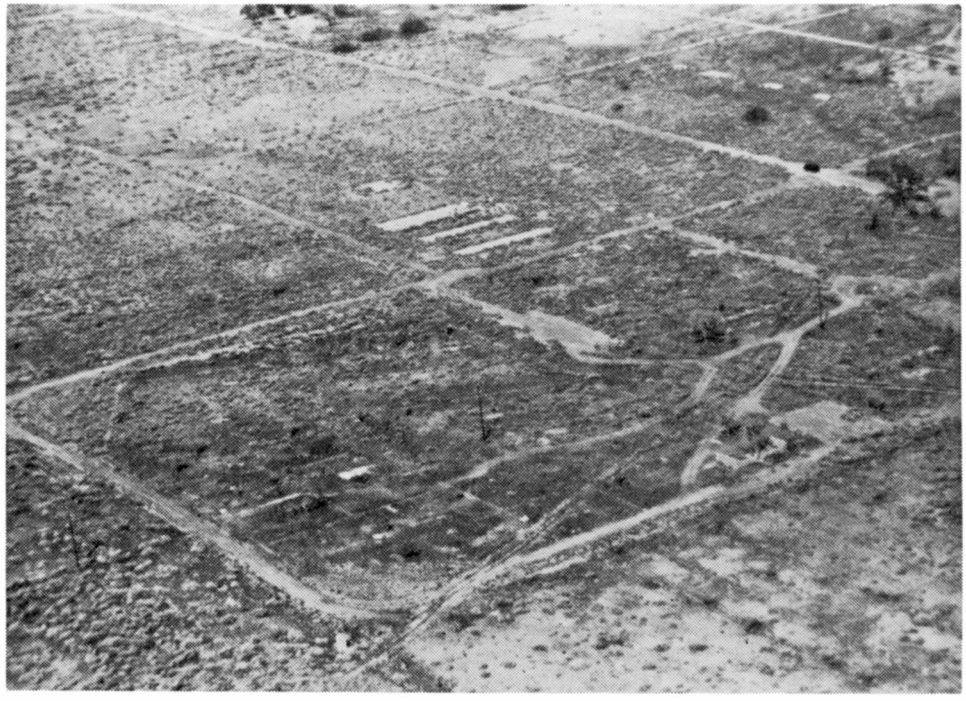


Figure 9.48. 1993 oblique aerial view of Staff Housing area (north to upper right).

Figure 9.49. Director's Residence in 1944 (WRA photograph, courtesy of Eastern California Museum).

Figure 9.50. Director's Residence (Feature S-1) in 1993.

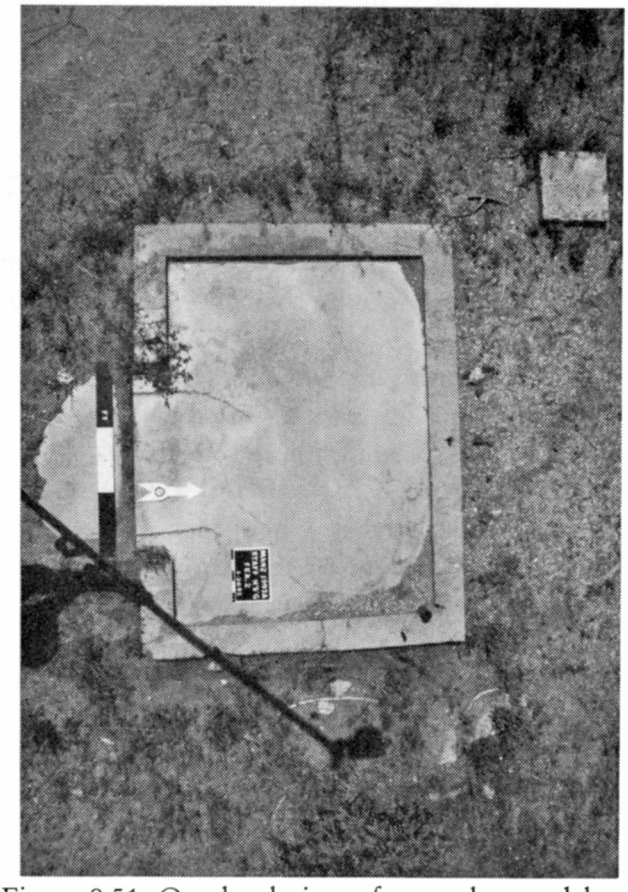


Figure 9.51. Overhead view of water heater slab at Director's Residence (Feature S-1).

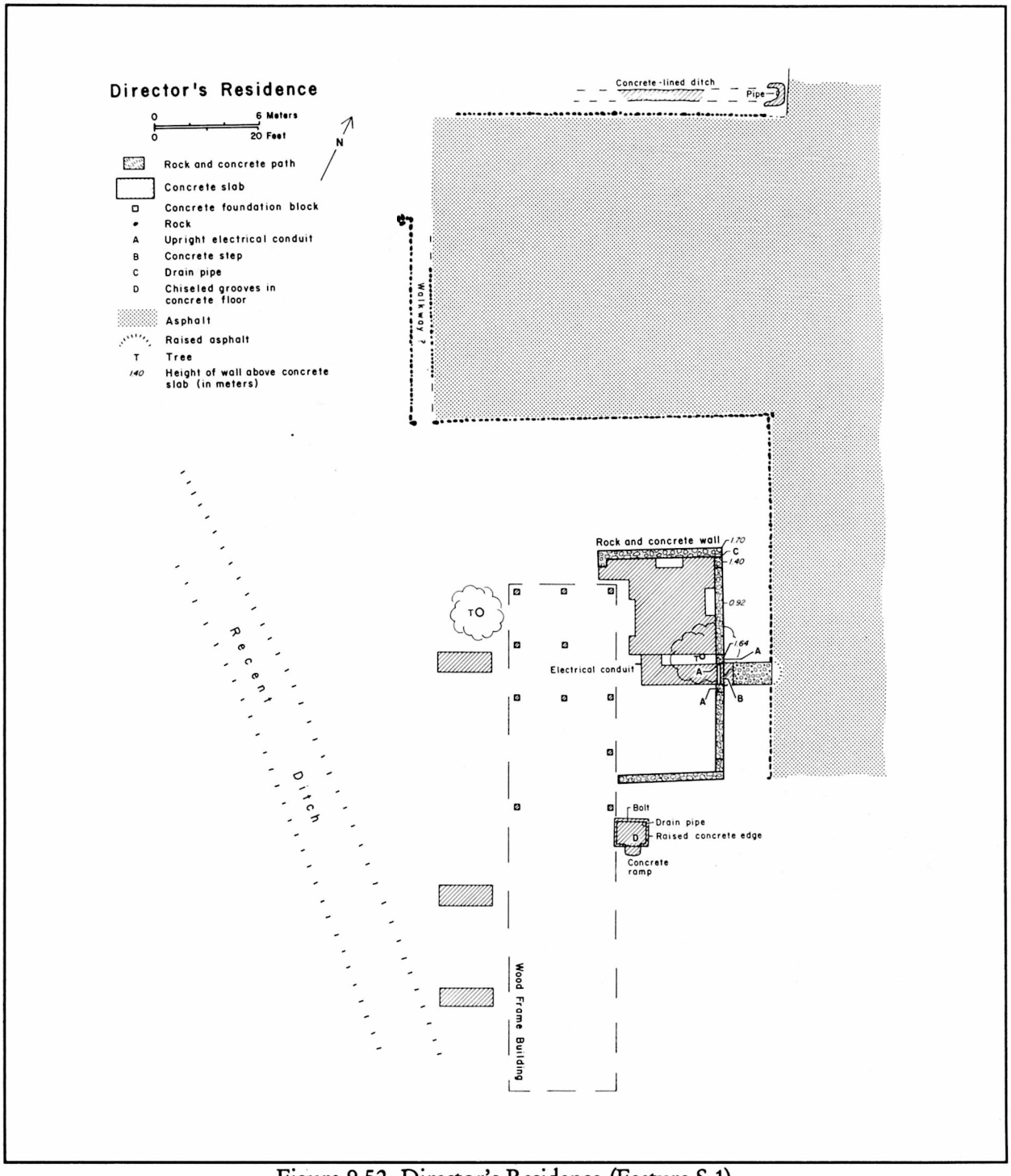


Figure 9.52. Director's Residence (Feature S-1).

and brick-lined hole (possibly a pit barbecue) at Building K (Feature S-4), a pole and wire clothesline north of the Building J Dormitory (Feature S-5), rock alignments (some with traces of white paint) along roads and around buildings (Features S-7 and S-12 through S-18), remnants of asphalt roads and parking areas and gravel walkways, and four intact manholes.

Artifacts

Non-structural artifacts in this block were counted, and representative samples collected (see Chapter 8). Structural artifacts, such as window glass, lumber, and pipe fragments, were noted

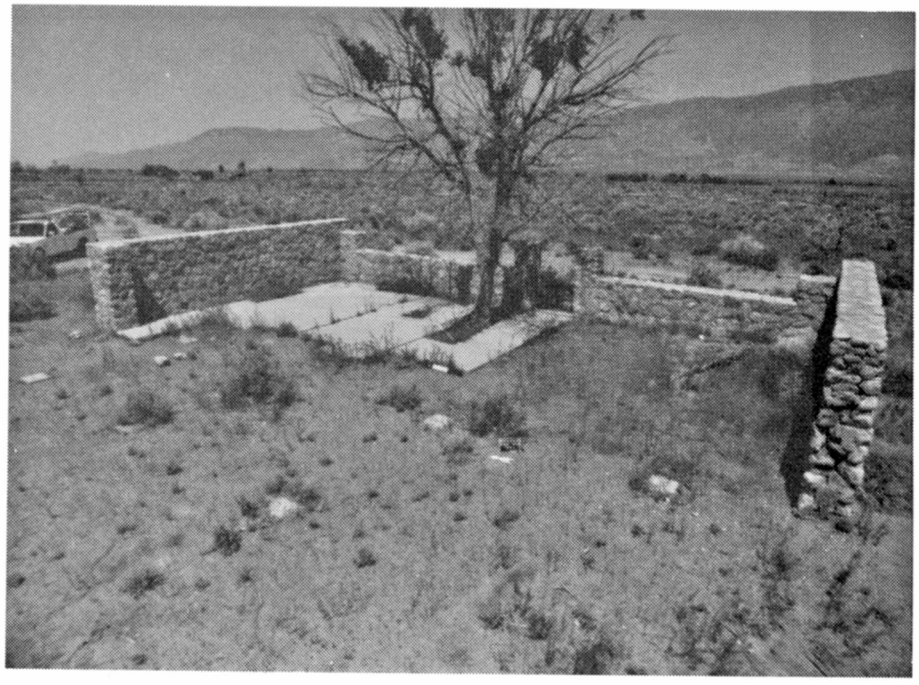


Figure 9.53. Patio at Director's Residence (Feature S-1).

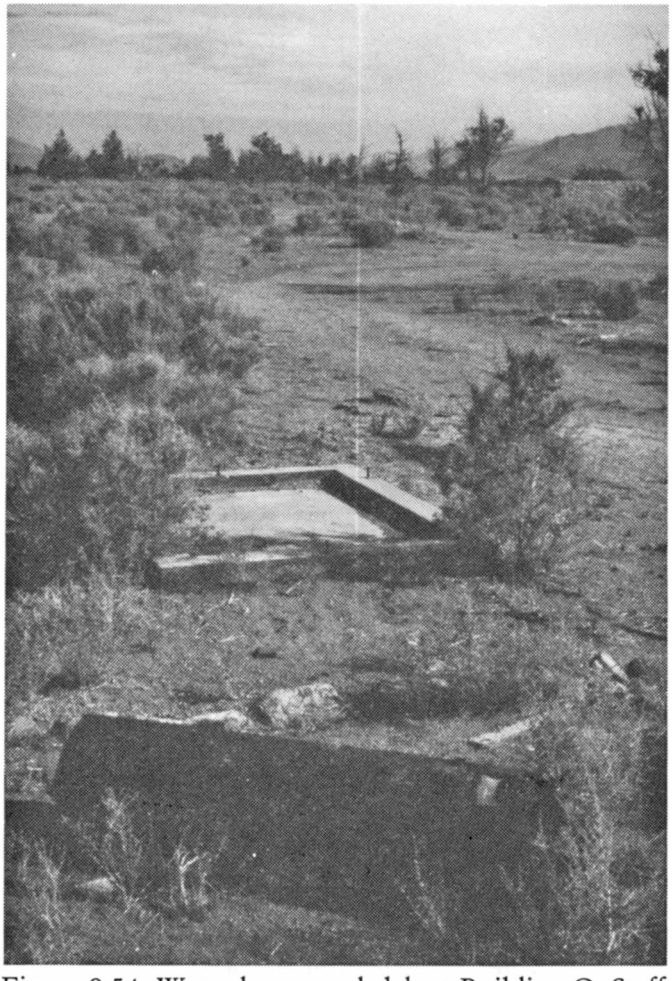


Figure 9.54. Water heater and slab at Building Q, Staff Housing Block (Feature S-2 vicinity).

and numbers estimated during survey. The results of both tabulations are summarized in Table 9.2. Some of the artifacts appear to date to the short period after the relocation center closed when it was used to house returning World War II veterans.

Structural artifacts noted include hundreds of window glass fragments, five electrical porcelain knobs, 475 wire nails, rebar, fencing, stove pipe, a 2-inch-diameter metal pipe, washers, a water heater (see Figure 9.54), 200 lumber fragments (some with bluish gray paint), salt-glazed sewer pipe fragments, tarpaper, roofing, and a red brick.

Domestic artifacts recorded were associated with beverage storage, food storage, food serving, food remains, furnishings, and pharmaceutical categories. All curved glass fragments were placed in the domestic artifact group. Color, shape, and other attributes were used to assign bottle types (Jones and Sullivan 1985). Glass bottle fragments unidentifiable as to type were classified solely on

Table 9.2.
Tabulation of Historical Artifacts in the Staff Housing Blocks.

Object Classification		Glass	Metal	Other
Structural	Structural Materials		1	755
	Window Glass	1,000		
	Hardware			
	Nails		475	
	Utilities		2	5
Domestic	Beverage Storage	824	78	
	Food Storage	2,053	48	
	Food Preparation			
	Food Remains			17
	Food Serving	1	4	3
	Furnishings		4	5
	Pharmaceutical	153		
Personal	Clothing			
	Jewelry			
	Grooming and Hygiene			
	Money			
Activities	Ammunition		6	
	Leisure			
	Automobile	10	1	2
	Miscellaneous Tools		1	1
	Toys			2
	Writing			
Unclassified			18	14

color (cf. Rhodes 1988:204; Teague and Shenk 1977: 114): brown and green glass are included under beverage storage; clear, aqua, and purple glass under food storage; and white and blue glass under pharmaceutical.

Items associated with beverage storage include 10 church-key-opened cans, two cone-top beer cans, 66 crown caps, and over 800 glass fragments. The fragments include 613 pieces of brown glass (from at least 15 different bottles), 199 of green (from at least 17 bottles), 10 of "Coke" bottles, and two clear. Identifying marks include "Bubble Up," "Squirt," and "Canadian Club" on green fragments, the Glass Containers Inc. hallmark (1945+) and "1-WAY" on a brown base, and "Mission Dr...." and "Lone Pine Dairy" on clear fragments.

Artifacts associated with food storage include 20 sanitary seal cans, two condensed milk cans, 18 can lids, six jar lids, a metal canning jar lid, a "Thermos" bottle, 2,053 clear glass fragments (from at least 25 different containers), and 10 purple glass fragments. Identifying marks on the clear fragments include "Duraglass" and the hallmarks of the Hazel-Atlas Glass Company (1920-1964), the Knox Bottle Company (1924-1968+), the Lummis Glass Company (1940-1955), the Latchford-Marble Glass Company (1939-1957), the Latchford Glass Company (1957+), and the Seaboard Glass Company (1943-1947). Recognizable date codes include two bottle bases with "43" and one each with "44," "48," and "56."

Food remains consist of 17 pig bones (see Appendix H). No artifacts associated with food preparation were recorded.

Items associated with food serving include a green dish fragment and four ceramics. The ceramics, all non-vitreous earthenware, include a white cup fragment with a red floral transfer print, a white plate fragment with a yellow and orange floral transfer print, a buff bowl with blue and white bands, and a salmon-colored fragment (see Appendix D).

Furnishings recorded include five terra cotta flower pot fragments, a clothes hanger, and three light bulb bases. Potential pharmaceutical items include one blue glass fragment and 152 white bottle glass fragments (from at least three different containers). No personal artifacts, such as clothing, jewelry, grooming items, or money, were noted.

Several specialized activities, including those associated with firearms, automobile use, children's play, and miscellaneous tasks, are represented by the artifacts found in this block. Ammunition includes six military cartridges with a "L L C 6" headstamp. Artifacts associated with automobiles include an oil can, a rubber battery electrode cover, a tire, and windshield, headlight, and taillight fragments. Toys include a plastic animal foot and a rubber ball. Miscellaneous tools recorded include a dry cell battery and a paper clip.

Unclassified artifacts include unidentified artifacts as well as artifacts with potentially multiple functions (such as wire) which hindered placing them in a particular category, and artifacts too fragmentary or altered to further classify. Unclassified items recorded include a rubber hose, 13 plastic fragments, 14 metal fragments, three pieces of smooth wire, and a barrel hoop.

Warehouse Blocks

The 4/20/45 relocation center blueprint depicts twenty-nine 20 ft by 100 ft warehouses (two are connected) and two latrines in these two blocks. On the 3/14/45 blueprint another three warehouses not on the later blueprint are shown cross-hatched, possibly indicating they were removed, burned down, or never built. Two warehouses (Nos. 31 and 37) are listed as having concrete floors.

The reported concrete slab floor at Warehouse 31 was not found; it may be buried. The foundation of Warehouse 37 consists of a 20 ft by 100 ft concrete floor of five contiguous 20 ft by 20 ft slabs (Feature W-1). The slabs incorporate seven footing blocks along its perimeter indicating it was a later addition. There is a mostly buried concrete driveway on the south end.

The latrine concrete slabs (Feature W-2 and W-3) are 16 ft by 27 ft, divided into two rooms. One room has three toilet waste pipes and the other five toilet waste pipes (Figure 9.56).

Concrete footing blocks remain at Warehouse 9 (n=7), 10 (n=2), 11 (n=6), 12 (n=1), 13 (n=1), 14 (n=1), 18 (n=1), 21 (n=1), 25 (n=17), 26 (n=12), 27 (n=1), 28 (n=7), 29 (n=1), 30 (n=1), 32 (n=2), 36 (n=5), 37 (n=7), 38 (n=5), and 39 (n=4). There were no footing blocks or other evidence of structures at the three cross-hatched building locations on the 3/14/45 blueprint.

Other features noted in this block include three asphalt driveways, between Warehouses 27 and 28, 9 and 10, and 23 and 24, some indistinct rock alignments, and two manholes. A dense concentration of charcoal between Warehouses 26 and 27 was designated Feature W-4.

Historical artifacts and ecofacts noted during survey include thousands of window glass fragments, about 700 bottle glass fragments (550+ clear, 40 brown, 40 purple, 25 green, 20 blue, 10 aqua; predominately from soda bottles), 200 ceramic fragments (stoneware, whiteware), two electrical porcelain knobs, thousands of wire nails, screws, 10 cans, over 20 crown caps, jar and can lids, a measuring cup for mixing baby formula (embossed with "S-M-A always pack tightly in cup"), a stencil, a hacksaw blade, brackets, springs, wire, five buttons (including a metal military uniform button), three paper clips, a wire clothes hanger, hinges, about 175 lumber fragments, piles of tarpaper, over 15 salt-glazed sewer pipe fragments, five bricks, and a few animal bone fragments. Several peach pits, likely from pre-relocation center trees rather than imported food, were also noted.

Figure 9.55. Staff Housing Block Laundry Room (Feature S-6).

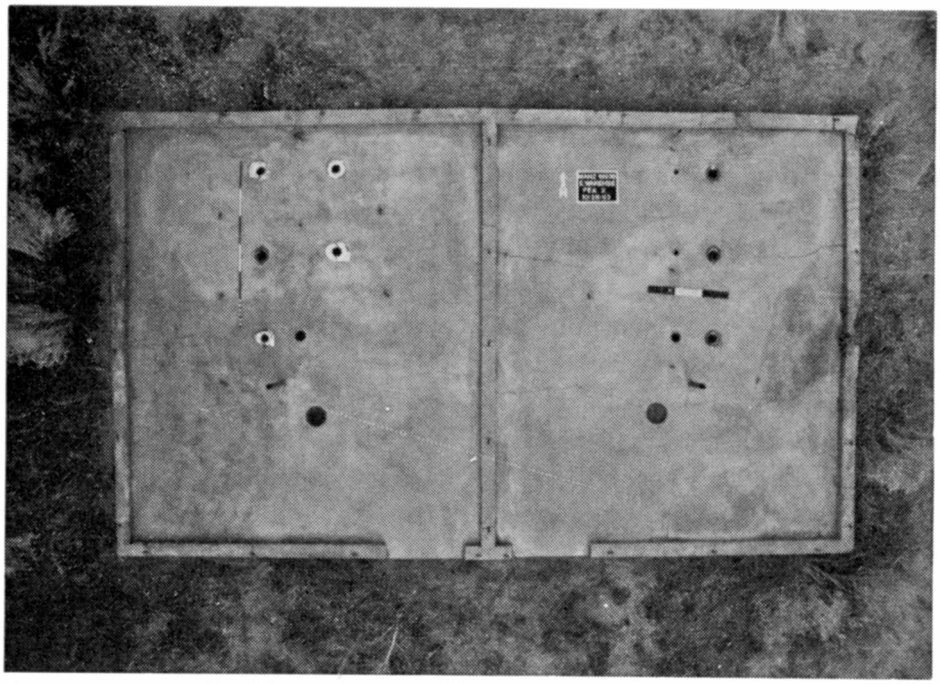


Figure 9.56. Overhead bi-pod view of latrine in Warehouse Block after removal of debris (Feature W-3).

The 12¾ inch by 6½ inch sheet metal stencil found in this block has the letters "WRA" stamped through it. There is a 3/4-inch-diameter hole at right end of the stencil that apparently was for hanging the stencil between uses. It was evidently discarded and used for another purpose: ten nails protrude from top edge and there are holes for four more nails along the left edge (Figure 9.57).

Figure 9.57. WRA stencil found in Warehouse Block.

Residential Blocks

The numbers and types of buildings and facilities in each of the 36 residential blocks were standardized. Each block included 14 barracks, a community building, a mess hall, a laundry room, an ironing room, and two latrines (Figure 9.58). The only exception was at Block 33, which lacked a community building. The layout of these buildings and facilities within each block was also standardized, varying only slightly in Blocks 25 and 26.

All of the buildings were constructed of wood frame, board, and tarpaper. Foundations for the barracks, mess halls, and community buildings were 14-inch-square footing blocks set at 10 ft intervals (post and pier). The barracks and the community buildings were 20 ft by 100 ft, each with an exterior water faucet at one end. Later additions to the barracks to make them more bearable during temperature extremes and high winds included plasterboard insulation, roof ventilators and lathing, and foundation boards. The mess hall, 40 ft by 100 ft, had a water heater and a grease trap. Many of the mess halls had hand-dug storage cellars under them (Block Managers Daily Reports 1942-1945). Faucets and footing blocks remain at some of the barracks and mess hall locations (Figures 9.59 and 9.60).

Although the buildings and layout were standardized, the Japanese Americans personalized and differentiated their grounds by adding sidewalks, stoops (or landings) at the foot of their wooden stairs, rock-lined pathways, gardens, and small ponds. Some evacuees even hand-dug basements under their barracks for use as root cellars (Houston and Houston 1973:69). Most of the residential blocks also had large community garden complexes, with ornamental ponds, streams, bridges, and paths. Typically these were located between the barracks and the mess hall, where the evacuees lined up for meals. Many of these evacuee improvements are still present, and together they comprise some of the most significant features at the National Historic Site.

Foundations for the laundry room, ironing room, and latrines were concrete slabs. Most of these slabs are intact. The laundry room was 20 ft by 50 ft, with a water heater and a grease trap (Figures 9.61 and 9.62). The grease traps not only helped prevent clogged sewerlines, they also allowed waste fats to be collected and recycled for the war effort. The ironing room was 20 ft by 28 ft (Figure 9.63). The ironing rooms were a later addition found necessary due to numerous blown fuses caused by the use of irons in the barracks.

The latrines consisted of two separate (men's and women's) 20 ft by 30 ft buildings. Each had a

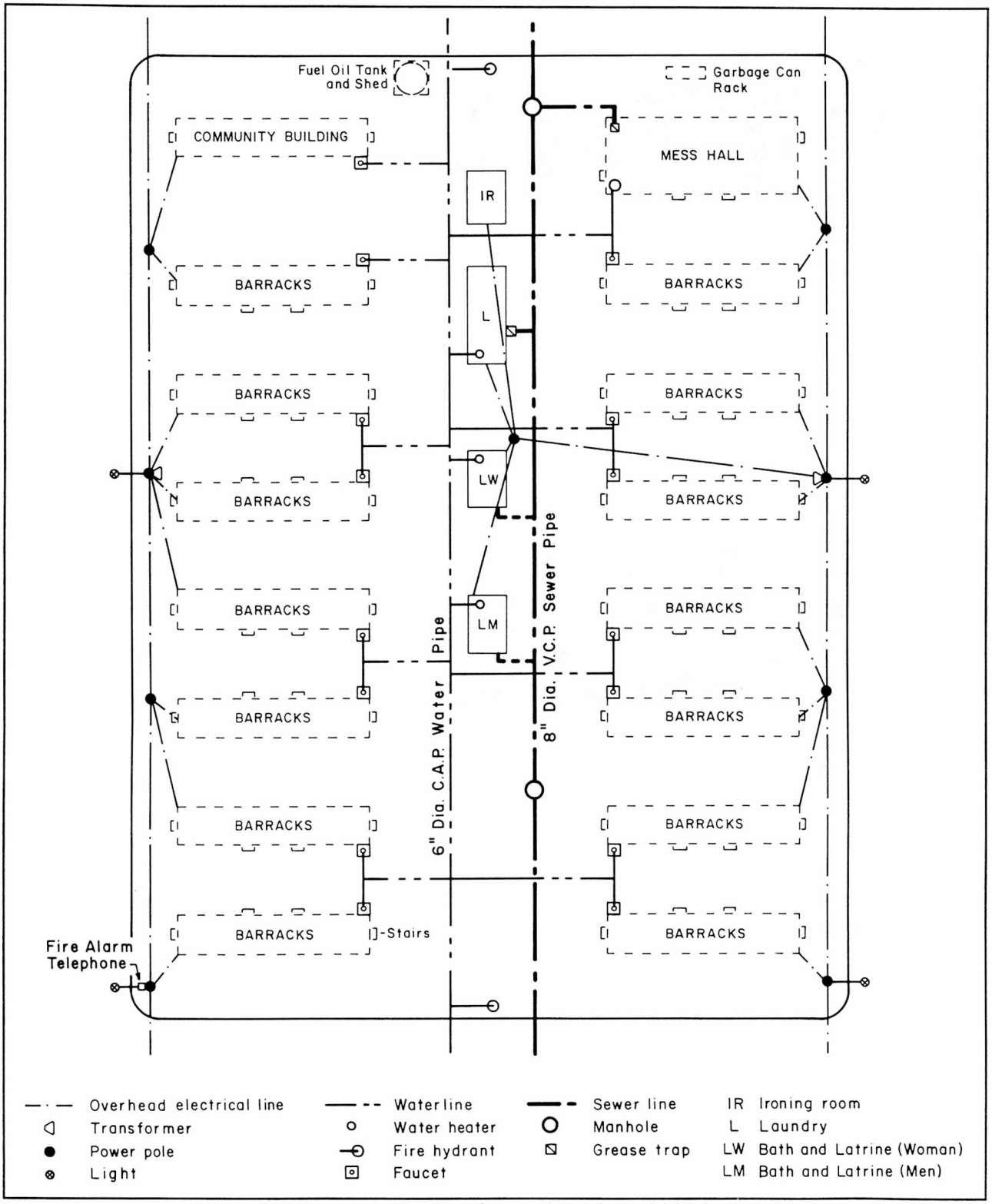


Figure 9.58. Layout of typical residential block.

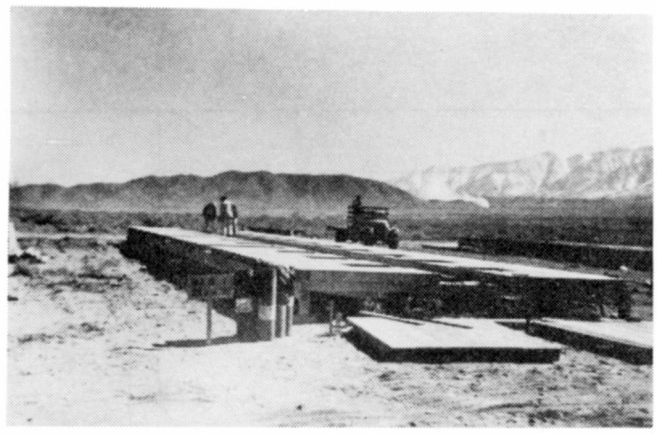


Figure 9.59. Building 1, Block 1, under construction (WRA photograph, courtesy of Eastern California Museum).

Figure 9.60. Location of Building 1, Block 1, in 1993.

single water heater, a communal shower, and sinks. At virtually all of the latrines the evacuees added built-in or free-standing Japanese baths to supplement or replace the showers (Block Managers Daily Reports 1943-1945). The men's latrine had eight toilets and a trough urinal, while the women's latrine had 10 toilets (Figures 9.64-9.66). For privacy the evacuees constructed partitions between the toilets at many of the latrines. Partitions were also added at the latrine entrance so people changing clothes could not be seen when the door was opened.

Other residential block facilities included a raised heating oil storage tank enclosed by a shed, a garbage can rack, one or more manholes, two fire hydrants, a fire alarm telephone, and around nine power poles, some with street lights. Of these, only manholes remain. The rest were apparently completely removed for reuse or recycling. Blueprints indicate that 17 of the residential blocks had a dirt basketball court and four had playground equipment. Block Manager Daily Reports (1943-1945) mention basketball courts at 19 blocks, volleyball courts at 16 blocks, a tennis court at one block, and playgrounds at six blocks. The remains of only one basketball post were found and it was at Block 3, a block not noted as having one on blueprints or in Block Managers Daily Reports.

Block 1

Block 1 was used partly for administrative offices. According to WRA blueprints, Barracks 1 was used by the Manzanar Free Press, Barracks 2 was used by Public Works and Public Relations, Barracks 3 was used by Adult Education, Barracks 4 was used by Education, Barracks 5 was used by Personnel and Statistics, Barracks 7 was used by Housing, and Barracks 8 was used by Mail Delivery. Most of the remaining barracks were used for bachelor's apartments. The laundry and ironing buildings were interconnected by a 20 ft by 30 ft building and used for the manufacture of *shōyu* and tofu. The women's latrine was converted to a laundry.

In this block all of the central concrete slabs for the latrines, the laundry room, and the ironing room have been broken up and placed in piles. Concrete footing blocks remain at Barracks 3 (n=1), 4 (n=2), and an interconnecting building between Barracks 3 and 4 (n=4). Other features include 10 upright water faucet pipes and two manholes.

There are storm drains constructed of concrete and rock along the road east of Barracks 1 (Features 1-1 and 1-2, Figure 9.67) and a rock alignment between them along the road (Feature 1-4). Other evacuee-constructed features are

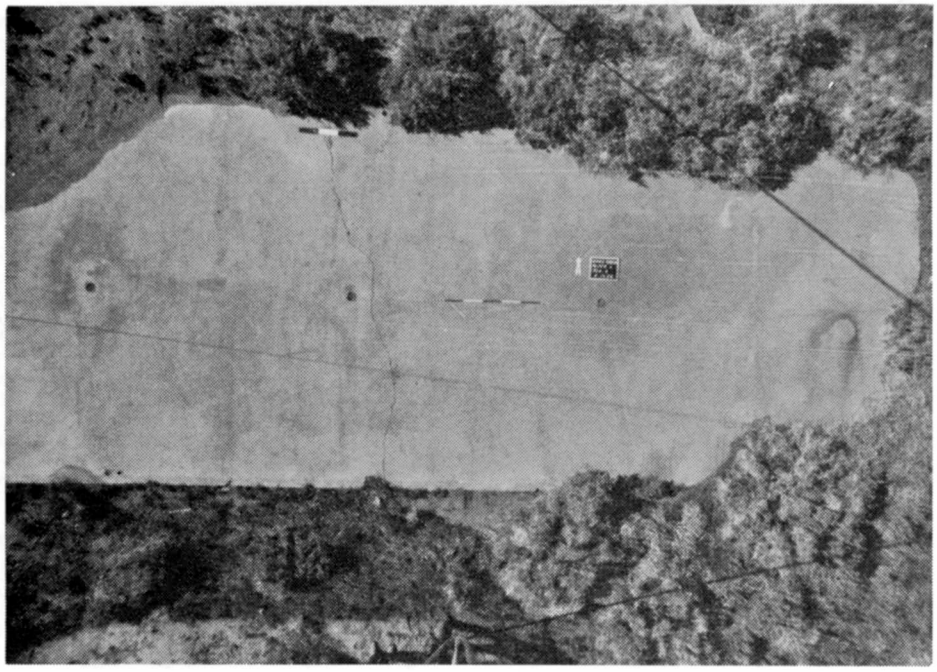


Figure 9.61. Overhead bi-pod view of typical residential block laundry room.

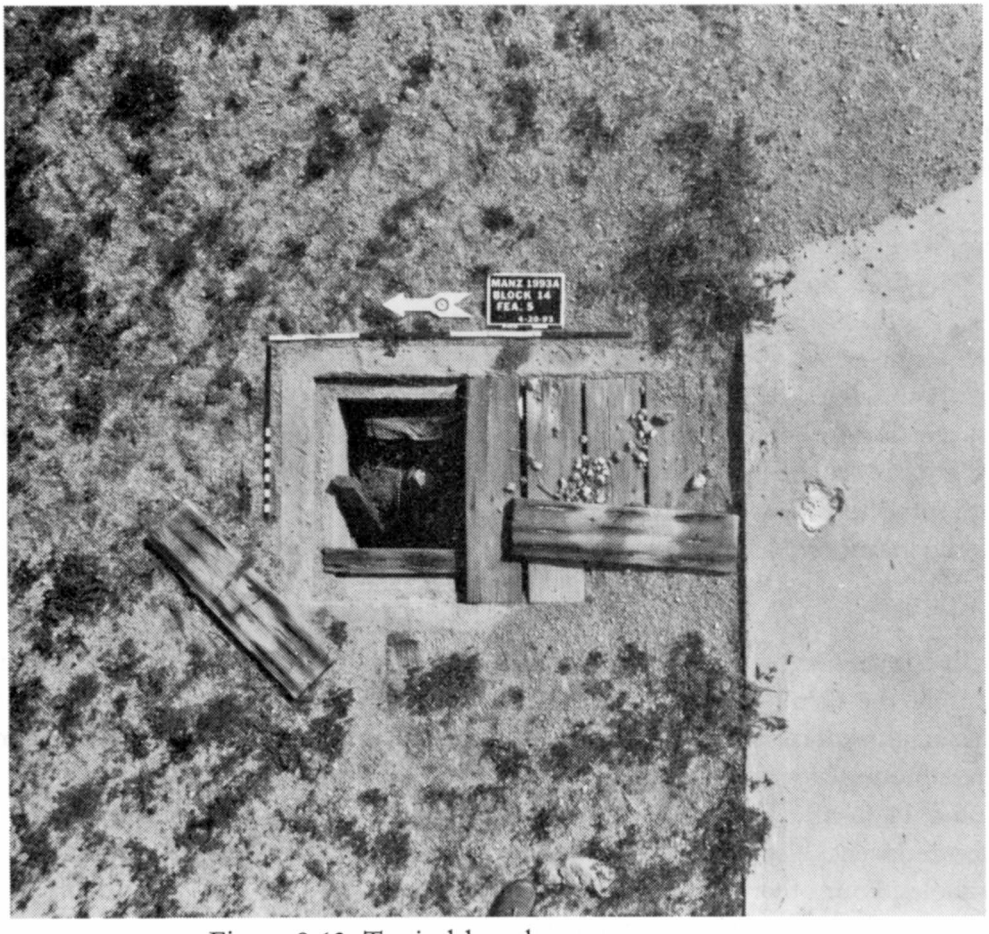


Figure 9.62. Typical laundry room grease trap.

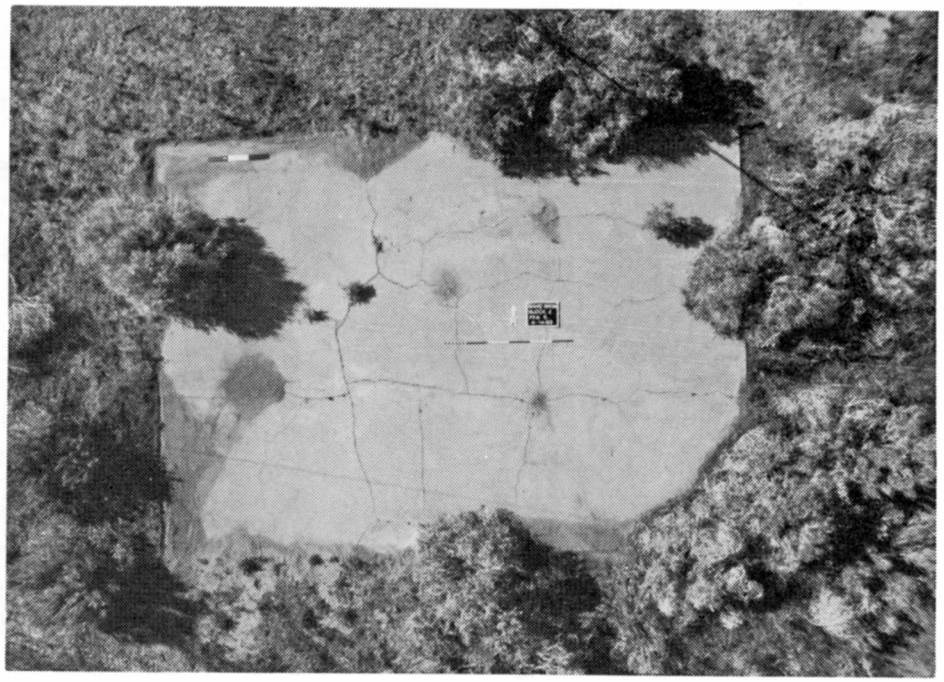


Figure 9.63. Overhead bi-pod view of typical residential block ironing room.

limited to a rock alignment east of the men's latrine (Feature 1-3) and a concrete stoop on the west side of Barracks 12.

Historical artifacts and ecofacts noted during survey in this block include five window glass fragments, hundreds of bottle and other glass fragments (green, clear, frosted, cobalt), 30 ceramic fragments, three fragments of electrical porcelain, a door spring, a machine part, over 200 wire nails, 12 cans, a crown cap, four other metal artifacts, about seven lumber fragments, 15 bricks, a plastic button, plastic fragments, and a few bone fragments. Artifact density is greatest in the northern half of the block, with some other concentrations associated with building locations.

Block 2

The only building remains are the concrete slab foundations of the men's latrine, the women's latrine, the laundry room, and the ironing room, and concrete footing blocks at Barracks 7 (n=3), 9 (n=1), and 14 (n=1). There are five upright water faucet pipes encircled with rocks and three intact manholes. Four other former water faucet locations have rock circles remaining and one has a concrete drain.

Evacuee-constructed features include several landscaping elements. These include a small concrete-lined pool at the southeast corner of Barracks 2 (Feature 2-1), a concrete sidewalk between Barracks 4 and 5 (Feature 2-2), rock alignments and a concrete sidewalk between Barracks 11 and the men's latrine (Feature 2-3), a rock alignment between Barracks 8 and 9 and rock circles around trees east of Barracks 8 (Feature 2-4), and two other minor rock alignments. There is one concrete stoop each at Barracks 5, 7, and 14, and an asphalt stoop at Barracks 2.

Historical artifacts noted in this block during survey include five window glass fragments, 60 bottle and other glass fragments (clear, brown, one purple), 10 whiteware ceramic fragments, 300 wire nails, 30 cans (food, condensed milk, and beer), an oil drum, 10 other metal artifacts (including smooth, barbed, and insulated wire), 25 lumber fragments, tarpaper, a leather boot part, two metal heel taps, and a ceramic button.

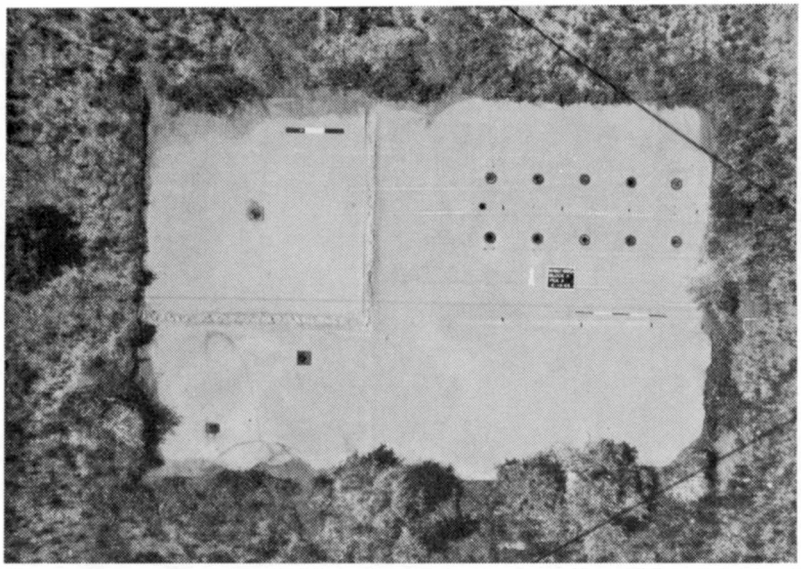


Figure 9.64. Overhead bi-pod view of typical residential block women's latrine.

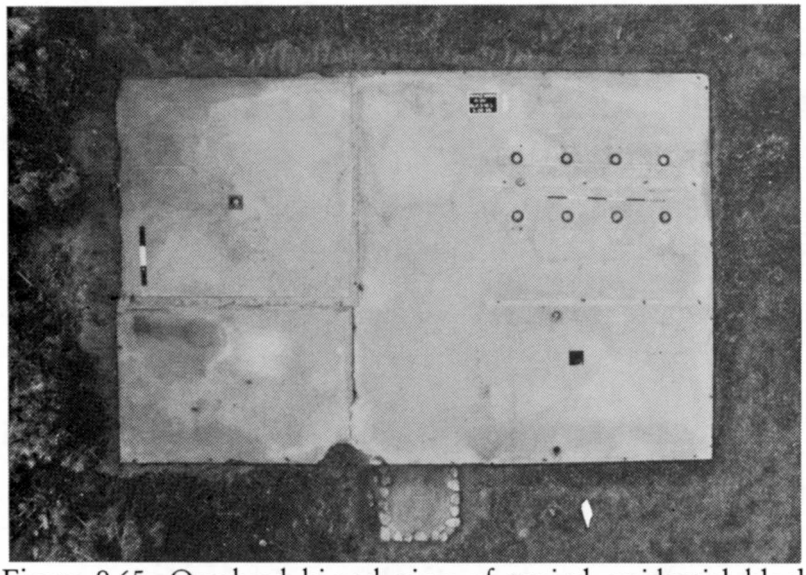


Figure 9.65. Overhead bi-pod view of typical residential block men's latrine.

Block 3

Concrete foundations present in this block include the slabs of the men's latrine, the women's latrine, the laundry room, and the ironing room. The men's latrine has a rock-lined concrete entry on its south side (see Figure 9.63). Concrete footing blocks remain only at Barracks 8 (n=3). Other building remains include 10 upright water faucet pipes, one encircled with rocks. There is a paved area adjacent to the west side of the mess hall. No surface evidence of a cellar completed beneath the mess hall on April 19, 1943 (Block Manager Daily Reports 1943-1945), was found.

Evacuee-constructed barracks features include a concrete stoop with imbedded glazed pipe fragments at Barracks 8 (Feature 3-1, Figure 9.68), two concrete stoops (Feature 3-2) and a 2 ft by 2 ft concrete slab entry (Feature 3-4) at Barracks 11, and a cobblestone and concrete stoop at Barracks 14 (Feature 3-6). A stoop on the south end of Barracks 7 appears to have been recently removed.

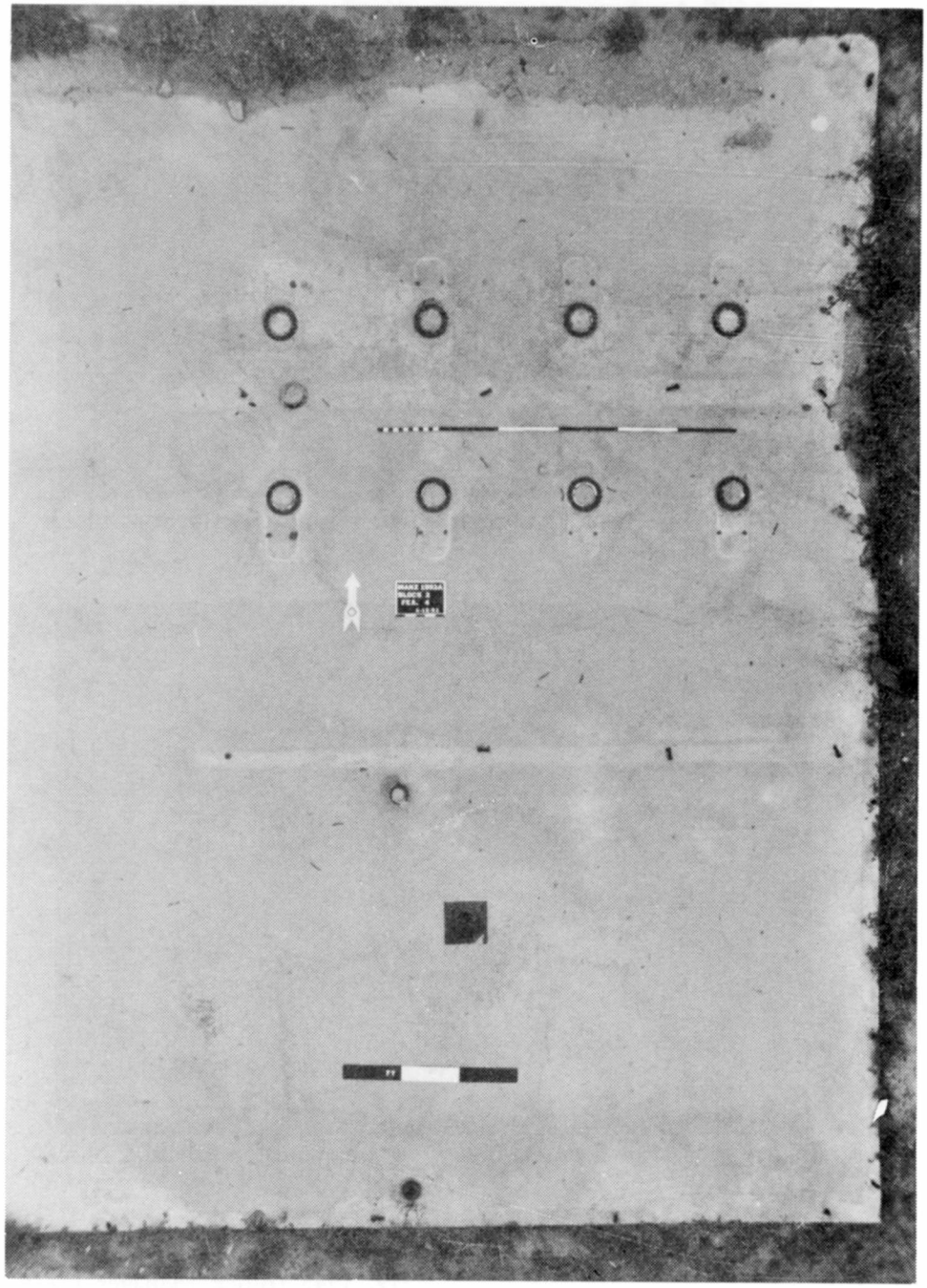


Figure 9.66. Detailed overhead bi-pod view of typical residential block men's latrine.

Landscape features include a circle of rocks around a stump between the men's and women's latrine (Feature 3-5), and rock alignments north of Barracks 2, between Barracks 10 and 11, and east of the mess hall. A little over 19 ft east of the men's latrine slab there is a concrete support for a 7-inch-thick post flush to the ground (Feature 3-7). It likely supported a basketball backboard; according to relocation center blueprints, basketball courts were typically in this location in other residential blocks.

Historical artifacts noted during survey include 100 window glass fragments, 500 bottle glass fragments (mostly clear, with 50 brown and aqua, 15 purple, 6 green), 50 ceramic fragments

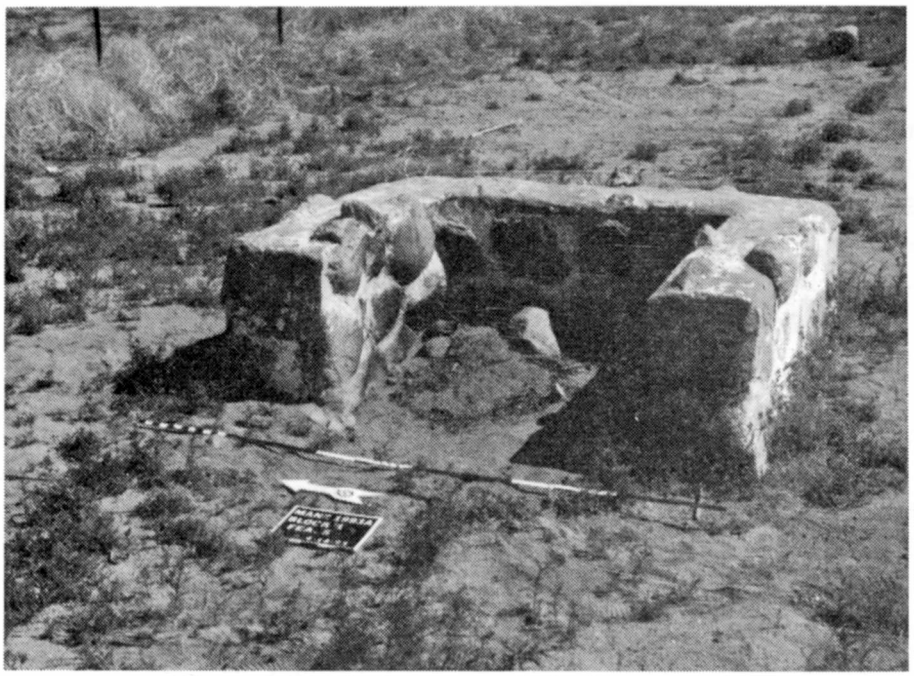


Figure 9.67. Block 1 storm drain (Feature 1-2).

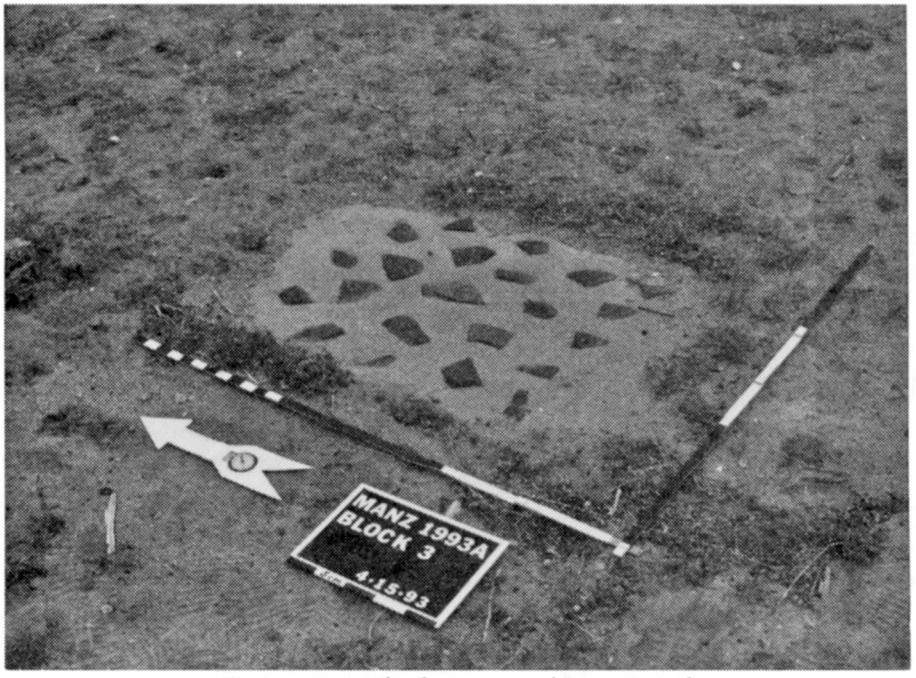


Figure 9.68. Block 3 stoop (Feature 3-1).

(plain whiteware, with some transfer print, stoneware, crockery), four electrical porcelain knobs, over 30 fragments of salt-glazed sewer pipe, four hardware parts (two hinges, pipe, wire), over 1200 wire nails, 10 sanitary seal cans, four other metal artifacts, 50 lumber fragments, 15 bricks, two metal shoe taps, a leather boot fragment, a rubber sole fragment, a glass marble fragment, and a shell button. In general, artifacts are concentrated in the northern half of the block.

Block 4

This block has been subjected to heavy alluvi-

ation from LADWP water-spreading activities. The concrete foundation slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room are buried by a thin layer of sand. No concrete footing blocks were noted at any of the former building locations. Eight upright water faucet pipes and concrete and brick debris (possibly from a destroyed manhole) are present.

Evacuee-constructed features include a cobblestone and concrete stoop at Barracks 8 (Feature 4-1), boulders and rock alignments between Barracks 14 and the mess hall (Feature 4-2), a gravel entry at Barracks 9, and rock circles on the east and west sides of Barracks 13. This block may have a buried pond; the Block Managers Daily report for 10/19/43 for this block indicates he helped dig a fish pond all day.

Historical artifacts and ecofacts noted during survey include 45 window glass fragments, 250 bottle glass fragments (110± clear, 100 brown, 20 green, 1 blue, 1 white), 15 ceramic fragments, 180 wire nails, 45 cans, 24 other metal artifacts, 60 lumber fragments, tarpaper, around 20 clay pigeon fragments, a rubber fragment, three salt-glazed sewer pipe fragments, and a few bone fragments. Artifacts are concentrated in the northern half of the block and around barracks 9, 13, and 19.

Block 5

The eastern third of this block incorporates a firebreak. Concrete slab foundations are present at the men's latrine, the women's latrine, the laundry room, and the ironing room. The only remaining concrete footing block is at the mess hall. Depressions at Barracks 12 and 13 are possibly from infilled basements. There are seven upright water faucet pipes and a partially broken manhole. Northeast of the men's latrine there is a small concrete slab of unknown function.

Evacuee-constructed features include a rock circle around a water faucet at the northwest corner of Barracks 1 (Feature 5-1), a cobblestone and concrete stoop at Barracks 5 (Feature 5-2), debris from a possible cobblestone stoop on the east side of the mess hall, and some small rock concentrations. East of Barracks 8, in the fire break portion of the block, there are seven remnant pre-relocation center apple trees that were likely maintained by the evacuees (Feature 5-3).

Historical artifacts noted during survey include 35 window glass fragments, hundreds of bottle glass fragments (mostly clear with some green, milk, purple, brown, aqua, and cobalt), hundreds of ceramic fragments (government-issue stoneware, whiteware, yellowware, and crockery), 75 wire nails, 15 sanitary seal cans, a hole-in-top can, two 4-ft-long water pipe sections, a stove pipe cover, 15 lumber fragments, and a salt-glazed sewer pipe fragment. Most artifacts are along a wash on the south edge of the block, suggesting they are flood-washed material from the relocation center landfill. Three piles of ceramic fragments, probably from collectors, were also noted.

Block 6

Concrete foundations present in this block include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The women's latrine is buried under a thin layer of sand and the laundry room has an exposed grease trap. Barracks remains consist of a single concrete footing block at Barracks 11 and 10 upright water faucet pipes. The remains of a concrete and brick manhole are scattered on top of the laundry slab; one piece has an incomplete inscription (see Appendix A).

Remains of evacuee-constructed features include a small rock garden between Barracks 14 and the mess hall (Feature 6-1), a rock alignment east of the laundry room, and numerous rock concentrations. The Feature 6-1 rock garden, with some live and dead bamboo, is covered with debris and leaf litter. The Block Managers Daily report for 8/5/42 for this block indicates that this pond was started that day by the mess

Figure 9.69. Block 7 faucet.

hall kitchen crew.

Historical artifacts noted during survey include 55 window glass fragments, 500 bottle glass fragments (300± clear, 170 brown, 18 green, 6 white, 2 purple, 2 aqua, 1 blue), 135 ceramic fragments, two hardware parts, 25 wire nails, 13 cans, 28 other metal artifacts, 20 lumber fragments, a brick, a rubber hose fragment, and salt-glazed sewer pipe fragments. Most artifacts, found along a gully on the south edge of the block, are likely flood-washed material from the relocation center landfill (MANZ 1993 B-8). An apparent collector's hole was noted in the western portion of the block.

Block 7

This block was used for the relocation center high school. The concrete slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room have been removed: all that remains of them is a small pile of concrete rubble and a grease trap at the laundry room. Barracks remains consist of two scattered concrete footing blocks and eight upright water faucet pipes (one with a handle, Figure 9.69). There is a manhole on the east edge of the block. Evacuee-constructed features include a rock alignment encircling an upright water faucet pipe at Barracks 5 (Feature 7-1) and rock alignments on the east side of Barracks 2 (Feature 7-2).

Historical artifacts noted during survey include 20 bottle glass fragments, 10 ceramic fragments, 100 wire nails, five sanitary seal cans, two pocket tobacco cans, five can lids, crown caps, an oil drum and lid, wire, a button, 15 lumber fragments, a metal and wood trough, salt-glazed sewer pipe fragments, and 10 bricks.

The northern one-third of the block is currently within the fenced Inyo County Maintenance Yard. In that area there are three small sheds, a trailer, a dirt road, and a small trailer pad with associated rock alignments and a walkway.

Block 8

Blueprints indicate that Barracks 14 of this block was used as a canteen. Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The women's latrine slab has been partially broken up. Concrete footing blocks remain at Barracks 8 (n=1) and 9 (n=1) and the

mess hall (n=3). Other remains include eight upright water faucet pipes (three encircled with rocks) and an intact manhole. The water faucet at the southeast corner of Barracks 11 appears to have been recently dug out. The only evacuee-constructed landscape feature noted in this block was a cobblestone sidewalk east of Barracks 9 (Feature 8-1).

Historical artifacts noted during survey include a window glass fragment, 15 bottle glass fragments (mostly clear with 3 brown, 1 cobalt, 1 purple), four glass insulator fragments, a canning jar lid liner fragment, 10 other glass fragments, 15 ceramic fragments (whiteware and one transfer print), a metal military button, about 200 wire nails, 30 cans (mostly church-key-opened beer cans, with one condensed milk can, a cone top beer can, and a paint can), an oil drum, a hacksaw blade, heavy metal wire, 15 lumber fragments, and 20 brick fragments.

Block 9

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. Concrete footing blocks remain at Barracks 1 (n=9), 3 (n=3), 4 (n=2), 5 (n=2), 6 (n=2), 8 (n=2), 9 (n=3), 10 (n=1), 12 (n=6), and 14 (n=1) and the mess hall (n=1). Other features include three upright faucet pipes (two with concrete, brick, and cobblestone overflow basins [Feature 9-1]) and a manhole.

Evacuee-constructed landscaping in this block include an elaborate garden complex and numerous other features. The garden complex (Feature 9-9), located between Barracks 14 and the mess hall, includes a large landscaped mound of dark brown to black-colored soil, boulders, a stream, rock alignments, and possibly a buried pond. A large amount of dirt has been recently removed from the mound (Figure 9.70). An adjacent concrete stoop to the mess hall has a simulated wood pattern and color (Figure 9.71). Another concrete stoop, on the east side of Barracks 2, has the same pattern (Feature 9-3). It seems likely that this stoop is at the former home of the artisan who made these and other similar features in the relocation center.

Other evacuee-constructed features include two small concrete basins on the east side of Barracks 6 (Feature 9-5), a concrete stoop and rock alignment at Barracks 1 (Feature 9-2), a rock stoop and walkway at Barracks 3 (Feature 9-4), a concrete stoop with an inscription ("9=6=1") at Apartment 1 of Barracks 6 (Feature 9-6, Figure 9.72), and a concrete sidewalk along the east side of Barracks 6 (Feature 9-7). Rock alignments are present at Barracks 1, 2, 6, 9, 11 (Feature 9-10), and 14. Rock alignments and a concrete curb are at the southeast corner of the mess hall (Feature 9-8). Concrete slabs are present at the northeast corner of Barracks 4, the northwest corner of Barracks 5, and between Barracks 12 and 13.

Historical artifacts and ecofacts noted during survey include seven window glass fragments, hundreds of bottle glass fragments (clear, aqua, green, brown), three white milk glass fragments, 17 ceramic fragments (white stoneware), over 175 wire nails, 11 cans, eight other metal artifacts, 32 lumber fragments, 10 bricks, a stove pipe, electrical wire, and abalone shell fragments. One of the aqua glass fragments is a bottle base embossed with "Sake Brewery & Ice Company, LTD, Honolulu, Hawaii," the Owens Illinois Bottle Company hallmark, and a probable 1941 date code. Six large fishhooks and a clothing pin with a nautical motif were found just southwest of Barracks 14 (Figure 9.73). This block reportedly housed fishermen and their families from the Terminal Island and San Pedro areas of Los Angeles (Sue Embrey, personal communication, 1993).

Block 9 encompasses the location of a known pre-relocation center farm (Smith Farm, see Chapter 11). No features associated with that farm were identified, but some of the artifacts in this block may be associated with it.

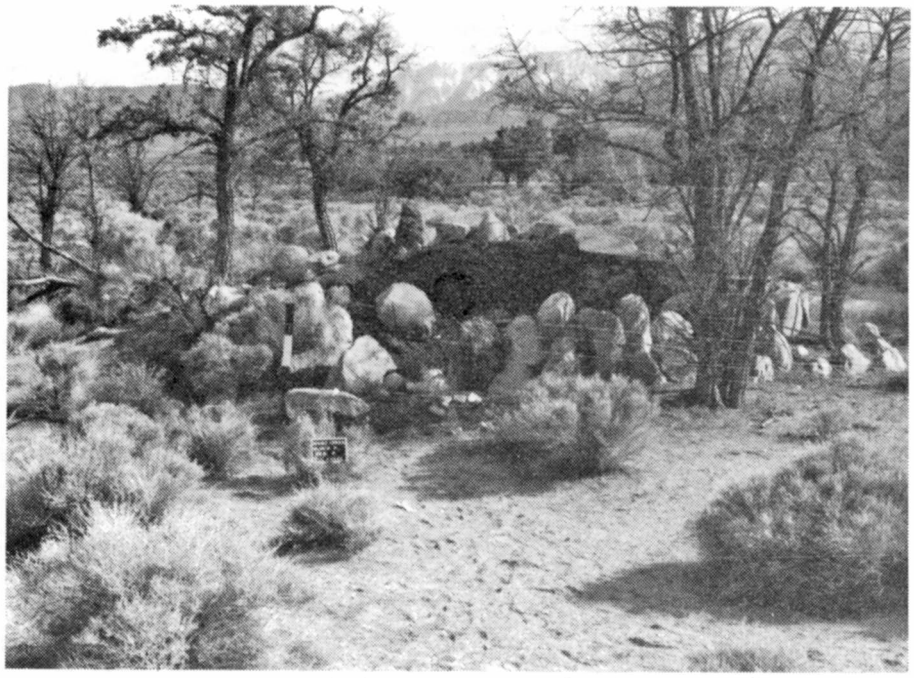


Figure 9.70. Block 9 garden complex (Feature 9-9).

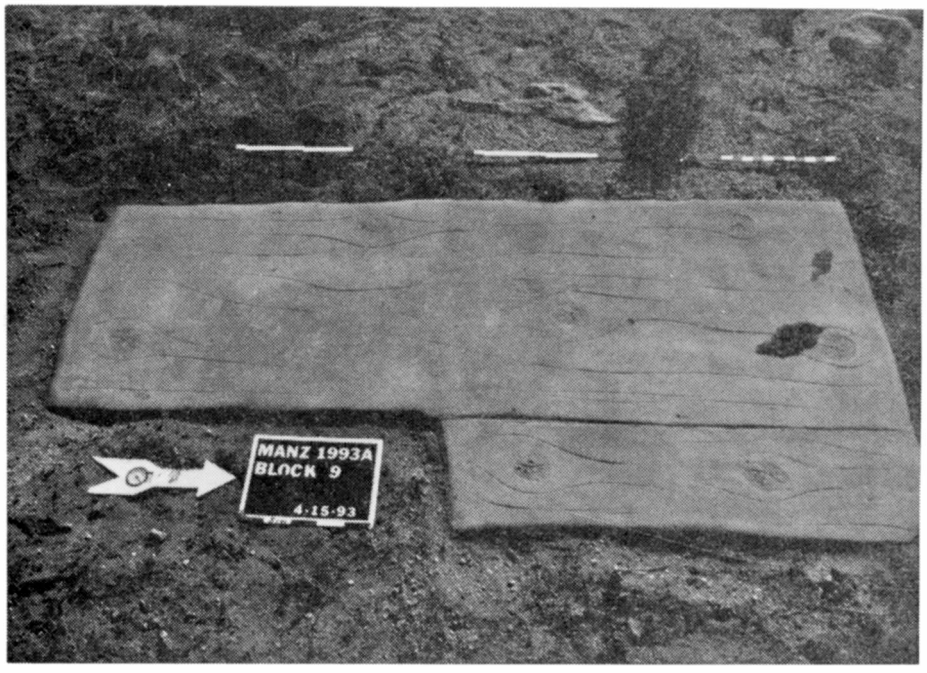


Figure 9.71. Block 9 stoop (Feature 9-10).

Block 10

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The laundry room has a concrete entry slab on its east side. Concrete footing blocks remain at Barracks 4 (n=2), 5 (n=3), 8 (n=1), 9 (n=2), 11 (n=6), 12 (n=1), and 13 (n=2), and the mess hall (n=5). Other remains include 10 upright water faucet pipes. Most of these have concrete or rock overflow basins, one of which is inscribed with the date June 6, 1943 (Feature 10-1).

Other evacuee-constructed features include an

Figure 9.72. Block 9, Building 6, Apartment 1 stoop (Feature 9-6).

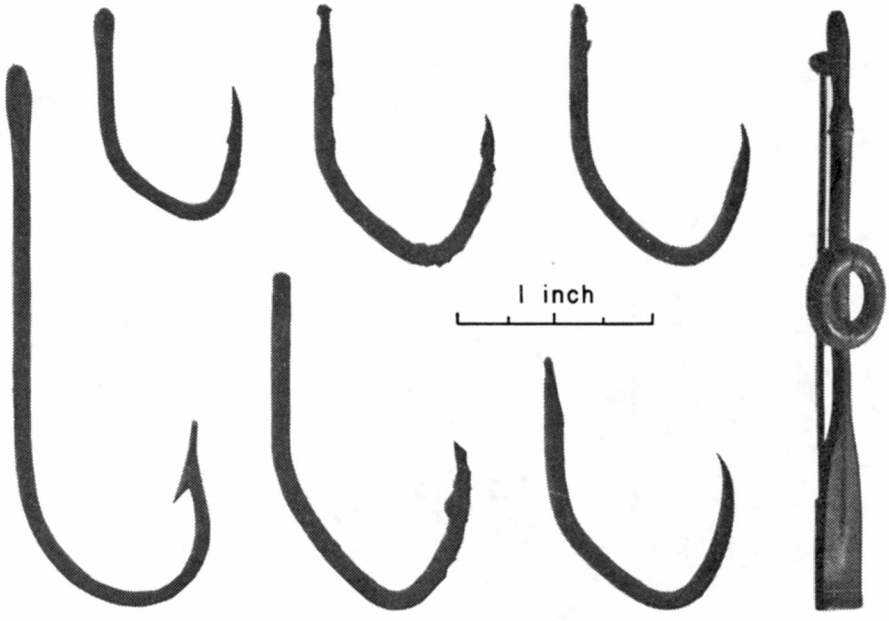


Figure 9.73. Fish hooks and clothing pin found near Block 9 mess hall.

elaborate garden complex with a concrete-lined pond, earthen mound, bench, and rock alignments between Barracks 12 and 13 (Feature 10-3), and a concrete sidewalk and stoop on the east side of Barracks 2 (Feature 10-2). There are evacuee-constructed rock alignments at the south end of Barracks 6, around a cottonwood tree southwest of Barracks 6, and between Barracks 11 and 12.

Historical artifacts noted during survey include over 40 glass fragments, three ceramic fragments, over 150 wire nails, nine cans, an oil drum, three lumber fragments, a brick, a glass marble

fragment, and a glass insulator.

Block 11

The eastern third of this block incorporates a firebreak. A Kendo structure is shown on relocation center blueprints in this area, and victory gardens are visible in the southeastern portion of the firebreak in a 1944 aerial photograph. The Kendo structure reportedly only consisted of a raised wooden platform (Sue Embrey, personal communication, 1993) in a grove of large cottonwood trees. No remains were identified in the area, possibly because leaf litter is deep here.

An above-ground steel pipeline (Feature 11-1) that likely supplied water to victory gardens is present in the northeastern portion of the firebreak. There are a few scattered apple trees in the southwest portion of the firebreak (Feature 11-8); these remnant pre-relocation center trees were likely maintained by the evacuees. The Block Managers Daily Report for 8/2/43 for Block 26 indicates that the Kendo Manager (also the Block 26 Manager) spent all day laying water pipes in the firebreak between Blocks 10 and 11.

In the residential portion of the block, concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. Concrete footing blocks remain at Barracks 2 (n=1), 4 (n=1), 8 (n=3), 9 (n=1), and 10 (n=2), and the mess hall (n=3). Other remains include an intact manhole and debris from another, a depression at the mess hall (likely from an infilled cellar), and 15 upright water faucet pipes (including six with rock or concrete overflow basins, one inscribed with a 1944 date). A mess hall cellar is mentioned in the 7/10/43 Block Managers report for this block. At that time a permit was being requested to get rocks to line the cellar.

Evacuee-constructed features consist of numerous entry stoops, two sidewalks, and rock alignments. Entry stoops include a cobblestone and concrete stoop at Barracks 3 (Feature 11-3), a concrete and rock stoop on the north end of Barracks 6 (Feature 11-7), a concrete stoop inscribed with a name and date (Shintoni May 21, 1944) and a concrete and wood stoop at Barracks 8 (Feature 11-2), and stoops on the south end of Barracks 10, the west side of Barracks 12, and the east side of Barracks 14. There are concrete sidewalks along the east side of Barracks 2 (Feature 11-4) and between Barracks 12 and 13 (Feature 11-5) and rock alignments between Barracks 14 and the mess hall (Feature 11-6), at the north end of Barracks 11, and between Barracks 7 and the community building.

Historical artifacts noted during survey include 17 window glass fragments, over 100 bottle glass fragments (mostly clear and brown with a few aqua, blue, and purple), a glass insulator fragment, 20 ceramic fragments, three stove pipes, 80 wire nails, eight sanitary seal cans, a pocket tobacco can, smooth wire, barbed wire, 22 boards, 10 other lumber fragments, 11 bricks, a barrel hoop, a button, two marbles, a wooden broom handle, salt-glazed sewer pipe fragments, and a plastic bottle cap.

Block 12

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. Concrete footing blocks remain at Barracks 1 (n=3), 3 (n=2), 11 (n=3), and 12 (n=2), and the mess hall (n=3). Other remains include two manholes and four upright water faucet pipes.

This block includes one of the best preserved evacuee-constructed garden complexes at the site. Located between Barracks 14 and the mess hall, it has a large concrete-lined pond, a stream with waterfalls, an island, a sidewalk, and rock alignments (Feature 12-1, Figures 9.74 and 9.75).

Other evacuee-constructed features consist of concrete stoops on the south, north, and east sides of Barracks 14 and a concrete sidewalk on the east side of Barracks 14 (Feature 12-2),

Figure 9.74. Block 12 pond and garden complex (Feature 12-1).

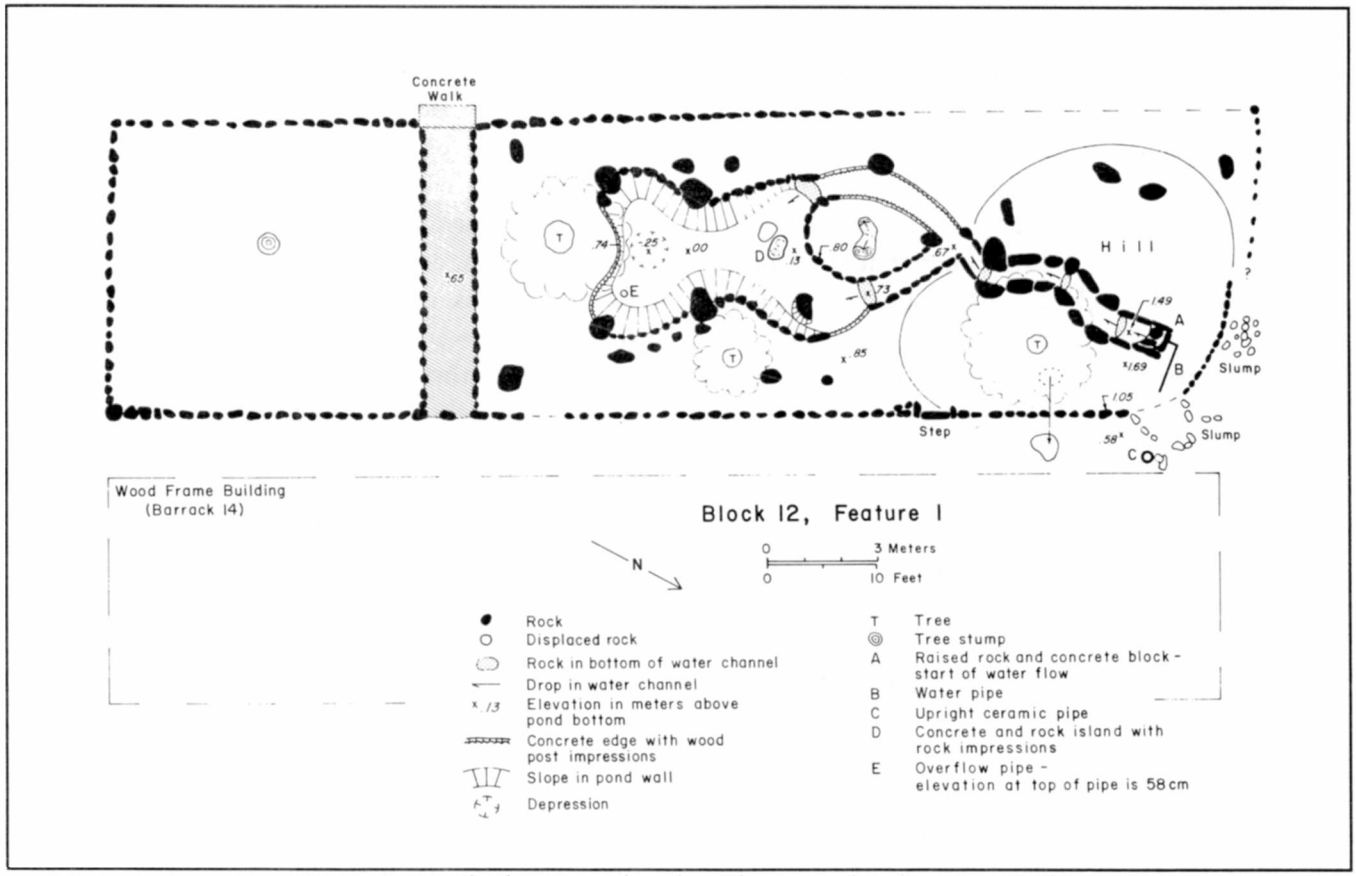


Figure 9.75. Block 12 pond and garden complex (Feature 12-1).

concrete stoops on the west sides of Barracks 3 and 7, and rock alignments at Barracks 8 and 9.

Table 9.3.
Tabulation of Historical Artifacts in Residential Block 12.

Object Classification		Glass	Metal	Other
Structural	Structural Materials			120
	Window Glass	5		
	Hardware		4	
	Nails		80	
	Utilities			
Domestic	Beverage Storage	65	2	
	Food Storage	252	70	
	Food Preparation		1	
	Food Remains			
	Food Serving			3
	Furnishings	1	1	
	Pharmaceutical	6		
Personal	Clothing			
	Jewelry			
	Grooming and Hygiene			
	Money			
Activities	Ammunition			
	Leisure		1	
	Automobile			
	Miscellaneous Tools			
	Toys			
	Writing			
Unclassified			12	2

Artifacts

This block encompasses the location of a pre-relocation center farm (Wells Farm, see Chapter 11). No features associated with that building were identified, but some of the artifacts in this block may be associated with it. Because the area is densely wooded with abundant leaf litter, additional artifacts may be buried.

Non-structural artifacts were counted and representative samples collected (see Chapter 8). Structural artifacts, such as window glass, lumber, and pipe fragments, were noted and numbers estimated during survey. The results of both tabulations are summarized in Table 9.3.

Structural artifacts noted include five window glass fragments, four hardware parts, 80 wire nails, screen pieces, two pipe sections, and 117 lumber fragments.

Beverage storage is represented by two crown caps, 59 brown glass fragments (from at least six different bottles) and six green fragments (from at least three bottles). One of the brown glass bottle bases, embossed with "Made in Japan," may be from a sake bottle.

Items associated with food storage include 10 sanitary seal cans, 34 condensed milk cans, 14 can lids, three jar lids, a metal canning jar lid, and 252 clear glass fragments (from at least 26 different containers). Glass marks include two bases with the Owens Illinois Bottle Company hallmark (with a "2" and "44" date code) and one base with the Hazel-Atlas Glass Company hallmark (1920-1964). The condensed milk cans are of a size ($3^{1}\!/_{16}$ inch by $2^{15}\!/_{16}$ inch) commonly made between 1935 and 1945 (Simonis n.d.). Some of the can lids have been pierced by nails suggesting they may have been used to patch holes and cracks in the barracks walls.

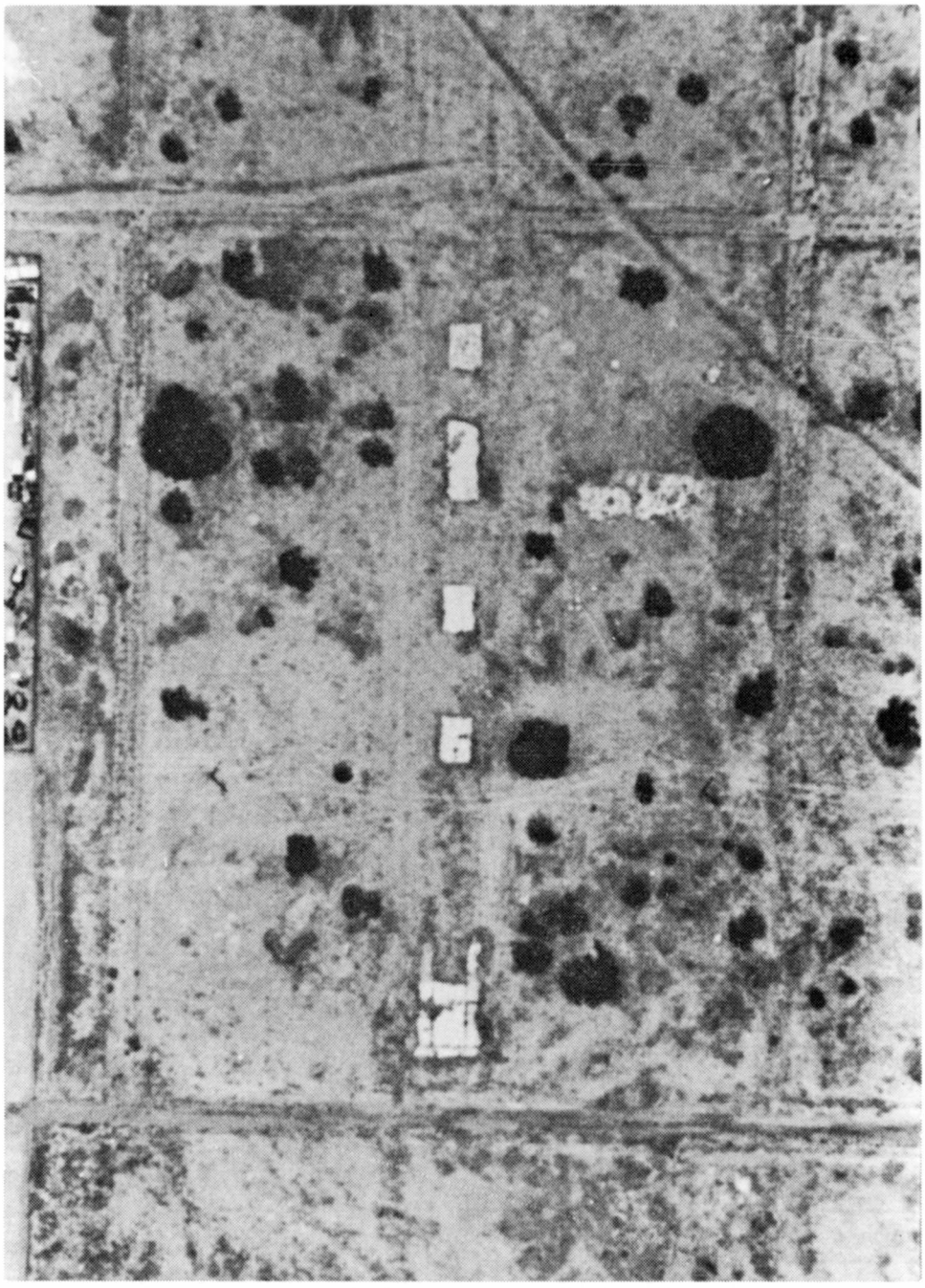


Figure 9.76. 1992 aerial photograph of Block 13 (north to right).

The only food preparation artifact recorded was a small baking tray. No food remains were recorded. Artifacts associated with food serving include a green ceramic fragment, a blue and white ceramic fragment, and a porcelain cup fragment. Furnishings include an ornate glass lid and a metal shaker top from an "Old Dutch Cleanser" can. Potential pharmaceutical items consist of four white glass fragments and two blue glass fragments.

No personal artifacts, such as clothing, grooming items, or money, were noted. The only artifact recorded indicating a specialized activity, in this case leisure, was a pocket tobacco can.

Unclassified artifacts include unidentified artifacts as well as artifacts with potentially multiple

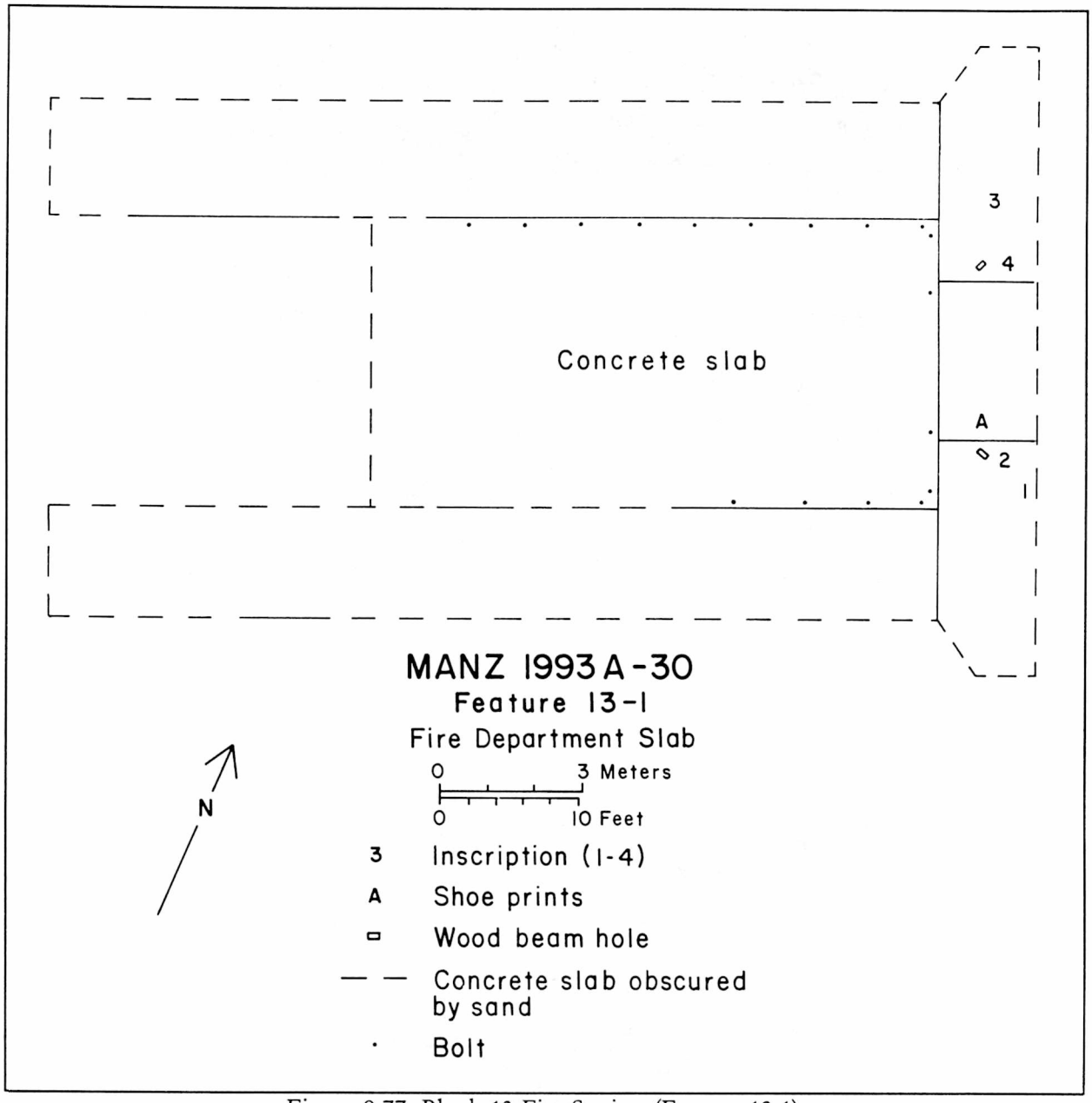


Figure 9.77. Block 13 Fire Station (Feature 13-1).

functions (such as wire) which hindered placing them in a particular category, and artifacts too fragmentary or altered to further classify. Unclassified items recorded include 11 metal fragments, a smooth wire, a plastic fragment, and a rubber hose fragment.

Block 13

The relocation center fire department was located in the east-central portion of this block (Figure 9.76). The foundation of the fire station (Feature 13-1) consists of a central 20 ft by 40 ft concrete slab; around its perimeter there are imbedded bolts to anchor wood-frame walls. There is a 7 ft by 11 ft concrete entry ramp to "A" Street on the east side. Adjacent to the building along the north and south sides, 2 inches below the level of the central slab, are 7½ ft by 38 ft concrete slabs, possibly foundations for additions. North and south of the entry ramp there are 7 ft by 16 ft slab additions of different texture and composition (Figure 9.77 and 9.78). The entry ramp has a few shoe imprints in the concrete and the additions

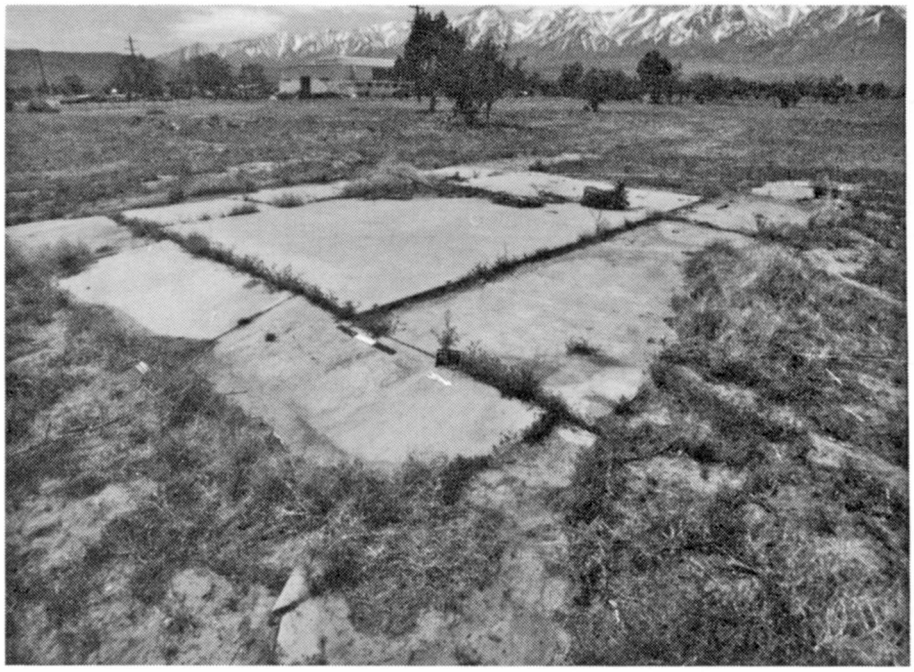


Figure 9.78. Block 13 Fire Station (Feature 13-1).

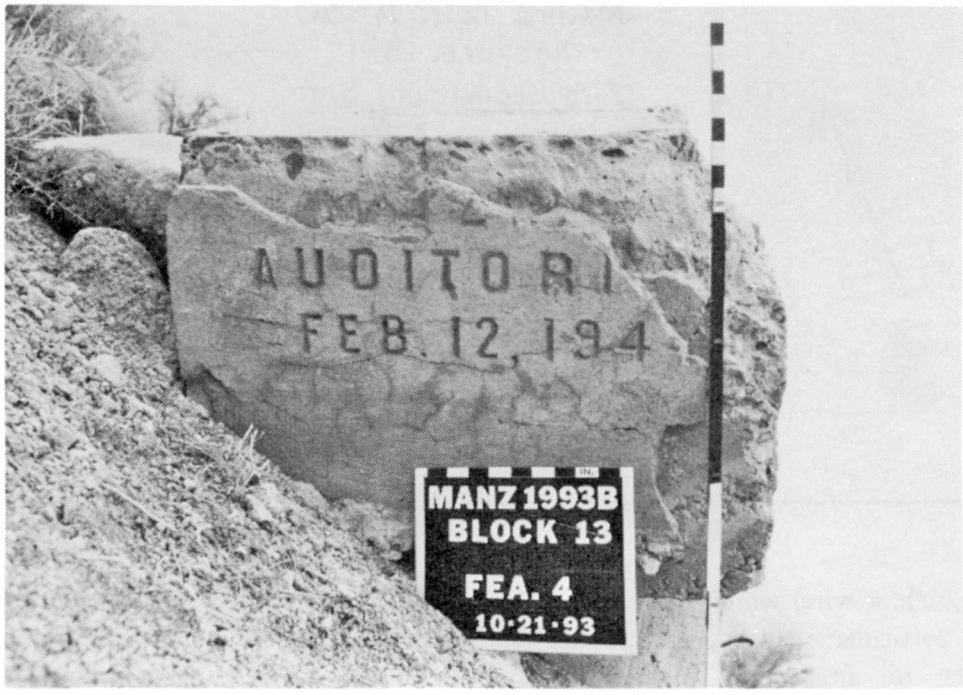


Figure 9.79. Auditorium cornerstone found in Block 13 (Feature 13-8).

have several inscriptions (see Appendix A). The Block Managers Daily Report for this block mentions that on 8/11/42 an addition was made to the Fire Station to make room for another vehicle.

Other concrete foundations present in this block include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. Concrete footing blocks remain at all former building locations: Barracks 1 (n=8), 2 (n=4), 3 (n=4), 4 (n=1), 5 (n=3), 6 (n=1), 7 (n=4), 8 (n=5), 9 (n=1), 10 (n=4), 11 (n=4), 12 (n=1), 13 (n=6), and 14 (n=2), the community building

Table 9.4.
Tabulation of Historical Artifacts in Residential Block 13.

Object Classification		Glass	Metal	Other
Structural	Structural Materials		2	54
	Window Glass	160		
	Hardware		4	1
	Nails		300	
	Utilities		2	1
Domestic	Beverage Storage	369	56	
	Food Storage	333	89	3
	Food Preparation		6	
	Food Remains			23
	Food Serving	2	3	68
	Furnishings	4	11	1
	Pharmaceutical	40		
Personal	Clothing		4	15
	Jewelry			
	Grooming and Hygiene			1
	Money			
Activities	Ammunition		1	
	Leisure		2	10
	Automobile	16	12	10
	Miscellaneous Tools		19	1
	Toys	7	2	
	Writing			
Unclassified			109	20

(n=1), and the mess hall (n=2). Other features include a manhole and nine upright water faucet pipes (four with associated rocks or concrete debris). In addition, there is a 40 ft by 100 ft concrete slab (possibly a patio) that covers the entire area between Barracks 13 and 14 (Feature 13-2).

Between the locations of Barracks 12 and 13 there are four out-of-place 2-ft-square concrete blocks; one block is lettered "AUDITORI... FEB. 12, 1944" indicating it and the other blocks have been moved from the auditorium block (Feature 13-8, Figure 9.79). Historical photographs on file at Manzanar National Historic Site taken by Toyo Miyatake indicate this block or "cornerstone" was located at the southwest corner of the south wing of the auditorium which was removed prior to the early 1950s (see Figure 4.55).

Evacuee-constructed landscaping features consist of cans embedded in concrete surrounding a stump between Barracks 3 and 4 (Feature 13-3), rock alignments on the west, east, and north sides of Barracks 10 (Feature 13-4), a rock and concrete stoop and rock alignments on the north end of Barracks 9 (Feature 13-5), a concrete and rock stoop and walkway on the east side of the mess hall (Feature 13-6), rock alignments at the south end of Barracks 13 (Feature 13-7), a concrete and asphalt entry at the northeast end of Barracks 2, and a rock alignment at the south end of Barracks 12.

Artifacts

Non-structural artifacts were counted and representative samples collected (see Chapter 8). Structural artifacts, such as window glass, lumber, and pipe fragments, were noted and amounts estimated during survey. The results of both tabulations are summarized in Table 9.4. Some items recorded, such as the late 1940s whiskey bottles, are likely associated with the use of the adjacent relocation center auditorium by the Veterans of Foreign Wars (VFW). Other recorded artifacts, especially those related to automobile use, are likely associated with

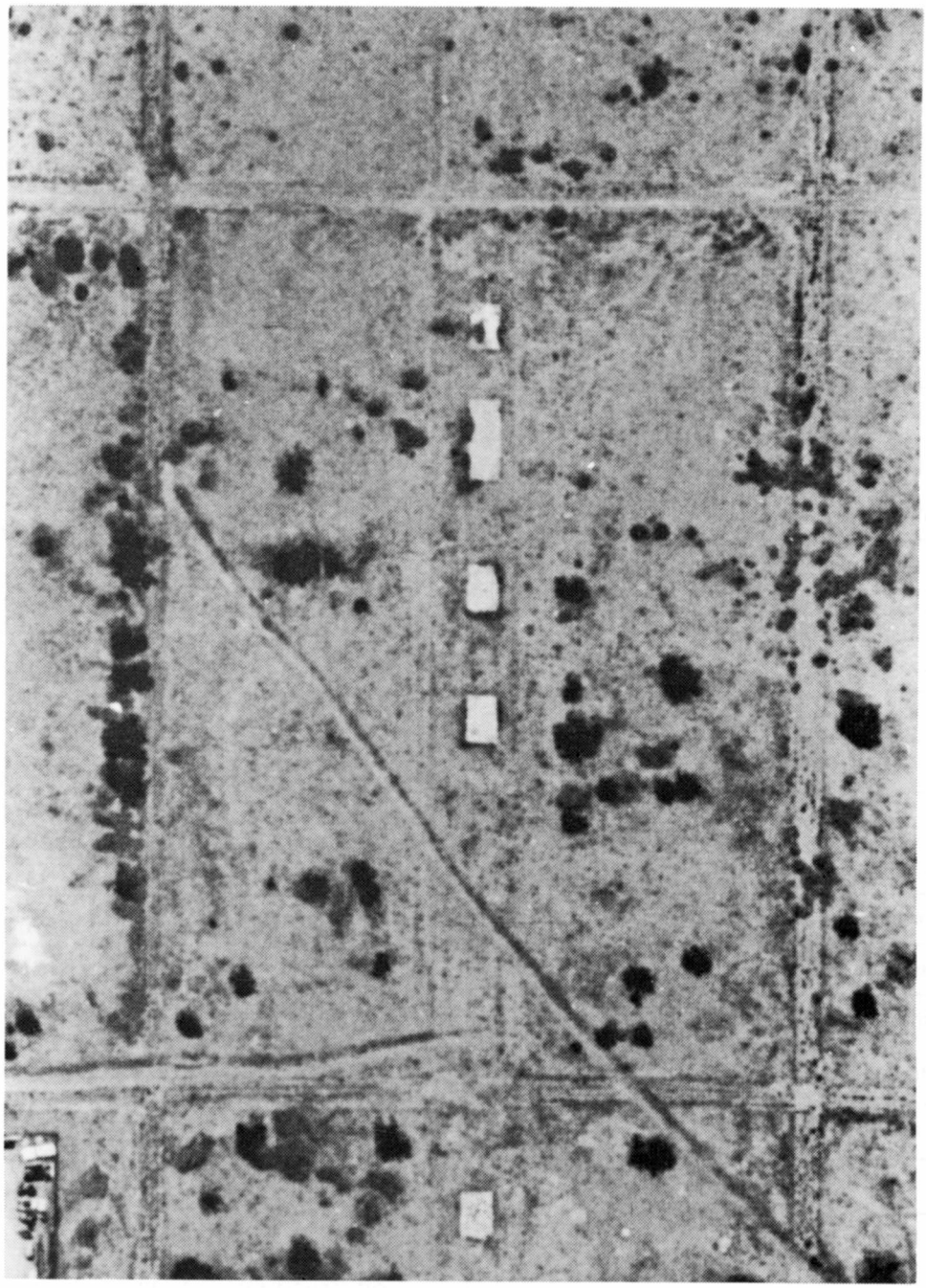


Figure 9.80. 1992 aerial photograph of Block 14 (north to right).

the subsequent use of the auditorium by Inyo County as a maintenance facility.

Structural artifacts noted include 160 window glass fragments, six electrical porcelain fragments, two large door hinges, 300 wire nails, steel drain collars, two toilet chains, steel pipe fragments, four pieces of sheet metal, 50 lumber fragments, and 10 brick fragments.

Beverage storage is represented by 12 church-key-opened cans, five cone top beer cans, 39 crown caps, and 369 bottle glass fragments. The bottle fragments include 352 of brown glass (from at least 58 different bottles), 10 of green, and seven of aqua. Identifiable types include at least two "Coke" bottles (Bishop Bottling Co.), a Mission soda bottle, two oval whiskey bottles, and eight

Table 9.5.
Tabulation of Historical Artifacts in Residential Block 14.

Object Classification		Glass	Metal	Other
Structural	Structural Materials		6	75
	Window Glass	125		
	Hardware		67	
	Nails		1,000	
	Utilities		4	25
Domestic	Beverage Storage	142	7	
	Food Storage	252	101	
	Food Preparation		2	
	Food Remains			5
	Food Serving	2	1	36
	Furnishings		5	8
	Pharmaceutical	9		
Personal	Clothing	1	1	1
	Jewelry	2		
	Grooming and Hygiene		1	
	Money			
Activities	Ammunition			
	Leisure			
	Automobile		1	1
	Miscellaneous Tools			
	Toys			
	Writing			
Unclassified			18	2

round-base whiskey bottles. Six of the whiskey bottles have the Owens Illinois Bottle Company hallmark; four of these have date code "48," and one each has "4," "7," and "49." The only other hallmark noted was the Newborn Glass Company (pre-1924). Readable cans include a "White Rock Lemon Ginger Ale" can ("White Rock Bottlers Co. ... Los Angeles") and a can with "... Brewing Co. 1947."

Artifacts associated with food storage include 76 sanitary seal cans, 10 can lids, three jar lids, 333 clear glass fragments (from over 30 different containers), and three purple glass fragments. Glass base marks include one with the Owens Illinois Bottle Company hallmark and a "48" date code, one with the Hazel-Atlas Glass Company hallmark (1920-1964), and one with the Maywood Glass Company hallmark and a "51" date code.

Artifacts associated with food preparation include two coffee maker parts, three bread baking pans, and a metal funnel. Food remains noted include 23 abalone shell fragments.

Artifacts associated with food serving include two metal spoons, a metal plate, a green glass saucer fragment, a green glass teacup fragment, and 68 ceramics. The ceramics include porcelain saucer and lid fragments (some with black and white floral designs, tan and black floral designs, or parallel blue lines), nonvitreous white-bodied earthenware plate, bowl, and cup fragments (some with a blue floral transfer print), and vitreous hotelware plate and bowl fragments (basemarks include "Shenango," "TEPCO," and "...na [Newca]stle, P...").

Noted furnishings include six light bulb bases, three clothes hangers, a bed spring, a latch hook, three fragments of mirror glass, a brown glass "Purex" bottle fragment, and a suitcase handle.

Potential pharmaceutical items include 30 white glass fragments, nine blue glass fragments, and a

Figure 9.81. Block 14 rock alignments (Feature 14-1).

fragment of a clear glass oval-base liquid prescription medicine bottle. The medicine bottle has "ILLINOIS" and the Owens Illinois Bottle Company hallmark and the date code "5."

Personal artifacts include those associated with clothing and grooming and hygiene. Clothing includes eight shell buttons, three plastic buttons, a metal button, three metal shoe heel taps, and six other shoe parts (soles and insoles). Grooming is represented by a plastic comb.

Several specialized activities, including those associated with firearms, leisure, automobile use, children's play, and miscellaneous tasks, are represented by the artifacts found in this block. Ammunition consists of one .22-caliber shell. Leisure activities are represented by two pocket tobacco cans, a badly decomposed golf ball, and nine 1/8-inch-thick phonograph record fragments. Items associated with automobile use include two tires, three spark plugs (two "Autolite Resister" and one "AC-MB"), ten oil cans, an oil filter, four air filters, a rubber knob (embossed with "DELCO MORAINE PRO U.S.A. 5453829"), a "Studebaker" hubcap, a red taillight fragment, and 15 fragments of two glass battery acid bottles ("...ckaged by ...te Battery Corp ...ledo, Ohio ... at 80° **N** ... milk mag... te... batteries ..."). Toys include seven glass marbles, half of a metal gun, and a metal shovel blade 1¼ inches by ¾ inch. Miscellaneous tools include a metal spout, a paint can, a solvent can, a rake fragment, a rubber washer, 11 metal washers, a bolt, two hack saw blades, and a galvanized bucket.

Unclassified artifacts include unidentified artifacts as well as artifacts with potentially multiple functions (such as wire) which hindered placing them in a particular category, and artifacts too fragmentary or altered to further classify. Unclassified items include a piece of leather, eight rubber hose fragments, three other rubber fragments, nine plastic fragments, five small springs, a barrel hoop, a piece of barbed wire, a piece of wire fencing, 46 other wire fragments, three metal strips, three metal fittings, 45 miscellaneous machine parts, 59 metal fragments, and a barnacle (found near Barracks 14).

Block 14

Relocation center blueprints indicate the mess hall at this block was used as a community

hostel. Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. Concrete footing blocks remain at Barracks 4 (n=1), 5 (n=3), 6 (n=1), 10 (n=1), and 11 (n=1), and the hostel (n=7). Other features include a manhole depression and four upright water faucets; many other former faucet locations are indicated by concentrations of rock. Water and sewer lines appear to have been removed (Figure 9.80).

Evacuee-constructed features include a walkway and rock alignments at Barracks 1 (Feature 14-1, Figure 9.81), a broken concrete stoop and rock alignments at Barracks 4 (Feature 14-7), a walkway, a stoop, and rock alignments at Barracks 7 (Feature 14-3), a rock and concrete stoop and some cans embedded in concrete at Barracks 8 (Feature 14-2), a walkway, a stoop, and rock alignment at the south end of the community building (Feature 14-5), walkways, a stoop, and rock alignments at Barracks 10 (Feature 14-6), a broken rock and concrete sidewalk south of Barracks 10 (Feature 14-9), a small section of concrete sidewalk between Barracks 12 and 13, displaced boulders and rock alignments west of the ironing room (Feature 14-4), a rocky mound and an L-shaped rock alignment between Barracks 1 and 8 (Feature 14-8), stoops at Barracks 5, 7, 8, and 13, and numerous rock and broken concrete concentrations.

Artifacts

Non-structural artifacts were counted and representative samples collected (see Chapter 8). Structural artifacts, such as window glass, lumber, and pipe fragments, were noted and amounts estimated during survey. The results of both tabulations are summarized by functional category in Table 9.5.

Structural artifacts noted during survey include approximately 125 window glass fragments, electrical porcelain fragments, four hinges, a light switch chain, hundreds of wire nails, stove pipe, door springs, lighting fixtures, a bolt and nut, a pump handle part, two pieces of sheet metal, tarpaper, 60 lumber fragments, 15 brick fragments, and salt-glazed sewer pipe fragments.

Artifacts associated with beverage storage include a church-key-opened can, cone top beer can, five crown caps, and 142 bottle glass fragments. The bottle fragments include 86 of green glass (from at least 16 different bottles), 44 of brown (from at least eight bottles), 11 of aqua, and one dark olive. Identifiable soda bottles include eight "LaVida," four "Coke" (Bishop Bottling Co.), four "Mission" soda (Bishop), and three "Seven-Up" (Los Angeles). The Owens Illinois Bottle Company hallmark was noted on four brown bottle bases; date codes include "2," "44," and "47."

Food storage is represented by 43 sanitary seal cans, 30 condensed milk cans, 24 can lids, four jar lids, 252 clear glass fragments (from at least 31 different containers), five aqua canning jar fragments, and six purple glass fragments.

The condensed milk cans are of a size ($3^{1}\!/_{16}$ inches by $2^{15}\!/_{16}$ inches) commonly made between 1935 and 1945 (Simonis n.d.). Many of the milk cans were used as filler within concrete features. Some of the can lids have been pierced by nails suggesting they may have been used to patch holes and cracks in the barracks walls.

Glass fragments with basemarks, all of clear glass, include three with the Owens Illinois Bottle Company hallmark (date codes include "8" and "44") and one each with the Anchor Hocking Glass Corporation hallmark (with a "46" date code), the Glass Containers Inc. hallmark (1945+), the Hazel-Atlas Glass Company (1920-1964), the Latchford-Marble Glass Company hallmark (1939-1957), and "REGAL AMBER BREWING CO."

Artifacts associated with food preparation include a metal strainer and a baking pan. Food remains consist of five abalone shell fragments.

Artifacts associated with food serving include a metal plate, a glass plate fragment, a glass saucer fragment, and 36 ceramics. The ceramics include fragments of a molded Art Deco style (1930s) bowl and fragments of vitreous hotelware bowls and plates (basemarks include TEPCO and McNichol China U.S.Q.M.C. ... Mar. 20, 1944).

Noted furnishings include a mop head, three light bulb bases, a broom handle, a bed spring, two fragments of a reddish brown glazed stoneware cylindrical vessel, and five terra cotta flower pot fragments.

Artifacts categorized as pharmaceutical include four white glass fragments and five blue glass fragments.

Personal artifacts include those associated with clothing, jewelry, grooming and hygiene. The clothing category includes a shell button, a metal shoe heel tap, and a green sunglasses lens fragment. Jewelry consists of two dark blue glass beads. Grooming and hygiene is represented by a bobby pin.

Only two artifacts indicating a specialized activity, in this case automobile use, were recorded. These include a tire fragment and an oil can.

Unclassified artifacts include unidentified artifacts as well as artifacts with potentially multiple functions (such as wire) which hindered placing them in a particular category, and artifacts too fragmentary or altered to further classify. Unclassified items recorded include a metal spool, two barrel hoops, a 50-gallon drum, a rubber fragment, a plastic fragment, a horseshoe, and 12 metal fragments.

Block 15

Relocation center blueprints indicate the community building in this block was used for a Protestant church. Building remains present include concrete slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The ironing room slab is buried and the men's latrine and laundry slabs are partially buried. Concrete footing blocks remain at Barracks 1 (n=1), 3 (n=1), 9 (n=1), and 13 (n=2). Other remains include two manholes (Figure 9.82), seven upright water faucet pipes (two with overflow basins), and a possible basement depression at Barracks 13.

The most impressive evacuee-constructed feature in this block is a small garden at the south and southeast end of Barracks 8. It has concrete sidewalks, a stoop, rock alignments, and a 3-ft-high upright automobile driveline used as a decorative element (Feature 15-1). The Block Managers Daily Report for this block indicates this garden was built by Tak Muto and completed on 7/31/42. It was likely one of the first completed at the relocation center; it is the first residential rock garden mentioned in any of the Block Managers Daily Reports.

Remains of other evacuee-constructed landscaping consists of numerous rock alignments, stoops, and walkways. These include a concrete curb, a concrete and cobble walkway, rock alignments, and stoops at Barracks 1 (Features 15-3 and 15-4), a rock wall, rock alignments, stoops at Barracks 2 (Feature 15-8), and rock alignments, a walkway, a stoop, and a post on the north end of Barracks 3 (Feature 15-7). Between Barracks 8 and 9 are rock alignments and concrete fragments with partial inscriptions (Feature 15-2). At the south end of Barracks 12 and between Barracks 11 and 12 are concrete sidewalks (Feature 15-6). There is a concrete stoop at the north end of Barracks 13 that has an address of embedded pebbles ("15-13-4" signifying block, barracks, and apartment number, Figure 9.83) and a rock alignment that extends from the stoop to Barracks 12 (Feature 15-5). There are also stoops on the south side of the mess hall and on the west side of the community building. Rock alignments encircle trees north of Barracks 11, northeast of Barracks 12, and west of Barracks 13, and there are numerous other rock concentrations and possible alignments.

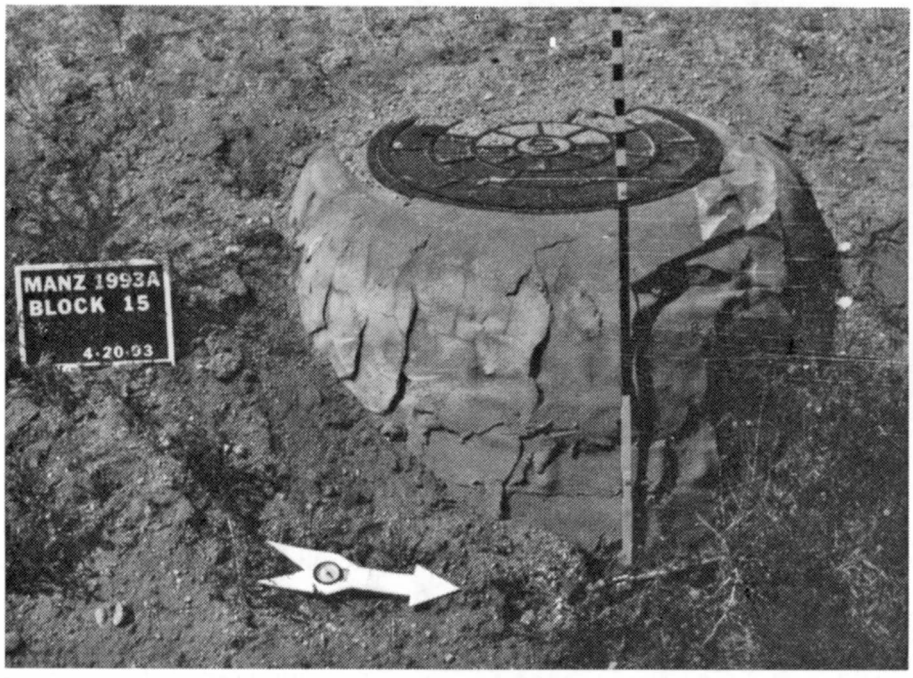


Figure 9.82. Block 15 manhole and cover.

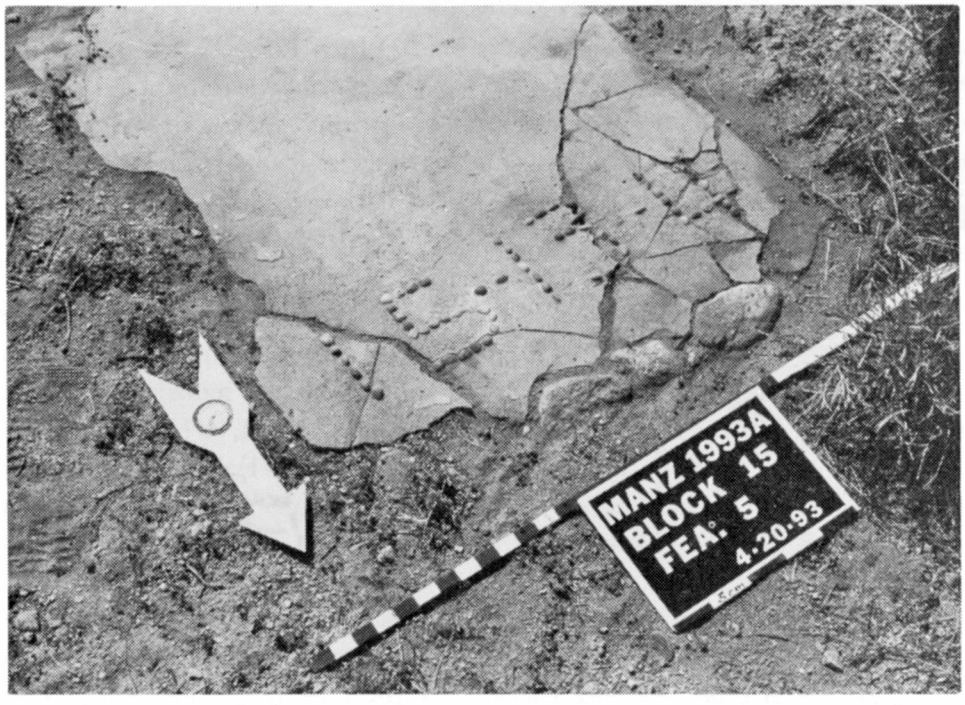


Figure 9.83. Block 15, Building 13, Apartment 4 entry (Feature 15-5).

Historical artifacts noted during survey include hundreds of window glass fragments, hundreds of bottle glass fragments (mostly clear with 30 brown, 20 green, 4 purple, 2 blue, 1 white), a glass marble, 65 ceramic fragments (whiteware, yellowware, blue glazed white and yellowware, transfer print, terra cotta), electrical porcelain knobs, hundreds of wire nails, 20 sanitary seal cans, 50 lumber fragments, three brick fragments, four salt-glazed sewer pipe fragments, tarpaper, and portions of a 1945 newspaper.

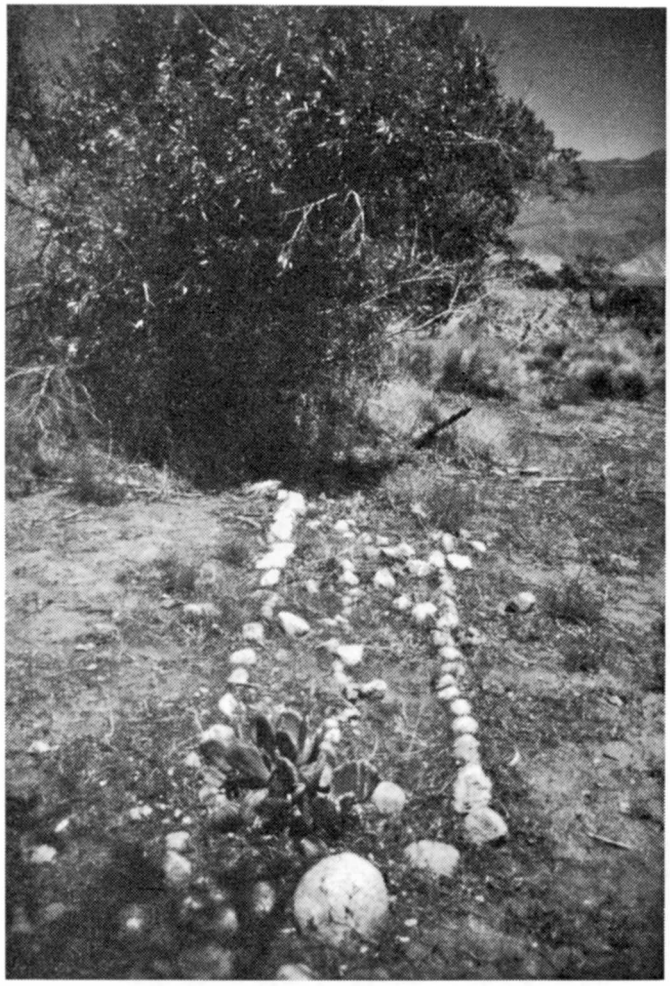


Figure 9.84. Block 17 rock alignments (Feature 17-2).

Block 16

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The laundry room includes an exposed grease trap inscribed with some initials (see Appendix A). Concrete footing blocks remain at Barracks 3 (n=2), 8 (n=1), and 10 (n=1), and the mess hall (n=1). Other features include a manhole and seven upright water faucet pipes (six with rocks around them).

Evacuee-constructed landscape features consist of rock alignments between Barracks 5 and 6 (Feature 16-1) and cobble and concrete concentrations (likely from broken stoops) at Barracks 1, 2, 3, 7, and 14. There may have been a large garden complex in this block at one time; the 8/5/42 Block Managers Daily Report for this block mentions a request for cement to build a rock garden.

Historical artifacts noted during survey include hundreds of window glass fragments, 60 bottle fragments (clear and brown), glass insulator fragments, a glass marble, three ceramic fragments, electrical porcelain parts, hundreds of wire nails, eight cans (six sanitary seal, one condensed milk, one pocket tobacco), crown caps, a "Schick" razor blade dispenser, a cable, a door hinge, a screen door spring, 25 lumber fragments, shingle fragments, and four brick fragments. In addition, there is a small can dump exposed in a drainage on the southern edge of the block that apparently pre-dates the relocation center (this dump was recorded as part of MANZ 1993 A-28).

Block 17

The only feature noted in the eastern third of this block, a firebreak, was a manhole. In the residential portion of the block, concrete slab foundations are present at the men's latrine, the women's latrine, the laundry room, and the ironing room. The men's latrine slab is buried by sand and the laundry room has an exposed grease trap. Concrete footing blocks remain at Barracks 1 (n=7), 2 (n=5), 3 (n=2), 4 (n=5), 5 (n=4), 7 (n=1), 8 (n=1), 12 (n=1), and 14 (n=3), and the mess hall (n=3). Nine upright water faucet pipes also remain.

Evacuee-constructed landscape features include now-broken concrete slabs southeast of Barracks 1 (Feature 17-1), one with an inscription (see Appendix A) and a possible buried concrete sidewalk north of that barracks. There are remains of a possible garden between Barracks 8 and 9, and a terraced rock garden with a beavertail cactus between the Barracks 2 and 3 (Feature 17-2, Figure 9.84). Rock alignments remain at Barracks 4 (Feature 17-3), Barracks 7 (Feature 17-4), Barracks 8 (Feature 17-6), and west of the community building, and there are

rock alignments and stoops on the south ends of Barracks 2 and 3. Southeast of the mess hall there is a low cement and cobblestone wall 1 ft wide by 8 ft long (Feature 17-5). Two wood posts protrude from the top.

Historical artifacts and ecofacts noted during survey include 50 window glass fragments, 255 bottle glass fragments (240 clear, 8 green, 4 purple, 3 brown), a glass marble, 10 ceramic fragments (whiteware and terra cotta), electrical porcelain parts, electrical porcelain knobs, 115 wire nails, two sanitary seal cans, a "Gillet" razor blade fragment, an oval brass tag (embossed with "N.Y.A. 20063 CALIF."), rubber fragments, clay sewer pipe fragments, 27 lumber fragments (including a wood window frame), a brick, and some shell. There is a dense concentration of glass and nails on the laundry and ironing room foundations.

Block 18

Relocation center blueprints indicate the mess hall in this block was used for a Buddhist church. A recent ditch, berm, and road cut across the western portion of the block. A small recent-looking depression at the former church location was probably the material source for a portion of the berm.

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. However, ditch construction and roads have partially destroyed the laundry room slab and all but totally destroyed the ironing room slab. Concrete footing blocks remain at Barracks 4 (n=1), 5 (n=5), 6 (n=1), and 8 (n=1), the community building (n=1), and the Buddhist church (n=1). Other remains include an intact manhole and 10 upright water faucet pipes (two with associated rock concentrations).

Evacuee-constructed landscape features include rock alignments between Barracks 1 and 2 (Feature 18-1), Barracks 2 and 3, Barracks 3 and 4, Barracks 5 and 6 (Feature 18-3), and Barracks 8 and 9, and on the north sides of Barracks 8, 9, and 10 (Feature 18-6), a broken concrete sidewalk along the east side of Barracks 5 (Feature 18-2), a concrete stoop on the west side of Barracks 5, a concrete sidewalk and scattered concrete slabs and rock work at the north end of Barracks 7 (Feature 18-4), a small concrete slab on the south side of Barracks 11 with two deliberate handprints (Feature 18-5, Figure 9.85), rock circles around several dispersed trees, and numerous other rock concentrations.

Historical artifacts and ecofacts noted during survey include 50 window glass fragments, 30 bottle glass fragments (mostly clear with five brown), a glass insulator fragment, three whiteware ceramic fragments, two terra cotta flower pot fragments, electrical porcelain knobs, approximately 600 wire nails, 10 sanitary seal cans, a cable, a horseshoe, barbed wire, metal pipe, a screen door spring, a plastic button, a battery, a comb fragment, one complete section of clay sewer pipe and 50 fragments, 35 lumber fragments, and a few unidentified shell fragments.

Block 19

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room (with an exposed grease trap), and ironing room. Concrete footing blocks remain at Barracks 1 (n=5), 2 (n=6), 3 (n=2), 4 (n=4), 5 (n=7), 6 (n=1), 7 (n=9), 8 (n=4), 9 (n=10), 10 (n=8), 12 (n=4), 13 (n=7), and 14 (n=9), the community building (n=1), and the mess hall (n=3). Other features include an intact manhole, a destroyed manhole, and nine upright water faucet pipes. One of the faucet pipes has a concrete overflow basin inscribed with "1943" (Feature 19-2) and two others have associated rocks. Water and sewer lines in this block appear to have been removed (Figure 9.86).

Evacuee-constructed landscape features consist of concrete or concrete and rock stoops and rock alignments at Barracks 1 (Feature 19-3), 3, 4, 5, and 11. Rock alignments, what may have been a

Figure 9.85. Handprints in Block 18 concrete stoop (Feature 18-5).

rock and concrete fountain, and stumps or posts are at the south end of Barracks 5 (Feature 19-1). Other remains include scattered rock at the north end of Barracks 7, a concrete curb on the east side of Barracks 8, a concrete sidewalk at the northeast corner of Barracks 12, and a rock walkway at the south end of Barracks 6.

Historical artifacts and ecofacts noted during survey include 200 window glass fragments, 800 bottle glass fragments (550+ clear, 80 aqua, 125 brown, 50 green, 30 light green [Seven-Up], 15 white, 3 blue), 50 white stoneware ceramic fragments, seven terra cotta flower pot fragments, 10 electrical porcelain fragments, 15 miscellaneous machine parts (mower part), 20 miscellaneous hardware parts (latches, hinges, drains, brackets, plate metal, eye-hook, springs, pipe, stove top, stove pipe), over 3,000 wire nails, 30 cans, 12 can lids, three crown caps, a single-edge razor blade, two plastic buttons, four shell buttons, a metal military button, a glass marble, a comb fragment, fencing, leather fragments, a shoe heel tap, a toothpaste tube, half of a roller skate, a paper clip, rubber fragments, wallboard bits, window screen fragments, electrical wire, 80 lumber fragments, 75 concrete pipe fragments, three brick fragments, bone fragments, and egg shell.

Block 20

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The laundry room has an exposed grease trap with a wood cover. There is a rock entry on the east side of the ironing room. Concrete footing blocks remain at Barracks 2 (n=2), 6 (n=4), 7 (n=1), 12 (n=1), 13 (n=1), and 14 (n=2), and the community building (n=1). Other features include a manhole and seven upright water faucet pipes.

Evacuee-constructed landscape features include a concrete sidewalk and stoop at the south end of Barracks 2 (Feature 20-6), rock alignments, posts, edging boards, vegetation, and a concrete stoop at the north end of Barracks 6 (Feature 20-2), a rock alignment and rock walkway at the south end of Barracks 9 (Feature 20-5). More concrete stoops are located on the west side of Barracks 5, the east side of Barracks 6, and the west side of Barracks 14. At Barracks 10 there are rock alignments at the south and north ends and two

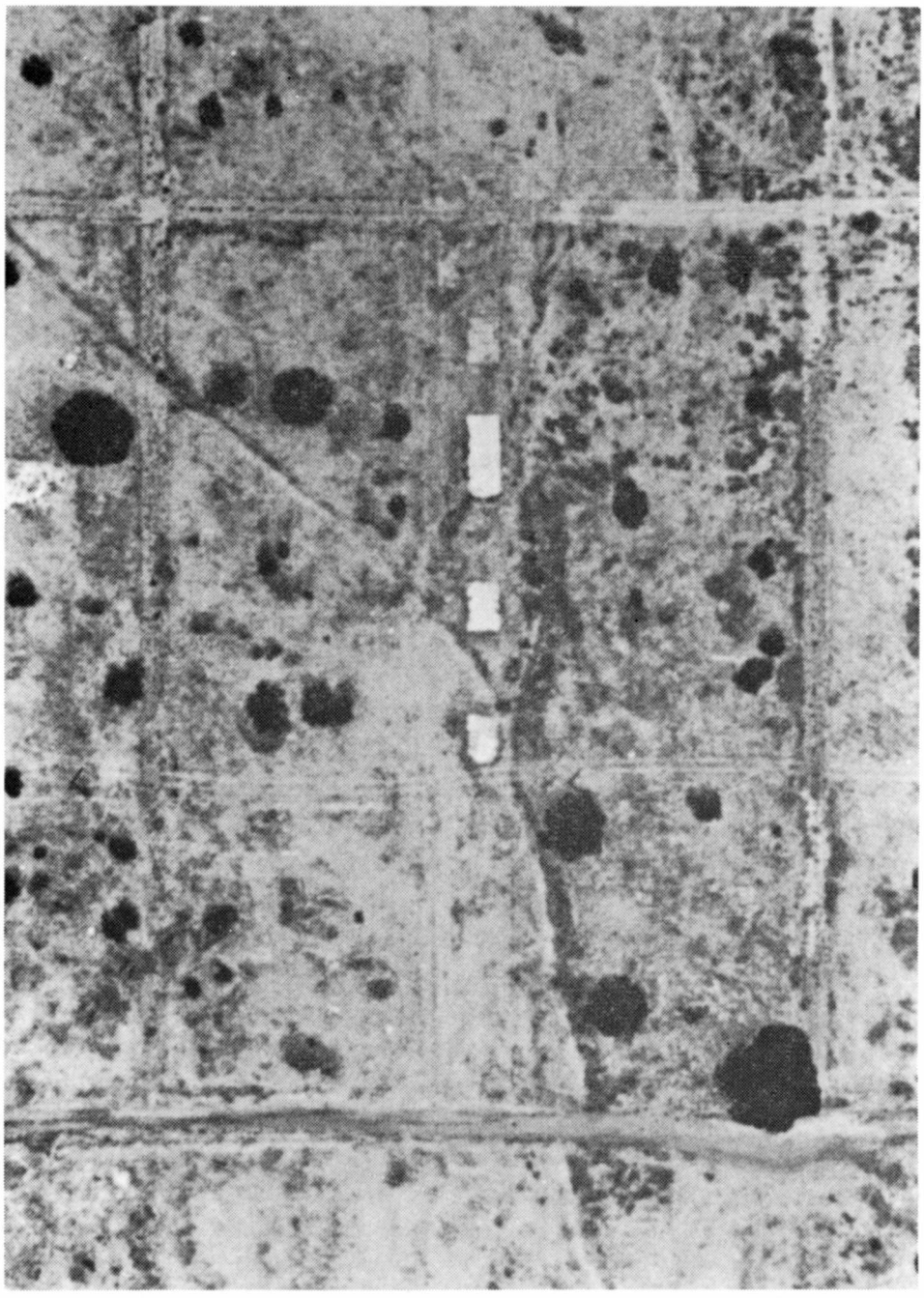


Figure 9.86. 1992 aerial photograph of Block 19 (north to right).

standing posts with a cross-piece at the northwest corner (Feature 20-4). Other rock alignments are at Barracks 1, between Barracks 1 and 2, at Barracks 4 (Feature 20-1), west of Barracks 5, west of Barracks 7, northwest of Barracks 8, the south end of Barracks 13 (Feature 20-3), and at the northwest corner of Barracks 14.

Historical artifacts noted during survey include over 525 window glass fragments, over 360 bottle glass fragments (mostly clear with some green, purple, yellow, and white), 14 ceramic fragments, 10 electrical porcelain knobs, an electrical porcelain light fixture, over 500 wire nails, a measuring cup for mixing baby formula (embossed with "S-M-A always pack tightly in cup"), a pocket tobacco can, a spoon, a porcelain button, a 1925 nickel, eight fragments of

concrete pipe, and lumber fragments.

Block 21

Relocation center blueprints indicate that Barracks 14 was used as a department store. Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The laundry room has an exposed grease trap. Concrete footing blocks remain at Barracks 6 (n=2), 7 (n=6), 9 (n=2), 10 (n=1), and 11 (n=1), and at the mess hall (n=3). Other remains include a manhole and three upright water faucet pipes. One water faucet, at the southwest corner of Barracks 10, has a concrete and rock overflow basin, wall, and slab (Feature 21-3); another faucet has a broken concrete and rock overflow basin. Three sets of water pipes (Feature 21-8) are exposed in a gully north and east of the ironing room.

Evacuee-constructed landscape features include a concrete stoop at the south end of Barracks 2 (Feature 21-6), rock alignments between Barracks 3 and 4 and at the northwest corner of Barracks 4 (Feature 21-5), a concrete curb and rock alignments between Barracks 5 and 6 and rock alignments at the south end of Barracks 6 (Feature 21-7), a concrete sidewalk and an asphalt sidewalk between Barracks 8 and 9 (Feature 21-1), a concrete sidewalk and rock alignments along the east side of Barracks 10 (Feature 21-2), and rock alignments and wood edging between Barracks 10 and 11 (Feature 21-4).

Other landscaping features recorded include a concrete stoop and rock alignment at the south end of Barracks 1, rocks along the east side of Barracks 2, rock concentrations at the north and south ends of Barracks 7, rock alignments at the south end of Barracks 12, a concrete curb and rocks north of Barracks 13, and a rock alignment north of the mess hall. There is a low mound with some displaced concrete slabs at the northwest corner of Barracks 5.

Artifacts

Non-structural artifacts were counted and representative samples collected (see Chapter 8). Structural artifacts, such as window glass, lumber, and pipe fragments, were noted and numbers estimated during survey. The results are summarized in Table 9.6. The densest concentration and greatest variety of artifacts was encountered in the southeastern portion of the block.

Structural artifacts include over 200 window glass fragments, four electrical porcelain fragments, 30 miscellaneous hardware parts (hinges, screws, smooth wire, water pipe), about 500 wire nails, a stove pipe section, 120 lumber fragments, wallboard bits, salt-glazed and clay sewer pipe fragments, and five brick fragments.

Beverage storage is represented by a church-key-opened can, four crown caps, 83 brown glass fragments (from at least nine different bottles), 70 green glass fragments (from at least nine bottles), and nine "Coke" bottle fragments (from at least four bottles). Besides "Coke," other soda bottles identified include eight "LaVida," one "Seven-Up," one "Antelope," and one "Mission Dry." One of the "Coke" bottle fragments has "SAFFORD ARIZ" on the base and the Owens Illinois Bottle Company hallmark and the date code "42" on its side. The "Seven-Up" bottle base has "SEVEN UP BOTTLING CO. LOS ANGELES," the Owens Illinois Bottle Company hallmark and the date code "3." Three other bottles have the Owens Illinois Bottle Company hallmark and date codes of "1" and "8."

Food storage artifacts include 48 sanitary seal cans, two condensed milk cans, four can lids, four jar lids, an aqua glass canning jar lip, 244 clear glass fragments (from at least 34 different bottles), two aqua canning jar fragments, and three purple glass fragments. The condensed milk cans are of a size ($3^{1}/_{16}$ inches by $2^{1}/_{16}$ inches) commonly made between 1935 and 1945 (Simonis n.d.). Embossed glass (all clear) includes

Table 9.6.
Tabulation of Historical Artifacts in Residential Block 21.

Object Classification		Glass	Metal	Other
Structural	Structural Materials			154
	Window Glass	200		
	Hardware		30	1
	Nails		500	
	Utilities			4
Domestic	Beverage Storage	162	5	
	Food Storage	244	59	
	Food Preparation		1	
	Food Remains			22
	Food Serving	1	3	31
	Furnishings	1	2	2
	Pharmaceutical	6		
Personal	Clothing		2	3
	Jewelry			
	Grooming and Hygiene	1	2	
	Money			
Activities	Ammunition			
	Leisure			1
	Automobile			
	Miscellaneous Tools		11	
	Toys	2	1	
	Writing			8
Unclassified			17	8

a gallon jug with the Glass Containers Inc. hallmark (1945+), three bases with the Hazel-Atlas Glass Company hallmark (1920-1964), two bases with the Owens Illinois Bottle Company hallmark and the date code "3," and a "Ben-Hur Coffee" jar.

The only artifact recorded dealing with food preparation was a blue-enameled coffee percolator lid. Food remains recorded consist of five abalone shell fragments and 17 peach pits.

Artifacts associated with food serving include a glass dish fragment, a metal salt shaker top, an enameled metal plate, a metal fork, and 31 ceramics. The ceramics include fragments of vitreous hotelware (one with a "TEPCO" base mark), fragments of a nonvitreous yellow-tinted glaze earthenware, a white-bodied plate fragment with a thistle decal, and fragments of a porcelain pitcher (with a "Made in Japan" basemark).

Recorded furnishings include two enameled-steel stove tops, two terra cotta flower pot fragments, and the base of a brown "Purex" bottle.

Pharmaceutical items include an oval-base prescription liquid medicine bottle fragment and five white glass fragments from at least two containers.

Personal artifacts recorded include items associated with clothing or grooming and hygiene. Clothing is represented by three shell buttons, a brass snap, and a metal shoe heel tap. Artifacts associated with grooming and hygiene include an aluminum hair curler, a single-edge razor blade, and a "Jergens Lotion" bottle.

Several specialized activities, including those associated with leisure, children's play, writing, and miscellaneous tasks, are represented by the artifacts found in this block. Leisure activities are represented by a "Go" gaming piece. Toys include two glass marbles and a jack. Items

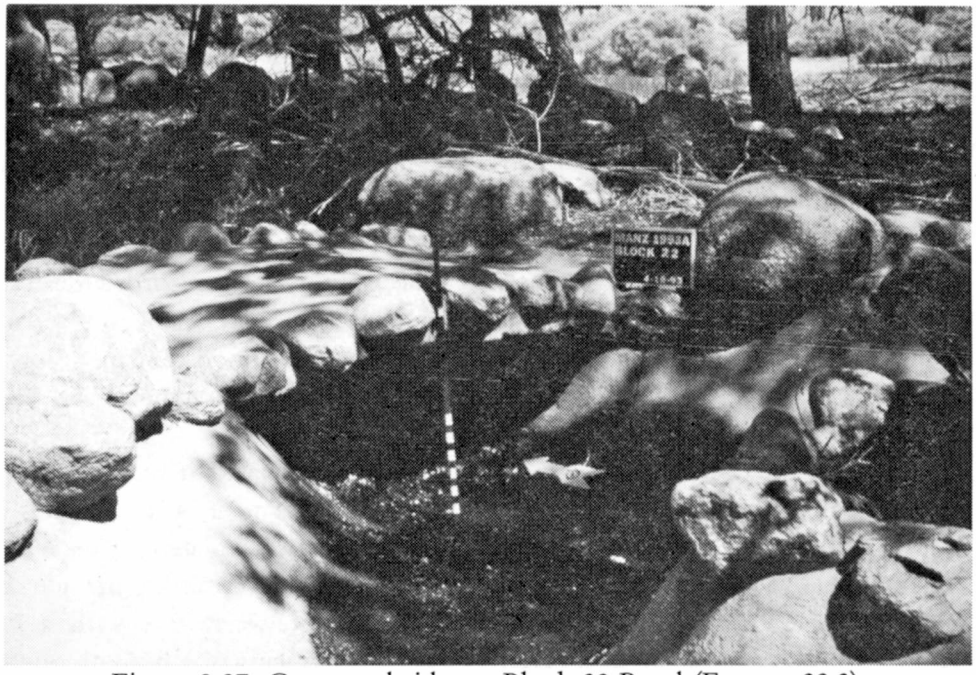


Figure 9.87. Concrete bridge at Block 22 Pond (Feature 22-3).

associated with writing include two eraser fragments and six slate chalkboard fragments. Miscellaneous tools include 10 miscellaneous machine parts and a safety pin.

Unclassified artifacts include unidentified artifacts as well as artifacts with potentially multiple functions (such as wire) which hindered placing them in a particular category, and artifacts too fragmentary or altered to further classify. Unclassified items recorded include six rubber hose fragments, two other rubber fragments, two 50-gallon metal drums, a 50-gallon drum lid, two barrel hoops, a metal strap, a smooth wire, a horseshoe, a hunk of melted lead, and nine other metal fragments.

Block 22

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The laundry room has an exposed grease trap. Concrete footing blocks remain at Barracks 1 (n=2), 3 (n=1), 4 (n=2), 5 (n=7), 6 (n=1), 8 (n=1), 9 (n=1), 10 (n=1), 11 (n=6), 12 (n=1), 13 (n=3), and 14 (n=1), the community building (n=3), and the mess hall (n=4). Other remains include two manholes, five upright water faucet pipes, and rock concentrations at the former locations of six other faucet pipes. Shallow depressions, possibly from infilled basements, are at Barracks 8 and 13.

This block has one of the most elaborate residential block garden complexes at Manzanar. It has a concrete-lined pond, a concrete sidewalk, a bridge, a waterfall, an island, and rock alignments (Feature 22-3, Figures 9.87-9.89). Inscribed in the concrete top of the bridge is "AUG. 9, 42" and in the north end of the pond the date "8-7 1942" is formed with small stones imbedded in concrete. This was reportedly the first residential pond started at the relocation center (Embrey et al. 1986:29-32). It was started in July 1942 by Harry Ueno, who would later figure prominently in the Manzanar Riot (see Chapter 4).

Remains of evacuee improvements were noted at all but one of the barracks. There are concrete stoops on the south side of the mess hall and on the west side of Barracks 14, a rock walkway at the south end of Barracks 1 (Feature 22-11), a concrete sidewalk, wooden borders, and a

Figure 9.88. Block 22 Pond and garden complex (Feature 22-3).

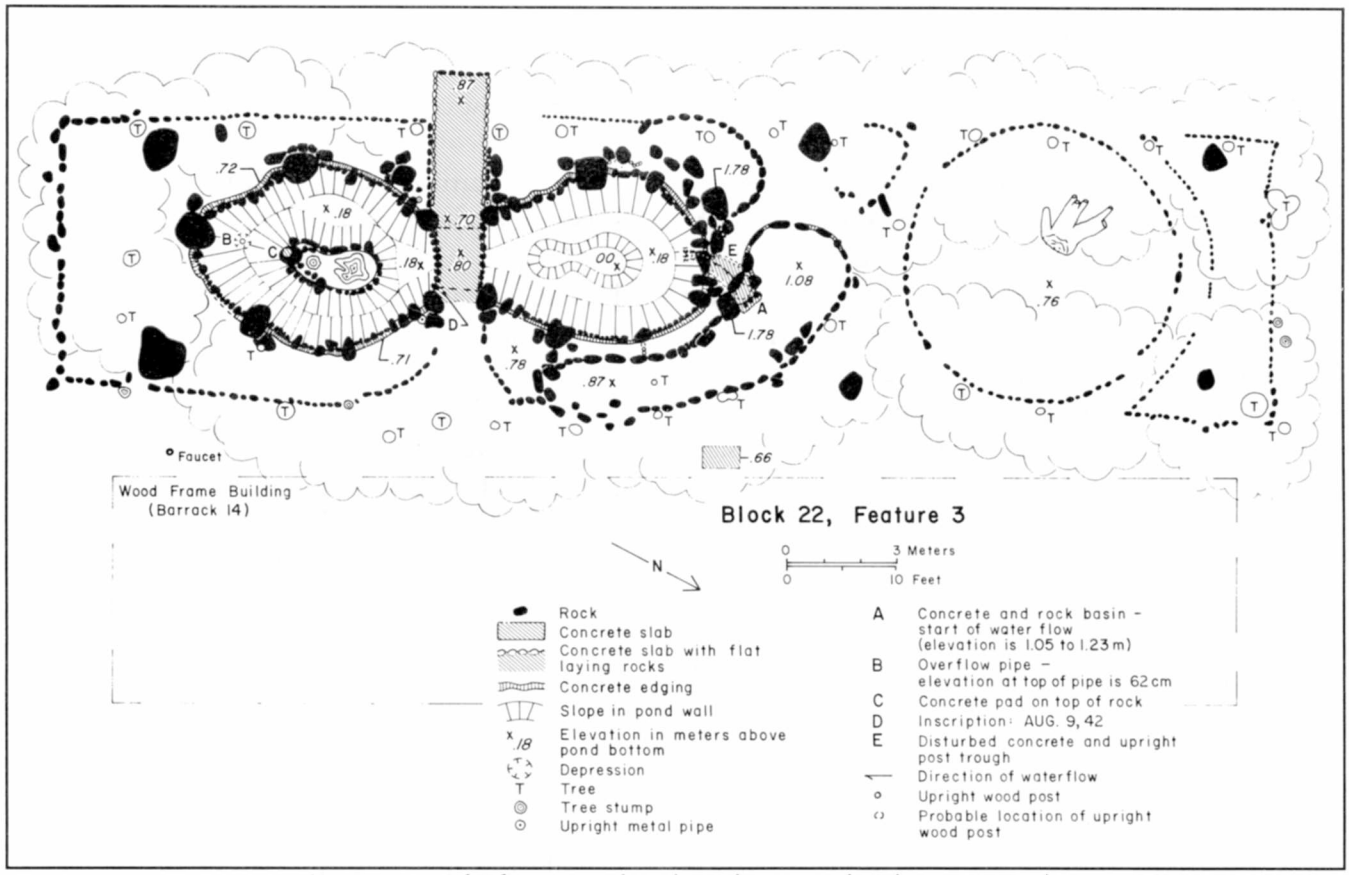


Figure 9.89. Block 22 Pond and garden complex (Feature 22-3).

broken concrete stoop on the east side of Barracks 3 (Feature 22-10), a concrete stoop on the east side of Barracks 4, concrete slabs and a sidewalk between Barracks 5 and 6 (Feature 22-4), concrete debris at Barracks 8, a rock stoop at the north end of Barracks 10, a concrete and rock-lined walkway and stoop on the east side of Barracks 11 (Feature 22-6), a broken concrete and rock stoop of the south side at Barracks 11, a plain concrete stoop and an incised and painted concrete stoop on the south side of Barracks 13 (Feature 22-1), a concrete sidewalk and stoop on east side of Barracks 14 (Feature 22-2), and a concrete and rock stoop at the south end of Barracks 14.

Rock alignments are present at the north and south ends of Barracks 2, northwest of and between Barracks 3 and 4 (Feature 22-5), on the south side of and between Barracks 5 and 6, around a tree southwest of Barracks 7, at the north end of Barracks 8 (Feature 22-9), between Barracks 8 and 9 (Feature 22-8), at the north end of Barracks 10 (Feature 22-7), along the east and north sides of Barracks 11, between Barracks 12 and 13, and along the south side of Barracks 13.

Historical artifacts and ecofacts noted during survey include over 200 window glass fragments, over 420 bottle glass fragments (mostly clear with some brown, green, and blue), 10 ceramic fragments, over 650 wire nails, about 30 sanitary seal cans, crown caps, several glass marbles (including four from the pond), a jack, a toy whistle, three shell buttons, two plastic buttons, a 1939-S and a 1944-S penny, a plastic Utah sales tax token (3-mil), a wire baby bottle brush, a door latch, a screen door spring, hinges, a hacksaw blade, a shovel blade, hardware cloth, wire, cast iron fragments, salt-glazed, concrete, and metal pipe, over 100 lumber fragments, tarpaper, bone fragments, and unidentified shell.

Block 22 encompasses the location of a known pre-relocation center farm (Lafon Farm, see Chapter 11). No features associated with that farm were identified, but some of the artifacts in this block are likely associated with it.

Block 23

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The men's latrine is mostly buried and the ironing room is completely buried. Concrete footing blocks remain at Barracks 1 (n=22), 2 (n=8), 3 (n=4), 4 (n=26), 5 (n=5), 6 (n=5), 7 (n=1), 8 (n=3), 9 (n=1), 12 (n=4), 13 (n=6), and 14 (n=2), the community building (n=1), and the mess hall (n=3). Other features include a manhole and 11 upright water faucet pipes.

Evacuee-constructed landscape features include a concrete sidewalk on the east side of Barracks 6, a concrete stoop on the west side of Barracks 5, and rock alignments between Barracks 5 and 6 (Feature 23-1), rock alignments on the east side of Barracks 14 (Feature 23-2), small boulders at the south end of Barracks 7, rock alignments on the west side of Barracks 7, rock alignments between Barracks 10 and 11, a possible concrete and rock entry on the west side of the mess hall, and a rock-lined walkway and a concrete curb at the southeast corner of the mess hall.

Historical artifacts and ecofacts noted during survey include 30 window glass fragments, 170 bottle glass fragments (mostly clear with 30 brown, 21 aqua, 6 green, 4 purple, 2 blue), 14 white stoneware ceramic fragments, seven electrical porcelain fragments, a toilet fragment, 80 wire nails, six cans, crown caps, two hinges, six metal pipe sections, wire, a rope fragment, a glass marble, a plastic button, a plastic cap, 35 plastic fragments, 15 lumber fragments, two brick fragments, bone fragments, and abalone shell fragments.

Block 24

Relocation center blueprints indicate that the community building was used as a music hall. The music hall location has been greatly disturbed by roads and gully erosion. Concrete foundations present include slabs for the men's

latrine, the women's latrine, the laundry room, and the ironing room. The laundry room, with an exposed grease trap, has been deeply undercut by a gully, exposing water and sewer pipes under the slab (Feature 24-2). The ironing room has been partially undercut by the gully. Concrete footing blocks remain at Barracks 2 (n=1), 4 (n=3), 6 (n=3), 7 (n=1), 8 (n=5), 9 (n=20), 10 (n=3), 11 (n=3), 12 (n=1), and 14 (n=10), and the mess hall (n=1). Other features include a manhole and nine upright water faucet pipes (three with concrete overflow basins and five with associated rock features). The Block Managers Daily Reports for this block indicate that the mess hall had an elaborate rock- and cement-lined cellar. However, no indication of the mess hall cellar was found during survey; it probably remains buried.

Evacuee-constructed landscape features include a small concrete-lined pond with a concrete and rock channel leading away from it at the southwest corner of the mess hall (Feature 24-1). The mess hall location is also marked by two concrete stoops at the southeast corner, and stoops, a walkway, and rock alignments at the north end (Feature 24-3), as well as a concrete stoop on the west side. There is also a small concrete-lined pond, concrete slabs, a walkway, and rock alignments between Barracks 5 and 6 (Feature 24-4), and broken slabs from an entry at the south end of Barracks 5. A small concrete-lined pond, a cobblestone and concrete stoop, concrete curbs, and rock alignments are situated between Barracks 8 and 9 (Feature 24-5). There is a rock alignment on the east side of Barracks 10, and rock alignments north of Barracks 14.

Historical artifacts noted during survey include over 700 window glass fragments, 160 bottle and other glass fragments (mostly clear with brown and green), nine white stoneware ceramic fragments, an electrical porcelain knob, over 330 wire nails, 18 cans, five water pipe sections, wire, two hinges, a buckle, a safety pin, a marble, a door hook, a gold-colored costume jewelry ring with the stone missing, three plastic pieces, tarpaper, and 11 lumber fragments.

Block 25

Blueprints indicate that the community building was used as a Catholic Church (see Figure 5.6). For some reason the central buildings of this block (and adjacent Block 26) are in a different order than at other blocks; from east to west they are the ironing room, men's latrine, women's latrine, and laundry room. All of the concrete slabs of these buildings are buried under a thin layer of sand. Concrete footing blocks remain at Barracks 1 (n=4), 2 (n=1), 5 (n=2), 7 (n=1), 8 (n=17), 9 (n=5), 10 (n=3), 11 (n=3), 12 (n=5), 13 (n=5), and 14 (n=7), the Catholic Church (n=5), and the mess hall (n=4). Other features include two destroyed manholes, 12 upright water faucet pipes, and possible basement depressions at Barracks 10 and 12.

Evacuee-constructed landscape features consist of rock alignments between Barracks 8 and 9 (Feature 25-1), rock alignments and a rock and asphalt stoop on the south end of Barracks 12 (Feature 25-2), rock alignments at the north end of Barracks 6 (Feature 25-3), rock alignments and a rock entryway on the south side of Barracks 7, and a rock-lined concrete stoop on the west side of Barracks 7 (Feature 25-4). There is broken concrete and asphalt on the west side of Barracks 9, wooden edging between Barracks 10 and 11, a lumber border on the west side of Barracks 12, a concrete stoop on the east side of Barracks 14, a possible rock stoop on the west side of Barracks 14, and a broken concrete stoop on the south side of the mess hall.

Historical artifacts and ecofacts noted during survey include 50 window glass fragments, hundreds of bottle glass fragments (500± clear, 20 aqua, 5 white, 15 green, 11 blue), 35 ceramic fragments (stoneware, transfer print, peach-glazed yellowware, whiteware), two electrical porcelain knobs, an electrical porcelain light fixture, thousands of wire nails, 30 sanitary seal cans, can and jar lids, a spear-type can opener, hinges, a door hook, wire, a rake, a padlock key, a

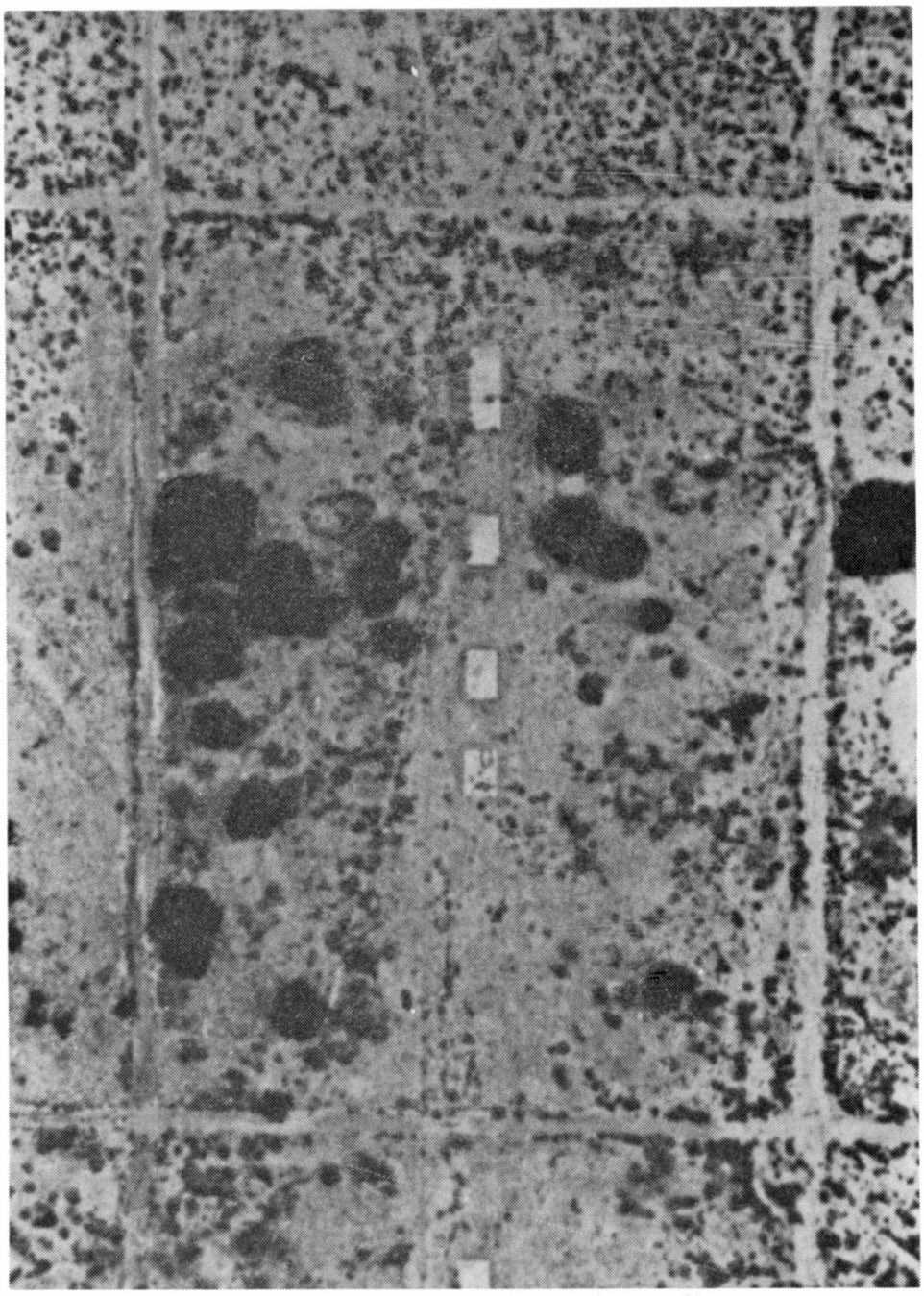


Figure 9.90. 1992 aerial photograph of Block 26 (north to right).

hairpin, two buttons, a piece of rubber, brown and red brick fragments, 75 lumber fragments, and a few fragments of unidentified shell.

Block 26

The concrete foundations of the ironing room, men's latrine, women's latrine, and laundry room are present and the laundry room has an exposed grease trap with a wood cover. These foundations are in the same atypical placement as in Block 25 (Figure 9.90). Concrete footing blocks remain at Barracks 2 (n=2), 3 (n=2), 4 (n=7), 5 (n=3), 6 (n=3), 7 (n=4), 8 (n=5), 12 (n=2), and 13 (n=2), the community building (n=2), and the mess hall (n=2). Upright water faucet pipes remain at 11 building locations (three have associated rocks and one has a concrete overflow channel) and rocks are present

at the former location of another water faucet. Block Managers Daily Reports (1943-1945) suggest there were at least two basements in this block, although no indication of these basements were found during survey.

Evacuee-constructed landscape features include a rock and concrete stoop and rock alignments at the south end of Barracks 1 (Feature 26-1), a concrete-lined pond and rock alignments between Barracks 13 and 14 and a sidewalk and rock stoop on east side of Barracks 14 (Feature 26-2), rock alignments on the east, south, and west sides of Barracks 4 and a concrete and a rock stoop on the west side of Barracks 4 (Feature 26-3), rock alignments and concrete sidewalks between Barracks 8 and 9 (Feature 26-4), a rock alignment west of Barracks 3, a rock alignment between the north end of Barracks 3 and 4, a rock and concrete stoop west of Barracks 10, a broken concrete stoop at the south end of Barracks 12, and a concrete stoop on the south side of the mess hall.

Historical artifacts and ecofacts noted during survey include 100 window glass fragments, 350 bottle glass fragments (250± clear, 45 brown, 20 green [Seven-up], 2 white, 1 blue), 30 ceramic fragments (whiteware, stoneware, transfer print), toilet fragments, a brown-glazed insulator fragment, hundreds of wire nails, 10 sanitary seal cans, 40 hole-in-top cans, can and jar lids, crown caps, a water faucet handle, pipe sections, barbed and smooth wire, two shell buttons, a plastic button, a caster wheel, an ointment tube, small and large hinges, shoe heel taps, screen door springs, salt-glazed and clay pipe fragments, 100 lumber fragments, 10 bricks, bone fragments, and unidentified shell. Several peach pits, likely from the pre-relocation center orchards, were also noted.

Block 27

Concrete foundations present include concrete slabs for the women's latrine, the laundry room, and the ironing room. The laundry room, with an exposed grease trap, is mostly buried. The foundation of the men's latrine could not be found. The area is covered by a thick layer of sand, but a small wash crosses the area where the slab should have been. It may lie deeper or may have been removed (a few chunks of concrete are in the area). Concrete footing blocks remain at Barracks 1 (n=2), 2 (n=2), 3 (n=3), 4 (n=1), 7 (n=1), 8 (n=1), 10 (n=5), 13 (n=3), and 14 (n=5), and the mess hall (n=2). Other features include two destroyed manholes and five upright water faucet pipes.

Evacuee-constructed landscape features consist of a rock stoop and 2½-ft-high wooden post at Barracks 3 (Feature 27-1), rock alignments on the south end and east side of Barracks 13 (Feature 27-3), a rock stoop on the west side of Barracks 1, a rock and concrete stoop on the east side of Barracks 2, and rock alignments on the south end of Barracks 8. There is a fence of 1-ft-high wooden posts 2 ft apart, loosely connected by thin metal wire, at the south end of Barracks 6 (Feature 27-2).

Historical artifacts noted during survey include 25 window glass fragments, 165 bottle glass fragments (100 clear, 50± brown, 8 green, 2 white, 1 blue, 1 aqua), glass insulator fragments, six ceramic fragments (5 stoneware, 1 whiteware), 175 wire nails, 20 sanitary seal cans, jar lids, crown caps, a plastic lid, a tire iron, a 12-inch length of rebar, wire, chicken wire, a shell button, 40 lumber fragments, and two brick fragments. Most artifacts observed were limited to the eastern half of the block; the western half is covered by sand, limiting visibility.

Block 28

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The men's latrine and the ironing room are mostly buried by a thin layer of sand and the other slabs are partially buried. Concrete footing blocks remain at Barracks 3 (n=3), 4 (n=6), 5 (n=4), 7 (n=1), 8 (n=8), 9 (n=1), 10 (n=2), and 14 (n=4), the community building (n=1), and the mess hall

(n=3). Upright water faucet pipes remain at 12 building locations (two have associated rocks and one has a concrete basin). The 11/30/42 Block Managers Daily Report for this block includes a request for cement to help alleviate flooding of the mess hall cellar, but no indication of this cellar was found during survey. A section of exposed concrete pipeline in the vicinity of Barracks 4 that pre-dates the relocation center was recorded as part of site MANZ 1993 A-5.

Remains of evacuee-constructed landscape features include a rock stoop on the west side of Barracks 10 (Feature 28-1), rock alignments southeast of Barracks 5, scattered rocks (possibly disturbed alignments) north of Barracks 2 and south of Barracks 3, rocks set in concrete northeast of Barracks 13, and broken concrete west of the mess hall (possibly from an entry).

Historical artifacts noted during survey include approximately 225 bottle glass fragments (about 150 clear, 35 green, 30 brown, 7 blue, 3 white, 1 aqua), 10 mirror fragments, two white stoneware ceramic fragments, an electrical porcelain knob, 50 wire nails, four cans, two can lids, crown caps, a wire clothes hanger, a 1½-ft-square metal frame, wire, a shell button, linoleum pieces, window screen, 10 lumber fragments, and brick fragments. Most of the bottle glass is on top of concrete slabs and is likely recent.

Block 29

The eastern third of this block incorporates a firebreak with about 15 live pear trees and numerous stumps (Feature 29-9). These remnant pre-relocation center trees were probably cared for by the evacuees.

In the residential portion of the block, concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. Concrete footing blocks remain at Barracks 1 (n=6), 3 (n=5), 4 (n=2), 5 (n=8), 6 (n=7), 7 (n=5), 8 (n=6), 9 (n=3), 10 (n=2), 11 (n=1), 12 (n=2), 13 (n=2), and 14 (n=2), and the mess hall (n=2). Other features include one intact and one destroyed manhole and nine upright water faucet pipes (five with concrete improvements).

Evacuee-constructed landscape features include a concrete sidewalk north of Barracks 2 (Feature 29-4), a concrete sidewalk, wood posts, and rock alignments at the south end of Barracks 8 (Feature 29-3), concrete sidewalks, rock alignments, vegetation at the south end of Barracks 10 (Feature 29-1), a standing wood clothesline post west of Barracks 11 (Feature 29-2), a rock walkway and rock alignment south of Barracks 14 (Feature 29-5), a rock alignment at the south end of Barracks 7 (Feature 29-6), broken concrete and a section of concrete sidewalk south of Barracks 9, and a rock stoop on the east side of the mess hall. Rock alignments border the road in the northwest and southwest corners of the block (Feature 29-7 and 29-8).

Two artifact concentrations were noted in the firebreak portion of the block during survey. Feature 29-10 consists of 136 bottle glass fragments (100 clear, 25 brown, 5 green, 5 white, 1 blue), other glass fragments, six ceramic fragments, two jar lids, phonograph record fragments, a part of a belt buckle, a snap, and 15 wire nails. Some of the glass is melted. Feature 29-11 consists of 115 bottle glass fragments (65 clear, 35 brown, 8 green, 8 white), three ceramic fragments, and 15 miscellaneous metal fragments.

Historical artifacts and ecofacts noted in other areas of the block during survey include 25 window glass fragments, 200 bottle glass fragments (mostly clear with 35 brown, 10 green, 3 blue, and 2 white), 20 ceramic fragments (whiteware, stoneware, transfer print, terra cotta), 175 wire nails, 30 sanitary seal cans, crown caps, can lids, a pail, a metal drawer handle, stove pipe, 35 lumber fragments, 10 brick fragments, and unidentified shell fragments.

Block 30

Concrete foundations present include slabs for

the men's latrine, the women's latrine, the laundry room, and the ironing room. The ironing room slab is buried by a thin layer of dirt. Concrete footing blocks remain at Barracks 1 (n=6), 2 (n=4), 3 (n=1), 4 (n=5), 5 (n=1), 7 (n=1), 8 (n=1), 9 (n=3), 10 (n=1), 11 (n=4), 12 (n=1), and 13 (n=2). Upright water faucet pipes remain at 11 building locations (five have associated rocks and one is enclosed by boards). Possible basements are indicated by depressions at Barracks 3, 5, and 6.

Evacuee-constructed landscape features consist of a possible rock stoop on the east side of Barracks 1 (Feature 30-1), a rock alignment west of Barracks 13 (Feature 30-2), concrete and rocks at the northeast corner of Barracks 2, rocks at the southeast corner and a possible walkway on the west side of Barracks 8, and a possible asphalt entry on the south side of Barracks 7.

Historical artifacts noted during survey include over 25 window glass fragments, over 270 bottle glass fragments (mostly clear, 1 purple), at least 17 white stoneware ceramic fragments, about 420 wire nails, metal washer, eight cans, crown caps, a butter knife, a bobby pin, a glass marble, a shoe heel tap, two shoe soles, cloth fragments, two shell buttons, a plastic button, a light bulb base, barbed wire, salt-glazed and clay sewer pipe fragments, and around 20 lumber fragments.

Block 31

Building remains present include concrete slab foundations buried by sand for the men's latrine, the women's latrine, the laundry room, and the ironing room. Concrete footing blocks remain at Barracks 1 (n=3), 2 (n=1), 3 (n=3), 4 (n=1), 6 (n=2), 8 (n=1), 9 (n=2), 11 (n=1), 12 (n=1), 12 (n=1), 13 (n=1), and 14 (n=1), and the mess hall (n=3). Nine upright water faucet pipes (two with concrete work and two with associated rocks) and depressions from possible basements at Barracks 3, 4, and 12 were noted.

Evacuee-constructed landscape features include rocks from a possible stoop on the west side of Barracks 1, a rock alignment on the south end of Barracks 3, a concrete sidewalk, a stone-lined entryway, and rock alignments between Barracks 3 and 4 (Feature 31-7), two concrete stoops on the east side of Barracks 4 (Feature 31-8), a small circular rock alignment (garden) between Barracks 4 and 5 (Feature 31-1), rocks at the southeast corner of Barracks 5, a two-course-high rock wall segment on the west side of Barracks 6 (Feature 31-2), rock alignments at the south end of Barracks 7, remains of concrete stoops and rock alignments between Barracks 8 and 9, rock alignments north of Barracks 9, rock alignments on the east side of Barracks 11, a rock alignment between Barracks 11 and 12, concrete slab fragments, connected concrete blocks, and rock alignments between Barracks 12 and 13 (Feature 31-6), a concrete stoop and rock alignments on the north end of Barracks 14 (Feature 31-3), a rock-lined concrete walkway and stoop on the north, south, and east sides of Barracks 14 (Feature 31-4), rock alignments, a stoop, and dead trees at south end of Barracks 14 (Feature 31-5), and rock alignments (possibly from entries) at the southeast corner of the mess hall.

Historical artifacts and ecofacts noted during survey include thousands of window glass fragments, over 630 bottle glass fragments (mostly clear, with green, aqua, white, brown, red, and purple), over 80 white ceramic fragments (including 28 broken plates, cups, and bowls northwest of the mess hall), five electrical porcelain fragments, hundreds of wire nails, over 35 sanitary seal cans, three condensed milk cans, two pocket tobacco cans, crown caps, a coping saw blade, a tree saw blade, a hinge, a comb, a bobby pin, a plastic button, a glass marble, an eye dropper, a hose fragment, wire, iron pipe fragments, a light bulb base, and bone fragments. In the northwest portion of the block, west of the mess hall, there is a scatter of small coal fragments.

The northwest portion of Block 31 encompasses the location of a known pre-relocation center

home (Cornelius/Comelins House, see Chapter 11). No features associated with that structure were identified, but some of the artifacts in this block (such as purple glass fragments) may be associated with it.

Block 32

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The laundry room foundation is covered by dirt, but has an apparent grease trap. Concrete footing blocks remain at Barracks 1 (n=12), 2 (n=18), 3 (n=17), 5 (n=3), 6 (5), 7 (n=1), 8 (n=2), 9 (n=5), 10 (n=1), and 11 (n=2), the community building (n=4), and the mess hall (n=2). Other remains include a manhole and 11 upright water faucet pipes, four with associated rocks and one with a concrete basin and slab (Feature 32-3, located at southwest corner of Barracks 8).

Evacuee-constructed landscape features consist of rock alignments on the west and south sides of Barracks 3 (Feature 32-1), the south side of Barracks 4, the north end of Barracks 5, on the south side of Barracks 6 and the east side of Barracks 7 (Feature 32-2), at the south end of Barracks 8 (Feature 32-4), and the south end of Barracks 11. In addition, there are rock circles around trees and a pathway between Barracks 13 and 14, rock alignments east of Barracks 13 (Feature 32-5), and stoops on the south and north sides of Barracks 9.

Historical artifacts and ecofacts noted during survey include 100 window glass fragments, 130 bottle glass fragments, five ceramic fragments (stoneware and whiteware), 15 wire nails, five sanitary seal cans, a pocket tobacco can, can and jar lids, cable, stove pipe, a bracket, a hinge, a crown cap, barbed wire, a toy shovel blade, two glass marbles, a red plastic disk bead, a plastic button, a plastic cap, cloth, clay pipe fragments, wire, 33 lumber fragments, and a few bone fragments. Peach pits, likely from the pre-relocation center orchards, were also noted.

Block 32 encompasses the general location of a known pre-relocation center farm (A.L. Meyers Farm, see Chapter 11). No features associated with that farm were identified, but some of the artifacts in this block (such as a collected 1910s-1920s ceramic) may be associated with it.

Block 33

This block is heavily wooded with historical and recent vegetation, including fruit trees. This block had no community building; there is now a depression where a community building was usually located. Concrete foundations present include slabs for the men's latrine (partially buried by a thin layer of sand), the women's latrine (buried), the laundry room (mostly buried), and the ironing room. Concrete footing blocks remain at Barracks 1 (n=1), 2 (n=1), 3 (=1), 4 (n=1), 6 (n=1), 7 (n=13), 8 (n=1), 9 (n=1), 10 (n=4), 12 (n=4), and 14 (n=1), and the mess hall (n=3). Upright water faucet pipes (five with associated rocks) remain at 13 building locations.

Evacuee-constructed landscape features consist of rock alignments, a concrete sidewalk, and a rock and cobble stoop at Barracks 1 and 2 (Feature 33-1), rock alignments between Barracks 3 and 4 (Feature 33-2), rock alignments and cemented cobbles at the north end of Barracks 10 (Feature 33-3) and the north end of Barracks 12 (Feature 33-4), and a concrete stoop and rock alignments on the north end of Barracks 9 (Feature 33-6). Also noted were rock stoops on the east side of Barracks 6, a cobblestone stoop and a concrete stoop on the west side of Barracks 7, a wood post wired to a tree and rocks at the south end of Barracks 8, and a stoop on the east side of the mess hall. There is a fence of wood posts and four-strand barbed wire along the road north of Barracks 10 and 11 (Feature 33-5).

Historical artifacts noted during survey include over 200 window glass fragments, about 835 bottle glass fragments (mostly clear), five white stoneware ceramic fragments, an electrical porcelain knob, over 50 wire nails, over 50 cans,

Figure 9.91. Rock monument at Merritt Park (Feature 34-1).

Figure 9.92. Rock border at teahouse location (Feature 34-2).

an oil drum and lid, metal pipe, a wood disk, a "Go" game piece, three glass marbles, barbed wire, chicken wire, 20 lumber fragments, and part of a tractor blade.

Block 34

The eastern one-third of the block was used as a lavishly landscaped park, variously named Rose, Pleasure, and Merritt (see Figure 5.10). This area has been heavily disturbed with most landscaping elements removed. At the southwest and southeast corners of the park at the road a large elongated boulder was cemented upright on a low flat boulder (Feature 34-1 and 34-6, Figure

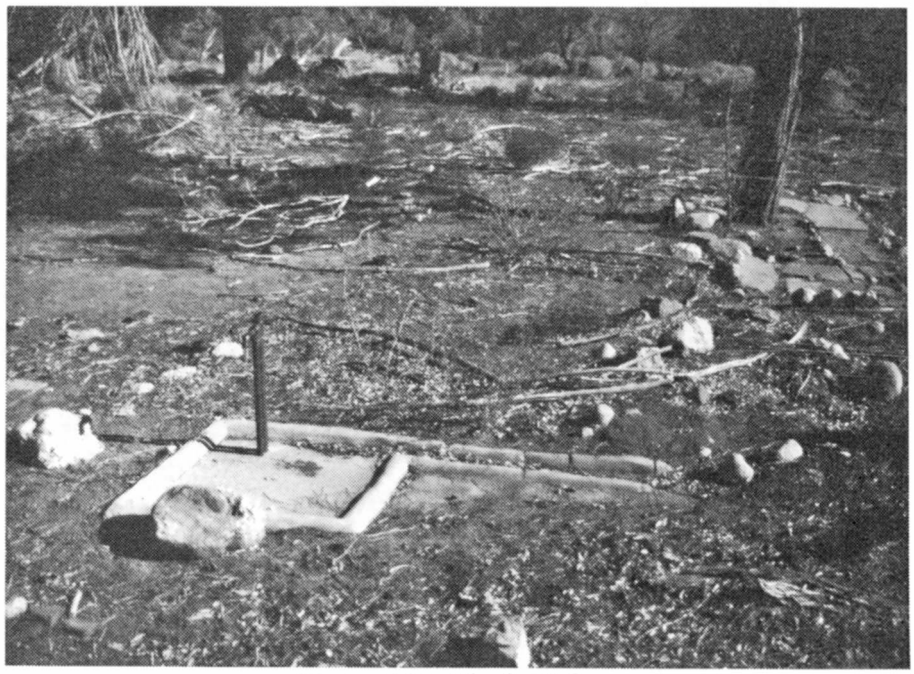


Figure 9.93. Block 34 faucet.

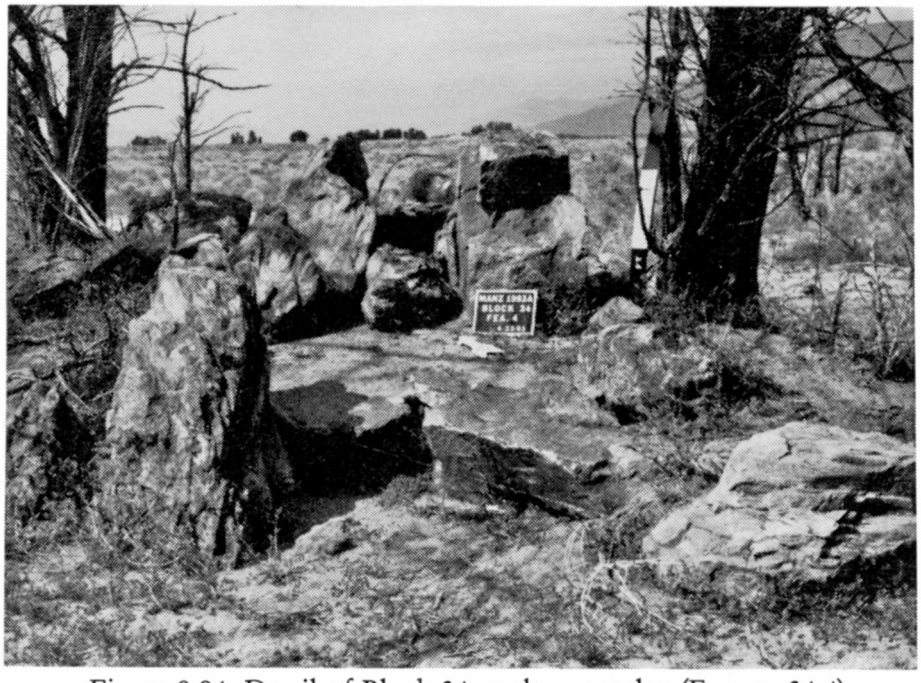


Figure 9.94. Detail of Block 34 garden complex (Feature 34-4).

9.91). A home movie taken during the relocation center occupation shows the name of the park painted on one of these boulders (Eastern California Museum collections). Scattered rocks at both locations are probably the remains of associated rock alignments.

Remains at a former teahouse location (ramada) in the southwest portion of the park consist of a raised rectangular area enclosed by a rock border (Feature 34-2, Figure 9.92). To the north there are scattered rocks (possibly disturbed alignments) and a large depression (possible pond). Further to the north there is another

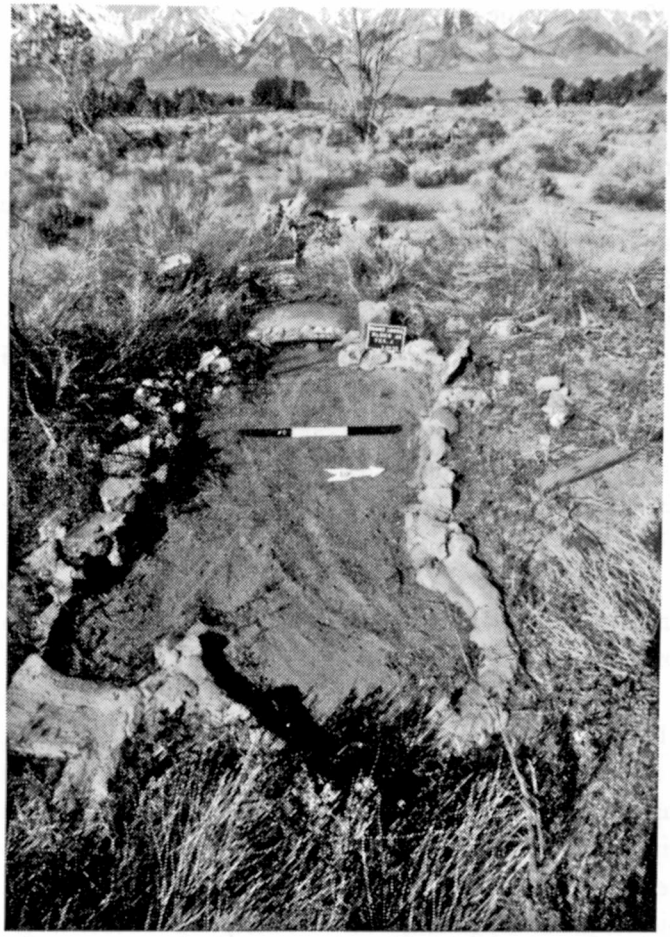


Figure 9.95. Block 35 pond and bridge (Feature 35-1).

smaller depression and a small area of concrete and rock work (Feature 34-3). Apparently mostly buried, the feature may have been a concrete-lined pond or possibly the remains of a "Dutch oven" shown in this general area on relocation center blueprints. Between this feature and the teahouse location there are the remains of a large rock garden and possible fountain (Feature 34-9). Northeast of the park there are rows of live and dead fruit trees (Feature 34-8) that were likely maintained by the evacuees.

In the residential portion of the block, concrete slab foundations for the men's latrine, the laundry room, and the ironing room are buried by a thin layer of dirt and the women's latrine slab is partially buried. Concrete footing blocks remain at Barracks 1 (n=2), 3 (n=7), 4 (n=8), 5 (n=11), 6 (n=5), 7 (n=1), 8 (n=4), 9 (n=6), 12 (n=3), 13 (n=7), and 14 (n=2). Blocks appear to have been recently removed at Barracks 5 and 6. Upright water faucet pipes (two with associated rocks) remain at nine building locations. There are rocks at the former locations of two other faucet pipes and concrete work at another (Figure 9.93).

Between Barracks 14 and the mess hall there is an elaborate garden complex with a rocky mound, concrete-lined pond, stream, bridge, rock alignments, and a collapsed barbed wire fence (Feature 34-4, Figure 9.94). The rocks used in the garden are metavolcanic rocks from the Inyo Mountains, rather than the more commonly used local granite boulders and cobbles. Numerous trees associated with this feature have been recently cut and removed for firewood. The Block Managers Daily Report (11/23/42) for this

block indicates that the pond and garden were started September 23, 1942, under the supervision of Mr. Kubota, Mr. Kayahara, and Mr. Murakomi.

Other evacuee-constructed features include a concrete stoop with an inscription (May 8, 1942), a concrete curb, and a heavily fractured concrete sidewalk at Barracks 2 (Feature 34-5), a concrete stoop on the west side of Barracks 3, a concrete stoop on the north end of Barracks 5, scattered rocks and concrete along the west side of Barracks 8, two posts and some rocks at the south end of Barracks 13, and a rock alignment along the edge of the road at the southwest corner of the block (Feature 34-7).

Historical artifacts and ecofacts noted during survey include approximately 130 window glass fragments, 280 bottle glass fragments (175 clear, 100 brown, 40 aqua, 17 white, 9 purple, 5 blue, 3 green), 35 ceramic fragments (stoneware and whiteware), 20 wire nails, 20 cans, a crown cap, a perforated metal strip, a screw, a glass marble, a shell button, an overalls hook, a pan handle, rebar, wire, rubber pieces, a tire fragment, salt-glazed pipe fragments, wallboard bits, 25 lumber fragments, five bricks, bone fragments, abalone shell fragments, and peach pits.

Block 35

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The laundry room has a grease trap and the ironing room slab is mostly buried by a thin layer of dirt. Concrete footing blocks remain at Barracks 1 (n=1), 2 (n=3), 3 (n=1), 4 (n=1), 5 (n=4), 7 (n=2), 8 (n=3), 11 (n=2), and 14 (n=1), the community building (n=1), and the mess hall (n=6). Other features include a manhole and nine upright water faucet pipes (two with associated rocks).

One of the more elaborate personal gardens is in this block on the west and north sides of Barracks 8. It consists of rock alignments, cobblestone and concrete stoops, two 3-ft high circular planters, and a small concrete bridge (Feature 35-1, Figure 9.95). Other evacuee-constructed landscape features consist of an upright slab and rock alignment at the northwest corner of the laundry room (Feature 35-2), several small boulders and rocks southwest of the ironing room, and rock concentrations (scattered alignments and stoops) at Barracks 2, 3, 4, 6, 7, 9, 10, 11, and 13, the community building, mess hall, and southeast of Barracks 13.

Historical artifacts noted during survey include over 150 window glass fragments, over 750 bottle glass fragments, over 50 ceramic fragments, electrical porcelain fragments, three electrical porcelain knobs, an electrical porcelain tube, over 950 wire nails, over 40 sanitary seal cans, two sardine cans, crown caps, a bedspring, a hinge, a latch (embossed with "Stanley SW Made in U.S.A."), stove pipe, a spring, metal pipe, wire, a spoon handle, a plastic button, two combs, a glass bead, two "Go" game pieces, a toy whistle, a pen quill (embossed with "1: Mark Fero... Chilled Steel Made ...A"), a fan belt, and lumber fragments.

Block 36

Concrete foundations present include slabs for the men's latrine, the women's latrine, the laundry room, and the ironing room. The men's latrine and ironing room slabs are partially buried by dirt. Concrete footing blocks remain at Barracks 1 (n=3), 4 (n=1), 6 (n=4), 7 (n=2), 8 (n=4), 9 (n=1), 10 (n=1), 11 (n=2), and 14 (n=8). Other remains include seven upright water faucet pipes (two with associated rock), rocks at the former locations of two other pipes, a basement depression at Barracks 9, and a manhole.

This block includes two elaborate personal gardens. At the north end of Barracks 12 there is a concrete-lined pond, a possible rock and concrete fountain, and a rock-lined concrete bridge with the inscription "36-12" (Feature 36-1). Northeast of Barracks 14 there is a small

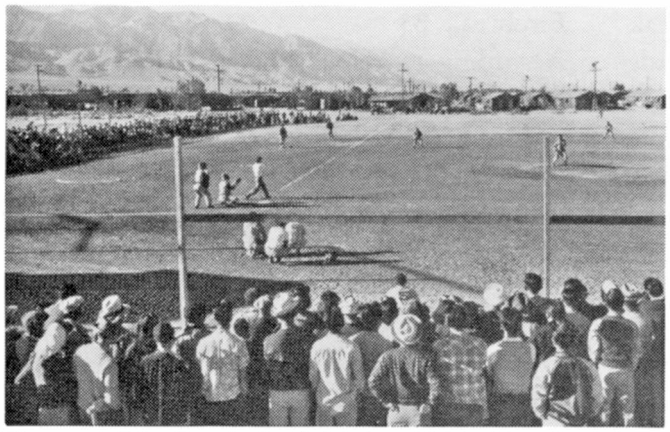


Figure 9.96. Baseball field in 1944 (Ansel Adams photograph, Library of Congress).

Figure 9.97. Location of baseball field in 1993 (A6-1).

garden with a live cholla and beavertail cactus and a dead barrel cactus (Feature 36-2).

Other evacuee-constructed landscape features include a concrete sidewalk east of Barracks 4 (Feature 36-3), rock alignments, a concrete stoop, and a concrete sidewalk at Barracks 9 and 10 (Feature 36-4), and rock alignments and scattered rock (possibly from an entry) at the north end of Barracks 14. In addition there are rock concentrations (scattered alignments and stoops) at Barracks 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14, and at the mess hall, and concrete stoops at Barracks 1, 2, and 6.

Historical artifacts noted during survey include approximately 180 window glass fragments, 400 bottle glass fragments (over 300 clear, 75 brown, 25 aqua, 14 purple, 12 green, 8 white, 5 blue, 2 red), 30 ceramic fragments (stoneware, whiteware, crockery), 10 pieces of electrical porcelain, an electrical plug prong (embossed with "Arrow H&H U.S.A."), over 1,000 wire nails, eight sanitary seal cans, three pocket tobacco cans, seven can lids, six crown caps, nine pieces of wire, an automobile exhaust pipe, a glass marble, two shell buttons, a clothespin spring, a light bulb base, a metal wedge, plastic bits, stove pipe, slate fragments, 30 lumber fragments, five bricks, bone fragments, and abalone shell fragments.

Firebreaks

Numerous blocks were left undeveloped, to serve as firebreaks. The term "firebreak" for these blocks persisted, even though many had auxiliary functions. For example, the auditorium, Children's Home, and Judo House (described above) were located in firebreaks. Firebreaks were also used for an outdoor theater, victory gardens, and athletic fields. Some of these improvements are depicted on official relocation center blueprints, and others are shown in period photographs (e.g., Adams 1945) and a 1944 aerial photograph.

Firebreak A6

Two ball fields were in this block: a baseball field in the southwest corner appears in historical photographs (Figure 9.96) and relocation center blueprints show a softball field in the northeast corner. Block Managers Daily Reports (1942-1945) indicate that the Recreation Department started construction of the baseball field in August 1943. Remains at the baseball field recorded during survey include lumber fragments and downed chicken wire, mostly buried by drifting sand, where the backstop used to be and a low earthen mound at the pitcher's mound (Feature A6-1, Figure 9.97). The softball field also has wire fencing buried in sand where its backstop would have been (Feature A6-2).

In the north central portion of the firebreak there is an artifact scatter consisting of hundreds of wire nails, a sanitary seal can, a plate fragment, six white fragments, two brown glass fragments, three blue glass fragments, a clear glass fragment, an aqua glass fragment, and a piece of sheet metal (Feature A6-3). Other likely relocation center-era artifacts noted during survey include a few window glass fragments, two aqua glass fragments (insulator fragments), six white fragments, a white-glazed pipe fragment, a few wire nails, five sanitary seal cans, a spray paint can, chicken wire, and lumber fragments.

Features and artifacts in the southeast portion of the firebreak that apparently pre-date the relocation center were recorded as site MANZ 1993 A-19 (see Chapter 11). A vegetation windbreak and indications of a ditch along the southern edge of the firebreak also predate the relocation center.

Firebreak A9

Two features were noted in this firebreak. Feature A9-1 is a large depression in the southwest portion of the firebreak; the original identification of this feature is unclear. It is in the general location of the town of Manzanar school (ca. 1910-1930) and the depression may have resulted from the removal of its foundation during construction of the relocation center. Alternatively it may have been a borrow pit. Feature A9-2 is a wooden home plate from a baseball field (Figure 9.98). Relocation center blueprints do not show any playing fields in this firebreak, however, the Block Managers Daily Report for Block 30 indicates the block residents built a softball field in this firebreak in March 1943.

Historical artifacts noted during survey include a few window glass fragments, a plate fragment, two sanitary seal cans, a crown cap, wire fencing, a metal fragment, a section of water pipe, a plate fragment, and two electrical porcelain knobs.

Firebreak B3

According to relocation center blueprints and historical photographs, this firebreak, located northwest of the high school and west of the auditorium, included three basketball courts, four tennis courts, and five volleyball courts. Remains associated with the basketball and volleyball courts were not identified. However, three of the four tennis courts left tangible remains. There is a simple rock alignment remaining at one (Feature B3-3), remnants of concrete and rock net supports and an area of discolored soil (possibly from a clay court) at another (Feature B3-5), and a partial concrete border 3 inches wide by 1½ inches high at the third one (Feature B3-6). The concrete border has been heavily disturbed by a recent diversion ditch, but roughly measures 36 ft by 78 ft, the standard tennis court size.

There is a rock alignment incorporating two trees (Feature B3-4) between the location of the tennis courts and the basketball and volleyball courts in the western portion of firebreak. Near the trees is a capped upright water pipe (Feature B3-2). Along the east edge of the firebreak there is a fire hydrant surrounded by a circle of rocks (Feature B3-7, Figure 9.99). Lettering on the hydrant indicates it was made by Pacific States of Provo, Utah. It is one of only two hydrants remaining at the relocation center. Other features in this firebreak include two rock circles and a rock alignment east of the tennis courts (Feature B3-8) and a low earthen mound in the northwest portion of the firebreak (Feature B3-1).

Probable relocation center-era artifacts noted in this block include hundreds of clear, brown, aqua, and green glass fragments, several 1940s era bottle bases (Owens Illinois, Duraglass, and others), a few wire nails, a horseshoe nail, four sanitary seal cans, two crown caps, eight can lids, a metal drum, a piece of window blind hardware, and yellow firebrick fragments. Artifacts in the southwest portion of the block, most apparently associated with a pre-relocation center structure in that area, were recorded as a separate site

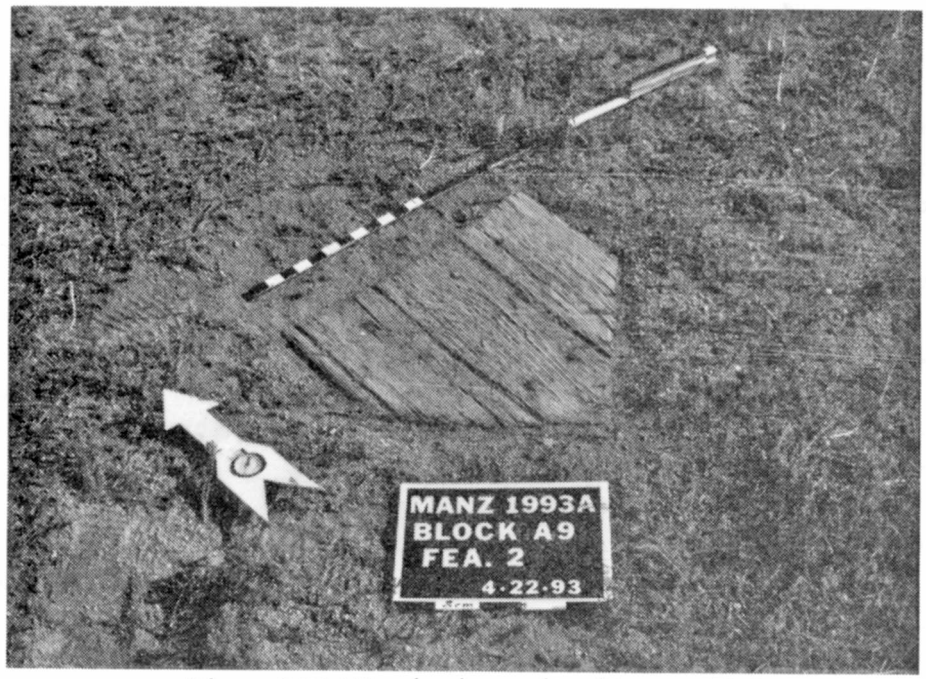


Figure 9.98. Wooden homeplate (Feature A9-2).

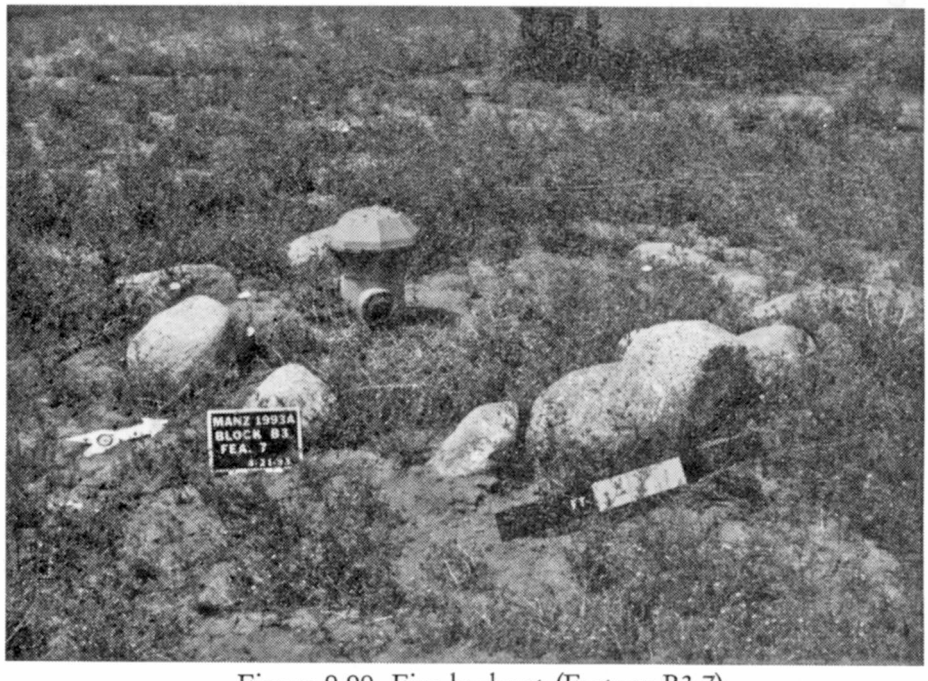


Figure 9.99. Fire hydrant (Feature B3-7).

(MANZ 1993 A-26, see Chapter 11).

Firebreak B6

Features and artifacts in the eastern portion of this firebreak, all apparently pre-dating the relocation center, were recorded as site MANZ 1993 A-20 (see Chapter 11). Probable relocation center-era artifacts noted elsewhere in this firebreak include eight sanitary seal cans, a can lid, a jar lid, a pocket tobacco can, fragments of a "Barq's" soda bottle, a crown cap, an embossed glass fragment (clear), and a comb fragment. Numerous peach pits, likely from the pre-relocation center orchards, were also noted.

Prehistoric site MANZ 1994 A-1 is in the northwest corner of the block (see Chapter 13).

Firebreak B9

No relocation center-era features were noted. A north-south alignment of tamarisk and a possible parallel road trace (both likely pre-relocation center features) are present in the west central portion of this firebreak. Likely relocation center-era artifacts noted in this block include four sanitary seal cans, a can lid, three purple glass fragments, two blue glass fragments, two clear glass fragments, fragments of a "Coke" bottle and a "Seven-Up" bottle, two whiteware fragments, and a glass marble.

Firebreak C0

Within this firebreak there are five irregular areas of asphalt paving that are also visible on 1944 aerial photographs. Separate, small, and not integrated with any road or other feature these patches do not appear to have been systematically laid, and may have resulted from the cleaning of paving equipment.

In the south central portion of the firebreak there is a dense concentration of charcoal (Feature C0-1). Likely relocation center-era artifacts noted in this block include over 275 window glass fragments, over 85 bottle glass fragments (clear, brown, "Coke"), 20 ceramic fragments, over 65 wire nails, 13 sanitary seal cans, crown caps, wire, pipe, over five lumber fragments, and three salt-glazed sewer pipe fragments.

Firebreak C1

Two 2 inch by 4 inch posts were noted in this firebreak (Feature C1-1): one is 2 ft high and the other is cut flush to the ground. Likely relocation center-era artifacts and ecofacts noted in this block include a small concentration of about 75 window glass fragments, a small concentration of about 50 bottle glass fragments, fragments of a "Seven-Up" bottle, two purple glass fragments, a few wire nails, a shoe heel tap, a hinge fragment, a 1945 penny, and bone fragments.

Firebreak C2

The only feature noted in this firebreak was a manhole without its cover. Likely relocation center-era artifacts noted include fragments of a "Coke" and a "Seven-Up" bottle, a clear glass jug fragment, a purple glass fragment, a whiteware plate fragment, an all-steel beer can, can fragments, two shell buttons, a screw, a brick, and bone fragments. A small unreadable wooden sign is at the northwest corner of the firebreak.

Firebreak C3

Feature C3-1, the only feature noted, consists of a slight depression and an adjacent lumber scatter. Likely relocation center-era artifacts noted in this block include a plate fragment, fragments of a "Seven-Up" bottle, a glass bowl fragment, two crown caps, a screw, water pipe, and a concentration of small lumber fragments and wire nails.

Firebreak C4

The only feature noted was a broken-up manhole without its cover. Likely relocation center-era artifacts noted in this block include a rectangular can, two crown caps, two electrical porcelain knobs, a hose fragment, a coffee maker part, three purple glass fragments, a clear soda bottle fragment ("Antelope" soda), an aqua glass fragment, smooth wire, a shoe heel tap, a section of water pipe, around six plate fragments, and a galvanized bucket. Numerous peach pits, probably from the pre-relocation center orchards rather than imported food, were noted.

Firebreak C5

One feature was recorded in this firebreak, a small concrete block with a wood footing and an upright section of pipe or conduit (Feature C5-1). It may be a footing associated with either a pre-relocation center structure or with the evacuee-built outdoor theater known to have been in this firebreak. Numerous artifacts in the southern half of the block, apparently predating the relocation center, were recorded as MANZ 1993

A-27 (see Chapter 11). Probable relocation center-era artifacts noted in this block include a small concentration of clear and brown glass and plate fragments (5 per square meter), a sanitary seal can, three purple glass fragments, a large lock nut, and numerous peach pits.

Firebreak C6

No relocation center-era features were noted. A vegetation windbreak and indications of a ditch along the southern edge of the firebreak apparently predate the relocation center. Historical artifacts noted in this block include five sanitary seal cans, a crown cap, fragments of at least two green glass bottles, an aqua glass fragment, a "Pond's" cold cream jar fragment, two purple glass fragments, bone fragments, unidentified shell fragments, and numerous peach pits.

Firebreak C7

No relocation center-era features were noted. Artifacts and ecofacts include a concentration of hundreds of wire nails (Feature C7-1), a metal and wood broom fragment, two sanitary seal cans, three plate fragments, a stove pipe section, a brick, lumber fragments, and numerous peach pits.

Firebreak C8

This firebreak includes three dead fruit trees (Feature C8-1) that were likely maintained by evacuees. A small rock pile of unknown function was noted in the southwest corner of the firebreak. Historical artifacts noted during survey include two sanitary seal cans, a can lid, a crown cap, a clear "Pyrex" vaccine/insulin bottle, fragments of a green glass bottle, a blue glass fragment, and a purple glass fragment.

Firebreak C9

Features in this firebreak include scattered rocks and an alignment of rocks in the shape of an arrow (Feature C9-3) and three artifact concentrations. Feature C9-1 consists of two plate fragments, a "BOYD" canning lid liner fragment, a clear glass fragment, a thick green glass fragment, smooth wire, and two can fragments. Feature C9-2 consists of two brown glass fragments, a pocket tobacco can, a green glass fragment, smooth wire, a clear glass fragment, and a few concrete pipe fragments. Feature C9-4 consists of coffee cup fragments, a plate fragment, a brown glass fragment, three sanitary seal cans, smooth wire, a hacksaw blade, a metal fragment, two tobacco cans, concrete chunks, and a piece of electrical line cable. Other historical artifacts noted during survey include nine sanitary seal cans, smooth wire, a blue glass fragment, an aqua glass insulator fragment, five purple glass fragments, two clear glass fragments, a green glass fragment, a plate fragment, two coffee cup fragments, two iron parts, and concrete fragments.

Firebreak D3

The eastern half of this firebreak has been heavily impacted by alluviation. Relocation center blueprints indicate two softball fields were in this block, however no remains associated with them were found. Feature D3-1 is a waterline access hole with a metal cover; lettering on the cover indicates it was made by Pacific States of Provo, Utah. Historical artifacts noted during survey include a few wire nails, a sanitary seal can, a "Coke" bottle base, crown caps, three purple glass fragments, a transfer print tea cup fragment, a button, a segment of 7-inch-diameter metal pipe, a 1937-S penny, and lumber fragments.

Firebreak D6

No relocation center-era features were noted. A vegetation windbreak and indications of a ditch along the southern edge of the firebreak are associated with a road that predates the relocation center. Three artifact scatters were noted during survey. Feature D6-1 consists of three sanitary seal cans, wire nails, a clay pipe fragment, wooden framework of 4 inch by 4 inch and 1 inch by 6 inch lumber (possibly the remains of a basketball backboard), and other lumber fragments. Feature D6-2 consists of thousands of wire nails, hundreds of clear glass

fragments, five hinges, screws, a sanitary seal can, and a screen door spring. Feature D6-3 consists of hundreds of glass, can, and plate fragments. Other historical artifacts and ecofacts noted include six sanitary seal cans, a hole-in-top can, can fragments, a small drum lid, a 6-ft-long 4-inch-diameter galvanized pipe, wire, about 50 wire nails, fragments of pressed glass, brown glass fragments, a beer bottle base, two purple glass fragments, an olive green glass fragment, a green soda bottle neck, a coffee cup fragment, a wooden keg lid, and a few peach pits.

Firebreak E6

No relocation center-era features were noted. Exposed sections of steel and concrete pipe at the western edge of the firebreak were recorded as part of site MANZ 1993 A-5. A vegetation windbreak and indications of a ditch along the southern edge of the firebreak also apparently predates the relocation center.

Two artifact concentrations were noted in this firebreak. Feature E6-1 consists of 10 plate fragments, hundreds of glass fragments (clear, green, blue, white, pressed glass), and around 100 can, wallboard, and lumber fragments. Feature E6-2 consists of 10 plate fragments, hundreds of glass fragments (1 purple), and about 25 can fragments. Other historical artifacts and ecofacts noted include a plate fragment, a glass marble, two purple glass fragments, a beer bottle neck, a leg-hold (coyote) trap, can fragments, and unidentified shell.

Firebreak F3

The 1944 aerial photograph indicates this firebreak was used for victory gardens. Features associated with the gardens include several earthen irrigation ditches with lumber remains (Features F3-6, F3-7, and F3-8, Figure 9.100), sections of steel pipe at apparent road crossings (Features F3-3, F3-4, and F3-5), and scattered rocks and an earthen mound possibly from landscaping (Feature F3-1). Under some large trees in the east-central portion of the block is a 15-ft-square concrete slab (Feature F3-2). The slab may predate the relocation center; a relocation center blueprint (3/14/45) depicts a small unidentified structure in this block, but well west of Feature F3-2.

Historical artifacts noted during survey include chicken wire, eight sanitary seal cans, a rectangular meat can, a screen door spring, steel pipe, clear bottle glass fragments, a toilet fragment, four purple glass fragments, salt-glazed sewer pipe fragments, and lumber fragments. Most of the non-structural artifacts in the eastern portion of the firebreak are likely associated with the Lee Campbell/Ed Shepherd House (see Chapter 11).

Firebreak H3

The 1944 aerial photograph indicate this firebreak was also used for victory gardens. Recorded features associated with the gardens include earthen irrigation ditches and lumber (Features H3-1, H3-3, H3-4, and H3-5) and an earthen irrigation ditch with a rock and concrete culvert (Feature H3-2).

Two artifact concentrations were noted in this firebreak. Feature H3-6 consists of glass, wire nails, a plate fragment, and a "Ponds" cold cream jar. Some of the artifacts are melted or burned. Feature H3-7 includes glass, lumber, a hacksaw blade, a bottle base, and barbed wire. Other historical artifacts noted scattered throughout the firebreak include bottle glass, plate fragments, a tea cup fragment, stove pipe, two sanitary seal cans, square washer (power pole hardware), barbed wire, lumber fragments, and wire nails.

Firebreak H6

This firebreak includes rows of fruit trees (mostly dead and stumps) and traces of irrigation ditches (Feature H6-1). This remnant pre-relocation center orchard was likely maintained by the evacuees. Historical artifacts noted in this block during survey include four sanitary seal cans, a stove pipe section, a crown cap, a purple glass fragment, scattered glass, and concentrations of brick and concrete fragments.

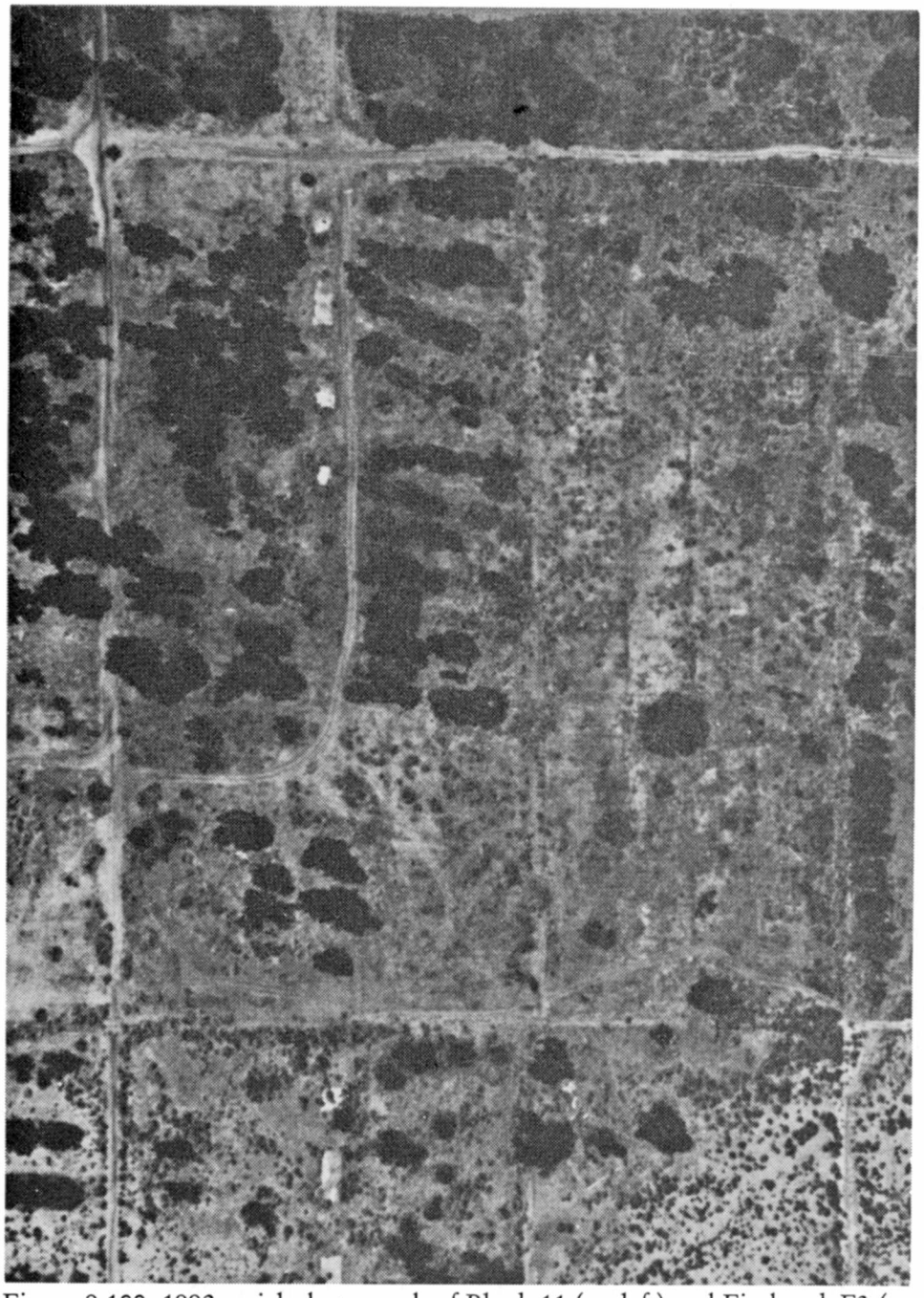


Figure 9.100. 1992 aerial photograph of Block 11 (on left) and Firebreak F3 (on right; north to right).

Perimeter

Beyond the area of the blocks but still within or along the relocation center's fenced boundary were buildings at the relocation center entrance, eight watchtowers, three guardhouses, other structures, victory gardens, and orchards. Eighty-one archeological features were designated within or adjacent to this area. These include six features at the relocation center entrance, foundations of five watchtowers, remains of two other watchtowers, remains of two guardhouses, several sections of fence, ten other foundations, a well, five agricultural features, two orchards, three barbecue grills, a wooden barrel and asphalt feature, a windbreak, and 28 small artifact concentrations.

Relocation Center Entrance

This area was mapped in detail (Figure 9.101). Two paved roads run east-west from Highway 395 to the relocation center. Between these roads are two evacuee-constructed buildings, a sentry post (Feature P-40) and a police post (Feature P-41), and a low rock-encircled earthen mound. There are rock alignments along the outside edges of the roads and rock-outlined parking spaces along the north road between the sentry post and the police post. Nearest the highway, the low mound has wooden posts remaining from the relocation center entrance sign (Feature P-39, see Figure 5.1).

The first building from the highway was the sentry post staffed by the military police. It is a 13 ft by 14 ft one-room rock and concrete building (Feature P-40, Figures 9.102–9.105). Across the road north and south of the sentry post there are substantial rock and concrete stub walls (Feature P-38, Figures 9.106 and 9.107). The decorative concrete tree stumps that were on both sides of the sentry post have been removed, and are now located at a house in the town of Independence (see Chapter 10).

Located west of the sentry post, the police post was staffed by the evacuee police force. It is an 8 ft by 10 ft one-room rock and concrete building (Feature P-41, Figures 9.108–9.111). The sentry post and police post both have pagoda-style wood shake roofs and simulated wood concrete lintels over the doors and windows.

North of the police post are the remains of the Police Station (Feature P-42). These include a 20 ft by 100 ft concrete slab with rock alignments and trees on west side and a large area of buried asphalt on the east side. The southern portion has been impacted by a shallow water diversion ditch. To the east there are the remains of a rock-lined ditch (Feature P-37).

Recently placed plaques at the entrance include a large boulder with a brass National Historic Landmark marker, a brass State of California Historic Site marker incorporated into the front of the sentry post (see Figure 9.104), and a free-standing Blue Star Memorial Highway marker.

Watchtowers

Relocation center blueprints indicate watchtowers (numbered 1–8) were present at the corners and the midsections of the fenced central portion of the relocation center. Remains of seven of these watchtowers were found. Nothing remains at Watchtower 1, in the northeast corner of the relocation center; the location is now within a graded road. Although Watchtowers 2 and 3 were located within the same road, pulled footings were found alongside (Features P-73 and P-74). The roughly 2-ft-square concrete footings varied from 3 ft to 4 ft in total length.

At the five remaining watchtower sites, foundations consist of four 1½ ft by 1½ ft concrete footing blocks with steel straps, 11 ft apart (Figures 9.112–9.114). Watchtower 4 (Feature P-70), along the western perimeter, lies between a graded road and a fenceline. Watchtower 5 (Feature P-63), at the southwest corner of the fenced area, is adjacent to a dirt road and is crossed by a recent barbed wire fence. Watchtower 6 (Feature P-49), located along the southern perimeter, has scattered rocks and a wood fence post nearby. Watchtower 7 (Feature P-47), located at the southeast corner of the fenced area (between the Staff Housing Block and the Military Police Compound), has an associated trash scatter of numerous glass and "Coke" bottle fragments covering an area of about 40 ft by 80 ft. Watchtower 8 (Feature P-29) is located along the eastern perimeter, west of Highway 395.

Guard Houses

Not much remains at the guard house locations, once located at roads to the fields and relocation center landfill. At Guard House 1, on the north perimeter, there is a small rock concentration (Feature P-8), and at Guard House 2, on the west perimeter, there are rocks and asphalt (Feature P-67). No remains of Guard House 3, on the south

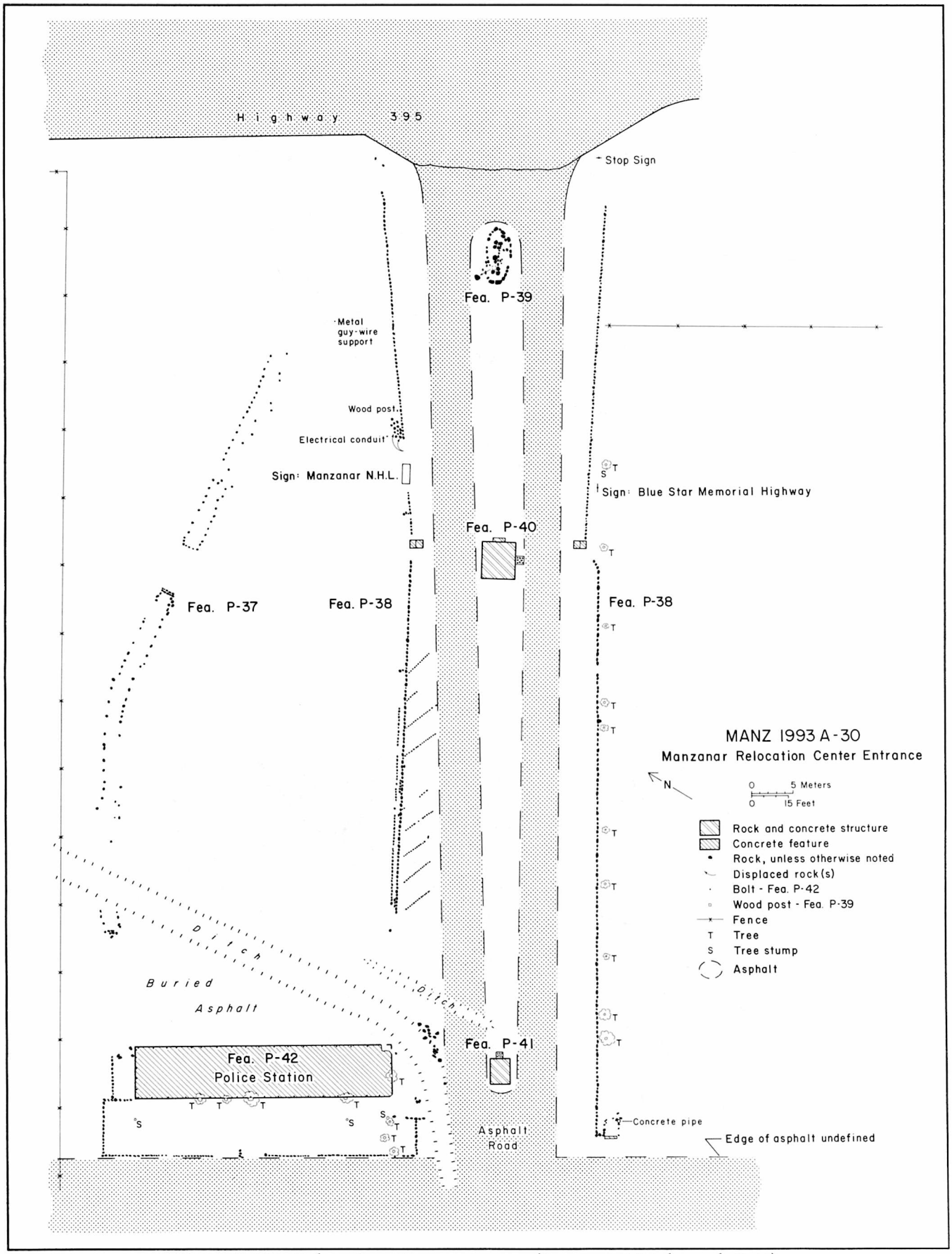


Figure 9.101. Relocation Center entrance (Features P-37 through P-42).

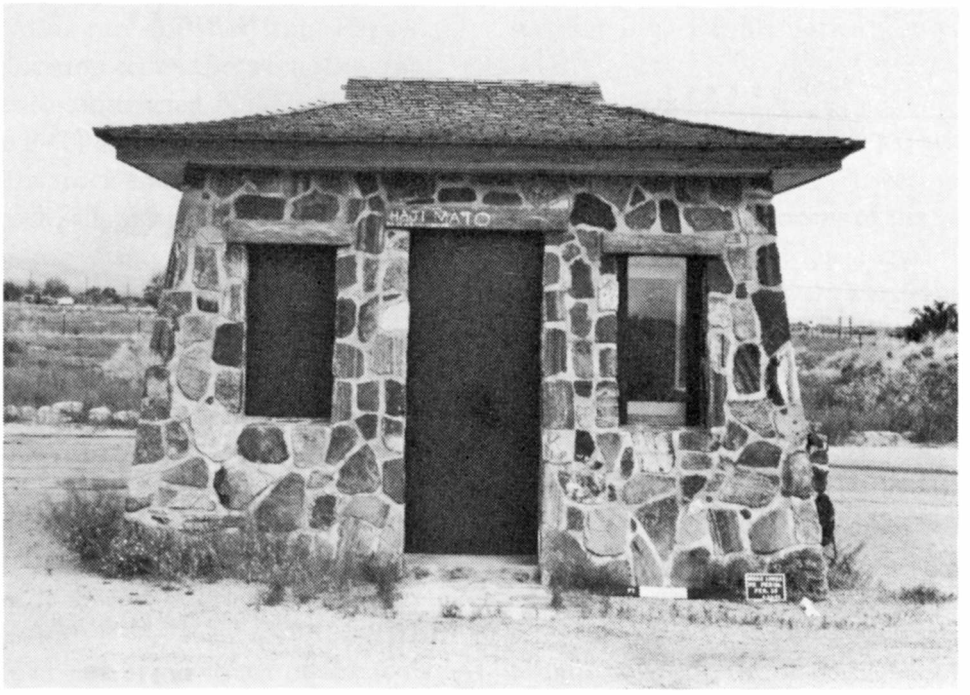


Figure 9.102. Military Police Post (Feature P-40), south side.

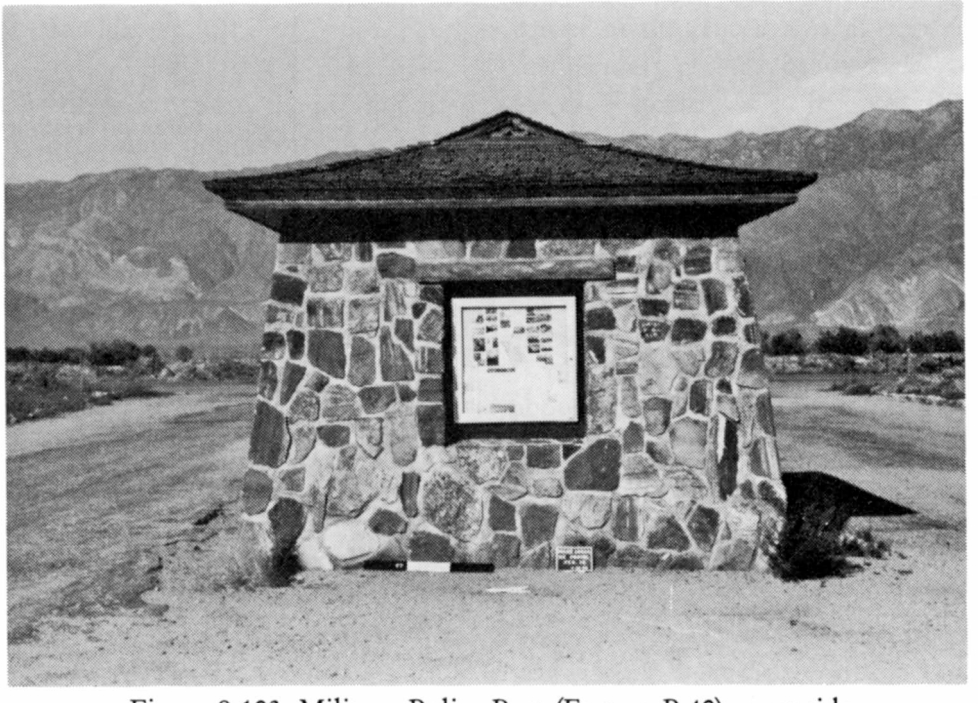


Figure 9.103. Military Police Post (Feature P-40), west side.

Figure 9.104. Military Police Post (Feature P-40), east side.

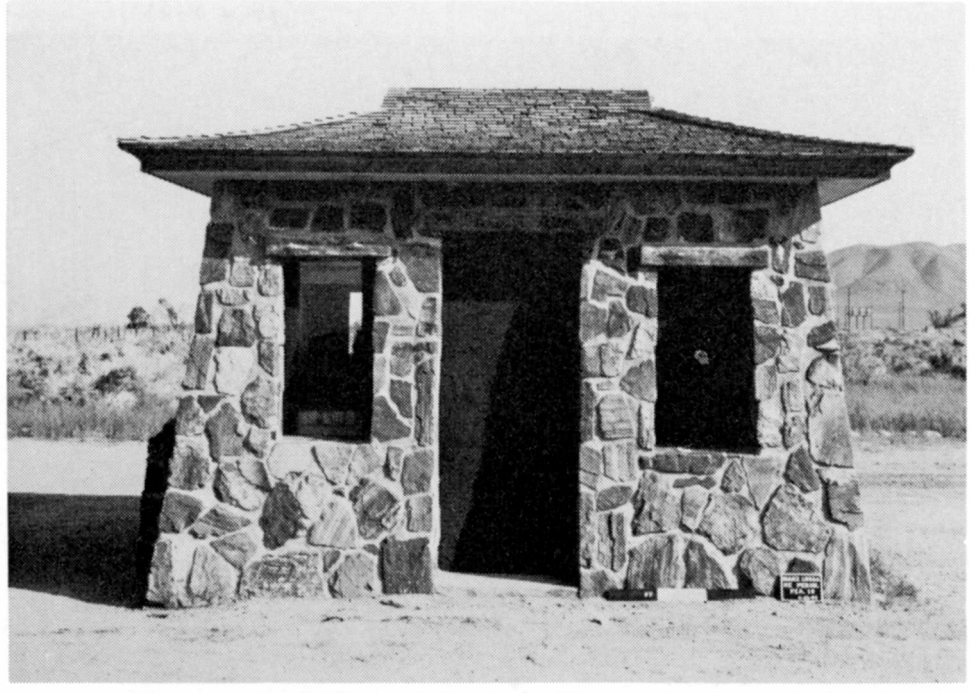


Figure 9.105. Military Police Post (Feature P-40), north side.

Figure 9.106. Relocation center entrance in 1943 (WRA photograph, UCLA Special Collections).

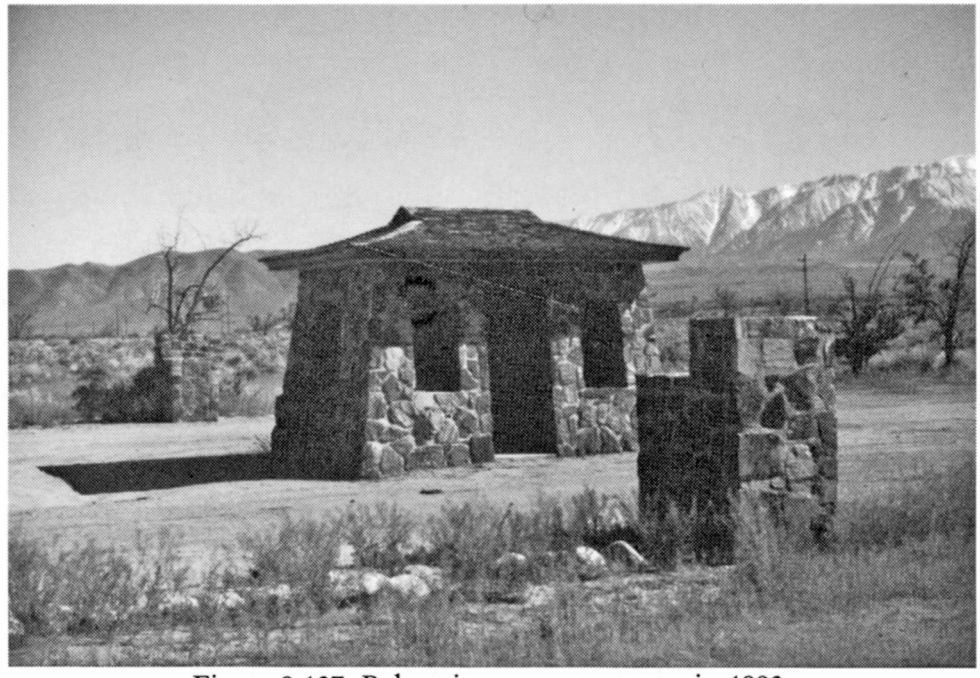


Figure 9.107. Relocation center entrance in 1993.

Figure 9.108. Internal Police Post (Feature P-41), south side.

Figure 9.109. Internal Police Post (Feature P-41), west side.

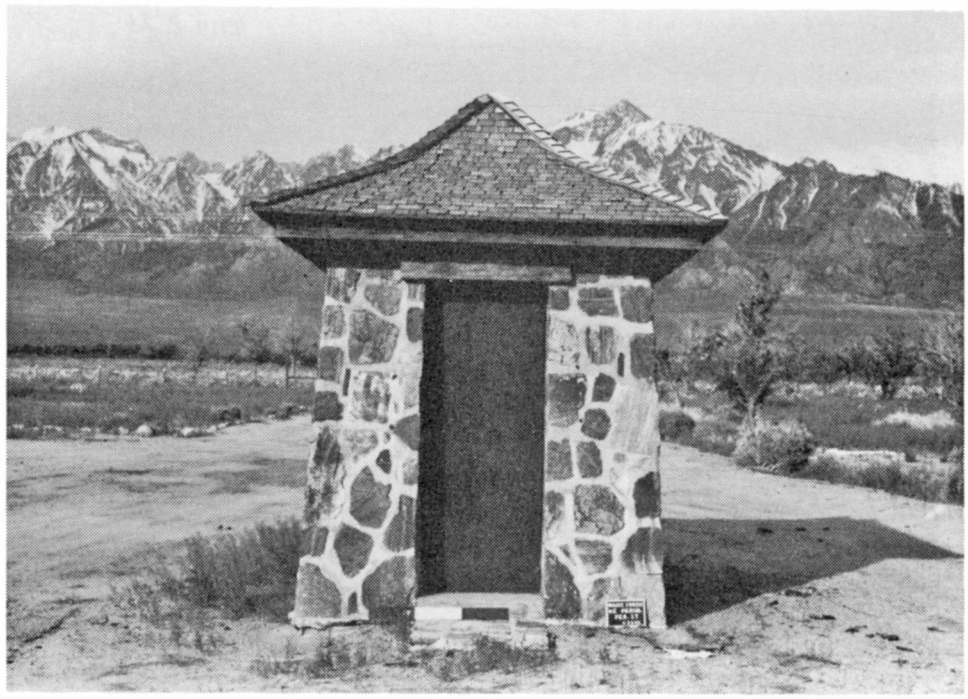


Figure 9.110. Internal Police Post (Feature P-41), east side.

Figure 9.111. Internal Police Post (Feature P-41), north side.

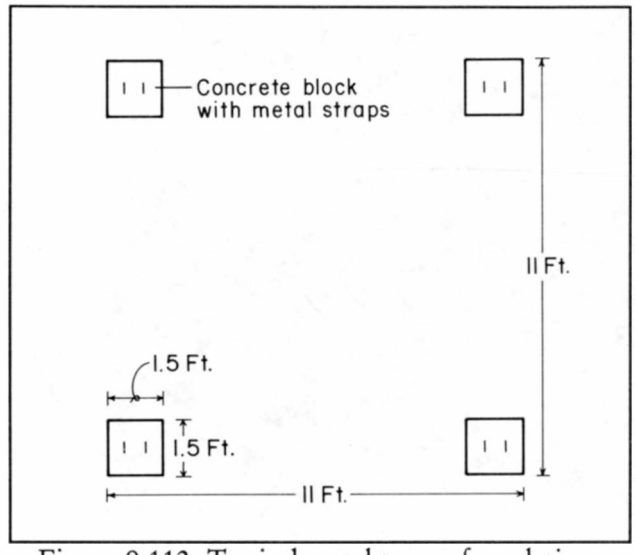


Figure 9.112. Typical watchtower foundation.

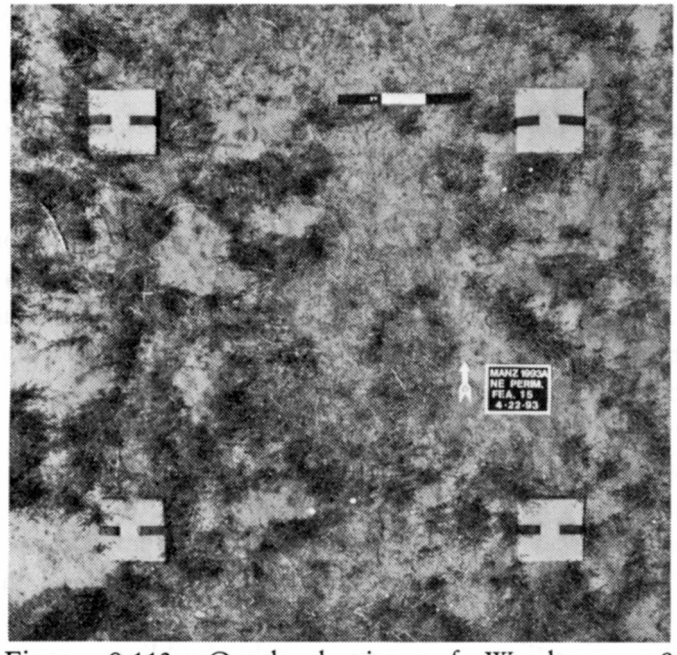


Figure 9.113. Overhead view of Watchtower 8 foundation blocks (Feature P-29).

edge of the relocation center, were found. Bairs Creek is deeply entrenched at this point and the surrounding area is covered by sand and gravel.

Fences

Portions of the existing barbed wire fences west, north, and possibly east of the central area appear to date to the relocation center (Figure 9.115). These fence sections are either 4-inch by 4-inch or 4-inch by 6-inch wooden posts (both nominal and actual), placed approximately 16 ft apart. These posts are distinguished from those in typical range fences in the area by their material, height (extending over 5 ft high), and patterns of nail holes. Nail holes indicate these posts originally held five wire strands at about 12-inch intervals starting at 12 inches above the ground. The top and bottom strands have been removed.

Figure 9.114. Watchtower 7 foundation blocks (Feature P-47).

Feature P-77, located at the southwest corner of the central area between the Watchtower 5 location and Bairs Creek, includes at least ten posts. Feature P-78, east of the cemetery, consists of 16 posts. Feature P-79, northeast of the cemetery, includes a section of seven posts and another post, farther north. Feature P-80, at the northwest corner of the central area, includes seven posts angling across the corner, possibly the original alignment. Feature P-81, north of the central area and west of cattle guard, includes two standing 4-inch by 6-inch posts (58 and 60 inches high), and one downed 4-inch by 6-inch post. Outside of these designated features, the existing fence is constructed of metal stakes and an occasional log pole.

Portions of the existing barbed wire fence east of the central portion of the relocation center may also be original: Features P-75 and P-76, along U.S. Highway 395, are constructed of square posts, augmented by small-diameter tree limb spacers. Wooden fence posts are common along the highway right-of-way in this area, but Features P-75 and P-76 are located along a slightly different alignment, a few yards west of the right-of-way.

Although there is no fenceline along the southern boundary of the central area currently, wooden fence posts near the staff area and where the fence crossed Bairs Creek appear to have been part of the original fence. Feature P-48, along the southern boundary, includes eight standing and two fallen posts. The posts are 4 inch by 6 inch lumber or log poles. Nail holes in these posts indicate five strands of wire at 12-inch intervals starting at about 5 inches above the present ground surface. Feature P-49 includes a single post near the Watchtower 6 location; Feature P-51 consists of posts at the point where the fence would have crossed Bairs Creek. These are more substantial (6-inch by 8-inch lumber, split telephone poles, and log poles), 2 ft to 4 ft tall above the present ground surface, perhaps partially buried by recent alluvium.

Remains of another fence that may date to use of the relocation center consist of wood fence posts along the west side of a road near the location of Guard House 3 (Feature P-50). The road leads south from the relocation center to fields farmed by the evacuees.

Foundations

Most perimeter area foundations are in the southwest portion, where there was a garage area, lath house, and outdoor theater. Relocation center blueprints indicate four garages and three other buildings were in the garage area. Three of the garages are represented by structure pads and 14-inch–square concrete footing blocks, and a concrete slab foundation remains from another building. No tangible evidence remains of the western-most garage (Garage 1) or two of the small buildings shown on the blueprints.

Features P-53 and P-54 (Garages 1 and 2) both consist of a 20 ft by 100 ft structure pad indicated by a leveled area with 11 footing blocks along the east edge. Feature P-55 (Garage 3) consists of a 20 ft by 100 ft structure pad

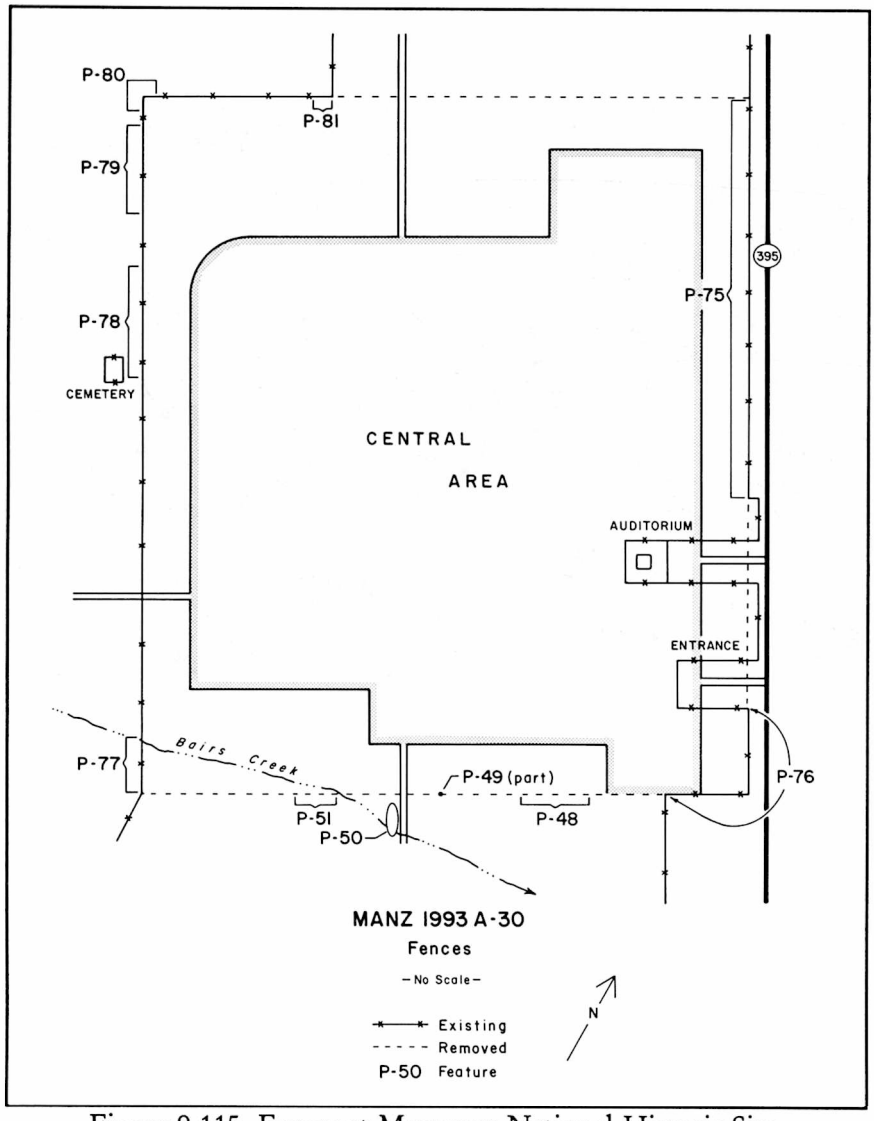


Figure 9.115. Fences at Manzanar National Historic Site.

indicated by a leveled area with six footing blocks along the east edge. Feature P-56 (Garage 4) consists of a mostly buried 20 ft by 100 ft concrete slab.

There are no remains apparent at the Guayule Lath House location that was once in the perimeter southwest of Block 6. But nearby are several features likely associated with the lath house. These include a large rectangular area enclosed by tamarisk and a barbed wire fence (Feature P-60), two shallow rectangular depressions possibly from gardens (Feature P-58), and an 11 ft by 11 ft concrete slab with an inscription (12.30.42). The slab has an attached irregular 2 ft 9 inch by 3 ft 4 inch sloping slab on the east side of unknown function and a mostly buried smaller slab further to the east, which may have served as a footing block (Feature P-61). Features P-57 and P-59 are concentrations of over 35 sanitary seal cans with punched bottoms. These were probably used for planting seedlings.

West of the lath house location, Feature P-64 consists of several depressions, concrete rubble, and a portion of concrete wall at the location of the first relocation center outdoor theater. The theater was reportedly only used a few times before it was dismantled due to its inconvenient location (see Chapter 4). No remains associated with the golf course and developed picnic area

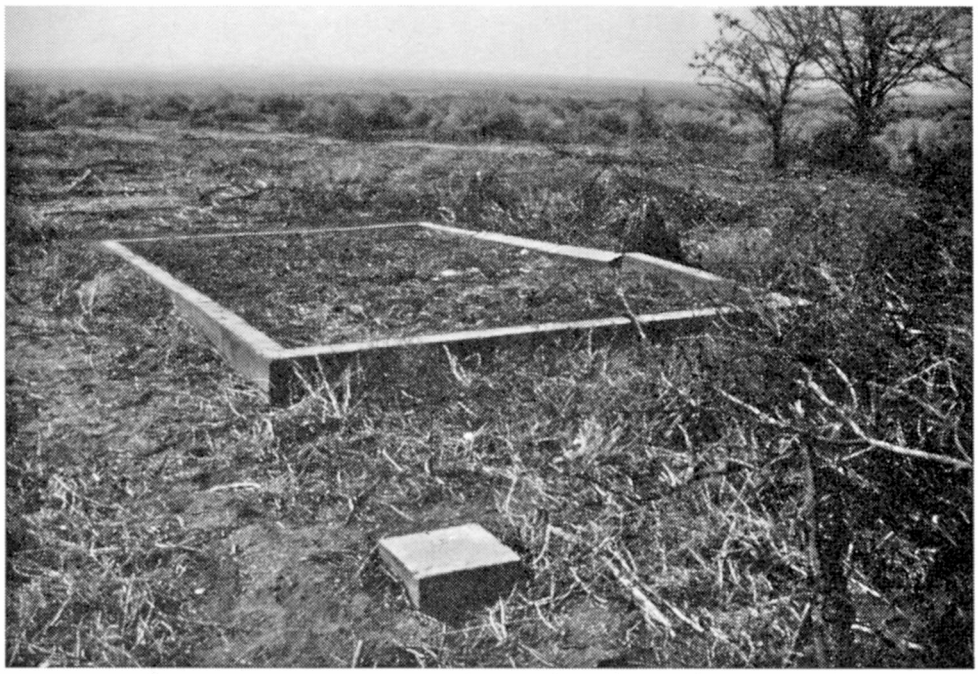


Figure 9.116. Concrete perimeter foundation (Feature P-7).

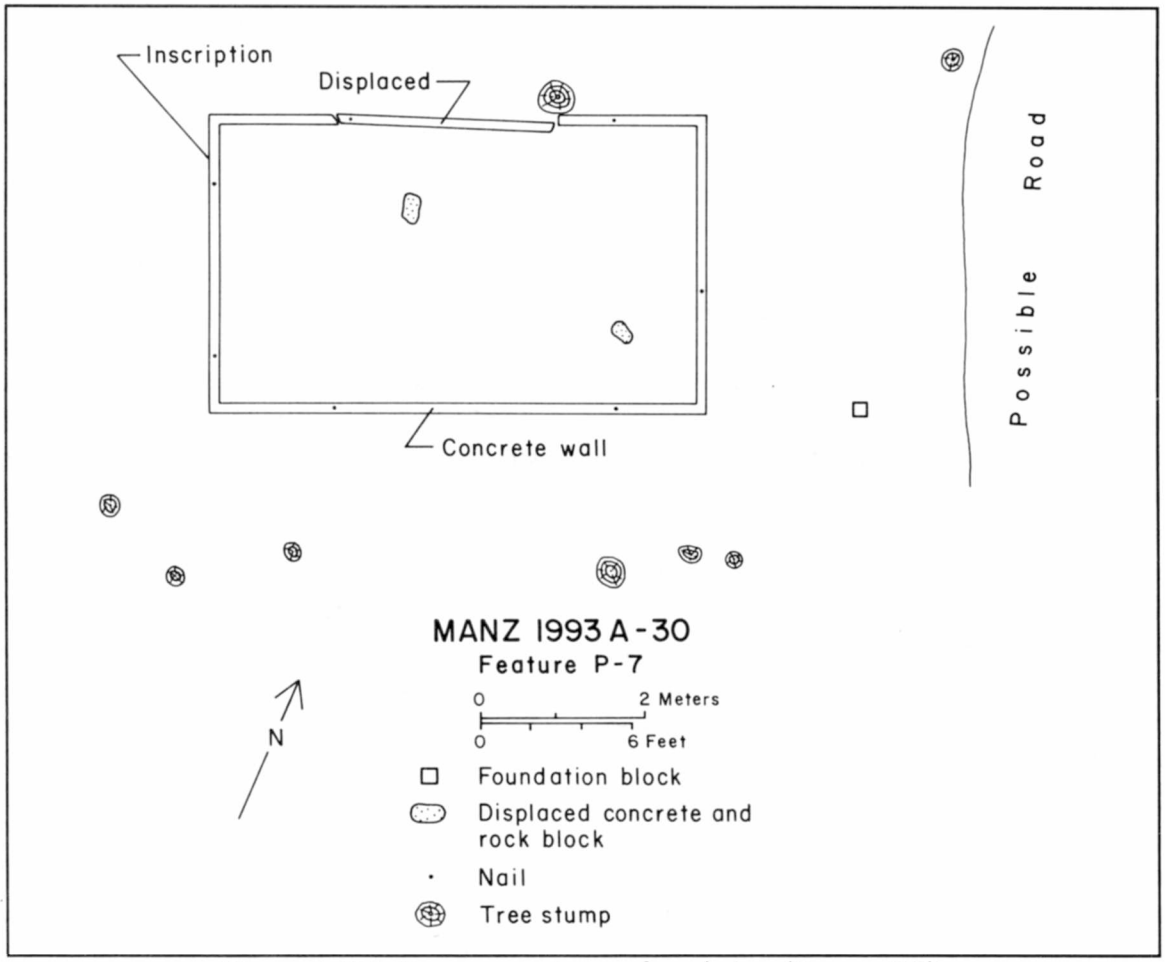


Figure 9.117. Concrete perimeter foundation (Feature P-7).

on Bairs Creek were located. Two concentrations of concrete steps and other rubble along the edge of Bairs Creek are likely from dismantled buildings in the Administration and Staff Housing areas.

In the northwest portion of the perimeter, Feature P-3 consists of a 1-inch-thick, 10 ft by 10 ft fractured concrete slab on a 1-ft-high earthen mound. On relocation center blueprints this building is depicted as Building 48, but no function is identified. It may have been used as a storage room for nearby victory gardens.

North of the relocation center residential area, on the west side of the road to the northern farm fields is Feature P-7. It consists of a 6 -inch-wide 12 ft by 20 ft concrete perimeter foundation (Figures 9.116 and 9.117) with an inscription (1944) and associated artifacts. There is a roughly 14-inch-square concrete footing block and a road trace to the east. The concrete has a surface texture similar to a slab at the relocation center chicken ranch (MANZ 1993 A-31). Artifacts noted include electrical conduit, sheet metal, water pipe, wire nails, and a white stoneware ceramic. This foundation is designated Building 49 on relocation center blueprints, but no function is identified.

Feature P-9 is a 15 ft by 15 ft rough concrete slab, about 2 inches thick. The use of this feature is not clear. Its size and construction suggest it is likely associated with the relocation center. It is located north of Block 33 and west of a road used to access farm fields north of the relocation center.

Feature P-10 is a capped well located north of Block 33 and east of a road used to access farm fields north of the relocation center. The well pipe is surrounded by an 8-ft-square concrete slab with iron-reinforced corners. A 32-inch-wide skirting of concrete and rock was added, likely during the relocation center use. There are hand and finger prints and the initials "BK" in the concrete. An earthen ditch heads east from the well towards the former Shepherd Ranch location (see Chapter 11) and the relocation center North Park. The well, used by the relocation center as a backup water supply, was originally used by the town of Manzanar (ca. 1910–1930) and possibly the Shepherd Ranch (ca. 1880-1910). Three wells are shown in this area on 1930s LADWP plat maps (numbers 167, 168 and 169). The number 169 is painted on the concrete slab of the well.

Agricultural Features and Orchards

Visible within the perimeter on 1944 aerial photographs are three areas used for victory gardens. These include a large portion of the northern perimeter, a small area in the northeastern corner of the perimeter, and an area west of the Staff Housing Block. Remains associated with each of these areas were found. The staff victory garden was recorded as part of the Bairs Creek Irrigation System (MANZ 1993 A-35) and is discussed under that heading below.

Water was brought to the northern perimeter victory gardens from the relocation center reservoir (see Water Delivery System, MANZ 1993 B-11, below).

Four features associated with these gardens and the water delivery system were identified. North of the victory garden area, Feature P-2 consists of an earthen ditch, possibly for flood control, and a parallel alignment of wooden posts and downed wire fencing. Feature P-6 consists of terraced garden areas in the victory garden.

Northwest of the victory garden area a wooden weir box (Feature P-4) and two earthen ditches (Feature P-5) divert the flow of a small drainage to an area north of the victory gardens.

Northeast of Block 35, in the northeast corner of the central portion of the relocation center, there are several short sections of concrete-lined ditch (Feature P-21). A small victory garden is visible in this area on the 1944 aerial photograph (see Figure 9.2).

Figure 9.118. Barbecue grill in North Park (Feature P-14).

Two remnant pre-relocation center orchards are within the perimeter. Both were likely maintained by evacuees. One, east of Block 13, consists of about 10 live and dead trees (Feature P-35), the other, west of Block 12, consists of numerous dead trees and stumps (Feature P-68).

Miscellaneous Features

Two barbecue grills are in the central portion of the northern perimeter in an area used by the evacuees as a park (North Park). One is a 7 ft 6 inch by 5 ft 2 inch grill made of metasedimentary rock and concrete, the front is 3 ft 8 inches high and the back is presently 5 ft 4 inches high. Most of the chimney has been removed (Feature P-14, Figure 9.118). Inscriptions on the concrete top of the grill area include a name and a date (Ray Kobote, August 1943). The other barbecue is a 4 ft by 6 ft 3 inch flat-top grill 33 inches high made of granite boulders and concrete (Feature P-15, Figure 9.119).

Another grill, of much less substantial construction, is in the southern perimeter. It consists of a crude, low U-shaped grill-like feature made of cement and concrete blocks (Feature P-52). Its relocation center ascription is based on the concrete blocks which are similar to ones used for a step at relocation center chicken ranch incinerator (see MANZ 1993 A-31).

Located north of the relocation center entrance is an enigmatic feature. It consists of boulders, terraced areas, and eight wooden barrels imbedded in asphalt (Feature P-36, Figure 9.120). It may be associated with a fuel oil storage tank shown near here on relocation center blueprints.

Feature P-71 is a windbreak of locust trees along the western edge of the relocation center area west of the hospital. Most of the trees are dead and many have been cut for fuelwood.

The final perimeter feature consists of three imbedded sections of upright concrete pipe along the western perimeter (Feature P-69). These are apparently access holes for a waterline.

Artifact Concentrations

Only three of the 28 recorded artifact concentrations are at former garbage can rack locations, the others likely represent abandonment behavior. Two of the trash concentrations were tested (Features P-17 and P-18). Artifact concentrations pre-dating the relocation center and artifacts associated with

Figure 9.119. Barbecue grill in North Park (Feature P-15).

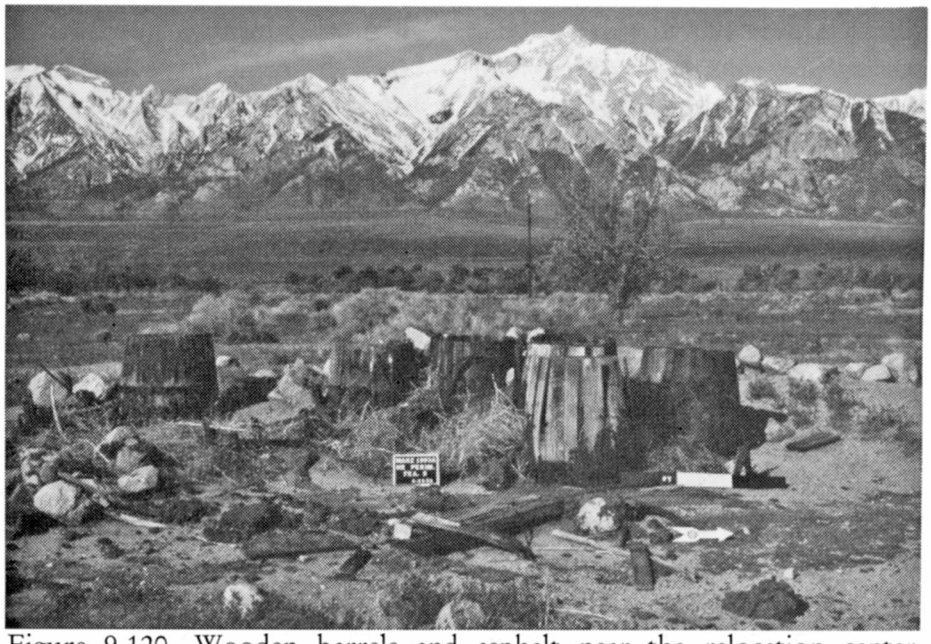


Figure 9.120. Wooden barrels and asphalt near the relocation center entrance (Feature P-36).

pre-relocation center features were recorded as separate sites (see Chapter 11).

Feature P-1 (50 ft by 150 ft in size) is located north of the Hospital block, between 9th Street and a parallel ditch (MANZ 1993 B-11, Feature 2) to the north. It contains hundreds of wire nails and corrugated fasteners, likely left from dismantled buildings.

Feature P-11 (150 ft by 200 ft in size) is located north of Block 33 and west of a road used to access farm fields north of the relocation center. It includes hundreds of clear glass fragments, hundreds of window glass fragments, lumber scraps, a thick stoneware coffee cup fragment, a horseshoe, and concrete chunks.

Feature P-12 (100 ft by 100 ft in size) is located north of Block 33 and east of a road used to access farm fields north of the relocation center. It includes two metal 55-gallon drum halves, a cut iron tank, assorted lumber, pipe fittings, over 12 concrete blocks, concrete chunks, and an iron pipe.

Feature P-13 (25 ft by 100 ft in size), located along a ditch heading east from Well 169 (Feature P-10), includes bolts, pipe fragments, large pieces of lumber, and barbed wire.

Feature P-16 (50 ft by 325 ft in size) is located along the northern edge of Block 36. It consists of scattered artifacts and several small artifact concentrations that include over 100 clear glass fragments, white glass fragments, brown glass fragments, a "Seven-Up" bottle fragment, a "Purex" bottle base, over 100 wire nails, about 25 metal parts and fragments, three sanitary seal cans, a can lid, a jar lid, metal pipe fragments, 10 crown caps, a salt-glazed sewer pipe fragment, small lumber fragments, and small piles of dirt and rock. The dumping of trash in this area by the residents of Block 36 is mentioned as a fire and sanitation hazard in the 4/22/43 Block Managers Daily Report for Block 36.

Feature P-17 (75 ft by 75 ft in size) is located north of Block 35. It consists of 50 window glass fragments, a small jar, glass fragments (90% clear, 10 white, 6 brown 3 blue, 2 green, 1 purple), pressed glass fragments, plate fragments, wire nails, metal bits, melted glass, a "Coke" bottle fragment, a pan handle, can fragments, and about 20 lumber fragments. The results of a 1 m by 1 m unit excavated at this feature are discussed below.

Features P-18 through P-20 are three adjacent artifact concentrations located just northeast of Block 35. Most of this area was used for a victory garden (see Figure 9.2) suggesting these deposits date to the abandonment of the relocation center in late 1945.

Feature P-18 (30 ft by 60 ft in size) includes a shallow 10 ft by 10 ft depression blanketed with abundant burned trash. The hole may have been left by bottle collectors. Noted in and around the hole were thousands of glass fragments, hundreds of wire nails, a metal button, assorted hardware and screws, barrel hoops, a small spring, small can fragments, a ceramic cup handle fragment, plate fragments, a perfume bottle fragment, terra cotta flower pot fragments, and "Seven-Up" and "Coke" bottle fragments. Noted in the remainder of Feature P-18 were approximately 100 aqua, blue, and clear glass fragments, three purple glass fragments (including a bottle base), a few sanitary seal cans, and a metal toy car part. The results of a 1 m by 1 m unit excavated at this feature are discussed below.

Just east of Feature 18, Feature P-19 (80 ft by 80 ft in size) includes hundreds of clear and aqua glass fragments (one base embossed with "... tooth powder"), at least 20 purple glass fragments (one base embossed with "331 ...ATR..."), about 100 plate fragments, a "Seven-Up" bottle base (with the Owens Illinois Bottle Co. hallmark and a "2" date code), and a sanitary seal can.

Feature P-20 (65 ft by 65 ft in size) is located southeast of Feature P-19 across a dirt road. It consists of thousands of glass fragments (clear, green, brown, and a few purple; embossed pieces include "Crown Products Corp.", "Lambert ...cal Company", "Log Cabin Syrup", and "Purex"), crown cap finish (soda) bottle fragments, about 50 sanitary seal cans, 50 plate fragments, a red brick fragment, an iron pipe elbow, bits of wallboard, toilet bowl fragments, and part of a galvanized bucket. Noted hallmarks include the Hazel-Atlas Glass Co. (1920-1964), the Owens Illinois Bottle Co. (1932+), and the Maywood Glass Co.

Feature P-22, about 80 ft by 80 ft in size, is located just beyond the southeast corner of Block 36. It includes about 100 clear glass fragments (including one with the hallmark of Glass

Containers Inc. [1945+]), brown glass fragments, a "Bubble-Up" bottle fragment, about 50 plate fragments (including one with "TEPCO USA"), a light bulb fragment, numerous wall board bits, around 100 wire nails, and a sanitary seal can.

Feature P-23 (50 ft by 80 ft in size), located northeast of Block 25, consists of plate fragments, clear glass fragments, and some brown glass fragments. Immediately to the east there is a 25 ft by 40 ft area of asphalt.

Feature P-24 (75 ft by 75 ft in size), east of Block 25, consists of about 25 window glass fragments, over 1,000 clear glass fragments, around 100 brown glass fragments, 50 green glass fragments, a "Ben-Hur Coffee" jar, a can lid, about 50 wire nails, a metal part, a pocket tobacco can, a metal snap, and an electrical porcelain knob.

Feature P-25 consists of a small sand pile and artifact concentration in a 25 ft by 25 ft area east of Block 25. Artifacts noted include over 100 brown and clear glass fragments, a large brown glass jug base, electrical wire, plate fragments, two sanitary seal cans, a Master-type padlock, and a concrete chunk.

Feature P-26, 130 ft by 150 ft in size, is located east of Firebreak A6 along the U.S. Highway 395 right-of-way fence. It contains hundreds of clear glass fragments, a whiskey bottle (Peerless Distiller, Vancouver, Canada), and a "Canada Dry Ginger Ale" bottle base, hundreds of ceramic plate and coffee cup fragments, 11 crown caps, four press-on can caps, wire nails, a spoon, a bath tub stopper, and scraps of lumber. Ceramic hallmarks include O.P.CO Syracuse with a Virginia logo on the front (ca. 1940s), John Maddock & Sons (ca. 1940s), and "Made in Japan" (1921+).

Feature P-27, 30 ft by 30 ft in size, is also located east of Firebreak A6 along the U.S. Highway 395 right-of-way fence. It contains approximately 100 clear glass fragments, about 20 brown glass fragments, a hotelware cup fragment with the Sterling China Co. hallmark (ca. 1940s), and two sanitary seal cans.

Feature P-28, 100 ft by 100 ft in size, is located just east of Firebreak A6. Artifacts are primarily concentrated on a low 20-ft-diameter mound which includes thousands of brown and clear glass fragments, a milk bottle fragment, around 20 ceramic plate fragments, a coffee cup fragment with the Wallace China hallmark (ca. 1940s), a shoe heel, a belt buckle, about 20 crown caps, wire nails, two light bulb bases, a condensed milk can, a pocket tobacco can, and a dark blue glass marble. Embossed glass fragments include "Purex," fragments of two "Old Quaker" whiskey bottles (embossed with "Federal Law Forbids ...;" 1933-1964), three Owens Illinois Bottle Company hallmarks (with 1941 and 1942 dates), the Maywood Glass Co. hallmark, "Glube Bottling Co. Property Los Angeles Cal," and "PAT. APP FOR ..R 174 65-41." Artifacts noted in the area surrounding the low mound included thousands of clear glass fragments, hundreds of brown, green, and blue glass fragments, "Mission" soda, "Seven-Up," and "Coke" bottle fragments, plate and coffee cup fragments, an electrical porcelain knob with a nail, a Ford spark plug, and a pocket tobacco can.

Features P-30 through P-33 are four adjacent artifact concentrations located between Block 19 and the U.S. Highway 395 right-of-way fence. Closest to the residential block, Feature P-30 (100 ft by 225 ft in size) contains approximately 100 glass fragments (brown, clear, green, "Barq's" soda), two pieces of embossed purple glass, 15 crockery fragments, a sanitary seal can, five metal slugs, hundreds of wire nails, a 1-inch-diameter metal twist cap, a crown cap, an iron cable, electrical screws, an electrical porcelain knob with nail, and other electrical porcelain fragments.

East of the Feature P-30 concentration, Feature P-31 (100 ft by 130 ft in size) contains hundreds of wire nails, numerous metal slugs and concrete pipe fragments, over 12 can lids, a hacksaw blade

fragment, and a clear whiskey bottle (with the Glass Containers Inc. hallmark and a 1941 date). Within this locus there is a 50 ft by 75 ft area of burned ground.

Just east of Feature 31, Feature P-32 (25 ft by 30 ft in size) contains hundreds of wire nails and a hotelware plate fragment with the Shenango Pottery Co. hallmark (early 1940s). Adjacent Feature P-33 (10 ft by 15 ft in size) includes hundreds of soda bottle fragments ("Coke," "Barq's," "Antelope," and "Squirt"), electrical porcelain fragments, wire nails, bits of wire, can lids, crown caps, and a sanitary seal can.

Feature P-34, east across the road from the Fire Station (Block 13), includes two low mounds and an artifact concentration in a 75 ft by 100 ft area. Artifacts noted include thousands of window and glass bottle fragments ("Coke," clear, brown, green, blue), a boot fragment, two glass buttons, three dry cell batteries, three light bulb bases, thousands of wire nails, lumber fragments, a can, large bolts and nuts, about 100 cup and plate fragments, a complete coffee cup (with a "TEP-CO" basemark), a razor, metal parts, a shoe heel tap, six carbon rods from batteries, and a crown cap.

Feature P-43 (20 ft by 60 ft in size) is at the former location of a trash can rack across the road from the Director's Residence. It consists of about 100 glass fragments (clear and white), 50 clear blue glass fragments (some with embossed side panels), and three sanitary seal cans.

Feature P-44 (10 ft by 15 ft in size) is just inside the perimeter fence east of the Staff Housing Block. It consists of about 20 clear glass fragments, two metal parts, and three lumber fragments.

Feature P-45 (35 ft by 90 ft in size) is at the former location of a trash can rack southeast of the Staff Housing Block. Included are thousands of clear glass fragments, around 1,000 brown glass fragments, 50 plate fragments, five cans, a large nail, a nut, eight lumber fragments, two clay sewer pipe fragments, and bone fragments.

Feature P-46 is a concentration of artifacts in a 50 ft by 50 ft area of hard-packed soil devoid of vegetation in the extreme southeast portion of the perimeter (northwest of Watchtower 7). Artifacts noted include around 100 "Coke" bottle fragments, 50 clear glass fragments, dark blue glass fragments, a perfume bottle, yellow ceramic plate fragments, a metal button, three sanitary seal cans, and two small metal straps with nails.

Feature P-65 (140 ft by 200 ft in size), southwest of Block 6, consists of hundreds of clear glass fragments, hundreds of brown, green, white, and gold glass fragments, a sanitary seal can, can bits, and hundreds of plate fragments (mostly white-ware with some yellowware). Most items are in a gully that has eroded through the relocation center landfill, but others are scattered to the south.

Feature P-66, 25 ft by 25 ft in size, is at the former location of a garbage can rack at the southwest corner of Block 12. It consists of over 100 clear glass fragments, 10 brown glass fragments, 10 window glass fragments, 30 plate fragments, three sanitary seal cans, four metal parts, and some smooth wire.

Feature P-72 (40 ft by 60 ft in size), northwest of the Hospital Block, includes barbed and smooth wire, 10 sanitary seal cans, and a pocket tobacco can. There is a trash can and a stove part in the drainage to the south.

Other Artifacts

Historical artifacts within the perimeter area but outside of designated feature and site areas were noted and plotted on maps on file at the Western Archeological and Conservation Center, Tucson, Arizona. These "isolated" artifacts include about 100 window glass fragments, hundreds of bottle glass fragments (80% clear, 10% brown, green, white, gold, blue, purple), over 85 sanitary seal cans, two pocket tobacco cans, five can lids, two

Table 9.7.
Historical Artifacts Recovered from Feature P-17 (MANZ 1993 A-30 [Excavation Unit 19]).

Object Classification		Glass	Metal	Other
Structural	Structural Materials		1	12
	Window Glass	117		
	Hardware			
	Nails		18	
	Utilities		2	
Domestic	Beverage Storage	2		
	Food Storage	32	19	
	Food Preparation			
	Food Remains			4
	Food Serving			2
	Furnishings		2	
	Pharmaceutical	1		
Personal	Clothing		4	
	Jewelry		1	
	Grooming and Hygiene	1		
	Money			
Activities	Ammunition			
	Leisure			
	Automobile			
	Miscellaneous Tools		3	
	Toys			
	Writing			12
Unclassified			7	

drum lids, crown caps, sheet metal, metal parts, an automobile fender, an automobile U-joint, a farm equipment part, pipe and pipe fittings, stove parts, stove pipe, cast iron stove parts, fencing, barbed and smooth wire, electrical wire, wire nails, nuts and bolts, two galvanized buckets, around 30 ceramic fragments (mostly earthenware cups and plates), electrical porcelain parts and fragments, a shoe fragment, two buttons, two glass marbles, red and yellow brick fragments, concrete fragments, and lumber fragments.

Feature P-17 Testing

A 1 m by 1 m unit (Excavation Unit 19), placed in the central portion of Feature P-17, was excavated to a depth of 50 cm. Three major strata were discerned based on texture, color, compaction, and cultural constituents. Stratum 1, the uppermost stratum, consists of loose pale brown (Munsell color 10YR 6/3) sandy silt with gravels, numerous artifacts, and charcoal. It extended up to 15 cm deep. There was a 2 cm-thick charcoal layer at the termination of Stratum 1. Stratum 2 consists of loose grayish brown (10YR 5/2) silty sand with some artifacts and charcoal. This stratum was from 5 cm to 25 cm thick. Stratum 3, the lowest stratum encountered, consists of culturally sterile light brownish gray to light gray (10YR 6/2–7/2) compact sandy silt. It began at depths varying from 20 to 40 cm.

Artifact Assemblage

In all, 240 historical artifacts were recovered from excavation Unit 19; none were from below 30 cm. Where possible the historical artifacts were classified by function. Items recovered range from structural materials to personal items (Table 9.7).

Structural materials recovered from Unit 19 include 117 window glass fragments, a section of cut water pipe, 18 nails, nine 3/4-inch-thick lumber fragments, and drywall and plaster fragments. The nails include 14 common nails (two 8d, two 6d, two 4d, one 3d, three 2d, and

four fragments), two finishing nails (2 inch and 1¼ inch), a staple fragment, and a corrugated fastener.

Domestic remains recovered from Unit 19 include a "Ben-Hur Mustard" jar, a "Pompeian Olive Oil" jar base, a jar base with the Owens Illinois Bottle Company hallmark and the date code "2", a small baby food jar, 27 clear glass fragments, a "Coke" bottle fragment, a brown glass fragment, 11 sanitary seal can fragments, three jar lids, five twist caps, two nonvitreous white-bodied earthenware saucer fragments, two animal bones (pig and chicken), two eggshell fragments, and two electrical plug prong fragments.

Personal items recovered from Unit 19 include four metal shoe eyelets, a brass bead, and a large fragment of a cosmetics jar. Other materials recovered include 12 slate fragments possibly from a chalkboard, a metal washer, an aluminum washer, a cut bolt, a large chain link, a spike fragment, two machined heavy bronze fragments, and miscellaneous metal fragments.

Feature P-18 Testing

A 1 m by 1 m unit (Excavation Unit 20), placed along side a shallow depression, was excavated to a depth of 50 cm. Three strata were discerned based on texture, color, compaction, and cultural constituents. Stratum 1, the uppermost stratum, consists of slightly compact dark gray (Munsell color 10YR 4/1) sandy silt with numerous artifacts and charcoal. It extended from 10 to 30 cm deep. Stratum 2 consists of loose grayish brown (10 YR 5/2) sandy silt with a few artifacts. This stratum was from 2 cm to 20 cm thick. Stratum 3, the lowest stratum encountered, consists of culturally sterile brown (10YR 5/3) compact sandy silt. It began at a depth of 30 cm.

Artifact Assemblage

In all, 319 historical artifacts were recovered from excavation Unit 20; many were burned or melted and most (95%) were from above 30 cm. Where possible the historical artifacts were classified by function. Items recovered range from glass and ceramic sherds to nails and personal items (Table 9.8).

Structural materials recovered from Unit 20 include a screen latch, six screen door spring fragments, a hook and eye screw, three wood screws, and 69 nails. The nails include 57 common nails (two 2d, five 3d, 12 4d, three 5d, 11 6d, three 7d, four 8d, one 16d, and 17 fragments), five finishing nails (one 1 inch, three 2 inch, and one 2½ inch), four roofing nails (two 2 inch, one 1¼ inch, one 3/4 inch), two staples (1/2 inch and 3/4 inch), and a corrugated fastener. The wood screws include one ½ inch, one 3/4 inch, and one 1½ inch.

Recovered items associated with beverage storage from Unit 20 include 11 "Seven-Up" bottle fragments (1937+), four "Coke" bottle fragments, a clear bottle fragment with a crown cap finish, a clear glass fragment embossed with "...T 4/5 P...," two pieces of lead foil (possibly from a wine bottle cork cover), and a crown cap. Recovered items associated with food storage include four can fragments, 19 jar lid fragments, 136 clear glass fragments, and three aqua glass fragments. The clear glass fragments include a round base with the Glass Containers Inc. hallmark (1945+) and a fragment embossed with "Duraglass."

Recovered food remains consist of nine faunal remains and a peach pit. Identifiable faunal species include jackrabbit and chicken (Appendix H). Items associated with food serving include eight fragments of a pressed glass bowl, three drinking glass fragments (with orange and brown stripes), a non-vitreous white-bodied earthenware soup bowl fragment with dark red stars around the exterior rim, and a dark brown/black glazed porcelain body fragment.

Recovered items classified as furnishings include two fragments of light bulb glass. Items classified as pharmaceutical include five blue glass

Table 9.8.
Historical Artifacts Recovered from Feature P-18 (MANZ 1993 A-30 [Excavation Unit 20]).

Object Classification		Glass	Metal	Other
Structural	Structural Materials			
	Window Glass			
	Hardware		11	
	Nails		69	
	Utilities			
Domestic	Beverage Storage	17	3	
	Food Storage	139	23	
	Food Preparation			
	Food Remains			1
	Food Serving	11		2
	Furnishings	2		
	Pharmaceutical	7		
Personal	Clothing		6	
	Jewelry			
	Grooming and Hygiene	7		
	Money		1	
Activities	Ammunition			
	Leisure			
	Automobile			
	Miscellaneous Tools			
	Toys	5		
	Writing		1	
Unclassified			14	

fragments and two melted glass pipette fragments. Personal artifacts recovered include a 1935 dime, six white cold cream jar fragments (with an embossed rim design), a cologne bottle fragment, a shell button, an undergarment strap fastener, two shoe eyelets, a shoe hook, a snap, and a wire from a campaign-type button. Activities group artifacts recovered include four standard-size glass marbles (one melted), a small glass marble, and a metal band from a pencil.

Unclassified recovered include five pieces of wire, two metal straps, a brass cap, and six metal fragments.

Hospital Landfill and Post-Relocation Center Dump
(MANZ 1993 A-37)

This site, roughly 3 acres in area, is located within the perimeter of the central portion of the relocation center, just west of the hospital block. It consists of a landfill associated with the relocation center hospital and other dumps and scattered trash from later adaptive use of the center (ca. 1946-1949). Four loci (A–D) were designated, and two 1 m by 1 m units were excavated at this site, one at Locus A and one at Locus C.

Locus A, across the road from the hospital block, measures 50 ft north–south by 100 east–west. It consists of an artifact concentration in and around a shallow depression, possibly a hole left by bottle collectors. Artifacts noted during survey at this locus include thousands of brown and clear glass fragments, about 50 blue glass fragments, white glass fragments, two purple glass fragments, hundreds of plate fragments, over 20 terra cotta flower pot fragments, blue-glazed earthenware, seven sanitary seal can fragments, four plastic medical bottle caps, a white "Go" piece, a rubber stopper, a leather shoe fragment, metal parts, asbestos board, small lumber fragments, over 50 yellow brick fragments, and a concrete chunk. The brick

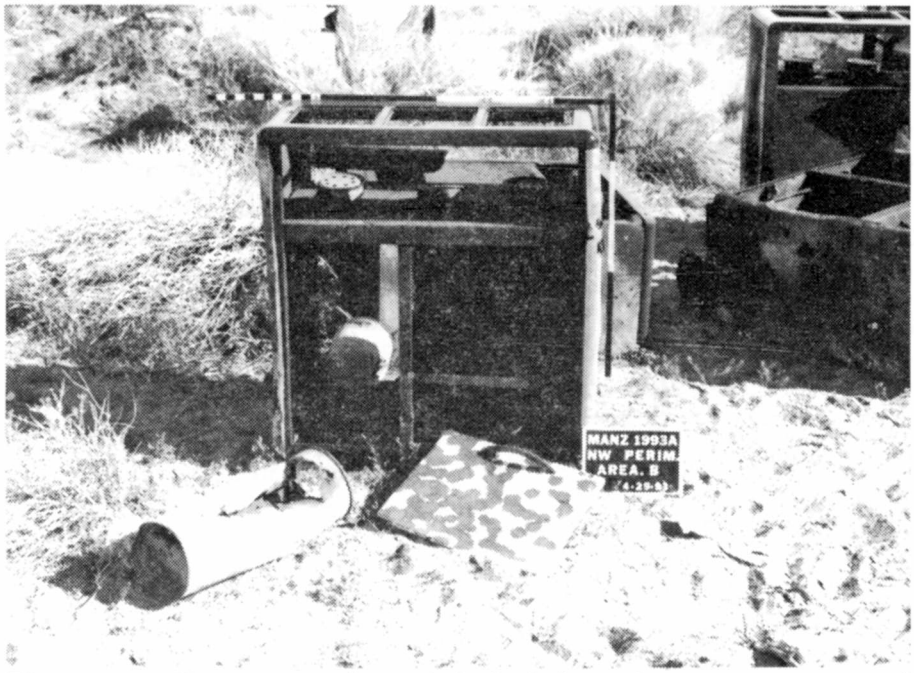


Figure 9.121. Stoves west of Hospital Block (MANZ 1993 A-37, Locus B).

fragments and concrete chunk may be remnants of an incinerator shown on a relocation center blueprint in this general area.

Locus B is a 50-ft-diameter area, 100 ft west of Locus A, containing eight enameled metal cooking stoves (Figure 9.121), a water heater, ten fuel oil containers, a glass medical bottle with plastic cap, a sanitary seal can, a purple glass fragment, lumber bits, and wire fencing.

Locus C, measuring 100 ft north–south by 65 ft east-west, is located along a gully 150 ft north of Locus A. Noted on the surface and eroding out of the gully were over 10,000 can fragments, over 10,000 glass fragments (clear, brown, green, white, blue), over 1,000 plate fragments, several broken soda bottles, milk bottle fragments, "Purex" and "Clorox" bottle fragments, a 55-gallon oil drum, cooking pans, car parts, other metal parts, toilet bowl fragments, concrete slab fragments, cable, window glass, light bulbs, oval liquid prescription medicine bottles, a likely toothpaste tube, and a few bone fragments.

Locus D, a 65 ft north–south by 100 ft east–west area within the gully 100 ft upstream (west) of Locus C, includes two trash cans, stove parts, fuel oil containers, and brown glass fragments.

Locus A is apparently a dump used by the relocation center hospital. Excavation revealed that Locus C post-dates the relocation center: recovered during subsurface testing were numerous bottles with embossed 1947 to 1949 manufacturing dates. The material is probably trash from the few years after the relocation center closed, when the administration area was used for veterans housing. The condition of the trash at Loci B and D suggests that it, too, post-dates the relocation center, and may include items abandoned when the veterans housing was closed. The relocation center broke up, crushed, and buried their abandoned material (see Disposal Pits [MANZ 1993 B-9] in Chapter 10).

Locus A Testing

One 1 m by 1 m test unit was excavated at this locus (Excavation Unit 25). It was placed within the depression in the central portion of the artifact concentration (Figure 9.122). Artifacts were recovered to 75 cm in depth.

Figure 9.122. Excavation at the Hospital Landfill (MANZ 1993 A-37, Locus A).

Figure 9.123. Excavation Unit 25 south sidewall (MANZ 1993 A-37, Locus A).

Stratigraphy

Six major strata were discerned based on texture, color, compaction, and cultural constituents. Each stratum is described below, and sidewall profiles are illustrated in Figures 9.123 and 9.124.

Stratum 1, the uppermost stratum, consists of loose grayish brown (Munsell color 10YR 5/2) sandy silt with abundant artifacts and charcoal. It extended up to 10 cm deep.

Stratum 2 consists of lenses of grayish brown to dark gray (10YR 5/3–4/1) sandy silt with some artifacts and concrete rubble. This stratum was

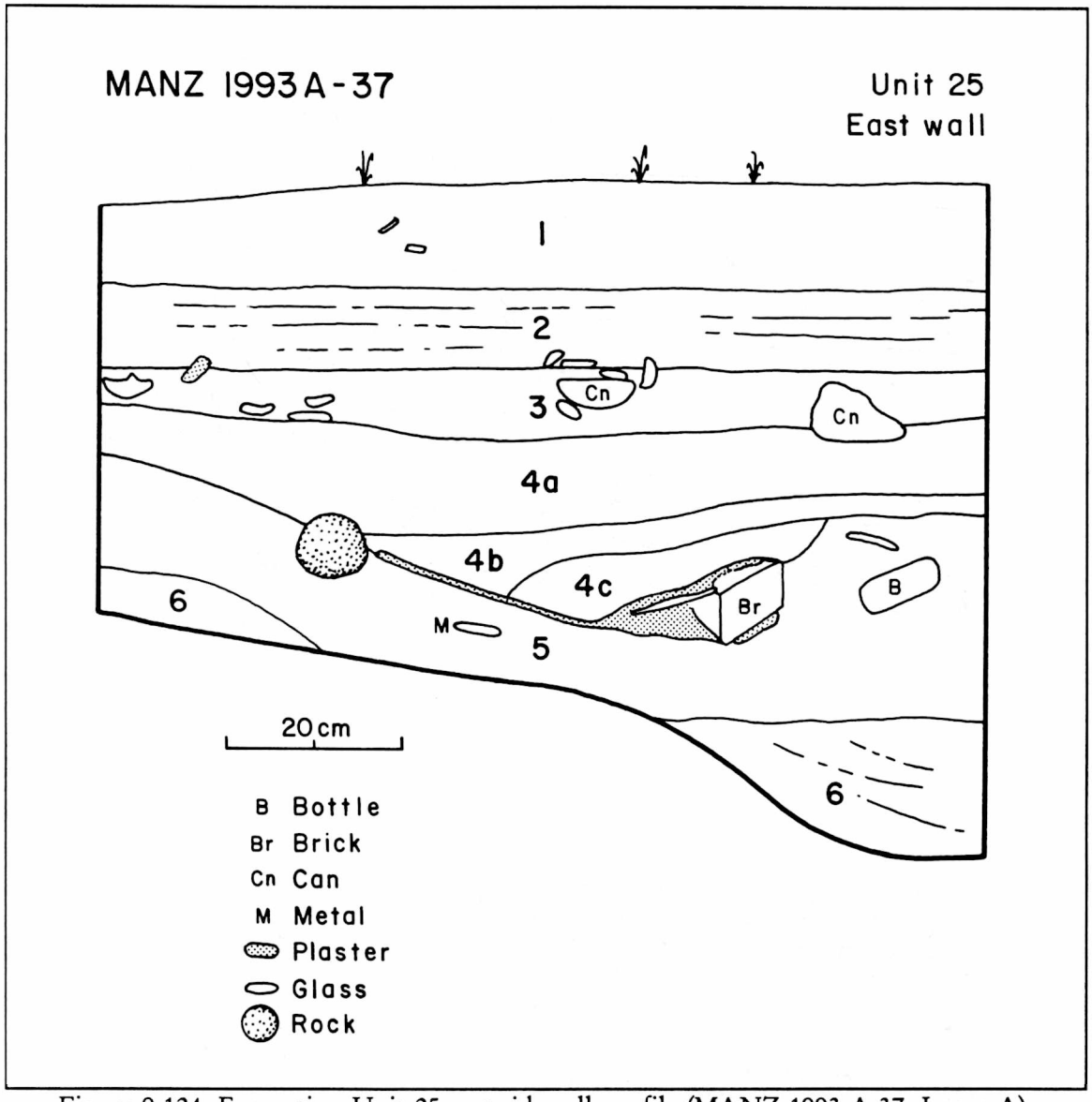


Figure 9.124. Excavation Unit 25 east sidewall profile (MANZ 1993 A-37, Locus A).

about 10 cm thick.

Stratum 3, 4 to 8 cm thick, consists of dark gray (10YR 4/1) lenses of sandy silt with some brown (10YR 5/3) mottling. There were quite a few artifacts and charcoal in this stratum.

Stratum 4 consists of three slightly different layers of compact silt; virtually no artifacts were recovered from this stratum. Stratum 4a is grayish brown to brown (10YR 5/3–5/2) silt with some sand, about 12 cm thick. Stratum 4b is pale brown (10YR 6/3) sandy silt, 4 to 6 cm thick. Stratum 4c, about 6 cm thick, is a compact pocket of light brownish gray (10YR 6/2) silt with some sand.

Stratum 5, first encountered at 30 cm depth, contains most of the artifacts recovered. The soil matrix consists of dark gray (10YR 4/1) sandy silt. This stratum was irregular in thickness and depth but was in general 20 to 25 cm thick. Stratum 5 also contained a small granite boulder (see Figure 9.123) and several thin layers of burned soil.

Stratum 6, the lowest stratum encountered, consists of culturally sterile grayish brown to

Table 9.9.
Historical Artifacts Recovered from the Relocation Center Hospital Landfill (MANZ 1993 A-37, Locus A [Excavation Unit 25]).

Object Classification		Glass	Metal	Other
Structural	Structural Materials			
	Window Glass	15		
	Hardware		2	
	Nails		150	
	Utilities	45	14	1
Domestic	Beverage Storage	27	12	
	Food Storage	3	80	
	Food Preparation			
	Food Remains			69
	Food Serving	3		19
	Furnishings	1	1	6
	Pharmaceutical	1,842	30	46
Personal	Clothing	1	1	4
	Jewelry			
	Grooming and Hygiene	17	1	
	Money			
Activities	Ammunition			
	Leisure			4
	Automobile			
	Miscellaneous Tools		24	1
	Toys	1		
	Writing			
Unclassified			263	21

brown (10YR 5/3–5/2) compact sand. It began at depths varying from 42 to 74 cm.

Artifact Assemblage

Over 2,600 historical artifacts were recovered from excavation Unit 25. Where possible the historical artifacts were classified by function. A wide range of items were recovered (Table 9.9). However, over 70 percent of the items were categorized as pharmaceutical. The majority of items were fragmentary, so artifact counts reflect the total number of sherds or fragments, rather than a tally of complete objects. Due to time constraints very little reconstruction of items was attempted, but several reconstructible items appear to be present. Much of the material is burned or partially melted.

Structural Artifacts

Structural artifacts recovered include two hardware screws, four water pipe fragments, two pipe fittings, a piece of electrical wire, a drain grate, two 1/2-inch-diameter copper tubes, four light bulb bases, 45 fragments of light bulb glass, 15 window glass fragments, and a ceramic recessed on-off switch.

A total of 150 nails was recovered. These include 21 common nails, five miscellaneous nails, and 124 too fragmentary to further classify. Common nails include 11 of sizes normally used for shingles and slats (4d and smaller), nine of sizes generally associated with clap-boarding and finish work (5d–8d), and one of a size generally used for heavy framing (20d). Other miscellaneous nails include one 2½ inch finishing nail, one 1 inch roofing nail, two 1 inch staples, and one corrugated fastener. The nails are likely from scrap wood used as kindling during trash burning.

Domestic Artifacts

Recovered items associated with beverage storage include 12 crown caps, eight "Coke"

Table 9.10.

Marks Noted on Artifacts at the Relocation Center Hospital Landfill (MANZ 1993 A-37, Locus A).

Glass

...phylline solution
...solv.t TCW CO...
Anacin
Anchor-Hocking Glass Corporation hallmark (1938+)
Aristocrat
Armstrong Cork Company, Glass Division hallmark (1938-1969)
B-D Yale 5cc Luer-Lok Benton Dickinson & Co. (syringe)
Brockway Glass Company hallmark (1925+)
CANOE (on base of trough-shaped unglazed porcelain fragment)
Clorox
Coke (Bishop Bottling Co.)
Cumberland Glass Manufacturing Company hallmark (ca. 1890-1900)
Cutter ✚ Standard
Dr. L(yons Tooth Powder)
Duraglass (Owens-Illinois Company trademark)
GE MAZDA 100W 120V (light bulb)
Hazel-Atlas Company hallmark (1920-1964)
Hospital
Hospital Liquids
J.T. Hamilton hallmark (1900-1943)
Kimble Glass Company hallmark (ca. 1947)
Knox Glass Bottle Company of Mississippi hallmark (1932-1953+)
Lee S. Smith
List No. 1941 Procaine HO ... 0% W/r Sc ...nott Lab
Listerine
Magnus, Mabee, and Reynard, Inc. hallmark (1895+)
Maywood Glass Company hallmark
Millville Bottle Works hallmark (1903-1930)
Musterole
novacain solution...tary extract local use ...
Obear-Nester Glass Company hallmark (1915+)
Owens
Owens-Illinois Pacific Coast Company hallmark (1932+)
Pyrex (1915+)
Richard Hund... New York Park three flowers ...tiantime (baby food jar)
Sani-Glass ✚ (Brockway trademark)
Whitall-Tatum and Co. hallmark (1935-1938)
Wine 44
Woodbury (cold cream jar)

Other

...res No Heat ★ No. CH-1 (aluminum strip)
Baker's (plastic cap)
Colg(ate) (toothpaste tube)
Devol RU (paper label)
Dextrose in Saline (metal tag)
Mallinckrodt (plastic cap)
Potassium Bromide (paper label)
PYREX GE CO USA (20-amp fuse)
Transfuso-Vac for 500cc of Blood (metal tag)
Tear Off (metal tag)

bottle fragments (one marked as bottled in Bishop), a green wine bottle base (with a likely 1944 date), two brown beer bottle fragments, a clear whiskey bottle fragment, 13 green glass fragments, and two olive green glass fragments. Other glass fragments listed below under pharmaceutical may also be from beverage bottles.

Recovered items associated with food storage include 51 can fragments (all identifiable ones were sanitary seal), 28 can lid fragments, a can key fragment, a glass baby food jar with a partial paper label, a mayonnaise jar fragment, and a purple glass fragment.

Recovered food remains include 16 peach pits, a plum pit, a squash seed, an unidentified seed, an abalone shell fragment, and 49 animal bone fragments. The faunal assemblage is predominantly pig bone and egg shell, with one fish bone (see Appendix H).

Items associated with food serving include a glass cup or mug fragment, two drinking glass fragments, a trough-shaped unglazed porcelain fragment of uncertain function, and 18 white-bodied and buff-bodied earthenware fragments, some with dark green lines. The ceramics consist of seven cup fragments, three plate fragments, four bowl fragments, two saucer fragments, and an unidentified fragment (see Appendix D).

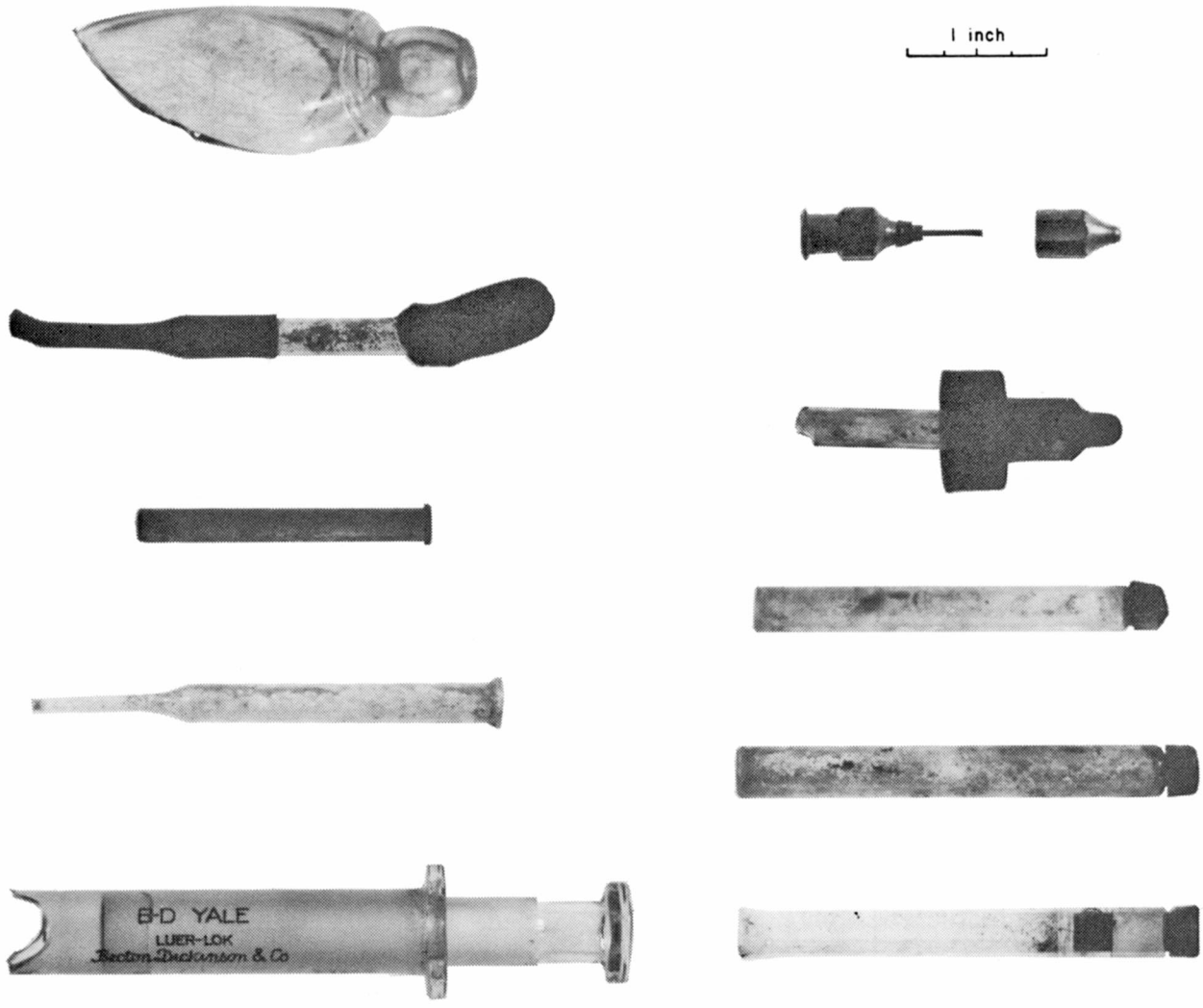


Figure 9.125. Typical small artifacts recovered from the Hospital Landfill (MANZ 1993 A-37, Locus A).

The few furnishings recovered include a 20-amp plug fuse, a hardware fastener, a lamp wick, and four terra cotta flower pot fragments.

By far the largest number of objects recovered are those associated with medicine, dentistry, and pharmacology. Six clear, five brown, and one blue glass bottle were recovered during testing. The clear glass bottles include two oval liquid prescription medicine bottles, two narrow-mouth bottles with the Cutter Standard hallmark, a wide-mouth bottle, and a short octagon bottle with a plastic dropper (with "LEE S. SMITH" embossed on the base).

Brown bottles include two wide-mouth bottles, one with a paper "Potassium Bromide" label, and three narrow-mouth bottles, one with a cork stopper (with the Magnus, Mabee, and Reynard, Inc. hallmark embossed on the base) and one with a plastic cap. The blue bottle is a narrow-mouth bottle.

Bottle glass fragments similar in color and style

Table 9.11.
Historical Artifacts Recovered from the Post-Relocation Center Landfill (MANZ 1993 A-37, Locus C [Excavation Unit 26]).

Object Classification		Glass	Metal	Other
Structural	Structural Materials		4	1
	Window Glass			
	Hardware		3	
	Nails		5	
	Utilities	6	15	2
Domestic	Beverage Storage	70	22	
	Food Storage	195	41	
	Food Preparation	1	4	
	Food Remains			190
	Food Serving	1	1	12
	Furnishings		1	1
	Pharmaceutical	20	1	
Personal	Clothing		34	11
	Jewelry		1	
	Grooming and Hygiene	3	2	
	Money		3	
Activities	Ammunition		3	
	Leisure		1	2
	Automobile	1	5	
	Miscellaneous Tools		5	
	Toys	2	2	
	Writing		2	2
Unclassified			195	

to the complete medical bottles were classified here as pharmaceutical glass instead of beverage or food storage; these counts therefore likely include a few misclassified fragments. Bottle glass fragments include 1,205 clear, 459 brown, 11 aqua, and 13 blue. The fragments represent at least 72 clear bottles, 39 brown, two aqua bottles, and one blue bottle. Identifiable types include four round-base wide-mouth bottles for powders, capsules, or ointments, three round-base narrow-mouth bottles for liquids, 20 other round-base bottles, 15 oval-base prescription liquid medicine bottles, six rectangular-base bottles, two square-base bottles, two round-base one-gallon jugs, and two short octagon-base dropper bottles. Twenty-three bottles or lip fragments have a continuous thread finish, three have a stopper finish, and two have an extract finish. Many have embossed graduations and apothecary weight symbols such as ʒ (ounce), ƒʒ (fluid ounce), ʒ (dram), ƒʒ (fluid dram), and cc (cubic centimeter, 1/30 ounce). A summary of makers' marks is provided in Table 9.10. Embossed dates and date codes on the bottles encompass 1941-1945.

Besides bottle glass, glass pharmaceutical items include a partially melted complete test tube (painted with "REG...PYREX...US PAT MADE IN ..."), 25 test tube fragments, 37 pipette fragments (two with marked gradations), a small funnel, three capillary tubes, two droppers with rubber caps (one marked with "DAVOL RU ..."), two dropper shaft fragments, two beaker fragments, a hypodermic syringe, three oral thermometer fragments, eight microscope slide fragments, 14 fragments of thin clear and brown glass (one marked with "List No. 1941 Procaine HO... 0% W/r Sc ..nott Lab"), two fragmentary and one complete cutting block (3 inches by 6 inches by 3/4 inch), three multiple dose vaccine bottles, 37 single dose ampoules or ampoule fragments (Figure 9.125).

Table 9.12.
Marks Noted on Artifacts at the Post-Relocation Center Landfill (MANZ 1993 A-37, Locus C [Excavation Unit 26]).

Glass
...INGE BOTTLING CO. CH
Anchor-Hocking Glass Corp. hallmark (1938+)
Armstrong Cork Company hallmark (1938-1969)
Ball (canning jar)
Brockway Glass Co. hallmark (1925+)
Bubble Up
Canada Dry
Canada Dry Ginger Ale, Inc.
Coca Cola (Bishop, Calif.)
Clorox
Duraglass (Owens-Illinois Bottle Co. trademark)
Glass Containers Inc. hallmark (1945+)
Hazel-Atlas Company hallmark (1920-1964)
HHK
Jergen's Lotion
Joes Cali... 19...
Karo Syrup 1½ Lbs. Net
Latchford-Marble Glass Co. hallmark (1939-1957)
Lummis Glass Co. hallmark (1940-1955)
Maywood Glass Co. hallmark
Mission Soda
Owens Illinois Bottle Co. hallmark (1932+)
Purex (1915+)
Pyramid Pat'd
Sparkle Up
Sparkletts Up
Sunset (soda) Santa M...
T (in keystone motif)
Thatcher Glass Manuf. Co. hallmark (1900+)
USA GLAST... 2 (cake platter)
Other
$ (electrical porcelain knob)
Meissner U.S.A. A3 (electrical porcelain base plate)
Oakland (hubcap)

The hypodermic syringe, made of Pyrex glass, is a Luer-type with a ground plunger shaft and barrel interior (Cook 1948:1138-1139; Hoover 1975: 1797-1800). Marked on its side is "B-D Yale 5cc LUER-LOK BECTON DICKINSON & CO." The three vaccine bottles have aluminum rims and one still has a rubber cover. Base marks include "PYREX 27" and "14 ... SOLV.T, TCW CO ..." One has a portion of a readable paper label "tetanus ...oid..."

Single dose ampoules recovered include automatic injection and hermetically sealed types. The four complete and two fragmentary automatic injection cartridge ampoules are open-ended with rubber caps at both ends. Two complete sealed ampoules and 29 fragments were recovered. The sealed ampoules are thin containers that, after filling, are sealed by fusion of the glass before being sterilized. They are opened by snapping off the neck after scoring with a file, some are prescored (Rawlins 1977:557-558). Sealed ampoules come in three types: plain, constricted, and double-tip (Cook 1948:249). The complete specimens are plain, while the fragmentary specimen include examples of all three types. Readable paper labels include two with "novocain solution ...tary extract local use..." and one with "...phylline solution."

Metal pharmaceutical items include three small circular aluminum tags (one marked with "5% DEXTROSE IN SALINE," one with "TRANSFUSO-VAC FOR 500cc OF BLOOD," and one with "TEAR OFF"), two hypodermic needle fragments, a valve stem and valve nib likely from a pressurized oxygen tank, an ointment tube, 14 twist caps, a screw-on lid, a screw-on vial cover, three tape dispenser fragments, and a small measuring scoop.

Other artifacts include two rolls of cloth tape on a metal tube, a hardened roll of plaster of paris bandages, a glue cap from a vial, three rubber stoppers, six cork stoppers, eight plastic bottle caps, three thin plastic sheets (possibly slide covers), three pieces of plastic tubing, nine small bits of putty, two rubber medical hose fragments, two plastic microscope slide grips, a small round sandpaper disk, and a plastic lancet holder (3/4 inch by 7/8 inch by 1/8 inch). Also recovered were two dental casts, two pulled teeth, and a temporary crown (see Appendix I).

Personal Artifacts

Items in this class include a metal shoe eyelet, five buttons (see Appendix E), a "Colgate" toothpaste tube, a "Woodbury" cold cream jar, 15 fragments of white glass, and fragments of a "Dr. Lyon's Tooth Powder" jar.

Activities Group

Miscellaneous tools recovered consist mostly of office supplies. These include a thumbtack, seven paper clips, 14 paper fastener fragments, a small wrench, a battery, and a rubber band. Items associated with leisure activities consist of four "Go" gaming pieces. Toys are represented by one glass marble.

Unclassified Artifacts

This group includes unidentified artifacts as well as artifacts with potentially multiple functions (such as wire) which hindered placing them in a particular category, and artifacts too fragmentary or altered to further classify. Unclassified items include two aluminum bases, an aluminum strip (inscribed with "...RES NO HEAT ★ No CH-1"), a metal plate, a scrap of copper, a hose fitting, four carbon brushes for a small motor, three small springs, an adjustable screw, two barbed wire fragments, 23 other wire fragments, and two human feces. Unidentified objects include 224 small metal bits, six small leather fragments, six small paper fragments, four cloth fragments, and a piece of foam rubber attached to cloth.

Locus C Testing

A 1 m by 1 m test unit (Excavation Unit 26) was excavated in an undisturbed area just north of the gully, near the center of the Locus C trash dump. Encountered was a 40-cm-thick densely packed trash deposit with thousands of objects per 10 cm level. Artifacts recovered included electrical porcelain, light bulbs, ceramics, glass, cans, and other items. Below the trash deposit, extending to 145 cm in depth, was a filled pit or gully that contained two large nails, a few pieces of wood, glass, and metal, and several small bits of asphalt.

Stratigraphy

Five major strata were discerned based on texture, color, compaction, and cultural constituents. Each stratum is described below, and the sidewall profile is illustrated in Figure 9.126.

Stratum 1, the uppermost stratum, consists of loose light yellowish brown (Munsell color 10YR 6/4) sandy silt extending up to 22 cm deep. It contained numerous artifacts and a small amount of charcoal.

Stratum 2 consists of a very loose layer of compacted trash and charcoal up to 44 cm thick. The little soil in this stratum was a grayish brown (10YR 5/2) sandy silt.

Lower strata had dramatically fewer artifacts. Stratum 3a, 2 to 12 cm thick, consists of grayish brown (10YR 5/2) silty sand. Stratum 3b consists of yellow (10YR 7/6) silty sand with gravels.

Stratum 4 consists of fill within a pit or gully. The area may have been leveled during construction of the adjacent relocation center hospital. Stratum 4a includes compact dark grayish brown (10YR 4/2) silt with gravels, ashy pockets and a very few artifacts (glass fragments and metal bits). Stratum 4b consists of very dark gray (10YR 3/2) sandy silt containing asphalt pieces, two 20d nails, and a few lumber fragments.

Stratum 5, the lowest stratum identified, consists of culturally sterile pale brown (10YR 6/3) compact silt with sand. It began at depths varying from 48 to 140 cm.

Artifact Assemblage

During excavation it quickly became apparent that collecting all artifacts would be unfeasible, given time constraints, and unwarranted, due to the poor condition of the material. Virtually all of the cultural material shows effects from burning. Therefore, a strategy was devised in the field to sample the material. Lumber, nails,

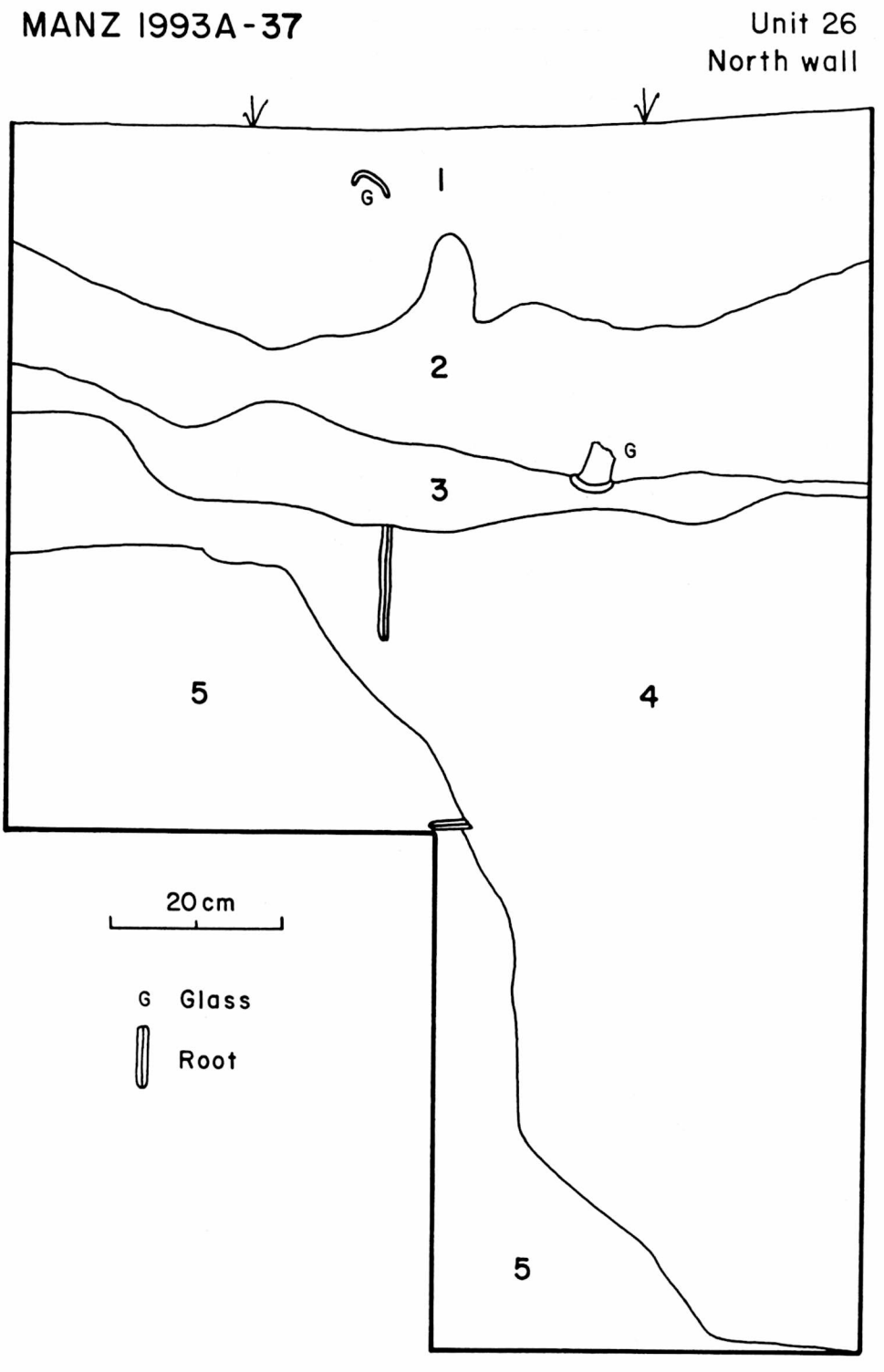


Figure 9.126. Excavation Unit 26 north sidewall profile (MANZ 1993 A-37, Locus C).

window glass, and light bulb glass fragments were not collected or tabulated. Glass, can, and ceramic fragments were collected only if diagnostic. Small rubber, cloth, and paper fragments were also not collected. All bone was collected except the smallest unidentifiable fragments. Some other items were only noted and not collected if other identical items were already collected (i.e., shotgun shells with the same headstamp). A tabulation of items collected is provided in Table 9.11. A summary of makers' marks is provided in Table 9.12.

Structural Artifacts

Structural artifacts recovered include a small electrical porcelain knob (from knob and tube wiring), an electrical porcelain base plate, six light bulb bases, a bolt, a pipe fragment, a faucet valve, a knob handle, and a gang-nailed metal plate. Encountered between 80-145 cm depth were two 20d common nails, some 3/4 inch thick lumber fragments, and asphalt bits.

Domestic Artifacts

Glass fragments and can fragments were by far the most prevalent artifact type encountered during testing of Locus C. Tabulation in the field indicates that 60 percent of the glass fragments are clear, 24 percent are brown, 8 percent are green, 6 percent are blue, and 2 percent are various other colors.

Embossed date codes on bottle bases include nine with "48," one with "46," one with "51," six with "8," two with "1," one with "7," and one with "9." Taken together these suggest a late 1940s to early 1950s date for the deposit.

Collected items associated with beverage storage include 13 soda bottle fragments, seven milk bottle fragments, 13 whiskey bottle fragments, a beer bottle fragment, a gin bottle fragment, three church-key-opened beer can fragments, and 17 crown caps.

Food storage is represented by a jelly jar, a minimum of 25 fragmentary bottles or jars, a glass stopper for a "Tabasco"-type bottle, aluminum foil, and abundant can fragments. Identified bottle and jar types include vinegar, ketchup, mayonnaise, "Karo" syrup, and jelly. One glass fragment with a baby drinking from a bottle painted on it may be from a formula container. Fragments of a "Ball" canning jar and a lid liner are evidence of home preserving. Cans, while abundant, were mostly fragmentary and greatly deteriorated. Recognizable fragments included sanitary seal cans of various sizes, rectangular meat cans, can lids, snap-on and twist caps.

Food serving items recovered include a large glass pitcher, a clear glass plate fragment, two blue glass plate fragments, five drinking glass fragments, a broken punch cup, a glass cake platter, 12 white-bodied earthenware ceramics, two porcelain fragments, and a metal spoon.

The earthenware includes seven plate fragments, two cup fragments, and three saucer fragments. Some have gold stenciled or stamped accents, decals, or a molded fruit motif. The porcelain includes a cup fragment and a saucer fragment (see Appendix D).

Food remains include four peach pits, a bean, and 185 animal bones. Identifiable bones include cottontails, jackrabbits, pig, sheep/goat, chicken, and possible quail (see Appendix H).

Recovered items associated with food preparation include a glass pie plate fragment, a sauce pan, two pot handles, and an aluminum coffee maker basket. Furnishings recovered include a lamp part, and a terra cotta flowerpot fragment. Pharmaceutical items include an oval liquid prescription medicine bottle and a cloth tape dispenser.

Personal Artifacts

Artifacts associated with clothing include 12 buttons, three metal snaps, three zipper pulls, and a buckle. The buttons include three bone buttons, one metal button, two plastic buttons,

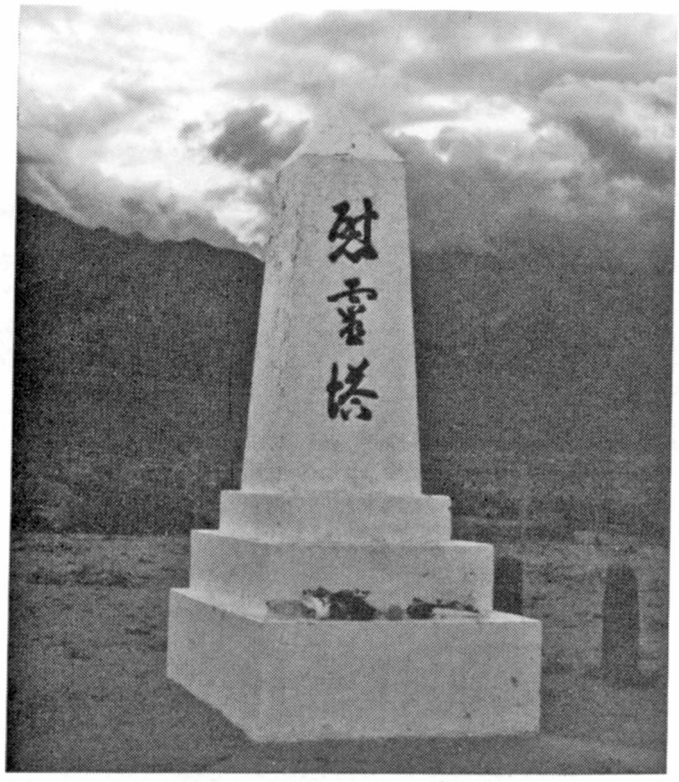


Figure 9.127. Cemetery Monument (MANZ 1993 A-33).

five shell buttons, and one button of an unknown material (see Appendix E). Footwear is represented by 26 metal eyelets.

Other personal artifacts include items associated with grooming and hygiene such as an ointment tube, an aluminum hair curler, a lipstick tube, a fragment of a "Jergens" lotion bottle, and a small complete perfume bottle. Also recovered were a women's earring and a fragment of a sunglasses lens.

Activities Group

Ammunition collected includes a .22-caliber shell and two shotgun shell casings; noted were another .22 shell and several shotgun shells. Items associated with leisure activities include two lantern wicks and a pocket tobacco can. Automobile parts include four small dashboard light bases, a headlight fragment, and a hubcap (with an "Oakland" logo). Miscellaneous tools include an electric gauge, a compressor air valve, a carbon battery pole, a push (map) pin, and a safety pin. Toys are represented by two glass marbles, a jingle bell, and a 4-inch-diameter metal wheel. Items associated with writing include two pencil leads and two metal fountain pen covers.

Unclassified Artifacts

Unclassified artifacts collected include three barbed wire fragments, nine other wire fragments, and 93 metal objects too fragmentary to classify.

Relocation Center Cemetery
(MANZ 1993 A-33)

The relocation center cemetery is located along the western perimeter of the residential area, just outside the fenced central portion of the relocation center. Relocation center blueprints show the cemetery subdivided into six equal-sized units of approximately one-half acre each. Apparently only one of these units was used. Over 135 people died at Manzanar during operation of the relocation center. However, only 28 of these were buried in the cemetery (all reportedly cremations); the rest were shipped

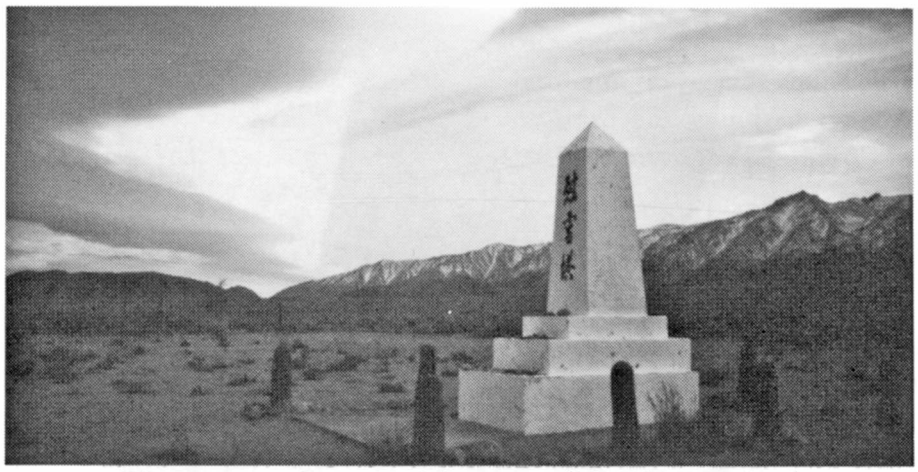


Figure 9.128. Cemetery Monument (MANZ 1993 A-33).

Figure 9.129. Grave at cemetery (MANZ 1993 A-33).

elsewhere for burial. The first burial in the cemetery was on May 10, 1942. After the relocation center closed, reportedly all but six of the cremations were relocated to other cemeteries. The remaining plots were fenced by order of the relocation center director (Merritt, memorandum dated 1/7/46).

The cemetery includes a large concrete obelisk with Japanese inscriptions on the east and west sides (Figure 9.127). The east (front) inscription translates as "Monument to console the souls of the dead" and the west (back) inscription translates as "Erected by the Manzanar Japanese August 1943" (see Appendix A). Around the monument there is a concrete slab and nine concrete posts shaped and stained to resemble wood (Figure 9.128). Within the fenced cemetery area there are 14 rock-outlined plots, two with cut stone markers with inscriptions, two with wood posts, and one with a small unreadable wooden sign (Figure 9.129). The existing burial plots may or may not denote historical locations. At least one of the two cut stone markers at the cemetery is a reproduction: a photograph in Girdner and Loftis (1969: 275) shows a different marker than the one now present.

Also within the fenced cemetery area there are three concrete foundations for wooden fence posts, one with an inscription (see Appendix A). Across a dirt road north of the fenced cemetery enclosure there are three rock-outlined graves commonly known as the "pet cemetery" (Figure 9.130). The pet cemetery was specifically left unfenced after the relocation center closure (Merritt, memorandum dated 1/7/46). Assorted

artifacts have been placed on the cemetery monument and graves by visitors. Most appear to be from a nearby crockery disposal pit (see Disposal Pits [MANZ 1993 B-9] in Chapter 10), but also include historical artifacts from other areas, prehistoric artifacts, flowers, coins, and origami. The cemetery is the focus of the annual Manzanar Pilgrimage. The current perimeter fence was put up by the Manzanar Committee in the 1980s. There is a large parking lot adjacent to the cemetery, and recent litter abounds.

Figure 9.130. Pet cemetery (MANZ 1993 A-33).

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