An Analysis of Modified Material Culture from Amache: Investigating the Landscape of Japanese American Internment

Paul Swader
University of Denver

An Analysis of Modified Material Culture from Amache:

Investigating the Landscape of Japanese American Internment

A Thesis

Presented to

The Faculty of Social Sciences

University of Denver

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

---

by

Paul Swader

March 2015

Advisor: Dr. Bonnie Clark

Author: Paul Swader
Title: An Analysis of Modified Material Culture from Amache: Investigating the Landscape of Japanese American Internment
Advisor: Bonnie Clark
Degree Date: March 2015

ABSTRACT

Modified material culture is a class of objects that indicates a transformation of material function. Archaeological research at the Japanese American internment camp in Granada, Colorado, called Amache, has recently uncovered artifacts featuring evidence of modification. Previous studies at internment camps have failed to include a comprehensive analysis of these artifacts; instead focusing on formal materials or aesthetic objects. This thesis investigates an assemblage of modified material culture identified at Amache and a collection from the Minidoka internment camp in Idaho. These artifacts provide insight into how internees responded to imprisonment. Through material culture studies, oral histories, and archival research, the use of these artifacts is examined within a context of confinement. This collection helps construct an internee landscape from which we may better understand the relationship between internee agency and internment social structure. In addition, by studying this evidence of adaptation this research aims to highlight the ingenuity of Japanese American internees and their ability to adapt and overcome the inhumane treatment experienced in the camp.

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

It has been just over seventy years since the United States government forced nearly 120,000 people of Japanese ancestry to move into internment camps. Following the attack on Pearl Harbor by the Empire of Japan, President Roosevelt signed Executive Order No. 9066. As a result, Japanese Americans were forcefully relocated from their homes on the West Coast to isolated, military style compounds.

The attack on Pearl Harbor is famous for drawing the United States into World War II. America's involvement in the Second World War has been documented in countless books and films. Often omitted from these records is the government's treatment of Japanese Americans. Most people know very little about this part of American history.

This was a tumultuous period for Japanese Americans. Families were suddenly uprooted and businesses were closed. Internees were instructed to bring only what they could carry, allowing for few personal possessions. People were first moved to assembly centers. These were temporary facilities that housed internees before they were transferred to one of ten relocations centers. Relocation centers were the primary facilities used to house and isolate most Japanese Americans imprisoned during WWII.

The Granada Relocation Center, also known as Amache, was the smallest of the ten internment camps. Amache is located in Powers County, in southeastern Colorado. It was open from August 1942 until October 1945.

Amache is suggested to have "some of, if not the best, intact remains and materials of any of the camps" (Carillo and Killam 2004:114); however, there has been limited publications that focus on the camp's archaeological record. Amache offers a well preserved site for conducting additional research on Japanese American internment.

My research began after viewing photographs taken by Stephanie Skiles. Skiles, who also wrote a thesis about Amache for the University of Denver, took photographs of cans found at the site. The cans exhibited modifications in the form of various perforated marks. Following analysis of these photographs, future inquiries focused on the reuse and modification of materials salvaged by internees. Two sources of data were used to study these artifacts: the data recovered during fieldwork conducted in 2010 and an assemblage of material culture from the Minidoka internment camp.

Significance

The material culture examined in this thesis was made in the camp or constitutes those objects that were reused or reworked in a way that either changed or updated their original function. The presence of such objects at the Amache might reveal significant information concerning the response of Japanese Americans to forced confinement.

My research is heavily focused on material culture studies. I use historical records to supplement, or help identify the use of, material culture. Previous research on Amache has often incorporated oral histories (Slaughter 2006; Shew 2010; Kamp-Whittaker 2010). Oral histories are often given by former child or teenage internees. Unfortunately, they are not omniscient witnesses, and are only capable of providing testimony relating to their camp experience as limited by their age and gender. When studying incarceration sites "artifacts used and produced by those interned there can provide important counterpoints to the inevitably biased views of both the captors and the imprisoned" (Mytum and Carr 2012:4). Therefore, to study the archaeological record created by adults I relied less on anecdotal evidence, limiting supplemental testimony to support empirical, material evidence. Material culture is not an infallible source of data, but it offers an alternative strain of evidence to a greater body of work, which can provide insight into the varied experiences of internment.

Literature on material culture in internment camps is primarily concerned with objects crafted for their aesthetic appeal, not those made to serve a utilitarian function (Dusselier 2008; Eaton 1952; Higa 1992; Hirasuna 2005; Kuramitsu 1995). Studies that focus on an aesthetic analysis come to the same conclusion: the production of crafts was a way to maintain emotional and mental stability (Dusselier 2008; Kuramitsu 1995). Miller states that the "anthropology of art…emphasized the greatest possible distance between people and their environment, in order to focus upon exotic and esoteric practices" (1987:111). To obtain greater detail on internee life, my study of camp-made objects centered on utilitarian items. Some of these artifacts have aesthetic qualities but their service was primarily functional in helping internees adapt, both physically and mentally, to the internment center.

Research Questions

To study how internees salvaged materials to adapt to imprisonment, several inquiries had to be addressed. Was this a regular occurrence during internment? What were these artifacts used for? How did internees obtain the necessary resources? These questions are addressed in different chapters, along with the historical and theoretical context.

The next chapter provides context for studying Amache as an archaeological site. Historical background is outlined from the immigration of Japanese to the United States through the internment period and the occupation of Amache. A brief history of the Minidoka internment center is also presented. Further, the previous research conducted at the site and the theoretical basis for my research is summarized

Chapter 3 covers my archaeological methods. This includes field and lab procedures employed during the 2010, University of Denver field school. I identify my sources for archival research and oral histories. I also describe my access to studying, and the facility that stores, the Minidoka assemblage.

Chapter 4 summarizes the archaeological finding used during my research. Many of the findings discussed were gathered during field work conducted in 2010. Contextual data is provided for the artifacts recovered during the field season. In addition, artifacts from the Minidoka internment center are introduced and used to provide a more diverse collection of camp-made objects. The chapter aims to support the assertion that camp-made artifacts are commonly recovered from the archaeological record and the artifacts photographed by Skiles did not reflect statistical outliers.

The internee use of these artifacts is addressed in chapter 5. Material culture is analyzed as a coping mechanism for displacement. Such artifacts are classified as transitional objects that facilitate in adaptation to an unfamiliar physical setting (i.e., the natural environment and the internment facility). They were used to replace individual possessions or reconstruct personal and cultural traditions lost during internment. Cultural and historical explanations for material form and function is supported by archival records and oral histories.

In chapter 6, I investigate internee access to materials and tools from within the camp. Given limited personal possessions, income, and resource restrictions, I investigate how internees acquired the supplies necessary to construct their transitional objects. I use oral histories, archival documents, and the study of landscapes to address the impact community had on the formation of these objects, and further highlight the ingenuity of Japanese American internees.

Finally, in the conclusion I summarize my findings. The material culture reused or modified by internees can provide evidence of both internee agency and Japanese American social structure. Close analysis shows how individuals and the internee community transformed the social structure of the internment camp to facilitate the preservation of cultural and personal traditions.

CHAPTER 2: BACKGROUND

The Early History of Japanese in America

Japanese Immigration. The Japanese immigrated to the United States for reasons very similar to those that motivated immigrants from other countries. Many came to flee poor economic circumstances in Japan and make a quick fortune in America (Iwata 1962:25). Immigration to the United States from Japan primarily occurred between 1885 and 1924 (O'Brien and Fugita 1991:14).

Emigration from Japan was prohibited between the early seventeenth and latter nineteenth century under the Tokugawa Shogunate feudal system (1615-1867). In 1868, the Meiji Restoration re-instated imperial rule (Beasley 1972:2) through victory in a brief civil war. According to Beasley, "For Japan…the Restoration has something of the significance that the English Revolution has for England or the French Revolution for France" (1972:1). After the Restoration, Japan adopted Western-style industrialization and technology, and developed a modern, or Western, education system (Godo and Hayami 2002; O'Brien and Fugita 1991:10).

Japan’s population density steadily increased in the late nineteenth through the early twentieth century. With a budding population and limited resources, a growing competition emerged between members of the working class (Iwata 1962:26). In 1873, the Japanese government, shifting to Western methods, significantly increased taxes on land, choosing to tax based on the value of land. These adjusted levies hit farmers the hardest. Between 1883 and 1890 367,000 farmers were evicted from their land (O’Brien and Fugita 1991:10).

Japanese immigration to the United States took off in the late eighteenth and early nineteenth century. The Japanese population in the United Sates jumped from fifty-five in 1870 to over two thousand by 1890. The highest annual migration occurred in 1907 with over 30,000 Japanese entering America (Iwata 1962:26). The Chinese Exclusion Act of 1882 nearly prevented all Chinese immigration, while creating job opportunities for Japanese immigrants. The legislation also codified anti-Asian sentiment, a pattern of political action that would continue through the early 20th century. As early as the 1890s an anti-Japanese movement began to form, incited by the decline of the Chinese population and the economic prosperity of Japanese immigrants. To curb the economic growth of Japanese immigrants, anti-Japanese land bills were introduced in the California legislature in 1913 (Daniels 1988:138-139). The Immigration Exclusion Act, passed in 1924, limited the annual number of immigrants. A special provision in the bill made some immigrants ineligible for citizenship and codified previous administrative prohibitions against Asian naturalization (Daniels 1988:151). As a result of the

Immigration Exclusion Act, Japanese immigration to the United States was nearly prohibited until after World War II.

Steps toward Internment. On December 7, 1941, The United States Pacific fleet was nearly destroyed during the bombing of Pearl Harbor. Immediately following the attack, the Justice Department detained Japanese leaders they considered enemy aliens (O'Brien and Fugita 1991:44). Some of the detainees were simply leaders of community and religious organizations. All accounts were frozen in American branches of Japanese banks (Burton et al. 2002:28).

There was never confirmed evidence of a threat by people of Japanese ancestry against the United States. Long-standing racist beliefs, resentment over Japanese success in agriculture, and newspapers that spread anti-Japanese opinions fueled support for the internment policy. In addition, government and military figures, such as California Attorney General Earl Warren and General John L. De Witt, spoke out against people of Japanese ancestry, declaring that they were a threat to national security (O'Brien and Fugita 1991: 45-46).

On February 19, 1942 President Franklin Delano Roosevelt signed Executive Order 9066. This legalized the exclusion of any individuals from any locality for national security. Although the order was not specific to any ethnic group or part of the United States, the government primarily applied it to the removal of people from Japanese ancestry from the western United States. This eventually led to the signing of Executive Order 9102 on March 18, which formed the War Relocation Authority (WRA), a civilian agency established to administer the relocation program. Roosevelt chose Milton Eisenhower, youngest brother of General Dwight D. Eisenhower, to head the agency (Harvey 2004: 23, 32-33; O'Brien and Fugita 1991: 62).

High ranking military personnel disagreed when it came to the threat posed by Japanese Americans on national security. After the bombing of Pearl Harbor, Lieutenant General John L. DeWitt was assigned the Western Defense Command. Lieutenant General DeWitt, known for his prejudice against African and Asian Americans, along with Major General Gullion supported the evacuation of the West Coast because they believed that acts of sabotage by the Japanese would probably occur in America. Lieutenant Delos C. Emmons, commander in Hawaii after the bombing of Pearl Harbor, reported that he had not found any evidence of sabotage by people of Japanese ancestry. He chose not to remove the Issei (first generation Japanese immigrants) from the Island, knowing that the Hawaiian economy was built from the work of Japanese immigrants (Harvey 2004: 12-15).

Despite the known contributions of Japanese Americans to the country and unproven threats against national security, Lieutenant General DeWitt began issuing orders that would lead to forced mass relocation. He began by issuing Public Proclamation No. 1 on March 2, which outlined Military Area No. 1: the western halves of Washington, Oregon, and California as well as the southern part of Arizona (O'Brien and Fugita 1991: 60). Some Japanese American families chose to move out of this zone to the interior United States. On March 29, 1942, Public Proclamation No. 4 prohibited people of Japanese ancestry from leaving Military Area No. 1 (Burton et al. 2002:33).

This was followed by the forced relocation of tens of thousands of Japanese Americans to internment centers.

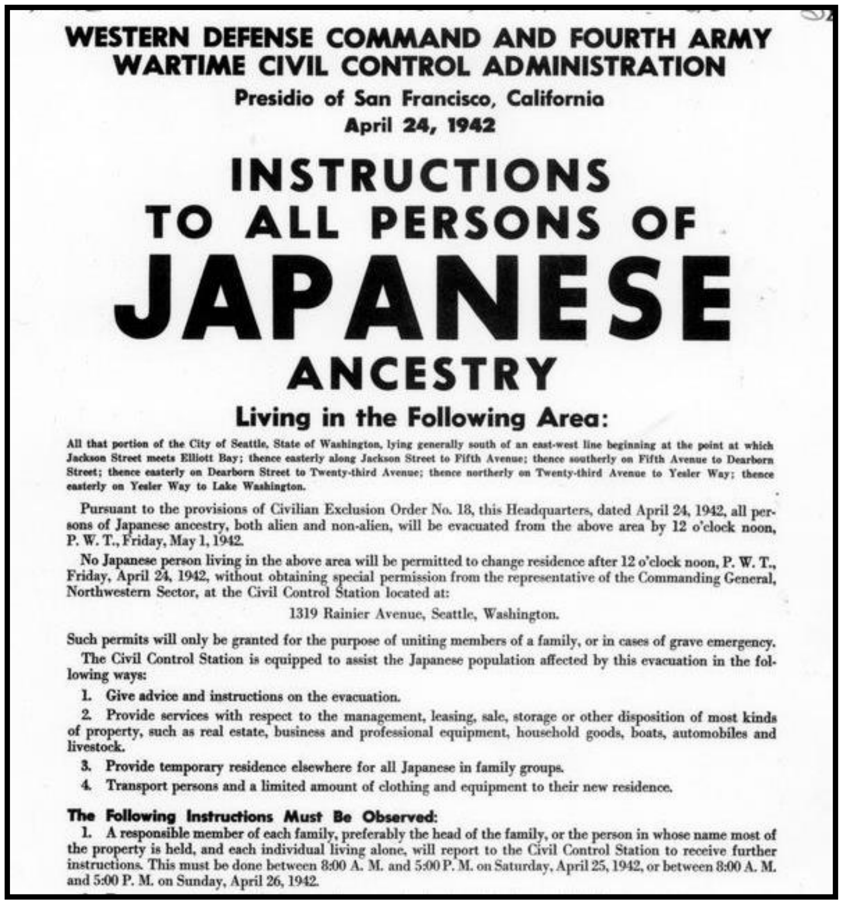
History of Internment

When the United States entered World War II they were at war with Germany, Italy, and Japan. On the home front, the federal government treated individuals with ties to these countries very differently. Citizens from Germany and Italy were only arrested if the government found evidence that they participated in acts against the country. On the West Coast, citizens of Japanese Americans were being imprisoned because of their ancestry.

Most of the people of Japanese ancestry who were gathered for internment were American citizens or lived in this country long before the attack on Pearl Harbor. Of the approximately 47,000 Issei that were interned, ninety-eight percent of them had immigrated to America prior to the passing of the Immigration Exclusion Act of 1924. Approximately 80,000 people interned in camps were born in America and therefore were American citizens. This group includes the children (i.e., Nisei), and grandchildren (i.e., Sansei) of Japanese immigrants (Thomas and Nishimoto 1946:1-2).

By April 1942, evacuation notices were posted on the West Coast (Figure 1). People were unable to bring all of their possessions during the relocation process. They were only allowed to take what each person could carry. Many internee bank accounts were frozen and their assets were often sold for a fraction of their worth, losing a substantial amount of money (an aggregate loss of $400 million in 1942) (Burton et al.

2002; Simmons and Simmons 1994: 12). After selling, storing, or giving away their belongings, these "evacuees" reported to the nearest Civil Control Station. Directed by the Western Defense Command, they were then transported to assembly centers (Tsukamoto and Pinkerton 1987:17, 21-24).



WESTERN DEFENSE COMMAND AND FOURTH ARMY
WARTIME CIVIL CONTROL ADMINISTRATION
Presidio of San Francisco, California
April 24, 1942

INSTRUCTIONS TO ALL PERSONS OF JAPANESE ANCESTRY

Living in the Following Area:

All that portion of the City of Seattle, State of Washington, lying generally south of an east-west line beginning at the point at which Jackson Street meets Elliott Bay; thence easterly along Jackson Street to Fifth Avenue; thence southerly on Fifth Avenue to Dearborn Street; thence easterly on Dearborn Street to Twenty-third Avenue; thence northerly on Twenty-third Avenue to Yesler Way; thence easterly on Yesler Way to Lake Washington.

Pursuant to the provisions of Civilian Exclusion Order No. 18, this Headquarters, dated April 24, 1942, all persons of Japanese ancestry, both alien and non-alien, will be evacuated from the above area by 12 o'clock noon, P. W. T., Friday, May 1, 1942.

No Japanese person living in the above area will be permitted to change residence after 12 o'clock noon, P. W. T., Friday, April 24, 1942, without obtaining special permission from the representative of the Commanding General, Northwestern Sector, at the Civil Control Station located at:

1319 Rainier Avenue, Seattle, Washington.

Such permits will only be granted for the purpose of uniting members of a family, or in cases of grave emergency.

The Civil Control Station is equipped to assist the Japanese population affected by this evacuation in the following ways:

1. Give advice and instructions on the evacuation.
2. Provide services with respect to the management, leasing, sale, storage or other disposition of most kinds of property, such as real estate, business and professional equipment, household goods, boats, automobiles and livestock.
3. Provide temporary residence elsewhere for all Japanese in family groups.
4. Transport persons and a limited amount of clothing and equipment to their new residence.

The Following Instructions Must Be Observed:

1. A responsible member of each family, preferably the head of the family, or the person in whose name most of the property is held, and each individual living alone, will report to the Civil Control Station to receive further instructions. This must be done between 8:00 A. M. and 5:00 P. M. on Saturday, April 25, 1942, or between 8:00 A. M. and 5:00 P. M. on Sunday, April 26, 1942.

Figure 1: *""Evacuation" instructions" (denshopd-p25-00049), Densho, Yamada Family Collection.*

To allow time for the construction of permanent internment camps, people were first transported to one of sixteen temporary assembly centers (Figure 2). These centers were established in large facilities such as fairgrounds and race tracks in the western United States (Figure 3) (Hayashi 1983:12; O'Brien and Fugita 1991). Internees at Amache came from the Merced and Santa Anita assembly centers.

Santa Anita was the largest assembly center. It was a horse track converted into a temporary camp that, at its peak, held close to 19,000 people. The Japanese Americans housed in this center were primarily from the Los Angeles area. Santa Anita was open from March 27, 1942 until October 27, 1942 (Burton et al. 2002:369).

Figure 2: *"Mass removal" (denshopd-i151-00018), Densho, National Archives and Records Administration.*

The Merced Assembly Center, a former county fairground, opened in early May, 1942. This center held Japanese Americans from Central and Northern California; people that were evacuated from both urban and rural areas including Sacramento, Merced, and Sonoma Counties. At its peak, the population at the Merced Assembly Center reached around 4,500 people (Burton et al. 2002:356-357).

The assembly centers consisted of substandard housing. People lived in military-style barracks that were constructed out of wood and tar paper. Rooms, or apartments, were small with gaps in the walls. Centers were enclosed with barbed wire fencing, and guarded by armed military police (Burton et al. 2002:351-352).

Relocation Centers. The camp constructed near Granada, Colorado was called a "relocation" or "evacuation" center by the WRA. Relocation centers were a type of government-controlled facility that housed Japanese Americans, evacuated from the West Coast, for the duration of the war. Despite the WRA terminology, Japanese Americans were interned in concentration camps. However, since World War II, the term "concentration camp" has been reserved, used almost exclusively to describe sites where atrocities rival Nazi extermination camps (Daniels 1988:226-228). For this reason, the term often used in this thesis will be "internment."

Milton Eisenhower, head of the WRA, had difficulty finding states in which to construct internment centers. Governors of interior states resisted receiving Japanese Americans. At a conference with ten governors of interior states only one governor was willing to aid internees. Ralph Carr of Colorado "maintained that aiding evacuees was the civic responsibility of American citizens” (Harvey 2004: 36). Eventually, the Army Corps of Engineers constructed ten internment camps in seven states: Arizona, Arkansas, California, Colorado, Idaho, Utah, and Wyoming (Figure 3). The internment center in Colorado was the smallest of these camps (O’Brien and Fugita 1991).

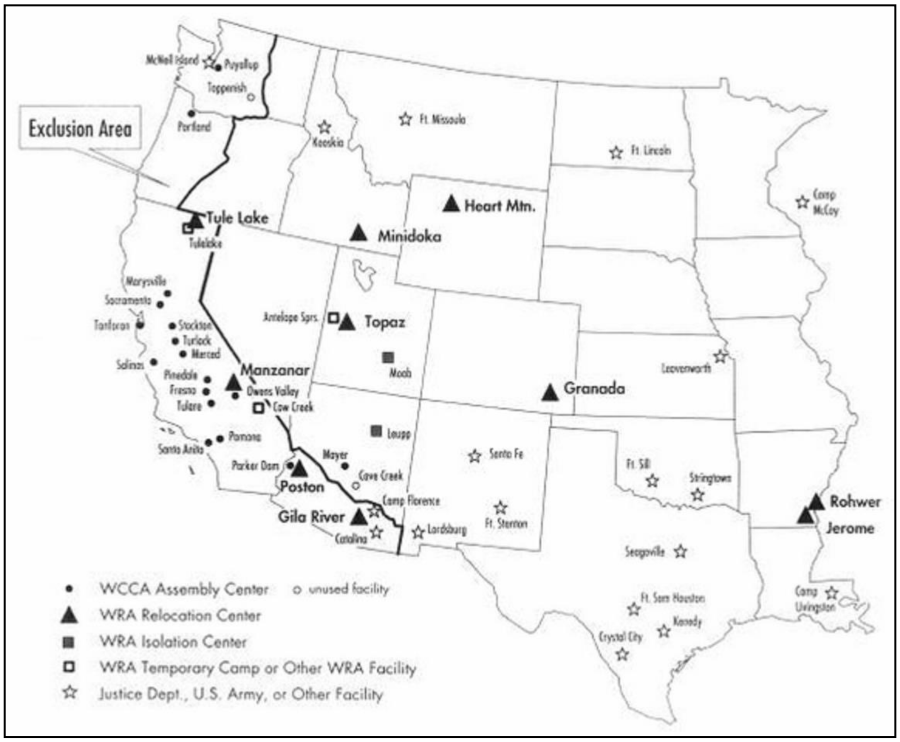


Figure 3: Location of Sites Used to “Relocate” Japanese Americans (Burton et al. 2002:2).

The Granada Relocation Center

Many areas in Colorado were considered for the establishment of an internment camp. The area chosen was in Prowers County, near the small town of Granada, between Lamar and Holly in southeast Colorado (Figure 4). The WRA acquired parcels of land from 18 privately owned farms and ranches. The government first condemned the land before purchasing it at a fraction of its worth (Burton et al. 2002).

Figure 4: Location of Granada Relocation Center in Southeast Colorado (Courtesy of the National Park Service).

After an area was chosen, the Army Corp of Engineers was responsible for construction of the site. Internment centers were quickly assembled and construction was not completed by the time people arrived from the assembly centers.

Moving In. Japanese Americans from the Santa Anita and Merced assembly centers were transported to Colorado by railroad. The first group of internees arrived from the Merced Assembly Center. On arrival, construction of Amache was not completed. This group of 212 Japanese Americans included workers needed to help the WRA organize the camp for the arrival of the remaining internees (Harvey 2004: 74-75). Internees helped with the construction of the camp - e.g., installing glass in the windowless barracks - and unloading and transporting supplies.

The bulk of internees began to arrive at Granada in August and September of 1942. By the end of October, 7,567 Japanese Americans were living in Amache (Harvey 2004; Lindley1942a). When internees began to move into their barracks, basic infrastructures remained incomplete. Overcrowding was a temporary problem until carpenters and electrician could finish work on all quarters.

The Camp. In June of 1942, Eisenhower resigned and Dillon Myer stepped in to replace him as the head of the WRA. The WRA appointed James Lindley as director of the Granada Relocation Center. Although the WRA was responsible for management of the facility, the Army Corp. of Engineers was assigned with its construction.

The people interred in relocation camps were referred to, by the WRA, as evacuees. They were told that their relocation was done for their own safety. However, the organization of the camps gave the opposite impression. Instead of a hospitable site organized for temporary settlement, relocation centers were designed with the single purpose of containing those individuals living within the camp.

Granada, as with all other internment centers, was designed like an army base (Figure 5). Barbed-wire fencing lined the perimeter of the camp. Watch towers were evenly spaced around the perimeter, armed with one guard and a searchlight. The facility was split into two sectors, the operations area and the housing units.

The operations area, located in the northern part of the camp, consisted of the administration section (i.e., three blocks that contained a post office, fire department, motor pool, gas station, and WRA staff housing), a warehouse section, a hospital, and barracks for military police (MP). The housing units, located in the southern part of the camp, contained 34 blocks. Twenty nine of these blocks were designated for internee dwellings. The remaining blocks contained the elementary school, high school, athletic fields, and the center's business district. In addition, the sewage treatment plant, landfill, and cemetery were located on the west side of the center (Burton et al. 2002; Simmons and Simmons 1994).

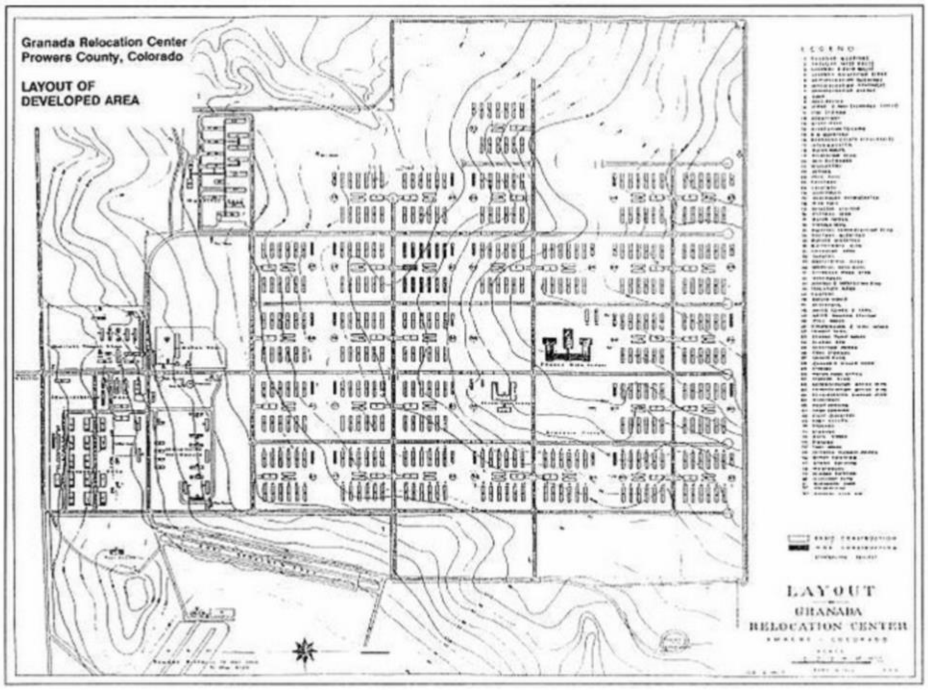


Figure 5: Historic Layout Map of Granada Relocation Center (Burton et al. 2002:104).

The residential area contained 34 blocks separated by roads running north-south and east-west. North-south streets were labeled alphabetically and east-west streets were labeled numerically. Every block was named after the streets of their north-west intersection (e.g., Block 12H). Each residential block had twelve barracks, a recreation building (which were slightly shorter than a barrack), a mess hall, and a laundry room/latrine (Burton et al. 2002; Simmons and Simmons 1994).

In each block, there were twelve 120’ x 20’ barracks. Foundations typically consisted of an outline of poured concrete. Barracks were constructed from wooden frames covered with sheets of wood, and the exterior walls and roofs were covered with asphalt roll roofing. Every barrack was divided into six "apartments," each had one light bulb hanging from the ceiling for lighting (Carillo and Killam 2004; Simmons and Simmons 1994).

Located at the center of each block were a mess hall and an H-shaped building for internee bathrooms, showers, and laundry. Mess halls were designed similar to standard army mess halls, where many people would eat meals together in a single room (Figure 6). Internee bathrooms were shared by everyone in the block, not allowing for the privacy people were used to before relocation (Harvey 2004: 88-89).

Figure 6: "Meal in a mess hall" (denshopd-i37-00525), Densho, National Archives and Records Administration.

The residential compound was transformed into a small town. The internees worked together to form a community. Various organizations were formed, such as Boy Scouts, Brownies, Christian churches, and Buddhist temples. Residents planned recreational activities including judo, football, and various classes for hobbies (e.g., knitting and art). Communal operations will be explored in greater depth in Chapter 6.

In addition to the residential compound, Amache included a tract of land used for an agricultural program. The site contained over 10,000 acres of farm and grazing land that could be used to sustain WRA crops and livestock for the war effort. The vegetables grown in the field supplied the camp, were shipped to other relocation centers, and sold for profit (Burton et al. 2002; Harvey 2004: 60-61).

Loyalty and the War Effort. Despite their hard work, and the fact that the majority of internees were U.S. citizens, the Japanese Americans living at Amache were not trusted by their government. To determine eligibility for early resettlement or military service among individuals eighteen years and older, internees were given a loyalty questionnaire. Two critical questions were presented to internees: if they were willing to volunteer for military service, and if they would pledge their allegiance to the United States of America, renouncing their allegiance to Japan (O'Brien and Fugita 1991:69). For the Issei, who were ineligible for U.S. citizenship, forswearing their allegiance to Japan would leave them stateless (Yoo 2000:103-104).

Popular distrust aside, Japanese Americans were called on to help the war effort. As World War II accelerated, factories shifted to manufacture war supplies and production demands increased. Employers needed to hire new workers to meet rising demands, and to replace those employees who were conscripted into military service. Internees could apply to leave Amache for work. Regionally, farmers were in need of laborers to help with their harvest. In addition to the Amache agricultural project, many internees gained employment with independent farmers. For example, in 1942, 1070 Japanese Americans helped with the fall sugar beet harvest in Colorado (Heimburger 2008:15).

Camp Closure. By early 1945, internees and the administrative staff began dismantling the camp. Internees were pressured to move out of Amache prior to the official closure date, October 15, 1945. Over the next three years deconstruction of the center continued with the sale of land, buildings, and machinery.

After their internment at Amache, most of the former internees returned to the West Coast. Some Japanese Americans chose to resettle in other parts of the United States. Though resettlement was a decision based on numerous reasons, many studies and personal testimonies suggest job opportunities and positive public opinion were major factors (Yoo 2000:154-155; Tsukamoto and Pinkerton 1987:185).

The Site Today

The Granada internment center has relatively good integrity as an archaeological site. Many of the building foundations are still intact. Deposition of aeolian sediment buries and helps preserve artifacts and features - e.g., sand has buried many of the building foundations that once stood ten inches above the ground.

The site has been purchased by the city of Granada and is therefore not disturbed by private landowners. The site receives regular maintenance by the Amache Preservation Society (APS). The APS was organized by John Hopper, a teacher at the Granada High School, in 1993. In addition to Mr. Hopper, the APS is comprised of students from the Granada High School who volunteer their time to be members of the organization. The APS organizes outreach programs to educate communities on the subject of internment, and is also responsible for managing the small museum about Amache located in Granada.

The residential part of the site does experience some disturbance that affects the site's archaeological integrity. Until very recently, a local rancher leased the site for cattle grazing. Grazing has negatively impacted artifacts and features located near the surface. There has been anthropogenic disturbances from locals. Evidence of drinking and use of fire arms are apparent at the site. There are relatively modern deposits of bottles and cans scattered around the site. Fragments of targets, such as clay pidgins and wooden bowling pins, are found among archaeological remains, as well as bullet holes identified on concrete foundations and artifacts.

Minidoka Internment Center

In 1942, the Minidoka Relocation Center was established in the high desert environment of Jerome County, Idaho. Minidoka was larger than Amache, having held a maximum population of 9,397 internees and encompassing 33,000 acres (Appendix B). Internees came from Oregon, Washington, and Alaska. The building plan within each residential block was identical to Amache; each block contained 12 housing barracks, a recreation hall, a mess hall, and an H-shaped building for bathrooms, showers, and laundry. Similar to other internment centers, residential blocks also had stores and institutions that provided services to the camp, such as schools, barbers, and fire stations (Burton et al. 2002:203-205). Akin to the communal activities at Amache, internees at Minidoka participated in adult education courses. Hobby and vocational courses were offered, including welding, needlework, and carpentry. The class on carpentry was organized to help internees pass time as well as furnish their barracks (Lillquist 2007).

Previous Research

Archaeological investigations have only recently been conducted at Amache. The first intensive survey was done in 2003 in an attempt to determine the archaeological integrity of the site (Carrillo and Killam 2004). Those researchers determined that relative to other internment camps, Amache, with its large number of artifacts, building foundations, and both surface and subsurface features, has excellent archaeological integrity. Due to its physical integrity and historical significance to the United States, Amache was declared a National Historic Landmark in 2006.

The University of Denver Department of Anthropology began a long-term archaeological project at Amache in 2005. Dr. Bonnie Clark serves as the Principal Investigator for this project and many graduate students have conducted research on Amache for their Master's theses.

Four Master's projects, all but one from the University of Denver, have been completed on Amache. Michelle Slaughter, who graduated from the University of Colorado-Denver, worked on the 2003 survey. She focused on the use of saké in the camp by collecting oral histories and data from surface artifacts. Her data indicates that the consumption of sake in camp was common, and facilitated in the preservation of Japanese identity (Slaughter 2006). Stephanie Skiles studied the production and consumption of food and its conveyance of Japanese identity. Her data came from the analysis of surface ceramics, particularly Japanese wares and other food containers, including tin cans (Skiles 2008). The research of Skiles and Slaughter assert the persistence of former practices was important to maintain during internment (Clark 2010).

In 2008, a field school was organized to conduct surveys on seven blocks. Data was collected for two other master's theses. Dana Shew studied the impact of interment on the women of Amache, while April Kamp-Whittaker focused on the children of the camp (Clark et al. 2008). The claim is often made that these are two of the groups left out of history. Both Shew (2010) and Kamp-Whittaker (2010) argue that this is not entirely true with Amache's archaeological record. Women and children have left a substantial amount of data in the form of letters, journals, oral histories, and artifacts recovered from the site. Their research expresses how moving to Amache, with its regulations and new environment, has affected the formation of Japanese American identity. There is also evidence of how internees were able to maintain their former selves and their roles in their family during confinement (Clark 2010).

The University of Denver's archaeological work at the Granada Relocation Center National Historic Landmark is ongoing and has contributed to a greater understanding of the daily lives of Japanese American internees during World War II. The university's collection of graduate theses provide additional information about the experiences in the camp, and how they differed between individuals and across generations.

Availability of Resources

The DU Amache Project has been focused both on the site of Amache and the Amache museum in Granada, Colorado. Artifacts and archival record are stored both at this museum and in the Department of Anthropology's archaeology lab at DU.

The APS, which manages the museum in Granada, holds a significant collection of historic documents and artifacts, some of which were collected from the site or donated by former internees and staff of the camp. All items collected from the site by the DU project will eventually be housed at the museum. Because of the need for a comprehensive system to manage their collection, the DU Amache project and APS put in place a collections management plan during the 2008 field season. A digital database was created using Past Perfect. In 2010, work continued to accession objects and documents. It has been an active role of the DU Amache project to train APS students in procedures for museum management.

In addition to the Amache museum in Granada, a collection of artifacts and historical documents are stored with the DU Anthropology Department in Denver. These resources are catalogued in a database, using Microsoft Office Access, and kept available to staff and students for analysis and continued research on Amache related projects.

Theoretical Background

There has been much debate over the theoretical and practical applications of historical archaeology. There is even disagreement over whether historical archaeology should be defined based on its methods or its content (Hall and Silliman 2006:1). In definition, methods employ a combination of studying material culture and historical records, where one source of data is often used to supplement the other in its interpretation of human behavior. According to Deagan, "The approach to historical issues through archaeological research can result in a more objective standard of measurement, as opposed to the frequently subjective standard of written history." As a result, a popular focus for historical archaeology has been on "the documentation of historically disenfranchised groups" (1996:25). This focus makes historical archaeology well suited for the exploration of Japanese American internees.

CHAPTER 3: METHODS

Introduction

To determine how materials were reused and the factors that initiate this practice, research methods employed archaeological and ground-penetrating radar (GPR) surveys, artifact analysis, archival research, oral histories, and comparative studies. The methods utilized for this project were designed based on prior work at the site and consultations with Dr. Bonnie Clark, Associate Professor in the anthropology department at the University of Denver and Principal Investigator for the Amache project.

Fieldwork was conducted in conjunction with an archaeological field school hosted by the University of Denver from June 21 through July 19, 2010. The field crew consisted of undergraduate students from DU, two high school students, four volunteers, and a graduate student from the University of Massachusetts-Boston. In addition, David Garrison and I, two graduate students from DU who were conducting research on Amache for their theses, served as crew chiefs.

The research design for this field school incorporated those techniques that proved successful during the 2008 fieldwork (Clark et al. 2008). The areas chosen to conduct research were selected based on the theses topics of Garrison and myself, and the future goals for the Amache National Historic Landmark. Future goals for the site included the reconstruction of a barrack, water tower, and guard tower.

The areas chosen for the 2010 archaeological field school were blocks 12G, 12H, 12K, the eastern half of 7G, and a field to the east of 12K, which, for the purposes this research, was designated as block 12L (Figure 7). The water tower was to be relocated in the southwest corner of block 12L, adjacent to block 12K. The remains of the guard tower to be reconstructed are currently located between blocks 12G and 12H, along the southern edge of the camp. Surveys were also conducted on 12L because it was identified as an informal trash dump that contained a concentration of modified materials useful for this thesis. Blocks where gardens have been identified from historic photographs – i.e., blocks 7G and 12K – were surveyed for the thesis research of Garrison.

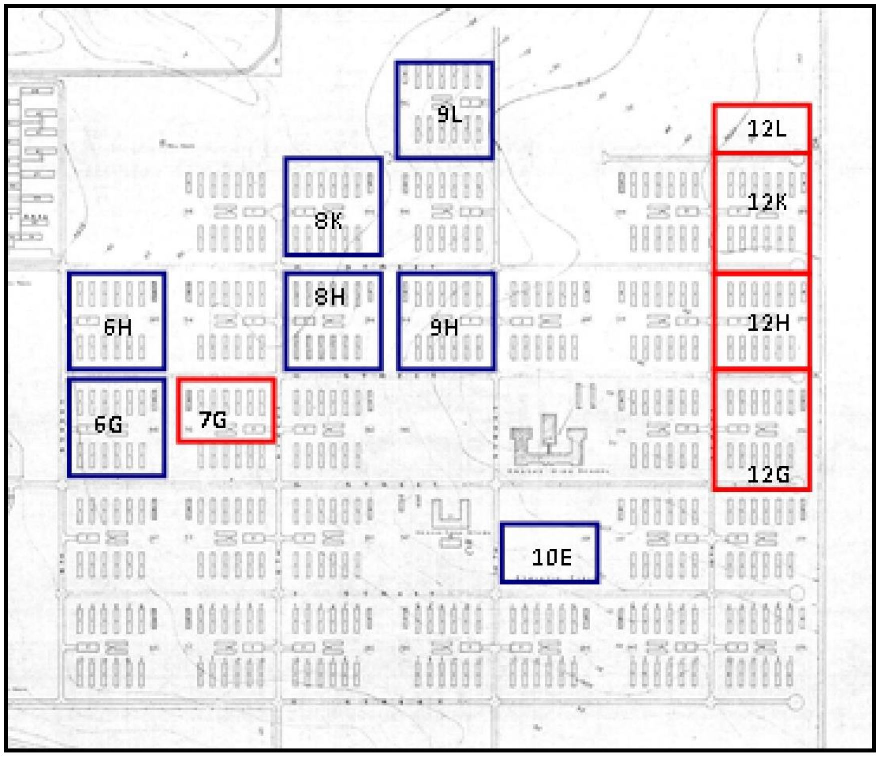


Figure 7: Map depicting areas of surface survey.
Blocks in blue are from the 2008 field season while
those in red represent blocks surveyed in 2010.

Surface Survey Methods

Archaeological surface surveys are critical as an initial analysis technique, and often used for acquiring an artifact assemblage and identifying features. These surveys helped us gain a general understanding of the archaeological integrity of each block, while determining which blocks require more intensive archaeological investigation to accomplish our future goals and research.

Blocks were surveyed by 4-6 crew members guided by one crew chief. Transects were walked at 2 meter intervals. The crew chief kept a record of non-architectural artifacts and features identified by crew members during surveys. A variety of colored flags were used for delineation of artifacts of interest.

Artifacts. The count of each artifact type was documented on a Surface Survey Block Form (Appendix A) designed based on known artifact classes previously identified, or projected to be found, at the site. The goal was to quantify artifacts in each block, identify objects that require further analysis, and document any artifact distribution patterns.

Artifacts of particular interest were flagged for further analysis. This included personal objects, ceramics, items that were temporally diagnostic, and artifacts that could contribute to the theses of the two crew chiefs: items related to landscaping and internee re-purposing.

All flagged artifacts were assigned Field Artifact numbers (FA). FA numbers started at 1 for each block. These artifacts were recorded on a Master Object List (Appendix A) and their location was approximately marked on a block map with their FA number (Appendix A). They were subsequently mapped using a Global Positioning System (GPS), photographed, sketched on graph paper, and received basic analysis. Analysis forms were created for the different classes of artifacts; i.e., bottles, ceramic or glass tableware, and a form for "Other," such as shell or metal artifacts (Appendix A).

In addition to being analyzed in the field, each artifact could be chosen for catch and release analysis or permanent collection. Artifacts selected for catch and release were objects that required additional time for in-depth analysis. Such objects received an FA number and were taken to the field house or the DU archaeology laboratory to be studied, but were not appropriate for permanent collection. Following analysis, these objects were returned to their original location on the site.

Rare artifacts and objects that could be used for public interpretation were often selected for permanent collection. All of these objects were assigned a Field Specimen number (FS) and recorded on a Field Specimen Log (Appendix A). FS numbers began at 500 and, unlike FA numbers, continued consecutively across blocks; therefore, there are no duplicate FS numbers. These items were analyzed and temporarily housed at the Archaeology Laboratory of the University of Denver, Department of Anthropology, but will eventually be curated at the Amache museum in Granada. All information obtained from their analysis was uploaded to the Amache Access database.

Features. Similar to the documentation of artifacts, feature types and localities were also recorded during surface surveys. Features were numbered, starting at 1 for each block. A description of the features and the materials found within them was documented on a Master Feature List for each block (Appendix A). The locality of each feature was approximately marked on a block map by its feature number (Appendix A). Any features identified within a block were also subsequently mapped using GPS, photographed, and surveyed with transects running at 1 meter intervals. For those features comprised of multiple artifacts, a Surface Survey Block Form, identical to those artifact tally forms used for each block, were filled out. Plan view sketches were made for a number of important features.

Geographic Information System Methods

During the 2010 Amache project, we collected discrete, nominal data (i.e., defined positions) that required creating a large scale map. Geographic Information System (GIS) was employed to create maps of the site. These were designed primarily through the use of collecting GPS points.

A data dictionary was created by Jim Casey and Paul Swader for the GPS data collected during the summer of 2010. Three feature classifications were used: point, line, and area. Points were used to symbolize artifacts, while lines and areas represented linear and polygon features. Data was collected using a Trimble GPS unit with an H-Star receiver, which is capable of collecting points within 10 centimeters accuracy after post-processing. Each point was recorded with an average for 120 positions (or recorded for 2 minutes). Data was then downloaded from the GPS to a PC.

GPS Pathfinder Office was used to store and process GPS data. Data files were added to *Data Transfer* and saved in Pathfinder Office. In Pathfinder Office, every file was individually opened for *Differential Correction*. To differentially correct each file the Lamar base station [CORS, LAMARARPT_COR2004 (P040), COLORADO] was chosen for the *base provider*.

The datum used to create GIS maps was the North American Datum of 1983 (NAD83), which is accepted worldwide (Clarke 2011, 41). The Universal Transverse Mercator (UTM) coordinate system was also used. This system divides the Earth into 60 longitude zones. This site is located in Zone 13N (N is added to the end of the zone number because the site is located in the northern hemisphere).

Ground-Penetrating Radar Methods

In the summer of 2010, the University of Denver Amache project used ground-penetrating radar (GPR) to locate subsurface features. Specifically, the use of GPR was to locate subsurface gardening features adjacent to barracks as well as possible features in areas of the site slated for development. Ground-penetrating radar has the ability to quickly determine the location and depth of subsurface features not visible through surface surveys.

The GPR data were collected using GSSI SIR-3000 collection system and a 900 MHz dipole antenna and a survey wheel for distance measurement. (Figure 8). After collection, data were processed to create horizontal amplitude slice maps and vertical linear profiles. Ground-penetrating radar data were then used to help determine the location of excavation units.

Figure 8: Students conducting a GPR survey in Block 12K.

Use and background. Ground-penetrating radar employs the use of a dipole antenna, or a pair of antennas, one transmitter and one receiver. The antennas we used were housed in a fiberglass box. To collect data, antennas are dragged across the ground, along survey transects within defined grids.

Ground-penetrating radar data is collected by transmitting radar waves into the ground (Conyers 2004). Radar waves reflect off subsurface features and are received by a surface antenna. Ground-penetrating radar records the amplitude of electromagnetic pulses transmitted into the ground and reflected off buried features, objects, and soil interfaces (Conyers 2004). In addition, GPR measures the elapsed time between the transmission and reception of energy at the surface antennas.

A GPR antenna produces electromagnetic waves. Reflections of propagating waves are created by changes in the electrical or magnetic waves that are generated by the transmitting antenna. Loss of energy either from attenuation, absorption, or electrical conductivity will cease the propagation of radar waves. Whenever there is a change to the physical and chemical properties of subsurface materials that change wave velocity, a wave is reflected back to the surface antenna (Conyers 2004).

A composite of many waves reflected from a single surface location is recorded and converted into a *trace*. Each trace contains information including the two-way travel time of waves, which is the time between the transmissions of radar waves to their reception back at the surface antenna. This time, recorded in nanoseconds, can be used to calculate the distance traveled, or depth (Conyers 2004: 11-12; Conyers 2006: 137). Therefore, in archaeology, determining the two-way travel time of an individual reflection can establish the depth of an artifact, feature, or an important soil or sediment interface.

Radar energy does not travel at a constant speed through the ground. The velocities of waves change as they encounter different subsurface materials. Relative dielectric permittivity (RDP) is an approximate analog to the velocity of radar propagation; the greater the RDP of subsurface materials, the slower the velocity of radar propagation (Conyers 2004: 45). Relative dielectric permittivity is a reflection of the electrical conductivity and magnetic permeability of materials. For example, material with greater water saturation will have more electrical conductivity and produce a higher RDP.

The amplitude of reflections can be determined by knowing the two RDPs at an interface. As with RDP, the amplitudes of reflected waves are contingent on the chemical and physical properties of subsurface materials. Stronger reflections will occur where there are larger differences between the two materials at an interface. Gradual changes in RDP will produce weak or no reflections (Conyers 2004). Equations exist to calculate RDP and the amplitude of reflections (Conyers 2004: 48-49); however, in our study we used a series of computer programs, which will be discussed later, to produce accurate calculations.

The application of GPR in archaeological studies is most effective when subsurface artifacts and/or features are at depths of 2 to 3 meters (Conyers 2004: 1). However, the depth of permeation is dependent on many factors. It is primarily dependent on the environment and the frequency of the antenna (measured in hertz). The size of the wavelengths produced by the transmitted radar waves is dependent on the frequency of the antenna. The higher the frequency produced by the antenna, the shorter the wavelength. Transmitting lower frequencies, producing longer wavelength energy, will penetrate deeper in the ground. Shorter wavelengths experience greater attenuation and therefore are more applicable for shallower depths. In addition, smaller wavelengths produce greater reflections from small objects whereas longer wavelengths provide less reflection (Conyers 2004: 23-24). Therefore, smaller wavelengths produce more detailed images, but at shallower depths.

Collection Methods. Ground-penetrating radar is a strategic geophysical technique for near-surface data collection. Instead of using a crew of field technicians conducting random sampling by digging shovel test probes, GPR was used to survey portions of the camp without disturbing the site. Data were then digitized into maps and readily interpreted to plan excavations.

During the 2010 field school, a higher frequency antenna (i.e., 900 MHz) was chosen because the site of Amache is located in an aeolian environment. Soil and sediment mineralogy, ground moisture, and depth of archaeological materials were suitable for data collection by propagating radar waves with small wavelengths (Conyers 2009). Amache is a historic site where artifacts and features tend to be within a meter below the surface. The aeolian sediment at the site retains little moisture, which provides the high ground resistivity optimal for data acquisition using GPR (Bristow and Jol 2003:2).

After surface surveys, GPR grids were established in Blocks 12K, 12H, and 7G. The location of these grids was determined by the identification of features from surface surveys or preliminary research using historic photographs. Sections of the blocks designated for GPR surveys were outlined with blue flags.

Rectangular grids were outlined and their corners were mapped with a GPS. All grids were placed in an overall site map by measuring the corners to stable landmarks (e.g., barrack corners and fence posts). Data was collected within these grids along transects at 20 cm separation.

During the GPR surveys, the antenna is attached to a survey wheel (Figure 8), which records the distance the antenna travels. When the antenna is dragged across the surface, ground coupling occurs. As radar energy is transmitted from the surface antenna, refraction occurs when waves move from air into the ground. Most electromagnetic energy is transmitted downward in a conical pattern. Uneven terrain and surface vegetation hinders data collection by causing coupling loss. Coupling loss occurs when something interrupts the maintenance of uniform coupling. This causes an inconsistent pattern in wave propagation (Conyers 2004: 68-71).

To minimize error, we removed larger surface vegetation (e.g. sagebrush and prickly pear cactus) that may have interfered with keeping the antenna running parallel to the ground. Interruptions to the antenna running parallel were manifested in coupling losses as well as some deviations from straight lines in transects. A coupling loss was caused by the antenna being lifted off the ground surface by plant growth, rocks, surface artifacts, concrete, and ground sloping (Figure 11). Transect deviation occurred by swerving the antenna during collection in order to avoid large surface obstructions.

For all grids, the collection system was set to collect data with a 40 ns range and at 40 units per meter. The 40 nanosecond range is also called the time window or the depth in two-way travel time that will be visible in processed vertical profiles (which will be discussed in the next section). The “40 units” are the number of reflection traces set to be collected per meter. Although GPR antennas transmit radar pulses at extremely high rates (Conyers 2004: 29-30), each reflection trace was set to be a composite of 512 digital samples.

Processing Methods. Most software used for processing GPR data has been designed to find buried pipes and geological deposits (Conyers 2004: 6). For our archaeological work, we primarily used two programs: *GPR Viewer* and *GPR Process*.

GPR Process is a Microsoft Windows based program created by Martha West, Pyoosh Rai, and Prashant Kumar with the base code written by Jeff Lucius and Lawrence Conyers. This program processes data that is then imported into a mapping program; we used *Surfer 9* by Golden Software as our mapping program. The maps created by Surfer 9 are raster maps of GPR grids.

GPR Process and Surfer 9 are used to create two-dimensional, plan view maps depicting the spatial distribution of amplitudes across a GPR grid. In GPR process, the files representing data collected along transects are aligned to form a grid. The data can be sliced into multiple maps. The thickness, in nanoseconds, of each slice is determined, to show amplitude reflections at specific depths in the ground. After the data are imported into Surfer 9, the areas between transects - i.e., between the known values - are statistically interpolated. This is done to estimate unknown values by using known points along transects.

The maps created from these two programs are called amplitude slice-maps (Conyers 2004). All the profiles within a grid are aligned and the amplitudes of reflections are represented by colors. We used the colors in the rainbow as a scale for reflection intensity. The ROYGBIV scale begins with violet for low amplitude reflections and progresses to red for very high amplitude reflections. To illustrate a greater contrast in electrical and magnetic properties between two materials at an interface, white was substituted in for violet; therefore, white represents the lowest reflections. Figure 9 is an amplitude slice-map from Block 12H.

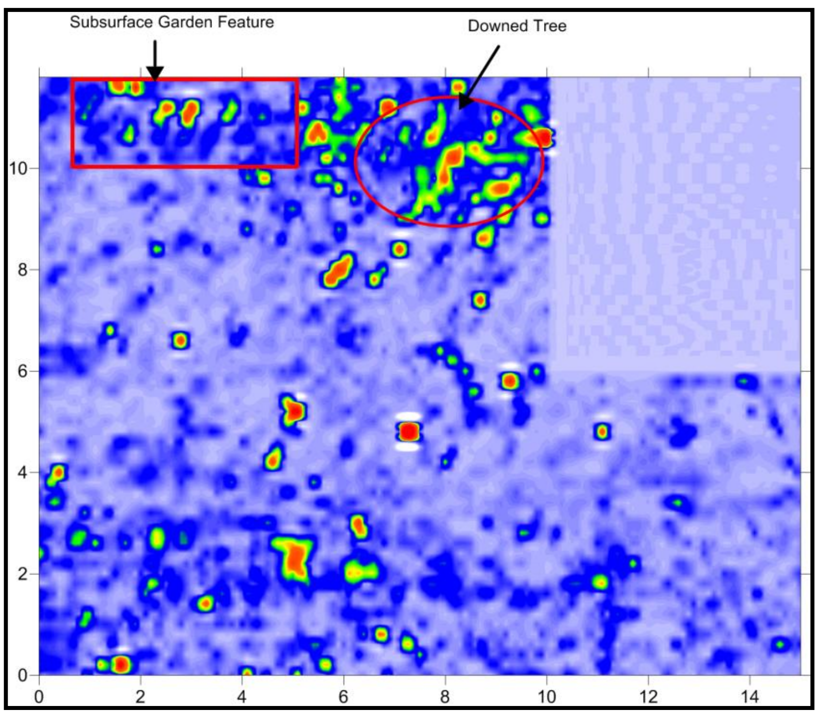


Figure 9: Amplitude slice map of the 12H entryway garden.

GPR Viewer, created by Jeff Lucius and Lawrence Conyers, was used to view vertical profiles, which are vertical slice depictions of many traces aligned sequentially. This allowed us to analyze the reflection data collected along individual transects. All reflection traces collected from a transect are displayed on a two-dimensional profile with two-way travel time plotted on the Y axis and the surface location, or trace number, plotted on the X axis (Figure 10). GPR Viewer was primarily used to analyze point-source reflection. These are reflections generated from a single point feature - e.g., an individual buried object. Within vertical profiles, point-source reflections appear as hyperbolas (Conyers 2004: 54) (Figure 10).

Characteristics of reflection hyperbolas can be analyzed to study subsurface materials without disturbing a site. Hyperbolas can reveal the size and geometry of subsurface objects, while the intensity of reflections help determine the physical and chemical properties of subsurface materials. Multiple hyperbolas stacked vertically are evident of a greater amount of radar energy reflecting back to the surface antenna. Lighter hyperbolas may suggest less radar energy reflecting back to the antenna because of the inferior conductivity of the subsurface feature or because of attenuation due to subsurface materials. Other features commonly visible on GPR profiles are areas of coupling loss. These coupling changes are indicated by high amplitude reflections throughout the time window (Figure 11).

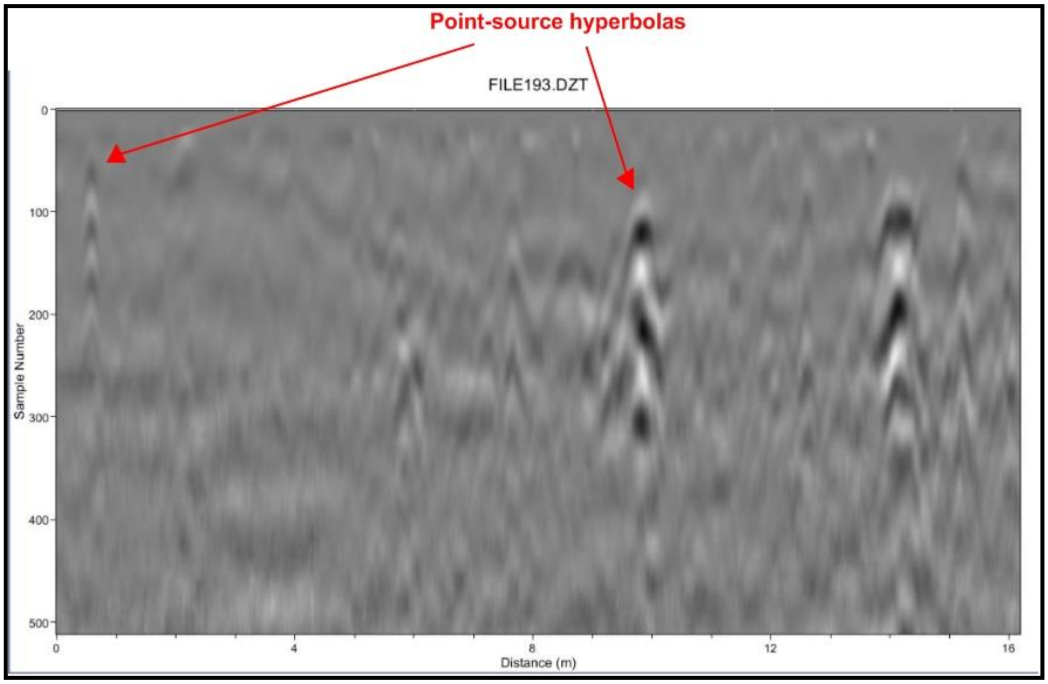


Figure 10: Example of a laterally corrected GPR profile.

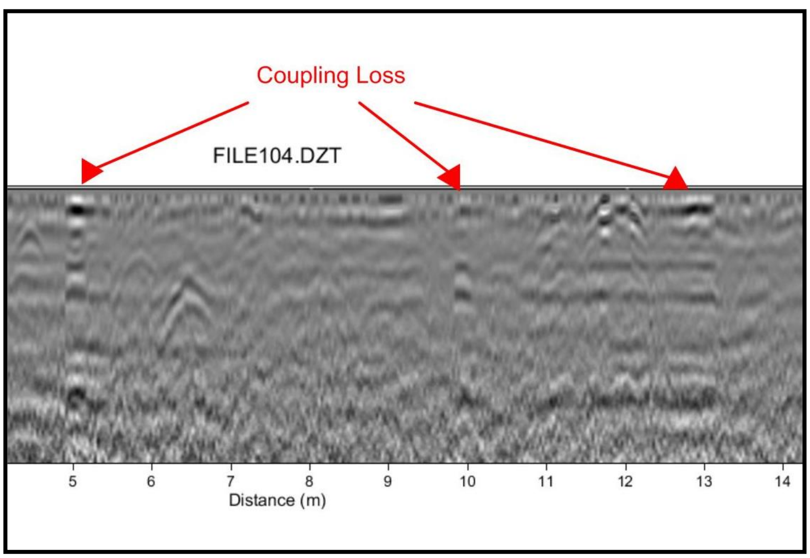


Figure 11: Laterally corrected data profile showing examples of coupling loss during data collection.

The program *GPR Viewer* was also used for velocity analysis. This involves locating individual hyperbolas in linear profiles. The apex of the hyperbola identifies the approximate location of the reflection source. Using GPR Viewer, the shapes of these hyperbolas were measured to calculate RDP and velocity at which energy traveled through the ground. The average velocity (approximately 7.5 cm/ns.) was then used to convert time in nanoseconds to depth in meters.

Excavation Methods

Excavation units were established in blocks 7G, 12H, and 12K. The placement of units was based on the anticipated location of features determined by surface surveys, ground-penetrating radar, and historical photographs.

Excavation units consisted of 2x2 meter squares, a practice consistent with the extensive exposure needed in garden excavations (Currie 2005). Units were outlined with string and vegetation was cleared from the surface. The units were hand excavated with trowels and shovels. Excavated soil was passed through 1/8" mesh screens onto tarps placed adjacent to the unit. Crew members examined the screens for artifacts that were then recorded and collected for further analysis at the lab.

Field crews excavated ten-centimeter levels or followed stratigraphic layers if there was a change in soil or sediment mineralogy. This employed the techniques of excavating at arbitrary levels as well as the Harris matrix (Harris 1979). The Harris matrix involved defining contexts of natural or cultural strata instead of arbitrary levels.

If there was a change in soil or sediment, the identified layer was removed, screened, recorded, and the artifacts and ecofacts processed as a single group. Soil and soil chemistry samples were collected from most contexts during excavation. Each soil sample was documented in the Soil Sample Log (Appendix A).

While units were excavated, crew chiefs assigned each level a context number, recorded on the Context Register forms (Appendix A). Contexts uncovered in a single block were numbered consecutively beginning at 7G-001, 12K-1001, and 12H-3001. Information about each context was recorded on a context form (Appendix A). The Harris matrix, and information on these forms, helped to connect natural soil or sediment horizons with anthropogenic layers across multiple excavation units. After units were completely excavated, profiles were sketched of one of the walls that provided a good representation of the different contexts within each unit.

Every artifact collected from the same provenience, or same level within a test unit, were assigned the same Field Specimen or FS number. Artifacts with the same FS number were bagged together and recorded on the Field Specimen Log (Appendix A). If appropriate artifacts found *in situ* were given their own FS number and their point provenience recorded. Field Specimens were numbered consecutively within each block. Artifacts from block 12K started at FS 1000, 7G began at FS 2001, and 12H started with FS 3001.

Lab Methods

To process and analyze the artifacts collected during the 2010 field season, two labs were used. Most work was done at the archaeology lab at the University of Denver.

However, while still conducting field work in the summer of 2010, a temporary field lab was established at the crew house in the town of Granada. The field lab was used to clean artifacts, analyze catch-and-release artifacts, and to conduct soil flotation.

Modified objects designated as catch-and-release artifacts were brought to the field lab if they required more in-depth analysis. Pictures and sketches were taken of these artifacts and information was recorded on modified object forms (Appendix A**).**

The soil samples were transported to the field lab for flotation. Only half of a soil sample from each context was used for flotation. The remaining half was transported to, and stored at, the University of Denver Department of Anthropology. Flotation was conducted to separate light and heavy fraction from the remaining sediment. Light fraction samples were analyzed by archaeobotanist Steven Archer. His report on the 2010 field season was submitted to the University of Denver (Archer 2011).

As with the light fractions, soil chemistry sample were also given to a specialist. Soil chemistry analysis was conducted by Dr. Erika Marin-Spiotta and graduate student Emily Eggleston. The samples were transported back to their lab at the University of Madison-Wisconsin. The findings were included in their report (Marin-Spiotta and Eggleston 2011). Likewise, samples collected for pollen analysis were sent to a specialist in archaeological palynology. John G. Jones's analysis was conducted at the University of Washington and his report submitted to DU (Jones 2011).

After field work was concluded, artifacts were transported to the archaeology lab at the University of Denver. Once in the lab, all artifacts with an FS number were assigned a Lot number by the Lab Director. The Lot number reflects the Block in which the FS was collected, and in what order. Artifacts collected during excavations had Lot numbers that continued consecutively from the artifacts collected during surface surveys. Some artifacts, from Block 12K, were given Lot numbers that consecutively followed numbers assigned during the 2008 field season. Translating FS to Lot allowed all artifacts from the same block to be easily organized by block even if they are collected over a series of years. Each Lot with more than one item in it (i.e, most of the Lots from excavation units) was sorted into the smallest analytical unit, by giving each individual item sequential sublot numbers.

All artifacts collected experienced in-depth analysis. In addition to Garrison and myself, the artifacts were analyzed by students in Dr. Clark's course, Historical Archaeology, held in the Fall of 2010. Students completed both basic functional analysis, as well as more intensive analysis based on material type (e.g., determining ware, vessel form, and decorative techniques for ceramics). This data was entered into the Amache Microsoft Access database.

During the summer of 2011, I traveled to Idaho to analyze items from the Minidoka internment camp. The objects are stored at a facility managed by the National Park Service (NPS). The majority of items consisted of furniture donated to the NPS. Each piece was analyzed and photographed.

Minidoka Assemblage

In the summer of 2011, an assemblage of artifacts from the Minidoka Internment Center was studied to provide supplemental data on repurposed and modified material culture in WWII relocation camps. The Minidoka collection primarily consisted of furniture constructed by Japanese Americans during their incarceration at the camp.

These items offer a representation of the type of furniture people built to prepare their barracks for habitation. The assemblage provides characteristic examples of tools and materials employed during construction.

Minidoka Internment National Monument (MIIN) was established on January 17, 2001 (National Park Service 2006b:46). The site is managed by the National Park Service (NPS). Park archives and museum collections is administered by Hagerman Fossil Beds National Monument in Hagerman, Idaho. This NPS facility serves as storage for museum collections and a research center for paleontology (National Park Service 2008:23). Phil Gensler is the curator for the MIIN museum collections.

Correspondence with Mr. Gensler allowed access to the Minidoka assemblage. Most of the larger items in the collection were donated by former internees (National Park Service 2008:24). Each object is identified by an accession and catalog number. Artifacts analyzed from the Minidoka assemblage are included in Appendix F.

Archival Research and Oral Histories

The study of material culture goes beyond the simple analysis of artifacts. Primary sources enable more accurate identification and interpretive use of material culture. Primary sources used in this thesis include historic photographs, oral histories, WRA documents, and newspapers.

In the past, archaeologists have encountered problems with historic records. Primary sources were often housed in repositories with inadequate conservation practices and poor accessibility. In addition, those limited documents available to the public may have only provided a narrow perspective, which offered bias or insufficient information.

Many institutions have managed to ameliorate these problems by compiling electronic records and transmitting their databases to researchers via the internet. Digital archives offer an extensive and diverse collection of primary sources. Archival research was primarily conducted through three institutions: Densho: The Japanese American Legacy Project, Online Archive of California (OAC), and The Bancroft Library.

Densho is an organization dedicated to the preservation of primary source materials on the internment of Japanese Americans during World War II. Their digital archive consists of oral history interviews, historic photographs, documents, and newspaper articles. Their diverse collections eliminates the risk of preserving bias accounts of history. Historic photographs were taken by internees, the administration staff, and camp visitors. The archive contains issues of the *Granada Pioneer*, a newspaper published by residents of Amache. Densho has similar primary source material from all the internment camps and assembly centers.

The Online Archive of California and The Bancroft Library provided much of the same digitized materials as Densho. The OAC is a digital repository for primary resources from the University of California public education system and various libraries, archives, and museums in California. The Bancroft Library at the University of California, Berkeley has an archival digital collection. This special collection library is part of the OAC system, but it was exclusively used for the *Japanese American Evacuation and Resettlement Records, 1930-1974*. This was a collection of camp documents that detailed daily operations of the administration and employed residence of Amache.

Many oral histories have been collected discussing Japanese American internment during World War II. No oral histories were collected by myself for this thesis. Any information from oral histories referenced in this thesis was obtained from one of the digital archives formerly discussed, previously collected by the DU Amache project, or referenced in a secondary source. In addition to past theses, the University of Denver collected oral histories in May, 2011. Dr. Bonnie Clark, David Garrison, and Christian Driver travelled to Los Angeles, California to conduct individual and large group interviews. Issues discussed during the interviews were guided by the research topics of the 2010 field school and the future goals of the DU Amache project.

CHAPTER 4:

ARCHAEOLOGICAL FINDINGS AND COLLECTIONS RESEARCH

Introduction

The blocks surveyed during the summer 2010 field season included 7G, 12G, 12H, 12K, and 12L. Each was chosen for a specific reason and therefore methods were tailored to fit the focus of our research on each block. This chapter summarizes the data gathered from surface surveys, the collection of GPR data, and excavations. Also included is a summary of the type of artifacts studied from the Minidoka assemblage. Artifacts discussed were considered significant for providing evidence of modification and the re-purposing of material by internees. The chapter is also intended to supply contextual data for significant artifacts and features.

Archaeological Findings: 7G

The eastern half of Block 7G (Appendix B) was selected for investigation. This was partially due to archaeological integrity. Most of the western half (i.e., the foundations and surface artifacts) was buried by aeolian sediment or has experienced greater disturbance from the dismantling of the camp. In addition, historic photographs shared with DU by a community member revealed the presence of a Japanese style entryway garden (Figure 12). Because internee landscaping is significant to the DU Amache Project, one objective, while surveying this block, was to locate this garden. The population of 7G was mostly from the northern Central Valley of California with a few people from coastal towns outside of both Los Angeles and San Francisco. The people from the Northern Central Valley were primarily rural agricultural workers prior to the war.

Figure 12: Historic photograph of Mataji Umeda
seated in his entryway garden, Block 7G.

Surface Survey. The majority of artifacts identified during surface surveys were flagged and analyzed in the field. Seven of the surface artifacts were given lot numbers and collected for further study. The locations of the surface artifacts, surface features, and excavation units were recorded and mapped (Appendix B). Very few modified, or repurposed, materials were identified during surface surveys.

Field Artifact # 29 is a composite artifact that was flagged during surface surveys, to be photographed and analyzed later. It is comprised of two 9 gauge wires, each being wrapped around itself to form two loops that link the pieces together (Figure 13).

Figure 13: Two 9 gauge wires linked together (FA# 29).

Barrel hoops are commonly found throughout Amache. They are artifacts that remain from the many barrels that were delivered to the camp and stored various supplies. Field Artifact # 31 is a barrel hoop found in Block 7G (Figure 14). Several perforations were made in the hoop after it was manufactured. A two-penny (d) nail was driven through one of the holes.

Figure 14: A Barrel hoop (FA# 31) with several perforations and a nail punctured in the side.

Six surface features were recorded in Block 7G (Appendix C). All features were identified as remnants of either architectural or landscaping/gardening projects. Feature 7G-2, located near the northwest corner of Barrack 5, was identified as the Mataji Umeda garden from camp records. Located directly across from the Umeda garden, features 7G-1A and 7G-1B were more consistent with the photographs of the Umeda garden. Subsequent oral history suggests Mr. Umeda lived in Barrack 6 and constructed the 7G-1A and 7G-1B gardens as well.

These features have been identified as Japanese-style gardens. Material used to construct the gardens included broken slab concrete, crushed brick, sandstone, and river cobbles. In feature 7G-1A, poured concrete was used to construct a small pond. Other decorative material documented in garden features was shell. Abalone shell was identified and photographed near the concrete pond in feature 7G-1A (Figure 15).

Figure 15: A large abalone shell found in feature 7G-1A.

Ground-Penetrating Radar. Surface surveys discovered two features between barracks 5 and 6 identified as features 7G-1 and 7G-2. Feature 7G-2 was less discernible on the surface than 7G-1, which included a visible section of poured concrete that resembled a small pond. The area between barracks 5 and 6 that included feature 7G-2 was the focus of a subsurface survey using ground-penetrating radar. This section was chosen to reveal any subsurface anomalies that could be related to the landscaping works identified on the surface. The slice maps reveal a concentration of high amplitude reflections in the southwest corner of the grid (Figure 16). These reflections are located beneath the 7G-2 surface feature. This possible landscape feature contains a distinct line of high amplitude, point-source reflections running parallel to barrack 5.

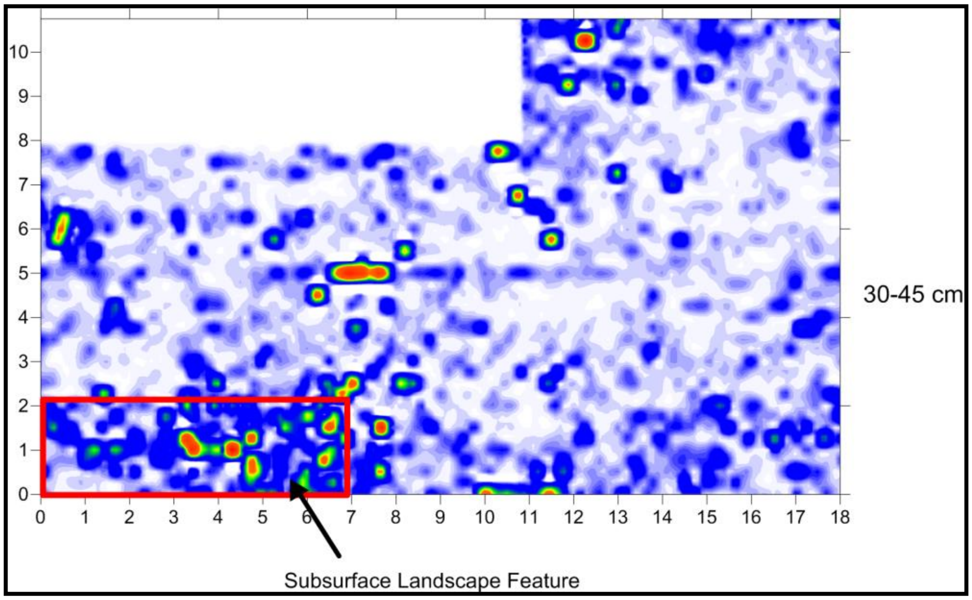


Figure 16: Amplitude slice map of the 7G entryway garden, outlined in red.

Excavation. The GPR data revealed the presence of subsurface anomalies just outside the westernmost entryway of barrack five, buried under the sediment covering feature 7G-2 (Figure 16). This concentration of hyperbolic reflections was suspected of being contextually related to the surface feature, possibly being attributed to cultural remains from the Umeda garden. Three excavation units were opened in this area in an attempt to study the Umeda garden and collect greater data on landscaping and gardening by internees at the Granada Relocation Center. See Appendix D for the locations of each unit in relation to the northwest corner of barrack 5 and the southwest corner (0, 0) of the GPR grid.

Two 2x2 meter units were initially outlined for excavations. David Garrison and Steve Archer opened unit 2001N/2001E on July 6 and unit 2003N/2003E on July 8, 2010. On July 13, unit 2000N/2001E was opened as an expansion of unit 2001N/2001E. The excavation of this 2x1 meter unit was initiated after 2003N/2003E was closed and positioned because of the high number of artifacts recovered from the southern half of unit 2001N/2001E.

Unit 2003N/2003E was excavated by students David Ambrose, Walter Lozier, and volunteer Anita Miyamoto Miller. The entire unit was excavated at ten centimeter arbitrary levels. Unit 2003N/2003E only contained three contexts (Appendix C) because no distinguishable features or change in stratigraphic layers were identified. A small quartz boulder and chunk of concrete embedded with river cobbles (Figure 17) were collected near the surface. Also found within this context was a large fragment of petrified wood, crushed brick, loose river cobbles, small pieces of coal, nails, and a 30 cm piece of shale. The remaining artifacts from unit 2003N/2003E were recovered from context 7G-004. These objects, which possibly relate to Amache gardening and landscaping, include nails, limestone fragments, larger river cobbles, and coal.

Figure 17: Cement with river cobbles (Lot 7G.9.13, FS# 2002) from context 7G-002 in unit 2003N/2003E.

In addition to Garrison and Archer, unit 2001N/2001E was excavated by Anna Goss, Ava Hawkinson, and volunteer Carlene Tinker. The unit was situated directly above high amplitude point source reflections detected by the GPR survey. Nine features were identified in a primarily sandy matrix. In addition to these nine distinct contexts, four arbitrary levels were excavated around the features. Appendix C contains a list of each context and their approximate elevations.

Excavation of unit 2001N/2001E began with context 7G-001. The context ended when excavators discovered a linear wood feature extending out of the west wall across the northern part of the unit (Figure 18). Inclusions consisted of metal wires, terra cotta ceramic sherds, brick, cement, high concentrations of gravel, and fragments of cedar from the plank feature.

Figure 18: Linear wood feature identified in contexts 7G-001 and 7G-003.

Among the artifacts recovered from context 7G-001 were several modified materials. Object 7G.10.18 was composed of 2 wires twisted together; one wire formed a hook and the other formed a noose. A similar wire (7G.10.20) was found with one end bent to form a loop. Four wire artifacts (sublots 7G.10.11, 12, 13, and 14) consisted of a large wire (between gauges 14 and 15) that was wrapped with smaller wire (between gauges 25 and 26) (See discussion of Block 12K excavations to view images of similarly modified wire). In addition to metal wires, three fragments of marine shell were analyzed (7G.10.27, 7G.12.28, and 7G.10.37). One of the thicker fragments exhibits working along the margins, as if it was intentionally ground into a triangular shape (Figure 19).

Figure 19: Modified shell fragment (7G.10.27).
Photograph taken by Christian Driver.

The excavation of context 7G-003 revealed that the linear wood feature consisted of cedar posts that formed a rectilinear, fence-like structure. Two vertical posts that formed a ninety-degree angle were exposed south of the horizontal post (Figure 20). They were aligned with the vertical posts that were uncovered under the horizontal post. Context 7G-003 also contained metal wiring, concrete, brick, river cobble, and wood fragments.

Figure 20: Vertical wooden posts found in context 7G-003.

Three post molds were identified in unit 2001N/2001E. Each had a posthole fill and posthole cut feature. The excavation of these contexts revealed darker, organic sedimentary material, an abundance of cedar fragments, and pieces of concrete. The unit was closed on July 17, 2010 due to time constraints.

Unit 2000N/2001E was opened as a 2x1-meter southern expansion of excavation unit 2001N/2001E. It contained many of the same artifacts discovered in the other 7G units. These inclusions included large chunks of concrete, architectural artifacts from the barrack (i.e., tarpaper and brick), large river cobbles, and gravel. In addition, pieces of terra cotta, possibly part of a ceramic planter, were also found.

Excavations in Block 7G uncovered many landscaping and building materials. Artifacts from several contexts provided great examples of natural materials that may have been used to construct aesthetic landscaping features. The small rocks found embedded in concrete are water worn. These rocks and other river cobbles found in 7G most likely came from the Arkansas River, which defines the northeast boundary of the agricultural fields associated with the Granada Relocation Center.

Samples of sediment were collected from 7G postholes (e.g., context 7G-006). Pollen analysis revealed high quantities of High spine Asteraceae pollen. Members of this group include *Helianthus* (sunflower), *Aster* (asters and daisies), *Zinnia*, *Coreopsis*, *Gaillardia* (Indian blanket) and many others. Many of these plants are ornamental cultivars and their pollen rarely travels far distances, which suggests these plants were deliberately grown in a possible historic garden (Jones 2011). Flotation results revealed the presence of purslane or rose moss, a decorative ground cover, and Brassicaceae (mustard family) seed that is either peppergrass or tumble mustard (Archer 2011). Purslane could have been intentionally planted in the garden since it is a beneficial ground cover that can store moisture and nutrients in a dry environment to provide to adjacent plants. Purslane was recovered from a garden feature (9L-1) excavated in 2008.

Archaeological Findings 12G

Block 12G was surveyed to document any unknown features or significant artifacts. It was chosen because of planned development work. The guard tower that stood at its SE corner was slated for reconstruction. Only surface surveys were conducted on Block 12G. The block was primarily populated by people who lived in the Los Angeles area before internment.

Surface Survey. Block 12G (Appendix B) was surveyed at 2 meter intervals along east-west transects. The majority of artifacts consisted of ceramic and glass fragments. Objects of particular interest included a bright colored planter pot (FA# 27, Lot # 12G.3.1), possibly used for decoration inside a barrack. A small copper alloy make-up compact (FA# 17, Lot # 12G.2.1) with an embossed image of the fleur-de-lis was also discovered. This artifact originally came from a store in Southern California, providing an example of how internees brought some items of importance with them to internment camps. Appendix B shows the locations of all collected artifacts and features.

There were five features identified in Block 12G (Appendix C). All five were designated as landscaping features. Most were downed trees that had previously been planted by internees in rows along the barracks. The other features consisted of a combination of concrete foundations, limestone scatters, brick, cobbles, and wood plank walls. Feature 7G-3, an entryway garden that featured a small concrete pond, was particularly important to the study of landscaping at Amache.

Archaeological Findings 12H

Block 12H (Appendix B) was initially chosen for survey due to the planned reconstruction of a barrack and guard tower. The population of 12H largely consisted of people who had previously lived in the Los Angeles area. Surface surveys located the remains of internee entryway gardens. After GPR revealed potential buried garden features, Block 12H was chosen for test excavations.

Surface Survey. Several Japanese-style ceramic fragments were collected during surface surveys. Two over-glaze fragments (12H.6.1) are pieces of a small, shallow saucer. The larger fragment is hand painted, depicting the left leg of a figure (Figure 21). Artifact 12H.10.1 is a porcelain fragment decorated with an under-glaze, hand painted design of a tree (Figure 22). The absence of a rim or base makes it an indeterminate type of hollowware. The last ceramic fragment from Block 12H (Lot 12H.9.1) is a piece of semiporcelain hollowware (Figure 23). The ceramic sherd is decorated, on the outside, with a scene featuring snow-capped mountains. The size and shape suggests the vessel was a rice bowl.

Figure 21: Hand painted, over-glaze, porcelain fragment (12H.6.1). Photograph taken by Christian A. Driver.

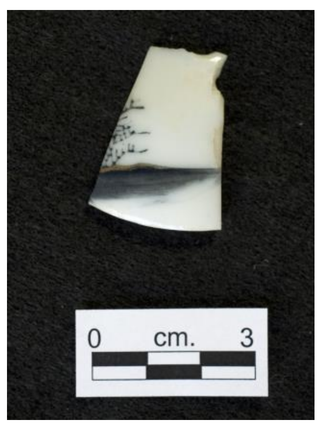


Figure 22: Hand painted, under-glaze, porcelain fragment (12H.10.1). Photograph taken by Christian Driver.

Figure 23: Decorated ceramic fragment (Lot 12H.9.1).
Photograph taken by Christian Driver.

These ceramic fragments cannot be precisely dated because of the absence of maker's marks. Most were likely produced after 1870. In 1870, following the Meiji Restoration, Japan began the industrial production, and export, of porcelain ceramics. This was a period of economic and social reform, which involved the adoption of Western-style industrialization. The introduction of Western production methods resulted in the construction of ceramic factories. However, instead of completely embracing material traits of Western societies, the Meiji administration viewed industrialization as a way to preserve traditional crafts. They encouraged the production of traditional Arita and Kutani porcelain, and Satsuma ware (Crueger et al. 2006:17-18). These fragments have characteristics similar to traditional Japanese ceramics.

The ceramic sherds from Block 12H are almost certainly Japanese ceramics brought to Amache by internees. The decoration on all the sherds and the size of 12H.9.1 suggest they had both aesthetic and utilitarian value. Lots 12H.6.1 and 12H.10.1 were hand painted, which is often a more expensive decoration method (Miller 1980). The traditional Sometsuke style is mirrored in sherds 12H.6.1 and 12H.9.1. This popular style features blue on white decoration and was influenced by traditional Arita porcelain (Crueger et al. 2006:17). Artifact 12H.9.1 resembles a sherd of Satsuma ware. Unlike the other fragments of porcelain, the cross section shows use of a porous material. Consistent with Satsuma ware, the body is stoneware or semiporcelain with a transparent glaze (Crueger et al. 2006:37). Popular decoration for Sometsuke and Satsuma ware ceramics included designs of landscape scenes, as featured on sherds 12H.9.1 and 12H.10.1.

Field Artifact # 23 is a rectangular sheet of metal that shows evidence that it was modified and repurposed (Figure 24). There are three evenly spaced cylindrical punctures, of approximately the same diameter, made near three of the four corners. Wear along the edges suggest it was cleanly cut from a larger metal object. The sheet is slightly curved, made from 18 gauge metal, with a welded seam. These characteristics suggest FA# 23 was a fragment of a 55 gallon drum. This will be discussed in greater detail with the analysis of artifacts recovered from Block 12L.

Figure 24: Sheet metal cut into a rectangle with three
perforations along the margins (FA# 23).

Five features were identified during the surface survey of Block 12H (Appendix C). They were all documented as evidence of landscaping and exhibited material commonly found in the gardens at Amache, such as crushed brick, sandstone, wooden planks, and concrete fragments (Appendix C). However, feature 12H-3 included a portion of ceramic pipe, which is found in fragments throughout Amache. The ceramic pipe was embedded in the ground, running vertically, and appeared to have been used as a planter. The feature was positioned directly in front of a barrack, the typical location for an entryway garden. Features 12H-3 and the adjacent 12H-4 were largely buried by aeolian sediment so ground-penetrating radar was used for subsurface imaging.

Ground-Penetrating Radar. A grid was outlined in Block 12H for ground-penetrating radar. The GPR grid included the western part of the area between barracks 5 and 6 with the northern and southern edges running along the barrack foundations. The amplitude slice maps show a cluster of high to low amplitude reflections at approximately 5 meters east and 11 meters north (Figure 25). These reflections are located just outside of the westernmost entryway to barrack 5 and under surface feature 12H-3. This area was chosen for excavation to reveal the potential presence of a subsurface garden feature.

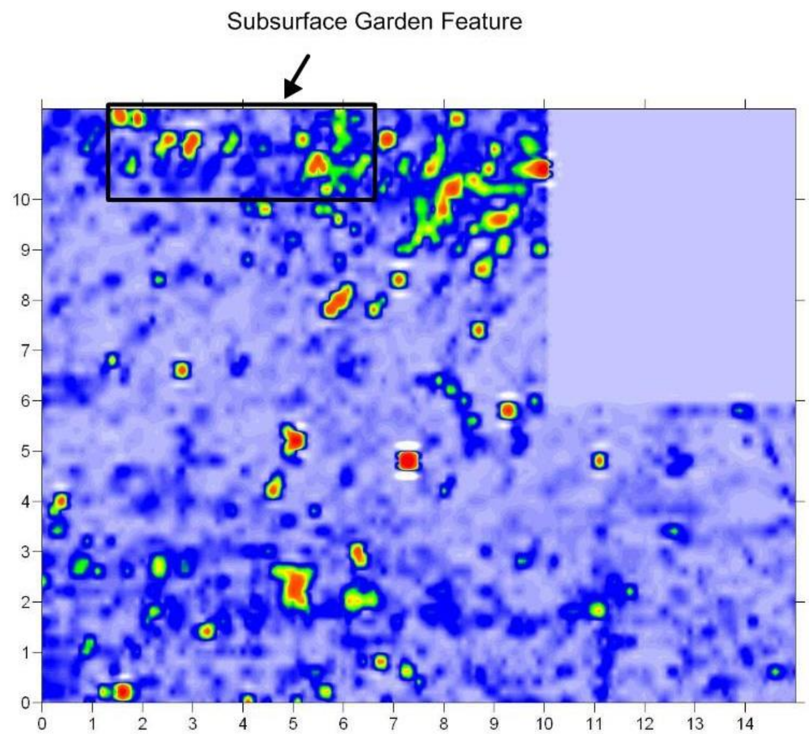


Figure 25: Amplitude slice map (2-4 nanoseconds, or 15-30 cm. below surface) of the 12H entryway garden.

Excavation. On July 13, 2010, a single 2 x 2 meter excavation unit was opened over surface feature 12H-3. The unit, designated 2997N/ 3004E, was located 1 meter south of barrack 5, near the entrance to apartment F (Appendix D). It encompassed the ceramic pipe "planter" identified during surface surveys, and the subsurface material recorded using ground-penetrating radar. The excavation, primarily conducted by student Walter Lozier and volunteer Anita Miller, was supervised by Project Director Bonnie Clark. Approximate elevation ranges from every context are recorded in Appendix C.

Excavation began with the removal of topsoil. This revealed a second ceramic water pipe. It had a similar orientation as, and located north of, the pipe identified during surface surveys. The two ceramic pipe planters (12H.14.1 and 12H.12.1) formed a line that ran perpendicular to the barrack foundation (Figure 26). In addition to exposing the second ceramic pipe, removing the aeolian sediment of context 12H-3001 also revealed a concentration of artifacts believed to be associated with a garden feature: pieces of concrete, brick, coal, and river cobble.

Further excavation revealed a variety of possible landscaping and hardscaping materials used in entryway gardens and to possibly construct barriers to enclose a garden. Bricks, found in the northeast corner of the unit, formed a line with other material that ran perpendicular to the barrack foundation and parallel with the aligned ceramic planters. The western half of the unit contained a tree mold, consisting primarily of rotted wood, and another linear formation of concrete along the western wall. The remaining artifacts collected from this unit included nails, fragments of wooden posts, marine shell, and eggshell. Due to time restraints, the remaining contexts were excavated levels within the two planters. Both planters contained coal, eggshell, and clay inclusions.

Figure 26: Two ceramic pipe planters (12H.14.1 and 12H.12.1).
Note brick concentration to the right of the far planter.

Flotation samples from context 12H-3001 produced wild lettuce and morning glory. Morning glory is documented in historic photographs of entryway gardens, but this was the first time lettuce appeared in the archaeobotanical record for Amache (Archer 2011).

Analyses of pollen collected from context 12H-3002 identified elderberry as a possible cultivar featured in this garden. Samples from context 12H-3008 included pollen from the rose family (i.e., Rosaceae). Analysis of pollen samples collected from context 12H-3007, identified dogwood and *Prunus*. *Prunus* is a genus of plants that include cherry, plum, peach, apricot and almond, along with a great variety of ornamental species. The pollen from these species does not travel far, and were likely deliberately cultivated at the site (Jones 2011). *Prunus* is also a particularly valued decorative genus in Japanese-style gardens.

Archaeological Findings 12K

Block 12K is the last residential block in the southeast corner of the Granada Relocation Center (Appendix B). The internees who inhabited the block were primarily from the Los Angeles area. Block 12K was surveyed for several reasons: there were features and artifacts of high archaeological integrity, historic photographs identify vegetable gardens, and future goals of the Amache National Historic Landmark include reconstructing the water tower located in the southeast corner of this block.

Surface Survey. Surface surveys were conducted at 2 meter intervals in the east-west direction. Artifacts found in 12K included many glass fragments, children's toys (e.g., marbles and glass vehicles), ceramics, and modified objects such as tin cans and a homemade wheel. See Appendix B for the locations of all collected artifacts, identified features, and excavation units mapped within Block 12K.

A sherd of celadon Japanese style pottery (FA# 11, Lot # 12K.16), or *Seiji*, was collected (Crueger et al. 2006) (Figure 27). It is a green glazed fragment of a sake cup, also known as *Ochoko*. A similar teacup, or *Yunomi*, vessel was also recovered from the camp dump in 2010 (Lot d.25.1) **(**Figure 28**)**. Both ceramics feature the maker's mark "Made in Japan" on the bottom. Artifacts with the same maker's mark have been found throughout Amache. Because these Japanese wares were not available for purchase during the war, they were likely brought to Amache by internees (Skiles and Clark 2010).

Figure 27: A sherd of celadon, or *Seiji*, style pottery (FA# 11, Lot # 12K.16).

Figure 28: Porcelain teacup, or *Yunomi*, with decal decoration (Lot d.25.1).

Only one other repurposed artifact was identified during the surface survey of Block 12K. Field Artifact # 10 is a sanitary tin can with evidence of modification. Many perforations were made throughout the bottom of the can. They are triangular holes, made by an unidentified tool (Figure 29).


Figure 29: Modified tin can with triangular perforations (FA# 10).

Common features identified in Block 12K were various forms of landscaping created by internees (Appendix C). Rows of Chinese elm trees were planted running parallel to barracks. Concrete borders were identified along the mess hall and a barrack. An architectural addition was also found connected to the mess hall, identified by a concrete foundation and concentration of bricks.

Ground-Penetrating Radar. A subsurface survey, using ground-penetrating radar, was conducted on the southeast corner of Block 12K. The area was chosen because of preliminary research, involving historic photographs, which document a vegetable garden to the east of barrack 6 and the recreation hall (Figure 30). This garden was designated VG-2 – i.e. – Victory Garden 2.

Figure 30: Historic photograph of 12K vegetable garden (VG-2). Note also the rows of trees in barrack front yards.

We established a GPR grid (see Figure 31 for the dimensions) and surveyed in the X direction. After data collection, we created amplitude slice maps and vertical profiles. Vertical profiles clearly illustrated hyperbolas from buried objects. No discernable changes in soil or sedimentary conditions were identified in the profiles, which supports the assertion that Amache is located in an unstable aeolian environment. The GPR slice maps revealed two subsurface features of particular interest. The first is the largest and has squared edges (Figure 31). The second, located in the southwest corner of our grid, is a linear feature (Figure 32).

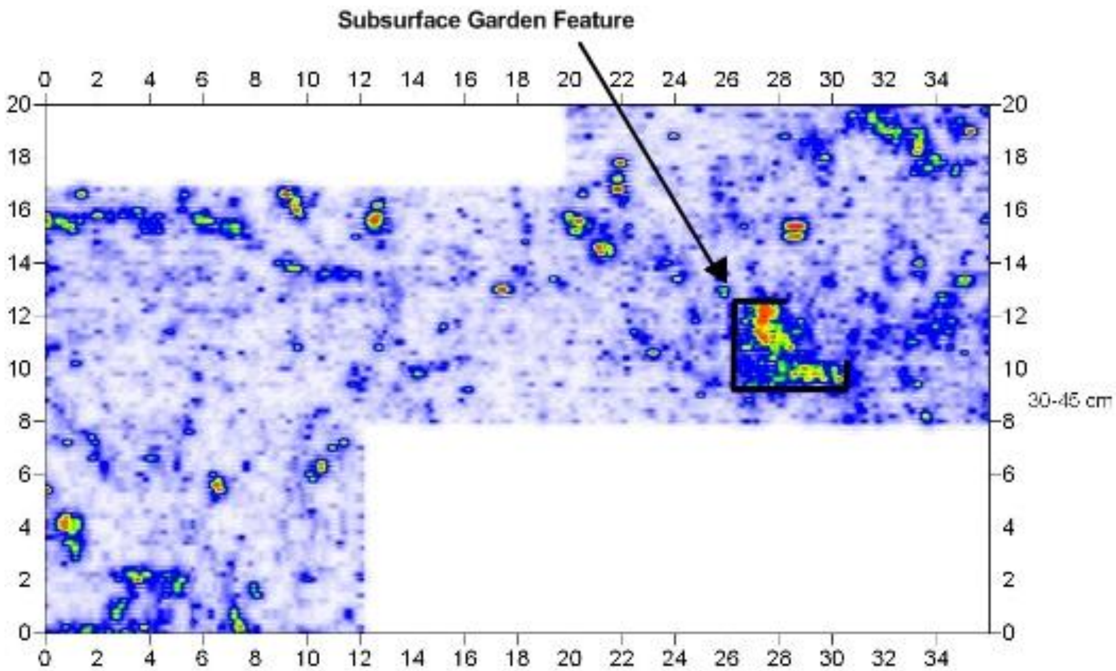


Figure 31: Amplitude slice map, 4-6 nanoseconds (30-45 cm. below surface), of the 12K vegetable garden showing subsurface feature with squared edges.

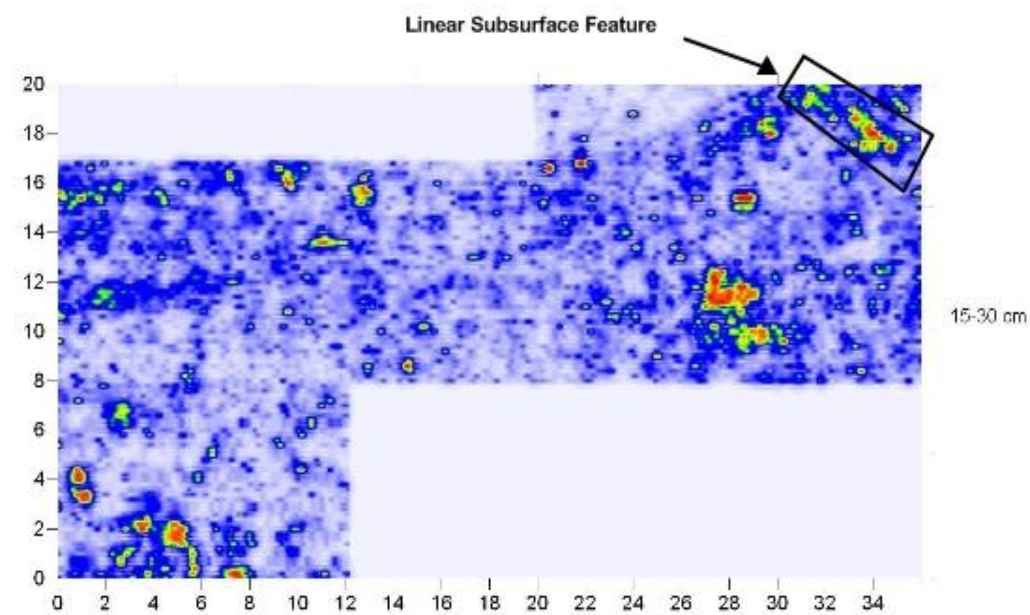


Figure 32: Amplitude slice map, 2-4 nanoseconds (15-30 cm. below surface), of the 12K vegetable garden showing a linear feature in the southeast corner.

The first feature is believed to be a trash dump. This feature is visible in the bottom three slice maps, from 2 to 8 nanoseconds. According to John Hopper (head of APS), during deconstruction of the site, materials from the barracks were gathered and disposed in areas of low elevation; these areas within the camp were often gardens. The slice maps depict this feature as a cluster of high to low amplitude reflections. It is approximately located where the historic photograph reveals a vegetable garden surrounded by a fence (refer to Figure 30). Trash being dumped inside the rectangular garden fence during deconstruction would explain the squared edges of the subsurface feature.

The majority of the linear feature was visible in the second amplitude slice map, between 2 and 4 nanoseconds. Laterally corrected data profiles reveal a concentration of small point-source reflections (Figure 33). Coupled with the slice maps, the GPR data suggests the feature is comprised of numerous high amplitude reflections. Unlike the rectangular feature, the profiles show that the linear feature contains multiple hyperbolas with similar dimensions. They are also located at approximately the same depth, not stacked vertically. The similarity of the hyperbolas could infer that the subsurface objects have similar size, geometry, and/or material composition. This feature was chosen as the area to establish three excavation units.

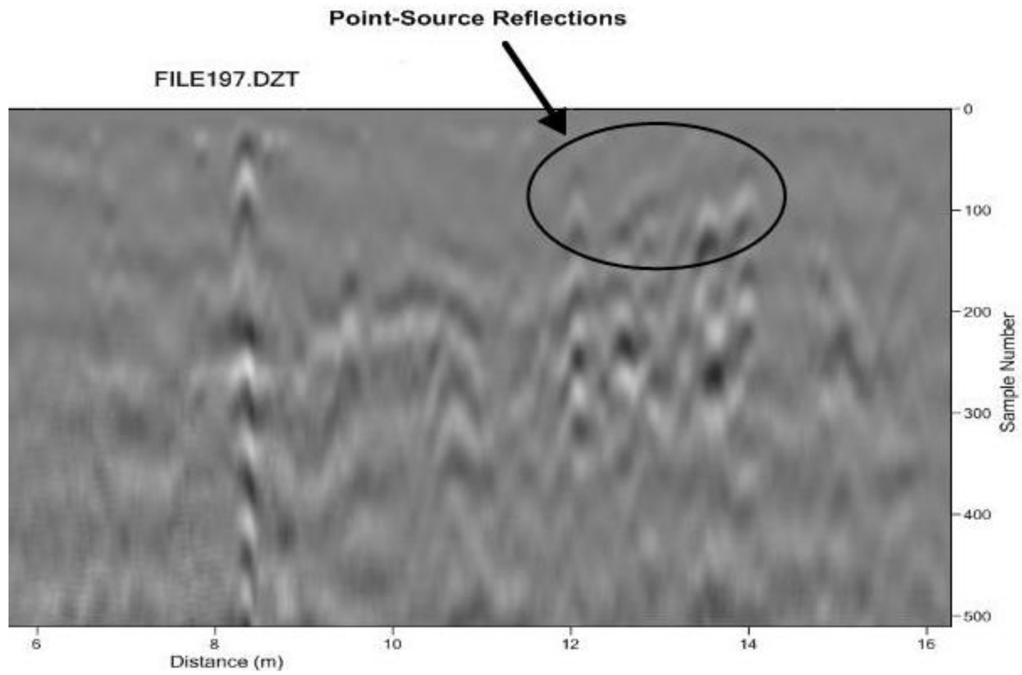


Figure 33: Vertical profile showing the linear feature as a compilation of high amplitude point-source reflections.

Excavation. On July 6, 2010, three 2x2 meter units were opened in the southeast corner of Block 12K. The units were laid out in an alternating, or checkerboard, pattern in order to encompass the area where the subsurface feature was identified using ground-penetrating radar (Appendix D). No distinguishable features or changes in sedimentary material were identified during excavations. Sediment primarily consisted of well-sorted, fine grained, clastic material.

The first unit, identified as 1001N/996E, contained five contexts (Appendix C) and was excavated by student Brianna Clark and intern Jordan Kemp. Artifacts primarily consisted of nails, staples, wire fragments, and wood. A small, hand painted, porcelain fragment was recovered (Lot # 12K.18.13). Unfortunately not enough of the ceramic vessel was available to attain a rim or base diameter, but it was most likely brought to Amache by an internee. Clear glass bottle fragments with a maker's mark were recovered from context 12K-1004 (Lot # 12K.25.1). The maker's mark belongs to the Owens-Illinois Glass Company, and was dated to 1944 (see discussion on glass bottles from Block 12L).

Context 12K-1004 contained the largest collection of artifacts in the unit. A significantly large collection of wire fragments were discovered in the northeast quadrant. In addition to wire, most artifacts recovered from sifting screens were nails and staples. Two fragments of wood were found in the mid-eastern part of the unit (Figure 34). A larger wooden plank was revealed in the southeast quadrant. These specimens were collected and later identified as softwood, likely from the conifer division (Archer 2011). They are possibly fragments of dimensional lumber, remnants of the fence that surrounded the garden.

Figure 34: Two wood fragments from unit 1001N/996E.

Unit 1003N/998E was excavated by volunteer Duncan Kelly and student Laura Ng. See Appendix C for list of contexts in unit 1003N/998E. In addition to the aeolian sediment found throughout Amache, river cobble was found in the first two contexts and many small pebbles in the third. Nails and metal wire fragments were found in context 12K-1002. These artifacts were more frequently found in context 12K-1005, along with metal staples, wooden fragments, concrete, limestone, and part of a glass thermometer. Similar artifacts were found in context 12K-1008, with an increase in wood deposition concentrated in the southern part of the unit. Three large sections of dimensional lumber were found in the southeast corner (Figure 35). One section, situated in the east wall, had three nails hammered into one end. Specimens of wood recovered from context 12K-1008 were identified as cedar (Archer 2011; Jones 2011).

Figure 35: Three large wood fragments in the southeast corner of unit 1003N/998E.

The linear feature, mapped with GPR, ran through units 1001N/996E and 1003N/998E. The majority of artifacts collected during excavation were recovered from the second and third contexts of these two units. In addition, no wire or fragments of lumber were found in unit 1005N/996E.

Excavations in Block 12K were conducted along the periphery of Victory Garden 2, but the units may have included materials used in the construction of the historic feature. The most prevalent artifacts recovered from the screens were nails, staples, and wire. The type of nails were almost entirely box and common, but the sizes varied. All staples had a length of 1 inch, or were slightly shorter with corroded and broken ends. The ferrous wire fragments were the most common type of artifact collected from the three units. Some wire fragments were found with hooked ends (Figure 36), similar to wire found in Block 7G.

Figure 36: Fragments of 15 gauge wire with hooked ends.

During excavations the majority of metal wires, nails, and staples were recovered from screens, while sieving excavated soil, rather than *in situ*. The subsurface origins of these small metal artifacts were estimated by analyzing GPR profiles. The positions of many of these high amplitude point-source reflections correlate with areas where wood fragments were mapped. This provides further evidence the feature identified prior to excavations were the collective remnants of a fence.

In addition to the remains of a fence, there was other evidence found during excavations to suggest a vegetable garden was once located in the southeast corner of Block 12K. Soil samples were collected from every context for flotation, chemical testing, and pollen analysis. Local environmental flora dominated the samples. Ulmus seeds were identified, which likely derived from the Chinese elm trees that were planted at Amache (Archer 2011). Pollen analysis suggests preservation from this garden area was poor, which could support the GPR data that indicates excavations occurred on the outskirts of where Victory Garden 2 was historically located. However, pollen samples did include cultivated potato and a *Canna* grain, which represents a cultivated ornamental plant (Jones 2011). Analysis of the soil chemistry for the contexts greater than 20 cm. below the current ground surface revealed elevated levels of ammonium nitrate, phosphorous, and potassium, relative to a control sample (Erika Marín-Spiotta and Emily Eggleston 2011). These elevated levels may be the result of amendments to the soil, made by internees.

Archaeological Findings 12L

The area east of Block 12K, defined for survey purposes as 12L, is not a residential block but an open field containing a concentrated and diverse collection of artifacts. The accumulation of aeolian sediment has helped preserve the feature. For this study, it is proposed that Block 12L is an informal trash dump. There are a couple of large piles of beer cans from the later 1940's, suggesting that areas of the trash dump were created during the dismantling of the camp. In addition, the remains of fencing materials similar to those found in the units excavated in 12K, suggests some of the artifacts may have derived from historic gardens.

The first archaeological survey of Amache, in 2003, documented similar trash dumps in open fields, along the perimeter of residential blocks, and on the edge of fire breaks (Carillo and Killam 2004). The survey also reported high concentrations of lumber and tin cans (some modified) within those features. Though it was not documented on the artifact checklist in 2010, Block 12L had a dense lumber deposit, larger than the historic trash dump used during occupation. A photograph taken after Amache was closed shows lumber deposited outside the barracks (Figure 37). Carillo and Killam describe the artifacts found in many of these features as domestic trash. They continue, describing a trash dump on the outskirts of Block 9E, "…this trash deposit may be the result of cleaning out the barracks once the block was evacuated" (2004:76). Finally, surveyors in 2003 noted evidence of bulldozing. This suggests informal trash dumps were created when debris was transported to the edges of blocks. The location of these trash deposits also reveals a pattern. The DU Amache Project has recorded similar trash features on the eastern edges of Blocks 7K, 8K, 9L, and 11K; each marks the boundary of the residential compound.

Figure 37: Deposition of household material after Amache closed.

As with all blocks, an artifact checklist was filled out during surface surveys. The GIS rendered map for Block 12K also shows the locations of artifacts analyzed in Block 12L and the extent of the informal trash dump feature (Appendix B). The Block 12L feature is mapped within the boundary of Block 12K. When the Block 12L artifact count is added to Block 12K, the distribution of artifacts recorded in Block 12K differs from the other residential blocks.

The Pearson's chi squared test was employed to study the distribution of artifacts between blocks. To conduct this test, counts of artifacts were taken from the Surface

Survey Block Form completed for each block. Chi squared tests are used for discrete, nominal data that questions whether two categorical variables are independent or related. The two nominal variables considered in this test were blocks and artifact classes. Artifact classes consisted of Glass, Ceramics, Metal, Tin Cans, and Post-Occupation Artifacts. For each block and artifact class, chi squared compares the observed artifact counts, recorded during surface surveys, to counts expected from a random distribution of artifacts. This helps determine if there is a correlation between the two nominal variables or if they are independent.

To test random distribution, the null and alternative hypotheses are:

H_0: There is no difference between a random distribution and these observations.

H_1: The distribution of artifacts in these blocks is not random.

The chi squared value must be greater than the critical value to reject the null hypothesis. The critical value is determined by the degrees of freedom [i.e., (rows-1)(columns-1)] and significance/probability level, which can be found on a chi square distribution table.

To test whether Amache blocks had a random distribution of artifacts, two concerns were addressed. First, Block 7G was omitted from the tests because it was the only residential block that was not completely surveyed. Second, the chi squared test was conducted as if 12K was surveyed like the other residential blocks, which would include the area, and artifacts, later designated as Block 12L.

Using a Chi Squared test, with an alpha of 0.005 (99.5% probability), 8 degrees of freedom, and a critical value of 21.955 (Penn State Department of Statistics n.d.), we must refute the null hypothesis in favor of the alternative hypothesis (Table 1). There is a very highly significant difference in the distribution of artifacts in Blocks 12G, 12H, and 12K.

Table 1. Summary of a Chi Squared Test Comparing the Distribution of Artifacts in Residential Blocks.

	12G	12H	12K	Total
Glass				
Observed	34	47	152	
Expected	37.9	51.16	143.01	
Chi Squared Contribution	0.401	0.338	0.565	1.304
Ceramics				
Observed	36	38	55	
Expected	20.93	28.25	78.97	
Chi Squared Contribution	10.85	3.365	7.275	21.49
Metal				
Observed	24	47	48	
Expected	19.39	26.18	73.19	
Chi Squared Contribution	1.096	16.557	8.669	26.322
Tin Cans				
Observed	17	21	162	
Expected	32.54	43.92	122.79	
Chi Squared Contribution	7.421	11.96	12.52	31.901
Post-Occupation Artifacts				
Observed	17	20	65	
Expected	16.59	22.39	62.6	
Chi Squared Contribution	0.01	0.255	0.092	0.357
Chi Squared Value				**81.374**

The distribution of artifact classes, among the blocks studied using the chi squared test, are not statistically random. Many factors, specific to individual blocks, may have contributed to the chi squared value exceeding the critical value; however, this study is primarily concerned with how the distribution of artifacts in Block 12K relates to the 12L feature (Table 2). The chi squared test revealed that there were significantly fewer ceramics found in block 12K than other residential blocks. In addition, there were a significantly higher number of tin cans and post-occupation artifacts found in 12K. However, these results changed when artifacts identified in the informal trash dump (i.e., Block 12L) were isolated from Block 12K. The 12L feature skewed the artifact counts for Block 12K. When these artifact counts were removed from 12K the block showed a normal distribution of ceramics, post-occupation artifacts, and tin cans.

Table 2. Distribution of artifacts in Blocks 12G, 12H, 12K, and 12L.

	12G	12H	12K	12L
Glass	34	47	85	67
Ceramics	36	38	46	9
Metal	24	47	13	35
Tin Cans	17	21	59	103
Post-Occupation Artifacts	17	20	25	40

Few artifacts were permanently collected from Block 12L. Those specimens that required lab analysis were designated as catch-and-release artifacts; most were objects that presented evidence of reuse and modification. Other artifacts, temporarily collected, were samples of the many glass jug fragments deposited in the trash dump.

Many glass jug fragments found in Block 12L had maker's marks of the Owens-Illinois Glass Company. Many had a plant and date code, representing the location and year of production, located on the bottom of the bottle. All bottles dated to the historical occupation of Amache, between 1942 and 1945 (Lockhart 2004).

Artifacts from Block 12L that exhibit reuse or modification were tin cans, sheet metal, wire, and metal barrel hoops. The materials, and the types of modifications, documented in this feature have also been identified throughout the blocks surveyed at Amache. Therefore, the artifacts studied from Block 12L may constitute a representative assemblage of reuse practices at Amache. Appendix F contains photographs and brief descriptions of modified artifacts from the 2010 field school.

Assessment of Field Methods

The field methods employed in 2010 allowed the University of Denver to collect data, while preserving the archaeological record of Amache. Ground-penetrating radar minimized the destruction of the site by strategically identifying the best locations for excavation. Choosing the catch-and-release method for studying a portion of the artifacts helped maintain the integrity of the site. As long as the APS continues to monitor and preserve the site, those artifacts can undergo further analysis in the future.

Minidoka Assemblage

Study of the Minidoka assemblage primarily focused on the furniture. In addition, a pair of sandals and a doll were studied and photographed. The assemblage is significant because the items were made in the camp by internees. They provide evidence of professional tools used in woodcarving and carpentry, as well as the use of salvaged materials in the construction of complex furnishings.

It is important to note that these articles do not constitute a random sample of the furniture constructed within the camp. Most pieces were taken, and kept by families, after internees moved out of the camp. They were significant to their owners and display superior quality. In contrast, Figure 38 shows a table and chair that were left behind when the camp closed. They are constructed from plywood and small pieces of scrap lumber, and do not maintain the aesthetic attributes visible among the other articles of furniture. They do not have an accession or catalog number but, instead, have a simple alphanumeric identification code.

Figure 38: Small table (T-3415) and chair (C-2548)
left at the Minidoka internment camp.

The furniture from the Minidoka assemblage exhibit use of salvaged materials. An example is the wooden trunk in Figure 4.39. The trunk was constructed with the combination of dimensional lumber (i.e., for the lid, front and rear sides) and multiple, irregularly cut, wooden planks nailed 3-6 abreast (i.e., to construct the bottom and lateral sides). The two handles, nailed to the lateral sides, were made from sewn strips of denim. In addition to the stitches that join the margins of the fabric, the denim strips have seams from an industrial sewing machine (Figure 40). The handles were possibly made from fabric recycled from jeans.

Figure 39: Large wooden trunk (MIIN accession #00025 / MIIN Cat# 61).

Figure 40: Strip of denim fabric used for a trunk handle.

Conclusion

The fieldwork conducted in 2010 and the Minidoka assemblage provide a diverse collection of items possibly repurposed by internees. Although we do not need to date the events at Amache through the archaeological record, temporally diagnostic artifacts provide evidence of excellent site integrity. The archaeological record consisted of many artifacts and features associated with gardening and landscaping. Also present were culturally significant artifacts, suggesting some personal items were brought to camp by internees.

CHAPTER 5:

USE OF MATERIAL CULTURE IN THE CONTEXT OF CONFINEMENT

Archaeological findings from the 2010 fieldwork and the Minidoka collection have provided evidence to suggest internees were recycling and/or modifying materials found within internment camps. Many of these materials have been associated with gardening or landscaping practices, but all artifacts were found within the context of confinement. This chapter will discuss how these artifacts were used by internees to adapt to their lives in an internment center. A particular focus will center on how these objects enabled internees to adjust to the unfamiliar environmental conditions and the limitations of living in an incarceration facility.

Material Culture Studies

Many scholars have discussed the possibility of material culture having multiple meanings. While studying individual artifacts, it is important to have global perspective (Deetz 1996). Artifacts do not exist in a vacuum. Therefore, scholars have proposed a multiscalar approach to studying material culture: a methodology where artifacts can have multiple meanings that differ based on their context (Praetzellis et al. 1987; Jordan and Schrire 2002). Further, Gosden and Marshall (1999) address a biographical approach to analyzing artifacts, where meaning changes throughout the life of an object. Meaning can be instilled or altered through physical modifications or changes in the social interactions that connect people and objects. As discussed by Skibo and Schiffer, people do make choices when developing their technology. Throughout the life history of material culture, choices are made based on innumerable factors, "from utilitarian to social or religious" (2008:2).

Amache presents a case study for the exploration of material culture as an expression of human agency and power structures. In addition to the interaction between Japanese American internees and the WRA incarceration center, camp-made objects may also reflect raw material constraints and environmental conditions (Dobres and Hoffman 1994:212; Dobres and Robb 2000:7).

Archaeology of Confinement

At Amache, artifacts are found in the context of imprisonment. The WRA compound is a power structure with enforced regulations and a defined space. Internees were exposed to unfamiliar environmental conditions with limited resources. Decisions may have been limited, but internees had a life before internment that likely influenced their actions within the camp. Individual response to confinement may be considered consciously or unconsciously guided by cultural background and/or individual experiences, both past and present.

Studying the institutions of incarceration, archaeology explores how inmates respond to captivity; this includes adapting to the administration's attempts to control inmate behavior and daily life. The institution uses techniques to flex its domination over the inmates. By removing personal property and enforcing institutional regulations, the inhabitants are assimilated into an inmate identity. However, inmates struggle to cope with the system and survive with their own techniques. Prisoners learn to adapt to, and manipulate, the system to their advantage by studying the limits of domination (Beisaw and Gibb 2009).

Casella, in *The Archaeology of Institutional Confinement* (2007), further explores these social interactions between those who incarcerate and those who are incarcerated. To better understand this social relationship, it is necessary to examine power relations and the operation of power itself (2007:57). While discussing the definition of power, Casella claims scholars have classified two primary forms of power: domination, defined as the "'power over' others," and resistance, defined as the "'power to' act" (2007:58). According to her synthesis of scholarly work "…institutional confinement . . . produces compliance by dominating or wielding 'power over' its inhabitants" (2007:66). Casella says, "Since power exists both as forces of compliance and forces of action, resistance is born at the same moment as domination" (2007:69). Resistance is, therefore, one force that negotiates in power relations. Inmates may use acts of resistance to undermine authority or limit the power of the institution.

Scholars who study the material remains from these institutions have varying objectives. This is normally illustrated by a strict focus on particular types of artifacts and certain information they wish to extract from them. In situations where a particular ethnic group is confined, correlations are usually drawn from ethnographic records; for instance, Samford (1996) and Singleton (1996) review empirical data taken from the Caribbean and Africa in their archaeological studies on African American slavery. Some anthropologists conduct abstract studies on material culture and what it represents. According to Tilley, archaeology is “the study of material culture as a manifestation of structured symbolic practices meaningfully constituted and situated in relation to the social” (1994: 70). His objective is studying the “underlying reality” of material culture, believing it is socially produced and acts as a text, communicating social practices. Tilley removes individualism, analyzing artifacts as a group manifestation.

In addition to studying culturally and socially significant artifacts, Turan (2003) studies personal objects used to preserve one’s sense of self. In an ethnographic study, Turan uses terms such as “transitional object” and “identity kit” to describe familiar possessions carried by individuals of Asia Minor descent who became refugees after the Greek-Turkish War. Such personal objects can be studied from similar contexts where there is a period of physical or mental displacement. To comprehend the changes one experiences during relocation, Turan argues “a person’s understanding of the self is shaped by the social experiences taking place with other people, with objects, and with the environment” (2003:468). Personal possessions can, therefore, be used as a remedy for loss and reestablish a connection to one’s previous life. During resettlement, transitional objects are especially effective with the continuity of one’s self “if they are part of daily rituals like eating, cooking, or religious practice” (2003:465).

Much work has been done studying the material culture of institutional confinement. This body of work includes a wide array of objects utilized by people from various historical and cultural backgrounds, but studied under similar contexts.

Susan Piddock (2007) reviews archaeological investigations of female prisons on Tasmania. During excavations, luxury items were discovered, such as alcohol, food, and tobacco. Although female inmates were strictly confined to the prison, items obtained outside of the jail were found in holding cells. It was later discovered that they were able to conduct trades with the guards. Restricted by their physical setting, inmates exploited their social landscape to improve their physical and mental condition.

Analysis of convict settlements on Australia included textual accounts from individuals (Gojak 2001). These records described the need to make items in addition to laboring on public works projects in order to survive. Objects were manufactured to sell and to use until they could be "replaced with consumer durables" (2001: 75). It was established that extreme poverty was partially due to the overwhelming power landowners had in a region that was separated from the central government (i.e., Britain). The global perspective of studying home-made objects as a substitution for store bought items provides insight on the social and political situation of the time.

Studies on prisoner camps consistently depict inmates doing what they can to survive. Reports from Andersonville, a prisoner-of-war camp during the Civil War, illustrate a scenario where supplies were inadequately provided to prisoners. Prisoners quickly died because of poor nutrition. Those who lived made their own clothes and built shelters. It has been documented that halves of canteens were used to tunnel holes for escape (Futch 1962). Similarly, testimonies from Nazi concentration camp survivors revealed a collaborative effort by prisoners to obtain necessary supplies (Des Pres 1976). Networks were organized to smuggle supplies into the camps. In addition, people scavenged the camp grounds for anything they could reuse; examples include using burlap sacks for clothing and rescuing tattered garments from the garbage. In writing about coping strategies employed during incarceration, Mytum states, "Material culture in the form of buildings, equipment, personal possessions, and items produced within the internment camp all played a crucial role in enabling survival" (2012:169).

Coping strategies utilized by prisoners were often based on personal desire not necessity. Waters's (2004) and Jameson's (2012) studies of Prisoner of War (PoW) camps revealed items manufactured in attempts to make camps more tolerable. Prisoners played games, such as chess and backgammon, or created organizations to publish their own newspaper. At Camp Lawton, a Civil War PoW camp, prisoners kept personal items from their homeland, such as coins minted in specific states or countries (Jameson 2012:34).

The compound constructed near Granada was not as restrictive as our modern prison systems. However, the methodologies employed in the archaeology of institutional confinement do apply to the study of Amache because of the displacement of Japanese Americans and limitations placed on internees.

Context of Confinement

A study of Amache's environment was necessary to identify and understand transitional objects, or items created to help internees adapt to confinement. Certain items may reflect an individual's response to overcoming a specific obstacle. At Amache, the WRA facilities and unfamiliar natural environment created many hardships.

Amache was isolated, located near the town of Granada in the High Plains of southeastern Colorado. The center was built on a low, arid bluff 2.5 miles south of the Arkansas River (Burton et al. 2002).

The historical Granada Relocation Center encompasses 10,500 acres of, chiefly, clay-rich farmland; however, the residential compound (approximately one square mile) lies in an aeolian depositional environment (Figure 41). The sediment consists of small, well-sorted clastic material – i.e. – primarily sand. This aggradational environment is due to the high winds in the area pulling unconsolidated sediment from the Arkansas River floodplain and depositing it to the south (Lillquist 2007:22). Due to consistent aeolian deposition, environmental conditions are unstable. In addition, vegetation was cleared during construction of the camp. Vegetation would have served to stabilize aeolian sediment and promote soil formation. During occupation, the region was only recently recovering from instability related to the Dust Bowl.

Figure 41: The Granada Relocation Center Today.

Most Japanese Americans living in Amache came from areas near Los Angeles and Merced County, as well as from northern coastal California and the Central Valley. There was a significant change in environmental conditions between California and Colorado (Appendix C). In California the majority of precipitation occurred from winter through spring, as opposed to the summer months in Granada. Granada also experienced much lower temperatures with greater annual snowfall.

In addition to the hardships introduced by unfamiliar weather patterns, camp facilities introduced greater adversity. Internee living quarters were inhospitable. Apartments were not furnished except for cots and mattresses. Each apartment was equipped with a coal-burning stove, which was insufficient for heating the unit during the cold Colorado winters. There was no running water and only one electrical outlet per unit. Due to the hastened construction of camp buildings, there were often gaps where walls aligned the windows and roofs (Harvey 2004: 84-85). Paul H. Freier, the housing superintendent, wrote in a December, 1942 report:

> It is an apparent fact…that normal sized beds to accommodate seven or eight people in a room 24’ x 20’ will take all of that room, leaving no room for toilet and other living purposes. This can by no means be desirable from a health and sanitation angle. It is not becoming of a democracy, where there are vast areas of living space (Harvey 2004:86).

Overcrowding was an immediate problem when camp Amache opened. There have been reports that people had to share beds due to limited room. Many evacuees spent as much time out of the barracks when not sleeping because of overcrowding. Some recreation halls were even converted to temporary apartments (Harvey 2004: 87).

History of Japanese American Gardeners

Many of the artifacts discussed in this thesis are associated with gardens. This is, in part, due to the research topics of the 2010 field school and the future goals of the DU Amache project. However, the archaeological focus on internee gardens is also a result of the significance of agricultural work in Japanese American society prior to the war. To understand the cultural significance of artifacts and features related to internee gardening and landscaping, one must first consider the connection between Japanese immigrants and the agricultural industry in early 20th century America.

Japanese immigrants were able to achieve greater success in the United States than the average immigrant group. This was due to a combination of several factors. Labor needs increased due to legislation that restricted Chinese immigrants from entering the country as well as changes in employment among white Americans. Agricultural work, available in the United States, conveniently coincided with the occupational background of many Japanese immigrants.

The Chinese immigrated to the United States a couple decades before the Japanese. Major Chinese immigration began in 1849, due to the California gold rush. Most Chinese immigrants worked as miners and, to a lesser extent, laborers in the manufacturing and agricultural industries (Bonacich 1984:66; Daniels 1988:19). The distribution of Chinese immigrants into various fields of employment had an impact on the labor market that contributed to anti-Chinese sentiments. People began to petition Congress against Chinese immigration. This resulted in the passage of the Chinese Exclusion Act on May 6, 1882, which largely ended Chinese immigration to the United States (Daniels 1988).

The exclusion of Chinese immigrants created a demand in the labor market (Morimoto 1997). In farming, this demand was made greater by the movement of white laborers into nonagricultural jobs. Wages for agricultural labor were low compared to other employment opportunities in America. However, these wages were still higher than in Japan, and employment opportunities were limited in the United States for Japanese immigrants due to discrimination and language barriers (Fugita and O'Brien 1991: 53).

There was a significant demand for agricultural workers in the United States at the same time as mass Japanese migration. Similar to the Japanese immigrants, many Chinese immigrants were previously farm laborers; however unlike the Japanese, twice as many Chinese moved into manufacturing and mechanical occupations. In addition, nearly three times as many Japanese immigrants were employed in agriculture as Chinese immigrants (O'Brien and Fugita 1991: 18). A poll of Japanese occupations taken in Los Angeles showed 5.9% working as gardeners in 1905. By 1934, 56.7% of gainfully employed Japanese immigrants were gardeners, farmers, or employed in the produce industry (Tsuchida 1984:438-440). In the two decades prior to WWII Japanese immigrants accounted for approximately 70-80% of the gardeners in Southern California (Tsuchida 1984:443). Among those Japanese Americans living on the West Coast 69% were employed in agriculture or agriculture-related businesses (Helphand 2006:158).

More Issei than Nisei gravitated toward agricultural work. Many Japanese who emigrated from Japan were farmers driven to leave due to economic hardships. As well as having experience in the field, farming was an occupation that was well respected in Japanese culture (Iwata 1962). Issei farmers and gardeners in America liked being self-employed and were successful at climbing the ladder from general laborers to tenant farmers. Many Japanese were willing to pay more for, and work harder on, land that was seen as undesirable by other people. By 1941, the Japanese population involved in farming "were producing between thirty and thirty-five per cent by value of all commercial truck crops grown in California" (Iwata 1962: 25).

Material evidence for the Adaptation to Confinement

The context of Japanese American internment is the product of a thriving, prewar immigrant group and the unwarranted, forced relocation of a community by their government. The sudden changes experienced during internment caused physical and mental strain. The archaeological findings discussed in Chapter 4 may reflect the internees' response to captivity. The significance of these artifacts and features is reflected by their contextual environment – i.e. – the struggle to adapt to institutional confinement.

An immediate concern was adjusting to the physical environment. When internees arrived at Amache in August and September of 1942, construction was not complete and barracks were minimally furnished. Internees were tasked with adjusting to their new residence with few resources and pressured by the onset of winter. Amache was not the only camp unprepared for housing internees. Internee modification of landscape and living space is well documented at internment centers.

Upon moving into their barracks, internees were almost entirely responsible for furnishing their quarters. The Minidoka assemblage exhibits the types of furniture internees constructed, like tables, chairs, and dressers (Appendix F). Some were crudely manufactured, others were carefully crafted and had features of aesthetic quality.

In addition to concerns of physical comfort, managing the transition into internment involves the "protection of privacy and personal space" (Mytum 2012:179). Internees experienced overcrowding, and have reported the barracks as feeling confined (Hirano 2011; Lindley 1942a).

Each barrack constructed for internment camps housed multiple families and contained a maximum of six living units. Interior walls were not built to divide the units into separate rooms. Blanket partitions often separated the individual units within a barrack, but provided limited privacy. Two room dividers were included in the Minidoka collection and historic photographs have documented their use (Figure 42).

Figure 42: *"Family inside barracks" (denshopd-i151-00416), Densho, National Archives and Records Administration.*

Barracks often had gaps where walls joined windows and roofs. Sand, rain, and snow would frequently blow through these holes. The WRA engineering sector at Amache filed many reports concerning maintenance and construction work on buildings because of damage from high winds and storms. Many of these projects went unfinished due to insufficient supplies and the inability to form maintenance crews due to internee leaves (WRA 1944b; WRA 1944c). A narrative from Manzanar described how a group in one barrack used a hammer, nails, and tin can lids scavenged from around camp to patch up the holes in the floor and walls (Houston and Houston 1973:24-25). These gaps were so common at Amache a warning was published in the camp newspaper. Art Tarman, the general manager of the Lamar Daily News visited Amache in October and suggested "that every little hole should be plugged because during blizzards snow will penetrate any places that air can come through" (Granada Pioneer 1942a:3).

An abundance of sheet metal was deposited in the Block 12L trash dump. These metal artifacts were refashioned, having charactristics of construction material (Appendix F). Common modifications are creases or cuts made along the lateral edges to create straight or rounded sides (Figure 43). Every modified piece of sheet metal had perforations consistently spaced along the margins, many with nails still imbedded in the holes (Figure 44).

Figure 43: Sheet metal (FA #21, Block 12L) with two folded sides, one edge cut in a curved shape, and two perforations made along the curved edge.

Figure 44: Sheet metal (FA #50, Block 12L) with nails and perforations along one edge.

The residential blocks at Amache originally had little vegetation to provide shade or stabilize the sand dunes that defined the surrounding terrain. Due to sparse vegetation loose particles were often deposited in barracks. In response, internees took steps to modify the landscape.

Rows of Chinese Elm trees were planted running parallel to barracks. Many of these trees are still visible at the site (Figure 45). Oral histories indicate internees had to venture outside the camp to acquire these trees. According to Thomas Shigekuni, his brother traveled to Lamar to purchase trees for their block (2011). In an interview, Mary Hamano stated that, in an attempt to adjust to harsh living conditions, “all the young men went down by the river bed and got all the seedlings, the elm seedlings and planted trees in the back of our barrack” (2008).

Figure 45: Internee-planted row of Chinese elms in block 12K.

Landscaping and gardening was a common profession of Japanese Americans prior to WWII. Previous studies have discussed the continuation of such practices during internment. As noted by Kamp-Whittaker (2010:62), the physical modification of Amache's environment was driven by the desire for a more aesthetic landscape and better living conditions. According to a National Park Service report on the cultural landscape at Manzanar, internees "were instrumental in developing techniques to maximize agricultural production" and were "given some freedom in selecting crops to plant" based on what internees wanted in the mess halls (2006a:61). In addition to transforming the landscape to make camps more hospitable, or employing practical farming procedures for the agricultural program, gardening became a pastime for many internees.

Two types of internee gardens are often discussed, ornamental and vegetable. Soil samples studied from excavations identified the pollen of various flower species in Blocks 7G and 12H. Pollen from Block 12K suggest tubers were grown in the vegetable garden that was documented by historic photographs. The identification this pollen is further supported by an article in a camp newspaper. In the *Junior Pioneer*, Katherine Fujita (1944) writes about a victory garden that was constructed by growing both flowers and vegetables.

Analysis of soil chemistry may support gardening as a popular endeavor. In the previous chapter I discussed how elevated levels of ammonium nitrate, phosphorous, and potassium discovered in garden features may have been evidence that internees took steps to amend the soil. In a study by the National Park Service (2006a:61), those chemical compounds and elements were initially insufficient to produce vegetables at Manzanar.

Internees working for the Manzanar agricultural program solved this problem with fertilizer and regular irrigation. Similar solutions may have been used by internees to help plant growth in their personal gardens. Excavations revealed the remnants of organic fertilizer, derived from food waste. Crumbled eggshell was found scattered fairly consistently throughout the unit in Block 12H. Unlike the large abalone shell found in Block 7G, the shell found in the 12H excavations consisted of small flakes. Both types of shell contain minerals essential to plant growth. The soil chemistry of the buried garden surface had "higher nutrient concentrations…distinct from the surrounding environment" (Marín-Spiotta and Eggleston 2011:11).

As irrigation systems were built to support agricultural programs, water management was certainly employed during the development of personal gardens. Terra cotta flower pots have been recorded in several blocks. In addition, repurposed materials, such as the ceramic pipe planters in Block 12H, aided gardening pursuits. Archival and oral histories report the use of tin cans to manage water and contain the limited, nutrient-rich soil. Watering cans were made by puncturing holes in the bottom of tin cans. A report from Topaz discusses the practice of attaching the ends of sticks to cans to make a watering tool (Dusselier 2008). Tin cans, with similarly punctured bases, were also used as plant pots. Such pots were used to nurture bulbs, seeds, and transplanted flora (Helphand 2006).

There are common modifications consistently found on tin cans. Perforations made on the bottom of cans are often circular or linear, and usually made from the outside. All circular holes are small and mostly uniform, possibly made with a tool that resembles an awl (e.g., an ice pick or stitching awl). There are minor fluctuations in the diameter of adjacent holes, as if a pointed tool was used to pierce the can at slightly varying depths (Figure 46). Linear perforations are often triangular, wider on one side and tapered to a thin end (Figure 47). The wedged shape of the holes suggest a single edged knife was used to puncture the can.

Figure 46: Modified tin can (FA# 51, Block 12L)
with circular perforations made on the bottom.

Figure 47: Modified tin can (FA# 58, Block 12L)
with triangular perforations made on the bottom.

The configuration of the perforations was mostly random, but some tin cans had a patterned arrangement. The holes on FA #10 are centrally concentrated in a circular formation (Figure 48). The inclusion of a handle (Figure 49) and arrangement of the holes resembles an instrument for watering plants.

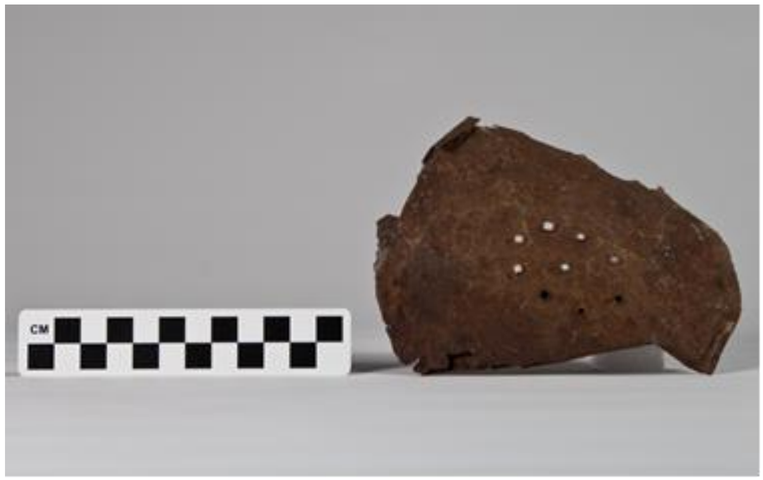


Figure 48: The bottom of a tin can with 9 holes centered in a circular pattern (FA #10, Block 12L).

Figure 49: A 14 and 15 gauge wire tied through 4 holes made in the rim of a tin can (FA #10, Block 12L).

The construction of plant pots was more common than water cans. Two Shells were found in a modified tin can suspected as a plant pot (Figure 47). Shells were found at garden features in Blocks 7G and 12H. More substantial evidence of tin can planters comes from historic accounts and photographs. An internee in the Santa Anita assembly center is said to have had a garden comprised of fifty tin cans (Dusselier 2008:59). Figure 50 is a photograph of a garden from Manzanar featuring numerous tin cans. The family that built the garden was in the plant nursery business before internment. Similar photographs have captured the use of tin cans to nurture plants at Amache (Figure 51).

Figure 50: *"Camp Garden" (denshopd-i151-00476), Densho, Dorothea Lange Collection.*

Figure 51: Two historic photographs of the landscaping around the elementary school at Amache. Image courtesy of the McClelland Collection.

Fences were also constructed to screen plants from wind and dust storms, as well as secure the borders of gardens. A variety of materials were recovered during excavations that have been associated with homemade fences. Block 7G contained artifacts from an entryway garden. Wood fragments were analyzed from the context that featured the horizontal post (i.e., context 7G-003). The fragments were identified as Western Red Cedar (Archer 2011). Western Red Cedar is often used to manufacture utility poles and fence posts (Nesom 2003). The alignment of horizontal and vertical posts in this unit suggests the remnants of a fence structure. Historic photographs provide further evidence that wooden planks were being used to delineate the borders of gardens (Figure 52).

Figure 52: Historic photograph of wood posts used to border gardens. Image courtesy of the McClelland Collection.

Wire was used in conjunction with wood to build fences. Excavations in Block 12K often recorded fragments of wood and wire within the same context. The most common sizes of wire were 15 and 16 gauge. The former was normally found in long sections (Figure 53). The latter was often found in small "S" shaped fragments (Figure 54). Artifact 12K.21.17 is a composite object that combines a 15 gauge wire and a 16 gauge wire (Figure 55). The fragment of 16 gauge wire is wrapped around the middle of the larger wire fragment. As seen in the photograph of Mataji Umeda's garden (refer to Figure 12), sections of wire were connected together and combined with wood to form fencing.

Figure 53: Sections of 15 gauge wires collected from excavations in Block 12K.

Figure 54: Small 16 gauge wire fragments (Block 12K).

Figure 55: Small 16 gauge wire fragment wrapped around 15 gauge wire (Block 12K).

The presence, and internee use, of wire is commonly documented in survey forms, excavations, and historic photographs. Wire artifacts are often found in fragmented pieces, but also as intentionally cut segments. Sections of wire were found as individually refashioned fragments, often with hooked ends, during excavations in Blocks 12K and 7G. In Block 12L, there is evidence that various gauges of wire were used to construct handles. Field artifact #26 consists of two different gauges of wire. The ends of each section are straight and suggest they were cut with a tool. The larger wire (9 gauge) is bent in a circle, while the smaller length of wire (13 gauge) is wrapped around it to form a rectilinear handle (Figure 56).

Figure 56: Small metal wire wrapped around a larger length of wire to form a handle (FA# 26, Block 12L).

Composite artifacts offer supplementary evidence to suggest wire was frequently used by internees to construct handles. Fragments of wire are often found attached to tin cans. A well preserved example is FA# 23 (Figure 57). Two holes were punctured on opposite sides of the rim. A 12 gauge wire was then cut and the ends were bent through each hole. This wire had the similar hooked ends that appear on wire fragments discovered during excavations. Similar tin cans appear to be constucted tools. An artifact found in the camp trash dump was possibly used as a bucket (Figure 58). The object has a similar handle made from a 14 gauge wire. Inside the can are small charcoal fragments, rocks, tar, and a post with similar dimensions to the wooden fragments found in excavations. Block Managers received many requests for buckets from internees. Supplying such items to their residents was difficult, noting “regular buckets are not available” (Block Managers 1943b). By modifying tin cans internees could substitute homemade tools for store-bought tools. A photograph taken from inside the Amache silk screen shop shows an internee using a tin can to mix paint (Figure 59).

Figure 57: A No. 10 sanitary tin can with a 12 gauge wire handle tied through the rim (FA# 23, Block 12L).

Figure 58: Tar and wood fragment inside a No. 10 sanitary tin can with a 14 gauge wire handle (FS #522/ Lot d.29).

Figure 59: *“Silk Screen Shop” (denshopd-p159-00132), Densho, George Ochikubo Collection.*

Another example of a homemade tool is the possible wheelbarrow wheel identified in Block 12K (Figure 60). Field artifact #37 is a metal wheel constructed from at least four pieces of scrap metal. Evidence of amateur spot welding suggests the object was unlikely purchased from a manufacturer. In an interview, Henry Shimizu (2006), recalled his time in an internment center in British Columbia. A man in the camp was so determined to build a rock garden that his friends built him a wheelbarrow to transport the necessary resources.

Figure 60: FA# 37, a homemade metal wheel from Block 12K.

In addition to salvaging materials for personal use, the internee community organized to preserve cultural traditions. There are historic photographs of internees celebrating New Years and the Obon festival, two traditional, family oriented, Japanese celebrations (Creighton 1997; Robertson 1991). Though it is often hidden in the background, homemade items often made these activities possible. Mochi, a Japanese rice cake, is traditionally prepared during the New Year's festival. Figure 61 is a cement mochi mortar that was made at Amache. Other culturally significant recreational activities, recreated in internment camps, included traditional performance art. At Heart Mountain internees organized a Japanese stage performance, called Shibai, which was mandated by their government constitution (Sakauye 2005). Adults in Gila River taught children Japanese dances and songs to entertain the Issei in camp. These performances utilized Japanese Kimonos, umbrellas, and fans (Matsuoka 1999). Similar stage acts were organized at Amache. Madame Fujima Kansuma, a dance instructor, traveled from Rohwer Arkansas to perform and teach traditional Japanese dances. The sets and costumes were skillfully crafted by internees. When internees did not have wigs for a performance, they were made with paper mache and rope dyed with black shoe polish (Figure 62) (Harada n.d.).

Figure 61: Concrete mochi mortar.

Figure 62: Historic photograph of two girls with hand-made wigs. Courtesy of Yukino Harada.

The ability of internees to produce artistic works while incarcerated is readily apparent from studying the Minidoka collection. A doll and pair of sandals exhibited creative and expressive characteristics. The hand-painted doll is dressed in a traditional woman's kimono and has several accessories created from salvaged or recycled materials (Figure 63). The doll is holding a tsuzumi (i.e., a Japanese drum) made from a yarn spool, card board, and thread (Figure 64) (Malm 1958). Various sections and styles of fabric were used for the kimono and the belt was made with a leather cord. The hair, made from thread, resembled the Shimada, a hairstyle associated with the traditional geisha (Dalby 2008:86). Flowers in the hair and the hair-comb were made with numerous small shells (Figure 65). The sandals resemble a style of traditional Japanese footwear called geta. The sandals were made from pine wood, which was sawed and sanded, and had braided textile thongs. Internees found meaning in starting new vocations in camps. A man in Manzanar was reported to have found purpose in crafting geta sandals for fellow internees (Dusselier 2008:148). A geta hand carved from cottonwood was recovered during the 2003 reconnaissance survey of Amache (Carillo and Killam 2004).

Figure 63: A doll decorated to resemble the traditional Japanese geisha (MIIN accession #00026 / MIIN Cat# 56).

Figure 64: Salvaged yarn spool, card board, thread, and
shells to decorate a homemade doll.

Figure 65: Pair of pine geta sandals from Minidoka
(MIIN accession #00021 / MIIN Cat# 17).

Conclusion

Many of the decisions made by internees were motivated by the need to adapt to unfamiliar environmental conditions coupled with the desire to preserve aspects of their former lives. Response to captivity was expressed in various material forms. The previous chapter reported the presence of Japanese-style ceramics that were recorded during fieldwork. These ceramic fragments can be defined as the remnants of transitional objects. Scholars have discussed their use in internment centers as practices to preserve cultural and personal traditions (Slaughter 2006; Skiles 2008; Skiles and Clark 2010). Internees may not have been able to bring all of their possessions to the camp, but they made attempts to replace those personal items lost from their former lives. Many fragmented artifacts provided insight into individual hobbies (e.g., gardening) that were maintained during internment due to the gathering and organization of various resources. These artifacts provided further evidence of the ingenuity of Japanese Americans during a turbulent time in their lives.

CHAPTER 6: COMMUNITY AND THE INTERNEE LANDSCAPE

In this chapter I will discuss the significance of these materials as they present the formation of a functioning community at Amache. Amache became relatively self-sustaining. In addition to the agricultural program, which supplied food to the camp, internees were able to access materials and tools that helped them adapt to confinement. The ability of the Japanese American community to organize and maintain the daily operations of the camp speaks to their role during internment as more than helpless inmates. Therefore, this study focuses on internee behavior as it serves community formation, to recreate aspects from pre-internment and to adapt to confinement.

Theoretical Background

Roles and Performances. According to Casella, institutions of confinement produce social roles (e.g., the inmate, guard, administrator, teacher, or student). To further explore the power relations within Amache, it is important to understand the interactions between those who inhabited and experienced the institution (i.e., administrative personnel and internees) (2007:57).

Erving Goffman was a sociologist who studied people as actors who adopt a role, seeing their social interactions as performances. He said, "a performance is, in a sense, 'socialised,' moulded and modified to fit into the understanding and expectations of the society in which it is presented" (1956:22-23). During a performance some things are over-communicated while personal views may be suppressed. Goffman uses the term "front" to define "that part of the individual's performance which regularly functions in a general and fixed fashion to define the situation for those who observe the performance" (1956:13). Therefore, the reality of a role and the sincerity of a performance may be questionable.

Where this theoretical view is relevant is when one considers the distinction between reality and the role people played. Mytum and Carr assert, "Archaeology can reveal the actual practices of the authorities, and also the ways in which internees worked within and against the conditions in which they found themselves" (2012:3). Based on the institution's function and roles, or job titles, of the administration, one might assume every WRA member reflected the ideals of their organization and believed in the imprisonment of Japanese Americans. This would also suggest administrative personnel did not trust Japanese Americans and internee activity was heavily supervised and limited. After studying the daily operations of the camp and the personal testimonies from internees and WRA personnel, evidence suggests Amache had less stringent procedures than other camps. In the previous chapter I labeled Amache as an institution of confinement. Although that is accurate, and choices were limited, opportunities may have been available for internees to control their environment.

Landscape. Although the administrative personnel at Amache may not have been as authoritarian as other internment camps, internees still struggled to overcome many hardships. Two such adversities, discussed in the previous chapter, were the harsher environment and the camp infrastructure. In addition to the loss of personal possessions, the loss of familiar space was devastating; "familiar places are experienced as inherently meaningful" (Basso 1996:108). Recreating personal space has been used as a coping mechanism during imprisonment (Mytum 2012). Place has a life history, meanings that are continually altered by the inhabitation of landscape. Joyce suggests "Transformations of inhabited landscapes…involve the reworking of established meanings and the politics of their control" (2009:34). Therefore, the modification of Amache by internees would have ascribed new meanings to the landscape and the formation of an internee community can be viewed as a coping strategy.

Studying the landscape at Amache can illustrate how Japanese Americans adapted to confinement. Landscape is a subjective concept that is spatially and temporally sensitive. It is also dependent on the interaction between the individual and the world around them. Personal experience is subjective, but landscape has material limits that influence personal experience (Bender 2006:303). Lewis equates landscapes with documents written by many authors, each saying something different. In addition, the authors of "human landscapes do not all receive equal attention from those who try to read it" (2003:88-89). It is sometimes difficult to analyze human landscapes because, unlike written documents, there is no signature to identify the creator.

There are many landscapes to study at Amache. People might look at Amache and see barbed wire and barracks, and read a camp designed to imprison Japanese Americans. Reading the ceramics and bottles will tell a story of retailers and various styles popular in the 1940s. By studying the reused and modified artifacts, we read the interaction between internees and the camp, the landscape created by the Japanese Americans, whose ingenuity helped re-establish a new community and preserve traditional lifeways.

Analysis of material culture can provide insights into the social structure and human agency at Amache. In the analysis of prehistoric material culture, it has been argued that studying technology is important to identifying social reproduction and changes. The development of technologies is influenced on environmental conditions, access to resources, social interaction, and human agency (Dobres and Hoffman 1994:212).

In his review of Anthony Giddens's structuration theory, Gauntlett writes:

> Giddens suggests, human agency and social structure are in a relationship with each other, and it is the repetition of the acts of individual agents which reproduces the structure. This means that there is a social structure - traditions, institutions, moral codes, and established ways of doing things; but it also means that these can be changed when people start to ignore them, replace them, or reproduce them differently (2002:93).

During internment the Japanese American social structure experienced sudden changes. Family structure changed, institutions were destroyed and had to be rebuilt, while personal and cultural traditions had to be maintained with more effort. While living in Amache, internees had different jobs, unfamiliar housing, and different daily routines imposed by camp operations. Giddens's theory of structuration may suggest individual and cultural traditions could have been preserved unaltered, or modified to survive in the context of internment. It also proposes the agency of one generation may create the structure for the next generation; therefore, the Japanese American community in the camp influenced the survival and formation of traditions after WWII.

Historical Background

Settlement and Formation of Communities. Among the European immigrants flooding into the United States there was an absence of clear national identities. Many immigrant groups had trouble organizing both socially and politically. In comparison, Japanese immigrants maintained an awareness that they belonged to a larger, uniform ethnic group with a shared culture and history (O'Brien and Fugita 1991:4-5).

Japanese immigrants showed a greater familiarity with the formation of organizations. Japan is often viewed as a collectivistic culture, whereas the United States and other Western countries are seen as individualistic cultures (Gudykunst and San Antonio 1993:29-30). This stems from the development of social relationships where attention is given to addressing the goals of the group over those of the individual (O'Brien and Fugita 1991:6). Therefore, maintaining a strong Japanese American community has involved both isolation from American society and adopting elements of American culture

Compared to most of the European immigrants, the Japanese had greater success at creating traditional communities. This was maintained, in part, by their isolation from mainstream American society due to more intense discrimination against the Japanese immigrants (O’Brien and Fugita 1991:34). Formation of traditional communities was partially initiated by the Japanese immigrants’ propensity to settle in Hawaii and along the west coast of continental United States. This relatively dense Japanese population facilitated the development of social programs that served to nurture the community. In 1903, the establishment of Japanese-language schools began in California to educate the Nisei. These schools employed teachers and used textbooks sent from Japan (Morimoto 1997:25).

Within the early twentieth century, a growing population of first generation Japanese Americans appeared in the United States. In 1921, annual newborn Nisei reached a peak of over 5,000, steadily decreasing every year after (Morimoto 1997: 58). While the Issei maintained many Japanese traditions, the Nisei lived in two worlds. Many Nisei went to American schools with non-Japanese children and wanted to be accepted as Americans; however, most of their social relationships were with other Nisei and existed within their ethnic communities (O’Brien and Fugita 1991: 35). The Americanization movement encouraged some Japanese-language schools to teach American ideals (Morimoto 1997:26, 34). This was not necessarily viewed as destructive to the Japanese culture. According to O’Brien and Fugita (1991:9, 42), Japanese culture has a moral principle that suggests cultural traditions can be modified if it benefits the community. This means altering specific cultural beliefs and practices that are not essential for the survival of the group.

Success in America. Economic success for Japanese immigrants was partially due to opportunities in the labor market, but this does not explain why other immigrant groups did not experience the same accomplishments. Compared to the average immigrant, many Japanese immigrants were well educated. According to an 1890 record of passports issued to Japanese immigrants, nearly 33% of Japanese immigrants consisted of students, while around 28% were businessmen. Wealthier individuals were encouraged to start a career in the United States by their elders (Morimoto 1997:18-19). The ability of Japanese Americans to successfully form social organizations and the fact that they were better educated than the average immigrant group helped them succeed when competing for jobs.

Japanese American farmers were able to organize and improve their economic standing in the midst of increased discrimination. The first farm workers union in California started in 1903 when Japanese sugar beet workers went on strike. In an effort to earn better wages in Hawaii, Japanese workers formed the Higher Wages Association in 1908 (O'Brien and Fugita 1991:20). Although Japanese immigrants experienced intense racism since they arrived in the United States, anti-Japanese movements in the early twentieth century influenced legislation. The California Alien Land Law, passed in 1913, made it illegal for aliens ineligible for citizenship to own land. This prohibited most Japanese immigrants from owning agricultural land, and limited them to a three year lease on such land (Daniels 1988:143; Morimoto 1997:33). The Issei found many ways to circumvent this law; they gave land to their children or a Caucasian citizen to whom they would act as foreman; they also created a land corporations that would lease land for a group of farmers (O'Brien and Fugita 1991:25). With the exception of the Japanese Farm Workers Union, formed in 1935, Japanese Americans decreased their participation in organizing unions in the early twentieth century. This was due to racism from the American Federation of Labor who restricted membership from unions who had Japanese individuals (O'Brien and Fugita 1991:20-21).

In the years leading up to WWII, Japanese Americans achieved relative economic success in California. During the Great Depression unemployed non-Japanese laborers turned to gardening work. With economic stagnation and increased competition in the job market Japanese Americans formed gardeners' associations. These associations unified gardeners by promoting friendship, education, and prohibited the stealing of clients. Each association also had a rotating credit system (Tsuchida 1984:450-451). In the 1930s, the average Japanese gardener in southern California earned $150 to $200 a month (Tsuchida 1984:442).

An Incarcerated Community. Japanese American internment centers were set up so that jobs would be filled by internees whenever possible. The WRA designated jobs for internees who lived in the camp. The average job paid $16.00 a month, those with professional training (e.g., medical doctors) were paid $19.00, and apprentices (i.e., those that require supervision) were only paid $12.00 (Dusselier 2008:81; Harvey 2004; Simmons and Simmons 1994: 24).

Work was often set aside for the Nisei, or second generation Japanese Americans. The Nisei could often speak English and were more assimilated into American culture

(O'Brien and Fugita 1991:62). According to a WRA report (1943a:4), 76% of the population at Amache were Nisei. Over 3,000 internees were employed at the center, compared to the 147 WRA staff members (Lindley 1942b:1; WRA 1943a:4).

Daily operation of the camp depended on the collaborative efforts of WRA personnel and internees. When the first wave of internees moved in they were immediately called upon to help build their prison. The first internees arrived at the camp on August 27, 1942. By September, internees were employed by Army contractors to help finish construction on the camp. According to the WRA director of Amache "…a crew of 288 evacuees working under the WRA program are doing general maintenance, sanitation, and janitor service" (Lindley 1942a:26). Internees did not only occupy simple positions of manual labor. Internees who were architects assisted in planning the administrative quarters, while internee artists help set up a studio (Embree 1943:9). Even among civil service departments internees outnumbered WRA members; for example, 40 internees and 2 WRA employees comprised the police department, 36 internees and 2 WRA employees worked for the fire department, and 82 internees and 46 WRA employees made up the teaching staff (WRA 1943a:4-5).

The ability of the WRA and internee population to work together for the Amache community was reported as more efficient than any other relocation center in the Western Defense Area. Despite a warning, from Washington to internment camps to proceed slowly with the formation of a self-governing community, Amache had already created a charter (Embree 1943). The charter outlined the branches and duties of a community government. The government included an assembly of representatives, which consisted of one internee elected from each block. This committee, referred to as "Block Managers," was responsible for passing legislation to help govern the internee community. Block Managers also selected individuals to form committees that oversaw various concerns, from criminal cases to community enterprises (Northwest Digital Archives 1996).

Community enterprises consisted of businesses and organizations developed to fulfill the needs of the populace. Before construction of the co-op, these various businesses included a variety store, confectionery store, clothing store, a watch repair shop, barber shop, and a shoe repair shop (Lindley 1942b:32). Recreation halls were transformed into centers for Buddhist and Christian practices, and extra room in the hospital was used for an optometry shop. Enterprises started and supervised by the WRA, such as the silk screen shop and camp newspaper (i.e., *The Granada Pioneer*), only prospered due to the hardworking staff consisting almost entirely of Japanese American internees. James Lindley reported "Yesterday Amache was a camp under construction --- today it is a full-fledged city with all the characteristics of any other city of the same size" (1942b:3).

Internees living in Amache worked together to unite the Japanese American community and relieve the stress of displacement. The center organized dances, hobby shows, and sports (Helphand 2006:157). Many recreational activities combined American and Japanese cultures. According to Lindley,

> …the recreation program was serving about 600 evacuees. Activities included social hours, dances, storytelling, hikes, playground periods, and athletics such as touchball, and sumo and judo contests. Boy Scouts and Girl Scouts groups had been organized (1942a:19).

Classes, advertised in the camp newspaper, were arranged to pass the time or learn practical skills. Many artists taught adult night classes, including two former Walt Disney studio artists (Granada Pioneer 1942c). More pragmatic classes offered included “clothing construction”, sewing, knitting, and woodworking (Granada Pioneer 1942b). The Block Managers helped distribute supplies to those in need. When the Granada Fish Market opened, they organized a system where orders would be written on paper and left in cans at mess halls (Block Managers 1943b). The Block Managers organized English language classes. In an effort to further bring the community together, they also suggested a practice where one day a week Issei speak only English and one day where the Nisei speak only Japanese (Block Managers Assembly 1944:6). Their newspaper, the *Granada Pioneer*, was published in English and Japanese.

To provide greater opportunities for all residents, the internee community employed similar practices used by the gardeners’ associations in California. The gardeners’ association held meeting and had a rotating credit system so that money would be dispersed to serve the needs of each member. The co-op was built using money raised by selling membership shares (Lindley 1943). The co-op Board of Directors discussed problems with the Block Managers and donated funds to various camp organizations (Block Managers 1943a). Money spent by internees was redistributed to the community.

Access to Resources. When Japanese Americans were forcefully relocated they lost a substantial amount of wealth and personal property. For those employed as gardeners in southern California, their monthly income dropped from between $150 and

$200 to $16, if they worked for the Amache agricultural program. Even if an individual was fortunate enough to be granted work leave for outside employment, the money they earned could not replace everything they lost. Internees had few options when it came to purchasing goods or services while incarcerated at Amache. In addition to the camp co-op, internees could visit the local stores in the towns of Granada and Lamar, or order items from catalogs, like Sears, Roebuck and Co.

The stores established in the camp had a limited selection of goods. These businesses were also not established on time for the arrival of internees. Initially, recreation halls were transformed into temporary stores. According to James Lindley, "We have been faced with serious difficulties in obtaining sufficient merchandise from local wholesalers . . . Many suppliers advise that they do not have stocks in sufficient quantities and are not interested in our business" (1942a:10). Construction of the co-op did not occur until some time after May of 1943 (Block Managers Assembly 1943).

Internees had the opportunity to order items using catalogs, such as Montgomery Ward and Sears, Roebuck and Co. Toshiko Aiboshi (2011) recalls only using the catalogs to order clothes. Some former internees have expressed their aversion to using mail order catalogs. Fumie Nishizaki (2011) did not trust the catalog companies. She was not pleased with the merchandise they delivered and was given the wrong items. Even if internees preferred to shop with the catalogs, some items were not available. During WWII military needs prohibited certain items from being sold to the general populace. The following warnings were printed in Sears, Roebuck and Co. catalogs from 1943 and 1944:

> Since only a limited amount of steel will be available for civilian use during the next year, the W.P.B. has decided that fence can be sold only to those who have a very definite need for it. In order to have the greatest possible supply of fence, the manufacture of fence has been limited to certain heights and weights deemed most necessary for proper protection of farms and stock. All of these sizes are listed on this and the adjacent pages.
> If you are entitled to buy fence, you can get it from Sears. Go to your local ration committee and get a signed ration certificate giving quantity and type of fence you want to buy, send it to us with a regular order blank (1943:912).
>
> About Wire Fence
>
> Wire fence, steel posts, smooth wire and barbed wire (except with fence chargers) are not offered in this catalog; however some will be available from time to time. When it is, we will offer it to our customers in special circulars…watch for them (1944:876L).

Many internees chose to shop in neighboring communities. There is not a record of what merchandise was sold in the stores in Granada and Lamar. It is safe to assert that similar items were rationed throughout the country; therefore, the local stores would not have a greater variety of products offered by the mail order catalogs. In addition, shopping in neighboring towns had different concerns. Former internees remember walking down the streets and seeing signs in shops that said they did not serve Japanese. Some stores limited the number of goods they would sell to internees (e.g., hammers, nails, or saws). Amache was a relatively large town established in an area with a small population. Merchants were concerned that by selling to the Japanese they would not have enough for non-Japanese customers (Fuchigami 2008; Hamano 2008).

Discussion

There is sufficient evidence to suggest internees formed a functioning community at Amache. Internees occupied many jobs and had many responsibilities within the camp.

In their day to day work, internees would have had access to various tools and resources. Amache had resources not sold to the public. The camp was considered part of the war effort, which is why they had rationed items (e.g., wire) (Tonai 2011). Many supplies that assisted with the transition to camp living were obtainable from within Amache.

Proximity to resources is only significant if communal endeavors were not restricted by the administration. Testimonies from WRA staff and former internees suggested the two groups may have occasionally functioned together in relative harmony. In 1943, John Embree visited the internment centers and drafted reports on the communities he observed within each camp. In his report, Embree included suggested positions the administration should take on "Japanese relocation." He reminded the administration that they are in a position not desired by either the internees or administrative staff, and recommended attitudes "of sympathetic understanding and a sincere desire to help the Evacuees to the limit of their ability to do so." Former internees have described the administration as understanding of their situation. Eiichi Sakauye (2005), who was interned at Heart Mountain, claimed that those Caucasian personnel that "were not compassionate were discharged or left their duties, they just couldn't work with us." Greater understanding between internees and the administration could have contributed to fewer regulations. After speaking with friends from other camps, Mary Hamano (2008) came to the opinion that she had an easier time at Amache.

Tin cans were one of the most common artifacts found that exhibited evidence of reuse or modification. Tin cans were commonly utilized for WRA sponsored purposes. A canning center was established at Amache by the WRA Agriculture Section. They instructed the agricultural division to use No. 10 cans to preserve foods produced by the farms (Reed 1943; Spencer 1943). Figure 66 shows internees canning tomatoes at Amache. After cans were used, camps were instructed to remove the ends and crush them in preparation for salvage trucks to pick them up for "war use" (Mitchell 1943).

Figure 66: *"Canning Tomatoes at Amache" (denshopd-p160-00104), Densho, James G. Lindley Collection.*

All tin cans studied at Amache are No. 10 sanitary cans, determined by the double seams and a numerical designation based on size (i.e., all cans have a 7 inch height and 6 inch diameter) (Rock 1984:105-107). An account from Heart Mountain described how internees planted vegetables in cans salvaged from mess hall trash dumps (Dusselier 2008:68). The archaeological record at Amache suggests tin cans were recycled from mess halls and not stolen from the canning centers. All the cans had striations along their rims, indicative of a can opener (Figure 67). For these marks to exist a top had to be applied, at the canning center, and then removed, most likely at the mess hall.

Figure 67: Striations along the rim of a modified tin can
(FA #10, Block 12K).

The canning center may, however, be the source for some sheet metal fragments deposited in block 12L. The canning center was assigned the task of creating their own equipment. Hot water canners were made by cutting off the top third of an oil barrel (Reed 1943). During WWII 18 gauge metal drums became more commonly used, including by the U.S. military (Gay 2000). Field artifact # 36 is slightly curved, made from 18 gauge metal, with a welded seam (Figure 68). These characteristics suggest it could be a section of a 55 gallon drum. There is wear along the edges, as if it was cleanly cut from a larger metal object, and nail holes evenly spaced along the top margin.

Figure 68: Section of 18 gauge cut sheet metal
(FA # 36, Block 12L).

Sheet metal was also available at Amache to construct and repair roofs. According to the War Department (1942), 26 gauge sheet metal was to be supplied to Amache for roof flashings. Sheet metal, from Block 12L, matched these specifications (i.e., FA #38, FA #43, and FA #48). Each of these artifacts had nail holes along their margins, but FA #43 and FA #48 had wire tied through perforations. Due to the delayed work associated with barrack repairs, some internees may have used wire for small fixes.

The tin can bucket with tar and a wood fragment (FS #522/ Lot d.29), from the previous chapter (refer to Figure 58) further suggests internees made repairs to their barracks using camp supplies. The “tar” is most likely mastic asphalt. Asphalt was mopped on barrack roofs to secure the rolled roofing. Mastic asphalt was supplied to Amache by the War Department (1942).

Similar to the canning center, the camp had other divisional operations where internees worked with materials that were later reutilized and deposited in the archaeological record. The mess division used wood barrels, with barrel hoops, to pickle vegetables (The Bancroft Library 1997).

Other artifacts found during excavations include structural materials that may have been attained by those internees on the maintenance and construction crews. Monthly reports were created by the WRA engineering division. They summarized the construction and maintenance work done that month and the supplies needed for unfinished projects. A reoccurring problem involved breaks in water and sewer lines. Reports often included requests for new pipe to replace damaged lines. This meant ceramic pipe fragments were obtainable, either by the internee plumbers working on the system or salvaged from the trash dump (WRA 1943b; WRA 1943c; WRA 1944a). The trash dump was outside the fence, so it would have been more difficult to access after deposition.

The maintenance crews were also responsible for building cement foundations. In Manzanar inscriptions were written in concrete by internees. This was sometimes internees marking their own work (Burton 2012). There was even a documented incident in Manzanar where an administrator provided a few bags of cement for a collaborative garden (Dusselier 2008). The large koi pond at Amache was a communal project, but here were also smaller concrete ponds and other garden structure built throughout the camp. Concrete fragments were often recovered from the garden features from the 2010 field season.

Kenneth Helphand described internee gardens as being constructed with found materials (2006). In addition to tin cans and discarded pipe fragments, river cobbles were also identified in many gardens. River cobbles imbedded in a cement fragment was found in the 7G garden feature. River cobbles could easily have been recovered around the Arkansas River, where some internees transplanted vegetation. They may also have been gathered by internees working in the agricultural fields adjacent to the river.

Lumber was one of the few materials featured in the both the Minidoka and Amache assemblages. Housing Office reports often mention a problem concerning the shortage of lumber within the camp. This was especially a problem with families that transferred to Amache from other camps. It was recommended that people should check rooms that were recently vacated. Block Managers spoke to their residents to try to have them leave shelf boards in their barracks when they move out (Ter Borg 1944a; Ter Borg 1944b; Ter Borg 1944c).

Internees would often scavenge for materials to make furniture (Hamano 2008). Analysis of the furniture from Minidoka provides evidence that internees used salvaged wood, from within the camp, for construction material. Many articles have sections of lumber with small-diameter holes arranged in linear formations (Figures 69 and 70).

Figure 69: The bottom of a dresser drawer (MIIN accession #00025 / MIIN Cat# 53) made from several narrow wood planks.

Figure 70: The bottom of a sewing machine table drawer (MIIN accession #00025 / MIIN Cat# 51), made from three wood planks.

Upon inspecting the underside of a dresser drawer, the words “Finest Quality” were identified, printed on two wooden planks (Figure 71). From consultations with Mr.

Gensler, they were identified as the sheathing boards from food crates. Several of the boards had perforations, where nails were removed, suggesting crates were disassembled and the wood was reused. Similar small planks, in place of dimensional lumber with greater width, were combined to assemble the doors, back, and lateral sides of a dresser (Figure 72). A historic photograph shows that wood from crates were also repurposed to construct garden fences (Figure 73).

Figure 71: The bottom of a dresser drawer (MIIN accession #00025 / MIIN Cat# 53), constructed with many sheathing boards from food crates (Photograph courtesy of Phil Gensler).

Figure 72: Multiple planks of salvaged wood used to construct a dresser (MIIN accession #00013 / MIIN Cat# 46).

Figure 73: Amache internee garden with a repurposed wood fence. Image courtesy of the McClelland Collection.

Internees did not rely entirely on scrap wood to construct the furniture in the Minidoka collection. Better quality, dimensional lumber was available. Some of the larger, more elaborate, pieces were constructed with dimensional lumber and professional tools (Figure 74 and Figure 75).

Figure 74: Large table with leaf (MIIN accession #00025 / MIIN Cat# 60).

Piles of lumber was available at Amache during the early stages of internment. George Hirano remembered people taking lumber from the sources meant for the construction of the high school. He recalled they went when the soldier on duty was occupied elsewhere. This story is similar to other oral histories (Tonai 2011). Dusselier writes about an assembly center in Washington, where internees acquired lumber left behind by contractors (2008:19). The wood specimens collected from Block 12K excavation units were identified as likely conifer division softwood. “Soft Wood” lumber was included on the list of carpentry and building supplies provided to contractors hired to build Amache (War Department 1942).

The two room dividers from the Minidoka collection were partially constructed with plywood and displayed evidence of additional woodcarving techniques. The dividers were decorated with scenes of wildlife and the camp, both carved into the wood and drawn on the plywood. Illustrations were drawn with a pencil and included scenes with guard towers. Carvings of wildlife (Figure 75) suggests internees had access to tools for woodcarving, such as a carving knife, chisel, or gouge. In addition, the beveled edges and intricate patterns on the table in Figure 74 required tools for wood carving.

Figure 75: Carvings of wildlife on a four-panel room divider
(MIIN accession #00026 / MIIN Cat# 55).

Tools and professional techniques exhibited on some of the artifacts may have derived from participation in classes, or the borrowing of camp equipment. In an interview, Minoru Tonai (2011) claimed if someone worked in the maintenance shop, they could build walls for privacy. Figure 76 shows two students in a woodworking classroom at Amache. The picture provides visual evidence of awls, saws, hand planes, straight gouge, V-parting tools, drawknives, and wood carving knives and chisels. The technical elements of all these tools can by identified in the Minidoka assemblage. Figure 77 shows an adult education class in welding at the Minidoka internment camp.

Figure 76: *"Two students in woodworking class" (denshopd-p159-00076), Densho, George Ochikubo Collection.*

Figure 77: *“Japanese American welding” (denshopd-i39-00007), Densho, Wing Luke Asian Museum, the Hatate Collection.*

Wire fragments and nails were the most common artifacts collected from excavations. Given the recession it is probable that internees acquired these items from camp sources. When the sizes of wire and nails recovered from fieldwork are catalogued (Appendix C), we find a greater diversity than what was offered for sale in catalogues (Appendix E). Materials allocated to contractors, by the War Department, included “Nails (all sizes)” (1942:4). There are accounts of internees getting nails from contractor supplies or through their carpentry jobs. Some people even reused the nails they pulled out of crates (Hirano 2011; Dusselier 2008). Wire was often obtained from the maintenance shop, along with the tools required to cut the wire (Tonai 2011).

Conclusion

Mytum and Carr write "The image of a PoW often concentrates on captured military personnel, and numerous colorful stories of resistance and escape have been the subject of books and films" (2012:4). It is easy to overly romanticize certain actions from the past, especially when addressing cases of injustice. In the previous chapter, I discussed how some artifacts were used to preserve personal and cultural traditions. Some scholars have labeled similar endeavors as acts of resistance. Tamura (2004) argues that the ornamental gardens at Japanese American internment camps, and the continuation of traditions, represent resistance against imprisonment and the WRA. I do not argue that acts of resistance did not occur. However, defining something as an act of resistance can be problematic. According to Kastrinou-Theodoropoulou, when studying resistance there is "a definitional problem bound up with the history of ideas pertaining to issues and uses of 'resistance,' which makes the term controversial at best if not biased" (2009:3). Does defining gardens as symbols of resistance merely provide a perspective from the prison system, is it a contemporary observation retroactively attributed to internees, or did internees intentionally create them to oppose the internment process? Casella identifies resistance as a form of power that is born at the same time as domination (2007). So classifying some behavior as acts of resistance may inaccurately imply they were born from internment. In reality, they may stem from personal and social experiences before internment.

Japanese Americans established a strong community prior to internment. They had to overcome diversity and oppression even before they were imprisoned by their government. The internment process caused a loss of valuable possessions and introduced Japanese Americans to a standard of living with greater limitations. The internee landscape, the archaeological record that reflects and interaction between internees and their environment, provides evidence that internees modified, and had some control over, their surroundings. From this chapter we understand that internee actions may have been inspired by a desire to form a strong community to survive internment. To adapt to their institution of confinement, internees maintained personal and cultural traditions that were practiced before internment. This is less dramatic to think about than heroic acts of resistance. However, the day-to-day operations of the camp took the effort of many individuals working together and constantly solving problems. Internee agency and the creative and practical use of resources gave the Japanese American community power to influence structure. Internees were then capable of establishing a social structure that was not simply enforced by the WRA.

CHAPTER 7: CONCLUSION

My research began with holes in tin cans. Further investigation revealed a larger assemblage of artifacts that consisted of salvaged and repurposed material. Initially I viewed these artifacts as the remains of a desperate effort to adapt to a period of displacement, artifacts once used by a minority group during a time of weakness. By studying the multiple, interactive landscapes at Amache, these artifacts began to illustrate the control internees had over their environment. When considering these artifacts one should focus, not on restrictions, prejudices, or inhumane treatment, except as an avenue to highlight ingenuity, fortitude, and social unity.

Identifying the function of artifacts was heavily based on material culture studies. These interpretations were then supported by archival research and oral histories. By primarily focusing on my analysis of artifacts, I tried to avoid bias in historical records. Some of the historic photographs were taken by the WRA for propaganda purposes. It is also problematic to generalize the information acquired through oral histories, due to the varied experiences of individuals. Toshiko Aiboshi (2011) was a little girl during internment and did not recall the gardens that others who were older remember vividly.

Relying heavily on material culture offers an alternative perspective which might conflict with some studies and corroborate others. In either instance, it contributes to the body of work centered on Amache.

Studying the material culture physically made or reutilized by Japanese Americans presents the landscape constructed by internees. The landscape constructed by the WRA was an incarceration facility. They built barbed wire fences, inadequate living quarters, and minimal infrastructure for bathing and food service. Some of the artifacts at Amache do not reflect internee identity, but portray their environmental restrictions. In her study of the children at Amache, Kamp-Whittaker (2010) presented an assemblage of toys that did not reflect Japanese heritage. Nevertheless, former internees provide oral histories of participation in cultural activities. The artifact assemblage associated with children consisted of items purchased from stores or catalogues. The artifacts presented by Kamp-Whittaker and myself result from internees interacting with their environment. However, the assemblage of repurposed materials reflects the internees' efforts to modify their surroundings and make decisions about the site in which they were forced to live.

Internees were able to adapt to, and transform, their prison, but the internment experience did not leave them unscathed. They sacrificed wealth and a portion of their lives for the ignorant, fear-based prejudices coming from a division of America. Studies have reported many enduring problems from living in an institution like Amache. There are many concerns: feeling isolated from society, losing the sense of security and status, being fearful of leaving the facility, the collapse of agency, and loss of culture (Sommer and Osmond 1961:255-257). Japanese Americans at Amache were not immune to these effects. After the betrayal of their country and reestablishing a community at Amache, some internees had trouble leaving. A post written by the block managers read:

> Mr. Lindley emphasized the fact that the evacuees cannot find out how they will be received unless they actually go out and learn for themselves. Waiting and worrying in the center only makes it simpler for others to go into these localities and take advantage of the jobs available (Block Managers Assembly 1945:1).

Therefore, it is a mistake to view the perceived liberty internees had, concerning access to resources, as having it easy. Instead, one should focus on the fact that, in addition to being forced to help run their own prison, they were tasked with the ordeal of rebuilding a civilized habitat for themselves and future generations.

Some may read this and believe it is more honorable or romantic to rebel than work with the WRA. However, one can attribute the maintenance of a relatively self-sufficient and peaceful community as honorable behavior. By acknowledging realities of the socio-political landscape, and having further consideration for the safety of one's family and the future relationship between one's ethnic community and their nation's government and general populace, internees could help establish a life after internment. Similar sentiments were expressed by Sueo Sako in the New Year edition of the Granada Pioneer:

> At the turn of every new year, it is customary to make numerous resolutions– some are silly, others worthwhile. But the sad part is seldom are they ever kept. Regardless of how many resolutions we make, we must make an important one this year–what are we planning for the coming year? Stagnate in a relocation center or return to America's life stream? It requires some thought. Undoubtedly we will encounter serious and discouraging obstacles that face all minority groups–and which will always continue.
>
> Recently, Professor Yamato Ichihashi spoke to a group of center residents and made a statement to which all nisei should give a thought or two.
>
> Said Professor Ichihashi, "Every man's main purpose in life is to work out his own destiny–destiny that is not humanly possible within the confines of a

> relocation center–but must be worked out in a free community." No truer words were spoken.
> The necessity and our hunger to find peace, security and justice once more should add to our incentive to rebuild and re-establish our future in the Mid-western and Eastern States.
> Only after we have regained our rightful status, only then can we enjoy the sweet meaning of the old familiar greeting, "A Happy New Year" (1943:2).

The WRA made many attempts to assimilate Japanese American internees. The process of assimilation is often viewed as immigrant groups adopting cultural characteristics of the larger society. It is assumed that this results in the loss of traditional customs and values. Of course the reality is more complex, with the results varying among individuals and ethnic groups. In general, a survey among Japanese Americans, after WWII showed greater involvement in ethnic community organizations than other ethnic groups. Participation in these associations was particularly high in areas with a lower population density of Japanese Americans (O'Brien and Fugita 1991:101-102). The preservation of personal and cultural traditions within the adult community at Amache enabled them to pass these traditions down to their children after internment. Studying repurposed material culture provided insight into the personal experiences of internees as well as the relationship between structure and agency. They revealed how Japanese Americans were able to maintain control and overcome the context of internment.

REFERENCES CITED

Aiboshi, Toshiko
2011 *Toshiko Aiboshi. Interview by Richard Potashin. January 20, 2011. Manzanar National Historic Site Collection, Densho.*

Archer, Stephen N.
2011 Amache Garden Testing – 2010 Field Season Archaeobotanical Analysis. Prepared for Dr. Bonnie J. Clark, University of Denver.

Bancroft Library
1997 Volume 6, Section A, WRA no. B-727. War Relocation Authority Photographs of Japanese-American Evacuation and Resettlement, BANC PIC 1967.014--PIC, The Bancroft Library, University of California, Berkeley. Electronic document, http://cdn.calisphere.org/data/13030/h0/tf596nb4h0/files/tf596nb4h0.pdf, accessed August 3, 2013.

Basso, Keith H.
1996 Wisdom Sits in Places: Notes on a Western Apache Landscape. In *Senses of Place*, edited by Steven Feld and Keith Basso, pp. 259-262. School of American Research Press, Santa Fe.

Beasley, W. G.
1972 *The Meiji Restoration*. Stanford University Press, Stanford, California.

Beaudry, Mary C., Lauren J. Cook, and Stephen A. Mrozowski
1996 Artifacts and Active Voices: Material Culture as Social Discourse. In *Images of the Recent Past: Readings in Historical Archaeology*, Charles E. Orser (ed.), pp. 272-313. AltaMira Press, Oxford.

Beisaw, April M., and James G. Gibb (editors)
2009 *The Archaeology of Institutional Life*. University of Alabama Press, Tuscaloosa.

Bender, Barbara
2006 Place and Landscape. In *Handbook of Material Culture*, edited by Chris Tilley, Webb Keane, Susanne Kuchler, Mike Rowlands, and Patricia Spyer, pp. 303-314. SAGE Publications Ltd, London.

Block Managers

1943a Block Managers' Meeting August 23, 1943. Granada Relocation Center. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

1943b Block Managers' Meeting September 13, 1943. Granada Relocation Center. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

1943c Block Managers' Meeting December 13, 1943. Granada Relocation Center. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

Block Managers Assembly

1943 Minutes of Block Managers Assembly, May 20, 1943. Granada Relocation Center. Special Collections, Tutt Library, Colorado College, Colorado Springs, Colorado. Electronic document, http://www2.coloradocollege.edu/library/SpecialCollections/Manuscript/Amache/Ama1_4_04.html, accessed January 9, 2015.

1944 Minutes of the Meeting of the Advisory School Board. Granada Relocation Center, Block Managers Assembly, October 5, 1944. Special Collections, Tutt Library, Colorado College, Colorado Springs, Colorado. Electronic document, http://coloradocollege.edu/Library/Specialcollections/Manuscript/Amache/Ama1_36_11.html, accessed November 15, 2013.

1945 Minutes of the Coordinating Advisory Committee, July 25, 1945. Special Collections, Tutt Library, Colorado College, Colorado Springs, Colorado. Electronic document, http://coloradocollege.edu/Library/Specialcollections/Manuscript/Amache/Ama1_36_14.html, accessed November 15, 2013.

Bonacich, Edna

1984 Some Basic Facts: Patterns of Asian Immigration and Exclusion. In *Labor Immigration Under Capitalism: Asian Workers in the United States Before World War II*, edited by Lucie Cheng and Edna Bonacich, pp. 60-78. The University of California Press, Berkeley.

Bristow, Charlie S. and Harry M. Jol

2003 An Introduction to Ground Penetrating Radar (GPR) in Sediments. In Ground Penetrating Radar in Sediments, edited by Charlie S. Bristow and Harry M. Jol, pp. 1-9. Geological Society: Special Publications, 211, London.

Burton, Jeffery F.

1996 *Three Farewells to Manzanar: The Archeology of Manzanar National Historic Site, California: Part 3*. Western Archeological and Conservation Center, National Park Service, U.S. Dept. of the Interior, Tucson.

2005 *The Fate of Things: Archaeological Investigations at the Minidoka Relocation Center Dump, Jerome County, Idaho*. Western Archeological and Conservation Center, National Park Service, U.S. Dept. of the Interior, Tucson.

2012 "Life in Manzanar Where There Is a Spring Breeze": Graffiti at a World War II Japanese American Internment Camp. In *Prisoners of War: Archaeology, Memory, and Heritage of 19th-and 20th-Century Mass Internment*, edited by Harold Mytum and Gilly Carr, pp. 239-269. Springer, New York.

Burton, Jeffery, and Mary Farrell, Florence Lord, and Richard Lord
2002 *Confinement and Ethnicity: An Overview of World War II Japanese American Relocation Sites.* University of Washington Press, Seattle.

Carillo, Richard F. and David Killam
2004 *A Class III Cultural Resource Intensive Field Survey of the Granada Relocation Center*. Colorado Historical Society, Town of Granada, and the Denver Optimist Club.

Casella, Eleanor Conlin
2007 *The Archaeology of Institutional Confinement*. University Press of Florida, Tallahassee.

Clark, Bonnie J.
2010 The Tangible History of Amache, Phase II: Research Design and Methodology for Field Investigations, Summer 2010.

Clark, Bonnie J., April Kamp-Whittaker, and Dana Ogo Shew
2008 *The Tangible History of Amache: Archaeology Research Design and Methodology for Field Investigations, Summer 2008*. University of Denver.

Clarke, Keith C.
2011 *Getting Started with Geographic Information Systems*, 5th ed. Prentice Hall. Upper Saddle River, New Jersey.

Conyers, Lawrence B.
2004 Ground-Penetrating Radar for Archaeology. Altamira Press, Walnut Creek, California.

2006 Ground-Penetrating Radar. In *Remote Sensing in Archaeology: An Explicitly North American Perspective*, edited by Jay K. Johnson, pp. 131-160. University of Alabama Press, Tuscaloosa .

2009 Ground-penetrating radar for landscape archaeology. In Seeing the Unseen: Geophysics and Landscape Archaeology, Edited by Stefano Campana and Salvatore Piro, pp. 245-256. CRC Press/Balkema: Taylor and Francis Group, London.

Creighton, Millie
1997 Consuming Rural Japan: The Marketing of Tradition and Nostalgia in the Japanese Travel Industry. *Ethnology*, 36(3):239-254.

Crueger, Anneliese, Wulf Crueger, and Saeko Itō
2006 *Modern Japanese Ceramics: Pathways of Innovation & Tradition*. Lark Books, New York.

Currie, Christopher
2005 *Garden Archaeology: A Handbook*. Council for British Archaeology, York.

Dalby, Liza
2008 *Geisha*. University of California Press, Berkeley.

Daniels, Roger
1988 *Asian America: Chinese and Japanese in the United States since 1850*. University of Washington Press, Seattle.

Deagan, Kathleen
1996 Avenues of Inquiry in Historical Archaeology. In *Images of the Recent Past: Readings in Historical Archaeology*, edited by Charles E. Orser, pp.16-41. AltaMira Press, Walnut Creek.

Deetz, James
1996 In Small Things Forgotten: An Archaeology of Early American Life. Random House, New York.

Des Pres, Terrence
1976 *The Survivor: An Anatomy of Life in the Death Camps*. Oxford University Press, Oxford.

Dobres, Marcia-Anne and Christopher R. Hoffman
1994 Social Agency and the Dynamics of Prehistoric Technology. *Journal of Archaeological Method and Theory*, 1(3):211-258.

Dobres, Marcia-Anne, and John E. Robb (editors)
2000 *Agency in Archaeology*. Routledge, London.

Dusselier, Jane E.
2008 *Artifacts of Loss: Crafting Survival in Japanese American Concentration Camps*. Rutgers University Press, New Brunswick.

Eaton, Allen Hendershott

1952 *Beauty behind Barbed Wire: The Arts of the Japanese in Our War Relocation Camps*. Harper & Brothers, New York:

Embree, John
1943 Report on Granada, January 30 – February 1, 1943. Community Analysis Section, War Relocation Authority. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

Fuchigami, Bob
2008 *Bob Fuchigami Interview. Interview by Richard Potashin. May 14 2008. Manzanar National Historic Site Collection, Densho.*

Fujita, Katherine
1944 Victory Garden. In *Junior Pioneer*, Granada Relocation Center, Granada, Colorado.

Futch, Ovid
1962 Prison Life at Andersonville. In *Civil War Prisons*, edited by William Best Hesseltine, pp. 121-135. Kent State University Press, Kent.

Gauntlett, David
2002 *Media, Gender and Identity: An Introduction*. Routledge, London.

Gay, Derek.
2000 Steel drums to steelpans. In *Proc. Int. Conf. on the Science and Technology of the Steelpan (ICSTS 2000), edited by A. Achong (Trinidad and Tobago Govt. Printery, 2002)*, vol. 1, p. 163. 2000.

Goffman, Erving
1956 *The Presentation of Self in Everyday Life*. Monograph No. 2. University of Edinburgh Social Sciences Research Centre, Edinburgh.

Godo, Yoshihisa and Yujiro Hayami
2002 Catching up in Education in the Economic Catch-up of Japan with the United States, 1890–1990. *Economic Development and Cultural Change* 50(4):961-978.

Gojak, Denis
2001 Convict Archaeology in New South Wales: An Overview of the Investigation, Analysis and Conservation of Convict Heritage Sites. *Australasian Historical Archaeology*, 19:73-83.

Gosden, Chris and Yvonne Marshall
1999 The Cultural Biography of Objects. *World Archaeology*, 31(2):169-178.

Granada Pioneer

1942a Sub-zero Weather to Face Center Populace. Granada Pioneer, Vol. 1, No. 1, 28 October:3. Granada, Colorado.

1942b School Gives 23 Courses. *Granada Pioneer*, Vol. 1, No. 1, 28 October:4. Granada, Colorado.

1942c Disney Men Teach Art. *Granada Pioneer*, Vol. 1, No. 5, 11 November:1. Granada, Colorado.

Gudykunst, William B. and Patricia San Antonio

1993 Approaches to the Study of Communication in Japan and the United States. In *Communication in Japan and the United States*, edited by William B. Gudykunst, pp. 18-48. State University of New York Press, Albany.

Hall, Martin and Stephen W. Silliman

2006 Introduction: Archaeology of the Modern World. In *Historical Archaeology*, edited by Martin and Stephen W. Silliman Hall, pp. 1-22. Blackwell Publishing, Malden, Massachusetts.

Hamano, Mary

2008 *Mary Hamano. Densho Visual History Collection (A-M), Densho*.

Harada, Yukino Okubo

n.d. Dance Scrapbook. Amache Preservation Society, Granada, Colorado.

Harris, E. C.

1979 *Principles of Archaeological Stratigraphy*, 1st Edition. Academic Press, London.

Harvey, Robert

2004 *Amache: The Story of Japanese Internment in Colorado during World War II*. Taylor Trade, Dallas.

Hayashi, Haruo

1983 *Self-Identity of the Japanese Americans during the Internment Period: An Archival Research*. Ph.D. dissertation, University of California, Los Angeles. University Microfilms International, Ann Arbor, Michigan.

Heimburger, Christian

2008 *Life Beyond Barbed Wire: Japanese American Labor During Internment at Amache and Topaz*. Center of the American West Thompson Writing Awards. Electronic document, http://centerwest.org/wp-content/uploads/2011/01/heimburger2008.pdf, accessed October 12, 2013.

Helphand, Kenneth I.

2006 *Defiant Gardens: Making Gardens in Wartime*. Trinity University Press, San Antonio.

Higa, Karin M.
1992 *The View from Within: Japanese American Art from the Internment Camps, 1942-1945*. University of Washington Press, Seattle.

Hirano, George
2011 Interview by Bonnie Clark, David Garrison, and Christian Driver, May 24. Manuscript on file at the University of Denver, Department of Anthropology.

Hirasuna, Delphine
2005 *The Art of Gaman: Arts and Crafts from the Japanese American Internment Camps 1942-1946*. Random House, New York.

Houston, Jeanne Wakatsuki and James D. Houston
1973 *Farewell to Manzanar*. Random House, New York.

Iwata, Masakazu
1962 The Japanese Immigrants in California Agriculture. *Agricultural History* 36:25-37.

Jameson, John H.
2012 Artifacts of Internment: Archaeology and Interpretation at Two American Civil War Prisoner-of-War Sites. In *Prisoners of War: Archaeology, Memory, and Heritage of 19th-and 20th-Century Mass Internment*, edited by Harold Mytum and Gilly Carr, pp. 23-40. Springer, New York.

Jones, John G.
2011 *Analysis of Pollen from Amache Internment Camp, Colorado*. Department of Anthropology, Washington State University, Pullman, Washington.

Jordan, Stacy and Camel Schrire
2002 Material Culture and the Roots of Colonial Society at the South African Cape of Good Hope. In *The Archaeology of Colonialism*, edited by Claire Lyons and John Papadopoulos, pp. 241-272. Getty Research Institute, Los Angeles.

Joyce, Arthur A.
2009 The Main Plaza of Monte Alban: A Life History of Place. In *The Archaeology of Meaningful Places*, edited by Brenda J. Bowser and Maria Nieves Zedeno, pp. 32-52. The University of Utah Press, Salt Lake City.

Kamp-Whittaker, April

2010 *Through the Eyes of a Child: The Archaeology of WWII Japanese Internment at Amache.* Unpublished Master's Thesis, Department of Anthropology, University of Denver.

Kastrinou-Theodoropoulou, Maria
2009 Editorial Note: Political Anthropology and the Fabrics of Resistance. *Durham Anthropology Journal,* 16(2):3-7.

Kimmerling, Constance
1945 Report of the Welfare Section, 28 Feb 1945, Minidoka Relocation Center, Introduction, Section A, Japanese American Evacuation and Resettlement Records, 1930-1974. Bancroft Library MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

Kuramitsu, Kristine C.
1995 Internment and Identity in Japanese American Art. *American Quarterly*, 47(4):619-658.

Lewis, Peirce
2003 The Monument and the Bungalow: The Intellectual Legacy of J. B. Jackson. *In Everyday America: Cultural Landscape Studies after J. B. Jackson*, edited by Chris Wilson and Paul Groth, pp. 85-108. University of California Press, Berkeley.

Lillquist, Karl
2007 *Imprisoned in the Desert: The Geography of World War II-Era, Japanese American Relocation Centers in the Western United States.* A research project funded by the Washington State Office of Superintendent of Public Instruction (OSPI) Through Interagency Agreement #23-0782 between OSPI and Central Washington University.

Lindley, James G.
1942a *Quarterly Report of Granada Relocation Center War Relocation Authority Amache, Colorado, July 1 – September 30, 1942*. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.
1942b *Quarterly Report of Granada Relocation Center War Relocation Authority Amache, Colorado, October 1 – December 31, 1942*. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.
1943 *Quarterly Report of Granada Relocation Center War Relocation Authority Amache, Colorado, April 1 – June 31, 1943*. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

Lockhart, Bill
2004 The Dating Game. *Bottles and Extras* 15(3):24-27.

Malm, William P.
1958 The Rhythmic Orientation of Two Drums in the Japanese No Drama. *Ethnomusicology*, 2(3):89-95.

Manning, Helen Amerman
2003 *Helen Amerman Manning. Interview by Alice Ito, August 2, 2003, Densho Visual History Collection (A-M).*

Marín-Spiotta, Erika and Emily Eggleston
2011 *Camp Amache Soil Chemistry Report*. Department of Geography, University of Wisconsin – Madison.

Matsuoka, Kay
1999 *Kay Matsuoka. Interview by Alice Ito. December 29 & 30, 1999. Densho Visual History Collection (A-M), Densho.*

Miller, Daniel
1987 *Material Culture and Mass Consumption*. Basil Blackwell, Oxford

Miller, George L.
1980 Classification and Economic Scaling of 19th Century Ceramics. *Historical Archaeology*, 14:1-40.

Miller, George L., Olive R. Jones, Lester A. Ross, and Teresita Majewski (compilers) Ronald L. Michael (editor)
1991 Approaches to Material Culture Research for Historical Archaeologists. A Reader from *Historical Archaeology*. Print Production by Braun-Brumfield, Ann Arbor, Michigan.

Mitchell, R. J.
1943 Memorandum, April 7, 1943. War Relocation Authority, Amache, Colorado. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

Morimoto, Toyotomi
1997 *Japanese Americans and Cultural Continuity: Maintaining Language and Heritage*. Garland Publishing, New York.

Mytum, Harold
2012 Materiality Matters: The Role of Things in Coping Strategies at Cunningham's Camp, Douglas During World War I. In *Prisoners of War: Archaeology, Memory,*

and Heritage of 19th-and 20th-Century Mass Internment, edited by Harold Mytum and Gilly Carr, pp. 169-188. Springer, New York.

Mytum, Harold and Gilly Carr
2012 Prisoner of War Archaeology. In *Prisoners of War: Archaeology, Memory, and Heritage of 19th-and 20th-Century Mass Internment*, edited by Harold Mytum and Gilly Carr, pp. 3-19. Springer, New York.

National Park Service
2006a *Cultural Landscape Report: Manazanar National Historic Site*. National Park Service, U.S. Department of the Interior.
2006b *Minidoka Internment National Monument General Management Plan*. Park Planning and Compliance Division, Seattle, Washington.
2008 *Museum Management Plan*. National Park Service, U.S. Department of the Interior, Cultural Resources, Pacific West Region.

Nesom, Guy
2003 *Plant Guide: Western Red Cedar*. United States Department of Agriculture, Natural Resources Conservation Service. http://plants.usda.gov/plantguide/pdf/cs_thpl.pdf, accessed January 8, 2013.

Nishizaki, Fumie
2011 Interview by Bonnie Clark, David Garrison, and Christian Driver, May 23. Manuscript on file at the University of Denver, Department of Anthropology.

Northwest Digital Archives
1996 Granada Relocation Center Records. University of Washington Libraries, Special Collections. Electronic document, http://nwda.orbiscascade.org/ark:/80444/xv82431, accessed December 12, 2013.

O'Brien, David J., and Stephen S. Fugita
1991 The Japanese American Experience. Indiana University Press, Bloomington and Indianapolis.

Orser, Charles E.
1996 Beneath the Material Surface of Things. In *Contemporary Archaeology in Theory*, edited by Robert W. Preucel and Ian Hodder, pp. 189-197. Blackwell, Oxford.

Penn State Department of Statistics
n.d. Chi-Square Distribution Table. Electronic document, http://sites.stat.psu.edu/~mga/401/tables/Chi-square-table.pdf, accessed October 22, 2012.

Piddock, Susan
2007 *A Space of Their Own: The Archaeology of Nineteenth Century Lunatic Asylums in Britain, South Australia, and Tasmania*. Springer, New York.

Praetzellis, Adrian, Mary Praetzellis, and Marley Brown III
1987 Artifacts as Symbols of Identity: An Example from Sacramento's Gold Rush Era Chinese Community. In *Living in Cities: Current Research in Urban Archaeology, Historical Archaeology Special Publication*, edited by Edward Staski, pp. 38-47. Society for Historical Archaeology.

Reed, E. H.
1943 Food Preservation in Relocation Centers, June 15, 1943. War Relocation Authority, Agricultural Section. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

Robertson, Jennifer
1991 *Native and Newcomer: Making and Remaking a Japanese City*. University of California Press, Berkeley.

Rock, James T.
1984 Cans in the Countryside. *Historical Archaeology* 18(2):97-111.

Sakauye, Eiichi
2005 *Eiichi Edward Sakauye. Interview by Wendy Hanamura. May 14, 2005. Japanese American Film Preservation Project Collection, Densho.*

Samford, Patricia
1996 The Archaeology of African-American Slavery and Material Culture. *The William and Mary Quarterly*, 53(1):87-114.

Sears, Roebuck And Co.
1943 Sears, Roebuck And Co., Spring and Summer, Philadelphia Edition 186.

Sears, Roebuck and Co.
1944-45 Sears, Roebuck and Co., Fall and Winter, Minneapolis Edition 189.

Shew, Dana Ogo
2010 *Feminine Identity Confined: The Archaeology of Japanese Women at Amache, A WWII Internment Camp.* Unpublished Master's Thesis, Department of Anthropology, University of Denver.

Shigekuni, Thomas

2011 Interview by Bonnie Clark, David Garrison, and Christian Driver, May 24. Manuscript on file at the University of Denver, Department of Anthropology.

Shimizu, Henry
2006 *Henry Shimizu. Interview by Tom Ikeda, July 25 and 26, 2006. Densho Visual History Collection, Densho.*

Simmons, T. H., & Simmons, L.
1994 National register of historic places nomination for Granada relocation center. Denver, CO: United States Department of the Interior, National Park Service.

Singleton, Theresa A.
1996 The Archaeology of Slave Life. In *Images of the Recent Past: Readings in Historical Archaeology*, edited by Charles E. Orser, pp. 141-160. AltaMira Press, Oxford.

Skibo, James, M., and Michael Brian Schiffer
2008 *People and Things: A Behavioral Approach to Material Culture*. Springer, New York.

Skiles, Stephanie
2008 *Confined Cuisine: An Archaeological and Historical Examination of Culinary Practoces at Amache, Colorado's WWII Japanese Internment Camp*. Unpublished Master's Thesis, Department of Anthropology, University of Colorado at Denver.

Skiles, Stephanie A. and Bonnie J. Clark
2010 When the Foreign is Not Exotic: Ceramics at Colorado's WWII Japanese Internment Camp. In *Trade and Exchange: Archaeological Studies from History and Prehistory*, edited by Carolyn D. Dillian and Carolyn L. White, pp. 179-192. Springer, New York.

Slaughter, Michelle Ann
2006 *An Archaeological and Ethnographic Examination of the Presence, Acquisition, and Consumption of Sake at Camp Amache, a World War II Japanese Internment Camp*. Unpublished Master's Thesis, Department of Anthropology, University of Colorado at Denver.

Sommer, Robert, and Humphry Osmond
1961 Symptoms of institutional care. *Social Problems*, 8(3):254-263.

Spencer, John
1943 Memorandum, To Donald Harbison, April 29, 1943. War Relocation Authority, Granada Project, Amache, Colorado. Japanese-American evacuation and

resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

Sueo Sako
1944 Resolution. *Granada Pioneer,* Vol. 2, No. 18, 31 December: 2. Granada, Colorado.

Tamura, Anna Hosticka
2004 Gardens below the Watchtower: Gardens and Meaning in World War II Japanese American Incarceration Camps. *Landscape Journal*, 23(1):1-21.

Ter Borg, John
1944a Housing Office Report for August 1944. War Relocation Authority.
1944b Housing Office Report for September 1944. War Relocation Authority.
1944c Housing Office Report for December 1944. War Relocation Authority.

Thomas, Dorothy S. and Richard Nishimoto
1946 *The Spoilage: Japanese American Evacuation and Resettlement*. University of California Press, Oakland.

Tilley, Christopher
1994 Interpreting Material Culture. In *Interpreting Objects and Collections*, edited by Susan Pearce, pp. 67-75. Routledge, London.

Tonai, Minoru
2011 Interview by Bonnie Clark, David Garrison, and Christian Driver, May 23. Manuscript on file at the University of Denver, Department of Anthropology.

Tsuchida, Nobuya
1984 Japanese Gardeners in Southern California, 1900-1941. In *Labor Immigration Under Capitalism: Asian Workers in the United States Before World War II*, edited by Lucie Cheng and Edna Bonacich, pp. 435-469. The University of California Press, Berkeley.

Tsukamoto, Mary and Elizabeth Pinkerton
1987 *We the People, a Story of Internment in America*. Laguna, Elk Grove, California

Turan, Zeynep
2003 Personal Objects from the Homeland: Reconstructuring Cultural and Personal Identities. *International Journal of the Humanities* 1:465-481.

War Department

1942 *Specifications for Construction of Evacuee Living Quarters, Granada Relocation Center, Colorado*. War Department, U.S. Engineer Office, Albuquerque District, Albuquerque, New Mexico.

War Relocation Authority

N.d. *A Brief Description of the War Relocation Authority Project for Evacuated Japanese.* Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

1943a *Welcome: Amache July 1 and 2, 1943*. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

1943b Engineering Monthly Report. November, 1943. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

1943c Engineering Monthly Report. December, 1943. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

1944a Engineering Monthly Report. February, 1944. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

1944b Engineering Monthly Report. April, 1944. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

1944c Engineering Monthly Report. May, 1944. Japanese-American evacuation and resettlement records, BANC MSS 67/14 c, The Bancroft Library, University of California, Berkeley.

Waters, Michael R.

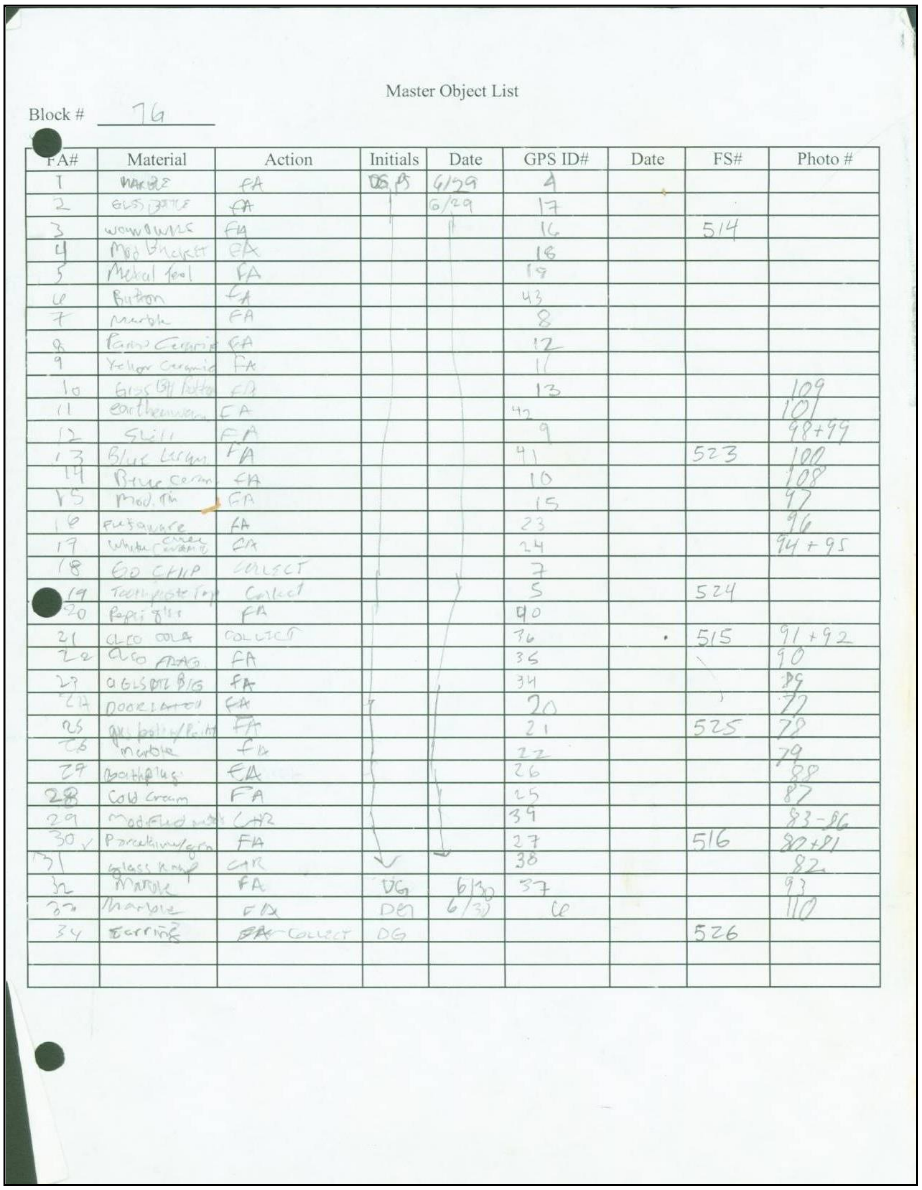
2004 *Lone Star Stalag: German Prisoners of War at Camp Hearne*. Texas A&M University Press, College Station, Texas.

Yoo, David K.

2000 *Growing Up Nisei: Race, Generation, and Culture among Japanese Americans of California, 1924-49*. University of Illinois Press, Chicago.

APPENDIX A: Field Forms

Master Object List

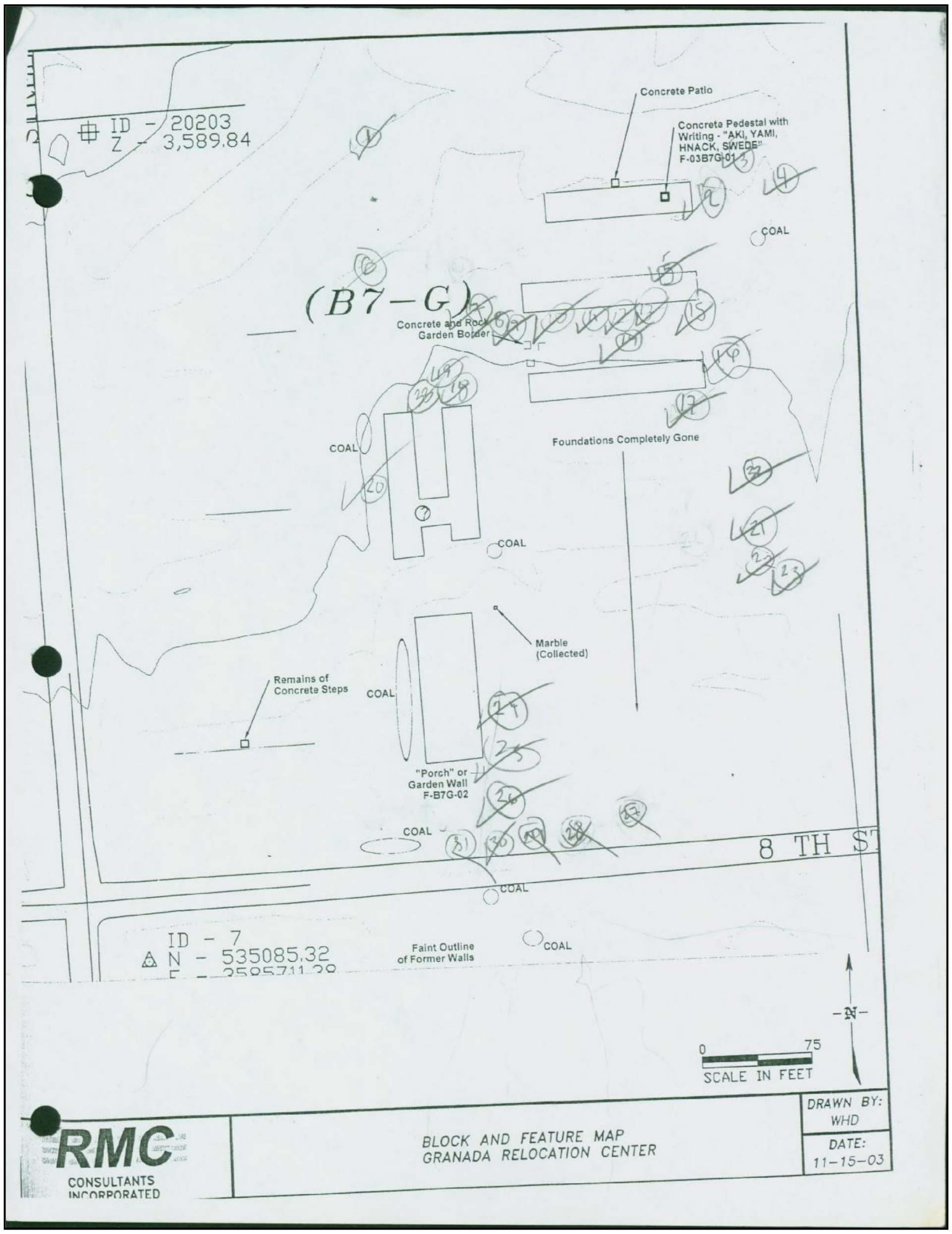


Master Object List

Block # 76

FA#	Material	Action	Initials	Date	GPS ID#	Date	FS#	Photo #
1	MARBLE	FA	DG, PS	6/29	4			
2	GLS BOTTLE	FA		6/29	17			
3	WOOD W/WIRE	FA			16		514	
4	Mod Bracket	FA			18			
5	Metal [illegible]	FA			19			
6	Button	FA			43			
7	Marble	FA			8			
8	[illegible] Ceramic	FA			12			
9	Yellow Ceramic	FA			11			
10	Glass [illegible] bottle	FA			13			109
11	earthenware	FA			42			101
12	Shell	FA			9			98+99
13	Blue Ceramic	FA			41		523	100
14	Blue Ceramic	FA			10			108
15	Mod. Tin	FA			15			97
16	Redware	FA			23			96
17	White Cream Ceramic	FA			24			94 + 95
18	GO CHIP	COLLECT			7			
19	Toothpaste Top	Collect			5		524	
20	Pepsi glass	FA			40			
21	CLCO COLA	COLLECT			36		515	91 + 92
22	CLCO FRAG.	FA			35			90
23	GLS BTL BIG	FA			34			89
24	DOOR LATCH	FA			20			77
25	glass bottle/Paint	FA			21		525	78
26	marble	FA			22			79
27	bath plug	FA			26			88
28	Cold Cream	FA			25			87
29	Modified metal	CAR			39			83-86
30	Porcelain/gr[illegible]	FA			27		516	80+81
31	glass knob	CAR			38			82
32	Marble	FA	DG	6/30	37			93
33	Marble	FA	DG	6/30	6			110
34	Earrings	~~FA~~ COLLECT	DG				526	

Block Map with Artifact Location



Bottle Analysis Form

D.A.
A.H.

Bottle Analysis Form

Block# 26

FA#	Color	Segment	#	% present	Dia mouth	Dia base	Height	Shape	Closure	Vess Fm	ID Marks	Content	Note
20	Cl	Body	1	(1/4) 1/2 3/4 W	/	/	/	/	/	B	"EPSICO" →	Pepsicola?	
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									
				1/4 1/2 3/4 W									

Color:
Cl-clear DG-dark green
A-aqua B-brown
LG-light green Co-cobalt
M-milk O-other

Segment:
Lip Base
Neck
Shoulder
Body

Shape:
R-round O-other
Oval
Sq-square
Rect-rectangular

Closure:
CC-crown cap Cork
LT-lug thread
Cont Th-continuous thread
Lid

Vessel Form:
B-bottle
Jar
Jug
CJ-canning jar

Ceramic or Glass Tableware Analysis Form

Ceramic or Glass Tableware Analysis Form

Block# 7G D.A. A.H

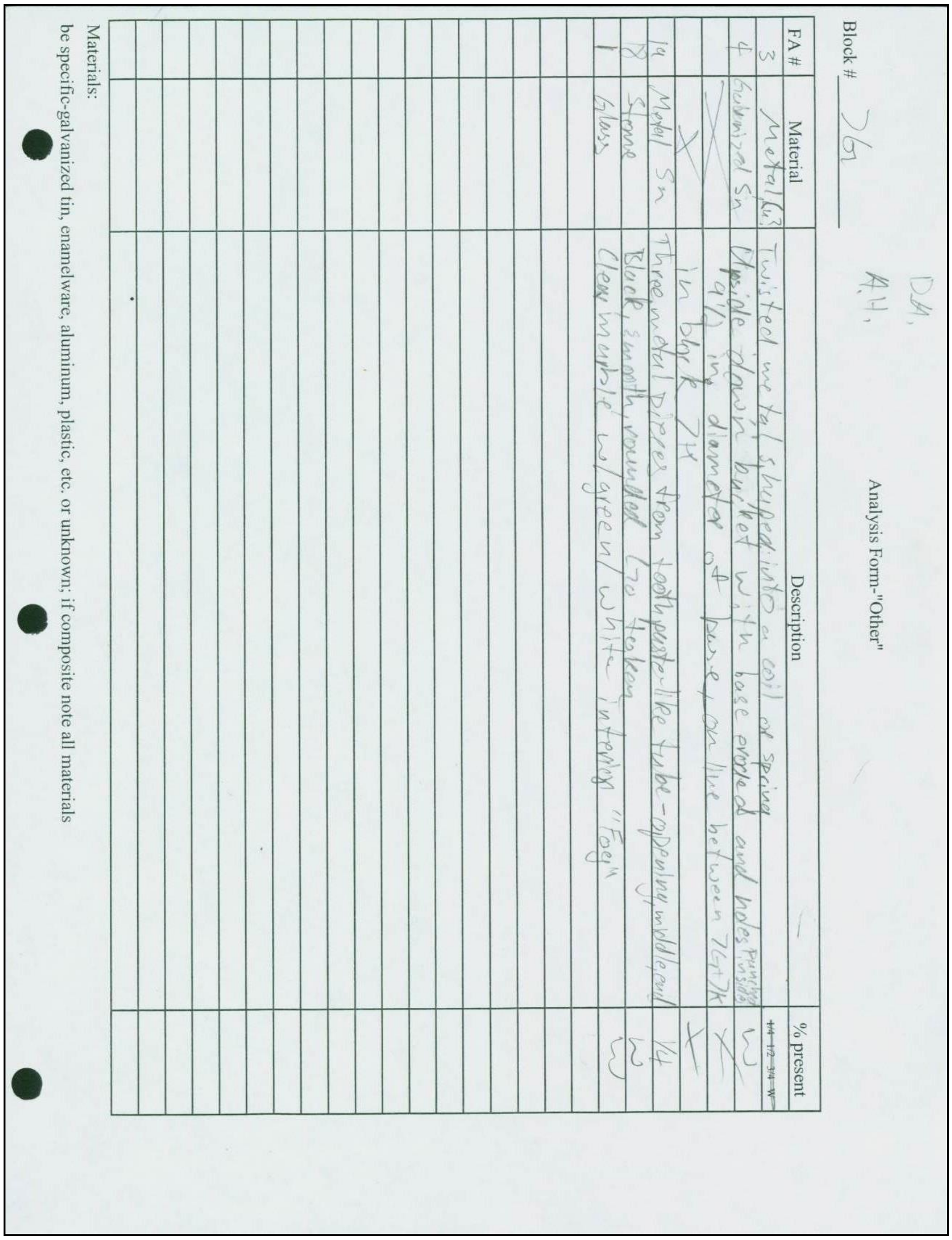
FA#	Ware	Segment	#	Diam	R/B	% present	Decor	Description	Max Thk	Min Thk	H/F	Vessel Form	Note
8	P	B	1	—	B	<1/4 1/2 3/4 W	Y	Turquoise mottled on exterior	3/16"	1/16"	H	Mug	
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							
						1/4 1/2 3/4 W							

Ware:
E-Earthenware O-Other T-Terra Cotta
H-Hotelware P-Porcelain
I-Ironstone S-Stoneware

Segment:
Rim Bas-Base
Bod-Body H-Handle
O-Other

#-number of associated fragments
R/B: Rim or Base
Decor-Decorated Y or N
H/F-hollow form or flatware

Analysis Form “Other”



DA,
A.H.

Analysis Form-"Other"

Block # 7G

FA #	Material	Description	% present
			~~1/4 1/2 3/4 W~~
3	Metal (Cu?)	Twisted metal shaped into a coil or spring	
4	Galvanized Sn	Upside down bucket with base eroded and holes punched inside	W
	X	9 1/2 in. diameter of base, on line between 7G+7K	X
	X	in block 7H	X
19	Metal Sn	Three metal pieces from toothpaste-like tube - opening, middle, end	1/4
18	Stone	Black, smooth, rounded (70 taken)	W
1	Glass	Clear marble w/green/white interior "Fog"	W

Materials:
be specific-galvanized tin, enamelware, aluminum, plastic, etc. or unknown; if composite note all materials

Amache Surface Survey Block/Feature Form

Amache Surface Survey
BLOCK / FEATURE FORM

Block #: 7G Feature #: ______ Date: 6/29/2010

Surveyors: BC, DA, EH, AQ, WL, JK, LN, DG Transect Spacing: 2m

Glass:	**Clear**	**Green**	**Brwn**	**Milk**	**Blue**	**Other**	**Totals**	
Bottle:								
small	~~||||~~ ~~||||~~	|	~~||||~~ |	~~||||~~ |		||		
medium	~~||||~~							
large	||							
Jar:								
small	~~||||~~							
medium	|							
large								
Cold cream jars								
Cleaning product jars								
Soda bottles	||							
Canning Jars								
Unidentified								
Ceramics:	**Earthenware**	**Porcelain**	**Hotelware**	**Fiestaware**	**Military**	**Glassware**	**Ironstone**	**Unknown**
	~~||||~~ ||	|||	|||		||||			
Tin Cans:	**lids**	**fragments**	**whole**	**reusable lid**	**handle**	**modified**		
Small	~~||||~~	||				|		
Medium	~~||||~~		||	|				
Large								
Oil/Gas								
Other								
Metal:							**Post-Occupation:**	
Barrel Hoops	~~||||~~ |						Car Parts	||||
Oil Drum	||						Beer	|
Bottle Caps	~~||||~~ |						Other	|||
Other	~~||||~~ ~~||||~~							
PIPE	||							
Other:								
marbles	||||							
shell	~~||||~~ |							
wound wire	||							
WIRE	||||							
Button	|							
GO chip	|							
limestone	|							
ceramic cube	|							
small glass	~~||||~~ |||							
Shoe	|							
Stopper Plug	|							

Field Specimen Log (Surface Survey)

FIELD SPECIMEN LOG – SURVEY

FS #	FA#	MATERIAL	BLOCK	FEAT	GPS ~~GIS~~ ID#	COLL INIT	DATE	COMMENTS	C	Lot
500	11	Japanese War	12K			DG+PS	7-12			16.1
501	37	Homemade wheelbarrel wheel	12K							17.1
502	3	Med. Bottle	12H							1.1
503	4	Ink Jar	12H							2.1
504	6	Toy Battleship	12H							3.1
505	10	Dec. Porcelain	12H							4.1
506	14	Tax Token	12H							5.1
507	26	2x Porcelain	12H							6.1
508	30	Sml Bottle	12H							7.1
509	1	Searchlight	12H	GUARD TOWER				on border 12H/12G		8.1
510	31	Brown Design Porcelain	12H							9.1
511	14	Toothbrush	12G							1.1
512	17	Compact	12G							2.1
513	27	Pos. Sake Ceramic	12G							3.1
514	3	wound wire	7G							1.1
515	21	Elec Cord	7G							2.1
516	30	Maker's Mark Hotelware	7G							3.1
517	20	cold cream Jar	12L	Trash Dump		PS	7-16-10			1.1
518	1	G; Teacup	Trash Dump	Trash Dump	1	PS	7-18-10			25.1
519	3	G; Cleaning Jug	Trash Dump	Trash Dump	3	PS	7-18-10			26.1

Master Feature List

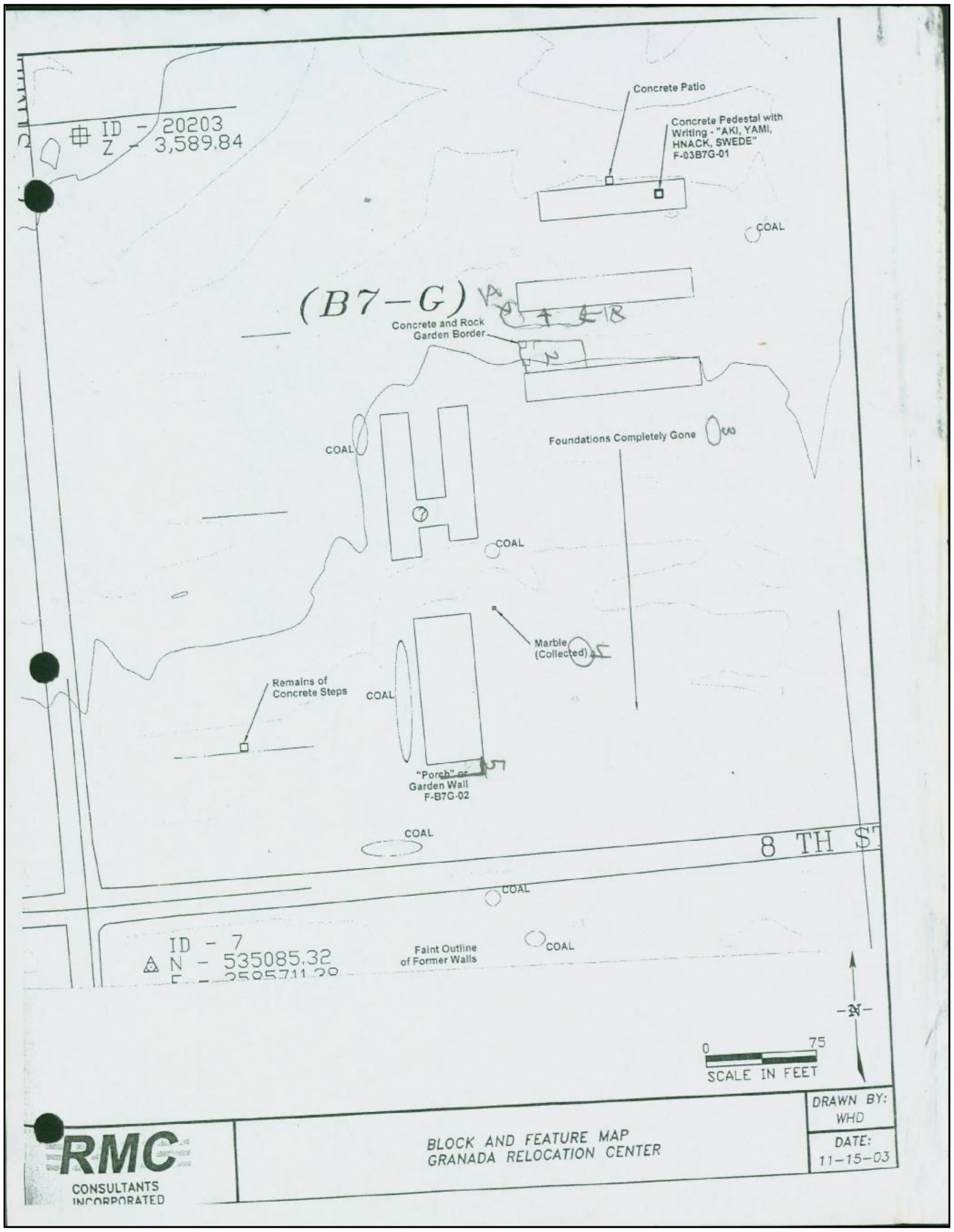
Master Feature List

Feature #	GPS ID #	Block	Feature Type	Materials	Vegetation	Description
1		7G	L	G, C, shell	Downed tree	Brick frags., concrete standing stone wall, and foundation, limestone, cobble
2		7G	L		"	Cobbles at base of tree, quartz, concrete blocks
3		7G	A			Brick frags, concrete wall
4		7G	L			Concrete, brick, and sandstone frags
5		7G	A			Concrete wall addition to 5 meters wall
1B			L			EAST HALF OF F1
1A			L			WEST HALF of F1

Feature Type:
T- Trash Scatter
L- Landscape
A- Architecture
P- Post-Occupational Disturbance

Materials:
G- Glass
C- Ceramic
M- Metal
O- Other

Block Map with Feature Locations



Soil Sample Log (Flotation)

12K

SOIL SAMPLE LOG

FS #	POLL PHYTO FLOT	CONT EXT	GRID PROVENIENCE	FLOT VOL	CONTEXT DESCRIPTION	CMBD	EXC	DATE	COMMENTS	
1000	Flot	12K-1005	1003N/998E	20L	Arbitrary Level 2		CH, DK, LN	7/9		2
1001	Flot	12K-1004	1001N/996E	20L	"		BC, JS, JK	7/9		1
1002	Flot	12K-1006	1005N/996E	20L	"		SC, JA, PD	7/9		3
1003	Pol	12K-1004	1001N/996E	1/2 cup	"	49	BC, JS, JK	7/9	Under wood frag FS 1066	1
1004	Pol	12K 1004	1001N/996E	1/2	"	44	BC JK	7/10	" FS 1008	1
1005	Flot	12K 1007	1001N/996E	20L	"		BC JK	7/13		1
1006	Flot	12K 1008	1003N/998E	20L	"		DK LN	7/13		2
1007	Flot	12K 1009	1005N/996E	20L	"		CH JS	7/13		3
1008	Flot	12K 1010	1001N/996E	20L	"		DK BC	7/13		1
1009	Pol	12K 1008	1003N/998E	1/2	"		LN DK	7/14	56cmbd, under wood	2
1010	Flot	12K 1011	1001N/996E	20L			BC JK	7/14		1
1011	Flot	12K 1012	1005N/996E	20L			CH JS	7/14		3
1012	Pol	12K 1008	1003N/998E				LN DK	7-15	under wood w/nails 61cmbd	2
1013	Pol	12K 1008	1003N/998E				DK	7-15	" 60cmbd	2
1014	Pol	12K 1011	1001N/996E				BC JK	7-15	E half of soft soil feature	1
1015	Flot	12K 1011	1001N/996E	20L			BC JK	7-15		1
1016	Flot	12K 1013	1003N/998	20L			LN DK	7-15		2

Soil Sample Log (Chemistry)

CHEM

SOIL SAMPLE LOG

SS ~~PS~~ #	POLL PHYTO FLOT	CONT EXT	GRID PROVENIENCE	FLOT VOL	CONTEXT DESCRIPTION	CMBD	EXC	DATE	COMMENTS
210	CHEM	7G-007	2001mN 2001mE		POSTHOLE	71			
211		7G-006	2001mN 2001mE		POST MOLD	67			
212		7G-009	2000mN 2001mE NE		TOPSOIL	15			
213		7G-012	2000mN 2001mE NE		Garden lvl 1	38			
214		7G-014	2000mN 2001mE NE		Garden lvl 2	49			
215	Chem	7G-015	2001mN 2001mE SW		Garden lvl 2	48			
216		7G-016	2000mN 2001E NE		Garden lvl 3	59			
217		7G-020	2001mN 2001mE SW		Garden lvl 3	59			
218		7G-021	2000N/2001E NE		Garden lvl 4	68			
219		7G-022	2000 N/2001E NE		Garden lvl 5	79			
220	Chem		2003N/2003E NW		STRAT 1	46			
221			2003N 2003E NW		STRAT 2	54			
222			2003N 2003E NW		STRAT 3	62			
223			2001N 2001E NE		STRAT 1	30			
224					STRAT 2	38			
225					STRAT 3	45			
226					STRAT 4	?			
227			2000 N 2001E NE		STRAT 1	20			
228					STRAT 2	30			
229					STRAT 3	45			

Context Register

Amache Project 2010 — Context Register — Block: — ~~Unit:~~

Sealed By Seals

Context Number	Context Type	Start Depth	End Depth	Description	Date Begun	Date Completed
7G001	ARBITRARY LAYER		7G003	2001 N 2001 E TOPSOIL	7/6/2010	7/8/2010
7G 002	ARBITRARY LAYER		7G004	2003 N 2003 E TOPSOIL	7/6/2010	7/8/2010
7G003	ARBITRARY LAYER	7G001		2001 N 2001 E	7/8/2010	
7G004	ARBITRARY LAYER	7G002	7G005	2003 N 2003 E	7/8/2010	7/10
7G005	ARBITRARY LAYER	7G004	7G006	2003N 2003E	7/10	7/10
7G006	Event	7G003		2001N 2001E Postmold	7/13	
7G007	Feature Fill	7G003		2001 N 2001E Post hole	7/13	
7G008	Feature Cut	7G003		2001 2001E	7/13	
7G-009	ARBITRARY LAYER		7G-010	2000N, 2001E	7/13	

Context Form (page 1)

Context Description: Garden Loam?		Context Number: 76015	
Site Number: Amache	Excav. Begun: 7/16/10	Unit Number: 2001 N/2001 E	
Excavators: AH AG	Excav. Ended: 7/17/10	Block Number: 76	
Context Type: Arbitrary Layer, Layer, Feature Fill, Feature Cut, Event	Feature Type:	Later Cxt. 76003	
		Earlier Cxt.	
		Equal Cxt.	Assoc. Cxt.
Unit Size: Shovel Test Pit, 50 x 50 cm, 1 x 1 meters, 2 x 2 meters, other size	Excavation Method: Shoveled, Troweled, All Soil Collected, Not Excavated, Unknown	Screen Type: 1/8 Inch Dry Screen, Water Screened, Not Screened, Flotation, Unknown	

Excavator's Notes: stopped digging at 10 cm mark. There was a small coal pile.

Supervisor's Notes:

Soil Type: Clay, Sandy Clay, Silty Clay, Clay Loam, Silty Clay Loam, Sandy Clay Loam, Loam, Silt Loam, Sandy Loam	Silt, Loamy Sand, Sand, Marl, Various, Brick, None, Unknown	Soil Texture: Silty, Friable, Sticky, Plastic, Gritty, Granular, Fine Sand, Medium Sand, Coarse Sand	Gravelly Brick, None, Various
Munsell Color: Dry, Wet	pH Value:	Relative Humidity:	

Inclusions (or use categories)
0% 1-5% 5-10% 15-20% 20-25% 25-30% 30-40% 40-50% >50%

Concrete	Limestone	Brick	Gravel	Coal	Clinker
0%	0%	0%	0%	1-5%	0%

Charcoal 0%	FS, Piece Plotted, Other Notes, Phyto Sample	Flot Sample, Pollen Sample, Other Sample, Chem Sample	Dimensions of Context: Length 2 m, Width 2 m, Thickness 10 cm	Master Context:
Photo Numbers:			Checked By:	

Additional Notes:

Context Form (page 2)

Elevations taken from Datum: 7

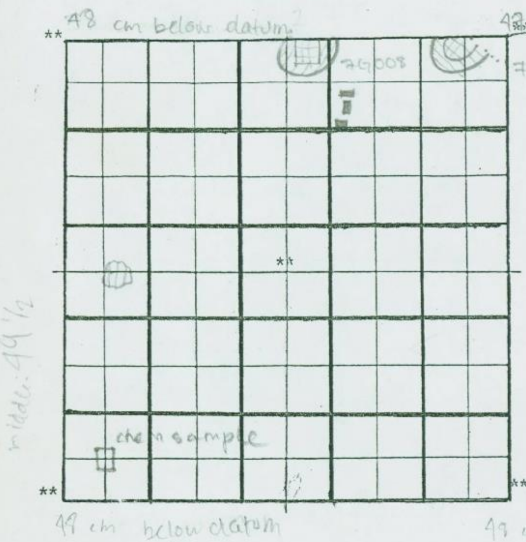
Elevations taken with:

Unit Datum

Instrument

Highest Elevation in Context: 45 cm below datum

Lowest Elevation in Context: 51 cm below datum



KEY

SCALE= 1 M^2

** : Elevations in centimeters below datum

Map point plotted artifacts (label FS #), areas of inclusion concentrations, features (label context #).

... balk

coal

7G-007 (fill)

7G-012 (fill)

7G-006 (mold)

7G-011 (mold

wood upright posts

Description/ Remarks: dirt hard w/ several patches of gray caked dirt, few traces of vegetation besides sage brush.

Artifacts/Ecofacts: coal pile

Additional Notes:

Field Specimen Log (Excavation)

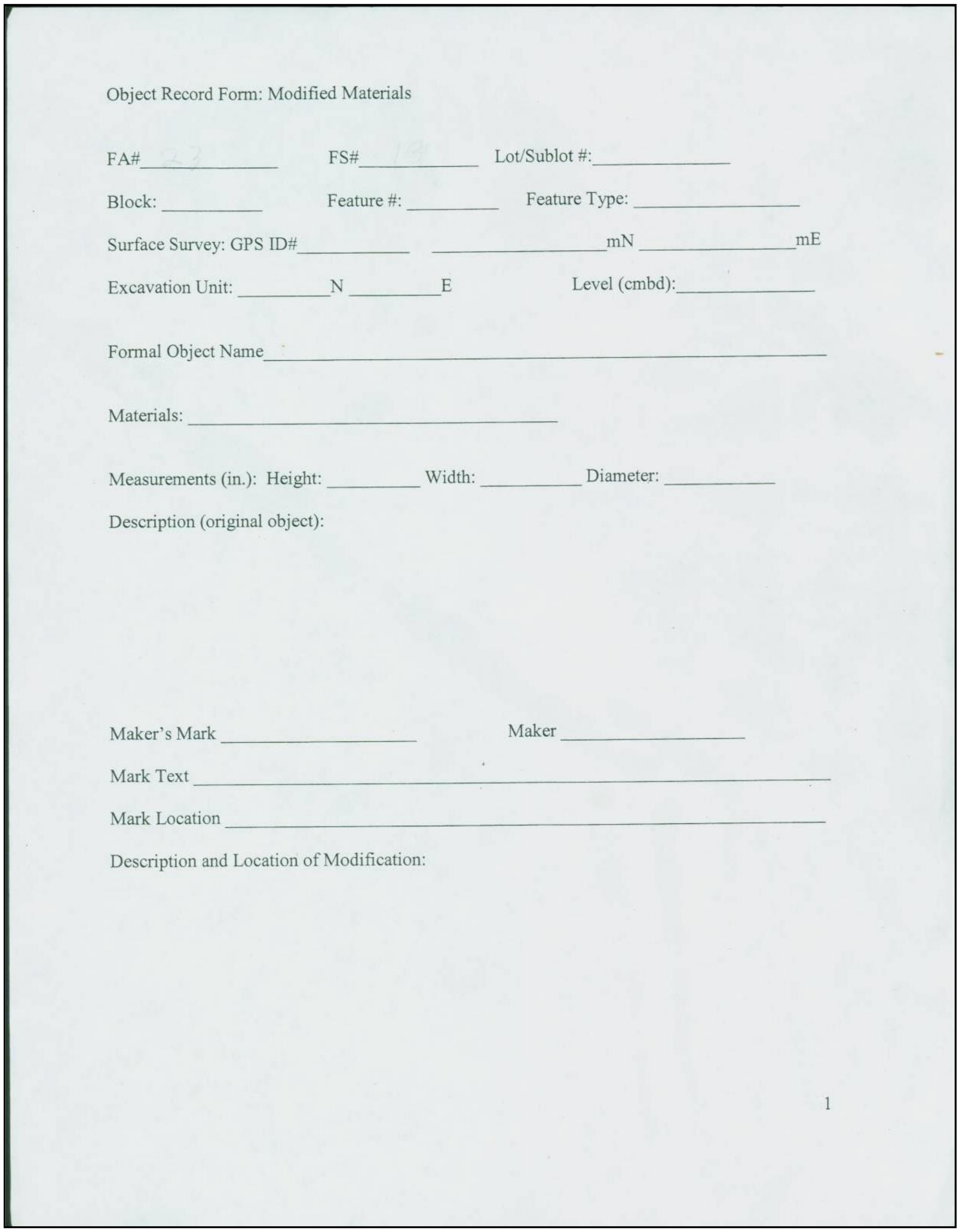
76

FIELD SPECIMEN LOG - EXCAVATION

2 ↓

FS #	MAT TYPE	FEAT	PROVENIENCE	UNIT SIZE	UNIT TYPE	CAT LVL	CmB ELEVATION	PNT LOC	EXC	DATE	COMMENTS	C	Lot
2001	Quartz		2007mN 2003mE	2x2	E.U.	76 002	25.5	Y		7/7/10	Cobble		8.1
2002	Copper		2003mN 2003mE	2x2	E.U.	76 002	27.5-44				General Artifact Bag		9
2003			2001mN 2001mE	2x2	E.U.	76 001	6.5-20.5				General Artifact Bag		10
2004			2003mN 2003mE	2x2	E.U.	76 002	26 cm	Y		↓	Shale-like-Rock		11.1
2005			2001mN 2001mE	2x2	E.U.	76 003	36-48			7/8	General Artifact Bag		12
2006			2003mN 2001mE	2x2	E.U.	76 004	43-58			↓	General Artifact Bag		13
2007			2001mN 2001mE	2x2	E.U.	76 003	31	Y		7/9	Wood Linear Feature		14.1
2008			2000mN 2001E	2x1	E.U.	76-009	26-30			7/14	General Art. Bag		15
2009			2000mN 2001mE	2x1	E.U.	76-10	36-40			↓	Gen Art Bag		16
2010			2000mN 2001mE	1x2	E.U.	76-14	46.5-51			7/15			17
2011			2001mN 2001mE	2x2	E.U.	76-15	45-51			7/16			18
2012			2000N/2001E	2x1	EU	76-16	57-60.5			7/16			19
2013			2000N/2001E	2x1	EU	76-21	66.5-70			7/17			20
2014			2001N/2001E	2x2	EU	76-20				7/17			21
2015	Mixed		2003N/2003E	2x2	EU	76-005				7/10	Level Bag		22

Modified Object Form (page 1)



Object Record Form: Modified Materials

FA# 23 FS# 14 Lot/Sublot #: ______

Block: ______ Feature #: ______ Feature Type: ______

Surface Survey: GPS ID# ______ ______ mN ______ mE

Excavation Unit: ______ N ______ E Level (cmbd): ______

Formal Object Name ______

Materials: ______

Measurements (in.): Height: ______ Width: ______ Diameter: ______

Description (original object):

Maker's Mark ______ Maker ______

Mark Text ______

Mark Location ______

Description and Location of Modification:

1

Modified Object Form (page 2)

If Composite artifact:

Description and function of separate elements:

Description and function of compound:

Condition:

Burnt ___ Broken___

Collector: ________________________________ Date: ____________________________

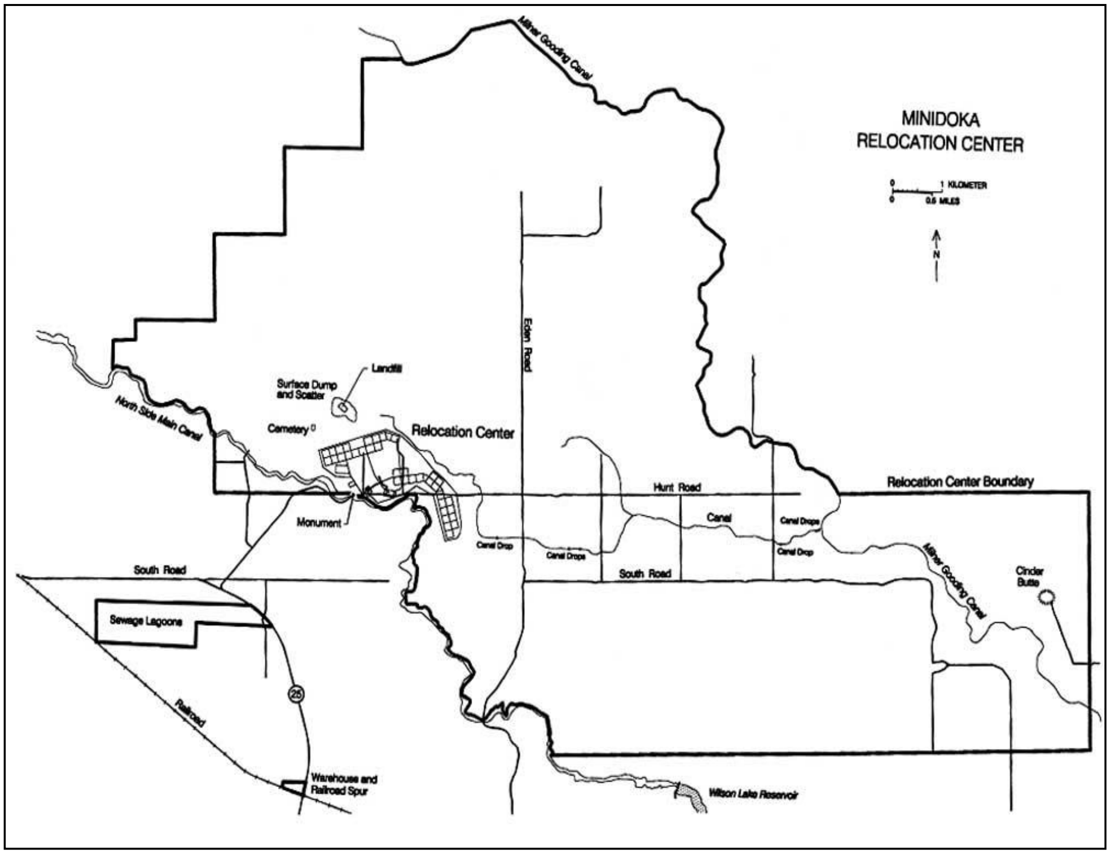
Analyzed by: _____________________________ Date: ____________________________

Photo Roll # ________ Frame #________

2

APPENDIX B: Maps

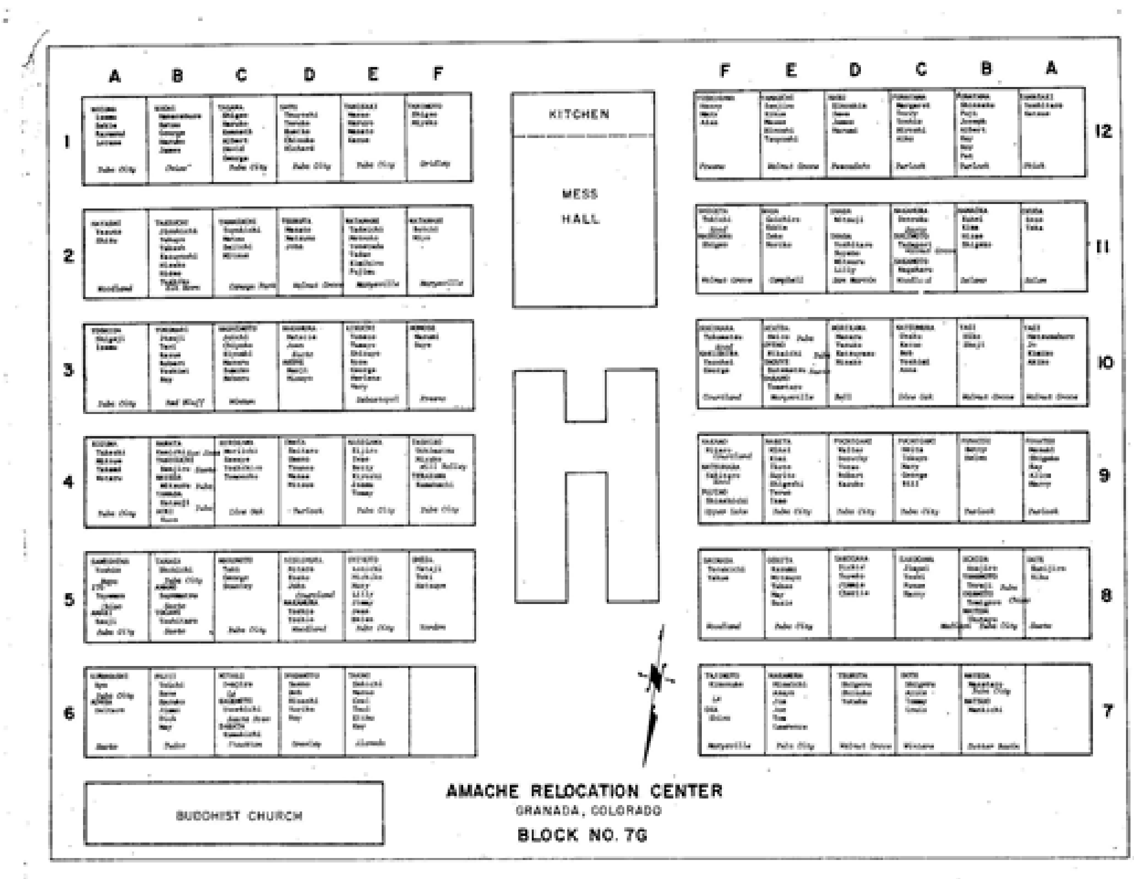
Map of the Minidoka Internment Center



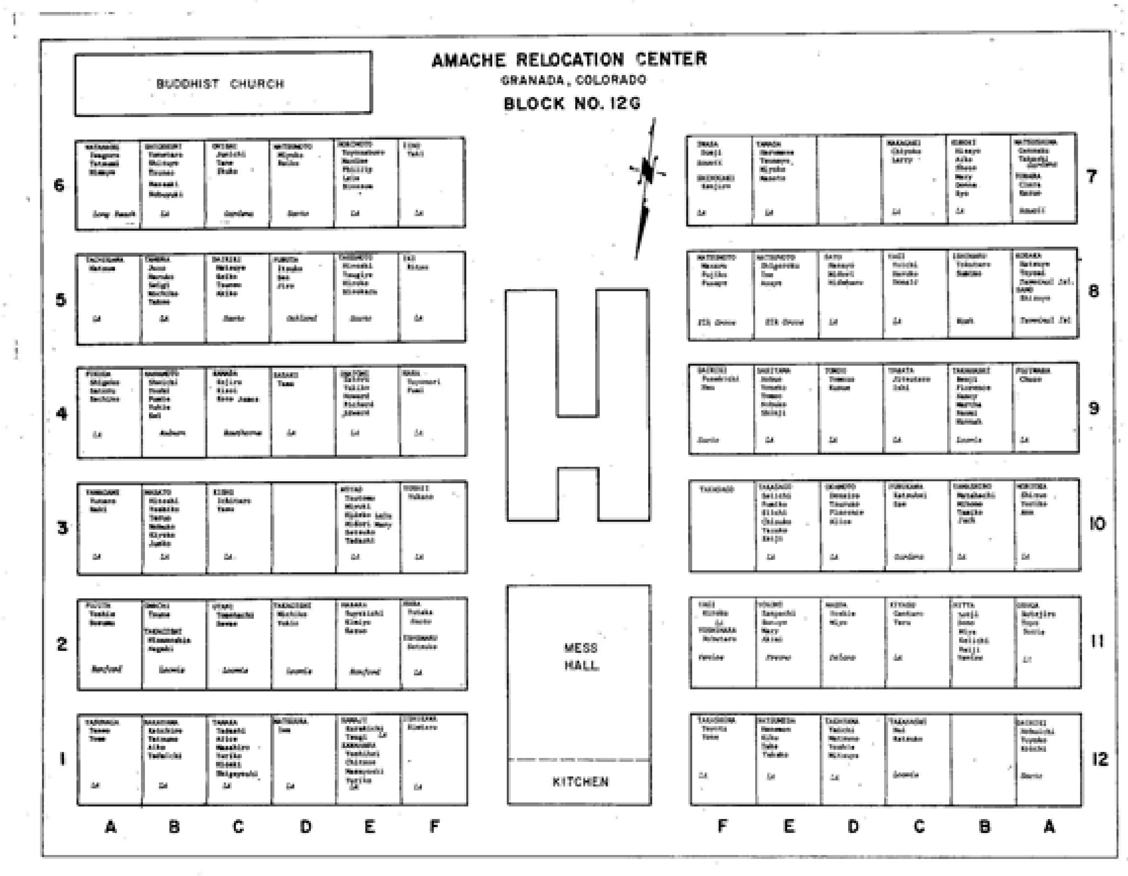
Burton, Jeffery, and Mary Farrell, Florence Lord, and Richard Lord. 2002 *Confinement and Ethnicity: An Overview of World War II Japanese American Relocation Sites.* Seattle: University of Washington Press.

Schematic Block Maps Created by the Amache Historical Society Using the 1945 Camp Directory (maps include family names as well as where they lived prior to internment).

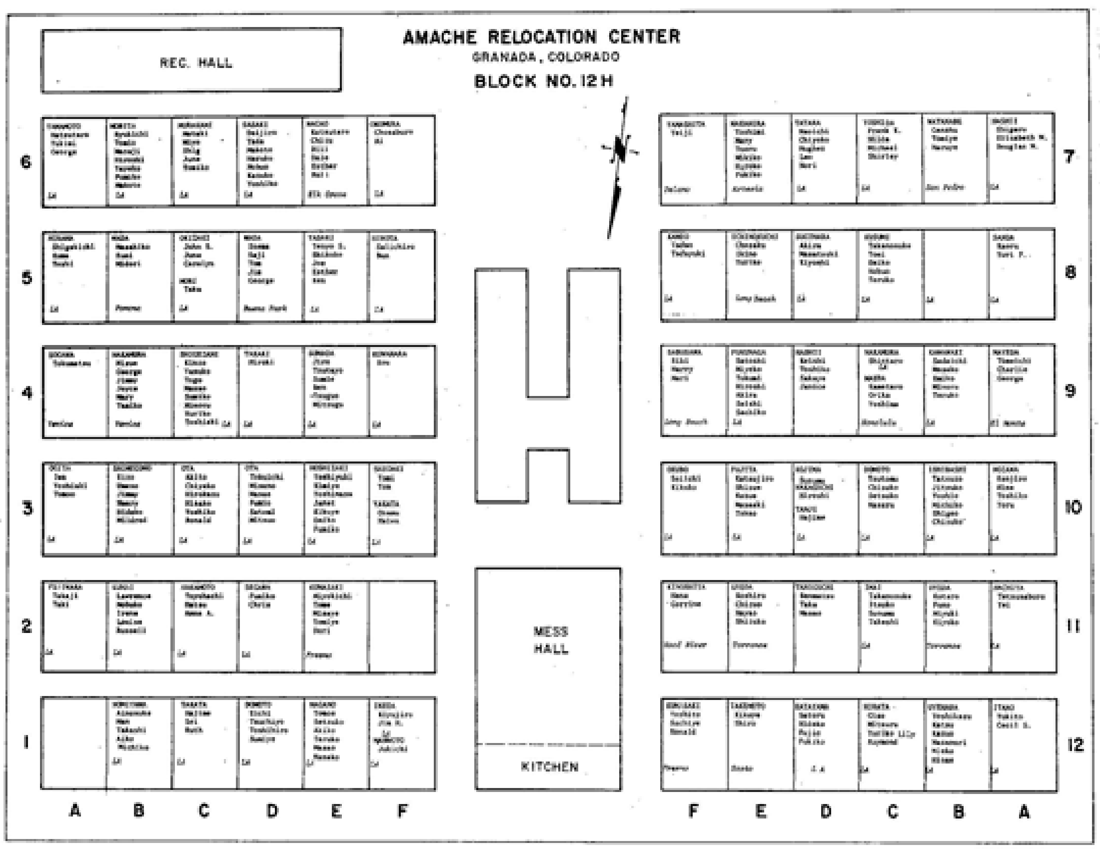
Block 7G



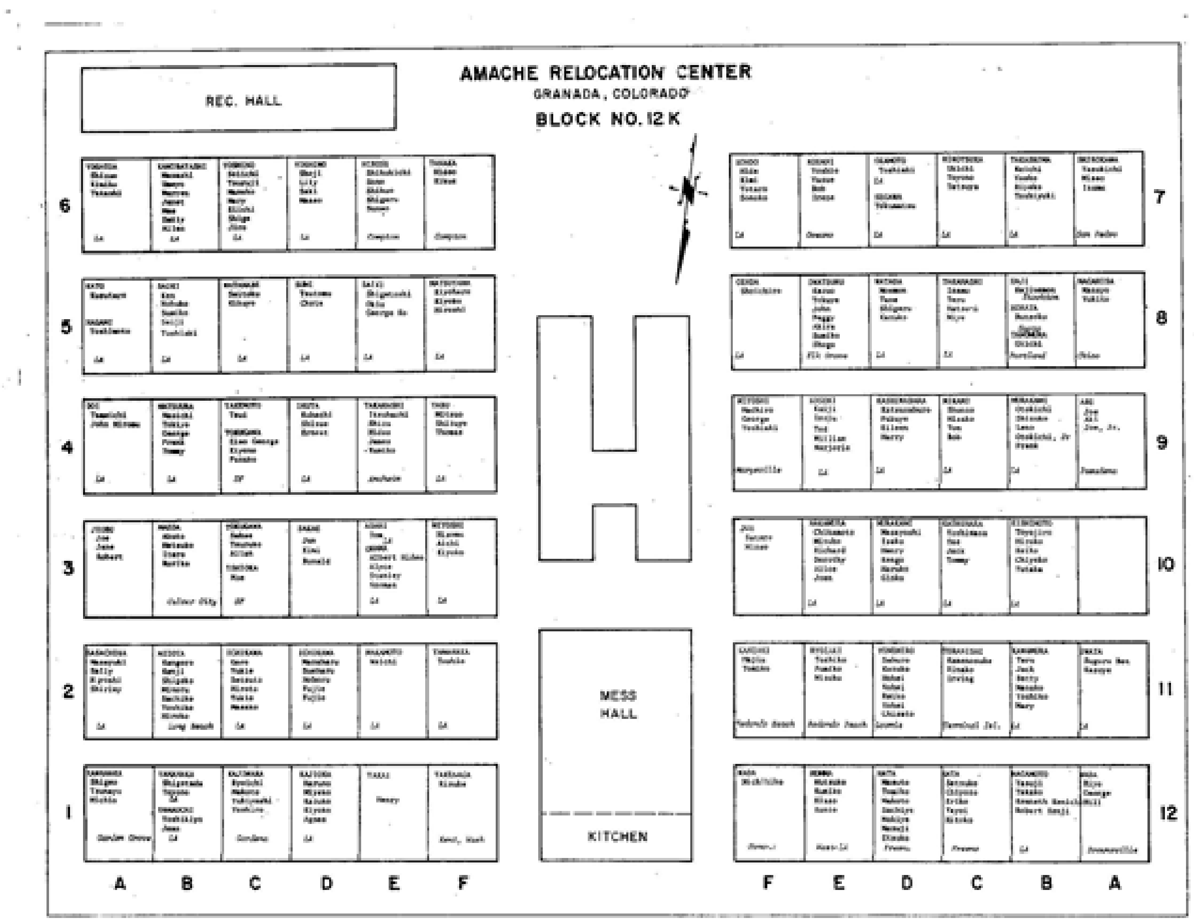
Block 12G


AMACHE RELOCATION CENTER
GRANADA, COLORADO
BLOCK NO. 12G
BUDDHIST CHURCH
MESS HALL
KITCHEN
A B C D E F
F E D C B A
1 2 3 4 5 6
7 8 9 10 11 12

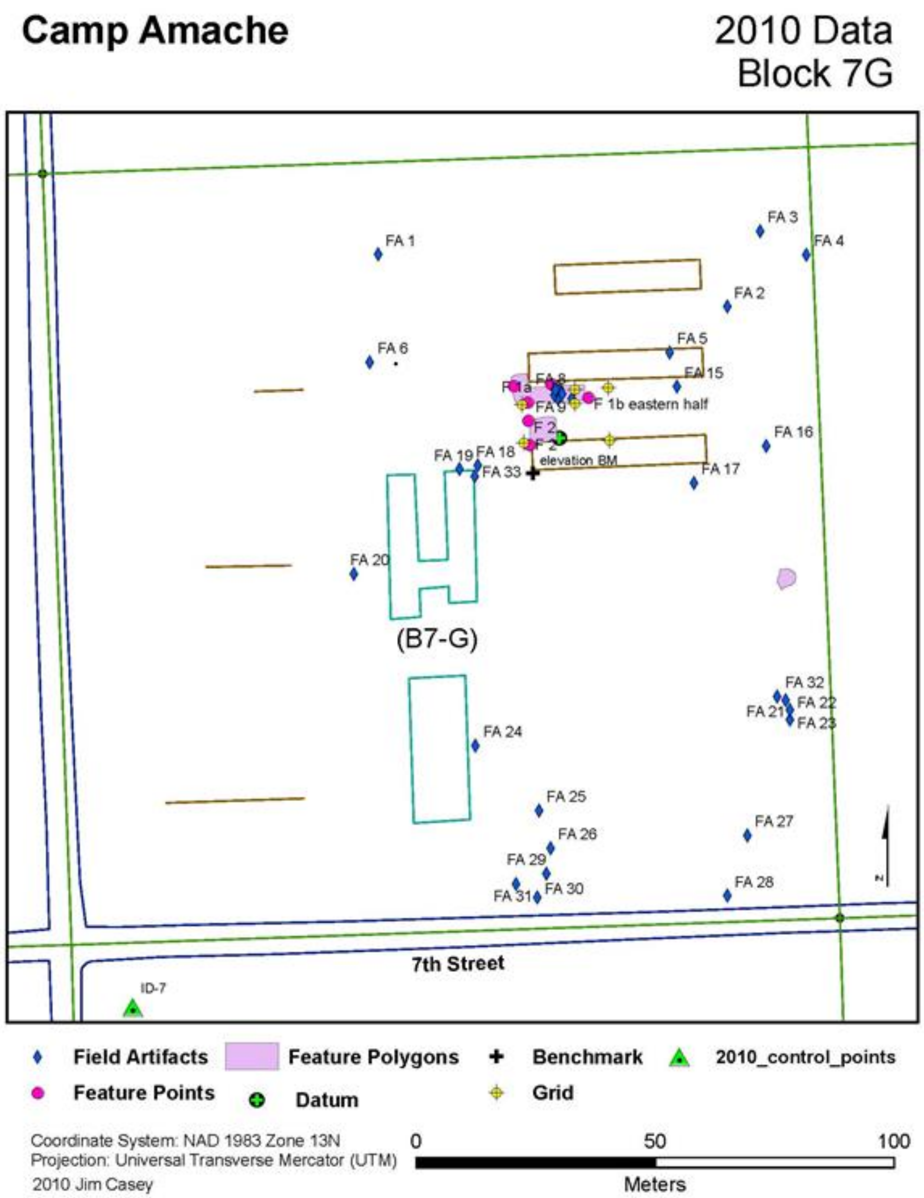
Block 12H

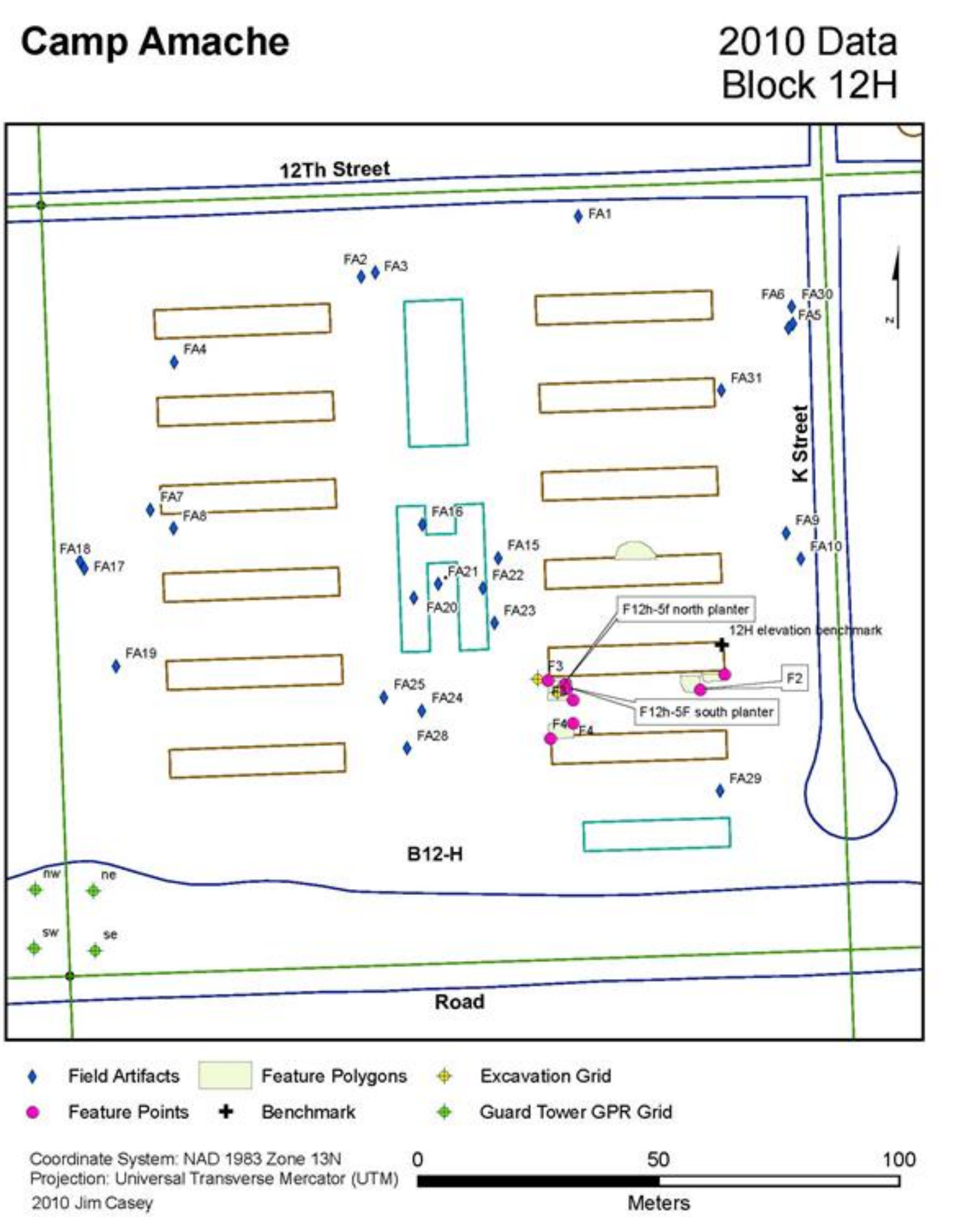

AMACHE RELOCATION CENTER
GRANADA, COLORADO
BLOCK NO. 12 H
REC. HALL
N
MESS HALL
KITCHEN
1
2
3
4
5
6
7
8
9
10
11
12
A B C D E F
F E D C B A

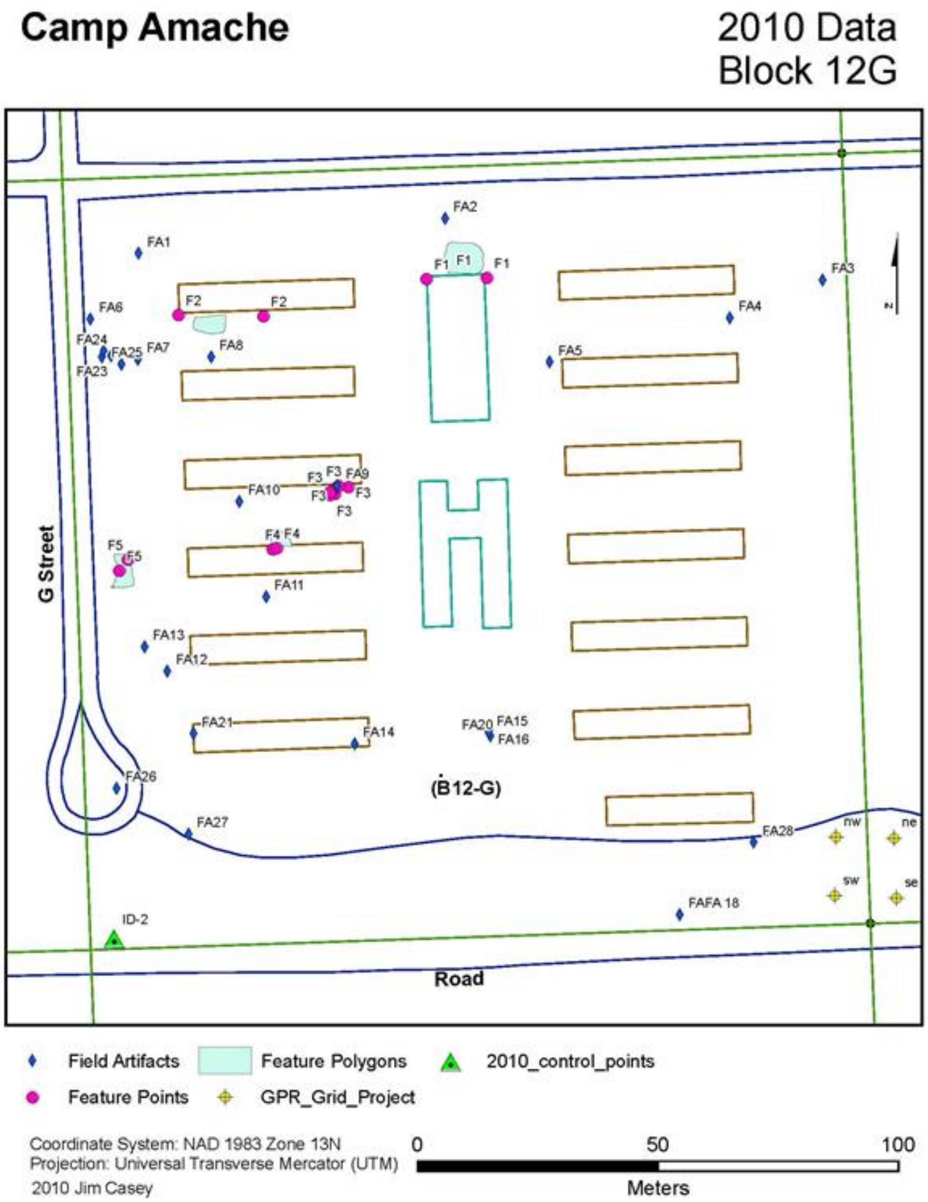
Block 12K


AMACHE RELOCATION CENTER
GRANADA, COLORADO
BLOCK NO. 12 K
REC. HALL
MESS HALL
KITCHEN
1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
F
E
D
C
B
A

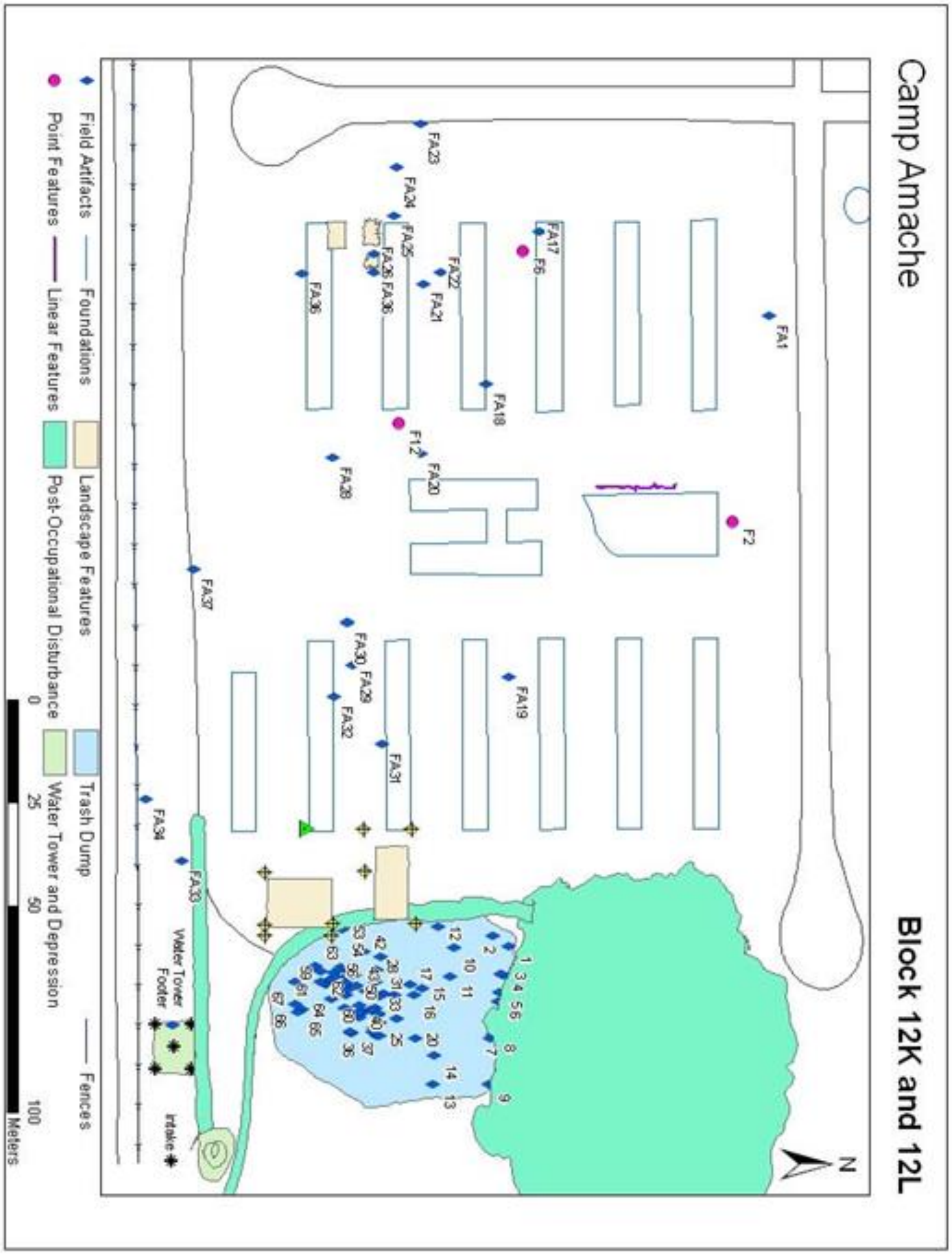
GIS Rendered Maps Displaying Artifact, Feature, Excavation, and GPR Grid Locations.




Camp Amache
2010 Data
Block 12H
12Th Street
K Street
Road
B12-H
FA1
FA2
FA3
FA4
FA5
FA6
FA7
FA8
FA9
FA10
FA15
FA16
FA17
FA18
FA19
FA20
FA21
FA22
FA23
FA24
FA25
FA28
FA29
FA30
FA31
F12h-5f north planter
12H elevation benchmark
F12h-5F south planter
F2
F3
F4
nw
ne
sw
se
N
Field Artifacts
Feature Polygons
Excavation Grid
Feature Points
Benchmark
Guard Tower GPR Grid
Coordinate System: NAD 1983 Zone 13N
Projection: Universal Transverse Mercator (UTM)
2010 Jim Casey
0
50
100
Meters



Camp Amache
2010 Data
Block 12G
G Street
Road
(B12-G)
FA1
FA2
FA3
FA4
FA5
FA6
FA7
FA8
FA9
FA10
FA11
FA12
FA13
FA14
FA15
FA16
FA20
FA21
FA23
FA24
FA25
FA26
FA27
FA28
FAFA 18
F1
F2
F3
F4
F5
ID-2
nw
ne
sw
se
Field Artifacts
Feature Polygons
2010_control_points
Feature Points
GPR_Grid_Project
Coordinate System: NAD 1983 Zone 13N
Projection: Universal Transverse Mercator (UTM)
2010 Jim Casey
0
50
100
Meters



Camp Amache
Block 12K and 12L
N
Field Artifacts
Point Features
Foundations
Linear Features
Landscape Features
Post-Occupational Disturbance
Trash Dump
Water Tower and Depression
Fences
0
25
50
100
Meters
Water Tower Footer
intake
FA1
F2
F6
F12
FA17
FA18
FA19
FA20
FA21
FA22
FA23
FA24
FA25
FA28
FA29
FA30
FA31
FA32
FA33
FA34
FA37

APPENDIX C: Tables

Garden and Landscape Features

Identified Features in Block 7G

Feature #	Type	Materials	Description
7G-1A	Landscaping	Brick, Standing Stones, Glass, Ceramic, Limestone, Shell, Concrete	Remnants of Entryway Garden Extending to Edge of Barrack
7G-1B	Landscaping	Glass, Ceramic, Shell	Continuation of Garden to Western Side of Barrack
7G-2	Landscaping	Cobbles, Quartz, Concrete	Remnants of Umeda Garden
7G-3	Architectural	Brick, Concrete	
7G-4	Landscaping	Brick, Concrete, Sandstone	
7G-5	Architectural	Concrete	Constructed Wall

Identified Features in Block 12G

Feature #	Type	Materials	Description
1	Landscaping	Concrete, Limestone	
2	Landscaping	Limestone, Cobbles, Downed Trees	
3	Landscaping	Concrete, Brick, Cobbles	Small Pond Feature
4	Landscaping	Wooden Planks, Brick, Limestone	Entryway Garden
5	Landscaping	Limestone, Downed Tree	

Identified Features in Block 12H

Feature #	Type	Materials	Description
1	Landscaping	Brick, Flower Pot Fragments, Concrete, Metal	Entryway Garden
2	Landscaping	Concrete, Downed Tree	Concrete Border Near Barrack Entryway
3	Landscaping	Ceramic Pipe, Concrete, Downed Tree	Concrete Border Near Barrack Entryway
4	Landscaping	Concrete	Concrete Border Near Barrack Entryway
5	Landscaping	Concrete, Brick, Downed Tree	Concrete Wall near Barrack Entryway

Identified features in Block 12K

Feature #	Type	Materials	Description
1	Landscaping	Three Chinese Elms	Internee Planted Row of Trees
2	Architectural	Concrete, Brick	Internee Built Addition
3	Landscaping	Concrete, Cinderblocks	Possible Garden Border
4	Landscaping	Four Chinese Elms	Internee Planted Row of Trees
5	Landscaping	Four Chinese Elms	Internee Planted Row of Trees
6	Landscaping	Tree, Building Materials, Cobble	Landscaped Surface Next to Entryway
7	Landscaping	Three Chinese Elms	Internee Planted Row of Trees
8	Landscaping	Limestone, Chinese Elm	Landscaped/Decorated Tree at Barrack Entryway
9	Landscaping	Five Chinese Elms	Internee Planted Row of Trees
10	Landscaping	Concrete, Two Chinese Elms	Concrete Garden Border
11	Landscaping	Limestone, Chinese Elm	Landscaped/Decorated Tree at Barrack Entryway
12	Landscaping	Concrete, Downed Tree	Concrete Standing Stones

Context Elevations

Approximate Elevations of Identified Contexts in Unit 2003N/2003E

Context	Highest Elevation (cmbd)	Lowest Elevation (cmbd)
7G-002	27.5	44
7G-004	43	58
7G-005	61	76

Approximate Elevations of Identified Contexts in Unit 2001N/2001E

Context	Highest Elevation (cmbd)	Lowest Elevation (cmbd)	Notes
7G-001	6.5	20.5	
7G-003	36	48	
7G-006	35	67	Post Mold
7G-007	35	71	Posthole Fill
7G-008	35	71	Posthole Cut
7G-011	46	67	Post Mold
7G-012	46	74	Posthole Fill
7G-013	46	74	Posthole Cut
7G-015	45	51	
7G-017	51	62	Post Mold
7G-018	51	69	Posthole Fill
7G-019	51	69	Posthole Cut
7G-020	51	60	

Approximate Elevations of Identified Contexts in Unit 2997N/3004E

Context	Highest Elevation (cmbd)	Lowest Elevation (cmbd)	Notes
12H-3001	39	65	
12H-3002	43	72	
12H-3003	52	59	South Planter
12H-3004	44.5	52	North Planter
12H-3005	59	68.5	South Planter
12H-3006	52	62	North Planter
12H-3007	68.5	88	South Planter
12H-3008	62	72	North Planter

Approximate Elevations of Identified Contexts in Unit 1001N/996E

Context	Highest Elevation (cmbd)	Lowest Elevation (cmbd)
12K-1001	31	40
12K-1004	40	50
12K-1007	50	61
12K-1010	61	75
12K-1011	63	75

Approximate Elevations of Identified Contexts in Unit 1003N/998E

Context	Highest Elevation (cmbd)	Lowest Elevation (cmbd)
12K-1002	31	41
12K-1005	41	51
12K-1008	51	60
12K-1013	60	71

Wire collected from units excavated in Block 7G (Lot/Sublot #s often assigned to multiple wire fragments of the same gauge)

Lot #	Sublot	Unit	Object	Gauge
7G.10	15	2001N/2001E	Wire	n/a
7G.10	11	2001N/2001E	Wire	14 and 25
7G.10	12	2001N/2001E	Wire	15 and 25
7G.10	13	2001N/2001E	Wire	14 and 25
7G.10	14	2001N/2001E	Wire	15 and 25
7G.10	15	2001N/2001E	Wire	11
7G.10	16	2001N/2001E	Wire	17
7G.10	17	2001N/2001E	Wire	13
7G.10	18	2001N/2001E	Wire	14
7G.10	19	2001N/2001E	Wire	14
7G.10	20	2001N/2001E	Wire	15
7G.10	21	2001N/2001E	Wire	15
7G.10	22	2001N/2001E	Wire	16
7G.10	23	2001N/2001E	Wire	13
7G.10	24	2001N/2001E	Wire	14
7G.10	25	2001N/2001E	Wire	15
7G.12	20	2001N/2001E	Wire	12
7G.12	21	2001N/2001E	Wire	13
7G.12	22	2001N/2001E	Wire	15
7G.12	23	2001N/2001E	Wire	16
7G.13	9	2003N/2003E	Wire	n/a
7G.9	9	2003N/2003E	Wire	13

Wire collected from units excavated in Block 12K (Lot/Sublot #s often assigned to multiple wire fragments of the same gauge)

Lot No	Sublot	Unit	Object	Gauge
12K.18	1	1001N/996E	Wire	18
12K.18	1	1001N/996E	Wire	14
12K.18	2	1001N/996E	Wire	15
12K.18	3	1001N/996E	Wire	16
12K.27	1	1001N/996E	Wire	17
12K.21	1	1001N/996E	Wire	15
12K.21	2	1001N/996E	Wire	13
12K.21	3	1001N/996E	Wire	16
12K.21	17	1001N/996E	Wire	15 and 16
12K.22	19	1003N/998E	Wire	6
12K.19	6	1003N/998E	Wire	14
12K.19	8	1003N/998E	Wire	12
12K.22	20	1003N/998E	Wire	n/a
12K.22	15	1003N/998E	Wire	n/a
12K.22	16	1003N/998E	Wire	5
12K.22	18	1003N/998E	Wire	15
12K.22	19	1003N/998E	Wire	6
12K.22	21	1003N/998E	Wire	16
12K.22	22	1003N/998E	Wire	13
12K.22	23	1003N/998E	Wire	14
12K.22	25	1003N/998E	Wire	18
12K.22	26	1003N/998E	Wire	16

Nails collected from units excavated in Block 7G

Lot #	Sublot	Unit	Type	Quantity	Pennyweight
7G.15	2	2000N/2001E	Common Nail	1	2
7G.15	3	2000N/2001E	Finishing Nail	1	8
7G.15	4	2000N/2001E	Box Nail	2	3
7G.16	1	2000N/2001E	Common Nail	2	8
7G.16	2	2000N/2001E	Common Nail	2	6
7G.16	3	2000N/2001E	Finishing Nail	1	8
7G.16	4	2000N/2001E	Common Nail	1	6
7G.16	5	2000N/2001E	Common Nail	1	2
7G.10	1	2001N/2001E	Box Nail	1	4
7G.10	2	2001N/2001E	Box Nail	1	6
7G.10	3	2001N/2001E	Common Nail	1	6
7G.10	4	2001N/2001E	Common Nail	2	16
7G.10	5	2001N/2001E	Common Nail	1	3
7G.10	6	2001N/2001E	Common Nail	1	20
7G.10	7	2001N/2001E	Common Nail	8	8
7G.12	7	2001N/2001E	Box Nail	1	4
7G.12	8	2001N/2001E	Finishing Nail	1	3
7G.12	9	2001N/2001E	Common Nail	1	6
7G.12	10	2001N/2001E	Common Nail	1	10
7G.12	11	2001N/2001E	Common Nail	1	20
7G.12	12	2001N/2001E	Common Nail	2	16
7G.12	13	2001N/2001E	Common Nail	4	8
7G.12	14	2001N/2001E	Box Nail	3	4
7G.12	15	2001N/2001E	Box Nail	2	6
7G.12	16	2001N/2001E	Box Nail	2	4
7G.12	17	2001N/2001E	Box Nail	1	3
7G.12	18	2001N/2001E	Box Nail	1	8
7G.12	19	2001N/2001E	Box Nail (zinc galvanized)	2	2
7G.9	1	2003N/2003E	Common Nail	1	8
7G.9	3	2003N/2003E	Common Nail	1	16
7G.9	4	2003N/2003E	Finishing Nail	1	2
7G.9	4	2003N/2003E	Common Nail	1	10
7G.9	5	2003N/2003E	Box Nail	2	4

7G.13	1	2003N/2003E	Finishing Nail	1	8
7G.13	3	2003N/2003E	Common Nail	2	6
7G.13	4	2003N/2003E	Box Nail	5	4
7G.13	5	2003N/2003E	Box Nail	2	4
7G.13	6	2003N/2003E	Box Nail	1	3
7G.13	7	2003N/2003E	Box Nail	3	3

Nails Recovered from Unit 2997N/3004E

Lot #	Sublot	Unit	Type	Quantity	Pennyweight
12H.13	1	2997N/3004E	Common Nail	3	8
12H.13	2	2997N/3004E	Common Nail	2	6
12H.15	1	2997N/3004E	Common Nail	9	8
12H.15	2	2997N/3004E	Common Nail	13	6
12H.15	3	2997N/3004E	Common Nail	3	16
12H.15	11	2997N/3004E	Common Nail	1	30
12H.15	12	2997N/3004E	Common Nail	2	3
12H.15	13	2997N/3004E	Common Nail	4	3

Nails collected from units excavated in Block 12K

Lot No	Sublot	Unit	Type	Quantity	Pennyweight
12K.18	5	1001N/996E	Box Nail	3	6
12K.18	6	1001N/996E	Common Nail	4	6
12K.18	8	1001N/996E	Box Nail	1	10
12K.18	9	1001N/996E	Common Nail	1	16
12K.27	3	1001N/996E	Common Nail	1	3
12K.21	5	1001N/996E	Box Nail	2	3
12K.21	6	1001N/996E	Box Nail	4	3

12K.30	1	1001N/996E	Common Nail	1	6
12K.22	28	1003N/998E	Common Nail	3	6
12K.28	7	1003N/998E	Common Nail	1	8
12K.28	9	1003N/998E	Box Nail	1	3
12K.28	10	1003N/998E	Common Nail	1	8
12K.19	7	1003N/998E	Common Nail	4	8
12K.19	9	1003N/998E	Common Nail	5	6
12K.19	12	1003N/998E	Finishing Nail	1	6
12K.19	10	1003N/998E	Box Nail	1	4
12K.22	13	1003N/998E	Common Nail	2	3
12K.22	9	1003N/998E	Common Nail	2	8
12K.22	10	1003N/998E	Common Nail	3	4
12K.22	11	1003N/998E	Common Nail	14	6
12K.22	12	1003N/998E	Common Nail	1	3
12K.23	1	1005N/996E	Common Nail	1	8
12K.23	2	1005N/996E	Common Nail	1	3
12K.23	3	1005N/996E	Finishing Nail	1	6
12K.23	4	1005N/996E	Common Nail	3	6
12K.20	1	1005N/996E	Finishing Nail	1	8
12K.20	2	1005N/996E	Box Nail	1	4
12K.20	6	1005N/996E	Common Nail	1	6
12K.20	5	1005N/996E	Common Nail	1	6

Western Regional Climate Center
Western U.S. Historical Summaries (individual stations)

LAMAR, COLORADO (054770)

Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1893 to 3/31/2013

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	45.5	50.8	59.6	69.7	78.5	88.8	94.1	92.2	84.5	72.3	57.3	46.3	70.0
Average Min. Temperature (F)	14.2	18.6	26.5	36.9	47.4	57.4	62.8	60.9	51.3	37.3	24.3	16.0	37.8
Average Total Precipitation (in.)	0.38	0.44	0.82	1.41	2.27	2.24	2.37	2.13	1.19	0.92	0.55	0.48	15.21
Average Total SnowFall (in.)	4.7	4.9	5.0	2.1	0.1	0.0	0.0	0.0	0.0	0.9	3.6	5.0	26.3
Average Snow Depth (in.)	1	0	0	0	0	0	0	0	0	0	0	1	0

Percent of possible observations for period of record.
Max. Temp.: 98.5% Min. Temp.: 98.4% Precipitation: 98.6% Snowfall: 98.3% Snow Depth: 98.5%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Electronic document, http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?co4770, accessed January 25, 2015.

LOS ANGELES WSO ARPT, CALIFORNIA (045114)

Period of Record Monthly Climate Summary

Period of Record : 8/ 1/1944 to 3/31/2013

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	65.2	65.3	65.3	67.4	69.1	71.9	75.1	76.3	76.0	73.6	70.2	65.9	70.1
Average Min. Temperature (F)	47.5	48.9	50.5	53.0	56.4	59.7	62.9	63.8	62.6	58.5	52.3	47.9	55.3
Average Total Precipitation (in.)	2.65	2.67	1.85	0.77	0.17	0.05	0.02	0.07	0.16	0.39	1.40	1.82	12.02
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 99% Min. Temp.: 99.6% Precipitation: 99.9% Snowfall: 93.5% Snow Depth: 97.1%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Electronic document, http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5114, accessed January 25, 2015.

MERCED MUNICIPAL ARPT, CALIFORNIA (045532)

Period of Record Monthly Climate Summary

Period of Record : 6/ 1/1899 to 3/30/2013

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	54.9	61.6	67.2	74.3	82.6	90.8	97.1	95.3	90.0	79.8	66.2	55.7	76.3
Average Min. Temperature (F)	36.0	38.7	41.2	44.9	50.6	56.4	60.9	58.9	54.8	47.2	39.6	35.6	47.1
Average Total Precipitation (in.)	2.46	2.17	1.96	1.09	0.44	0.10	0.01	0.02	0.15	0.60	1.37	1.89	12.27
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 96.8% Min. Temp.: 96.4% Precipitation: 98% Snowfall: 97.9% Snow Depth: 97.9%
Check Station Metadata or Metadata graphics for more detail about data completeness.

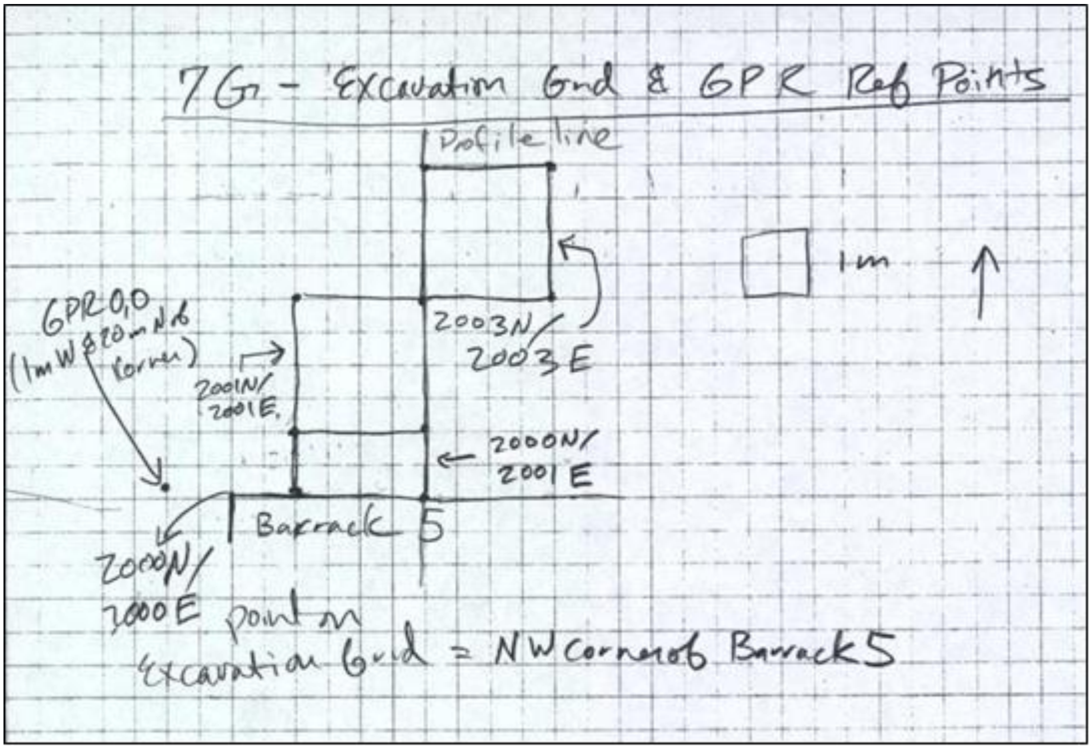
Western Regional Climate Center, wrcc@dri.edu

Electronic document, http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5532, accessed January 25, 2015.

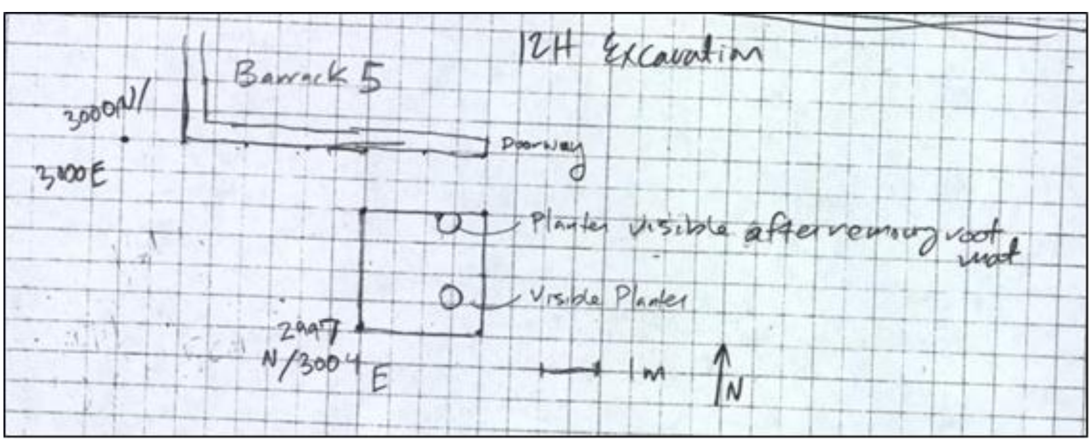
APPENDIX D: Excavation Unit Sketch Maps

Excavation Unit Sketch Maps with Reference Points for GPR Grids

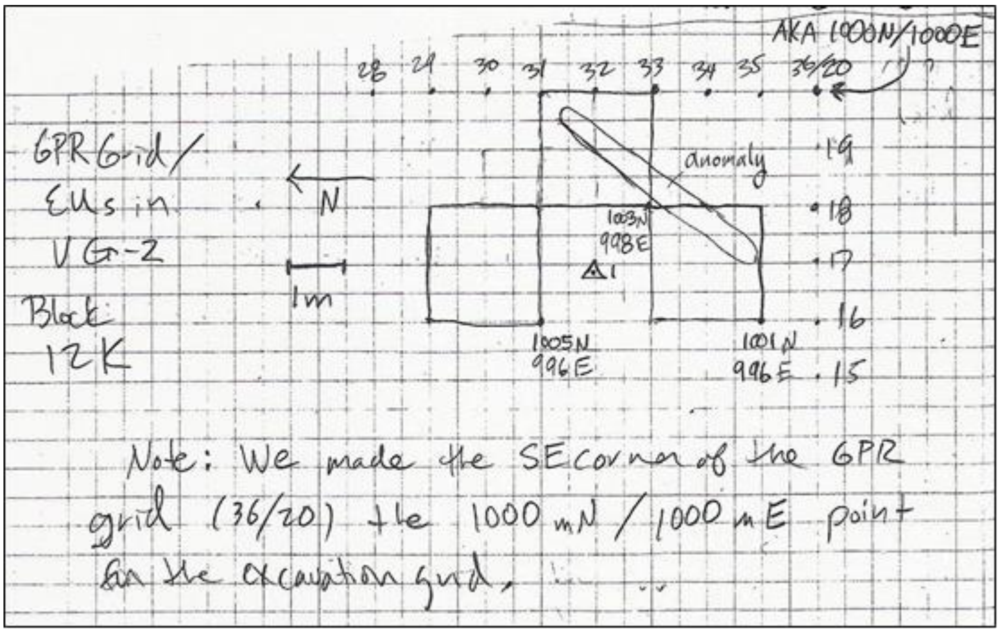
Block 7G Units



Block 12H Units (with northwest corner of the GPR grid – i.e. – 3000N/3000E)



Block 12K Units and GPR Linear Feature



APPENDIX E: Sears, Roebuck and Co. Catalog

Common Nails. For general use. Flat head; sharp point. *State size.*

Size	Length, Inches	Number Per Lb.	9 E 1190 5 Lbs.
6d	2	181	28c
8d	2½	106	28c
10d	3	69	27c
16d	3½	49	27c
20d	4	31	26c

Finishing Nails. For trim, etc. Brad head; sharp point. *State size.*

			9 E 1192
4d	1½	584	33c
6d	2	309	29c
8d	2½	189	27c

Casing Nails. For casing work on walls and cabinets; also for *flooring.* Countersunk head; sharp point.

Size	Length, In.	Number Per Lb.	9 E 1193 5 lbs.
8d	2½	145	27c

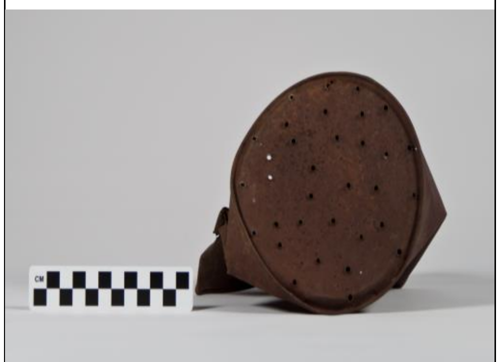
Smooth Box Nails. Similar to common nail but finer; will not split wood so easily. Flat head; sharp point. Easy-driving—hold tight. *State size.*

			9 E 1196
4d	1½	473	30c
6d	2	236	29c
8d	2½	145	28c

Sears, Roebuck and Co. 1943 Spring and Summer, Philadelphia Edition 186.

APPENDIX F: Repurposed Material Culture

Catch-And-Release Artifacts

Picture of Modified Artifact	Block	FA#	Lot#	Materials/Object Name (before modification)	Description of Modification
	Trash Dump	5	d.28	No. 10 sanitary tin can, with a 6 inch diameter	33 holes punctured on the bottom. Holes punched from inside out.

	Trash Dump	7	d.29	No. 10 sanitary tin can, with a 6 inch diameter and 7 inch height. 14 guage ferrous metal wire, wood plank, and tar with red drops of paint and fragments of coal clinker	Two holes punched just below the rim. Wire slid through one hole, doubled up (twisted), then tied around the other hole.
	12L	10		Sanitary tin can bottom	Nine holes puntured and concentrated in the center. 8d size holes. The larger the holes, the more square.

	12L	10		Sanitary tin can, 14 and 15 guage ferrous metal wire	Two punctures along the rim of the can with the 2 sides of the 14 guage wire wrapped around them. Holes punched from inside out. 2nd wire (15 g.), middle wrapped around middle of 14g. wire. One end of 15g. wire hooked around can rim and the other end is looped like a noose.
	12L	23		No. 10 sanitary tin can, with a 6 inch diameter and 7 inch height. 12 gauge wire	Two Holes punched just below the rim across from each other. Wire was cut and bent through the holes.

	12L	27		No. 10 sanitary tin can, with a 6 inch diameter and 7 inch height.	Linear punctures on the bottom of the can. Punctures are triangular and probably made with a knife; they are wider on one side, then gets progressively narrower. All cuts are between 0.3 and 0.64 inches long. Cuts made from the outside in.
	12L	28		No. 10 sanitary tin can, with a 6 inch diameter and 7 inch height.	Numerous small holes punched in the bottom of the can.

	12L	45		No. 10 sanitary tin can (6 inch diameter)	Six linear cuts on bottom of the can (possibly made with a knife). Cuts made from the outside in
	12L	50		Sheet metal, 2-3d nails, 4-2d nails, 2-<2d nails, 1 broken nail	2 ends of the sheet metal have been cut and folded over 1/4 of an inch. Nails and nail holes punched into top consistantly 1 - 2.25 inches apart.

	12L	51		No. 10 sanitary tin can, with a 6 inch diameter and 7 inch height.	Hole punched throughout the bottom (4d in size). Holes (possibly nail holes) punched in side of can approximately 2.25 inches below the rim.
	12L	58		Sanitary tin can. Two shells found inside can	Linear cuts on bottom of the can (possibly made with a knife). Cuts made from the outside in. Cuts are approximately 20-21 mm. long

	12K	10		No. 10 Sanitary tin can (7 inch height)	Many holes punched throughout the bottom of the can. They are not circular like most of the modified cans found aroun the camp. The holes are triangular.
	12K	10		Sanitary tin can	Three holes punched in the side of the can, about half way down. One 2d nail is still stuck in one of the holes. Of the two other holes, one is 2d in size and the other is 8d in size.

	12K	10		Sanitary tin can	On the opposite side, from the three nail holes, there is a circular hole cut out of the side of the can, 1 inch below the rim. The hole has a diameter of about 1.25 inches.

Surface Survey Artifacts

Picture of Modified Artifact	Bloc k	FA# / FS#	Materials/Object Name (before modification)	Description of Modification
	12L	FA# 44	Sanitary tin can. 12 gauge wire	Wire looped into a noose on one side. Circular holes puntured in tin can bottom.
	12L	FA# 18/ FS# 10	No. 10 sanitary tin can fragment (bottom has a 6 inch diameter)	Five evenly spaced rectangular perforations (approximately 1.4 x 4.6 mm) loctated on the bottom of the can

	12L	FA# 37	Sanitary tin can fragment and sections of wire (1.6 mm. diameter)	A wire tied through a hole punctured in the rim of the tin can. An additional wire with a similar noose tied on one side.
	12L	FA# 30	No. 10 sanitary tin can (i.e., 7 inch height and 6 inch diameter)	Linear perforations located on the bottom of the can

	12L	FA# 36	Sheet metal with a double seam	Cut sheet metal; sides folded back to form straight edges; three holes punctured and evenly spaced between each other
	12L	FA# 21	Sheet metal	Cut sheet metal; sides folded to create straight edges; two holes punctured through the metal

	12L	FA# 38	Sheet Metal	10 perforations made along the margins. Most holes are space approximately, the same length apart
	12L	FA# 43	Sheet metal broken into 2 fragments, wire fragment (18 gauge)	Sheet 1 (on right): Metal is folded and creased on one side. Opposite side has three perforations made along the margins with metal wire tied through one of the holes Sheet 2 (on left): Metal is folded and creased on one side. Opposite side has two perforations made along the margins.

	12L	FA# 55	Sheet Metal	Four circular perforations were made, evenly spaced apart, across the margins of one side.
	12L	FA# 48	Sheet metal and wire (17 gauge)	Metal is folded and creased along two sides. Two perforations were made along the opposite side with wire tied through one hole.

	12L	FA# 35	Barrel hoop	Multiple holes punctured around the hoop
	12L	FA# 59	Barrel Hoop and staples	Four staples punctured through barrel hoop; two remaining perforations without a staple

	12L	FA# 26	9 gauge wire; 13 gauge wire	Cut wire, bent and wrapped around each other to form a rectilinear handle

Minidoka Collection

Picture of Article	MIIN Accession #	MIIN Catalog #	Object Name/ Description	Materials and Description of Modification
	00025	53	Dresser	Many small narrow pieces of scrap pine wood, two sage wood handles, nails, and hinges.
	00027	40	3-Panel Divider	Scrap wood, nails, and hinges. Wood carving patterns and drawings of the camp, landscape, and wildlife on panels.

	00013	46	Chest of Drawers	Many repurposed wooden planks.
	00025	51	Sewing Machine Table	Small reused wooden slats
	00025	60	Table with Leaves	Dimensional lumber with evidence of various wood carving techniques

	00025	52	Wardrobe	Scrap and dimensional lumber sanded and finished; hinges and nails.
	00026	55	4-Panel Divider	Repurposed wooden slats, nails, and hinges. Depictions of wildlife carved into wood.

	00025	61	Trunk	Sides and bottom are made from various sizes of scrap wood. Handle made from sewn strips of denim
	00013	47	Dresser with two drawers	Reused wooden slats

	00021	17	Pair of Sandals	Sawed and sanded pine wood. Braided twine, scrap wood, and nails.
	00026	56	Doll with Kimono	Doll body, cloth, yarn spool, cardboard, shells, thread, and leather rope