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J. Howard Beverly, Jr.

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Masters degree in Anthropology



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**SPATIAL PATTERNING OF ARTIFACTS FROM A CIVIL WAR ERA MACHINE
SHOP, CAMP NELSON, KENTUCKY**

BY

J. Howard Beverly, Jr.

AN ABSTRACT OF A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of**

MASTER OF ARTS

Department of Anthropology

2001

Dr. Charles E. Cleland

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ABSTRACT

SPATIAL PATTERNING OF ARTIFACTS FROM A CIVIL WAR ERA MACHINE SHOP, CAMP NELSON, KENTUCKY

By

J. Howard Beverly, Jr.

Camp Nelson encompassed 4,000 acres and housed 2,000 - 8,000 soldiers and civilian workers. Yet for its size, there are few structural features that remain visible as evidence of its existence. This is most likely due to the fact that most structures erected were tents or impermanent wooden buildings. These building methods used at Camp Nelson did not leave many clues as evident by the paucity of structural features. On the other hand, the abundance of architectural related artifacts, provided clues to where buildings once stood.

In this thesis I will show that architectural data from shovel probes and excavation units are useful tools for identifying building areas. To do this, I will examine the spatial distribution for three of the most common architectural artifacts recovered on historical sites, bricks, window glass, and late cut nails. I will then compare these distributions with the location of architectural features. Functional artifacts will also be examined to determine probable functions and activities that occurred in and around any identified building areas.

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CHAPTER 1 - INTRODUCTION

One of the greatest feats of the American Civil War was the development of the extensive supply structure that provided the means to field massive armies during what is considered the first modern war. From ammunition to arms to subsistence, the supply system developed to deliver these goods to the fighting soldier on the battle line was no small feat. Indeed, the lessons learned in developing these supply lines would later prove valuable in the post war years during the massive industrial development of the United States. But, for the average soldier spending a cold lonely night on picket duty, the thought of warm coffee and somewhat palatable food waiting him back at camp kept spirits aloft. If not for the development of an extensive supply system, the ability of the Civil War soldier, or for any soldier of any war, would be greatly diminished.

The supply system developed during the Civil War is rudimentary to any logistical military operation. As an army moved from one location to another, it would develop a series of supply centers along it's path. These supply centers contained everything needed to fight a war - from subsistence to ammunition to mundane items such as ink and paper. These goods were, in turn, shipped to the soldier using a variety of transportation mediums such as wagon trains, railroads, and water ways. One such supply center that was developed by the Union Army was Camp Nelson in central Kentucky. It played a valuable role in war in Kentucky, Tennessee, and other neighboring southern states. Not only did it contribute to the Union war effort as a supply center but also as an important recruiting and training center of African-American soldiers.

Camp Nelson encompassed 4,000 acres and housed 2,000 to 8,000 soldiers and civilian workers. Yet for its size, there are few structural features that remain visible as evidence of it

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existence. This is most likely due to the fact that most structures erected during the Civil War on military establishments were tents or impermanent wooden buildings. Consequently, these building methods used did not leave many clues in the way of structural features. However, constructing and removing these structures created a wealth of architectural artifacts that may provide clues for identifying building locations and refuse areas.

In this thesis, I will examine the value of shovel testing as a viable tool for exploring archaeological sites. To do this, I will use data collected from a series of shovel probes excavated at 15 Js 113, the Machine Shop Complex at Camp Nelson. I will use the data recovered from these shovel probes to examine the spatial complexity of the site, focusing on identifying possible building locations and activity areas. Once I have identified possible building locations and activity areas, I will then examine the data recovered from the large-scale excavations and mechanical stripping conducted at the site. I will then compare and contrast the two data sets looking for similarity and differences. This will be conducted by using computer created displays of artifact density and statistical analysis of the two data sets. The unit data will act as a text of the relationship of the shovel probe data

To examine the spatial patterning at the Machine Shop Complex, I will utilize Geographic Information System (GIS) computer software. The GIS software packages that I will use are Surfer 6.04 and ArcView 3.2a with Spatial Analyst 2.0a. The resulting spatial grids produced by this collection of software will be 2.5D surface trend plots of artifact density. I will then examine these plots for clues about the spatial patterning of the site.

The approach I will take with the artifact distributions is to view them as an Exploratory

Data Analysis (EDA) device. I expect to be able to observe artifact patterns in the distributional maps. From the distributional maps I will then examine each in relation to a set of hypotheses. The relationship between the hypotheses and the distribution maps will be a continually changing one. I will then either accept or modify my hypotheses based on the observation of the distribution maps. My conclusion will then reflect this continually refinement of the hypotheses.

I will accomplish this by first examining the historical documents to determine if and what type of spatial pattern may be observed in the archaeological record. This will result in the creation of a working set of hypotheses that provide a beginning for identifying building locations and job/activity areas. Next, I will create a series of spatial maps using select artifact groups from the shovel test probes to provide a means for visually examining the distribution of the data. Then, for each of the spatial distributions, I will examine them in against the working set of hypotheses derived from the historical documents and other archaeological investigations. I will then either accept or modify each hypothesis and prepare to examine them against the archaeological data obtained from formal excavation units. From this last analysis I will either accept or reject the hypotheses and state my conclusion.

The hypotheses that I will develop are based on a review of archaeological research and historical documents. Some of these hypotheses will focus on identifying building areas and others will assist in identifying the possible job/activity areas. These hypotheses will help me to determine possible associations between specific observed patterns and proposed building areas based on their proximity with architectural features and other artifact groups and classes.

To identify possible building areas, I will examine the spatial distribution for three of the

most common architectural artifacts recovered on historical sites - bricks, window glass, and late cut nails. Since historical documents record a number of structures in the vicinity of the machine shop area, I expect to find evidence for their existence in the form of artifacts and features. I will then compare the distributions of architectural artifacts with the location of architectural features.

Identification of the machine shop's foundation should be an easy task. The machine shop structure is unlike most of the other structures known to have been built at Camp Nelson. Instead of having an impermanent wooden foundation, it was constructed out of cut limestone and measured 100 feet long by 40 feet wide. If evidence of these stones or the builders trench exist, they should be easily identifiable. Once this location has been identified, the relationship of architectural and other artifacts can be discerned. From the study of this area, I expect to be able to identify some patterns that I can test for identifying other possible building locations .

Once possible building areas have been identified, I will then use other specific artifact groups to identify possible jobs or activities that may have occurred nearby. To accomplish this task I will examine the spatial distribution of five groups of artifacts. These artifacts are those that belong to the fuel, job/activity, transportation, clothing, and kitchen groups. I will compare the distribution of these artifacts to the proposed building locations. I hope that by comparing the distribution for these artifacts groups I can elicit some type of pattern that reflects the location of possible buildings associated with the distribution of function/activity group artifacts.

Another topic that will be addressed in this thesis is the ability of current testing methodologies to detect Civil War occupations. While it has been suggested that shovel testing on Civil War military sites is a poor tool for site discovery, I will show that, at least, the shovel testing

methodology employed at the machine shop was a valuable and productive endeavor. Camp Nelson is, however, unlike most other Civil War military encampments archaeologically explored in that it was continually occupied for at least 3 years. Most other sites were usually occupied for only a few months at a time. These short occupations did not allow for depositing a large quantity of artifacts. The three years of Camp Nelson's occupation, however, should have given soldiers and civilians ample time and opportunity to deposit significant quantities of artifacts. This increased level of artifacts should then be reflected in the excavation data.

Overall, the uniqueness of Camp Nelson, and of the machine shop, contributes to the exceptional chance to conduct the analysis as outlined in this thesis. Together, the long duration of occupation and the machine shop's substantial foundation present a chance to test methodologies and theories in a highly controlled, scientific environment.

CHAPTER 2 - SPATIAL PATTERNING ON MILITARY SITES

Introduction

The goal of this section is to review the application of spatial analysis on 19th century military sites. Since my analysis of the Machine Shop Complex is focused toward identifying building locations and function/activity use areas, I will not examine in this chapter the spatial studies of battlefield sites. The conclusions I reach in this section, then, provide a methodological base for conducting spatial analysis on non-battlefield military sites as well as civilian sites.

Military Sites Spatially Investigated

Archaeologists have undertaken studies of spatial patterning on military sites with various results ranging from statements about activity areas to deciphering battle events. Few examples of spatial patterning on campsites, however, are present in the literature. Most of the military sites examined spatially have been battlefields (e.g. Scott and Fox 1987; Scott and et. al. 1989; Fox 1993; Smith 1994; Lees 1994; Lesser and McBride 1995; Ferguson 1977; Haecker 1994). A majority of these studies attempt to identify specific events and actions through the spatial distribution of battle related artifacts. Even less reported in the literature are spatial studies of encampment and bivouacs (e.g. Feister 1984; Fisher 1983, 1995; Geier 1994; Lees 1991; Staski and Johnson 1992; Staski and Reiter 1996; Staski 1990). These studies mostly focus on social spatial separation and concepts of class/economic stratification. Spatial studies of activity/function areas at 19th century military sites, however, have not been as extensive. It is in this area where I will focus my research.

The military sites that I review below are quite diverse for location and period of

occupation. They range from the French and Indian War (Crown Point), to the Revolutionary War (New Windsor Cantonment), the American Civil War (Hatcher-Cheatham Site) and finally to the Western Frontier (Fort Randall). The approaches taken at these various sites examine several different aspects of spatial analysis. For example, some of the analysis focus on identifying functional/activity areas (Geier 1994; Lees 1991), while others examine social stratification/relationships (Feister 1984; Fisher 1983, 1995; Staski and Johnson 1992; Staski and Reiter 1996; Staski 1990). Each study uses the distribution of artifacts to achieve their goals. However, their application of “spatial analysis” varies widely ranging from analysis of artifact density to observation of artifact group clusters. This difference in analytical methodology creates some problems when comparing methodology and results, but nonetheless, it also shows the diversity of approaches available.

When I examine the applications of spatial analysis from the following sites, I will look specifically at a few topics. I will closely how each of the authors apply their particular method of spatial analysis, paying attention to the specific methods employed. My goal is to identify specific spatial analysis methodologies used on military sites and to identify those topics the authors explore with spatially segregate data.

Hatcher-Cheatham Site

The battle of Drewy’s Bluff in Virginia was a small engagement during the American Civil War. A spatial analysis conducted by Geier (1994) of the Hatcher-Cheatham Site is different from most battlefield studies. Instead of focusing on the battle, Geier chose to examine the use and division of space at a farm house that functioned as a Union aid-station during the battle. He found

that specific classes and groups of artifacts he associates with specific functions clusters about particular areas around the farm house complex. For instance, Geier associates clothing parts, military hardware, alcohol containers, and pharmaceutical bottles with first-aid stations. He then assumes that clusters of these artifacts should occur in areas used as a Civil War aid-station. Geier notes that such clusters occurred around the icehouse and the kitchen area and concludes that these were the areas where the Union first-aid stations operated during the battle. However, since the artifacts groups Geier uses for his analysis are very common on any mid 19th century military site, the link he makes between them and Union aid-stations are precarious. When considering this narrow view of general Civil War history, Geier's analysis, nonetheless, does provide some useful insights about identifying functional/use areas on sites occupied by the military.

Fort Fillmore

From 1851 to 1862, Fort Fillmore helped to foster the settlement of the western frontier in New Mexico. During this time, the interplay between officers and soldiers stationed at this isolated fort developed some interesting patterns that are reflected in the spatial data. Research by Staski and Johnson (1992), Staski (1990), and Staski and Reiter (1996) each use spatial data to address the issue of social differences, but they differ in the material culture used. Initially, Staski (1990) relied on ceramics to form the base for their analysis. Subsequently Staski and Johnson (1990) used munitions. Finally, Staski and Reiter (1996), however, take a different approach. Instead of looking at material culture used and consumed by the officers and soldiers, Staski and Reiter examined building construction material and form for evidence of social stratification. Not only do these authors show that social stratification exists in the archaeological record, but they also

suggest that it exists spatially as well.

Staski and Johnson's (1992) research reveals that officers stationed at Fort Filmore had differential access to weapons than the soldiers at the fort. This conclusion is based on their knowledge of the historical separation of space within the fort, weapons, and the distribution for specific munitions. Staski and Johnson found that the munitions from areas historically associated with enlisted soldiers reflected those weapons assigned to them primarily large caliber rifle ammunition. This finding sharply contrasts with the munitions recovered from areas occupied by officers. In these areas, Staski and Johnson found that the type of munitions officers used varied greatly and did not always conform to the weapons assigned to them. They believe the difference between the munitions associated with both groups is based on the rigid hierarchical structure of a mid-nineteenth century military frontier fort.

Spatial social stratification at Fort Filmore is even evident in the distribution of ceramics between the officers' quarters and the soldiers' barracks. From an analysis of domestic ceramics Staski (1990) found that the ceramic assemblage from the officers' quarters has a higher degree of variability than that from the soldiers' barracks. Staski believes this difference in ceramic variability reflects the social stratification that exists between officers and soldiers. He believes that the personal freedom allotted to officers allowed them to explore and incorporate more of the local material culture. The soldiers on the other hand, had less personal freedom and were subjected to rules and regulations governing their interaction with the local populous.

The freedom allotted to officers under this military structure allowed them to choose from non-military issued weapons, thus resulting the variety of munitions recovered from areas occupied

by them. For the soldiers stationed at Fort Filmore, they did not enjoy the same freedom of choice in weapons, thus relaying on the standardized military issued weapons instead. Staski and Johnson conclude, then, that the observed difference in munitions reflects the social structure of a mid 19th century military establishment.

The building material used to construct Fort Filmore even reflects this spatial social stratification. Staski and Reiter (1996) show that the adobe bricks from the officers' quarters were of a better quality than the adobe bricks from the soldiers' barracks. They say that the difference, detected in laboratory tests, was not visible at the time of Fort Filmore's construction. Since the adobe from the officers' quarters and the soldiers' quarters is not visually distinguishable, then why is there a difference in composition? Staski and Reiter believe that the difference in adobe quality reflects more than mere manufacture techniques. Relying on other studies of military architecture and social status, they conclude that the observed difference in adobe quality was an intentional symbolic reflection of the social difference between officers and soldiers.

These three studies of Fort Filmore have shown that material culture and the built environment played important roles in maintaining power relations and caste-like hierarchies in the mid 19th century United States Army.

New Windsor Cantonment

Fisher (1983) presents a similar study of the structural innateness of a military camp. His study focuses on the New Windsor Cantonment, a Revolutionary era encampment in New York. Fisher uses the cantonment as an example of how conflict theory can help to understand social relations. He uses several avenues for analysis, focusing particularly on who camped where, and

how the built environment was used as a medium for creating spatial separation. Using historical documents and archaeological evidence, Fisher shows that camp commanders assigned regimental camp locations based on their perceptions of the regiments. For example, regiments perceived as troublemakers were placed in and around a swamp, separated from the main encampment by a stream. Spatial separation is also used at the cantonment to segregate the regiments into their respective states' affiliations. Fisher sees the spatial separation for regiments as functioning to reduce regional conflicts that was rising within the Continental Army near the end of the war. Fisher concludes that the commanding officers specifically structured the cantonment to reinforce their ideas of a perceived difference in social status and as a mechanism for reducing conflict. New Windsor Cantonment was not just an encampment, but an example of military cultural behavior in the eighteenth century.

Crown Point

At Crown Point, Feister (1984) and Fisher (1995) have each conducted spatial studies that examine the idea of social relations. The study by Feister examines the relationship between barrack construction and materials and the occupants' social class. Fisher approaches the same subject, but uses another avenue of inquiry. Instead he uses the spatial placement of structural features to identify the occupants' military rank and social status. Each study relies on artifacts and their spatial proximity for their conclusion.

Comparisons between French and Indian War period officer's and soldiers' barracks at Crown Point, shows that they differed in construction material despite similar outward appearances. Feister (1984) has noted differences in flooring and fireplace construction between

the two structures. In the officers' barracks, the flooring consisted of red tiles while the flooring in the soldiers' barracks was composed of red brick. The fireplaces in the barracks are similar below the floor. However, the fireplace construction above the floor is different. While the officers' fireplace contained red brick, the soldiers' fireplace included cut limestone, the same material used for the exterior walls of the barracks. The spatial distribution of the architectural artifacts also reflects this difference. Higher status construction materials are present around structures associated with soldiers. Although the barracks may be similar in function and appearance, Feister's study shows that subtle differences based on social status do exist in the barrack's construction and materials.

Not only are there discernable differences between construction techniques and materials used in officer and soldier barracks, but there is also a difference between their spatial arrangement. Following their excavation of three officer structures at Crown Point, Fisher (1995) discovered evidence that the spatial placement of campsites and the internal layout of these camps reinforces social and material hierarchies in mid 19th century British and Provincial Armies. To arrive at this conclusion Fisher examined several historical variables including the spatial arrangement of camps for Regular and Provisional troops, and the placement of structures housing soldiers and officers. From the archaeological data Fisher identified the location of three structural features he believes were occupied by provisional officers of the 2nd Connecticut Regiment. Fisher found that the spatial distance among the three architectural features suggests an occupation by officers because of the broad spacing among the three areas. He also found that the archaeological patterning is different from historical sources depicting provincial encampments as chaotic. Instead Fisher

concludes that the Provincial encampment comparable to those of a well-organized encampment of British regulars. Fisher concludes that the 18th century British Provincial armies used space to reinforce ideas of class, rank, and power by employing spatial separation to maintain order.

Fort Randall

The United States military occupied Fort Randall, South Dakota for thirty-six years from 1856 to 1892. This long term occupation left ample archaeological evidence of how space was used during the fort's occupation. An analysis of the Subaltern's Quarters by Lees (1991) Shows just how useful this material can be. At the Subaltern's Quarters Lees examined the distribution for several artifact groups, but for my purposes I will only look at his analysis of architectural, activity, and kitchen group artifacts. Lees's analysis of architectural material revealed two clusters around the Subaltern's Quarters, one to the rear of the building, and a lesser cluster toward the front. He interprets these clusters as reflecting where "salvage materials were stored or further dismantled" during the Quarter's destruction. After looking at the distribution of activity artifacts, Lees notes that several artifacts associated with washing clusters near the kitchen building. From this distribution Lees concludes that the kitchen building probably functioned as a wash room also. Lees's analysis of kitchen artifacts, however, had mixed results. He found that kitchen ceramics are good for finding kitchen activity areas while bottle glass is not. Lees found that kitchen ceramics showed a high concentration around the kitchen building. However, the distribution for bottle glass was even throughout the site. Lees attributes this to the continual deposition of bottle glass following Fort Randall's closing. Overall, the spatial analysis conducted by Lees shows the ability of artifact groups to identify spatial activity areas on military sites.

Conclusion

The forgoing examples of spatial studies conducted on military sites reveals the variety of approaches available to examine databases. Though each approach is different in context and units of analysis, there are a few common themes that can be gleaned from them. These themes, to be discussed separately, can provide important insights into the use of space on non-battlefield military sites. The three major themes are:

- That the spatial distribution of artifacts can provide insights into the social and hierarchical relationships between the different levels of military society.
- That the use of space on military sites functions to reinforce existing ideologies such as power relationships, unit cohesion, and class differentiation through the creation and maintenance of boundaries.
- That the spatial clustering of artifacts can help to identify specific function/use areas and structural features.

The first two themes are similar in their statement about the creation and use of social and hierarchical space. They state that material culture helps to create and maintain boundaries between different groups and classes of people. The last theme suggests that an artifact's distribution on non-battlefield military sites can provide insights into the use of functional/architectural space. All three themes rely on interpreting the distribution of artifacts across a site.

The basic idea behind the first two themes is that archaeologists can identify social and economic relationships through material culture. This idea has been well developed by several archaeologists in the field of plantation archaeology (c.f. Singleton 1985, 1988, 1990; Orser 1984,

1988, 1990; Otto 1977, 1980 1984) where they have explored relationships between slaves, overseers, and planters. They describe the relationship between these three groups as being based on economics - those who control the capital, those who oversee the workers, and the workers themselves. Otto (1977, 1984) has even described this relationship as having characteristics similar to a caste system. Many scholars have recognized the structural organization of the military as also containing elements similar to caste structures. Identification of artifacts akin to maintaining group boundaries and identities can provide insight into the military social structure of the time.

The last theme, that the spatial patterning of artifacts can help to identify the function/use for areas and structures are dependent on identifying certain groups of artifacts as being associated with specific activities. Historical military records provide a valuable insight into this area. As the examples reviewed above show, documents can provide important information to identify function/activity areas.

CHAPTER 3 - SPATIAL ANALYSIS AT CAMP NELSON

Introduction

The intention of this section is to develop testable hypotheses for identifying building locations and for delineating job/activity areas. Identifying groups of artifacts and features associated with structures and activities will accomplish this task. An examination of available historical data will also provide insights into identifying possible structural locations, building function and activity areas.

The Search for Building Location

Identifying and spatially locating artifact classes and features that associate with structures can help to identify probable building locations. Activity and job areas, similarly, can also be identified by looking for specific clusters of artifact groups and in relation (associating) different artifact groups spatially. The working assumption behind these two ideas is that materials related to these activities, such as construction, demolition, and to those related to function will be evident in the spatial pattern of the artifacts.

This approach is based on an idea that the presence of architectural artifacts and structural features is suggestive of where buildings once stood. However, this relationship is not as simple as it may seem. Some possible clues may be seen in the relationship of structures with specific artifacts. Recently Young and Carr (1989) and Young (1991, 1994) have developed an improved analytical technique for use with late cut nails. Their technique identifies areas of construction and areas of building refuse disposal. This technique, discussed below, shows that the presence of architectural material does not always suggest that a building once stood in an area. This technique,

relying on middle-range theory, needs other evidence such as features or other building artifacts, to collaborate the findings. Since I cannot assume that the presence of nails alone is an indicator of extant structures, other evidence must be considered. Because of this quandary, other architectural artifacts such as window glass and hand-made bricks, and structural features such as chimney foundations, structural posts, cellars, entrances, drip-lines, and sill shadows will also be considered.

One of the most common groups of artifacts recovered from historical sites are nails. Archaeologists have usually interpreted their presence on sites as an indicator for extant structures (Faulkner 1984; Journey 1987; Pogue 1988; Riordan 1988). Additionally most cataloging procedures have focused on recording their presence and quantity. Recently this changed, however, with the introduction of an analytical approach to nails based on condition - unaltered, pulled. This approach, developed by Young and Carr (1989) and later refined by Young (1991, 1994), is based on ethnographic interviews and observations of contemporary construction sites. On these sites, Young and Carr classified nails that exhibit little or no modifications as unaltered, pulled nails as having a gentle arch, and clinched are those nails that have bent over. Young and Carr discovered that the ratio of nails (unaltered:pulled:clinched) correlates with where carpenters erected buildings and where they deposited their refuse. Shown in Table 1 is Carr and Young's ratio for unaltered, pulled, and clinched nails for building areas and refuse disposal areas.

According to Young and Carr, a Building Construction area is the area where the erection of a structure occurred. Opposite this is the Building Refuse Area, the area that served as the receptacle for building refuse and structural rubble. The main difference between a Building

Table 1. Ideal Ratios for Nails From Building Construction or Refuse Areas.

	Unaltered	Pulled	Clinched
Building Construction Area	3	3	1
Building Refuse Area	1	3	1

Construction and a Building Refuse area, according to Young and Carr, is the frequency and proportion of unaltered nails from each area. Young and Carr hypothesized that more unaltered nails (straight) are to be found at a construction site than at a refuse area due to accidental loss. This is important because it allows for distinguishing potential areas of construction activity as opposed to areas of refuse disposal. Identification of construction areas then leads to the conclusion that a structure once stood within that area.

Another avenue of inquiry that may be useful for finding where extant structures once stood is to look for the remains of other architectural material. Two architectural artifact types associated with buildings are hand-made bricks and window glass. Dense occurrences of either hand-made bricks or flat window glass can be identifiers for construction areas. However, I must take exception to this assumption because these two artifact classes can also occur in refuse disposal areas. If either of these artifact groups spatially correlates with nails exhibiting a Building Construction Area pattern, then I can make a safe assumption that a structure once stood there. However, if hand made bricks and window glass correlate with nails exhibiting a Building Refuse Area pattern, then it is likely the area is a region of refuse disposal. Other possibilities include windowless buildings or disposal areas which did not include a standing chimney.

Obviously, the most definitive indicator of extant structures is the presence of structural related features. Such structural features may include chimney and structural foundations, post holes and post molds, cellars, entrances, drip-lines, and sill shadows. We can group these structural features into two categories, permanent and impermanent (Table 2). Permanent features are those features that are resistance to erosional and other destructive forces. Impermanent features are those features that are highly subjective to erosional processes. The best indicators for extant structures are those features less susceptible to erosional processes, usually built of brick or stone. However, not all buildings include these items, as often happened in the early Colonial

Table 2. Categorical Classification of Structural Related Features.

Permanent	Impermanent
Stone or brick structural foundations	Post hole and post molds
Stone or brick chimney bases	Drip-lines
Brick or stone lined subterranean entrances	Sill shadows
Cellars	

Chesapeake Bay region of Virginia and Maryland where structures were built of wood with post-the-ground foundations. This is in fact the case for most of the structures built at Camp Nelson. On these sites, the primary clues for extant structures are post holes and post molds, and sill shadows. Although not as easily associated with structures as are foundations or chimney remains, post hold and post molds can identify building location. Sill shadows, however are harder to identify and interpret resulting in a less tentative association with an actual structure.

The Search for Building Function and Activity Areas

Identification of areas containing past structures is only the beginning of my investigation. A more daunting task, however, is to assign a function to these structures. The existence of historical maps and structural descriptions that describe the various functions for several structures at Camp Nelson has simplified this task to an extent. Unfortunately, these historical documents do not identify all of Camp Nelson's mapped structures nor are all structures recorded on the maps, for example the unexpected discovery of a blacksmith shop uncovered north of the Post Headquarters to the north of the machine shop site.. The lack of specific historical documentation in the light of a bureaucratic military system can be a problem.

Another approach to identifying building function is also appropriate for identifying activity areas. This approach considers the spatial correlation of archaeological artifacts, features, and postulated building locations. The difference between identifying building location and activity areas is that activity areas will not always correlate with postulated building locations. In fact I assume some activity areas will occur away from clusters of architectural material. Similarly, I also expect that a single activity areas may be large enough to encompass one or more proposed building locations.

All Camp Nelson archaeological material was cataloged according to the system of artifact-function association modified from South (1977). Examination for building function and activity areas will focus on the spatial distribution and correlation of artifact-functional categories and some subgroups that are specific to Camp Nelson, the Civil War, and mid-nineteenth century United States. Artifact-function groups considered for this analysis include kitchen, furniture, arms, clothing, personnel, job/activity, transportation, architecture, and fuel. By breaking down these

artifact-functional groups into specific categories, I can obtain a better control over chronology and specific activities. A break down of the artifact-functional groups will also allow for the examination of research issues specific to Camp Nelson such as civilian vs. military use areas. Activity related features will also be considered.

The first artifact-function under consideration is the Kitchen Group. The Kitchen Group consists of artifacts used in the preparation, consumption, and/or storage of foods and beverages. Items examined from this group include ceramic, metal, and glass artifacts. Specific Kitchen Group objects considered are whiteware, ironstone, stoneware, metal kitchen objects, and non-machine made bottles, jars, and table glass.

Metal Kitchen Group artifacts include items associated with food preparation, serving, consumption, and storage. Such items may include kitchen utensils, cooking vessels and metal cans. Kitchen utensils are metal forks, spoons, and knives that are often found with decorative bone handles. Two tined forks are common to the eighteenth and nineteenth centuries. Spoons are common items used for a variety of functions including preserve spoons, ladles, skimmers, and dippers. Use of knives occurred in many situations such as food preparation (i.e. a butcher knife) and consumption (i.e. a steak knife). Common cooking vessels include iron and tin pots, pans, and skillets. Tinned metal containers saw frequent use during the nineteenth century. One of the more common tinned containers during this time was the hole-in-top tin can that contained either meat, fruit or vegetables. Square metal boxes were also common.

Items from the glass Kitchen Group consist of non-machine made bottles, jars and table wares. Kitchen bottles are glass containers designed to hold liquids such as beverages or

condiments. Jars are glass devices designed for storage of food stuffs such as preserved foods. Table wares refer to glass used in association with beverage and food consumption. Some forms of table wares are tumblers, goblets, and wine glasses.

The Furniture artifact-function group consists of non-modern artifacts associated with furnishings and household fixtures. Examples of these include lamp globe or chimney parts, mirror glass, faucet parts, fireplace equipment, clock parts, drawer pulls, flower pots and similar items.

Artifacts associated with the Arms functional group are Civil War era weapon parts and munitions. Civil War era weapons may include whole or fragmented parts of Colt Pistols, Enfield Rifles, or Parrott artillery pieces. Examples of Civil War munitions include, 3-ring Minie bullets, Burnside cartridges, .44 caliber Colt pistol rounds, musket balls, and Schenkl artillery shells.

The Clothing artifact/functional group consists of artifacts associated with clothing, such as buttons, collar studs, buckles, shoe leather, irons, eyelets, garter snaps, thimbles, straight and safety pins, and hoods and eyes. I can divide these items into two groups, Military and non-military clothing items. Military clothing items are buttons, accouterments and other devices used exclusively by the Confederate and Union militaries during the Civil War. Non-military items are those items not exclusively used by the militaries. The identification of strictly non-military items, however, may be problematic because civilians also used the same clothing objects used by soldiers.

The personal artifact/functional group includes objects typically reserved for one person's exclusive use, which they could often carry in a pocket or purse, such as smoking pipes, watches, clasp knives, gaming pieces, toys, jewelry, combs and brushes, and coins. The category of

Job/Activity artifacts consists of items related to manual labor. Such items may consist of hand tools or equipment. Artifacts assigned to the Transportation artifact/functional group include those associated with any form of wheeled transport, and those associated with horse, mule or ox harnessing and shoeing. Artifacts belonging to the Fuel artifact/functional group include items such as coal, coal cinders, ash, slag, and charcoal.

A reasonable hypothesis is that the function of a building correlates with specific artifact-functional groups. Table 3 describes what artifact-functional groups I expect that occurred in relation with known historic building function. A cluster of architectural artifacts with artifact-functional groups recovered from Camp Nelson will help to detect if a correlation exists between a structure and the structure's hypothesized function.

Hypotheses Statements

From the assertions made above I can construct hypotheses relating to finding structures through the examination of archaeological evidence. These hypotheses will attempt to identifying building function based on structural similarities and make use of artifact-function groups to identify possible building functions and activity areas. Each of these hypotheses is discussed in turn.

Building Location Hypotheses

Architectural artifacts are a good source for identifying possible building locations. These areas can be identified by correlating the spatial distribution of architectural artifacts with architectural features. This is a simple and straightforward way of identifying building locations.

Cut nails provides a good data set for examining this relationship. Following Young and Carr's work, areas of extinct buildings will reflect a ratio similar to that for a Building Construction

Table 3. Structures and Artifact-Functional Group.

Artifact- Function Groups	Structures																																						
	Baggage Room	Bakery	Barracks	Bath Room	Blacksmith Shop	Coal House	Commissary Room	Cook House	Corral	Crib	Dead House	Dining Room	Dispensary	Express Post Office	Guard House	Harness Shop	Hospital	Ice House	Laundry	Machine Shop	Mess House	Mule Chute	Nurses's Room	Office	Paint Shop	Pantry	Prison	Saw Mill	Sewing Room	Shed	Shoeing Shop	Soldiers Home	Stable	Wagon Shops	Wash Room	Warehouse			
Kitchen	X						X					X					X				X		X			X							X						
Furniture												X			X		X				X		X										X						
Arms			X												X																			X					
Clothing	X		X	X							X	X			X	X	X	X		X								X						X					
Personal	X		X								X	X			X	X	X	X	X		X		X					X						X					
Job/Activity		X			X			X					X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Transportation	X				X	X	X		X	X	X			X		X				X	X												X						
Fuel		X	X		X	X		X				X						X	X	X	X							X					X						

Area and that areas of building refuse disposal will reflect a nail ratio similar to the Building Refuse Area. My hypotheses for identifying Building Locations, then, reflect Young and Carr's findings. Clusters of nails will either reflect a Building Construction or Building Refuse area by having a ratio similar to those identified by Young and Carr for their two areas.

These hypotheses should assist me in conducting my analysis for identifying building areas.

Function Hypotheses

Once I have identified probable building locations, I can postulate several hypotheses about the building's function. In making these hypotheses, historical documents, maps, and the modified artifact-functional classification scheme developed by South (1977) are used. Together these varied sources can provide clues to the possible function of structures.

Once a probable building area has been identified, the next step is to find the building's function. This will be accomplished by examining the spatial distribution of functional group artifacts with the proposed building areas. My hypothesis is that the function of a proposed building area can be discerned from spatially correlating architectural group artifacts with specific functional group artifacts. The function of a proposed building area can be deciphered from the spatial distribution of correlating functional artifacts.

Activity Area Hypotheses

Additionally, I can also identify activity areas following a similar approach. The difference between these two approaches is in the expected correlation between proposed building location and building function. For activity areas I expect that there will not be a correlation between a proposed building location and functional artifacts. In this case, clusters of functional group artifacts

will occur away from proposed building areas. These areas will be treated as activity areas.

Identification of activities in or around the proposed building locations is important because it will help to identify the structure's possible function. Although a correlation may not be evident, I believe that the activities in around these areas will be visible. It is also possible that some of the activities associated with a building area are not directly related with one another. This may happen if the time of the activity and the occupation of the structure is different. It may be impossible to differentiate such occupations on a site that was only occupied for three years. Nevertheless, most clusters will be considered as being associated with any corresponding proposed building cluster.

Conclusion

In this chapter I have examined and outlined several hypotheses that will assist me in my spatial analysis of the machine shop area. These hypotheses were designed as a guide to facilitate identification of individual artifact clusters. I expect that clusters of architectural material will reflect areas of building activity. Likewise I also expect that identified building locations will have associated function/activity areas that will be identifiable thorough a spatial analysis of the archaeological record. By looking at these two components, I hope to gain a better understanding of the spatial relationships present at the machine shop.

CHAPTER 4 - BACKGROUND OF THE MACHINE SHOP COMPLEX

Introduction

In this section I will present the environmental and historical background of Camp Nelson, and in particular the Machine Shop complex. I will discuss first the site's environmental situation, then a general history of Camp Nelson, followed by a close historical examination of the Machine Shop complex. After the environmental and historical data has been presented, I will then describe the archaeological field and laboratory methodologies employed and the resulting data.

Overview of Environmental and Historical Factors

Instead to proceeding directly with a spatial analysis of the Machine Shop Complex archaeological data, I first need to discuss the environmental and historical background of the Machine Shop Complex. This information will help to understand some potential factors that may affect archaeological data patterning. To accomplish this, I will describe it's location, physiography, geology, drainage, and soils. The next topic that I will discuss will be the historical background of Camp followed by an in-depth historical look at the Machine Shop Complex.

The Machine Shop's Environmental Situation

Camp Nelson is located approximately seven miles south of Nicholasville, Kentucky in Jessamine County (Figure 1), in the state's Inner Bluegrass physiographic region (Figure 2). The Bluegrass region of Kentucky is located near the center of the state and is bordered by the Ohio River in the north and west and the Knobs hills to the west, south, and east. The region is a rolling plateau that becomes more rugged near the edges. The underlying limestone formations are often

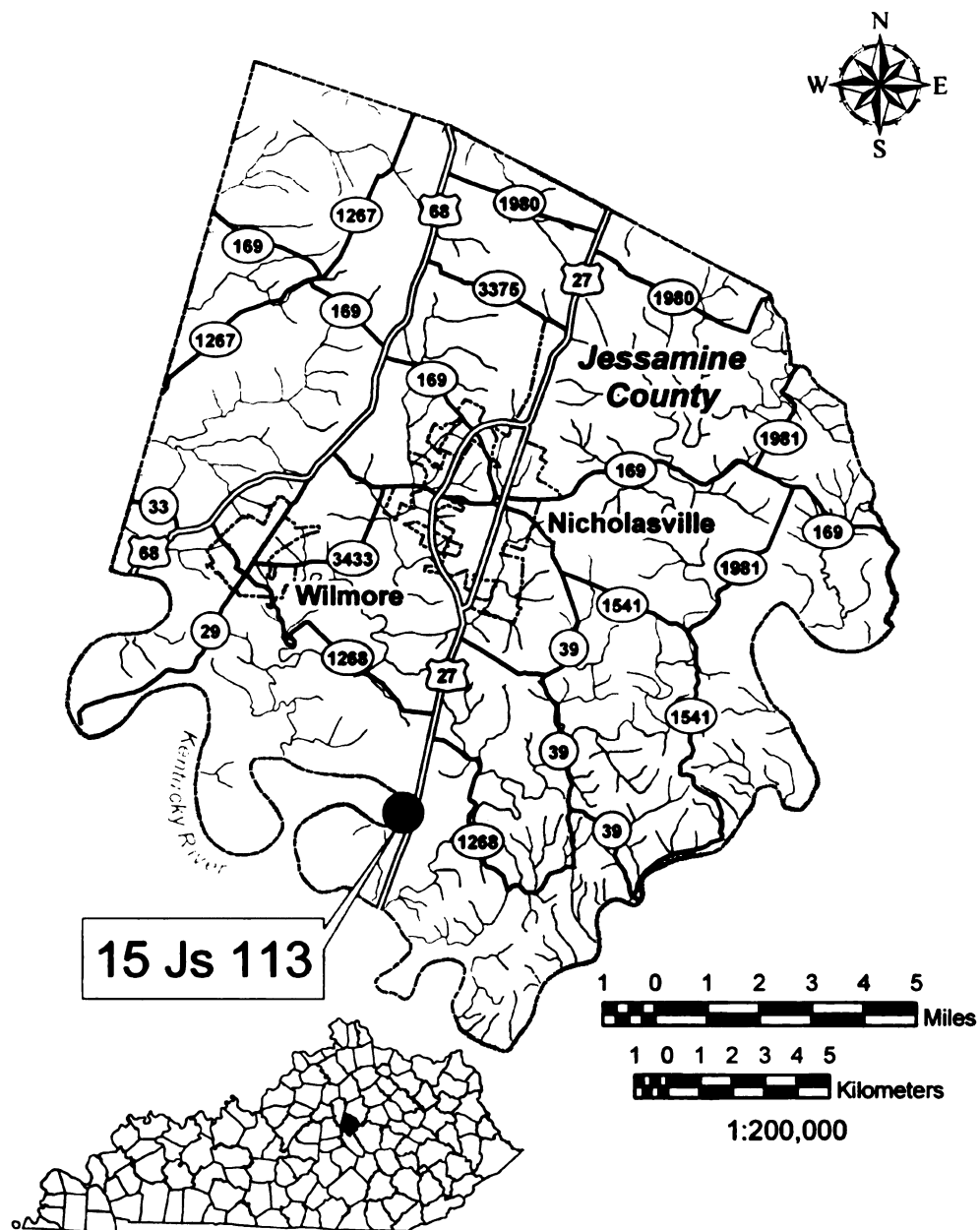


Figure 1. Location of 15 Js 113, the Machine Shop.

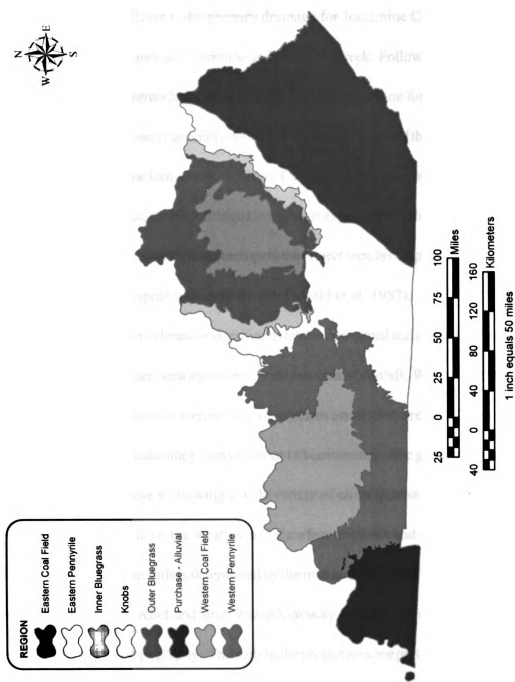


Figure 2. Physiographic Regions of Kentucky (Kentucky Geological Society).

visible at the surface in road cuts and where eroded by streams, most dramatically by the Kentucky River in an area known as the Palisades.

The Kentucky River is the primary drainage for Jessamine County. Its two largest tributaries within the county are Jessamine and Hickman Creek. Following old meander bends, the Kentucky River is entrenched 200 to 300 feet into the limestone formations of the plateau.

The Inner Bluegrass is generally defined by the surface extent of the Lexington, Cynthiana, and High Bridge limestone formations. While the Cynthiana Limestone formation does not outcrop near the Camp Nelson area, the High Bridge Limestone is exposed along the Kentucky River gorge. The Lexington Limestone, which also outcrops in the project area, is composed of thin interbedded and shaley, mostly phosphatic limestones (McDonald et al. 1983).

Kentucky's present climate is classified as humid continental and is characterized by a wide temperature range between seasons and moderate amounts of rainfall. Warm summers and cool winters are normal, and when extremes in temperatures occur, they are usually not prolonged. Annual precipitation in Jessamine County is about 113 centimeters. The growing season averages 181 days and is favorable to growing a wide variety of crops (Karan and Mather 1977:116).

Soils originate from the weathering of surface deposits and exposed bedrock. The magnitude in variation in soils is determined by the interaction of five factors: parent material, climate, living organism, relief, and time. Within Kentucky, soil differences are primarily the result of parent material and topography. The soils in the project area are part of the McAfee-Maury-Fairmount series (McDonald et al. 1983). Soils in this series are deep to shallow, well-drained and loamy to clayey soils on rolling to hilly uplands. McAfee soils occur on fairly narrow ridgetops and

sloping areas along drainages, Maury soils occupy broader ridge tops and gentler slopes, while Fairmount soils occur primarily on steeper slopes along drainage ways.

When Euro-American settlers entered this area, they encountered a wide variety of fauna. Historic records suggest the common occurrence of species such as bison, elk, panther, bear, and wolf, which largely disappeared by the nineteenth century. Opossums, raccoons, squirrels, striped skunks, muskrats, minks, red foxes, eastern chipmunks, woodchucks, white-tailed deer, cottontail rabbit, mice, and other species were also present and still exist today. In addition, the area is home to large number of birds, fish, molluscs, reptiles, and amphibians.

Prior to extensive clearing for agriculture, this area was part of the larger Western Mesophytic Forest, with walnut, oak-hickory, sugar maple, ash and beech being the dominant climax species, and elm, hackberry, Kentucky coffeetree, basswood, sycamore, willow, and cedar also present. Understory species include sumac, blackberry, poison ivy, red bud, wild grape, dogwood, and spicebush (Braun 1950). Although many of these species exist today, their distribution and relative importance are probably unlike that of the prehistoric period. Most of the area has been cleared of forests, and at present a large part of Jessamine County is pasture.

Historical Background

Camp Nelson, a Union supply depot, was established in 1863 as a center from which to send supplies received from Cincinnati, Ohio, overland to union soldiers in Kentucky, Tennessee, Alabama, and other locations in the south. It replaced an earlier depot, Camp Dick Robbins, that was discovered to be dangerously susceptible to enemy attacks. Camp Nelson was built next to the Kentucky River and along the Lexington-Danville Turnpike, about seven miles south of

Nicholasville, the county seat (Figure 3). It is protected on it's southern and western sides by the deeply entrenched Kentucky River and on the east by Hickman Creek. The only exposed area of the camp was its northern edge. Along this edge a series of eight forts, artillery batteries, rifle entrenchments, and abatis were constructed (Bartnik 1976:6) (Figure 4).

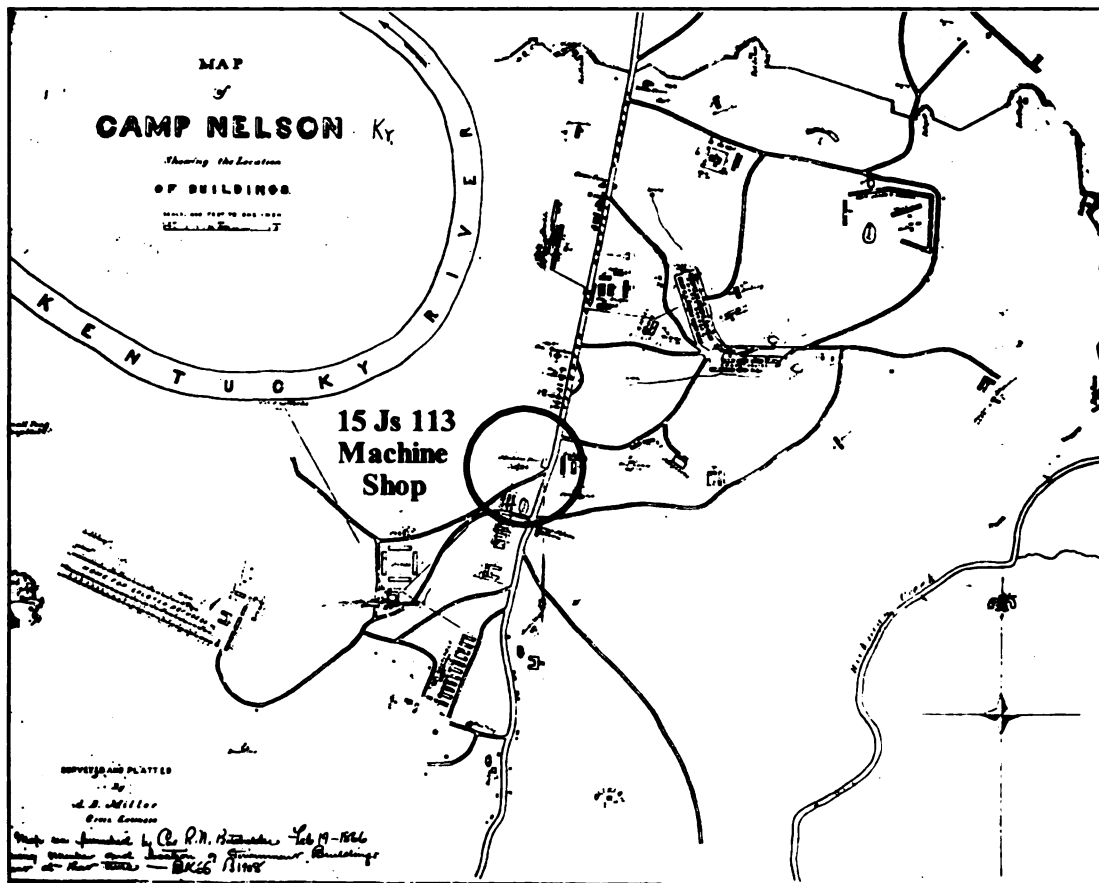


Figure 3. Miller 1866 Map of Camp Nelson.

At it's height, Camp Nelson encompassed approximately 4,000 acres and contained numerous structures including warehouses, workshops, corrals, and sheds, as well as support structures for soldiers and civilian employees. In the spring and summer of 1864, Camp Nelson also became Kentucky's largest recruitment center and refugee camp for African-American

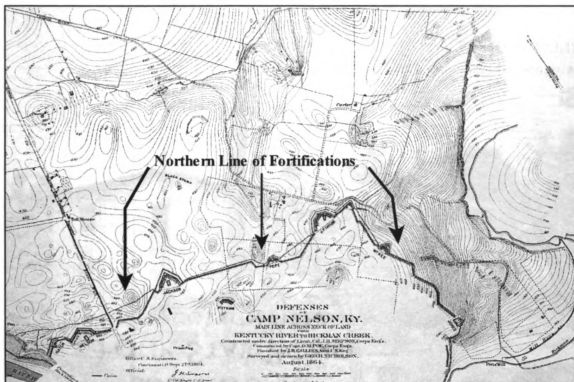


Figure 4. Northern Line of Fortifications at Camp Nelson (Simpson 1864).

soldiers and their families.

When the Union Army began to construct the depot in 1863, it needed a facility that could supply needed finished metal and wooden goods. To satisfy this need, the Army built the Machine Shop (Figure 5 and Figure 6). It was located along the western side of Lexington-Danville Turnpike about 0.5 miles south of the camp's Northern entrance (Figure 7).

When the machine shop was constructed in the summer of 1863, the site was likely a pasture or lightly wooded area. US Army quartermaster department records indicate that the machine shop was 100 foot long by 40 foot wide, two stories high on its east side (front) and three stories high on its west (rear). Historic documents, including a photograph, indicate that the structure had a solid limestone foundation, was of board-and-batten construction and had

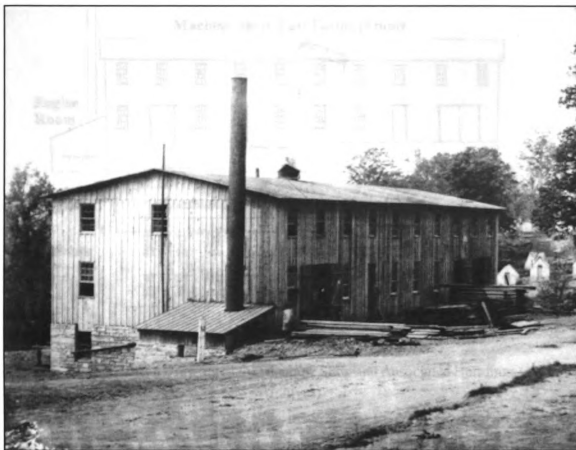


Figure 5. 1866 Photo of the Machine Shop (National Archives).

numerous windows. Interestingly, three lists of machinery from this building dating from March and May 1865 and January 1866 are extant. These lists indicate that the shop contained one 50-hp steam engine with a six-flue boiler, one planing machine, one tenon machine, one shingle machine, one morticing machine, one jockey stick machine, one saw table, one cut-off saw, one rip saw, one iron turning lathe, one machinist turning lathe, one large grind stone with side rest, one machinist vise, 225 feet of leather belting, two grist mills, one shelling machine, and two hay cutters. These machines support Capt. Theron Hall's statement that the "machine shop is a building in which all the carpenter work of the camp is done including the making of doors, windows sashes, desks, and

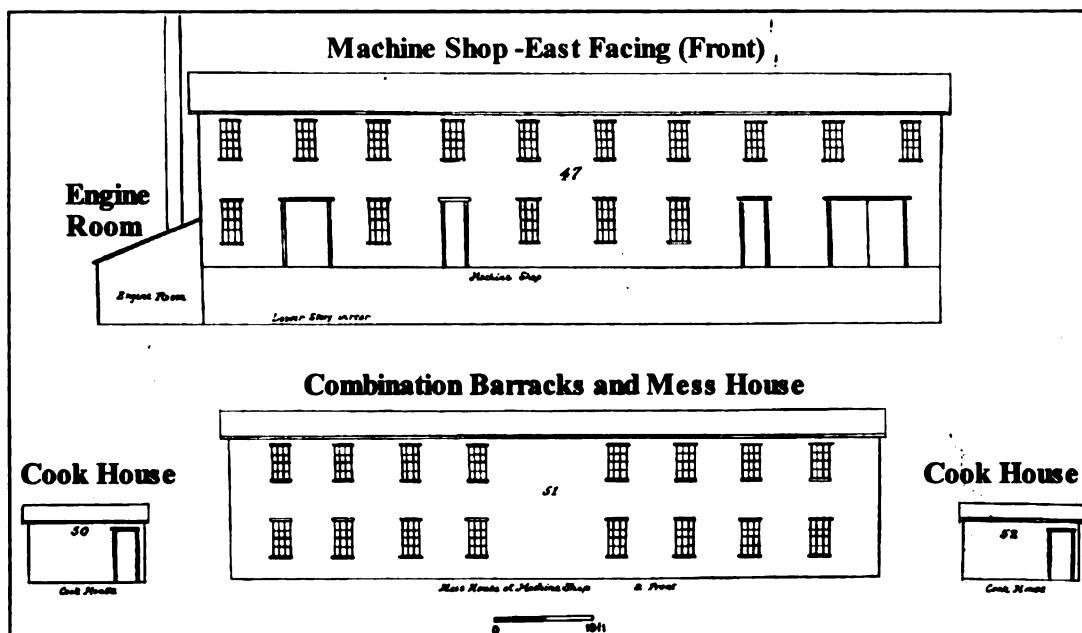


Figure 6. Line Elevation Drawing of the Machine Shop and Associated Buildings (National Archives).

all similar work required at this depot” (Hall 1865). The machinist lathe, however, suggests that some metal working, particularly turning, also took place at the shop. The grist mills, shelling machine, and hay cutters reflect the preparation of animal feed as this shop as was noted by Capt. Theron Hall. The need for a substantial weight bearing foundation is shown in these three documents that lists the shop’s contents.

Three structures were built near the Machine Shop as support structures (Figure 8). These include a two-story combination barracks and mess house, and two cook houses. Also a 1864–66 photograph shows a group of four tents located to the north of the shop which seems to be located near a gully (Figure 5).

After the cessation of hostilities in 1865, Camp Nelson began to slowly be

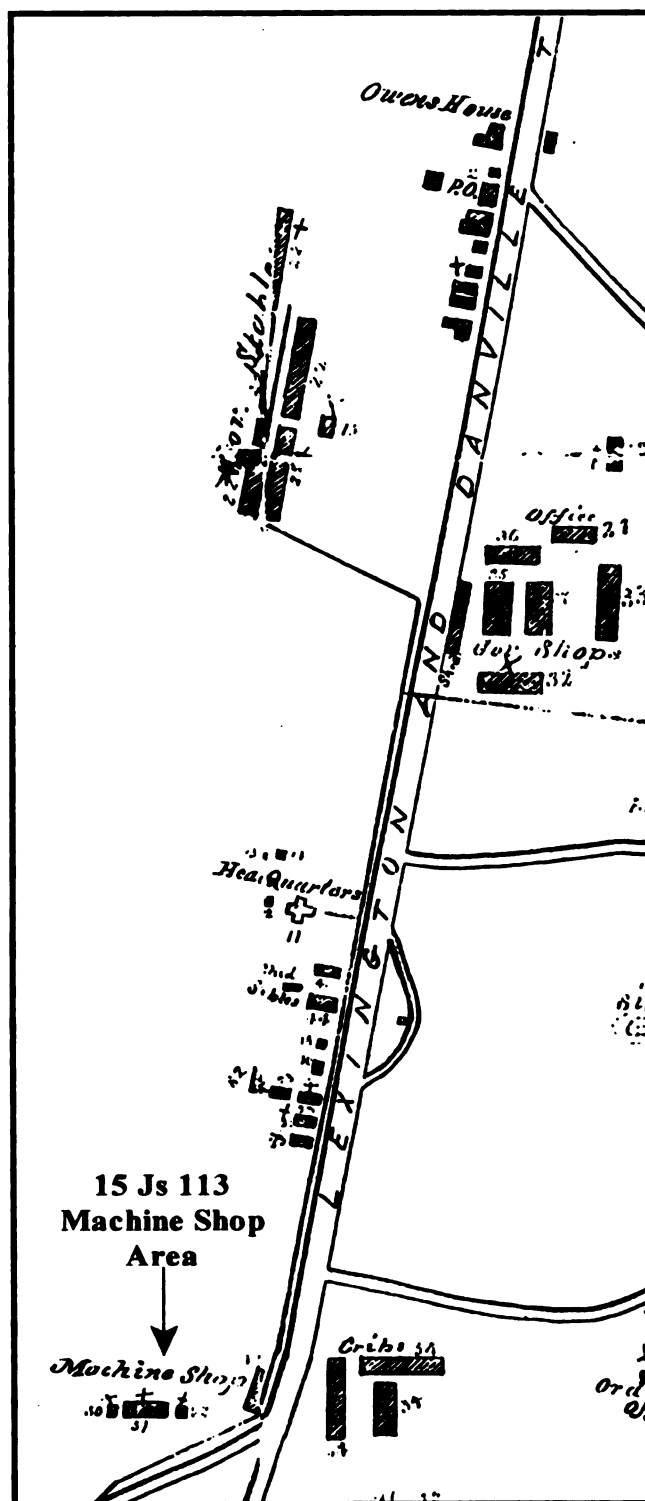


Figure 7. Machine Shop Area (Miller 1866).

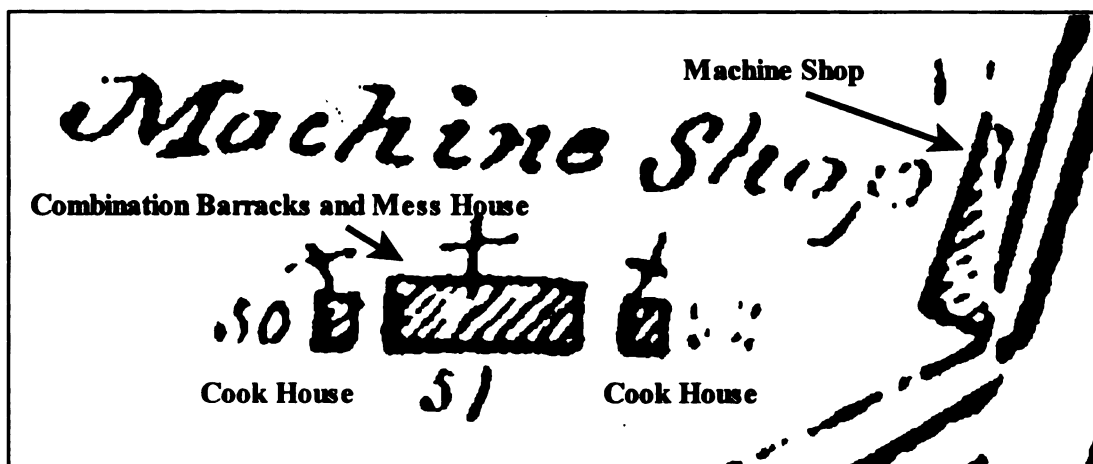


Figure 8. Close up of the Machine Shop Area (Miller 1866).

decommissioned. Many of its structures were closed or used for other purposes. Buildings were often torn down or sold at auction. Soon the former military camp would revert back to civilian ownership. By January 1866, or soon after, the Machine Shop was torn down.

Archaeological Methodologies

The following sections outline the field and laboratory methodologies employed at the Machine Shop Complex. This site was assigned site number 15 Js 113, an area 221 meters long and 183 meters wide (McBride and Sharpe 1991). The field methods employed at the Machine Shop Complex were designed to identify and locate areas of Civil War occupation and structures identified in historical documents. The laboratory methods allowed for cataloging the artifacts by provenience and functional group for detailed analysis.

Field Methodology

The fieldwork was designed to recover evidence of the structures described in the historical documents, identify other activity areas, and recover Civil War era artifacts so that we could learn

more about this site and the activities which took place here. To accomplish this, the field work was divided into three phases - shovel probes, grid excavation, and plowzone removal from the entire site. Shovel probes were used to assess artifact distribution and density. Based on the results of the shovel probes, excavation units were placed in areas showing high frequencies of Civil War related material. Excavation units presented the chance to systematically explore locations identified through the shovel probes as containing high concentrations of Civil War era archaeological material. Following the completion of all formal excavation units, a mechanical backhoe was employed to remove, or strip, the remaining overburden to expose subsoil. Though artifacts were not systematically collected from the overburden removal, all features exposed were thoroughly examined.

Systematic shovel probing was conducted over the entire site every 7 to 15 meters to (Figure 9). All 98 probes measured 50 x 50 cm² and were screened through ¼ inch mesh hardware cloth. All artifacts were collected and bagged by provenance. Planviews and profiles were drawn for each probe.

The same procedures were utilized in the larger 41 excavation units (Figure 10). These units were mostly 2 x 2 meters in size, but a few 1 x 2 meter and 1 x 1 meter units were also excavated. These units were placed in areas that were determined by examining the shovel probe data to contain a high concentration of Civil War era archaeological material.

All exposed features were cleaned, photographed and drawn. Refuse features and builders' trenches were bisected so that a profile could be drawn. The remaining half of the feature was then excavated and flotation samples were taken from all refuse features. Stone and brick

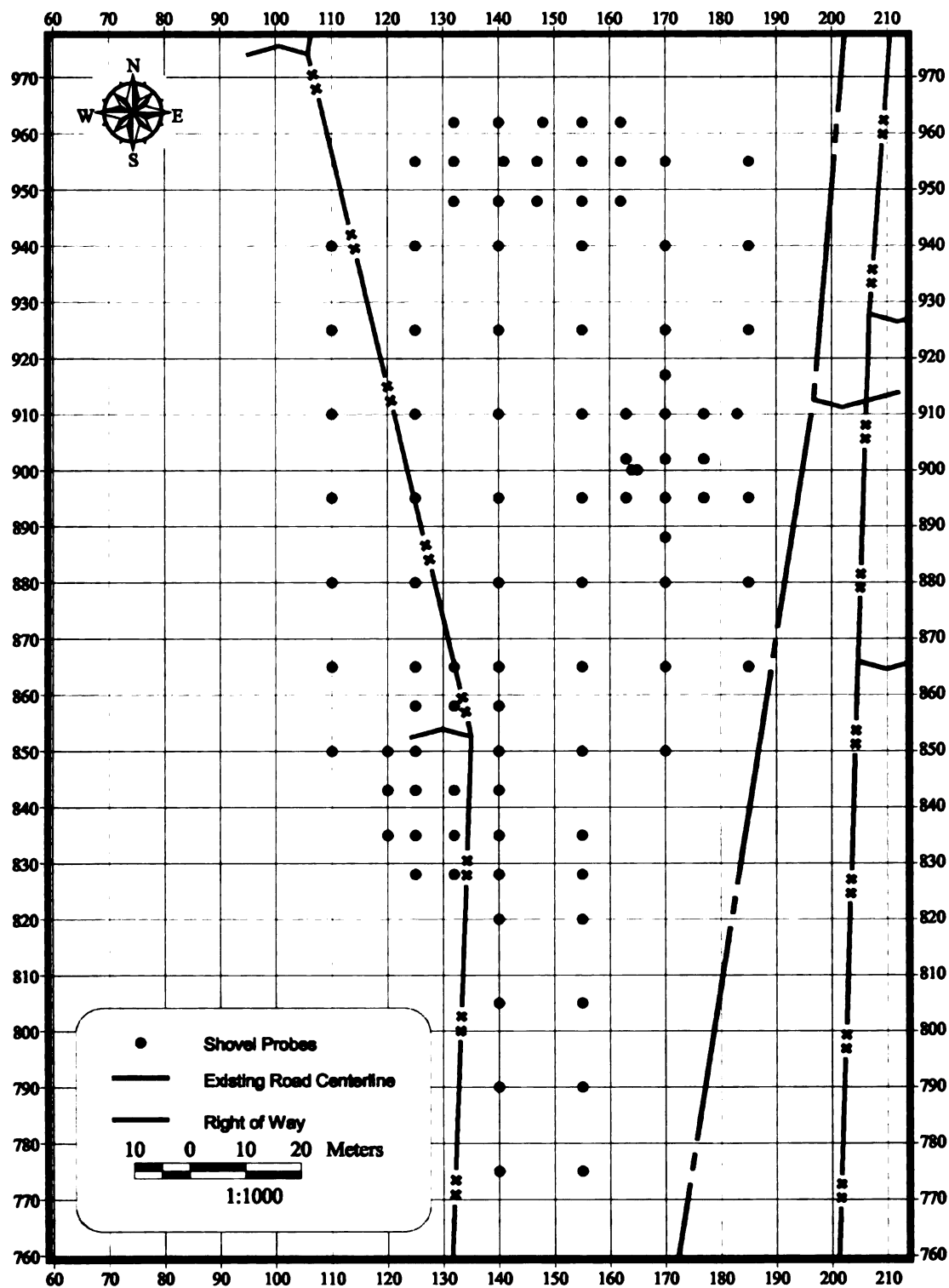


Figure 9. Location of Shovel Probes.

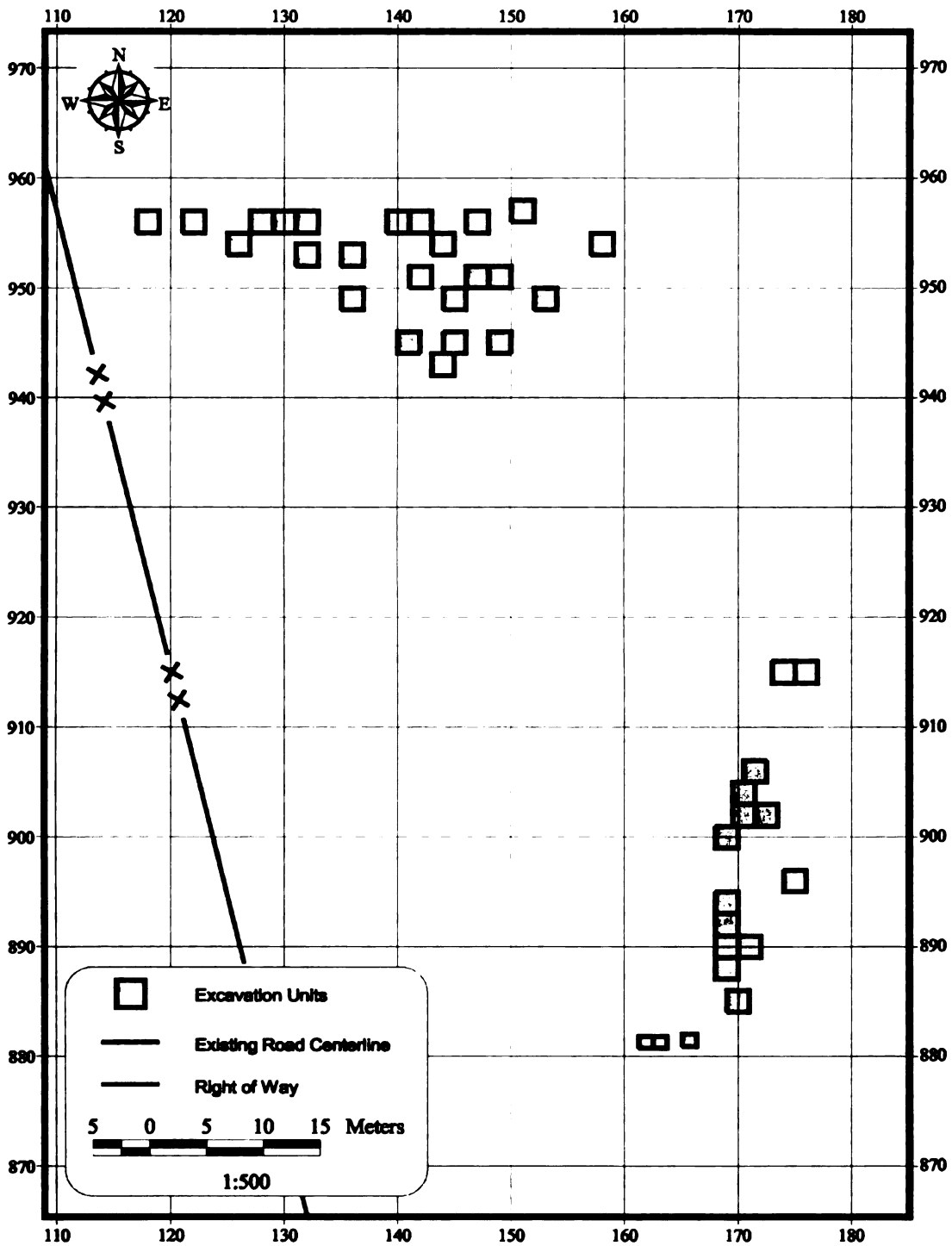


Figure 10. Location of Excavation Units.

architectural features were usually left in place following exposure, photography, and mapping.

Results of Shovel Probing

A total of 96 shovel probes was excavated at the Machine Shop (Figure 8). These extended from N770 to N962 and from E110 to E185. These were initially excavated at a 15-meter interval and then shortened to seven or eight meters in higher artifact density areas. As will be discussed below, three areas of higher artifact density were located one each in the southwestern, east-central, and northern sections of the site.

Two main stratigraphic profiles were encountered on the site. The most common profile consisted of a 9 to 20 centimeter brown to dark brown (10yr4/3 to 3/3) silty loam topsoil (Zone I), a dark yellowish brown (10yr4/4) silty loam plowzone (Zone II), and a yellowish brown (10yr5/6) silty clay subsoil (Zone III). This soil profile was present in all areas of the site except for some of the east-central knoll. Generally Zones I and II were thinnest along the western edge (E120 - E140) and is probably due to erosion.

The second most common profile type was found only on the east-central knoll (N880 to N920 and E140 to E170), or tent area which was determined to be the location of the machine shop buildings. This profile consisted of a 10 to 15 centimeter dark brown (10yr3/3) to 3/2) silty loam topsoil (Zone I), a 10 to 20 centimeter yellowish brown (10yr4/6 to 5/6) silty clay fill zone (Zone II), a 10 to 15 centimeter dark brown (10yr3/3) silty buried horizon (Zone III), and finally a yellowish brown (10yr5/6) silty clay subsoil. Zone II indicates that considerable landscaping occurred in this area and in fact much of the western half of the central knob was artificially built up. This landscaping created a flat surface to the rear (west) of the machine shop. The absence

of the transitional dark yellowish brown Zone (Zone II) in some probes (N895 - N910, E 177 and N910 E183) on the eastern edge of the central knoll suggests that this area has been cut and lowered.

Important variations from the above two typical profiles include a gravel zone at 9 centimeters below the surface in N880 E185, large limestone rocks at 12 centimeters below surface at N888 E170, a brick rubble concentration at 10 centimeters below surface at N900 E164.5, and a depth (34-41 centimeters below surface) dark stained (10yr4/4) soil at N843 E125. All of the above anomalies were designated features. The gravel concentration at N880 E185 was located east of the shop and was likely a road bed. This was designated feature 17. The limestone concentration in N880 E170 was designated Feature 1 and was the robbed builder's trench for the shop foundation. More discussion of this feature is given below. The brick rubble concentration in N900 E164.5 was 40cm thick and was designated Feature 5. Feature 8, the staining at N843 E125 turned out to be a tree root.

Artifacts from the Shovel Probes

A large quantity (1,431) of nineteenth century artifacts were recovered from the shovel probes (Appendix A). Most of these include architectural artifacts - window glass and cut nails (Table 4). To a lesser extent some ceramics, container glass, and clothing items were also recovered. These artifacts clearly concentrate in three areas, the southwestern corner, the east-central area, and the northern gully. Of these three areas showing high artifact concentrations, the east-central area and the northern gully were subjected to further investigations utilizing excavation units. The southwestern corner artifact cluster was not examined for it was later determined to lie

outside the project area.

Table 4. Artifacts from Shovel Probes by Function Group.

Artifact Group	Count	Percentage
Architecture	1,315	91.89
Clothing	4	0.28
Furniture	1	0.07
Job/Activity	5	0.35
Kitchen	66	4.61
Other	24	1.68
Personnel	1	0.07
Arms	0	0.00
Transportation	7	0.49
Fuel	8	0.56
Total	1,431	100

Results from Excavation Units

Larger test units were placed in two of the three identified artifact concentrations - the east-central area and the northern gully (Figure 9). No test units were placed in the southwest area because it lies outside of the project's boundaries. The units and features excavated in the east-central (Machine Shop) and northern gully areas are discussed next.

Machine Shop Area

The 1866 Miller Map and the concentration of artifacts and architectural features in this area suggest that this area is the location of the Machine Shop. Units were placed here to verify this through the location of architectural features and the recovery of additional artifacts. In total,

eighteen units (4, 6-19, 40-42) were excavated here and structural remains of the shop, in the form of a limestone foundation and stone piers, were found.

Three distinct stratigraphic profiles were encountered in this area, one near the west end of the shop foundation, one within the foundation, and one to its west. The first profile appears to be a rather normal profile. It consisted of a 10 to 12 cm dark brown (10yr3/2 to 4/2) silty loam topsoil (Zone I), an 8 to 12 cm brown to dark yellowish brown (10yr4/2 to 4/4) silty loam transitional zone (Zone II), and a yellowish brown (10yr5/6 to 5/8) silty clay subsoil (Zone III). The second profile, which was found in Units 7, 15 and 19 is missing the second zone. This zone was likely removed during the construction of the machine shop.

The third profile, which was found in most units to the west of the shop, consisted of a 10 to 12 cm dark brown (10yr3/2) silty loam topsoil (Zone I), a 10 to 20 cm yellowish brown (10yr4/6 to 5/6) silty clay fill zone (Zone II), a 15 cm dark brown to dark yellowish brown (10yr3/3 to 3/4) silt buried A Horizon (Zone III), and a yellowish brown (10yr5/6 to 5/8) silty clay subsoil (Zone IV). This profile is very interesting and suggests considerable landscaping during the Civil War. Zone II represents soil spread behind or to the west of the shop, to build up a flat surface. This soil zone becomes thicker as it moves to the west. The origin of this soil is unclear, but some of it likely came from the eastern half of the slope, where some soil removal had to occur to make a base for the shop. Since the artifacts from Zone I and Zone II date from the Civil War, I can infer that these were the Civil War era living surfaces. Zone III, the buried A Horizon was nearly sterile. It contained only a few prehistoric flakes, the result of prehistoric stone tool manufacturing.

Features

Six features were observed in the excavation units, Features 1-4, 9 and 16. Following the completion of the excavation units the entire area was striped with a backhoe. This resulted in the exposure of the entire shop foundation (Feature 1), a stone machine pad (Feature 10), nine stone piers (Piers 1-9), and five other refuse or architectural features (Features 11 - 16).

Feature 1 was first encountered in Unit 4 as a 70 to 90 cm wide and 40 cm deep builder's trench filled with dark brown to brown silty loam and limestone rubble (Figure 11). It also had no



Figure 11. The Southwest Corner of the Machine Shop Foundation.

remaining intact foundation stones. The foundation at this point had been robbed. Further excavation in Units 8 and 18 indicated that much of the shop's western wall foundation had been robbed. The bottom coarse of stones in the northwest and southwest corners were extant, however, as was demonstrated in the excavation of Units 9, 13, and 15. Here large horizontal limestone slabs were extant within the builder's trench. The distance from Units 15 to Unit 13

confirmed that this building was 100 foot long as stated in the historical documents.

The remainder of the builder's trench was uncovered after the area was mechanically striped. It was observed on the western, northern, and southern walls of the shop and in the partially intact eastern wall. Because of the deep upward-sloping ground surface above the eastern wall, this wall was less disturbed than the rest. Here the wall was two large stones, or 90 to 100 cm wide. The uncovered builder's trench confirmed that the shop was 40ft wide as indicated in historical documents.

At the southeastern corner of the foundation, feature 1 A, a three chambered extension store pad was uncovered (Figure 12). This pad extended out 2.2 meters from the main foundation and consisted of three east-west limestone walls, one connecting north-south limestone wall, and an east-west brick wall. It was 4.3 meters long.

The limestone and brick of this pad and the surrounding soil showed evidence of extreme heat in the form of reddening of the stone and spalling of the brick. Given the location of the steam engine off the southeast corner of this building in the 1860s photograph (Figure 5) and elevation drawing, it is possible that this pad held machinery related to the steam engine. No architectural evidence of the small steam room was discovered during excavation. It is also possible that this pad served another function. The large quantity of iron slag and bar stock recovered from this area indicates extensive iron forging activities occurred in or near this site.

Other architectural evidence of the shop included nine limestone piers found extending down the middle of the shop (Figure 13). These were typically 70 x 80 cm in size and placed 2.8 meters (9 ft) apart. The piers were the bases of large pillars (probably wooden) which helped hold

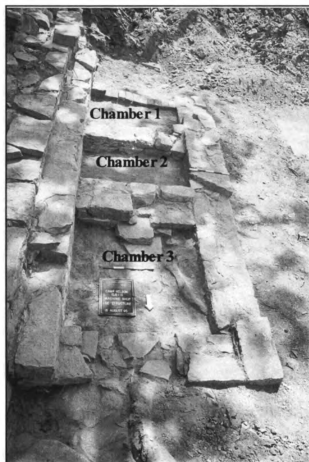


Figure 12. The Three Chambered Limestone Extension.

up the roof and load-bearing beams of the second and third floors. They give evidence of the size of this building and the weight that the second and third floors had to support.

Two other features, 10 and 14 were also associated with the machine shop. Feature 10 was a long 4 meter by 1 meter limestone pad located near the southern wall of the shop. This pad probably supported some type of heavy machinery. Since the pad did not extend to the southern wall, it is probably not a purely architectural support component.

Feature 14 was a one meter square pit located just east of the southern pier (Pier 1), and

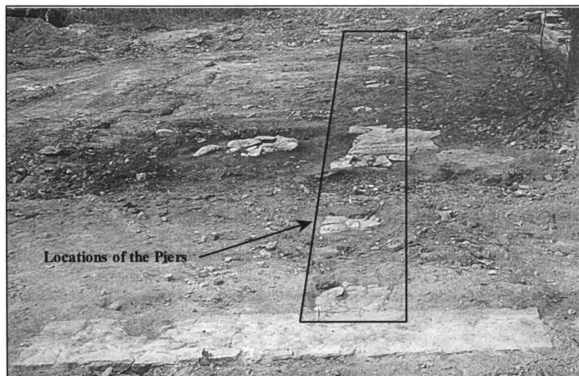


Figure 13. The Piers at the Machine Shop.

filled with horizontally laid limestone slabs and some bricks. The pit was only 10 cm deep. The function of this feature is unclear, but it was most likely a pier to support something heavy. Whether it supported machinery or a specific architectural element is unclear, but the former is likely given its location off the center-line of the building.

Three shallow midden features paralleled the foundation at about one meter to its west. In fact, these features, designated features 2, 3, and 12, may be all parts of the same feature. This feature is an erosional area, one to two meters wide, 7 to 20 cm deep and filled with very dark brown to very dark gray silty loam and large limestone rocks. It originated at the base of the topsoil (Zone I) and overlay the clay fill (Zone II). In Units 11, 14, and 16, it was designated Feature 3, and finally to the north of Unit 16 a similar stain was designated feature 12. The position

of this feature west and roughly parallel to the shop suggests that it may be the remains of a drip-line. A drip-line is formed when the runoff from a roof strikes the ground, creating a unique erosional feature parallel to the edge of the roof.

Feature 4, located in Unit 13 at the northwest corner of the shop is a narrow (30 cm) drainage ditch. It was filled with very dark brown soil to a depth of 7 cm and extended the entire length of the unit. No more of this odd feature was found during the mechanical stripping. Three additional features were also recovered. These include a refuse pit (Feature 9), a burned area (Feature 11), and a possible stone pier (Feature 16). These features were all located to the west of the shop.

Feature 9 was the only refuse pit located in the Machine Shop project area. The feature was identified at the base of Zone II (transitional zone) in Units 41 and 42. It was rectangular, 60 x 65 cm and 50 cm deep. The regular shape and straight walls of this feature indicate it was purposefully dug. The feature fill consisted of dark yellowish brown to yellowish brown silty clay mixed with mortar, limestone chunks, and nineteenth century artifacts.

Feature 11 was an irregularly shaped burned area. It had two parts, a central very dark grey (10yr3/1) silt and ash core and a surrounding burned red (2.5yr4/6) silty clay. The entire feature was 2.7 meters long north to south, one meter wide east to west, and only 10 cm deep. It was located just northwest of Feature 12. The characteristics of this feature suggest that was an area of intense burning, possibly a campfire.

Just west of the Feature 3 midden in Unit 14 was a concentration of four large flat limestone rocks. These rocks were designated Feature 16 and may have been part of a pier or

support for a porch or rear extension of the shop.

Artifacts

The artifacts recovered from the machine shop area units are listed in Appendix B. Architectural artifacts, especially cut nails and window glass, are by far the most common artifacts recovered (Table 5). These were followed by container glass, tin cans, metal artifacts, and fuel. The overall low number of kitchen related artifacts are indicative of the non-domestic function of this site. While few artifacts reflect the site's industrial function, the great frequency of window glass and nails does suggest the presence of a large building with numerous windows.

Table 5. Artifacts from the Machine Shop Excavation Units by Functional Group.

Artifact Group	Count	Percentage
Arms	2	0.02
Architecture	10,462	90.89
Job/Activity	35	0.30
Kitchen	470	4.08
Clothing	28	0.24
Other	439	3.81
Personal	7	0.06
Transportation	4	0.03
Fuel	61	0.53
Furniture	2	0.02
Total	11,510	100

Chronology diagnostic artifacts from the shop area units and features include late machine cut nails, early applied bottle lips, empointilled bottle bases, two 1863 penny, and ten Civil War era

military buttons and hardware, otherwise known as accouterments. The diagnostic artifacts described above clearly indicate a middle to late nineteenth century occupation.

The primary group of artifacts that reflect the machine shop's function are the metal craft/activity items and a few tools. The former artifacts included twisted lead and iron shavings which resulted from the turning, on a machine lathe, of lead and iron pipes; iron chunks and bar stock. The iron slags at the machine shop are most likely residues from forging. Although we are not sure where this blacksmithing occurred, the recovery of bar stock confirms that blacksmithing did occur nearby. The blacksmith's bar stock and the few tools recovered - files, chain, and unidentified handles, most likely relate to the machine shop's repair and maintenance, although the former could also relate to the production of iron pipes.

Interestingly seven U.S. Army Eagle Buttons, two New York state buttons, one Michigan State Button, and one military accouterment was found in these units. Four additional Eagle buttons, two more New York State buttons, and two military accouterments were recovered from the Feature 2 midden west of the machine shop. The presence of these military related artifacts indicate the presence of soldiers in this area. They may have been involved with the construction, function or demolition of the machine shop.

The most common artifacts in the features, like the units, were window glass and cut nails (Table 6). Bricks and mortar were also common in some features, especially features 1 and 2, as were craft/activity items. These later items again include iron chunks and lead shavings.

Northern Gully Area

The second major concentration of Civil War era artifacts at the Machine Shop area

Table 6. Artifacts from the Machine Shop Area Features.

Artifact	Count
Bone Button	3
Bottle/Jar Base	10
Bottle/Jar Body	101
Bottle/Jar Lip	6
Brick	518
Building Stone	6
Burned/Melted Unidentified Glass	47
Button, Copper/Brass	2
Button, Eagle Small	2
Button, Iron/Steel	14
Button, Military Other	2
Charcoal	27
Coal	20
Coal Cinder/Slag	12
Cut nail unspecified	785
Domestic Stoneware	1
Clothing Glass	4
Drawer/Door Pulls	1
Early cut nail	10
Eyelet/Grommet	1
Fabric, Natural Material	2
Flat Glass	3857
Job/Activity	368
Hard Paste Porcelain	1
Lamp Chimney	2
Late cut nail	1794
Machinery	1

Table 6 (cont'd).

Button, Eagle Large	2
Metal Furniture	2
Military Accouterments	2
Mortar	169
Other	759
Other Activity Biological	1
Other Activity Stone	1
Other Kitchen Metal	1
Other metal fastener	27
Redware	1
Roofing Slate	1
Rubber Button	1
Smoking Pipe Stem/White Clay	2
Tin Can Hole-in-Top	1
Transportation Metal	11
Undetermined Ceramic Base	1
Undetermined Ceramic Body	65
Suspender Buckle	1
Unidentified Activity Stone	1
Unidentified Key or Pin	1
Unidentified Nail	21
Unidentified Wood	1
Other metal hardware	32
Whiteware	3
Wire nail	1
Wrought nail	4
Yellow ware	1
Total	8,710

was located in the northern gully area, which was located 25 to 40 m north of the machine shop and included both level ground above the gully and the slopes within the gully. Twenty-four 2 x 2 m squares (Units 1-3, 5, 20-39) were excavated to better understand the historic use of this area. Placement of these units were based on the density of 19th century artifacts recovered from shovel probes, and to get a good coverage of the area. There was little or no stratigraphic variation in this area. The typical profile consisted of a 8 to 15 cm dark brown (10yr 3/3 to 4/3) silty loam topsoil (Zone I), a 10 to 17 cm brown (10yr4/3) to dark yellowish brown (10yr4/4) silty loam transitional zone or plowzone (Zone II), and finally a yellowish brown (10yr5/6) silty clay subsoil. Nineteenth century artifacts were recovered in high to moderate densities in both Zones I and II.

Features

Only two features were discovered in the northern gully area, Features 6 and 7. Feature 6 was a 40 cm to 1 m wide drainage ditch which extended through Units 31 and 36. This feature was observed at the base of Zone II and extended 16 to 20 cm in depths, it was filled with dark brown to brown silty loam and unfortunately, very few artifacts. Feature 7 was a rectangular (3 x 1 m) rock and dark brown silt filled pit. This feature was 10 cm deep and also contained only a small number of artifacts.

Artifacts

A listing of artifacts recovered from the Northern Gully area is shown in Appendix C. Like the machine shop area, the most numerous artifacts from the northern gully area were architectural items, especially window glass (Table 7). In fact, the quantity of window glass from some of these units, particularly Units 21 and 24, is quite fantastic and suggests some unique behavior occurred

in this area. This will be investigated further in the chapters to follow.

Table 7. Artifacts from the Northern Gully Excavation Units by Functional Group.

Artifact Group	Count	Percent
Arms	8	0.02
Architecture	31,985	93.03
Clothing	31	0.09
Fuel	414	1.2
Furniture	1	0.00
Job/Activity	357	1.04
Kitchen	298	0.87
Other	1,112	3.23
Personal	7	0.02
Transportation	167	0.49
Total	34,380	100

A large number of cut nails were also found in the northern gully area, although not abnormally large. Other common items include metal hardware, craft/activity items (iron slag and bar stock), bottle glass, tin and fragments, and coal.

Chronologically diagnostic artifacts from this area include late cut nails, four U.S. Army Eagle buttons, one military accouterment, one Minie bullet, two percussion caps, five early applied bottle lips, and a 1862 penny. These diagnostics artifacts suggests a middle to late nineteenth century occupation in this area.

Neither feature produced many artifacts (Table 8). Feature 7 produced more architectural refuse. The most interesting artifacts from Feature 6 were nine cast iron fragments from a pot and

its lid.

Table 8. Artifacts from the Northern Gully area Features.

Artifact	Count
Bottle/Jar Body	4
Brick	2
Charcoal	10
Coal	2
Coal Cinder/Slag	1
Coin	1
Cut nail unspecified	9
Flat Glass	134
Button, Eagle Large	1
Job/Activity	1
Hollow ware (cast or wrought)	9
Ironstone	1
Late cut nail	26
Other	3
Other metal fastener	1
Other metal hardware	14
Transportation Metal	2
Undetermined body	1
Whiteware	6
Total	228

Conclusion

Archaeological investigations at the Machine Shop Complex determined that this site had Civil War deposits with good integrity in three clusters. Extensive hand excavation was conducted

at the shop building area and the northern gully concentration. These resulted in the recovery of many artifacts and the discovery of substantial architectural remains of the shop and refuse features at both the shop and the northern concentration. No units were excavated at the mess house/cook house area because this was found to be out of the project area.

Architectural features observed include the Machine Shop's 100 x 40 foot foundation, two limestone pads, and nine limestone pier supports. These features give a clear idea of the Machine Shop's location and dimension. Unfortunately, no evidence of the Shop's 18 x 18 foot steam engine room was found. Where the steam engine room may have been was disturbed during the demolition of the building and through later erosion.

The artifacts recovered and their distribution indicates that some evidence exists for the activities that occurred here. Some of these activities, such as blacksmithing near the shop and various activities in the northern gullies, are not well documented. A more detailed examination of the Machine Shop Complex will be the focus of the next chapter.

CHAPTER 5 - GEOGRAPHIC INFORMATION SYSTEMS, EXPLORATORY DATA ANALYSIS, AND ARCHAEOLOGY

Introduction

The purpose of this chapter is to review the use of Geographic Information Systems (GIS) as a utility for conducting exploratory data analysis (EDA) on geo-referenced data. Emphasis is placed in this chapter on reviewing the GIS applications used to conduct the spatial analyses.

Use of Exploratory Data Analysis (EDA) in Archaeology

Archaeologists use a variety of tools for examining spatial data. One of the more common tools employed is exploratory data analysis or EDA. EDA is a problem-driven exploration application for visually evaluating the validity and underlying trends inherent within a data set (Tukey 1977; Wilkinsin 1993). The main goal of an EDA approach is to find unexpected relationships rather than using models of expected relationships (Tukey and Wilk 1970; Hartwig and Dearing 1979). While based on statistical theories and methodologies, EDA is unlike traditional statistical approaches because it allows for creating statistically testable hypotheses that are based on observed patterns (Savage 1990; Maschner 1996a).

EDA is a flexible approach to archaeological data allowing for both inductive and deductive reasoning (Ebert 1992; Kvamme 1996; Maschner 1996b). An inductive approach involves generating general statements from the study of detailed data. Settlement pattern and predictive model statements are good examples of an inductive approach. They each involve the detailed study of a specific body of data from which general statements about observed patterns

are made. In a deductive approach, a stated theory or a hypothesis is tested against a given data set.

The use of GIS systems in archaeological analysis can help conduct both inductive and deductive research. It is especially well suited for inductive analysis. GIS's ability to graphically display spatial data correlated with other archaeological features and other spatially geographically-referenced data can quickly give an indication of tentative relationships.

Use of Surfer

Various methods and instruments exist for conducting EDA analysis with equally varying results. Lately archaeologists have been employing a plethora of computer-based programs for EDA analysis (e.g. Carr 1991; Farley, Limp, and Lockhart 1990; Kvamme 1990, 1996; Williams, Limp, and Briuer 1990). The resulting EDA displays and conclusions vary widely. This is partly due to the many different computer programs available and the equally varying procedures they incorporate. Some of these computer-based applications include statistical packages such as SAS, SPSS, and SYSTAT or Geographical Information Systems (GIS) such as ArcInfo, ArcView, MapInfo, or Surfer.

Of the several EDA methods available, I will use a surface density analysis for displaying and analyzing the Camp Nelson archaeological data. A surface density analysis is a visual display, usually as a contour or other density reflecting display, of spatially segregated data (See Figure 14 through Figure 17 for examples of different ways to present the same surface data). Surface density analysis is a useful and appropriate EDA application for archaeological inquiry (Ebert, Camilli, and Berman 1996) although Haitala and Larson (1979) believe that its use is questionable.

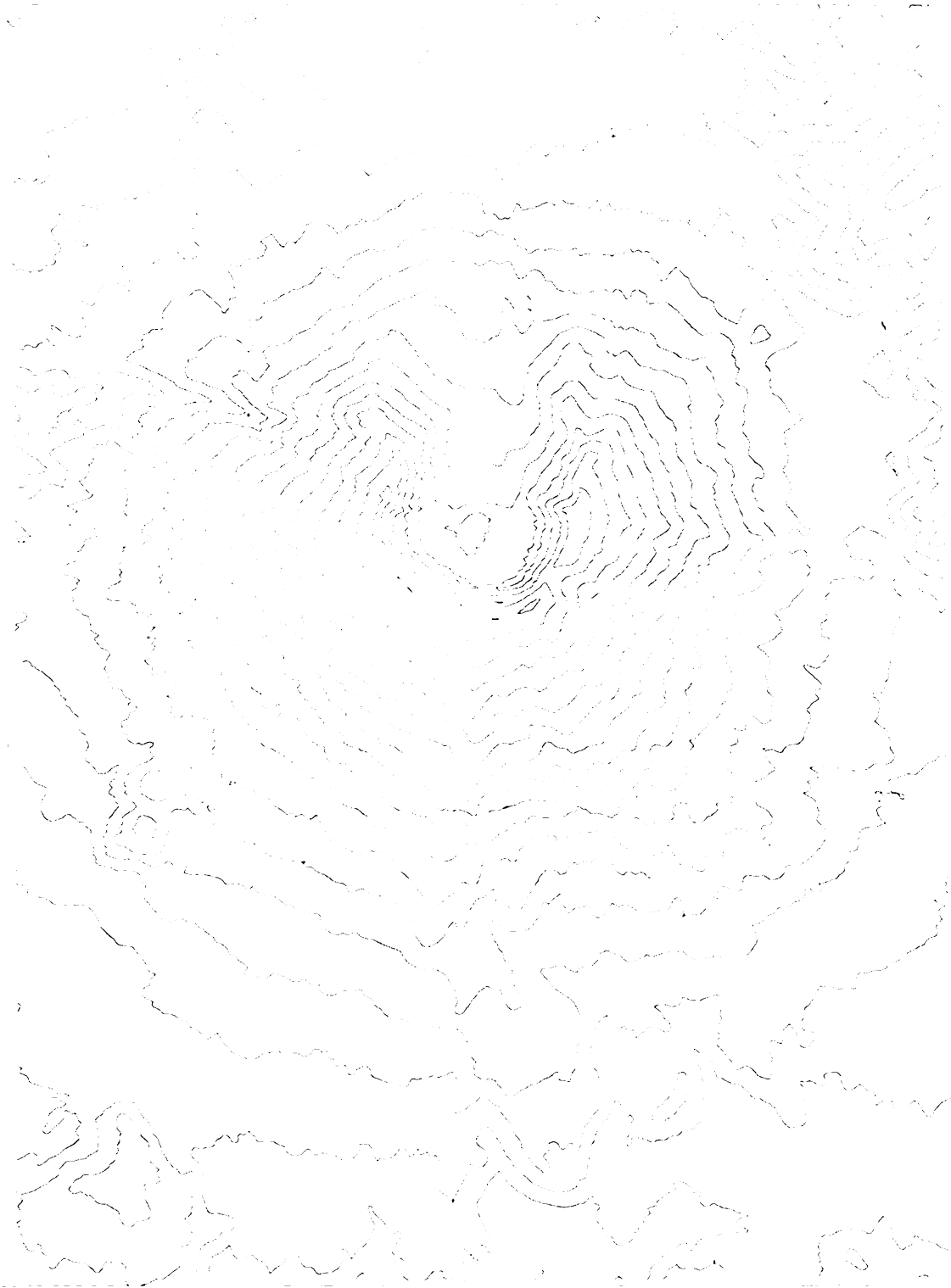


Figure 14. An Example of a Contour Plot.

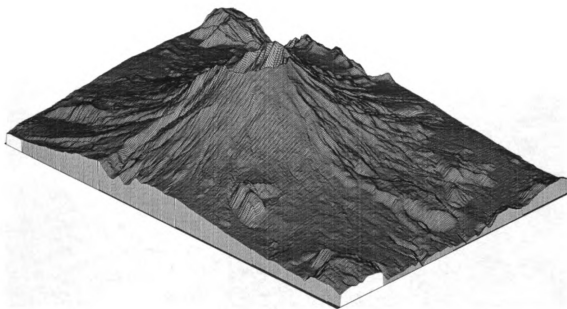


Figure 15. An Example of 2.5D Surface Plot.

One of the more flexible computer programs for displaying surface densities are Surfer, developed by Golden Software. Surfer's flexibility and use of a variety of techniques for creating plots makes it one of the more desirable computer applications to use for conducting spatial analysis.

The distributional studies conducted at Camp Nelson were completed using Surfer 6.04, a grid-based contouring and three-dimensional surface plotting GIS application. The Surfer program uses a collection of data points (x, y) and their corresponding numerical value (z) to extrapolate values for nodes on a grid. These grid node values are then used to construct surface trend maps. The Surfer program's extrapolation function is the key component of the program. Since zero value data cells exist between data points, their expected weight is extrapolated from the existing data points (Green 1990). The Surfer program then uses the resulting grid node values,

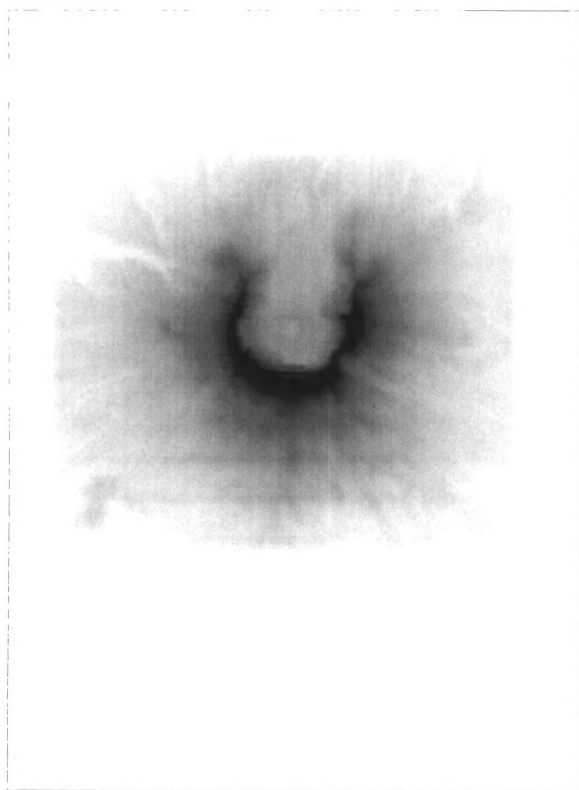


Figure 16. An Example of an Image Plot.

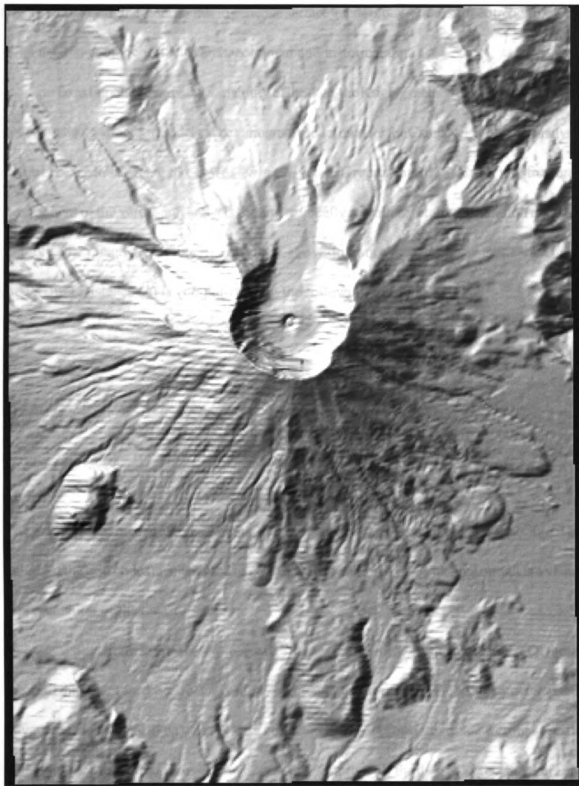


Figure 17. An Example of a Shaded Relief Plot.

along with the original data points, to generate surface trends plots. These surface trends plots are then used in conjunction with archaeological and historical data

To extrapolate the spatial variability of the data, the Kriging method can use one of several mathematical variogram models. The variogram model used for the Camp Nelson spatial analysis is the Linear Model. It is expressed as $\gamma(h) = Ch$, where C represents the Scale for the structured component of the variogram and h is the anisotropically rescaled, relative separation distance (Figure 18). Length (A) defines the change in the variogram as separation distance increases. Separation Distance (h) is computed using the following formula:

$$h = \frac{\sqrt{x^2 + y^2}}{A}$$

x and y is the separation vector (in map coordinates); A is the Length.

The Surfer program then assigns weights to the grid nodes based on their spatial variability. The values of the grid nodes are then used to construct distribution plots. The final output is a visual representation of the data.

Application of a GIS-based approach to human behavior has some limitations. Of these, the most important are the use of and validity of the appropriate data and the accuracy of its spatial coverage (Maschner 1996a). If the data collected is not appropriate for answering specific questions then those questions cannot be pursued. Similarly if the data is correct but there are errors in collection or cataloging of data (Beck and Jones 1989) misleading results are possible.

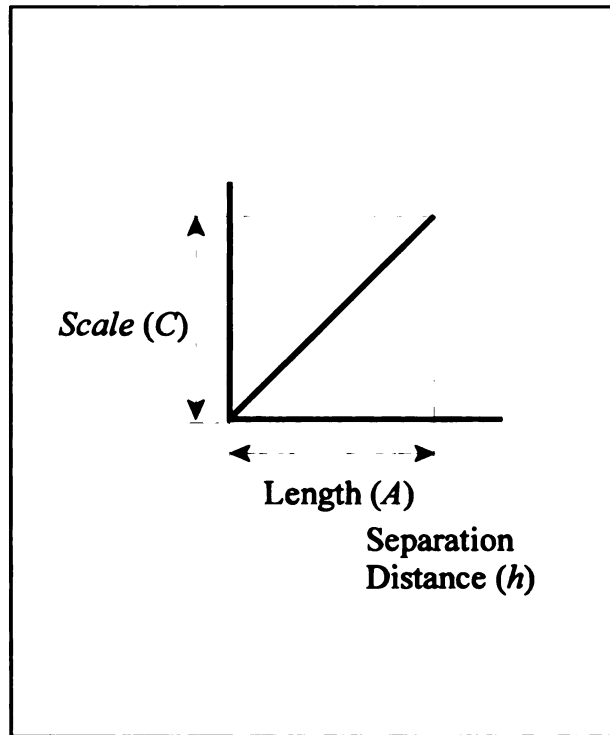


Figure 18. Ideal Linear Variogram Model.

The application of GIS is only as good as the questions being pursued (Allen, Green, and Zubrow 1990).

Applications of GIS to archaeological analysis also face other problems. Technology and the application of computerized models to human behavior are other limiting factors. Computer models in GIS deal with concrete models, the on/off value of pixels. Human behavior, especially over space and through time can be difficult to model. Boundaries, or edginess, is a particular problem. Since GIS applications require set limits or boundaries for areas, it becomes particularly challenging when modeling activities over space. Solutions to these problems may be found in the application of fuzzy logic to GIS theories and practices.

Another intriguing problem is modeling change over time. Most, if not all GIS applications,

are not capable of handling change through time as a continuum. Instead they rely on modeling change as being the difference between two or more sets of observations. Mathematically this change can be modeled and explained. In the world of GIS, however, spatial attributes are modeled for given sets of observations taken as specific moments. In other words, GIS can only model one set of observations at any given time. Currently, this is a limitation in the software components of most GIS applications. As modelers become more familiar with this concept, we may begin to see GIS applications that take into consideration change over time.

One last limitation in current GIS technology and applications is pseudo 3D modeling. A common misconception is associating 3D visualization with surface trend modeling. Surface plots of elevation models use one Z value for each pair of XY coordinates. This creates a simple plane surface with changes in Z shown as relief attributes. In contrast, modeling utilizing 3D Z values allows for complex surfaces. Under a 3D system, the application can map multiple Z values for the same XY coordinate, say modeling a cave entrance into a topographical surface. Some GIS systems are moving in this direction. ESRI's 3D analyst for ArcView is a one of the first to incorporate 3D modeling along with its spatial analysis tools. Advances in 3D modeling will become an important field of analysis as field data collection methodologies continue to advance. Already, precise Global Positioning Systems (GPS) are being used in more field explorations. Some of these systems have the ability to not only record XY coordinates but also Z values (Bernhardsen 1992). Instead of being forced to use arbitrary planular surfaces as units of analysis, complex 3D relations of in situ artifacts and features can be explored. Advances in recording technology, analytical tools, and theories will need to develop in conjunction with each other if 3D

modeling and analysis it to develop.

In this thesis I will be only concerned with surface elevations modeling as it relates to artifact density. It is unfortunate that I do not have access at this time to 3D modeling applications.

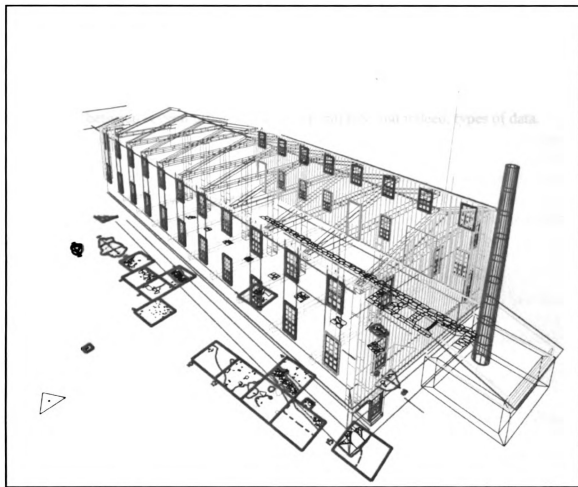


Figure 19. Computer Reconstruction of the Machine Shop in Relation to Features.

An initial analysis conducted by myself with the aid of Chris Rankin showed some promise (Beverly and Rankin 1999) (Figure 19). We looked at a computer reconstruction of the architectural features of the machine shop, especially the windows. We then placed this architectural model over the machine shop's foundation and examined its relationship with the spatial distribution for

window glass. As Figure 6 shows, the relationship of windows to the distribution of window glass may have some correlations. Future analysis based on computer reconstructed environmental and architectural features may shed light on some new thoughts about site formation processes.

Conclusion

Exploratory Data Analysis, when used correctly, can be a valuable tool for conducting archaeological research. When coupled with GIS it offers a powerful means to shed light on the relationship between several different classes of artifacts, and indeed, types of data.

CHAPTER 6 - SPATIAL ANALYSIS OF SHOVEL PROBE DATA

Introduction

In this section I will examine the spatial attributes for specific artifact classes recovered from the shovel probes and test units. Areas of probable building activity will be identified through the close examination of spatial data originating from shovel probes. I will use three specific architectural group artifacts to accomplish this task. After probable building areas have been identified, the next step will involve attempting to examine the artifacts from these specific areas to identify the probable building's function. Both of these tasks will be compared to the data recovered from the excavation units and from features exposed after mechanically stripping the site.

Spatial Analysis Using Shovel Probe Data

Architectural group artifacts represent the majority of artifacts recovered from shovel probes. Of the 1,447 artifacts recovered, 90.9% (n=1,315) are from the Architectural functional group (refer to Table 4). The abundance of Architectural group artifacts, specifically brick, flat window glass, and late cut nails, should prove to be useful for delineating the location of buildings.

To conduct these analysis I used Surfer 6.04 to create the artifact distribution maps. I also used ArcView 3.2a and ArcINFO 8.0.1 to conduct further examinations and create a few maps. And I used SYSTAT 5.03 to conduct the statistical analyses.

Bricks

Bricks fragments represented the smallest sample of the three architectural group artifacts spatially examined (Table 9). A total of 78 brick fragments was recovered from six shovel probes.

A majority of these fragments (80.77%) were recovered from one shovel probe, N896 E170. There may be several reasons why this occurred. It is possible that the number of brick fragments represent a higher than average brick density in this location. It could also reflect errors possible in data collection, that some bricks were counted and discarded while others were returned to the laboratory for analysis. Lastly, the disproportionally large amount of bricks from this individual shovel probe could be attributed the size of the brick fragments themselves. While more bricks fragments were recovered from this shovel probe, the density of the brick fragments could be equal to those from the other probes. Unfortunately at the time of analysis, brick weight was not recorded. Spatial analysis of these brick fragments, of course, shows a high concentration in this area (Figure 20).

Table 9. Percentage of Architectural Artifacts from Shovel Probes.

Artifact	Count	Percentage
Brick	78	6%
Cut Nail - Unspecified	116	9%
Flat Glass	843	64%
Late Cut Nail	235	18%
Other Metal Fastener	6	0%
Other Metal Hardware	34	3%
Unidentified Nail	2	0%
Wire Nail	1	0%
Total	1,315	100%

Flat Window Glass

One of the most abundant architectural artifacts recovered from the shovel probes was

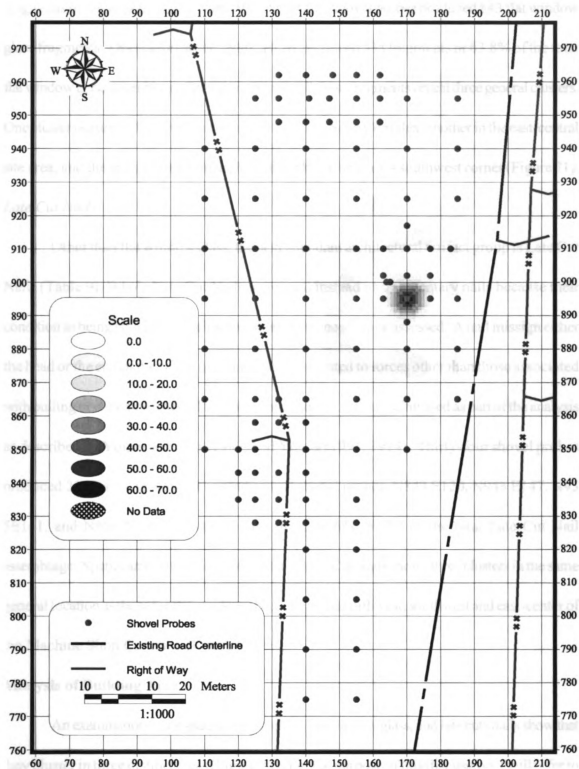


Figure 20. Distribution of Brick from Shovel Probes.

fragments of flat window glass (Table 9). Thirty-nine shovel probes produced 843 flat window glass fragments. One shovel probe, N902 E170, produced 538 fragments or 63.8% of the total flat window glass assemblage. Spatial analyses of all these fragments reveal three general clusters. One cluster occurs in the northern area of the Machine Shop Complex, another in the east-central site area, and the third cluster is in the Machine Shop Complex's southwest corner (Figure 21).

Late Cut Nails

Other than flat window glass, the next abundant architectural artifact group is Late Cut Nails (Table 9). Whole Late Cut Nails were used instead of fragmentary nails because their condition as being either pulled, clinched or unaltered needs to be assessed. A nail missing either the head or the end of the shank may have been subjected to forces other than those associated with pulling or clinching a nail. That would preclude them from being used as part of the analysis as described by Young and Carr (1989) and Young (1991, 1994). Thirty-four shovel probes produced 235 Late Cut Nails. Four individual shovel probes, N843 E120, N948 E147, N955 E141, and N955 E155 collectively contained 30.6% (n=72) of the total Late Cut Nail assemblage. Spatial analysis of the distribution of Late Cut Nails shows three clusters in the same general location as those for flat window glass, one in the northwest, southwest and east-center of the Machine Shop Complex (Figure 22).

Analysis of Building Areas

An examination of the spatial data for brick, flat window glass, and late cut nails show that they cluster in three distinct areas (Figure 23). For the purpose of this discussion, I will refer to these three areas as the first, second, and third building areas. As seen in Figure 23, the first

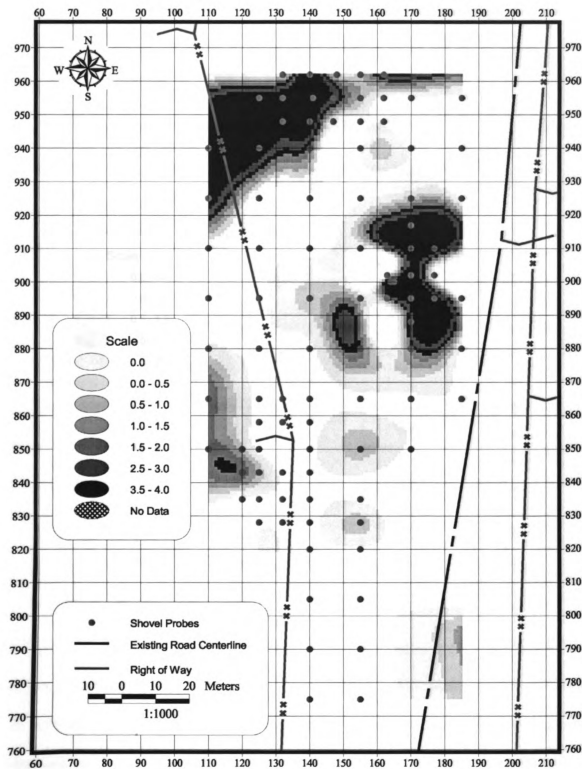


Figure 21. Distribution of Flat Window Glass from Test Probes.

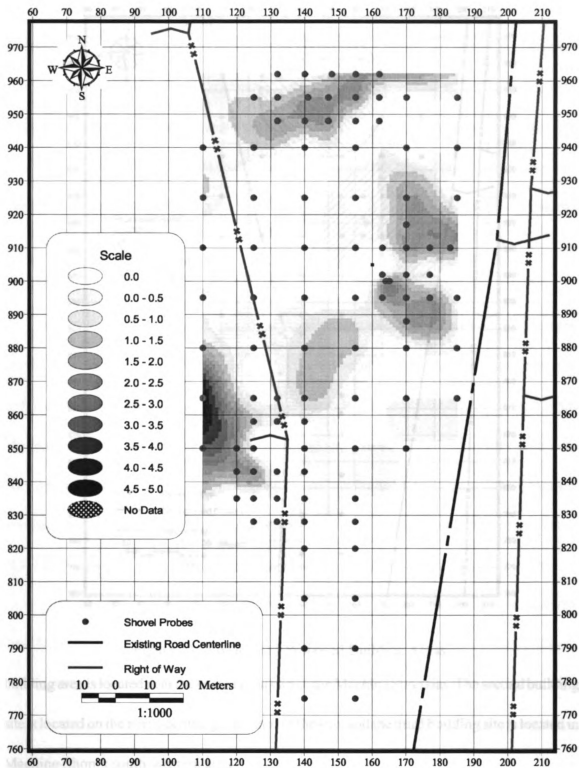


Figure 22. Distribution of Late Cut Nails from Shovel Probes.

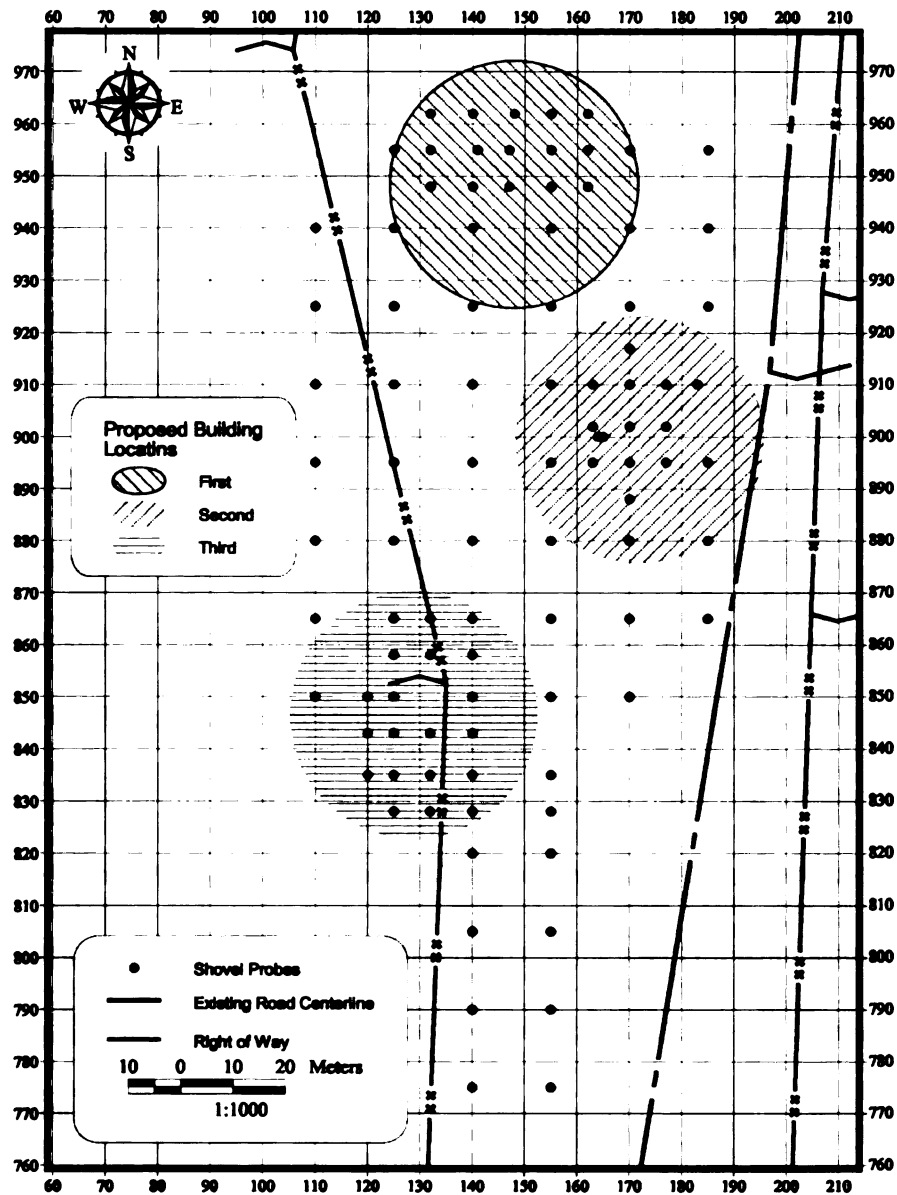


Figure 23. Location of Proposed Building Areas.

building area is located near the east-central part of the Machine Shop site. The second building site is located on the north-central proportion of the site, and the third building site is located in Machine Shop's south-western area.

First Building Area

In the first building area, all three architectural artifacts show a high concentration suggesting that this is a building area. The presence of several architectural features, including the entire shop foundation, a stone machine pad, drip-lines, and nine stone piers confirm this finding for this building area is indeed the location for the Machine Shop as documented in maps and photographs. The prevalence of architecture related artifacts in this area coupled with the actual remains of the machine shop suggests that using architectural related artifacts to identify building areas can be a productive endeavor.

Second Building Area

In the second building area, two groups of artifacts are shown to cluster, window glass and late cut nails. Brick fragments are not present and no architecture related features were recovered in this area. It is possible, though, that this area could be the location of the tents seen in the Machine Shop photograph (Figure 5). The window glass and cut nails in this area may have come from non-standard structural elements incorporated into the use of the tents such as floors and wooden side wall. They could also be the product of architectural refuse being dumped in the area.

Third Building Area

The distribution of architecture artifacts for this building area is similar to that from the first, though the quantity of artifacts is less. Here two clusters of late cut nails and window glass occur in proximity to each other. As in the first building area, no brick artifacts are present. No excavation units were placed in this area because of the paucity of artifacts and its proximity to the right-of-way boundary. It is possible, however, that this area is near the location of the two-story combination barracks and mess house, and two cook houses identified on historic maps.

Discussion

The distribution of brick, window glass, and late cut nails clearly shows three possible building locations (Figure 23). Fortunately, we have definitely identified one of these locations, the first building area, as the Machine Shop. The third cluster southwest of the Machine Shop is likely the location of the mess house and cook houses. The second cluster north of the Machine Shop may be the location of the wall tents and wooden structures seen in the historic photograph (refer to Figure 5) or a refuse dump.

Except for the first building area that is confirmed as being the location of the Machine Shop, there is no real feature evidence for structures in the other two areas. This presents an analytical problem. With no architectural features present, how are these two other building areas supposed to be examined for clues of building remnants? One possible solution is to look at the collection of late cut nails from the three areas to see if they hold any clues.

Analysis of Late Cut Nails

We recovered twenty-four whole late cut nails in the cluster associated with the Machine Shop foundation. Of these, unaltered nails comprise the largest group ($n=16$) with pulled nails making up the remainder ($n=8$). The ratio of unaltered to pulled to clinched late cut nails in this cluster is 2:1:0. This ratio is more similar to Young and Carr's ratio for a construction area than it is with their ratio for refuse areas (Table 10). It is likely, then, that the nails from this cluster are associated with building construction activity. Supporting this argument is the location of the nail cluster around the Machine Shop foundation.

We also observe a ratio similar to the Machine Shop foundation for the proposed building

Table 10. Ratio of Unaltered to Pulled to Clinched Nails.

	Unaltered	Pulled	Clinched
Machine Shop	2	1	0
Northern Gully Area	12.5	5.5	1
3 rd Proposed Building Area	6	6.5	1
Building Construction Area	3	3	1
Building Refuse Area	1	3	1

location northwest of the Machine Shop. In this area we recovered thirty-eight whole late cut nails. Unaltered nails are the largest group (n=25), followed by pulled (n=11), then clinched (n=2). The ratio of unaltered to pulled to clinched late cut nails is 12.5:5.5:1. Although this ratio does not closely reflect Young and Carr's ideal construction area ratio, I believe this cluster is still associated with building construction activity (Table 10).

Somewhat less obvious is the cluster southwest of the Machine Shop near the Mess and Kitchen Houses (Figure 22). Here we recovered a total of twenty-seven late cut nails. Unlike the preceding two clusters, this cluster has more pulled nails (n=13) than unaltered (n=12), followed by clinched (n=2). The ratio of unaltered to pulled to clinched late cut nails for this cluster is 6:6.5:1 (Table 10). This cluster's ratio is somewhat ambiguous when compared with the other two clusters. It closely resembles the ratio for the ideal construction area, but the ratio of pulled late cut nails is slightly greater than that for unaltered late cut nails. Although this ratio begins to lean toward the ideal refuse area, I believe it is much more similar to the ideal construction area ratio and thus reflects an area of building construction activity.

McBride and Sharp (1991) have developed another approach using late cut nails. Their procedure uses the proportion of penny size from different building areas. They then use that proportion to discover similarity or divergence in the proportion of late cut nails. According to them, during the Civil War U.S. military regulations dictated the penny size ratio of buildings by function. Therefore, military buildings of similar foundations constructed during the war should have a similar proportion of nails by size. To test this idea, McBride and Sharp use the penny size of late cut nails from four building areas at Camp Nelson - Camp Hill at 15 Js 112, the Owen's House and an Unidentified Building at 15 Js 97, and from the Mess House area at 15 Js 96 (Table 11). They found that the Unidentified Building and Mess House area displayed similar percentages of 4d and 6d late cut nails. McBride and Sharp attribute the common use of 4d and 6d nails to the probable Civil War era date of construction and similar construction elements for these two building areas. For the other two building areas, Camp Hill and the Owen's House, McBride and Sharp discovered that they did not follow the same patterning. Instead Camp Hill and the Owen's House building area have more 9d late cut nails. For the Owen's House, at least, McBride and Sharpe attribute this discrepancy partly to the house's antebellum date of construction. It was much more substantially built than the ephemeral Civil War buildings. However, the same is not true for Camp Hill. Here McBride and Sharp provide some explanations for the high proportion of 9d late cut nails. These include differences in construction methodology, use of different structural elements, and the smallness of the sample size.

Although the number of late cut nails from the three building sites at the Machine Shop Complex is small, I believe that they can be useful for penny size comparison. The penny size ratio

Table 11. Proportion of Late Cut Nails by Penny Size from Shovel Probes.

Nail Size	15 Js 112		15 Js 97				15 Js 96		15 Js 113					
	Camp Hill		Owen's House		Unid. Building		Mess Hall		Machine Shop		3 rd Building Area		Northern Gully	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
2d	0	0.0	0	0.0	2	5.3	10	1.6	0	0.0	1	3.7	0	0.0
3d	7	9.0	6	6.7	1	2.6	81	13.0	1	8.3	0	0.0	0	0.0
4d	7	9.0	5	5.6	14	36.8	206	33.0	14	58.3	6	22.2	14	36.8
5d	6	7.7	7	7.8	3	7.9	7	1.1	1	4.2	4	14.8	1	2.6
6d	11	14.1	17	18.9	7	18.4	107	17.1	3	12.5	3	11.1	8	21.0
7d	5	6.4	5	5.6	5	12.1	24	3.8	0	0.0	2	7.4	0	0.0
8d	7	9.0	15	16.7	2	5.3	97	15.5	2	8.3	2	7.4	10	26.3
9d	18	23.1	20	22.2	3	7.9	18	2.9	1	4.2	3	11.1	2	5.2
10d	5	6.4	3	3.3	1	2.0	50	8	1	4.2	3	11.1	3	7.9
12d	9	11.5	6	6.7	0	0.0	50	3.2	0	0.0	3	11.1	0	0.0
≥16d	3	3.8	6	6.7	0	0.0	5	0.8	0	0.0	0	0.0	0	0.0
Total	78	100	90	100	38	99.0	625	100	24	100	27	99.9	8	99.8

of late cut nails from the Machine Shop building area has a distribution similar to the Unidentified Building area at 15 Js 97 and the Excavation Block at 15 Js 96 (Table 11). All three sites show a high concentration of 4d and 6d late cut nails. McBride and Sharp (1991) have associated this pattern with Civil War era construction, particularly board and batten construction with shake or tin roofs.

The other two proposed building areas at the Machine Shop complex show a similar but also different pattern. Both the Mess and Kitchen House, and the Wall Tents or Small Wooden

Structures proposed building area have mostly 4d late cut nails (Table 11). This pattern is similar to those already observed for the Unidentified Building, 15 Js 96 Mess House, and the Machine Shop building area. However, unlike the other Civil War era related building areas, neither of these two proposed building sites show a concentration of 6d late cut nails. We can attribute this discrepancy from the pattern at the Wall Tents or Small Wooden Structures proposed building area to the nature of the structures built there. If the military placed many wall tents in the Wall Tents or Small Wooden Structures proposed building area, we can account for the occurrence of a high number of 8d late cut nails. A common practice during the Civil War among soldiers occupying wall tents was to build makeshift wooden floors (Robertson 1988:43-47; Wiley 1943 69-63, 1952:55-56). Additionally some common functions associated with 8d late cut nails include flooring, furring, boarding, and siding (McBride and Sharpe 1991: Table 4.9). If, then, the presence of 8d late cut suggests wooden floors, we can assume that the military used wooden floors along with wall tents in this area.

Discussion

Unlike the other architectural groups used for this analysis, the distribution of brick fragments shows only one major cluster, in the vicinity of the machine shop foundation (Figure 20). This distribution may represent an area where brick material could possibly have been incorporated into structural components or could equally represent an area where building waste was disposed. However the photograph of the Machine Shop (Figure 5) does not show any brick in the eastern or southern facades. They may have served, however, a specialized service, one not necessarily associated with the structure, but with the function of the machines housed within the structure.

Although the distribution for bricks is only comprised of data from four shovel probes, the one probe with an abundant quantity of bricks is unique and therefore important in this analysis. Since weight is given to the density of artifacts over space, this anomaly may indicate that a more specialized use of the bricks was employed in this location than for general building practices associated with Civil War era structures.

The distribution of window glass shows three clusters (Figure 21). Each cluster corresponds to the three building clusters. These clusters of window glass probably originated from windows built into structures. The photo of the Machine Shop (refer to Figure 5), for example, shows that this building did have many windows. The window glass recovered from these clusters may be representative of where buildings once stood. They may also reflect building material, such as window sashes, panes and accompanying hardware, that were discarded when the government dismantled their buildings shortly after closing Camp Nelson

The three clusters of late cut nails (Figure 22) may reflect building construction activities or even activities related to building destruction. Given that the life for most governmental structures spanned three years from construction to demolition, it is likely that the observed clusters reflect a combination of these two activities.

Twenty-four whole late cut nails were recovered from the array associated with the first building cluster, the machine shop (Figure 22). Of these, unaltered nails comprise the largest group ($n=16$) with pulled nails making up the remainder ($n=8$). The ratio of unaltered to pulled to clinched late cut nails in this cluster is 2:1:0. This ratio is more similar to Young and Carr's ratio for a construction area than it is with their ratio for refuse areas (Table 10). It is likely, then, that

the nails from this cluster are associated with building construction activity.

A ratio similar to the second building cluster is also evident for the first building cluster. In this area thirty-eight whole late cut nails were recovered. Unaltered nails are the largest group ($n=25$), followed by pulled ($n=11$), then clinched ($n=2$). The ratio of unaltered to pulled to clinched late cut nails is 12.5:5:1. Although this ratio does not closely reflect Young and Carr's idea construction ratio, I believe this cluster is still associated with building construction activity.

Somewhat less obvious is the cluster of nails from the third building cluster (Figure 22). Here a total of twenty-seven late cut nails was recovered. Unlike the preceding two clusters, this cluster has more pulled nails ($n=13$) than unaltered ($n=12$), followed by clinched ($n=2$). The ratio of unaltered to pulled to clinched late cut nails from this cluster is 6:6.5:1. This cluster's ratio is somewhat ambiguous when compared with the other two clusters (Table 10). It closely resembles the ratio for the ideal construction area, but the ratio of pulled late cut nails is greater than that for unaltered late cut nails. This would make it more similar to the ideal refuse area. I believe it is more similar to the ideal construction area ratio and thus reflects an area of building construction activity.

Now that these three building clusters have been associated with buildings, the next step is to identify these buildings' probable function. I will accomplish this in the following section.

Analysis for Function and Activity Areas

This analysis for function and activity areas identifies a few probable uses for three building clusters. Although the spatial analysis for building location had a plethora of data, the data available for conducting the spatial analysis for function and activity area is sparse. Despite this limitation,

a few statements about the possible functions of the building areas can be offered. Specific artifact groups and classes I used for this analysis include fuel, job/activity, transportation, clothing, and kitchen artifacts.

Fuel Group Artifacts

The spatial analysis of fuel group artifacts shows two clusters. One light cluster is in the vicinity of the first and second building clusters (Figure 24). The presence of fuel group artifacts at the first building cluster is represented by a single piece of coal (Table 12). The occurrence of

Table 12. Summary of Function and Activity Artifacts Counts.

	Fist Building Area (Machine Shop)	Second Building Area (Northern Gully)	Third Proposed Building Area (Mess Hall)	Total
Fuel Group	1	7	0	8
Job/Activity	1	4	0	5
Transportation	1	5	1	7
Clothing	1	2	1	4
Kitchen	0	16	29	45
Total	4	34	31	69

coal here is not surprising considering that the coal was used widely as a source of heat for a variety of equipment such as steam engines and activities such as blacksmithing. Coal was not the only source for fuel; wood may have been used instead. If this is the case then it may account for the low density of coal. Other fuel group artifacts, such as coal, may also be associated with heating devices such as fireplaces or fire pits and with food preparing areas. These alternative uses may be the case for the cluster in the vicinity of the second building cluster. In this cluster are seven fuel group artifacts were uncovered including one charcoal piece ($n=1$), one coal cinder/slag ($n=1$),

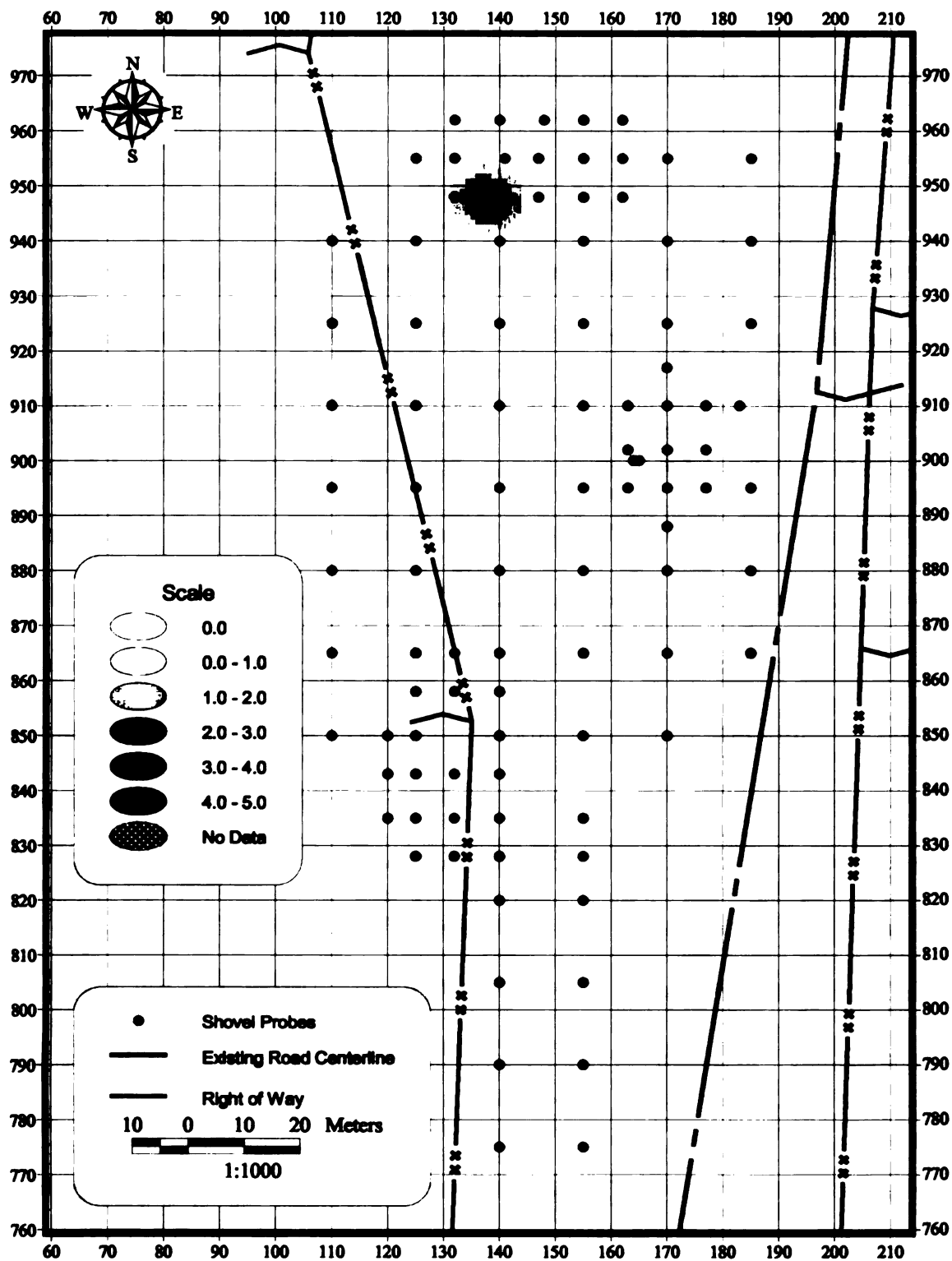


Figure 24. Distribution of Fuel Group Artifacts from Shovel Probes.

and coal (n=5) (Table 12). Although the limited artifacts associated with this functional group suggests possible activities in these two areas, the dearth of this distribution precludes their use as indicators of function.

Job/Activity Class Artifacts

The distributional analysis for job/activity reveals an interesting pattern. It shows two clusters, one in the vicinity the second building area (Northern Gully) and a second cluster just south of the first building cluster (Machine Shop) (Figure 25). This second cluster is represented by a single triangular file and may have been used activities involving metal working (Table 12). The other cluster, south of the first building area, is comprised of four blacksmithing bar stock fragments. The presence of these pieces of bar stock may indicate that blacksmithing activity was occurring in the general vicinity. The bar stock may be related to repair work on the shop's engines or machinery. Perhaps a portable forge was set up here (Figure 26).

Transportation Group Artifacts

Although the data for Transportation group artifacts is sparse, it can still provide some useful insights (Table 12). Analysis of the distribution for Transportation group artifacts reveals four occurrences in three distinct areas (Figure 27). One high point, located near the third building area, consists of one metal wagon part. Likewise, the high point at the first building cluster contains a solitary artifact, one animal shoe part. And near the second building cluster in the northern gully area are five transportation related artifacts. These consist of one metal harness parts, one animal shoe nail, and three metal carriage parts. The transportation group artifacts from these clusters reflect the use of transportation mediums such as carriages, wagons, and horses.

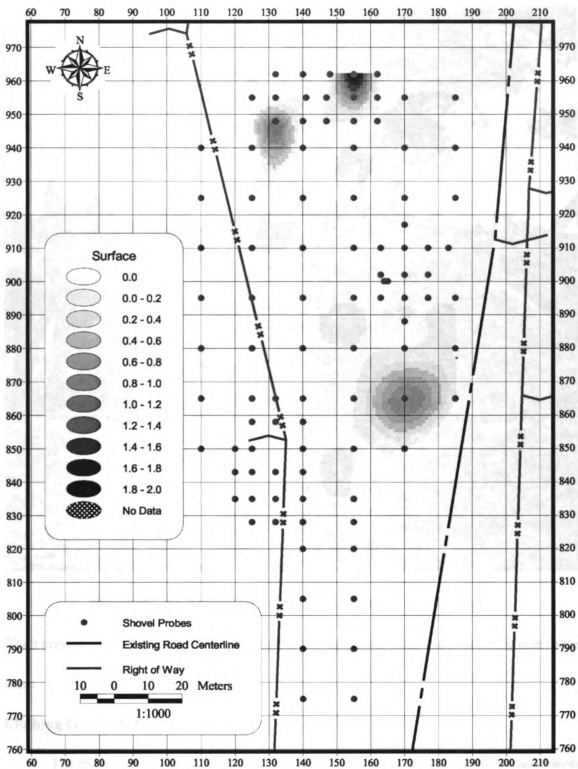


Figure 25. Distribution of Job/Activity Artifacts from Shovel Probed.



Figure 26. An Example of a Portable Union Blacksmith Shop.

Their presence may also indicate that furnishing and repair activities were occurring near these areas.

Clothing Group Artifacts

The distribution for Clothing Group artifacts is similar to the distribution for Transportation Group artifacts, though the numbers are correspondingly small (Table 12). Again there are four

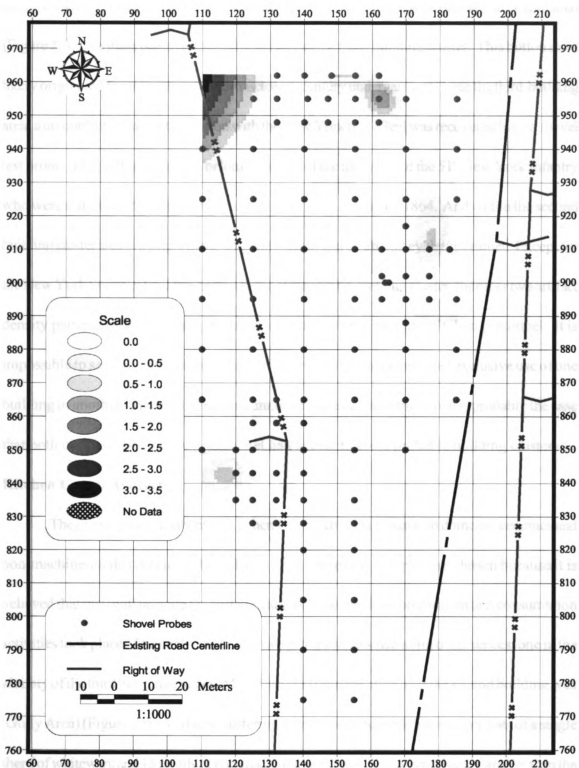


Figure 27. Distribution of Transportation Group Artifacts from Shovel Probes.

occurrences in the same three general areas where Transportation Group artifacts appeared (Figure 28). One glass button is located in the area of the third building cluster. This button most likely originated from a common mid-nineteenth century undergarment. Near the third building area, a unique button, a military button with the New York State Seal was recovered from a shovel test probe. This button may have belonged to one of the members of the 51st New York Infantry who were stationed at Camp Nelson from August 1863 to January 1864. And within the second building cluster area is a single metal suspender clasp and one metal eyelet/grommet. Except for the New York State Seal military button found at the second building cluster, the other two artifact density patterns reflect clothing items common to both military and civilian personnel. It is impossible to say from this data if either civilian or military personnel had exclusive use of one building or another. Since a distinction cannot be made between the two, it is probably the case that both civilians and military personnel had access to these probable building clusters.

Kitchen Group Artifacts

The distributional analysis of Kitchen Group Artifacts focuses on domestic ceramics and non-machine-made container glass (Table 12). These two groups were chosen because it is believed that they will provide the best indications for where food preparation and consumption activities took place. The analysis of these two groups shows two main occurrences, one in the vicinity of the third building cluster (Mess Hall area) and the other near the second building area (Gully Area) (Figure 29). Artifacts clustering near the second building area consists of a single sherd of whiteware and 15 shards of non-machine made glass. This assemblage is smaller than the one associated with the second building cluster. There the refined ceramics consists of a single

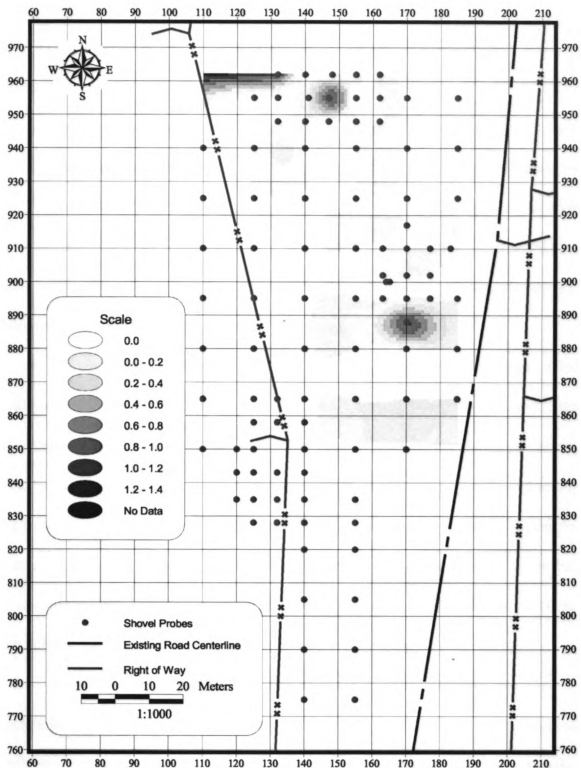


Figure 28. Distribution of Clothing Group Artifacts from Shovel Probes.

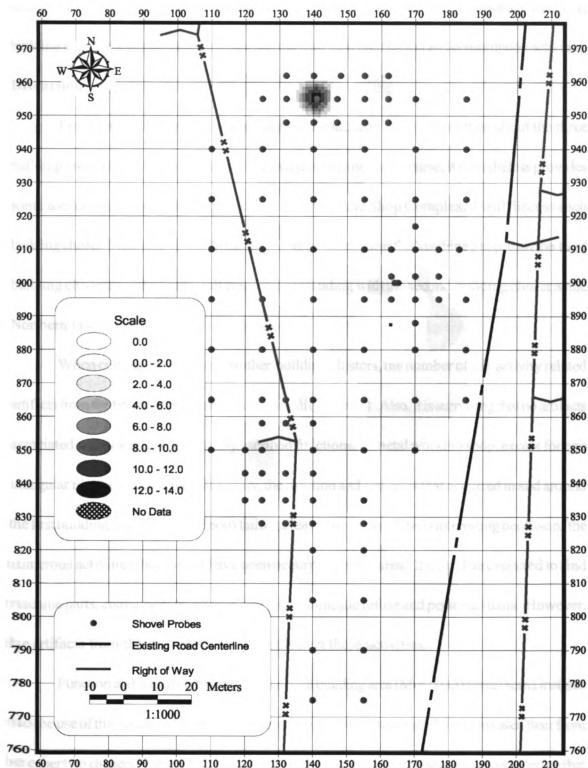


Figure 29. Distribution of Kitchen Group Artifacts from Shovel Probe.

sherd of ironstone, two shards of whiteware and 26 fragments of non-machine made glass. This building area, then, can tentatively be associated with food preparation and consumption activities.

Discussion

From the preceding analysis a number of conclusions can be reached about the three building clusters. Though the data for this analysis is sometimes sparse, it nonetheless provides some useful insights into the use of space at the Machine Shop Complex. I will discuss each building cluster, beginning first with the first building cluster near the Machine Shop, then the third building cluster near the Mess Hall area, and concluding with the second building cluster at the Northern Gully.

When compared with the two other building clusters, the number of job/activity related artifacts from the first building cluster is quite small (Table 12). Also, it is surprising that no artifacts associated with the area's historically ascribed function as a metal working shop, except for one triangular file, were recovered. Generally, the function and activities that occurred in and around the first building area (Machine Shop) failed to leave any traces. This is interesting because of the numerous activities that should have been occurring in this area. It would be expected to find machine parts, coal/cinder fragments, and some domestic refuse and personal items. However, the artifacts from the shovel probes do not reflect these activities.

Function and activity artifacts from the third building area (Mess Hall) reveal some insights into the use of this locale. More Kitchen related artifacts were recovered from this area than from the other two clusters (Table 12). This paucity of artifacts should not be surprising, considering that food preparation and consumption activities supposedly occurred nearby. One interesting fact that

needs to be pointed out is the lack of fuel group artifacts from this vicinity. Given that the Miller 1866 map shows two Cook Houses within the Machine Shop Complex area (see Figure 8), I was expecting to find more evidence of fireplaces in the form of either coal, cinder, or charcoal. None of these items were recovered from the shovel probes in this building cluster. Since the project area was limited to sampling only a portion of this area, it is possible that more coal would have been recovered had we explored more of the site. This lack of evidence, however, does not deter me from my interpretation that this building cluster is associated with food preparation and consumption. Except for the New York state seal military button, the remaining job/activity and functional artifacts do not yield any other clues. The New York state seal military button is the only military button recovered from the shovel probes at the Machine Shop Complex. This button provides a tentative link between the Machine Shop Complex and military personnel, possibly from the 51st New York Infantry, who may have built the built/occupied/demolished the Machine Shop.

Spatial analysis of the second building cluster (Northern Gully) shows that this area is different from the other two building clusters in several regards. One of the biggest differences is in the composition of the artifacts. Unlike the first and third building clusters, where artifacts tend to cluster in one category, the artifacts from the second building cluster area are fairly evenly distributed (Table 12). This distribution of artifacts may reflect multiple functions and activities. One possible activity that may have occurred here is the preparation and consumption of food goods. This activity is suggested by the presence of one whiteware sherd and fourteen fragments of non-machine made container glass. Though having less kitchen artifacts than the third building cluster, the second building cluster is similar to it. Food preparation and consumption activities

may have occurred in this area prior to the construction of the second building cluster.

Another possible activity that may have taken place at the second building cluster is blacksmithing. Although no blacksmithing associated features or structural remains were uncovered in this area, the artifact assemblage does suggest that blacksmithing activities could have taken place here (Table 13). The presence of charcoal (n=1), coal (n=6), and coal cinder/slag (n=1) along with blacksmithing bar stock fragments (n=4) provide strong evidence for blacksmithing activities. Even the presence of two animal shoe nails suggest that shoeing, an activity commonly associated with blacksmithing, occurred within the area of the second building cluster. The lack of blacksmithing related features and structural remains along with the presence of artifacts associated with blacksmithing suggest that a portable blacksmithing forge may have been used (Figure 26).

Table 13. Blacksmithing Artifacts from Shovel Probes.

Blacksmithing Related Artifacts	Count
Bar Stock	4
Charcoal	1
Coal	6
Coal Cinder/Slag	1

Apparently the proposed Wall Tents and Small Wooden Structures building area had several function and activities occurring in and around it. Though I have identified only two possible activities for this area, there may have been several more. It appears that the Kitchen related items were deposited prior to the construction of the Kitchen and Mess Halls. This would have been

during the initial months of Camp Nelson's occupation in 1863 when numerous buildings were being constructed. This was probably followed closely by the blacksmithing activities. Although this conclusion is not the only possible one for this area, I believe it best explains the combination of function and activity artifacts.

Conclusion

The shovel probe data has yielded a wealth of information. An analysis of their spatial distribution reveals some intriguing patterns. Use of architectural artifacts to locate possible building areas was successful. They identified three discrete possible building areas. One of these areas is historically known to be the location of the machine shop. The identification of the two other clusters as building areas is tentative until a more detailed analysis on recovered artifacts from units and excavated features can be conducted. Such an examination may take into consideration the effects of erosion on the deposition of the archaeological material. Unfortunately for my research, the third possible building area that may have been near the location of the two-story combination barracks and mess house, and two cook houses, lies outside the project boundaries and will not be further evaluated. The lack of architectural features in the second building area is an intriguing question and will be further explored in the next chapter.

Initial identification of function/activity areas for proposed building areas one and two was not as productive. Although some conclusions can be reached about these two proposed building areas, the lack of non-architectural artifacts hampers any meaningful interpretation. Fortunately there is an abundance of artifact data recovered from the test units for these two areas. This data will be looked at closely in the next chapter.

CHAPTER 7 - SPATIAL ANALYSIS OF EXCAVATION UNIT AND MECHANICAL STRIPPING DATA

Introduction

In this section I will examine the spatial distribution for data recovered from excavation units and from mechanical stripping. This will be done by comparing the data from the first and second building area with the artifacts recovered from the shovel probes for these locations. Particular emphases will be placed on examining the excavation unit data to test if the probable building locations identified by the shovel probes analysis is correct. I will then examine the two areas for further clues to determine possible functions for the two areas.

Review of Artifact Data

The quantity of artifacts unearthed from the excavation units at 15 Js 113 is vast. As mentioned previously in Chapter 4, the collection is dominated by the presence of architectural artifacts (see Tables 4, 5 and 7). The same three architectural artifacts shown to dominate the shovel probe data also prevail in the excavation unit assemblage. Of the 50,214 artifacts recovered, architectural group artifacts make up 82.3% of the assemblage. However, instead of being dominated by late cut nails as in the shovel probe collection, the assemblage from the excavation units is dominated by the abundant glass fragments recovered from the northern gully area. Overall 24,408 or 48.6 % of the total excavation unit assemblage consists of flat window glass shards from this area. This skewed distribution of window glass is interesting considering the fact that the machine shop had several large windows. Some of the potential interpretations of this

distribution will be discussed shortly.

First Building Area

The numerous structural features uncovered from the first building area positively identify this area as a building area; indeed it is the location of the machine shop. An analysis of the late cut nails using Young and Carr's method (Table 10) from the excavation units strongly suggests that this area is a building area. The strength of the use of artifacts to identify building areas is even further supported by an examination of penny size. Examination of the proportion of late cut nails by penny size (Table 14) reveals a pattern very similar to the Unidentified Building and Excavation Block at 15 Js 97, areas previously associated by McBride and Sharpe (1991) with Civil War era construction. It appears, then that the first building area is indeed the location of a structure. This is evidence by the numerous and substantial structures recovered from this area and the patterns of late cut nails as they related to Young and Carr's building area and to Civil War era construction dates as identified by McBride and Sharpe (1991).

Table 14. Proportion of Late Cut Nails by Penny Size from Excavation Units.

Nail Size	15 Js 112		15 Js 97				15 Js 96		15 Js 113			
	Camp Hill		Owen's House		Unidentified Building		Mess Hall		Machine Shop		Northern Gully	
	n	%	n	%	n	%	n	%	n	%	n	%
2d	0	0.00	0	0.00	2	5.26	10	1.52	28	3.279	101	6.14
3d	7	8.97	6	6.70	1	2.63	81	12.40	152	17.80	170	10.34
5d	6	7.69	7	7.80	3	7.89	7	1.06	48	5.621	151	9.18
6d	11	14.10	17	19.00	7	18.40	107	16.30	177	20.70	217	13.20
7d	5	6.41	5	5.60	5	13.20	24	3.66	31	3.63	81	4.92

Table 14 (cont'd)

4d	7	8.97	5	5.60	14	36.80	206	31.50	223	26.11	340	20.70
8d	7	8.97	15	17.00	2	5.26	97	14.80	89	10.40	433	26.30
9d	18	23.10	20	22.00	3	7.89	18	2.75	11	1.29	30	1.82
10d	5	6.41	3	3.30	1	2.63	50	7.63	46	5.39	55	3.35
12d	9	11.54	6	6.70	0	0.00	50	7.63	31	3.63	51	3.10
≥ 16d	3	3.85	6	6.70	0	0.00	5	0.76	18	2.11	15	0.91
Total	78	100	90	100.4	38	99.98	655	100	854	99.95	1644	99.98

The function of this area as a machine shop is supported by a number of artifacts and possibly by some structural features. Feature 1, the machine shop foundation and builder's trench is quite substantial in size. This indicates that the foundation was used to support a structure carrying considerable weight. The weight in this structure would have originated from the many wood and metal working tools housed inside of it. The nine support piers running the length of the foundation also are evident of a load-bearing structure.

Besides the robust structure, some evidence exists of the room used to house the steam engine. Feature 1 A, located at the southeastern corner of the foundation, was a three chambered brick and limestone extension or pad. The limestone and brick of this pad and the surrounding soil showed evidence of extreme heat in the form of reddening of the stone and the spalling of the brick. Given the location of the steam engine off the southeast corner of this building in the 1860s photograph and elevation drawing, it is possible that this pad held machinery related to the steam engine.

As described in Chapter 4, a number of artifacts relating to the shop's function were

recovered. These include metal craft/activity items, a few tools, and some twisted lead and iron shavings. Some of the tools recovered from the machine shop excavation units include carpenter's chalk, a carpenter's lead pencil, metal files, and some tool handles. Obviously these tools reflect the activities that occurred in and around the machine shop. Historical documents state that among the various activities engaged at the machine shop, woodwork and metalwork were quite common. In fact "all the carpenter work of [the] Camp is done including the making of doors, window sashes, desks and all similar work required at the Depot. Large numbers of cottages are now in process of erection in connection with the Refugee Home . . . and here the work for such structures is prepared" (Hall 1865). Evidently, then, the machine shop was quite a busy place.

The twisted lead and iron shavings may also reflect activities occurring at the machine shop. These artifacts are the byproducts of activities such as metal turning and metal lathing. Historical documents list as part of the inventory one iron turning lathe and one machinist turning lathe (Hall 1865). It is probable, then, that the twisted lead and iron shavings are the byproducts of activities associated with the use of these machines at the shop. It is interesting to note, however, that we did not recover more evidence for similar activities. Nor did we find evidence for the storage of raw and finished goods or refuse areas directly at the machine shop site. However, the excavation unit data from the second building area suggests that this area may have served this purpose.

Second Building Area

A similar analysis of the second building area is a little more complex. An examination of the ratio of unaltered, pulled, and clinched nails do not reflect either of the two types of building areas identified by Young and Carr (Table 15). Instead the ratio is 31:18:1. This odd proportion

of late cut nails may indicate that neither building nor demolition activities took place at this location. Instead it may reflect that this area could have possibly been used for either storage or dumping of building material. If nails and other architectural hardware were either stored or dumped in this area, then the ratio of unaltered to pulled to clinched nails would reflect a higher ratio of unaltered nails than either pulled or clinched. If no building or demolition activities were taking place in this vicinity then the amount of pulled and clinched nails would be correspondingly low.

Table 15. Proportion of Late Cut Nails from the Machine Shop and the Northern Gully.

	Unaltered	Pulled	Clinched
Machine Shop	16	16	1
Northern Gully Area	31	18	1
Building Construction Area	3	3	1
Building Refuse Area	1	3	1

The large quantity of architectural related metal fasteners and hardware also may indicate that this area functioned as a storage area or dump site for structural components. This statement is also supported by the quantity of flat window glass recovered from the vicinity (Table 16). Since no building is known to have been built in this area incorporating an abnormal number of windows, the window fragments may have been either stored or likewise dumped in this area along with the other architectural hardware. Because the machine shop contained quite a few windows, the frequency of flat window glass shards recovered from this area can be expected to be high. However, the quantity of flat window glass from the second building area in the Northern Gully Area is disproportionally larger. A possible explanation is that these window glass shards did not

originate from windows mounted in nearby structures, but rather were deposited in the Northern Gully Area for storage and become fragmented over time or were deposited in a broken state, considered as rubbish.

Table 16. Architectural Artifacts from the Northern Gully Excavation Units.

Artifact	Count	Proportion
Brick	36	0.11
Cut Nail Unspecified	2041	6.33
Flat Glass	24540	76.12
Late Cut Nail	3726	11.56
Mortar	1	<0.01
Other Metal Fastener	200	0.62
Other Metal Hardware	1400	4.34
Unidentified Nail	257	0.80
Wrought Nail	37	0.11
Total	32238	100

Conclusion

An initial analysis of these two locations based on data from shovel probes suggests that they are building areas. The data from excavation units and from features revealed through mechanical stripping support this interpretation for the first building area - that it is indeed the location of the machine shop. However when the same data for the second proposed building area in the Northern Gully is considered, the initial interpretation originating from the shovel probes does not appear to remain true. The data appears to suggest that some other event/activity was occurring

in this vicinity. After a review of some of the artifact data and feature composition, it seems that the second building area is not a building area at all. The artifact data from this area suggests that it functioned as either a storage or refuse area. Although structures may have never been built in this location, the storage or discard of architectural material could have influenced initial interpretations.

CHAPTER 8 - CONCLUSION

Introduction

In this chapter, I will conclude my research by summarizing my inquiry and presenting my findings. I will revisit my hypotheses about building location, building function, and activity areas examining each for relevance. I will finish my research by suggesting an interpretation for the two possible building areas.

Hypotheses Statements

In Chapter 3, I outlined a number of hypotheses that would serve as a guide throughout my analysis. Now that I have completed my research, I will reexamine each of them to see if they are supported.

The first of the three hypotheses was a guide for identifying potential building locations. It states that a building area may be identified through the clustering of architectural artifacts along with structural features.

After careful analysis of the artifact data recovered from the machine shop, it now appears that the hypothesis was only partially correct. It suggests that the clusters of cut nails, window glass, and bricks would indicate the presence of a nonextant structure. Analysis of the Shovel Probe archaeological data suggests that this hypothesis is true for the machine shop building area, and is also true for the second proposed building area in the northern gully. Initially it appeared that both areas are building locations. However, when the archaeological record is examined for both areas, the hypothesis seems to hold true for the machine shop building area, but not for the second proposed building area. The overwhelming structural evidence recovered from the machine shop

building area positively confirmed that this area was the actual location of a building. For the second proposed building area, the pattern of window glass and cut nails suggests that this area was not a building location. It appears, then, that the first proposed building area is indeed the location of the machine shop, as is evident by the numerous structural features that correspond with the architectural artifacts. However, a cluster of architectural artifacts in the second proposed building area does not occur in relation to any known structural features. According to the Building Location Hypotheses, then, the second proposed building area is not an actual building area.

This is where the analysis of the late-cut-nails provides evidence. Once the possible building areas were identified, the archaeological data was examined closely to see if there were any clues that may help identify each as being a building area. This analysis focused on the comparative study of late cut nails as outlined in Chapter 3. As outlined in the chapter, I state that areas of extinct buildings will reflect a nail ratio similar to that for a Building Construction Area as defined and that areas of building refuse disposal will reflect a nail ratio similar to that of Building Refuse Area as defined by Young (1991, 1994) and Young and Carr (1989).

After examining the distribution of late cut nails from each of the two proposed building areas, I observed that neither closely fit the expected proportion of nails. Because the first proposed building area is the location of a known structure, I reexamined the data to see if there is a general pattern to the nail data. I found that the ratio of nails from the first proposed building location (the machine shop), though not exactly fitting the ideal building construction pattern, it is somewhat similar to Young and Carr's Building Construction Area ratio. It seems plausible then, that the observed ratio of late cut nails is indicative of a building location although it departs from

Young and Carr's idea nail ratio. The nail ratio for the second proposed building area, based on nails from excavation units, is similar to the nail ratio identified for the machine shop. It does not reflect Young and Carr's expected pattern. It is, however, more similar to the ratio Young and Carr ascribes as being associated with a building refuse area.

From these hypotheses that help to identify building locations, it appears that the first building area is definitely the location of the machine shop. This is supported by numerous structural features that spatially correlate with architectural artifacts. It is also supported by historical documents. However, the second proposed building area in the northern gully, when examined using these hypotheses, appears not to be a building area at all. Although there are a large quantity of architectural artifacts in this area, including an incredible array of fragmented window glass, the lack of structural features and the divergent cut nail ratio seems to suggest that this area is either a building refuse or storage area.

Now that I have identified and interpreted these two proposed building areas, I need to identify their function/activity. To accomplish this I developed a hypothesis that stated that the function of a proposed building area can be discerned from spatially correlating architectural group artifacts with specific functional group artifacts. The function of a proposed building area can be deciphered from the spatial distribution of correlating functional artifacts.

This hypothesis states that if the function of a building area is unknown, the function may be derived from an analysis of the artifacts and possibly some of the features occurring in and around the building area. Since the function of the machine shop is known, it can be used as a suitable test of this hypothesis. Analysis of the data from this area, as shown in Chapter 5 reveals a number of

artifacts associated with the activities known to have occurred at the machine shop. It is plausible, then to assume that the same procedure can be applied to other building areas. However, since the second proposed building area has been determined not to be a building construction area, these hypotheses do not apply. I must look elsewhere for guidance in my attempt to identify the function of this area.

I examined the archaeological data recovered from the excavation units to determine if there were any correlation between the artifact groups. Using a correlation statistic, I examined their coefficient. The result of this analysis is shown in Table 17. The analysis of the machine shop archaeological data shows that there is a high correlation between excavation unit architecture and kitchen groups (0.97), the furniture and other group (0.97), and lastly between job/activity and transportation (0.82).

The correlation coefficient for the second proposed building area does not show any strong correlation (Table 18). The three pairings with the highest values are architecture and transportation (0.58), job/activity and other (0.56), and other and fuel (0.53). It appears, then, that the data for this area does not strongly correlate with one another. This might indicate that the relationship between the artifact groups is weak. A weak association is more likely from dumping processes, where artifacts from various groups are deposited independently. These correlations for the second building area, though, are skewed by the unusually high amount of architectural artifacts recovered from the area. The volume of flat window glass alone is more than what the machine shop may have contained and suggests dumping or storage of unused window panes. The results of the coefficient correlation, I believe, should be viewed cautiously.

Table 17. Correlation Coefficient for Artifact Groups from the Machine Shop Area.

	Architecture	Clothing	Furniture	Job/Activity	Kitchen	Other	Personal	Arms	Transportation	Fuel
Architecture	1.00									
Clothing	0.22	1.00								
Furniture	-0.05	-0.18	1.00							
Job/Activity	-0.18	0.19	-0.13	1.00						
Kitchen	0.97	0.17	-0.06	-0.22	1.00					
Other	0.02	-0.09	0.97	-0.17	0.03	1.00				
Personal	0.50	0.28	-0.14	0.44	0.46	-0.04	1.00			
Arms	0.63	0.02	-0.10	-0.19	0.60	0.06	0.46	1.00		
Transportation	-0.13	0.19	-0.12	0.82	-0.17	-0.14	0.54	-0.18	1.00	
Fuel	0.60	0.73	-0.13	-0.22	0.54	-0.02	0.10	0.45	-0.16	1.00

Table 18. Correlation Coefficient for Artifact Groups from the Second Building Area.

	Architecture	Clothing	Furniture	Job/Activity	Kitchen	Other	Personal	Arms	Transportation	Fuel
Architecture	1.00									
Clothing	-0.03	1.00								
Furniture	-0.07	-0.19	1.00							
Job/Activity	0.17	0.15	0.08	1.00						
Kitchen	-0.12	0.24	0.06	-0.00	1.00					
Other	-0.01	0.27	-0.08	0.56	0.11	1.00				
Personal	0.19	-0.02	-0.10	-0.25	-0.17	-0.09	1.00			
Arms	0.21	-0.04	0.25	-0.08	0.14	-0.19	0.32	1.00		
Transportation	0.58	-0.03	-0.11	0.33	-0.05	0.35	0.39	0.49	1.00	
Fuel	0.25	0.12	0.17	0.04	0.20	0.53	0.32	0.32	0.43	1.00

One last solution that I think may explain the processes at play that formed the archaeological record is to look at this area in light of some historical documents. Capt. Theron E. Hall states that the machine shop is involved in all types of architectural construction activities (1865). It is possible then, that goods used in or produced in the machine shop could have been deposited in this location. This would account for the high numbers of architectural artifacts and hardware recovered in this area. Since it is known that architectural components were constructed at the machine shop it seems likely that the second building area (Northern Gully) either could have served as a storage area for raw or finished goods or functioned as a refuse area where scrap material was placed. If this is the case, then the high number of architectural artifacts from the second building area (Northern Gully) area can be explained. I believe this explanation is highly plausible. It appears, then, that the artifacts recovered from thesecond proposed building area reflects depositional processes that indicated this area functioned either as a storage facility or as a refuse location. This explanation is supported by the lack of architectural features and by the artifact analyses reviewed above.

Conclusion

The building methods used by the Union Army at Camp Nelson did not leave many clues for archaeologists to discover. This may be due in part to how the Union Army perceived Camp Nelson and the buildings it contained. When construction on Camp Nelson began in 1863, the Camp's purpose was to function as a supply base and recruitment center for the Army of the Ohio. As the war progressed and the military front moved south, the importance of the Camp as a supply center lessened as supply lines became longer. Rumors even began to circulate in and around

Camp Nelson shortly after Burnside's December 1863 Knoxville Campaign that the Camp was to be closed and moved closer to the front (Peter 1976:51). Instead Camp Nelson remained opened for the duration of the war.

The Union Army viewed Camp Nelson, then, as an impermanent military installation whose existence they tied closely to the services it provided. As the Union Army moved farther south away from Camp Nelson, many services and facilities available at the Camp became unnecessary. One example is the Nelson General Hospital. It was closed before the end of the war and the buildings used for other purposes. The nature of Camp Nelson's occupation reflects observations made by Kent (1991, 1992). She said that the duration of occupation has a direct correlation between attributes such as the substantiality of structures, the number of features, and site size. If her observation holds true for mid-19th century military practices, then, Camp Nelson would reflect the same characteristics.

The structures built at Camp Nelson by the Union Army, then, were not meant to last. Instead the Union Army built them for their functionality with the idea that they would no longer need them after the end of the war. Such a desire precludes building substantial structures that were costly in both time, men, and money. It appears, then, that Kent's (1991, 1992) observation is consistent with Camp Nelson's occupation.

Though Camp Nelson is a Civil War military supply center, the Machine Shop is in itself an industrial styled center. Having heavy machinery and processing raw materials, the machine shop can be argued to be more similar to a mid 18th century industrial complex than a mid 18th century military complex. There are a couple of examples that show this relationship - the Grueber

Wagon Works in Pennsylvania (Sande 1976), the Wilkinson Mill Machine Shop at Slater Mill Historic Site in Rhode Island (Penn 1980), the Alexander Wilson Agricultural Works Complex in Delaware (HABS DE-209), and the Civil War era Tannehill forge and blast furnace in Alabama (Jones and Meyer 1992). These sites, though not all were explored archaeologically, have characteristics that are similar to the Machine Shop and hold clues to how the building itself may have been designed. Two of the sites, the Gruber Wagon Works and the Wilkinson Mill Machine Shop have descriptions describing their interior, an architectural description and photographs are available for the Alexander Wilson Agriculture Works, and the Tannehill forge and blast furnace is described by its archaeological remnants.

Good descriptions of the interior layout of a typical mid-nineteenth century machine mill are provided for the Gruber Mill and the Wilkinson Mill Machine Shop. The Gruber Wagon Works is a mid 19th century industrial facility that built wagons under the Gruber Wagon name. The interior of the facility has been described as containing a blacksmithing, wood, and bench work areas on the second floor with the second floor storing the finished wagons (Sande 1976:78-79). A similar, but more detailed description is provided for the Wilkinson Mill Machine Shop. It is described as follows:

The drilling, milling, planing, and turning machines are arranged throughout the shop between the workbenches and tool cabinets that line each wall and are connected to the overhead shaft by leather belts (Penn 1980:63).

These two descriptions provide a unique look into the complex structure comprising a machine shop. They describe the how the interior is divided into specialized compartments for specific

tasks.

The interior descriptions provided above describe the function and working complexities of each of the Machine Shops. A unique and insightful perspective of the structure and framing of a typical mid-19th century machine shop is provided in the Historic American Building Survey recording of the Wilson Alexander Agricultural Works Complex (HABS DE-209). This machine shop was completed circa 1851 and produced metal agriculture material for the surrounding community until 1895. Since the two machine shops were built about the same time and served a similar purpose, it is likely then that the Camp Nelson Machine Shop and the Wilson Alexander Agricultural Works Complex share similar properties. An examination of Figures 30 through 39 provides some clues to how the Camp Nelson Machine Shop may have appeared.

Figure 30 shows the exterior of the Wilson Alexander Agricultural Works Complex. When compared with Figure 6, the two structures look very similar. Each building on the first floor has large doors that open to the outside allowing for large items to pass inside. They also share a similarity with a row of windows on the second floor. Figure 31 shows an architectural drawing of the structure. The vertical boards under the modern shingles are also similar to those shown in the Machine Shop photograph (Figure 6). More will be said about the second floor in the following paragraphs.

The interior of the first floor is shown in Figures 32 and 33 and 34. The organization of space for the two floors is shown in Figure 32. Figure 33 shows the forge hearth remains in the southwest corner of the east bay. Figure 34 shows a storage cupboard in the west room. The interior of the Machine shop may resemble these photographs. The evidence for blacksmithing

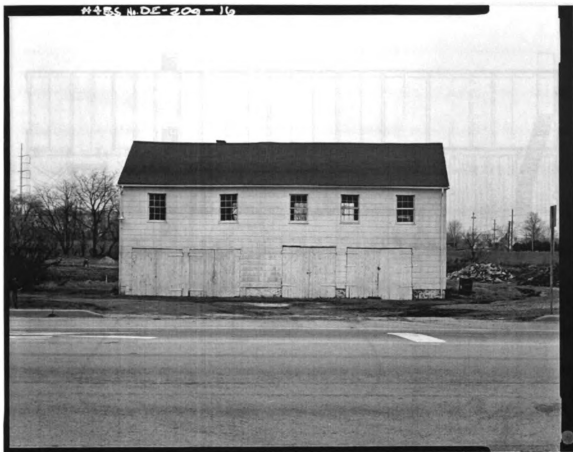


Figure 30. Wilson Alexander Agricultural Works Complex. South Front of the Machine Shop (DE-209-16).

activities in and around the Camp Nelson Machine shop may have mirrored activities of the blacksmithing facilities at the Wilson Alexander Agricultural Works Complex.

One difference between the two structures is the 2nd floor. Figure 6 shows that the Camp Nelson Machine Shop does not show a large space between the roof and the windows of the 2nd floor. Since some of the Camp Nelson Machine Shop machines were driven by belts and pulleys, it is possible that a large space on the 2nd floor was occupied by this equipment. However, it is also possible that the 2nd floor did contain workshops as indicated in Figure 35, 36 and 37 of

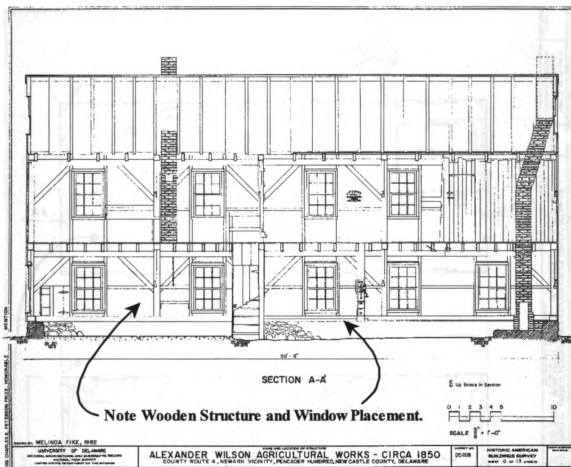


Figure 31. Wilson Alexander Agricultural Works Complex. Cutaway View Showing Structural Cross Section (DE-209-Sheet 10).

Wilson Alexander Agricultural Works Complex. Shown in Figure 34 is the East Gable Bay of the second floor. This photograph shows a brightly light and spacious work area. Figure 35 shows the southwest corner of an office. And shown in Figure 36 shows a tarring bench in the west gable bay. The second floor was accessible by a staircase near the south entrance. This is shown in Figure 38. It is possible, then, that the second floor of the Camp Nelson Machine shop contained a combination of offices, work areas, and machinery. This would reflect the verbal description provided by Sandee (1976) and Penn (1980).

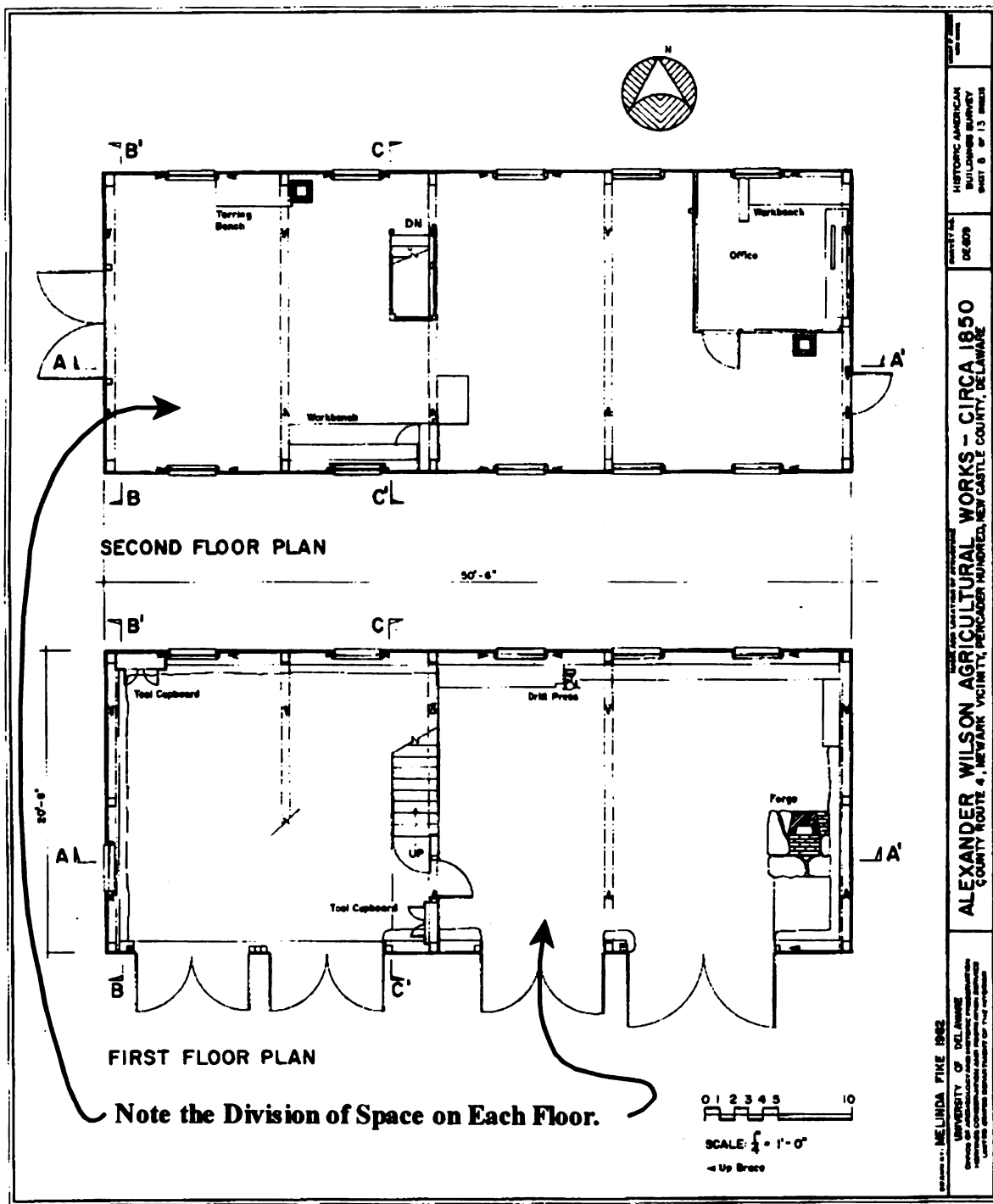


Figure 32. Wilson Alexander Agricultural Works Complex. Planviews of the 1st and 2nd Floors (DE-209-Sheet 8).



Figure 33. Wilson Alexander Agricultural Works Complex. First Floor Forge Hearth Remains. (DE-209-18).

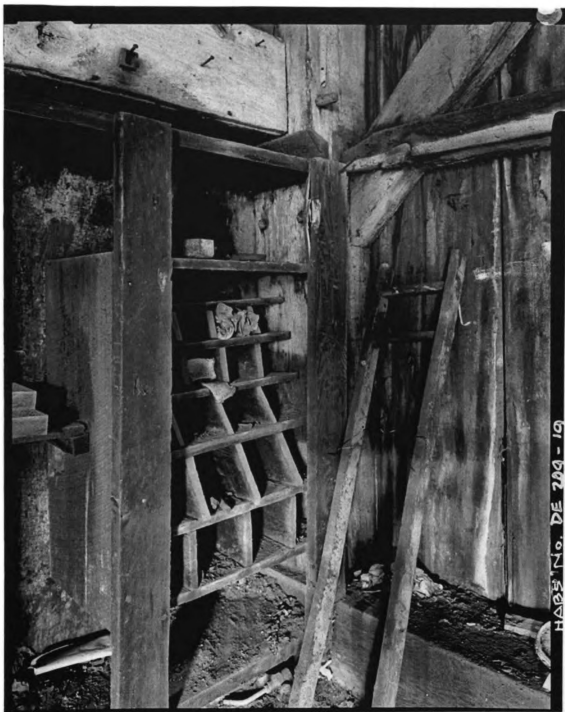


Figure 34. Wilson Alexander Agricultural Works Complex. First Floor Storage Cupboard.
(DE-209-19).



Figure 35. Wilson Alexander Agricultural Works Complex. Stairs from the First Floor. (DE-209-20).



Figure 36. Wilson Alexander Agricultural Works Complex. East Gable Bay on the Second Floor. (DE-209-22).

Probably the most interesting photograph of the Wilson Alexander Agricultural Works Complex is Figure 39. This photograph shows the framework of the building. Note the timber frame resting on top of the stone foundation. This photograph is a likely indicator of the building practices used to construct the Camp Nelson Machine Shop.

Archaeological excavations at the Tannehill site by Jones and Meyer recovered some useful archaeological information about the composition of the site. Of the archaeological material recovered from the site, metal hardware made up the largest analytical group (60.8%).

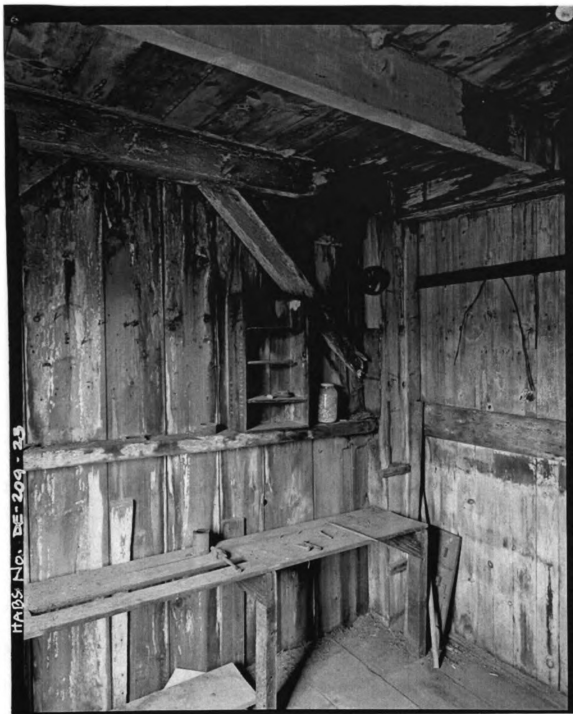


Figure 37. Wilson Alexander Agricultural Works Complex. Southeast corner of the office on the Second Floor. (DE-209-23).



Figure 38. Wilson Alexander Agricultural Works Complex. Tarring Bench on the Second Floor. (DE-209-22).



Figure 39. Wilson Alexander Agricultural Works Complex. Structural Frame Revealed During Demolition. (DE-209-26).

Interestingly, nails dominate the whole assemblage ($n=586$) accounting for 54.6% of the recovered material (Jones and Meyer 1992:98-99). Unfortunately the level of analysis did not include a description of the nail's condition as being either unaltered, pulled, or clinched. In contrast to the vase assemblage of window flat glass recovered from the Camp Nelson Machine Shop, the quantity of flat window glass recovered from the Tannehill site is quite small ($n=20$) (Jones and Meyer 1992:99).

Though the two structures had similar functions and were in use during the same time, the

differences in the artifact assemblage can be attributed to two factors, the type of structural destruction associated with each structure, and the recovery methods employed at each site. At the Tannehille site, dismantling and removal of structural components as occurred with it was destroyed by Union soldiers in 1865 (Jones and Meyer 1992:9) while the Camp Nelson Machine Shop was likely dismantled and sold at auction along with the rest of the camp's structures and equipment.

Another factor that may have had an influence on the assemblages was the data collections methods used at each site. At the Tannehill site, for example, a combination of mechanical stripping and trenching was used to uncover foundations and architectural features. Artifacts were collected as they were observed during this excavation. Only one part of the site, an area designated as Structure I, was hand excavated. Jones and Meyer (1992:103) suggest that this structure may have served as a blower house. In contrast, the data recovery levels at the Camp Nelson Machine Shop were divided into three stages of increasing data recovery, shovel testing, formal excavation units, and finally mechanical removal of overburden.

Excavations at 15 Js 96, 15 Js 97, and 15 Js 113 exposed only seven structural features associated with the Civil War in an area where Miller's 1866 of Camp Nelson map shows twenty-six structures. Of these, the Machine Shop's limestone foundation, a chimney foundation at 15 Js 96, and the antebellum Owen's House foundation were the only substantial structural feature recovered. The Machine Shop's limestone foundation is an exception to the impermanent construction technique employed at Camp Nelson. This is likely due to the need to support the heavy machinery employed at the shop. The remaining structural features include two cellar pits,

the remnants of the ornamental fountain in front of the Headquarters building, and a stone floor for a blacksmith shop that is not on Miller's map. Apparently the impermanent nature of Camp Nelson's structures affected how they would be visible in the archaeological record. A review of a typical Civil War era barracks photograph (Figure 40) and an architectural drawing (Figure 41) for structures similar to those built at Camp Nelson shows that the Union Army built these structures on top of the ground (Nelson 1982). This may be the reason for the paucity of building related features.



Figure 40. An Example of Impermanent Barracks Foundation.

Unlike most other Civil War sites that have been explored utilizing shovel probing, Camp Nelson is unique for several reasons. The duration of occupation and the types of activities that

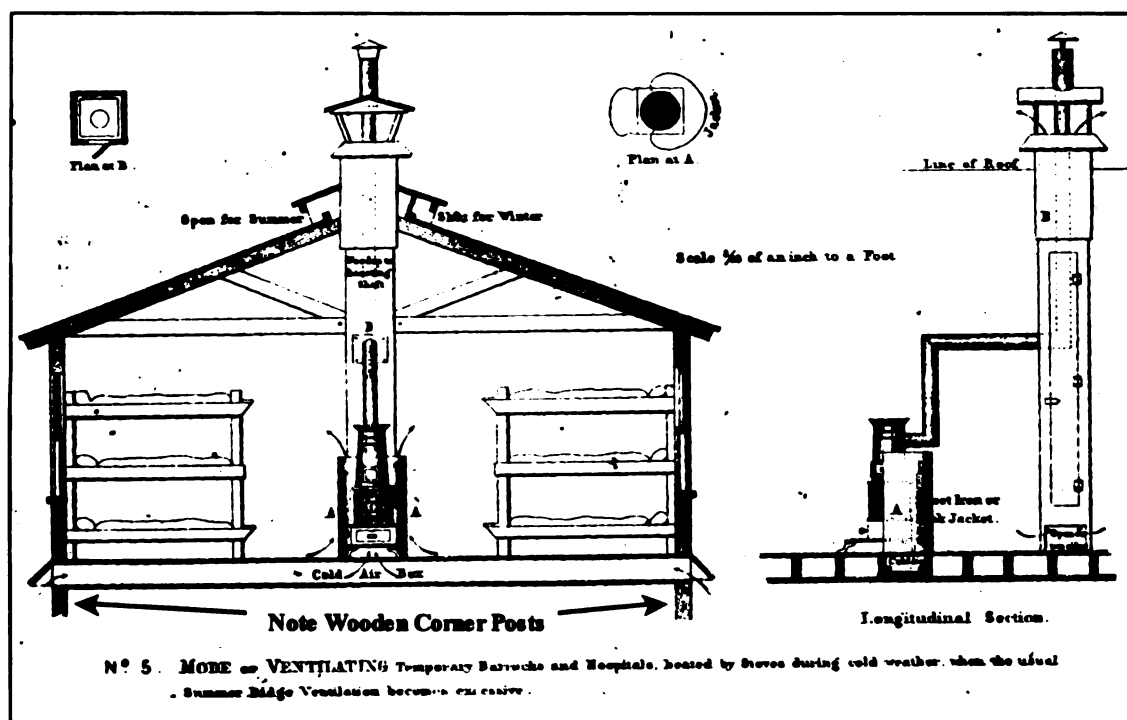


Figure 41. Architectural Drawing Showing Impermanent Foundation.

occurred at Camp Nelson left ample archaeological evidence. These were easily recovered from shovel probes. However, a few archaeologists have questioned the use of shovel probing on Civil War sites as a valid method for site discovery (Legg and Smith 1989) and others have debated its use in general archaeological research (Lightfoot 1989; Nance and Ball 1989; Shott 1989). After conducting methodological shovel testing and metal detector surveys, Klien, Theriot, and Chapin (1999) suggests that a combination of the two research methodologies may be more productive for locating Civil War sites. And as was shown in the archaeological survey of Wildcat Battlefield by McBride (1998) both shovel probing and metal detector surveying yielded mixed results. It is clear that shovel probing is a poor tool for site discovery for Civil War camps with short occupations or for battlefield sites. Metal detector surveys are more productive on these types of

sites. However, at Camp Nelson, shovel probing was successfully implemented. A vast array of Civil War related artifacts were recovered in sufficient quantity to conduct analysis and to guide further excavations. Camp Nelson as an entity would have been nearly impossible to miss through shovel probing, but individual components of the camp may be missed.

Although shovel testing at the Machine Shop showed that it was a viable tool for testing Civil War era military sites, it may not be a good tool for utilization on other Civil War sites. The Machine Shop is a unique structure at Camp Nelson. Most of the structures built by the Union army did not have large weight bearing foundations nor did they produce goods from raw materials. Gordon (2000) has suggested that to better understand an industrial site, the working context need to be understood. For the Camp Nelson Machine Shop, this meant that a better understanding of the equipment in use at the site should lead to a better understanding of the complex as a whole. It may even help to explain the artifact distributions (Harris and Elms 1996). The artifacts recovered from the Machine Shop area may more closely reflect a pattern similar to industrial sites than to a Civil War military site. More research will need to be on industrial sites to look at more closely the artifact distribution within a shovel probe research design.

The utilization of shovel probes on Civil War sites is not at a total loss. The artifacts are there to be recovered, however their density is less than those for other sites. Does this mean that a sampling strategy designed for an artifact dense site will work as well as on a Civil War archaeological site? Probably not. If a site is known to be related to the Civil War, then the shovel testing methodology should take into consideration the reduced artifact density associated with such sites and adjust the testing methodology accordingly.

In this thesis I have attempted to show that analysis of artifact clusters can be a viable tool for conducting spatial analysis. I have also attempted to show that shovel probing, at least in the case of Camp Nelson, can be a valuable tool for site discovery and exploration. The spatial exploration of Camp Nelson has just begun. As analytical methodologies and computer software make advances, a better understanding of the spatial complexities of Camp Nelson will be discovered.

Appendix A. Artifacts From Shovel Probes.

North	East	Zone	Group ¹	Artifact	Count
775	140	Z 2	O	Other Stone - Unidentified	
775	155	Z 1B	O	Other Stone - Unidentified	
790	140	Z 1B	O	Other Stone - Unidentified	
790	155	Z 1B	K	Ironstone: Undecorated White	1
790	155	Z 1B	K	Undetermined Glass Body, Unidentified Manufacture	1
822	140	Z 1B	O	Other Stone - Unidentified	
828	140	Z 2	O	Other Stone - Unidentified	
828	140	Z 1A	O	Other Stone - Unidentified	
828	155	Z 2	A	Flat Glass, Blue-green	1
828	155	Z 1	O	Other Stone - Unidentified	
835	132	Z 3	O	Other Metal - Unidentified	5
835	140	Z 1B	O	Other Stone - Unidentified	
843	120	Z 1	A	Late cut nail, 8d	1
843	120	Z 1	A	Late cut nail, 6d	2
843	120	Z 1	A	Late cut nail, 5d	1
843	120	Z 1	A	Late cut nail, Distal	4
843	120	Z 1	A	Late cut nail, Proximal	13
843	120	Z 1	A	Late cut nail, 12d	1
843	120	Z 1	A	Late cut nail, 10d	1
843	120	Z 2	A	Flat Glass, Blue-green	1
843	120	Z 2	A	Late cut nail, 6d	1
843	120	Z 1	A	Late cut nail, 9d	1
843	120	Z 1	A	Late cut nail, 4d	3
843	120	Z 1	A	Flat Glass, Blue-green	1
843	120	Z 1	A	Cut nail unspecified	5
843	120	Z 1	A	Metal Band	3
843	120	Z 2	A	Cut nail unspecified	3
843	120	Z 2	A	Late cut nail, 12d	1
843	120	Z 1	T	Metal Wagon Part	1
843	125	Z 3	A	Late cut nail, 7d	1
843	125	Z 3	A	Cut nail unspecified	1
843	125	Z 2	A	Late cut nail, Proximal	3
843	125	Z 2	A	Cut nail unspecified	3
843	125	Z 2	K	Whiteware: Annular	1

Appendix A (cont'd)

843	125	Z 2	A	Flat Glass, Blue-green	1
843	125	Z 2	K	Bottle/Jar Body, Unidentified Manufacture	1
843	125	Z 2	A	Late cut nail, 4d	1
843	132	Z 3	A	Cut nail unspecified	1
850	110	Z 1	K	Bottle/Jar Lip, Hand Formed	2
850	110	Z 1	K	Bottle/Jar Body, Blown Molded	11
850	110	Z 2	K	Bottle/Jar Body, Blown Molded	2
850	110	Z 1	K	Domestic Stoneware: Salt Glazed w/Albany Slip Interior	1
850	110	Z 1	A	Late cut nail, Proximal	4
850	110	Z 1	A	Late cut nail, 9d	1
850	110	Z 1	A	Late cut nail, 10d	2
850	110	Z 1	O	Other Metal - Unidentified	1
850	110	Z 2	A	Flat Glass, Blue-green	1
850	110	Z 1	A	Late cut nail, 12d	1
850	110	Z 1	A	Cut nail unspecified	2
850	110	Z 2	A	Late cut nail, Proximal	1
850	110	Z 1	A	Late cut nail, 5d	2
850	110	Z 1	A	Late cut nail, 7d	1
850	110	Z 1	A	Late cut nail, 2d	1
850	110	Z 1	A	Flat Glass, Blue-green	3
850	110	Z 1	A	Late cut nail, 4d	2
850	120	Z 1	K	Bottle/Jar Body, Blown Molded	1
850	120	Z 1	A	Flat Glass, Blue-green	1
850	120	Z 1	A	Late cut nail, 5d	1
850	120	Z 1	A	Late cut nail, Proximal	2
850	120	Z 1	K	Undetermined Glass Body, Machine Made	1
850	125	Z 1	K	Ironstone: Undecorated White	1
850	125	Z 1	K	Bottle/Jar Body, Blown Molded	1
850	125	Z 1	K	Whiteware: Annular	1
850	140	Z 1	A	Cut nail unspecified	2
850	155	Z 1	O	Other Stone - Unidentified	
850	155	Z 2	A	Flat Glass, Blue-green	1
858	125	Z 1	A	Late cut nail, 9d	1
858	140	Z 2	O	Other Stone - Unidentified	
858	140	Z 1B	A	Bolt	1

Appendix A (cont'd)

865	110	Z 1	A	Late cut nail, 8d	1
865	110	Z 1	A	Flat Glass, Blue-green	1
865	110	Z 1	K	Bottle/Jar Lip, Unfused Finish/Early Lipping Tool	2
865	110	Z 1	A	Cut nail unspecified	2
865	110	Z 1	K	Bottle/Jar Body, Blown Molded	8
865	110	Z 1	C	Glass Button	1
865	140	Z 1	A	Late cut nail, Proximal	1
865	170	Z 3	K	Whiteware: Undecorated	1
865	170	Z 3	J	File	1
880	125	Z 1	O	Other Biological - Unidentified	1
880	125	Z 1	K	Bottle/Jar Body, Unidentified Manufacture	1
880	140	Z 3	A	Late cut nail, 12d	1
880	155	Z 2	A	Flat Glass, Blue-green	2
880	155	Z 2	A	Late cut nail, Proximal	1
880	170	Z 1	K	Domestic Stoneware: Salt Glazed Undecorated	1
880	170	Z 1	A	Flat Glass, Blue-green	2
880	170	Z 1	A	Wire nail, 12d	1
880	185	Z 1	K	Bottle/Jar Body, Unidentified Manufacture	1
888	170	Z 1	A	Late cut nail, Proximal	1
888	170	Z 1	A	Metal Wire	1
888	170	Z 1	A	Late cut nail, 9d	1
888	170	Z 1	C	Metal Button, Military Other	1
888	170	Z 1	A	Flat Glass, Blue-green	3
888	170	Z 1	A	Brick, Fragment (Not Identifiable)	2
895	110	Z 1	A	Cut nail unspecified	1
895	140	Z 2	A	Flat Glass, Blue-green	1
895	155	Z 1	K	Burned/Melted Unidentified Glass	1
895	155	Z 1	A	Flat Glass, Blue-green	1
895	163	Z 1	A	Flat Glass, Blue-green	2
895	163	Z 1	A	Late cut nail, Proximal	2
895	170	Z 1	A	Brick, Hand Made, Unglazed	2
895	170	Z 1	A	Late cut nail, Proximal	4
895	170	Z 1	A	Late cut nail, 6d	1
895	170	Z 1	A	Brick, Fragment (Not Identifiable)	56
895	170	Z 1	A	Late cut nail, 4d	4

Appendix A (cont'd)

895	170	Z 1	A	Late cut nail, 3d	1
895	170	Z 1	A	Flat Glass, Blue-green	20
895	170	Z 1	A	Cut nail unspecified	4
895	170	Z 1	O	Other Biological - Unidentified	3
895	170	Z 1	O	Other Metal - Unidentified	1
895	170	Z 2	A	Brick, Fragment (Not Identifiable)	5
895	177	Z 2	A	Brick, Fragment (Not Identifiable)	1
895	177	Z 1	A	Brick, Fragment (Not Identifiable)	4
895	177	Z 1	A	Late cut nail, 3d	1
895	177	Z 2	A	Flat Glass, Blue-green	2
895	177	Z 1	A	Flat Glass, Blue-green	2
895	177	Z 1	K	Bottle/Jar Body, Blown Molded	2
895	177	Z 1	O	Other Metal - Unidentified	2
895	177	Z 2	A	Cut nail unspecified	5
895	177	Z 1	A	Cut nail unspecified	2
895	177	Z 2	A	Late cut nail, Proximal	3
895	177	Z 1	A	Late cut nail, Proximal	3
900	164	Z 4	A	Cut nail unspecified	1
900	164	Z 2	A	Late cut nail, Proximal	6
900	164	Z 2	K	Bottle/Jar Body, Blown Molded	1
900	164	Z 2	A	Flat Glass, Blue-green	4
900	164	Z 2	A	Cut nail unspecified	2
900.3	164.75	Z 1	O	Other Metal - Unidentified	1
900.3	164.75	Z 1	A	Flat Glass, Blue-green	6
900.3	164.75	Z 1	F	Stone Flower Pot	1
900.3	164.75	Z 2	A	Cut nail unspecified	1
900.3	164.75	Z 2	A	Brick, Fragment (Not Identifiable)	3
900.3	164.75	Z 2	A	Late cut nail, Proximal	3
900.3	164.75	Z 2	A	Flat Glass, Blue-green	7
902	170	Z 2	A	Cut nail unspecified	2
902	170	Z 1	A	Late cut nail, Proximal	1
902	170	Z 3	A	Flat Glass, Blue-green	1
902	170	Z 1	A	Cut nail unspecified	1
902	170	Z 1	A	Brick, Fragment (Not Identifiable)	4
902	170	Z 2	A	Flat Glass, Blue-green	266

Appendix A (cont'd)

902	170	Z 2	K	Bottle/Jar Body, Blown Molded	2
902	170	Z 1	X	Coal	1
902	170	Z 1	A	Flat Glass, Blue-green	270
902	170	Z 2	A	Metal Tack	2
902	170	Z 4	A	Flat Glass, Blue-green	1
910	110	Z 1	A	Metal Wire	1
910	110	Z 1	A	Metal Band	1
910	155	Z 1	A	Cut nail unspecified	1
910	163	Z 1	A	Flat Glass, Blue-green	2
910	163	Z 1	A	Brick, Fragment (Not Identifiable)	1
910	163	Z 1	A	Cut nail unspecified	1
910	170	Z 1	A	Flat Glass, Blue-green	24
910	170	Z 1	A	Late cut nail, 5d	1
910	170	Z 1	A	Cut nail unspecified	2
910	170	Z 1	A	Late cut nail, 10d	1
910	170	Z 1	A	Late cut nail, 6d	1
910	170	Z 1	A	Late cut nail, Proximal	2
910	170	Z 1	A	Late cut nail, 4d	6
910	177	Z 2	T	Animal Shoe Nail	1
910	177	Z 3	A	Cut nail unspecified	1
910	177	Z 2	A	Flat Glass, Blue-green	6
910	177	Z 2	A	Cut nail unspecified	6
910	177	Z 2	A	Late cut nail, Proximal	2
910	177	Z 1	A	Flat Glass, Blue-green	1
910	177	Z 2	A	Late cut nail, 6d	1
910	183	Z 2	A	Late cut nail, 4d	2
910	183	Z 2	A	Flat Glass, Blue-green	2
910	183	Z 1	A	Late cut nail, Proximal	1
910	183	Z 1	A	Late cut nail, 4d	1
910	183	Z 1	A	Cut nail unspecified	2
917	170	Z 1B	A	Flat Glass, Blue-green	5
917	170	Z 1B	A	Cut nail unspecified	1
917	170	Z 1B	A	Late cut nail, Proximal	1
917	170	Z 1A	A	Late cut nail, Proximal	1
917	170	Z 1A	A	Late cut nail, 8d	2

Appendix A (cont'd)

917	170	Z 2	A	Cut nail unspecified	1
917	170	Z 1A	A	Flat Glass, Blue-green	2
925	170	Z 1	A	Late cut nail, 4d	1
925	170	Z 1	A	Flat Glass, Blue-green	1
925	170	Z 1	A	Late cut nail, Proximal	1
940	110	Z 1	A	Late cut nail, Proximal	1
940	110	Z 1	A	Flat Glass, Blue-green	1
940	110	Z 1	K	Bottle/Jar Body, Blown Molded	1
940	125	Z 1	A	Late cut nail, 6d	1
940	125	Z 1	A	Flat Glass, Blue-green	4
940	140	Z 2	A	Flat Glass, Blue-green	2
940	170	Z 1	A	Metal Staple	1
940	170	Z 1	A	Cut nail unspecified	1
948	132	Z 2	O	Other Stone - Unidentified	
948	132	Z 1	A	Late cut nail, Proximal	3
948	132	Z 1	A	Metal Band	1
948	132	Z 1	X	Charcoal	1
948	132	Z 1	A	Late cut nail, 6d	2
948	132	Z 1	X	Coal	1
948	132	Z 1	A	Late cut nail, 8d	1
948	132	Z 1	A	Cut nail unspecified	1
948	132	Z 1	A	Flat Glass, Blue-green	12
948	132	Z 1	A	Metal Wire	1
948	132	Z 1	J	Bar Stock (Blacksmithing)	1
948	140	Z 1	A	Metal Band	6
948	140	Z 1	A	Late cut nail, 6d	1
948	140	Z 1	A	Late cut nail, 4d	3
948	140	Z 1	A	Bolt	2
948	140	Z 1	A	Unidentified Nail	2
948	140	Z 1	X	Coal	3
948	140	Z 2	A	Flat Glass, Blue-green	3
948	140	Z 1	X	Coal Cinder/Slag	1
948	140	Z 1	A	Late cut nail, Proximal	9
948	140	Z 1	A	Late cut nail, 10d	3
948	140	Z 1	A	Screw, Pointed End	1

Appendix A (cont'd)

948	140	Z 1	A	Cut nail unspecified	12
948	140	Z 1	A	Flat Glass, Blue-green	82
948	147	Z 2	A	Late cut nail, 6d	1
948	147	Z 2	A	Late cut nail, 4d	1
948	147	Z 2	A	Cut nail unspecified	16
948	147	Z 2	A	Late cut nail, 8d	1
948	147	Z 2	O	Other Metal - Unidentified	4
948	147	Z 2	A	Late cut nail, Proximal	24
948	147	Z 2	A	Late cut nail, 5d	1
948	147	Z 2	A	Bolt	1
948	147	Z 2	A	Metal Band	1
948	162	Z 2	O	Other Stone - Unidentified	
955	125	Z 1	A	Flat Glass, Blue-green	17
955	125	Z 1	T	Metal Harness Part	1
955	125	Z 1	A	Late cut nail, 6d	1
955	132	Z 1	X	Coal	1
955	132	Z 2	A	Flat Glass, Blue-green	3
955	132	Z 1	A	Bolt	1
955	132	Z 1	A	Flat Glass, Blue-green	8
955	132	Z 2	A	Late cut nail, Proximal	1
955	141	Z 2	A	Late cut nail, 4d	1
955	141	Z 2	A	Metal Band	1
955	141	Z 1	A	Screw, Undetermined/Broken	1
955	141	Z 2	A	Flat Glass, Blue-green	12
955	141	Z 1	K	Bottle/Jar Body, Blown Molded	8
955	141	Z 2	A	Cut nail unspecified	4
955	141	Z 1	A	Late cut nail, 4d	3
955	141	Z 1	A	Late cut nail, Proximal	22
955	141	Z 1	A	Flat Glass, Blue-green	36
955	141	Z 1	A	Cut nail unspecified	6
955	141	Z 1	A	Late cut nail, 6d	2
955	141	Z 2	A	Late cut nail, Proximal	9
955	141	Z 1	A	Late cut nail, 8d	1
955	141	Z 1	A	Late cut nail, 9d	1
955	141	Z 2	A	Flat Glass, Clear	1

Appendix A (cont'd)

955	141	Z 2	K	Bottle/Jar Body, Unidentified Manufacture	4
955	141	Z 1	O	Other Metal - Unidentified	3
955	141	Z 1	P	Coin	1
955	141	Z 1	K	Whiteware: Undecorated	1
955	147	Z 1	A	Cut nail unspecified	2
955	147	Z 1	A	Bolt	1
955	147	Z 1	A	Flat Glass, Blue-green	3
955	147	Z 1	C	Metal Eyelet/Grommet	1
955	147	Z 1	A	Late cut nail, 9d	1
955	147	Z 1	A	Metal Band	2
955	147	Z 1	A	Late cut nail, 8d	2
955	155	Z 1	O	Other Metal - Unidentified	3
955	155	Z 1	J	Bar Stock (Blacksmithing)	1
955	155	Z 1	A	Cut nail unspecified	11
955	155	Z 1	A	Metal Band	6
955	155	Z 2	A	Late cut nail, Proximal	1
955	155	Z 1	A	Flat Glass, Blue-green	1
955	155	Z 1	A	Late cut nail, 8d	4
955	155	Z 1	A	Late cut nail, Proximal	13
955	162	Z 1	A	Metal Washer	1
955	162	Z 1	K	Undetermined Glass Body, Machine Made	2
955	162	Z 1	T	Animal Shoe Nail	1
955	162	Z 1	T	Metal Carriage Part	1
955	162	Z 1	A	Screw, Pointed End	1
962	132	Z 1	A	Flat Glass, Blue-green	1
962	132	Z 1	C	Metal Suspender Clasp	1
962	140	Z 1	A	Flat Glass, Blue-green	5
962	140	Z 2	A	Flat Glass, Blue-green	3
962	140	Z 2	K	Bottle/Jar Body, Machine Made	1
962	148	Z 1	A	Late cut nail, Proximal	1
962	148	Z 1	A	Flat Glass, Blue-green	1
962	148	Z 2	A	Cut nail unspecified	1
962	148	Z 1	T	Metal Harness Part	1
962	155	Z 1	A	Metal Band	1
962	155	Z 1	A	Late cut nail, 4d	2

Appendix A (cont'd)

962	155	Z 1	A	Cut nail unspecified	7
962	155	Z 1	J	Bar Stock (Blacksmithing)	2
962	155	Z 1	A	Flat Glass, Blue-green	1
962	155	Z 1	K	Undetermined Glass Body, Unidentified Manufacture	1
962	155	Z 1	K	Bottle/Jar Body, Blown Molded	1
962	155	Z 1	A	Metal Washer	1
962	155	Z 1	T	Metal Harness Part	1
962	155	Z 2	A	Late cut nail, 4d	2
962	162	Z 1	K	Bottle/Jar Body, Unidentified Manufacture	1
962	162	Z 1	A	Metal Band	1
962	162	Z 2	A	Cut nail unspecified	1
962	162	Z 2	K	Bottle/Jar Body, Blown Molded	1
962	162	Z 1	A	Late cut nail, 8d	1
962	162	Z 1	A	Cut nail unspecified	1
962	162	Z 2	A	Late cut nail, 4d	2
962	162	Z 2	A	Late cut nail, Proximal	1
962	162	Z 1	A	Flat Glass, Blue-green	3
Total					1428

¹ Key

A = Architecture	C = Clothing
F = Furniture	J = Job/Activity
K = Kitchen	O = Other
P = Personal	R = Arms
T = Transportation	X = Fuel

[illegible]

Appendix B. Artifacts From Machine Shop Excavation Units.

Units	Zone	North	East	Group ¹	Text	Count
U 11	Z 1A	903	169.5	A	Brick, Hand Made, Unglazed	1
U 11	Z 1A	903	169.5	A	Flat Glass, Blue-green	29
U 11	Z 1A	903	169.5	A	Late cut nail, Proximal	2
U 11	Z 1A	903	169.5	A	Screw, Pointed End	1
U 11	Z 1A	903	169.5	K	Burned/Melted Unidentified Glass	2
U 11	Z 1B	903	169.5	A	Asphalt, Shingle	1
U 11	Z 1B	903	169.5	A	Brick, Fragment (Not Identifiable)	17
U 11	Z 1B	903	169.5	A	Cut nail unspecified	44
U 11	Z 1B	903	169.5	A	Early cut nail, 3d	4
U 11	Z 1B	903	169.5	A	Flat Glass, Blue-green	483
U 11	Z 1B	903	169.5	A	Late cut nail, 10d	1
U 11	Z 1B	903	169.5	A	Late cut nail, 2d	3
U 11	Z 1B	903	169.5	A	Late cut nail, 3d	19
U 11	Z 1B	903	169.5	A	Late cut nail, 4d	12
U 11	Z 1B	903	169.5	A	Late cut nail, 5d	1
U 11	Z 1B	903	169.5	A	Late cut nail, 6d	6
U 11	Z 1B	903	169.5	A	Late cut nail, 7d	3
U 11	Z 1B	903	169.5	A	Late cut nail, 8d	2
U 11	Z 1B	903	169.5	A	Late cut nail, Proximal	76
U 11	Z 1B	903	169.5	A	Screw, Pointed End	1
U 11	Z 1B	903	169.5	A	Wrought nail, 2d	1
U 11	Z 1B	903	169.5	A	Wrought nail, 3d	1
U 11	Z 1B	903	169.5	K	Bottle/Jar Body, Blown Molded	1
U 11	Z 1B	903	169.5	K	Burned/Melted Unidentified Glass	63
U 11	Z 1B	903	169.5	K	Undetermined Glass Body, Unidentified	1
U 11	Z 1B	903	169.5	K	Whiteware: Blue Shell Edge Straight Rim	1
U 11	Z 1B	903	169.5	O	Other Metal - Unidentified	1
U 11	Z 2	903	169.5	A	Brick, Fragment (Not Identifiable)	46
U 11	Z 2	903	169.5	A	Cut nail unspecified	135
U 11	Z 2	903	169.5	A	Flat Glass, Blue-green	2075
U 11	Z 2	903	169.5	A	Late cut nail, 10d	4
U 11	Z 2	903	169.5	A	Late cut nail, 12d	2
U 11	Z 2	903	169.5	A	Late cut nail, 2d	4
U 11	Z 2	903	169.5	A	Late cut nail, 30d	1

Appendix B (cont'd)

U 11	Z 2	903	169.5	A	Late cut nail, 3d	49
U 11	Z 2	903	169.5	A	Late cut nail, 4d	36
U 11	Z 2	903	169.5	A	Late cut nail, 5d	7
U 11	Z 2	903	169.5	A	Late cut nail, 6d	34
U 11	Z 2	903	169.5	A	Late cut nail, 7d	4
U 11	Z 2	903	169.5	A	Late cut nail, 8d	6
U 11	Z 2	903	169.5	A	Late cut nail, 9d	1
U 11	Z 2	903	169.5	A	Late cut nail, Proximal	170
U 11	Z 2	903	169.5	A	Metal Band	4
U 11	Z 2	903	169.5	A	Metal Brad	2
U 11	Z 2	903	169.5	A	Metal Wire	1
U 11	Z 2	903	169.5	A	Mortar	1
U 11	Z 2	903	169.5	A	Screw, Pointed End	2
U 11	Z 2	903	169.5	K	Bottle/Jar Body, Blown Molded	6
U 11	Z 2	903	169.5	K	Burned/Melted Unidentified Glass	98
U 11	Z 2	903	169.5	K	Tin Can Rim	1
U 11	Z 2	903	169.5	K	Undetermined Glass Body	1
U 11	Z 2	903	169.5	O	Other Biological - Unidentified	9
U 11	Z 2	903	169.5	O	Other Metal - Unidentified	14
U 11	Z 2	903	169.5	P	Marble	1
U 11	Z 2	903	169.5	P	Watch Part	1
U 11	Z 2	903	169.5	R	Percussion Cap	1
U 11	Z 2	903	169.5	X	Charcoal	4
U 11	Z 2	903	169.5	X	Coal	5
U 11	Z 2	903	169.5	X	Coal Cinder/Slag	2
U 11	Z 2&3	903	169.5	O	Other Stone - Unidentified	
U 12	U	891	168	A	Cut nail unspecified	1
U 12	U	891	168	A	Flat Glass, Blue-green	11
U 12	U	891	168	J	Other Metal Tool	4
U 12	U	891	168	O	Other Biological - Unidentified	1
U 12	Z 1A	891	168	A	Brick, Fragment (Not Identifiable)	29
U 12	Z 1A	891	168	A	Cut nail unspecified	5
U 12	Z 1A	891	168	A	Flat Glass, Blue-green	45
U 12	Z 1A	891	168	A	Late cut nail, 4d	2
U 12	Z 1A	891	168	A	Late cut nail, 5d	4

Appendix B (cont'd)

U 12	Z 1A	891	168	A	Late cut nail, 7d	2
U 12	Z 1A	891	168	A	Late cut nail, Proximal	11
U 12	Z 1A	891	168	J	Other Metal Tool	4
U 12	Z 1A	891	168	K	Bottle/Jar Body, Blown Molded	1
U 12	Z 1A	891	168	O	Other Biological - Unidentified	3
U 12	Z 1B	891	168	A	Brick, Fragment (Not Identifiable)	22
U 12	Z 1B	891	168	A	Cut nail unspecified	34
U 12	Z 1B	891	168	A	Flat Glass, Blue-green	246
U 12	Z 1B	891	168	A	Late cut nail, 12d	2
U 12	Z 1B	891	168	A	Late cut nail, 20d	1
U 12	Z 1B	891	168	A	Late cut nail, 2d	1
U 12	Z 1B	891	168	A	Late cut nail, 3d	5
U 12	Z 1B	891	168	A	Late cut nail, 4d	20
U 12	Z 1B	891	168	A	Late cut nail, 50d	1
U 12	Z 1B	891	168	A	Late cut nail, 5d	1
U 12	Z 1B	891	168	A	Late cut nail, 6d	5
U 12	Z 1B	891	168	A	Late cut nail, 7d	2
U 12	Z 1B	891	168	A	Late cut nail, 8d	1
U 12	Z 1B	891	168	A	Late cut nail, Proximal	26
U 12	Z 1B	891	168	A	Metal Band	1
U 12	Z 1B	891	168	C	Bone Button	1
U 12	Z 1B	891	168	C	Metal Button, Eagle Large	2
U 12	Z 1B	891	168	C	Metal Button, Military Other	1
U 12	Z 1B	891	168	J	Machinery:Other	2
U 12	Z 1B	891	168	J	Other Metal Tool	1
U 12	Z 1B	891	168	K	Bottle/Jar Body, Blown Molded	6
U 12	Z 1B	891	168	O	Other Biological - Unidentified	1
U 12	Z 1B	891	168	O	Other Metal - Unidentified	11
U 12	Z 1B	891	168	P	Unidentified Key or Pin	1
U 12	Z 1B	891	168	T	Metal Harness Part	2
U 12	Z 2	891	168	A	Brick, Fragment (Not Identifiable)	7
U 12	Z 2	891	168	A	Cut nail unspecified	16
U 12	Z 2	891	168	A	Flat Glass, Blue-green	42
U 12	Z 2	891	168	A	Late cut nail, 3d	1
U 12	Z 2	891	168	A	Late cut nail, 4d	14

Appendix B (cont'd)

U 12	Z 2	891	168	A	Late cut nail, 5d	1
U 12	Z 2	891	168	A	Late cut nail, 6d	3
U 12	Z 2	891	168	A	Late cut nail, 7d	1
U 12	Z 2	891	168	A	Late cut nail, 8d	3
U 12	Z 2	891	168	A	Late cut nail, Proximal	14
U 12	Z 2	891	168	A	Plumbing	1
U 12	Z 2	891	168	A	Wrought nail, Distal	1
U 12	Z 2	891	168	C	Metal Suspender Clasp	1
U 12	Z 2	891	168	J	Other Metal Tool	4
U 12	Z 2	891	168	K	Bottle/Jar Body, Blown Molded	5
U 12	Z 2	891	168	P	Smoking Pipe Part	1
U 12	Z 2	891	168	P	Token	1
U 12	Z 3	891	168	O	Other Stone - Unidentified	
U 13	Surfac	914	173	K	Tin Can Rim	2
U 13	Surfac	914	173	K	Tin Can Unidentified Body	4
U 13	Z 1A	914	173	A	Brick, Fragment (Not Identifiable)	1
U 13	Z 1A	914	173	A	Flat Glass, Blue-green	4
U 13	Z 1A	914	173	A	Late cut nail, Proximal	1
U 13	Z 1A	914	173	A	Metal Band	2
U 13	Z 1A	914	173	A	Screw, Pointed End	1
U 13	Z 1A	914	173	A	Screw, Undetermined/Broken	1
U 13	Z 1A	914	173	O	Other Metal - Unidentified	8
U 13	Z 1B	914	173	A	Brick, Fragment (Not Identifiable)	36
U 13	Z 1B	914	173	A	Cut nail unspecified	54
U 13	Z 1B	914	173	A	Flat Glass, Blue-green	307
U 13	Z 1B	914	173	A	Late cut nail, 10d	1
U 13	Z 1B	914	173	A	Late cut nail, 12d	2
U 13	Z 1B	914	173	A	Late cut nail, 16d	1
U 13	Z 1B	914	173	A	Late cut nail, 20d	2
U 13	Z 1B	914	173	A	Late cut nail, 3d	4
U 13	Z 1B	914	173	A	Late cut nail, 40d	1
U 13	Z 1B	914	173	A	Late cut nail, 4d	59
U 13	Z 1B	914	173	A	Late cut nail, 5d	3
U 13	Z 1B	914	173	A	Late cut nail, 6d	5
U 13	Z 1B	914	173	A	Late cut nail, 7d	3

Appendix B (cont'd)

U 13	Z 1B	914	173	A	Late cut nail, 8d	10
U 13	Z 1B	914	173	A	Late cut nail, Distal	0
U 13	Z 1B	914	173	A	Late cut nail, Proximal	33
U 13	Z 1B	914	173	F	Hinge	1
U 13	Z 1B	914	173	F	Other Furniture	1
U 13	Z 1B	914	173	K	Bottle/Jar Body, Blown Molded	2
U 13	Z 1B	914	173	K	Bottle/Jar Lip, Hand Formed	3
U 13	Z 1B	914	173	K	Tin Can Unidentified Body	2
U 13	Z 1B	914	173	K	Tin Cup	1
U 13	Z 1B	914	173	K	Undetermined Glass Body, Unidentified	8
U 13	Z 1B	914	173	O	Other Biological - Unidentified	200
U 13	Z 1B	914	173	O	Other Metal - Unidentified	7
U 13	Z 1B	914	173	O	Other Plastic - Unidentified	1
U 13	Z 1B	914	173	X	Coal	1
U 13	Z 2	914	173	A	Flat Glass, Blue-green	4
U 13	Z 2	914	173	A	Late cut nail, Proximal	1
U 14	Z 1A	903	171.5	A	Flat Glass, Blue-green	12
U 14	Z 1A	903	171.5	A	Late cut nail, Proximal	1
U 14	Z 1B	903	171.5	A	Brick, Fragment (Not Identifiable)	12
U 14	Z 1B	903	171.5	A	Cut nail unspecified	17
U 14	Z 1B	903	171.5	A	Flat Glass, Blue-green	339
U 14	Z 1B	903	171.5	A	Late cut nail, 10d	1
U 14	Z 1B	903	171.5	A	Late cut nail, 3d	2
U 14	Z 1B	903	171.5	A	Late cut nail, 4d	5
U 14	Z 1B	903	171.5	A	Late cut nail, 5d	1
U 14	Z 1B	903	171.5	A	Late cut nail, 6d	3
U 14	Z 1B	903	171.5	A	Late cut nail, Proximal	23
U 14	Z 1B	903	171.5	C	Metal Eyelet/Grommet	3
U 14	Z 1B	903	171.5	K	Bottle/Jar Base, Blown molded	1
U 14	Z 1B	903	171.5	K	Bottle/Jar Body, Blown Molded	14
U 14	Z 1B	903	171.5	K	Bottle/Jar Body, Unidentified Manufacture	10
U 14	Z 1B	903	171.5	K	Burned/Melted Unidentified Glass	11
U 14	Z 1B	903	171.5	O	Other Biological - Unidentified	6
U 14	Z 1B	903	171.5	O	Other Metal - Unidentified	1
U 14	Z 2	903	171.5	A	Brick, Fragment (Not Identifiable)	1

Appendix B (cont'd)

U 14	Z 2	903	171.5	A	Cut nail unspecified	30
U 14	Z 2	903	171.5	A	Flat Glass, Blue-green	574
U 14	Z 2	903	171.5	A	Late cut nail, 10d	2
U 14	Z 2	903	171.5	A	Late cut nail, 3d	9
U 14	Z 2	903	171.5	A	Late cut nail, 4d	14
U 14	Z 2	903	171.5	A	Late cut nail, 6d	11
U 14	Z 2	903	171.5	A	Late cut nail, 8d	3
U 14	Z 2	903	171.5	A	Late cut nail, Proximal	56
U 14	Z 2	903	171.5	A	Metal Brad	1
U 14	Z 2	903	171.5	A	Screw, Pointed End	4
U 14	Z 2	903	171.5	A	Unidentified Nail	1
U 14	Z 2	903	171.5	C	Metal Button, Unidentified Metal	1
U 14	Z 2	903	171.5	K	Bone Handle	1
U 14	Z 2	903	171.5	K	Bottle/Jar Body, Blown Molded	14
U 14	Z 2	903	171.5	K	Bottle/Jar Body, Unidentified Manufacture	8
U 14	Z 2	903	171.5	K	Burned/Melted Unidentified Glass	20
U 14	Z 2	903	171.5	O	Other Biological - Unidentified	20
U 14	Z 2	903	171.5	O	Other Metal - Unidentified	2
U 14	Z 2	903	171.5	P	Pocket Knife	1
U 14	Z 2	903	171.5	X	Coal	3
U 15	Z 1A	884	169	A	Brick, Fragment (Not Identifiable)	1
U 15	Z 1A	884	169	A	Flat Glass, Blue-green	4
U 15	Z 1A	884	169	A	Late cut nail, Proximal	2
U 15	Z 1B	884	169	A	Bolt	2
U 15	Z 1B	884	169	A	Brick, Fragment (Not Identifiable)	62
U 15	Z 1B	884	169	A	Brick, Hand Made, Unglazed	1
U 15	Z 1B	884	169	A	Cut nail unspecified	17
U 15	Z 1B	884	169	A	Flat Glass, Blue-green	176
U 15	Z 1B	884	169	A	Late cut nail, 10d	1
U 15	Z 1B	884	169	A	Late cut nail, 12d	2
U 15	Z 1B	884	169	A	Late cut nail, 2d	2
U 15	Z 1B	884	169	A	Late cut nail, 3d	4
U 15	Z 1B	884	169	A	Late cut nail, 4d	16
U 15	Z 1B	884	169	A	Late cut nail, 60d	1
U 15	Z 1B	884	169	A	Late cut nail, 6d	9

Appendix B (cont'd)

U 15	Z 1B	884	169	A	Late cut nail, 7d	1
U 15	Z 1B	884	169	A	Late cut nail, 8d	2
U 15	Z 1B	884	169	A	Late cut nail, 9d	1
U 15	Z 1B	884	169	A	Late cut nail, Distal	5
U 15	Z 1B	884	169	A	Late cut nail, Proximal	27
U 15	Z 1B	884	169	A	Metal Brad	1
U 15	Z 1B	884	169	A	Metal Wire	1
U 15	Z 1B	884	169	A	Mortar	1
U 15	Z 1B	884	169	A	Screw, Pointed End	2
U 15	Z 1B	884	169	A	Unidentified Nail	1
U 15	Z 1B	884	169	C	Glass Button	1
U 15	Z 1B	884	169	K	Undetermined Glass Body, Unidentified	1
U 15	Z 1B	884	169	O	Other Biological - Unidentified	4
U 15	Z 1B	884	169	O	Other Metal - Unidentified	6
U 15	Z 2	884	169	A	Brick, Fragment (Not Identifiable)	35
U 15	Z 2	884	169	A	Cut nail unspecified	18
U 15	Z 2	884	169	A	Flat Glass, Blue-green	55
U 15	Z 2	884	169	A	Late cut nail, 20d	1
U 15	Z 2	884	169	A	Late cut nail, 3d	3
U 15	Z 2	884	169	A	Late cut nail, 4d	12
U 15	Z 2	884	169	A	Late cut nail, 6d	4
U 15	Z 2	884	169	A	Late cut nail, 8d	1
U 15	Z 2	884	169	A	Late cut nail, 9d	1
U 15	Z 2	884	169	A	Late cut nail, Proximal	10
U 15	Z 2	884	169	A	Mortar	47
U 15	Z 2	884	169	K	Burned/Melted Unidentified Glass	1
U 15	Z 2	884	169	O	Other Metal - Unidentified	2
U 15	Z 2	884	169	X	Coal Cinder/Slag	1
U 16	Z 1A	905	170.5	A	Flat Glass, Blue-green	42
U 16	Z 1A	905	170.5	A	Late cut nail, Proximal	2
U 16	Z 1A	905	170.5	K	Undetermined Glass Body	1
U 16	Z 1B	905	170.5	A	Brick, Fragment (Not Identifiable)	10
U 16	Z 1B	905	170.5	A	Cut nail unspecified	52
U 16	Z 1B	905	170.5	A	Flat Glass, Blue-green	462
U 16	Z 1B	905	170.5	A	Late cut nail, 12d	1

Appendix B (cont'd)

U 16	Z 1B	905	170.5	A	Late cut nail, 16d	2
U 16	Z 1B	905	170.5	A	Late cut nail, 2d	3
U 16	Z 1B	905	170.5	A	Late cut nail, 3d	15
U 16	Z 1B	905	170.5	A	Late cut nail, 4d	36
U 16	Z 1B	905	170.5	A	Late cut nail, 5d	4
U 16	Z 1B	905	170.5	A	Late cut nail, 6d	1
U 16	Z 1B	905	170.5	A	Late cut nail, 7d	1
U 16	Z 1B	905	170.5	A	Late cut nail, 8d	2
U 16	Z 1B	905	170.5	A	Late cut nail, Proximal	65
U 16	Z 1B	905	170.5	A	Metal Brad	2
U 16	Z 1B	905	170.5	A	Metal Rivet	1
U 16	Z 1B	905	170.5	A	Other Metal Fastener	1
U 16	Z 1B	905	170.5	A	Screw, Pointed End	3
U 16	Z 1B	905	170.5	J	Bar Stock (Blacksmithing)	1
U 16	Z 1B	905	170.5	K	Bottle/Jar Body, Blown Molded	3
U 16	Z 1B	905	170.5	K	Bottle/Jar Body, Unidentified Manufacture	3
U 16	Z 1B	905	170.5	K	Burned/Melted Unidentified Glass	1
U 16	Z 1B	905	170.5	K	Whiteware: Blue Shell Edge Scalloped Rim	5
U 16	Z 1B	905	170.5	O	Other Biological - Unidentified	4
U 16	Z 1B	905	170.5	X	Charcoal	13
U 16	Z 1B	905	170.5	X	Coal	10
U 16	Z 2	905	170.5	A	Brick, Fragment (Not Identifiable)	11
U 16	Z 2	905	170.5	A	Brick, Hand Made, Unglazed	14
U 16	Z 2	905	170.5	A	Cut nail unspecified	48
U 16	Z 2	905	170.5	A	Flat Glass, Blue-green	604
U 16	Z 2	905	170.5	A	Late cut nail, 10d	3
U 16	Z 2	905	170.5	A	Late cut nail, 12d	5
U 16	Z 2	905	170.5	A	Late cut nail, 16d	2
U 16	Z 2	905	170.5	A	Late cut nail, 20d	1
U 16	Z 2	905	170.5	A	Late cut nail, 2d	3
U 16	Z 2	905	170.5	A	Late cut nail, 3d	21
U 16	Z 2	905	170.5	A	Late cut nail, 4d	10
U 16	Z 2	905	170.5	A	Late cut nail, 5d	1
U 16	Z 2	905	170.5	A	Late cut nail, 6d	5
U 16	Z 2	905	170.5	A	Late cut nail, 7d	1

Appendix B (cont'd)

U 16	Z 2	905	170.5	A	Late cut nail, 8d	3
U 16	Z 2	905	170.5	A	Late cut nail, Proximal	63
U 16	Z 2	905	170.5	A	Metal Washer	1
U 16	Z 2	905	170.5	A	Mortar	10
U 16	Z 2	905	170.5	A	Other Metal Fastener	1
U 16	Z 2	905	170.5	A	Screw, Pointed End	1
U 16	Z 2	905	170.5	A	Screw, Undetermined/Broken	1
U 16	Z 2	905	170.5	C	Bone Button	1
U 16	Z 2	905	170.5	C	Glass Button	1
U 16	Z 2	905	170.5	C	Metal Button, Eagle Large	1
U 16	Z 2	905	170.5	C	Metal Button, Iron/Steel	2
U 16	Z 2	905	170.5	C	Metal Button, Unidentified Metal	1
U 16	Z 2	905	170.5	C	Metal Eyelet/Grommet	2
U 16	Z 2	905	170.5	C	Metal Military Acoutrements	1
U 16	Z 2	905	170.5	C	Metal Suspender Clasp	1
U 16	Z 2	905	170.5	K	Bottle/Jar Body, Blown Molded	3
U 16	Z 2	905	170.5	K	Bottle/Jar Body, Unidentified Manufacture	2
U 16	Z 2	905	170.5	K	Table Glass Base, Press Molded	1
U 16	Z 2	905	170.5	K	Tin Can Unidentified Body	44
U 16	Z 2	905	170.5	K	Undetermined Glass Body, Unidentified	2
U 16	Z 2	905	170.5	O	Other Biological - Unidentified	7
U 16	Z 2	905	170.5	O	Other Metal - Unidentified	5
U 16	Z 2	905	170.5	X	Charcoal	1
U 17	U	889	168	A	Brick, Fragment (Not Identifiable)	1
U 17	U	889	168	A	Cut nail unspecified	4
U 17	U	889	168	A	Flat Glass, Blue-green	44
U 17	U	889	168	A	Late cut nail, 4d	4
U 17	U	889	168	A	Late cut nail, 5d	2
U 17	U	889	168	A	Late cut nail, 6d	1
U 17	U	889	168	A	Late cut nail, 7d	1
U 17	U	889	168	A	Late cut nail, Proximal	6
U 17	U	889	168	K	Undetermined Glass Body, Unidentified	2
U 17	U	889	168	O	Other Metal - Unidentified	2
U 17	Z 1A	889	168	A	Brick, Fragment (Not Identifiable)	8
U 17	Z 1A	889	168	A	Flat Glass, Blue-green	39

Appendix B (cont'd)

U 17	Z 1A	889	168	A	Late cut nail, 10d	1
U 17	Z 1A	889	168	A	Late cut nail, 4d	5
U 17	Z 1A	889	168	A	Late cut nail, 5d	1
U 17	Z 1A	889	168	A	Late cut nail, 6d	2
U 17	Z 1A	889	168	A	Late cut nail, Proximal	11
U 17	Z 1A	889	168	A	Metal Band	2
U 17	Z 1A	889	168	A	Mortar	8
U 17	Z 1A	889	168	A	Wire nail, 20d	1
U 17	Z 1A	889	168	C	Metal Button, Unidentified Metal	1
U 17	Z 1A	889	168	J	Bar Stock (Blacksmithing)	1
U 17	Z 1A	889	168	J	Unidentified Metal Tool	13
U 17	Z 1A	889	168	K	Burned/Melted Unidentified Glass	1
U 17	Z 1A	889	168	O	Other Metal - Unidentified	2
U 17	Z 1A	889	168	X	Charcoal	1
U 17	Z 1B	889	168	A	Brick, Fragment (Not Identifiable)	1
U 17	Z 1B	889	168	A	Cut nail unspecified	4
U 17	Z 1B	889	168	A	Flat Glass, Blue-green	22
U 17	Z 1B	889	168	A	Late cut nail, 12d	1
U 17	Z 1B	889	168	A	Late cut nail, 4d	1
U 17	Z 1B	889	168	A	Late cut nail, 6d	1
U 17	Z 1B	889	168	A	Late cut nail, 8d	1
U 17	Z 1B	889	168	A	Late cut nail, 9d	1
U 17	Z 1B	889	168	A	Late cut nail, Proximal	7
U 17	Z 1B	889	168	K	Bottle/Jar Body, Blown Molded	1
U 17	Z 1B	889	168	O	Other Metal - Unidentified	1
U 17	Z 1B	889	168	T	Animal Shoe Nail	1
U 17	Z 3	889	168	A	Flat Glass, Blue-green	2
U 17	Z 3	889	168	A	Late cut nail, Proximal	1
U 18	Z 1A	887	168	A	Brick, Fragment (Not Identifiable)	3
U 18	Z 1A	887	168	A	Cut nail unspecified	1
U 18	Z 1A	887	168	A	Flat Glass, Blue-green	4
U 18	Z 1A	887	168	A	Late cut nail, 4d	1
U 18	Z 1A	887	168	A	Late cut nail, Proximal	1
U 18	Z 1A	887	168	K	Undetermined Glass Body, Unidentified	1
U 18	Z 1B	887	168	A	Brick, Fragment (Not Identifiable)	6

Appendix B (cont'd)

U 18	Z 1B	887	168	A	Cut nail unspecified	20
U 18	Z 1B	887	168	A	Flat Glass, Blue-green	158
U 18	Z 1B	887	168	A	Late cut nail, 10d	2
U 18	Z 1B	887	168	A	Late cut nail, 4d	3
U 18	Z 1B	887	168	A	Late cut nail, 5d	2
U 18	Z 1B	887	168	A	Late cut nail, 7d	1
U 18	Z 1B	887	168	A	Late cut nail, 8d	3
U 18	Z 1B	887	168	A	Late cut nail, 9d	1
U 18	Z 1B	887	168	A	Late cut nail, Proximal	19
U 18	Z 1B	887	168	A	Other Metal Fastener	1
U 18	Z 1B	887	168	A	Unidentified Nail	1
U 18	Z 1B	887	168	A	Wrought nail, Distal	1
U 18	Z 1B	887	168	C	Metal Button, Iron/Steel	1
U 18	Z 1B	887	168	J	Other Metal Tool	5
U 18	Z 1B	887	168	K	Bottle/Jar Body, Blown Molded	3
U 18	Z 1B	887	168	K	Undetermined Glass Body, Unidentified	9
U 18	Z 1B	887	168	K	Whiteware: Undecorated	1
U 18	Z 1B	887	168	O	Other Biological - Unidentified	9
U 19	Z 1			A	Brick, Fragment (Not Identifiable)	4
U 19	Z 1			A	Cut nail unspecified	2
U 19	Z 1			A	Flat Glass, Blue-green	14
U 19	Z 1			A	Late cut nail, 12d	1
U 19	Z 1			A	Late cut nail, 2d	1
U 19	Z 1			A	Late cut nail, 4d	1
U 19	Z 1			A	Late cut nail, 6d	1
U 19	Z 1			A	Late cut nail, 7d	1
U 19	Z 1			A	Late cut nail, 8d	1
U 19	Z 1			A	Late cut nail, Proximal	1
U 19	Z 1			A	Wrought nail, 9d	1
U 19	Z 1			K	Bottle/Jar Body, Blown Molded	3
U 19	Z 1			K	Bottle/Jar Body, Machine Made	5
U 19	Z 1			K	Bottle/Jar Lip, Fused Finish/Later Lipping Tool	1
U 19	Z 1			O	Other Biological - Unidentified	25
U 19	Z 2			A	Brick, Fragment (Not Identifiable)	16
U 19	Z 2			A	Cut nail unspecified	6

Appendix B (cont'd)

U 19	Z 2			A	Flat Glass, Blue-green	10
U 19	Z 2			A	Late cut nail, 3d	3
U 19	Z 2			A	Late cut nail, 4d	4
U 19	Z 2			A	Late cut nail, 6d	2
U 19	Z 2			A	Late cut nail, Proximal	7
U 19	Z 2			A	Mortar	6
U 19	Z 2			A	Unidentified Nail	2
U 19	Z 2			C	Metal Button, Eagle Large	1
U 19	Z 2			K	Bottle/Jar Body, Machine Made	1
U 19	Z 2			K	Bottle/Jar Lip, Fused Finish/Later Lipping Tool	1
U 19	Z 2			O	Other Metal - Unidentified	1
U 4	Z 1A	889	170	A	Brick, Fragment (Not Identifiable)	1
U 4	Z 1A	889	170	A	Brick, Hand Made, Unglazed	1
U 4	Z 1A	889	170	A	Cut nail unspecified	2
U 4	Z 1A	889	170	A	Flat Glass, Blue-green	14
U 4	Z 1A	889	170	A	Late cut nail, 8d	1
U 4	Z 1A	889	170	A	Late cut nail, Proximal	1
U 4	Z 1A	889	170	K	Bottle/Jar Body, Blown Molded	1
U 4	Z 1A	889	170	K	Bottle/Jar Body, Unidentified Manufacture	1
U 4	Z 1A	889	170	O	Other Metal - Unidentified	3
U 4	Z 1A	889	170	X	Charcoal	1
U 4	Z 1B	889	170	A	Brick, Fragment (Not Identifiable)	42
U 4	Z 1B	889	170	A	Cut nail unspecified	20
U 4	Z 1B	889	170	A	Flat Glass, Blue-green	54
U 4	Z 1B	889	170	A	Late cut nail, 2d	1
U 4	Z 1B	889	170	A	Late cut nail, 3d	1
U 4	Z 1B	889	170	A	Late cut nail, 4d	1
U 4	Z 1B	889	170	A	Late cut nail, 5d	1
U 4	Z 1B	889	170	A	Late cut nail, 8d	3
U 4	Z 1B	889	170	A	Late cut nail, Proximal	26
U 4	Z 1B	889	170	A	Metal Washer	1
U 4	Z 1B	889	170	A	Screw, Pointed End	1
U 4	Z 1B	889	170	K	Bottle/Jar Body, Blown Molded	1
U 4	Z 1B	889	170	K	Whiteware: Undecorated	1
U 4	Z 1B	889	170	O	Other Metal - Unidentified	1

Appendix B (cont'd)

U 4	Z 2	889	170	A	Brick, Fragment (Not Identifiable)	11
U 4	Z 2	889	170	A	Brick, Hand Made, Unglazed	2
U 4	Z 2	889	170	A	Cut nail unspecified	14
U 4	Z 2	889	170	A	Flat Glass, Blue-green	24
U 4	Z 2	889	170	A	Late cut nail, 10d	1
U 4	Z 2	889	170	A	Late cut nail, 12d	2
U 4	Z 2	889	170	A	Late cut nail, 2d	1
U 4	Z 2	889	170	A	Late cut nail, 3d	1
U 4	Z 2	889	170	A	Late cut nail, Proximal	16
U 4	Z 2	889	170	O	Other Metal - Unidentified	2
U 40	Z 1			A	Bolt	1
U 40	Z 1			A	Brick, Fragment (Not Identifiable)	6
U 40	Z 1			A	Cut nail unspecified	35
U 40	Z 1			A	Flat Glass, Blue-green	13
U 40	Z 1			A	Late cut nail, 10d	6
U 40	Z 1			A	Late cut nail, 12d	1
U 40	Z 1			A	Late cut nail, 20d	1
U 40	Z 1			A	Late cut nail, 2d	2
U 40	Z 1			A	Late cut nail, 3d	1
U 40	Z 1			A	Late cut nail, 4d	9
U 40	Z 1			A	Late cut nail, 5d	3
U 40	Z 1			A	Late cut nail, 6d	9
U 40	Z 1			A	Late cut nail, 8d	6
U 40	Z 1			A	Late cut nail, 9d	1
U 40	Z 1			A	Late cut nail, Proximal	46
U 40	Z 1			A	Metal Washer	1
U 40	Z 1			A	Screw, Pointed End	2
U 40	Z 1			K	Burned/Melted Unidentified Glass	5
U 40	Z 1			K	Domestic Stoneware: Salt Glazed Undecorated	1
U 40	Z 1			O	Other Metal - Unidentified	2
U 40	Z 2			A	Cut nail unspecified	8
U 40	Z 2			A	Flat Glass, Blue-green	2
U 40	Z 2			A	Late cut nail, 10d	1
U 40	Z 2			A	Late cut nail, 8d	1
U 40	Z 2			A	Late cut nail, Proximal	3

Appendix B (cont'd)

U 41	Z 1A			A	Brick, Fragment (Not Identifiable)	3
U 41	Z 1A			A	Cut nail unspecified	84
U 41	Z 1A			A	Flat Glass, Blue-green	25
U 41	Z 1A			A	Late cut nail, 10d	8
U 41	Z 1A			A	Late cut nail, 12d	1
U 41	Z 1A			A	Late cut nail, 16d	1
U 41	Z 1A			A	Late cut nail, 2d	3
U 41	Z 1A			A	Late cut nail, 3d	2
U 41	Z 1A			A	Late cut nail, 4d	13
U 41	Z 1A			A	Late cut nail, 5d	2
U 41	Z 1A			A	Late cut nail, 6d	21
U 41	Z 1A			A	Late cut nail, 7d	2
U 41	Z 1A			A	Late cut nail, 8d	9
U 41	Z 1A			A	Late cut nail, 9d	1
U 41	Z 1A			A	Late cut nail, Proximal	107
U 41	Z 1A			A	Metal Band	1
U 41	Z 1A			A	Metal Brad	1
U 41	Z 1A			A	Metal Washer	1
U 41	Z 1A			A	Other Metal Fastener	1
U 41	Z 1A			A	Screw, Pointed End	2
U 41	Z 1A			C	Metal Button, Iron/Steel	1
U 41	Z 1A			K	Burned/Melted Unidentified Glass	21
U 41	Z 1A			O	Other Metal - Unidentified	10
U 41	Z 1A			T	Metal Harness Part	1
U 41	Z 1A			X	Coal	6
U 41	Z 1B			A	Brick, Fragment (Not Identifiable)	1
U 41	Z 1B			A	Cut nail unspecified	89
U 41	Z 1B			A	Flat Glass, Blue-green	11
U 41	Z 1B			A	Late cut nail, 10d	5
U 41	Z 1B			A	Late cut nail, 12d	4
U 41	Z 1B			A	Late cut nail, 2d	2
U 41	Z 1B			A	Late cut nail, 4d	15
U 41	Z 1B			A	Late cut nail, 5d	4
U 41	Z 1B			A	Late cut nail, 6d	19
U 41	Z 1B			A	Late cut nail, 7d	1

Appendix B (cont'd)

U 41	Z 1B			A	Late cut nail, 8d	9
U 41	Z 1B			A	Late cut nail, 9d	1
U 41	Z 1B			A	Late cut nail, Proximal	91
U 41	Z 1B			A	Metal Tack	2
U 41	Z 1B			A	Mortar	1
U 41	Z 1B			A	Screw, Pointed End	1
U 41	Z 1B			K	Bottle/Jar Body, Blown Molded	1
U 41	Z 1B			K	Burned/Melted Unidentified Glass	8
U 41	Z 1B			O	Other Metal - Unidentified	6
U 41	Z 2			A	Cut nail unspecified	9
U 41	Z 2			A	Flat Glass, Blue-green	1
U 41	Z 2			A	Late cut nail, 3d	2
U 41	Z 2			A	Late cut nail, 4d	3
U 41	Z 2			A	Late cut nail, 5d	2
U 41	Z 2			A	Late cut nail, 6d	7
U 41	Z 2			A	Late cut nail, 8d	3
U 41	Z 2			A	Late cut nail, Proximal	22
U 41	Z 2			A	Metal Tack	1
U 41	Z 2			K	Burned/Melted Unidentified Glass	2
U 41	Z 2			O	Other Metal - Unidentified	1
U 42	Z 2			A	Cut nail unspecified	69
U 42	Z 2			A	Flat Glass, Blue-green	7
U 42	Z 2			A	Late cut nail, 10d	6
U 42	Z 2			A	Late cut nail, 12d	3
U 42	Z 2			A	Late cut nail, 20d	1
U 42	Z 2			A	Late cut nail, 3d	3
U 42	Z 2			A	Late cut nail, 4d	12
U 42	Z 2			A	Late cut nail, 5d	4
U 42	Z 2			A	Late cut nail, 6d	19
U 42	Z 2			A	Late cut nail, 8d	14
U 42	Z 2			A	Late cut nail, 9d	1
U 42	Z 2			A	Late cut nail, Proximal	55
U 42	Z 2			A	Metal Brad	1
U 42	Z 2			A	Wire nail, 3d	1
U 42	Z 2			K	Burned/Melted Unidentified Glass	4

Appendix B (cont'd)

U 42	Z 2			O	Other Metal - Unidentified	3
U 8	Z 1A	901	171.5	A	Brick, Fragment (Not Identifiable)	1
U 8	Z 1A	901	171.5	A	Cut nail unspecified	19
U 8	Z 1A	901	171.5	A	Flat Glass, Blue-green	175
U 8	Z 1A	901	171.5	A	Late cut nail, 2d	1
U 8	Z 1A	901	171.5	A	Late cut nail, 3d	1
U 8	Z 1A	901	171.5	A	Late cut nail, 4d	6
U 8	Z 1A	901	171.5	A	Late cut nail, 5d	1
U 8	Z 1A	901	171.5	A	Late cut nail, 6d	1
U 8	Z 1A	901	171.5	A	Late cut nail, 7d	2
U 8	Z 1A	901	171.5	A	Late cut nail, 8d	1
U 8	Z 1A	901	171.5	A	Late cut nail, 9d	2
U 8	Z 1A	901	171.5	A	Late cut nail, Proximal	10
U 8	Z 1A	901	171.5	A	Screw, Pointed End	1
U 8	Z 1A	901	171.5	K	Bottle/Jar Body, Blown Molded	11
U 8	Z 1A	901	171.5	K	Bottle/Jar Body, Unidentified Manufacture	3
U 8	Z 1A	901	171.5	K	Burned/Melted Unidentified Glass	1
U 8	Z 1A	901	171.5	O	Other Biological - Unidentified	6
U 8	Z 1A	901	171.5	X	Coal	2
U 8	Z	901	171.5	A	Brick, Fragment (Not Identifiable)	2
U 8	Z	901	171.5	A	Brick, Hand Made, Unglazed	1
U 8	Z	901	171.5	A	Cut nail unspecified	72
U 8	Z	901	171.5	A	Flat Glass, Blue-green	203
U 8	Z	901	171.5	A	Late cut nail, 10d	1
U 8	Z	901	171.5	A	Late cut nail, 12d	2
U 8	Z	901	171.5	A	Late cut nail, 2d	1
U 8	Z	901	171.5	A	Late cut nail, 3d	6
U 8	Z	901	171.5	A	Late cut nail, 4d	13
U 8	Z	901	171.5	A	Late cut nail, 5d	2
U 8	Z	901	171.5	A	Late cut nail, 6d	6
U 8	Z	901	171.5	A	Late cut nail, 7d	3
U 8	Z	901	171.5	A	Late cut nail, 8d	4
U 8	Z	901	171.5	A	Late cut nail, Proximal	59
U 8	Z	901	171.5	A	Screw, Pointed End	4
U 8	Z	901	171.5	C	Glass Button	1

Appendix B (cont'd)

U 8	Z	901	171.5	C	Metal Button, Eagle Large	1
U 8	Z	901	171.5	C	Metal Button, Eagle Small	1
U 8	Z	901	171.5	C	Metal Button, Iron/Steel	1
U 8	Z	901	171.5	K	Bottle/Jar Base, Multipart Mold w/Separate Base	1
U 8	Z	901	171.5	K	Bottle/Jar Base, Other Manufacture	1
U 8	Z	901	171.5	K	Bottle/Jar Body, Blown Molded	6
U 8	Z	901	171.5	O	Other Biological - Unidentified	44
U 8	Z	901	171.5	O	Other Metal - Unidentified	1
U 8	Z	901	171.5	P	Watch Part	1
U 8	Z	901	171.5	R	Rimfire Cartridge .22 Caliber	1
U 8	Z	901	171.5	X	Coal	5
U 8	Z	901	171.5	X	Coal Cinder/Slag	5
U 8	Z 3	901	171.5	A	Cut nail unspecified	2
U 8	Z 3	901	171.5	A	Flat Glass, Blue-green	21
U 8	Z 3	901	171.5	A	Late cut nail, 4d	1
U 8	Z 3	901	171.5	A	Late cut nail, Proximal	5
U 9	Z 1A	914	175	A	Flat Glass, Blue-green	20
U 9	Z 1A	914	175	A	Late cut nail, 7d	1
U 9	Z 1A	914	175	K	Undetermined Glass Body	1
U 9	Z 1B	914	175	A	Brick, Fragment (Not Identifiable)	89
U 9	Z 1B	914	175	A	Brick, Hand Made, Unglazed	1
U 9	Z 1B	914	175	A	Cut nail unspecified	26
U 9	Z 1B	914	175	A	Flat Glass, Blue-green	405
U 9	Z 1B	914	175	A	Late cut nail, 10d	2
U 9	Z 1B	914	175	A	Late cut nail, 12d	2
U 9	Z 1B	914	175	A	Late cut nail, 16d	1
U 9	Z 1B	914	175	A	Late cut nail, 4d	4
U 9	Z 1B	914	175	A	Late cut nail, 5d	1
U 9	Z 1B	914	175	A	Late cut nail, 6d	2
U 9	Z 1B	914	175	A	Late cut nail, 7d	1
U 9	Z 1B	914	175	A	Late cut nail, Proximal	10
U 9	Z 1B	914	175	A	Mortar	3
U 9	Z 1B	914	175	A	Screw, Pointed End	1
U 9	Z 1B	914	175	A	Wrought nail, 8d	2
U 9	Z 1B	914	175	K	Bottle/Jar Body, Blown Molded	13

Appendix B (cont'd)

U 9	Z 1B	914	175	K	Ironstone: Undecorated Blue/Grey	3
U 9	Z 1B	914	175	K	Undetermined Glass Body, Unidentified	1
U 9	Z 1B	914	175	O	Other Biological - Unidentified	6
U 9	Z 1B	914	175	O	Other Metal - Unidentified	1
U 9	Z 1B	914	175	X	Charcoal	1
U 9	Z 2	914	175	A	Flat Glass, Blue-green	1

¹Key

A = Architecture C = Clothing
 F = Furniture J = Job/Activity
 K = Kitchen O = Other
 P = Personal R = Arms
 T = Transportation X = Fuel

Appendix C. Artifacts from the Northern Gully Area Excavation Units.

Unit	Zone	North	East	Group	Artifact	Count
U 1	Z 1	953	143	A	Bolt	2
U 1	Z 1	953	143	A	Cut nail unspecified	6
U 1	Z 1	953	143	A	Flat Glass, Blue-green	23
U 1	Z 1	953	143	A	Late cut nail, 5d	2
U 1	Z 1	953	143	A	Late cut nail, 6d	1
U 1	Z 1	953	143	A	Late cut nail, 8d	3
U 1	Z 1	953	143	A	Late cut nail, 9d	2
U 1	Z 1	953	143	A	Late cut nail, Proximal	13
U 1	Z 1	953	143	A	Metal Band	3
U 1	Z 1	953	143	A	Screw, Pointed End	1
U 1	Z 1	953	143	J	Bar Stock (Blacksmithing)	1
U 1	Z 1	953	143	J	Machinery: Unidentified	1
U 1	Z 1	953	143	K	Bottle/Jar Body, Unidentified Manufacture	1
U 1	Z 1	953	143	O	Other Metal - Unidentified	1
U 1	Z 2	953	143	A	Bolt	5
U 1	Z 2	953	143	A	Brick, Hand Made, Unglazed	1
U 1	Z 2	953	143	A	Cut nail unspecified	77
U 1	Z 2	953	143	A	Flat Glass, Blue-green	170
U 1	Z 2	953	143	A	Late cut nail, 10d	2
U 1	Z 2	953	143	A	Late cut nail, 12d	3
U 1	Z 2	953	143	A	Late cut nail, 20d	2
U 1	Z 2	953	143	A	Late cut nail, 2d	2
U 1	Z 2	953	143	A	Late cut nail, 30d	1
U 1	Z 2	953	143	A	Late cut nail, 3d	5
U 1	Z 2	953	143	A	Late cut nail, 4d	12
U 1	Z 2	953	143	A	Late cut nail, 5d	6
U 1	Z 2	953	143	A	Late cut nail, 6d	9
U 1	Z 2	953	143	A	Late cut nail, 7d	2
U 1	Z 2	953	143	A	Late cut nail, 8d	8
U 1	Z 2	953	143	A	Late cut nail, 9d	1
U 1	Z 2	953	143	A	Late cut nail, Distal	3
U 1	Z 2	953	143	A	Late cut nail, Proximal	94
U 1	Z 2	953	143	A	Metal Band	33
U 1	Z 2	953	143	A	Metal Brad	1

Appendix C (cont'd)

U 1	Z 2	953	143	A	Metal Washer	2
U 1	Z 2	953	143	A	Nut	3
U 1	Z 2	953	143	A	Screw, Pointed End	1
U 1	Z 2	953	143	A	Unidentified Nail	25
U 1	Z 2	953	143	A	Wrought nail, 6d	2
U 1	Z 2	953	143	F	Brass Tack	1
U 1	Z 2	953	143	J	Bar Stock (Blacksmithing)	15
U 1	Z 2	953	143	J	Machinery:Chain	2
U 1	Z 2	953	143	J	Machinery:Machinery Pin	1
U 1	Z 2	953	143	J	Machinery:Unidentified	1
U 1	Z 2	953	143	K	Bottle/Jar Base, Two Piece Mold	1
U 1	Z 2	953	143	K	Bottle/Jar Body, Blown Molded	2
U 1	Z 2	953	143	K	Bottle/Jar Body, Unidentified Manufacture	8
U 1	Z 2	953	143	K	Bottle/Jar Lip, Hand Formed	1
U 1	Z 2	953	143	K	Burned/Melted Unidentified Glass	3
U 1	Z 2	953	143	O	Other Metal - Unidentified	26
U 1	Z 2	953	143	R	Percussion Cap	1
U 1	Z 2	953	143	T	Animal Shoe Nail	2
U 1	Z 2	953	143	T	Metal Wagon Part	1
U 1	Z 2	953	143	X	Charcoal	10
U 1	Z 2	953	143	X	Coal	27
U 1	Z 2	953	143	X	Coal Cinder/Slag	3
U 2	Z 1	953	157	A	Metal Washer	1
U 2	Z 1	953	157	A	Screw, Pointed End	1
U 2	Z 1A	953	157	A	Flat Glass, Blue-green	2
U 2	Z 1A	953	157	A	Late cut nail, 4d	1
U 2	Z 1A	953	157	A	Late cut nail, Proximal	3
U 2	Z 1A	953	157	J	Bar Stock (Blacksmithing)	1
U 2	Z 1A	953	157	O	Other Metal - Unidentified	1
U 2	Z 1A	953	157	T	Metal Harness Part	1
U 2	Z 1B	953	157	A	Bolt	10
U 2	Z 1B	953	157	A	Cut nail unspecified	23
U 2	Z 1B	953	157	A	Flat Glass, Blue-green	16
U 2	Z 1B	953	157	A	Late cut nail, 2d	1
U 2	Z 1B	953	157	A	Late cut nail, 3d	3

Appendix C (cont'd)

U 2	Z 1B	953	157	A	Late cut nail, 4d	8
U 2	Z 1B	953	157	A	Late cut nail, 5d	2
U 2	Z 1B	953	157	A	Late cut nail, 6d	2
U 2	Z 1B	953	157	A	Late cut nail, 7d	2
U 2	Z 1B	953	157	A	Late cut nail, 8d	12
U 2	Z 1B	953	157	A	Late cut nail, Medial	2
U 2	Z 1B	953	157	A	Late cut nail, Proximal	24
U 2	Z 1B	953	157	A	Metal Band	11
U 2	Z 1B	953	157	A	Metal Hinge	1
U 2	Z 1B	953	157	A	Metal Washer	1
U 2	Z 1B	953	157	A	Screw, Pointed End	1
U 2	Z 1B	953	157	C	Metal Button, Iron/Steel	3
U 2	Z 1B	953	157	J	Bar Stock (Blacksmithing)	3
U 2	Z 1B	953	157	K	Bottle/Jar Body, Blown Molded	1
U 2	Z 1B	953	157	K	Bottle/Jar Body, Unidentified Manufacture	4
U 2	Z 1B	953	157	K	Tin Can Unidentified Body	11
U 2	Z 1B	953	157	O	Other Metal - Unidentified	4
U 2	Z 1B	953	157	R	Three Ring Minie' Bullet	1
U 2	Z 1B	953	157	T	Animal Shoe Nail	1
U 2	Z 1B	953	157	T	Metal Harness Part	1
U 2	Z 1B	953	157	T	Metal Wagon Part	1
U 2	Z 1B	953	157	X	Coal	3
U 2	Z 2	953	157	A	Bolt	4
U 2	Z 2	953	157	A	Cut nail unspecified	34
U 2	Z 2	953	157	A	Flat Glass, Blue-green	10
U 2	Z 2	953	157	A	Late cut nail, 12d	1
U 2	Z 2	953	157	A	Late cut nail, 3d	2
U 2	Z 2	953	157	A	Late cut nail, 4d	6
U 2	Z 2	953	157	A	Late cut nail, 5d	3
U 2	Z 2	953	157	A	Late cut nail, 6d	2
U 2	Z 2	953	157	A	Late cut nail, 7d	2
U 2	Z 2	953	157	A	Late cut nail, 8d	3
U 2	Z 2	953	157	A	Late cut nail, Proximal	24
U 2	Z 2	953	157	A	Metal Band	6
U 2	Z 2	953	157	A	Metal Brad	1

Appendix C (cont'd)

U 2	Z 2	953	157	A	Metal Washer	1
U 2	Z 2	953	157	A	Nut	1
U 2	Z 2	953	157	A	Screw, Pointed End	2
U 2	Z 2	953	157	A	Unidentified Nail	3
U 2	Z 2	953	157	A	Wrought nail, 8d	2
U 2	Z 2	953	157	J	Bar Stock (Blacksmithing)	6
U 2	Z 2	953	157	J	Machinery:Unidentified	1
U 2	Z 2	953	157	J	Slag	1
U 2	Z 2	953	157	K	Bottle/Jar Body, Blown Molded	1
U 2	Z 2	953	157	O	Other Metal - Unidentified	21
U 2	Z 2	953	157	T	Animal Shoe Nail	2
U 2	Z 2	953	157	T	Metal Harness Part	1
U 2	Z 2	953	157	X	Coal	5
U 20	Z 1A	956	150	A	Cut nail unspecified	4
U 20	Z 1A	956	150	A	Flat Glass, Blue-green	2
U 20	Z 1A	956	150	A	Late cut nail, 4d	1
U 20	Z 1A	956	150	A	Late cut nail, Proximal	7
U 20	Z 1A	956	150	A	Metal Band	3
U 20	Z 1A	956	150	A	Metal Washer	1
U 20	Z 1A	956	150	A	Unidentified Nail	2
U 20	Z 1B	956	150	A	Bolt	14
U 20	Z 1B	956	150	A	Brick, Fragment (Not Identifiable)	1
U 20	Z 1B	956	150	A	Cut nail unspecified	82
U 20	Z 1B	956	150	A	Flat Glass, Blue-green	13
U 20	Z 1B	956	150	A	Late cut nail, 12d	1
U 20	Z 1B	956	150	A	Late cut nail, 2d	3
U 20	Z 1B	956	150	A	Late cut nail, 3d	4
U 20	Z 1B	956	150	A	Late cut nail, 4d	9
U 20	Z 1B	956	150	A	Late cut nail, 5d	6
U 20	Z 1B	956	150	A	Late cut nail, 6d	6
U 20	Z 1B	956	150	A	Late cut nail, 7d	4
U 20	Z 1B	956	150	A	Late cut nail, 8d	9
U 20	Z 1B	956	150	A	Late cut nail, Proximal	66
U 20	Z 1B	956	150	A	Metal Band	29
U 20	Z 1B	956	150	A	Metal Brad	2

Appendix C (cont'd)

U 20	Z 1B	956	150	A	Metal Hinge	1
U 20	Z 1B	956	150	A	Metal Washer	2
U 20	Z 1B	956	150	A	Metal Wire	1
U 20	Z 1B	956	150	A	Nut	5
U 20	Z 1B	956	150	A	Plumbing	1
U 20	Z 1B	956	150	A	Screw, Pointed End	1
U 20	Z 1B	956	150	A	Screw, Undetermined/Broken	1
U 20	Z 1B	956	150	A	Unidentified Nail	19
U 20	Z 1B	956	150	J	Bar Stock (Blacksmithing)	7
U 20	Z 1B	956	150	J	Machinery:Unidentified	2
U 20	Z 1B	956	150	K	Tin Can Rim	1
U 20	Z 1B	956	150	O	Other Metal - Unidentified	14
U 20	Z 1B	956	150	T	Animal Shoe Nail	3
U 20	Z 1B	956	150	T	Metal Harness Part	3
U 20	Z 1B	956	150	T	Metal Wagon Part	1
U 20	Z 1B	956	150	X	Coal	2
U 20	Z 2	956	150	A	Late cut nail, Proximal	1
U 20	Z 2	956	150	O	Other Stone - Unidentified	
U 21	Z 1A	948	135	A	Cut nail unspecified	15
U 21	Z 1A	948	135	A	Flat Glass, Blue-green	2459
U 21	Z 1A	948	135	A	Late cut nail, 3d	1
U 21	Z 1A	948	135	A	Late cut nail, 4d	2
U 21	Z 1A	948	135	A	Late cut nail, 6d	2
U 21	Z 1A	948	135	A	Late cut nail, 8d	7
U 21	Z 1A	948	135	A	Late cut nail, Proximal	10
U 21	Z 1A	948	135	A	Metal Band	3
U 21	Z 1A	948	135	A	Metal Brad	1
U 21	Z 1A	948	135	A	Nut	1
U 21	Z 1A	948	135	A	Screw, Pointed End	1
U 21	Z 1A	948	135	O	Other Metal - Unidentified	3
U 21	Z 1A	948	135	X	Coal	5
U 21	Z 1B	948	135	A	Bolt	70
U 21	Z 1B	948	135	A	Cut nail unspecified	229
U 21	Z 1B	948	135	A	Flat Glass, Blue-green	4037
U 21	Z 1B	948	135	A	Late cut nail, 10d	1

Appendix C (cont'd)

U 21	Z 1B	948	135	A	Late cut nail, 12d	5
U 21	Z 1B	948	135	A	Late cut nail, 2d	9
U 21	Z 1B	948	135	A	Late cut nail, 3d	21
U 21	Z 1B	948	135	A	Late cut nail, 4d	56
U 21	Z 1B	948	135	A	Late cut nail, 5d	2
U 21	Z 1B	948	135	A	Late cut nail, 6d	23
U 21	Z 1B	948	135	A	Late cut nail, 7d	1
U 21	Z 1B	948	135	A	Late cut nail, 8d	55
U 21	Z 1B	948	135	A	Late cut nail, 9d	2
U 21	Z 1B	948	135	A	Late cut nail, Proximal	221
U 21	Z 1B	948	135	A	Metal Band	55
U 21	Z 1B	948	135	A	Metal Brad	8
U 21	Z 1B	948	135	A	Metal Hinge	2
U 21	Z 1B	948	135	A	Metal Washer	12
U 21	Z 1B	948	135	A	Nut	4
U 21	Z 1B	948	135	A	Other Metal Fastener	1
U 21	Z 1B	948	135	A	Screw, Pointed End	8
U 21	Z 1B	948	135	C	Bone Button	1
U 21	Z 1B	948	135	J	Bar Stock (Blacksmithing)	1
U 21	Z 1B	948	135	K	Bottle/Jar Body, Blown Molded	1
U 21	Z 1B	948	135	K	Bottle/Jar Body, Unidentified Manufacture	1
U 21	Z 1B	948	135	K	Undetermined Glass Body, Unidentified Manufacture	3
U 21	Z 1B	948	135	K	Whiteware: Undecorated	1
U 21	Z 1B	948	135	O	Other Metal - Unidentified	38
U 21	Z 1B	948	135	P	Other Personal Glass	1
U 21	Z 1B	948	135	P	Watch Part	1
U 21	Z 1B	948	135	R	Other Cartridge, Shell, or Bullet	1
U 21	Z 1B	948	135	T	Animal Shoe Nail	33
U 21	Z 1B	948	135	T	Metal Harness Part	1
U 21	Z 1B	948	135	T	Metal Wagon Part	2
U 21	Z 1B	948	135	X	Coal	73
U 21	Z 2	948	135	A	Cut nail unspecified	21
U 21	Z 2	948	135	A	Flat Glass, Blue-green	478
U 21	Z 2	948	135	A	Hook and/or Eye	1
U 21	Z 2	948	135	A	Late cut nail, 4d	2

Appendix C (cont'd)

U 21	Z 2	948	135	A	Late cut nail, 8d	1
U 21	Z 2	948	135	A	Late cut nail, Proximal	10
U 21	Z 2	948	135	J	Bar Stock (Blacksmithing)	1
U 21	Z 2	948	135	R	Percussion Cap	1
U 21	Z 2	948	135	X	Coal	1
U 21	Z 3	948	135	A	Flat Glass, Blue-green	14
U 22	Z 1A	955	141	A	Bolt	1
U 22	Z 1A	955	141	A	Cut nail unspecified	31
U 22	Z 1A	955	141	A	Flat Glass, Blue-green	87
U 22	Z 1A	955	141	A	Late cut nail, 12d	3
U 22	Z 1A	955	141	A	Late cut nail, 2d	1
U 22	Z 1A	955	141	A	Late cut nail, 3d	3
U 22	Z 1A	955	141	A	Late cut nail, 4d	10
U 22	Z 1A	955	141	A	Late cut nail, 5d	2
U 22	Z 1A	955	141	A	Late cut nail, 6d	3
U 22	Z 1A	955	141	A	Late cut nail, 7d	4
U 22	Z 1A	955	141	A	Late cut nail, 8d	5
U 22	Z 1A	955	141	A	Late cut nail, 9d	2
U 22	Z 1A	955	141	A	Late cut nail, Proximal	22
U 22	Z 1A	955	141	A	Metal Band	3
U 22	Z 1A	955	141	A	Screw, Pointed End	1
U 22	Z 1A	955	141	J	Bar Stock (Blacksmithing)	1
U 22	Z 1A	955	141	K	Bottle/Jar Body, Blown Molded	6
U 22	Z 1A	955	141	K	Bottle/Jar Body, Unidentified Manufacture	1
U 22	Z 1A	955	141	O	Other Metal - Unidentified	6
U 22	Z 1A	955	141	X	Charcoal	5
U 22	Z 1B	955	141	A	Bolt	3
U 22	Z 1B	955	141	A	Cut nail unspecified	57
U 22	Z 1B	955	141	A	Flat Glass, Blue-green	320
U 22	Z 1B	955	141	A	Late cut nail, 10d	1
U 22	Z 1B	955	141	A	Late cut nail, 12d	6
U 22	Z 1B	955	141	A	Late cut nail, 16d	1
U 22	Z 1B	955	141	A	Late cut nail, 2d	7
U 22	Z 1B	955	141	A	Late cut nail, 3d	9
U 22	Z 1B	955	141	A	Late cut nail, 4d	15

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U 22	Z 1B	955	141	A	Late cut nail, 5d	14
U 22	Z 1B	955	141	A	Late cut nail, 6d	12
U 22	Z 1B	955	141	A	Late cut nail, 7d	4
U 22	Z 1B	955	141	A	Late cut nail, 8d	7
U 22	Z 1B	955	141	A	Late cut nail, Proximal	62
U 22	Z 1B	955	141	A	Metal Band	24
U 22	Z 1B	955	141	A	Metal Brad	2
U 22	Z 1B	955	141	A	Metal Wire	2
U 22	Z 1B	955	141	A	Nut	1
U 22	Z 1B	955	141	A	Screw, Blunt End	1
U 22	Z 1B	955	141	A	Screw, Pointed End	1
U 22	Z 1B	955	141	A	Unidentified Nail	2
U 22	Z 1B	955	141	A	Wrought nail, 9d	1
U 22	Z 1B	955	141	A	Wrought nail, Distal	1
U 22	Z 1B	955	141	C	Bone Button	1
U 22	Z 1B	955	141	C	Glass Button	1
U 22	Z 1B	955	141	J	Bar Stock (Blacksmithing)	7
U 22	Z 1B	955	141	K	Bottle/Jar Body, Blown Molded	15
U 22	Z 1B	955	141	K	Bottle/Jar Body, Unidentified Manufacture	1
U 22	Z 1B	955	141	K	Burned/Melted Unidentified Glass	4
U 22	Z 1B	955	141	O	Other Metal - Unidentified	14
U 22	Z 1B	955	141	R	Rimfire Cartridge Other	1
U 22	Z 1B	955	141	T	Metal Animal Shoe	1
U 22	Z 1B	955	141	T	Metal Wagon Part	1
U 22	Z 1B	955	141	X	Charcoal	1
U 22	Z 1B	955	141	X	Coal	6
U 22	Z 1B	955	141	X	Coal Cinder/Slag	1
U 22	Z 2	955	141	A	Bolt	1
U 22	Z 2	955	141	A	Cut nail unspecified	15
U 22	Z 2	955	141	A	Flat Glass, Blue-green	214
U 22	Z 2	955	141	A	Late cut nail, 10d	2
U 22	Z 2	955	141	A	Late cut nail, 12d	1
U 22	Z 2	955	141	A	Late cut nail, 20d	1
U 22	Z 2	955	141	A	Late cut nail, 2d	1
U 22	Z 2	955	141	A	Late cut nail, 3d	4

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U 22	Z 2	955	141	A	Late cut nail, 4d	9
U 22	Z 2	955	141	A	Late cut nail, 5d	3
U 22	Z 2	955	141	A	Late cut nail, 6d	5
U 22	Z 2	955	141	A	Late cut nail, 7d	2
U 22	Z 2	955	141	A	Late cut nail, 8d	10
U 22	Z 2	955	141	A	Late cut nail, 9d	1
U 22	Z 2	955	141	A	Late cut nail, Medial	1
U 22	Z 2	955	141	A	Late cut nail, Proximal	26
U 22	Z 2	955	141	A	Metal Band	7
U 22	Z 2	955	141	A	Metal Brad	1
U 22	Z 2	955	141	A	Metal Washer	1
U 22	Z 2	955	141	A	Metal Wire	1
U 22	Z 2	955	141	A	Nut	1
U 22	Z 2	955	141	A	Other Metal Fastener	1
U 22	Z 2	955	141	A	Screw, Pointed End	4
U 22	Z 2	955	141	A	Wrought nail, Proximal	1
U 22	Z 2	955	141	C	Rubber Button	1
U 22	Z 2	955	141	J	Bar Stock (Blacksmithing)	2
U 22	Z 2	955	141	K	Bottle/Jar Body, Blown Molded	6
U 22	Z 2	955	141	K	Tin Cup	2
U 22	Z 2	955	141	O	Other Metal - Unidentified	10
U 22	Z 2	955	141	T	Metal Harness Part	2
U 22	Z 2	955	141	X	Coal	1
U 23	Z 1A	950	146	A	Bolt	1
U 23	Z 1A	950	146	A	Cut nail unspecified	11
U 23	Z 1A	950	146	A	Flat Glass, Blue-green	1
U 23	Z 1A	950	146	A	Late cut nail, 3d	1
U 23	Z 1A	950	146	A	Late cut nail, 8d	1
U 23	Z 1A	950	146	A	Late cut nail, Proximal	7
U 23	Z 1A	950	146	A	Metal Band	2
U 23	Z 1A	950	146	A	Metal Washer	1
U 23	Z 1A	950	146	J	Bar Stock (Blacksmithing)	1
U 23	Z 1A	950	146	J	Machinery:Unidentified	1
U 23	Z 1A	950	146	O	Other Metal - Unidentified	3
U 23	Z 1A	950	146	X	Coal	1

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U 23	Z 1B	950	146	A	Bolt	4
U 23	Z 1B	950	146	A	Cut nail unspecified	18
U 23	Z 1B	950	146	A	Flat Glass, Blue-green	6
U 23	Z 1B	950	146	A	Late cut nail, 2d	1
U 23	Z 1B	950	146	A	Late cut nail, 3d	2
U 23	Z 1B	950	146	A	Late cut nail, 4d	2
U 23	Z 1B	950	146	A	Late cut nail, 5d	1
U 23	Z 1B	950	146	A	Late cut nail, 6d	4
U 23	Z 1B	950	146	A	Late cut nail, 7d	1
U 23	Z 1B	950	146	A	Late cut nail, 8d	3
U 23	Z 1B	950	146	A	Late cut nail, Proximal	10
U 23	Z 1B	950	146	A	Metal Band	9
U 23	Z 1B	950	146	A	Unidentified Nail	5
U 23	Z 1B	950	146	A	Wrought nail, Proximal	1
U 23	Z 1B	950	146	J	Bar Stock (Blacksmithing)	3
U 23	Z 1B	950	146	O	Other Metal - Unidentified	3
U 23	Z 2	950	146	A	Bolt	33
U 23	Z 2	950	146	A	Brick, Fragment (Not Identifiable)	2
U 23	Z 2	950	146	A	Cut nail unspecified	150
U 23	Z 2	950	146	A	Flat Glass, Blue-green	60
U 23	Z 2	950	146	A	Late cut nail, 10d	1
U 23	Z 2	950	146	A	Late cut nail, 12d	8
U 23	Z 2	950	146	A	Late cut nail, 16d	1
U 23	Z 2	950	146	A	Late cut nail, 2d	7
U 23	Z 2	950	146	A	Late cut nail, 3d	14
U 23	Z 2	950	146	A	Late cut nail, 4d	25
U 23	Z 2	950	146	A	Late cut nail, 5d	33
U 23	Z 2	950	146	A	Late cut nail, 6d	19
U 23	Z 2	950	146	A	Late cut nail, 7d	9
U 23	Z 2	950	146	A	Late cut nail, 8d	34
U 23	Z 2	950	146	A	Late cut nail, 9d	1
U 23	Z 2	950	146	A	Late cut nail, Proximal	117
U 23	Z 2	950	146	A	Metal Band	80
U 23	Z 2	950	146	A	Metal Brad	3
U 23	Z 2	950	146	A	Metal Staple	2

Appendix C (cont'd)

U 23	Z 2	950	146	A	Metal Washer	9
U 23	Z 2	950	146	A	Nut	10
U 23	Z 2	950	146	A	Other Metal Door Hardware	1
U 23	Z 2	950	146	A	Screw, Pointed End	8
U 23	Z 2	950	146	A	Unidentified Nail	30
U 23	Z 2	950	146	A	Wrought nail, 8d	1
U 23	Z 2	950	146	A	Wrought nail, Distal	1
U 23	Z 2	950	146	A	Wrought nail, Proximal	7
U 23	Z 2	950	146	C	Glass Button	1
U 23	Z 2	950	146	C	Metal Button, Eagle Small	1
U 23	Z 2	950	146	J	Bar Stock (Blacksmithing)	36
U 23	Z 2	950	146	J	Machinery:Unidentified	11
U 23	Z 2	950	146	J	Slag	4
U 23	Z 2	950	146	J	Unidentified Metal Tool	1
U 23	Z 2	950	146	K	Bottle/Jar Base, Dip Mold w/Separate Base Part	1
U 23	Z 2	950	146	K	Bottle/Jar Body, Blown Molded	4
U 23	Z 2	950	146	K	Bottle/Jar Body, Machine Made	1
U 23	Z 2	950	146	K	Bottle/Jar Body, Unidentified Manufacture	1
U 23	Z 2	950	146	O	Other Glass - Unidentified	1
U 23	Z 2	950	146	O	Other Metal - Unidentified	123
U 23	Z 2	950	146	T	Animal Shoe Nail	3
U 23	Z 2	950	146	T	Metal Harness Part	4
U 23	Z 2	950	146	T	Metal Wagon Part	2
U 23	Z 2	950	146	X	Coal	8
U 23	Z 2	950	146	X	Coal Cinder/Slag	1
U 24	Z	944	140	A	Bolt	2
U 24	Z	944	140	A	Cut nail unspecified	24
U 24	Z	944	140	A	Flat Glass, Blue-green	3236
U 24	Z	944	140	A	Late cut nail, 12d	2
U 24	Z	944	140	A	Late cut nail, 2d	5
U 24	Z	944	140	A	Late cut nail, 3d	2
U 24	Z	944	140	A	Late cut nail, 4d	5
U 24	Z	944	140	A	Late cut nail, 5d	3
U 24	Z	944	140	A	Late cut nail, 6d	1
U 24	Z	944	140	A	Late cut nail, 9d	1

Appendix C (cont'd)

U 24	Z	944	140	A	Late cut nail, Proximal	17
U 24	Z	944	140	A	Metal Band	13
U 24	Z	944	140	A	Nut	1
U 24	Z	944	140	A	Screw, Pointed End	1
U 24	Z	944	140	A	Unidentified Nail	2
U 24	Z	944	140	J	Bar Stock (Blacksmithing)	9
U 24	Z	944	140	K	Bottle/Jar Body, Blown Molded	1
U 24	Z	944	140	O	Other Metal - Unidentified	6
U 24	Z	944	140	T	Metal Harness Part	4
U 24	Z	944	140	X	Coal	1
U 24	Z 2	944	140	A	Bolt	14
U 24	Z 2	944	140	A	Brick, Fragment (Not Identifiable)	1
U 24	Z 2	944	140	A	Cut nail unspecified	65
U 24	Z 2	944	140	A	Flat Glass, Blue-green	8160
U 24	Z 2	944	140	A	Late cut nail, 12d	2
U 24	Z 2	944	140	A	Late cut nail, 2d	7
U 24	Z 2	944	140	A	Late cut nail, 3d	8
U 24	Z 2	944	140	A	Late cut nail, 4d	7
U 24	Z 2	944	140	A	Late cut nail, 5d	13
U 24	Z 2	944	140	A	Late cut nail, 6d	9
U 24	Z 2	944	140	A	Late cut nail, 7d	13
U 24	Z 2	944	140	A	Late cut nail, 8d	10
U 24	Z 2	944	140	A	Late cut nail, 9d	3
U 24	Z 2	944	140	A	Late cut nail, Proximal	60
U 24	Z 2	944	140	A	Metal Band	26
U 24	Z 2	944	140	A	Metal Brad	4
U 24	Z 2	944	140	A	Metal Hinge	1
U 24	Z 2	944	140	A	Metal Staple	1
U 24	Z 2	944	140	A	Metal Washer	5
U 24	Z 2	944	140	A	Metal Wire	1
U 24	Z 2	944	140	A	Nut	6
U 24	Z 2	944	140	A	Screw, Pointed End	5
U 24	Z 2	944	140	A	Screw, Undetermined/Broken	4
U 24	Z 2	944	140	A	Unidentified Nail	11
U 24	Z 2	944	140	C	Metal Eyelet/Grommet	1

Appendix C (cont'd)

U 24	Z 2	944	140	J	Bar Stock (Blacksmithing)	22
U 24	Z 2	944	140	J	File	1
U 24	Z 2	944	140	J	Machinery:Other	1
U 24	Z 2	944	140	J	Machinery:Unidentified	1
U 24	Z 2	944	140	J	Other Blacksmithing Tool	2
U 24	Z 2	944	140	K	Bottle/Jar Body, Blown Molded	4
U 24	Z 2	944	140	K	Bottle/Jar Body, Unidentified Manufacture	1
U 24	Z 2	944	140	O	Other Metal - Unidentified	23
U 24	Z 2	944	140	T	Animal Shoe Nail	2
U 24	Z 2	944	140	T	Metal Harness Part	6
U 24	Z 2	944	140	T	Metal Wagon Part	2
U 24	Z 2	944	140	X	Coal	4
U 25	Z 1A	955	146	A	Flat Glass, Blue-green	2
U 25	Z 1A	955	146	A	Metal Band	1
U 25	Z 1A	955	146	J	Bar Stock (Blacksmithing)	1
U 25	Z 1B	955	146	A	Bolt	1
U 25	Z 1B	955	146	A	Cut nail unspecified	26
U 25	Z 1B	955	146	A	Flat Glass, Blue-green	7
U 25	Z 1B	955	146	A	Late cut nail, 12d	1
U 25	Z 1B	955	146	A	Late cut nail, 2d	4
U 25	Z 1B	955	146	A	Late cut nail, 3d	2
U 25	Z 1B	955	146	A	Late cut nail, 4d	1
U 25	Z 1B	955	146	A	Late cut nail, 5d	2
U 25	Z 1B	955	146	A	Late cut nail, 6d	1
U 25	Z 1B	955	146	A	Late cut nail, 7d	1
U 25	Z 1B	955	146	A	Late cut nail, 8d	2
U 25	Z 1B	955	146	A	Late cut nail, Proximal	4
U 25	Z 1B	955	146	A	Metal Band	21
U 25	Z 1B	955	146	A	Metal Tack	1
U 25	Z 1B	955	146	A	Metal Washer	3
U 25	Z 1B	955	146	A	Screw, Pointed End	1
U 25	Z 1B	955	146	A	Unidentified Nail	1
U 25	Z 1B	955	146	J	Bar Stock (Blacksmithing)	1
U 25	Z 1B	955	146	K	Bottle/Jar Body, Blown Molded	1

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U 25	Z 1B	955	146	K	Ironstone: Undecorated Blue/Grey	1
U 25	Z 1B	955	146	T	Animal Shoe Nail	2
U 25	Z 1B	955	146	X	Coal	2
U 25	Z 2	955	146	A	Bolt	9
U 25	Z 2	955	146	A	Cut nail unspecified	125
U 25	Z 2	955	146	A	Flat Glass, Blue-green	43
U 25	Z 2	955	146	A	Late cut nail, 2d	5
U 25	Z 2	955	146	A	Late cut nail, 3d	12
U 25	Z 2	955	146	A	Late cut nail, 4d	9
U 25	Z 2	955	146	A	Late cut nail, 5d	12
U 25	Z 2	955	146	A	Late cut nail, 6d	7
U 25	Z 2	955	146	A	Late cut nail, 7d	3
U 25	Z 2	955	146	A	Late cut nail, 8d	24
U 25	Z 2	955	146	A	Late cut nail, Proximal	90
U 25	Z 2	955	146	A	Metal Band	37
U 25	Z 2	955	146	A	Metal Brad	4
U 25	Z 2	955	146	A	Metal Tack	2
U 25	Z 2	955	146	A	Metal Washer	3
U 25	Z 2	955	146	A	Metal Wire	1
U 25	Z 2	955	146	A	Nut	2
U 25	Z 2	955	146	A	Screw, Pointed End	4
U 25	Z 2	955	146	A	Screw, Undetermined/Broken	3
U 25	Z 2	955	146	A	Unidentified Nail	39
U 25	Z 2	955	146	A	Wrought nail, 6d	1
U 25	Z 2	955	146	A	Wrought nail, 7d	1
U 25	Z 2	955	146	A	Wrought nail, Proximal	6
U 25	Z 2	955	146	J	Bar Stock (Blacksmithing)	24
U 25	Z 2	955	146	J	Machinery: Unidentified	7
U 25	Z 2	955	146	J	Slag	1
U 25	Z 2	955	146	J	Unidentified Metal Tool	1
U 25	Z 2	955	146	K	Bottle/Jar Body, Blown Molded	4
U 25	Z 2	955	146	K	Burned/Melted Unidentified Glass	1
U 25	Z 2	955	146	K	Whiteware: Undecorated	1
U 25	Z 2	955	146	K	Whiteware: Underglaze Painted	1
U 25	Z 2	955	146	O	Other Metal - Unidentified	105

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U 25	Z 2	955	146	T	Metal Carriage Part	1
U 25	Z 1B	955	146	O	Other Metal - Unidentified	11
U 25	Z 2	955	146	T	Metal Harness Part	6
U 25	Z 2	955	146	T	Metal Wagon Part	5
U 25	Z 2	955	146	X	Charcoal	1
U 25	Z 2	955	146	X	Coal	17
U 26	Z 1A	955	139	A	Bolt	2
U 26	Z 1A	955	139	A	Cut nail unspecified	3
U 26	Z 1A	955	139	A	Flat Glass, Blue-green	74
U 26	Z 1A	955	139	A	Late cut nail, 12d	1
U 26	Z 1A	955	139	A	Late cut nail, 20d	1
U 26	Z 1A	955	139	A	Late cut nail, 3d	3
U 26	Z 1A	955	139	A	Late cut nail, 4d	4
U 26	Z 1A	955	139	A	Late cut nail, 5d	5
U 26	Z 1A	955	139	A	Late cut nail, 6d	3
U 26	Z 1A	955	139	A	Late cut nail, 7d	2
U 26	Z 1A	955	139	A	Late cut nail, 8d	5
U 26	Z 1A	955	139	A	Late cut nail, Proximal	11
U 26	Z 1A	955	139	A	Metal Band	2
U 26	Z 1A	955	139	A	Metal Brad	1
U 26	Z 1A	955	139	J	Bar Stock (Blacksmithing)	1
U 26	Z 1A	955	139	K	Bottle/Jar Base, Dip Mold w/Pontil Scar and Kick	1
U 26	Z 1A	955	139	K	Bottle/Jar Body, Blown Molded	12
U 26	Z 1A	955	139	K	Ironstone: Undecorated Blue/Grey	1
U 26	Z 1A	955	139	O	Other Metal - Unidentified	3
U 26	Z 1A	955	139	X	Coal	1
U 26	Z 1B	955	139	A	Bolt	1
U 26	Z 1B	955	139	A	Cut nail unspecified	9
U 26	Z 1B	955	139	A	Flat Glass, Blue-green	88
U 26	Z 1B	955	139	A	Late cut nail, 2d	1
U 26	Z 1B	955	139	A	Late cut nail, 4d	5
U 26	Z 1B	955	139	A	Late cut nail, 5d	1
U 26	Z 1B	955	139	A	Late cut nail, 8d	3
U 26	Z 1B	955	139	A	Late cut nail, 9d	2
U 26	Z 1B	955	139	A	Late cut nail, Proximal	6

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U 26	Z 1B	955	139	A	Screw, Pointed End	2
U 26	Z 1B	955	139	C	Bone Button	1
U 26	Z 1B	955	139	K	Bottle/Jar Body, Blown Molded	2
U 26	Z 1B	955	139	K	Bottle/Jar Body, Unidentified Manufacture	1
U 26	Z 1B	955	139	O	Other Stone - Unidentified	1
U 26	Z 2	955	139	A	Bolt	2
U 26	Z 2	955	139	A	Cut nail unspecified	19
U 26	Z 2	955	139	A	Flat Glass, Blue-green	268
U 26	Z 2	955	139	A	Late cut nail, 12d	1
U 26	Z 2	955	139	A	Late cut nail, 30d	1
U 26	Z 2	955	139	A	Late cut nail, 3d	4
U 26	Z 2	955	139	A	Late cut nail, 4d	6
U 26	Z 2	955	139	A	Late cut nail, 5d	7
U 26	Z 2	955	139	A	Late cut nail, 6d	4
U 26	Z 2	955	139	A	Late cut nail, 7d	1
U 26	Z 2	955	139	A	Late cut nail, 8d	7
U 26	Z 2	955	139	A	Late cut nail, 9d	3
U 26	Z 2	955	139	A	Late cut nail, Proximal	24
U 26	Z 2	955	139	A	Metal Band	1
U 26	Z 2	955	139	A	Screw, Undetermined/Broken	1
U 26	Z 2	955	139	A	Unidentified Nail	1
U 26	Z 2	955	139	C	Metal Button, Eagle Small	1
U 26	Z 2	955	139	C	Metal Button, Iron/Steel	1
U 26	Z 2	955	139	J	Bar Stock (Blacksmithing)	5
U 26	Z 2	955	139	K	Bottle/Jar Base, Machine Made Nonspecific	1
U 26	Z 2	955	139	K	Bottle/Jar Body, Blown Molded	1
U 26	Z 2	955	139	K	Bottle/Jar Body, Unidentified Manufacture	2
U 26	Z 2	955	139	K	Tin Can Unidentified Body	23
U 26	Z 2	955	139	O	Other Metal - Unidentified	12
U 26	Z 2	955	139	T	Metal Wagon Part	1
U 26	Z 2	955	139	X	Coal	1
U 27	U	950	148	A	Cut nail unspecified	3
U 27	U	950	148	A	Flat Glass, Blue-green	1
U 27	U	950	148	A	Late cut nail, Proximal	2
U 27	U	950	148	A	Metal Band	1

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U 27	U	950	148	X	Coal	1
U 27	Z 1A	950	148	A	Cut nail unspecified	4
U 27	Z 1A	950	148	A	Flat Glass, Blue-green	3
U 27	Z 1A	950	148	A	Late cut nail, 8d	1
U 27	Z 1A	950	148	A	Late cut nail, Distal	1
U 27	Z 1A	950	148	A	Late cut nail, Proximal	5
U 27	Z 1A	950	148	C	Glass Button	1
U 27	Z 1A	950	148	J	Bar Stock (Blacksmithing)	1
U 27	Z 1A	950	148	O	Other Stone - Unidentified	
U 27	Z 1A	950	148	T	Animal Shoe Nail	2
U 27	Z 1A	950	148	X	Coal	1
U 27	Z 1B	950	148	A	Bolt	4
U 27	Z 1B	950	148	A	Cut nail unspecified	13
U 27	Z 1B	950	148	A	Flat Glass, Blue-green	4
U 27	Z 1B	950	148	A	Late cut nail, 4d	2
U 27	Z 1B	950	148	A	Late cut nail, 8d	1
U 27	Z 1B	950	148	A	Late cut nail, Proximal	16
U 27	Z 1B	950	148	A	Metal Band	6
U 27	Z 1B	950	148	A	Metal Washer	3
U 27	Z 1B	950	148	A	Other Metal Fastener	1
U 27	Z 1B	950	148	A	Screw, Undetermined/Broken	1
U 27	Z 1B	950	148	C	Metal Suspender Clasp	1
U 27	Z 1B	950	148	K	Bottle/Jar Body, Blown Molded	1
U 27	Z 1B	950	148	O	Other Metal - Unidentified	16
U 27	Z 1B	950	148	T	Animal Shoe Nail	1
U 27	Z 2	950	148	A	Bolt	34
U 27	Z 2	950	148	A	Brick, Fragment (Not Identifiable)	1
U 27	Z 2	950	148	A	Cut nail unspecified	169
U 27	Z 2	950	148	A	Flat Glass, Blue-green	36
U 27	Z 2	950	148	A	Flat Glass, Clear	1
U 27	Z 2	950	148	A	Late cut nail, 10d	4
U 27	Z 2	950	148	A	Late cut nail, 12d	5
U 27	Z 2	950	148	A	Late cut nail, 16d	1
U 27	Z 2	950	148	A	Late cut nail, 2d	2
U 27	Z 2	950	148	A	Late cut nail, 3d	12

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U 27	Z 2	950	148	A	Late cut nail, 4d	17
U 27	Z 2	950	148	A	Late cut nail, 5d	4
U 27	Z 2	950	148	A	Late cut nail, 6d	13
U 27	Z 2	950	148	A	Late cut nail, 7d	4
U 27	Z 2	950	148	A	Late cut nail, 8d	35
U 27	Z 2	950	148	A	Late cut nail, 9d	2
U 27	Z 2	950	148	A	Late cut nail, Proximal	220
U 27	Z 2	950	148	A	Metal Band	102
U 27	Z 2	950	148	A	Metal Brad	2
U 27	Z 2	950	148	A	Metal Hinge	1
U 27	Z 2	950	148	A	Metal Washer	10
U 27	Z 2	950	148	A	Nut	9
U 27	Z 2	950	148	A	Screw, Pointed End	8
U 27	Z 2	950	148	A	Screw, Undetermined/Broken	4
U 27	Z 2	950	148	A	Unidentified Metal Fastener	1
U 27	Z 2	950	148	A	Unidentified Nail	17
U 27	Z 2	950	148	A	Wrought nail, Proximal	2
U 27	Z 2	950	148	C	Glass Button	2
U 27	Z 2	950	148	C	Metal Button, Eagle Large	2
U 27	Z 2	950	148	J	Bar Stock (Blacksmithing)	26
U 27	Z 2	950	148	J	File	1
U 27	Z 2	950	148	J	Machinery:Chain	1
U 27	Z 2	950	148	J	Machinery:Other	2
U 27	Z 2	950	148	J	Machinery:Unidentified	3
U 27	Z 2	950	148	J	Slag	4
U 27	Z 2	950	148	K	Bottle/Jar Body, Blown Molded	2
U 27	Z 2	950	148	K	Bottle/Jar Body, Unidentified Manufacture	1
U 27	Z 2	950	148	K	Undetermined Glass Body, Unidentified Manufacture	1
U 27	Z 2	950	148	O	Other Metal - Unidentified	105
U 27	Z 2	950	148	T	Animal Shoe Nail	2
U 27	Z 2	950	148	T	Metal Harness Part	6
U 27	Z 2	950	148	T	Metal Wagon Part	2
U 27	Z 2	950	148	X	Coal	12
U 28	Z 1A	950	141	A	Bolt	1
U 28	Z 1A	950	141	A	Brick, Fragment (Not Identifiable)	2

Appendix C (cont'd)

U 28	Z 1A	950	141	A	Cut nail unspecified	14
U 28	Z 1A	950	141	A	Flat Glass, Blue-green	156
U 28	Z 1A	950	141	A	Late cut nail, 2d	1
U 28	Z 1A	950	141	A	Late cut nail, 4d	1
U 28	Z 1A	950	141	A	Late cut nail, Proximal	18
U 28	Z 1A	950	141	A	Metal Band	4
U 28	Z 1A	950	141	A	Metal Washer	2
U 28	Z 1A	950	141	A	Screw, Pointed End	1
U 28	Z 1A	950	141	C	Metal Suspender Clasp	1
U 28	Z 1A	950	141	J	Bar Stock (Blacksmithing)	1
U 28	Z 1A	950	141	J	Machinery:Other	1
U 28	Z 1A	950	141	K	Bottle/Jar Body, Unidentified Manufacture	2
U 28	Z 1A	950	141	X	Coal	21
U 28	Z 1A	950	141	X	Coal Cinder/Slag	1
U 28	Z 1B	950	141	A	Bolt	8
U 28	Z 1B	950	141	A	Cut nail unspecified	35
U 28	Z 1B	950	141	A	Flat Glass, Blue-green	223
U 28	Z 1B	950	141	A	Late cut nail, 3d	3
U 28	Z 1B	950	141	A	Late cut nail, 4d	2
U 28	Z 1B	950	141	A	Late cut nail, 6d	2
U 28	Z 1B	950	141	A	Late cut nail, 7d	1
U 28	Z 1B	950	141	A	Late cut nail, 8d	2
U 28	Z 1B	950	141	A	Late cut nail, Proximal	47
U 28	Z 1B	950	141	A	Metal Band	14
U 28	Z 1B	950	141	A	Metal Brad	2
U 28	Z 1B	950	141	A	Metal Washer	2
U 28	Z 1B	950	141	A	Nut	2
U 28	Z 1B	950	141	A	Screw, Pointed End	3
U 28	Z 1B	950	141	K	Bottle/Jar Body, Blown Molded	3
U 28	Z 1B	950	141	K	Bottle/Jar Body, Unidentified Manufacture	1
U 28	Z 1B	950	141	O	Other Metal - Unidentified	8
U 28	Z 1B	950	141	X	Coal	17
U 28	Z 2	950	141	A	Bolt	17
U 28	Z 2	950	141	A	Cut nail unspecified	149
U 28	Z 2	950	141	A	Flat Glass, Blue-green	718

Appendix C (cont'd)

U 28	Z 2	950	141	A	Late cut nail, 10d	11
U 28	Z 2	950	141	A	Late cut nail, 12d	1
U 28	Z 2	950	141	A	Late cut nail, 3d	3
U 28	Z 2	950	141	A	Late cut nail, 4d	11
U 28	Z 2	950	141	A	Late cut nail, 6d	6
U 28	Z 2	950	141	A	Late cut nail, 8d	14
U 28	Z 2	950	141	A	Late cut nail, Proximal	137
U 28	Z 2	950	141	A	Metal Band ¹	54
U 28	Z 2	950	141	A	Metal Washer	8
U 28	Z 2	950	141	A	Nut	4
U 28	Z 2	950	141	A	Screw, Pointed End	4
U 28	Z 2	950	141	A	Unidentified Nail	22
U 28	Z 2	950	141	C	Metal Button, Iron/Steel	2
U 28	Z 2	950	141	J	Bar Stock (Blacksmithing)	13
U 28	Z 2	950	141	K	Bottle/Jar Base, Unidentified Manufacture	1
U 28	Z 2	950	141	K	Bottle/Jar Body, Blown Molded	10
U 28	Z 2	950	141	K	Bottle/Jar Body, Unidentified Manufacture	7
U 28	Z 2	950	141	K	Undetermined Glass Body, Unidentified Manufacture	2
U 28	Z 2	950	141	O	Other Metal - Unidentified	165
U 28	Z 2	950	141	T	Animal Shoe Nail	1
U 28	Z 2	950	141	T	Metal Harness Part	2
U 28	Z 2	950	141	T	Metal Wagon Part	1
U 28	Z 2	950	141	X	Coal	64
U 28	Z 2	950	141	X	Coal Cinder/Slag	8
U 28	Z 3	950	141	A	Cut nail unspecified	11
U 28	Z 3	950	141	A	Flat Glass, Blue-green	38
U 28	Z 3	950	141	A	Late cut nail, 7d	1
U 28	Z 3	950	141	A	Late cut nail, 8d	1
U 28	Z 3	950	141	A	Late cut nail, Proximal	15
U 28	Z 3	950	141	A	Metal Band	1
U 28	Z 3	950	141	A	Metal Hinge	1
U 28	Z 3	950	141	A	Screw, Pointed End	1
U 28	Z 3	950	141	A	Unidentified Nail	1
U 28	Z 3	950	141	K	Bottle/Jar Body, Blown Molded	1
U 28	Z 3	950	141	O	Other Metal - Unidentified	5

Appendix C (cont'd)

U 28	Z 3	950	141	X	Coal	4
U 29	Z 1A	952	135	A	Cut nail unspecified	1
U 29	Z 1A	952	135	A	Flat Glass, Blue-green	68
U 29	Z 1A	952	135	A	Late cut nail, 3d	3
U 29	Z 1A	952	135	A	Late cut nail, 6d	2
U 29	Z 1A	952	135	A	Late cut nail, 7d	1
U 29	Z 1A	952	135	A	Late cut nail, 8d	7
U 29	Z 1A	952	135	A	Late cut nail, 9d	1
U 29	Z 1A	952	135	A	Late cut nail, Proximal	8
U 29	Z 1A	952	135	A	Metal Band	2
U 29	Z 1A	952	135	J	Bar Stock (Blacksmithing)	1
U 29	Z 1B	952	135	A	Bolt	7
U 29	Z 1B	952	135	A	Brick, Fragment (Not Identifiable)	8
U 29	Z 1B	952	135	A	Brick, Hand Made, Unglazed	2
U 29	Z 1B	952	135	A	Cut nail unspecified	38
U 29	Z 1B	952	135	A	Flat Glass, Blue-green	170
U 29	Z 1B	952	135	A	Late cut nail, 10d	12
U 29	Z 1B	952	135	A	Late cut nail, 12d	2
U 29	Z 1B	952	135	A	Late cut nail, 20d	2
U 29	Z 1B	952	135	A	Late cut nail, 2d	2
U 29	Z 1B	952	135	A	Late cut nail, 3d	3
U 29	Z 1B	952	135	A	Late cut nail, 4d	10
U 29	Z 1B	952	135	A	Late cut nail, 5d	2
U 29	Z 1B	952	135	A	Late cut nail, 6d	12
U 29	Z 1B	952	135	A	Late cut nail, 7d	1
U 29	Z 1B	952	135	A	Late cut nail, 8d	52
U 29	Z 1B	952	135	A	Late cut nail, Proximal	91
U 29	Z 1B	952	135	A	Metal Band	33
U 29	Z 1B	952	135	A	Metal Hinge	1
U 29	Z 1B	952	135	A	Screw, Pointed End	3
U 29	Z 1B	952	135	A	Screw, Undetermined/Broken	2
U 29	Z 1B	952	135	A	Unidentified Nail	1
U 29	Z 1B	952	135	J	Bar Stock (Blacksmithing)	2
U 29	Z 1B	952	135	J	Whetstone	1
U 29	Z 1B	952	135	K	Bottle/Jar Body, Blown Molded	1

Appendix C (cont'd)

U 29	Z 1B	952	135	O	Other Metal - Unidentified	13
U 29	Z 1B	952	135	T	Animal Shoe Nail	1
U 29	Z 1B	952	135	X	Coal	3
U 29	Z 2	952	135	A	Bolt	2
U 29	Z 2	952	135	A	Brick, Fragment (Not Identifiable)	4
U 29	Z 2	952	135	A	Cut nail unspecified	8
U 29	Z 2	952	135	A	Flat Glass, Blue-green	53
U 29	Z 2	952	135	A	Late cut nail, 10d	3
U 29	Z 2	952	135	A	Late cut nail, 12d	1
U 29	Z 2	952	135	A	Late cut nail, 3d	1
U 29	Z 2	952	135	A	Late cut nail, 4d	1
U 29	Z 2	952	135	A	Late cut nail, 6d	2
U 29	Z 2	952	135	A	Late cut nail, 8d	10
U 29	Z 2	952	135	A	Late cut nail, Proximal	10
U 29	Z 2	952	135	A	Metal Band	6
U 29	Z 2	952	135	A	Screw, Pointed End	2
U 29	Z 2	952	135	C	Glass Button	1
U 29	Z 2	952	135	C	Metal Military Acoutrements	1
U 29	Z 2	952	135	K	Bottle/Jar Body, Blown Molded	1
U 29	Z 2	952	135	X	Coal	1
U 3	Z 1A	948	152	A	Cut nail unspecified	1
U 3	Z 1B	948	152	A	Flat Glass, Blue-green	2
U 3	Z 1B	948	152	A	Wrought nail, Proximal	1
U 3	Z 1B	948	152	J	Bar Stock (Blacksmithing)	1
U 3	Z 2	948	152	A	Bolt	3
U 3	Z 2	948	152	A	Cut nail unspecified	7
U 3	Z 2	948	152	A	Flat Glass, Blue-green	12
U 3	Z 2	948	152	A	Late cut nail, 16d	1
U 3	Z 2	948	152	A	Late cut nail, 2d	1
U 3	Z 2	948	152	A	Late cut nail, 3d	1
U 3	Z 2	948	152	A	Late cut nail, 4d	2
U 3	Z 2	948	152	A	Late cut nail, 6d	2
U 3	Z 2	948	152	A	Late cut nail, 7d	2
U 3	Z 2	948	152	A	Late cut nail, 8d	4
U 3	Z 2	948	152	A	Late cut nail, Proximal	5

Appendix C (cont'd)

U 3	Z 2	948	152	A	Metal Band	2
U 3	Z 2	948	152	A	Metal Wire	3
U 3	Z 2	948	152	A	Screw, Pointed End	1
U 3	Z 2	948	152	A	Wrought nail, Distal	1
U 3	Z 2	948	152	J	Bar Stock (Blacksmithing)	2
U 3	Z 2	948	152	J	Machinery:Chain	1
U 3	Z 2	948	152	K	Bottle/Jar Body, Blown Molded	2
U 3	Z 2	948	152	K	Whiteware: Undecorated	1
U 3	Z 2	948	152	T	Metal Harness Part	2
U 3	Z 2	948	152	X	Coal	1
U 3	Z 3	948	152	A	Brick, Fragment (Not Identifiable)	1
U 3	Z 3	948	152	A	Cut nail unspecified	2
U 3	Z 3	948	152	A	Flat Glass, Blue-green	7
U 3	Z 3	948	152	A	Late cut nail, 6d	1
U 3	Z 3	948	152	A	Late cut nail, 8d	1
U 3	Z 3	948	152	A	Late cut nail, Proximal	3
U 3	Z 3	948	152	A	Mortar	1
U 30	Z 1A	944	148	A	Late cut nail, Proximal	1
U 30	Z 1A	944	148	J	Slag	1
U 30	Z 1A	944	148	K	Bottle/Jar Body, Blown Molded	1
U 30	Z 1B	944	148	A	Late cut nail, 3d	1
U 30	Z 2	944	148	A	Cut nail unspecified	3
U 30	Z 2	944	148	A	Flat Glass, Blue-green	6
U 30	Z 2	944	148	A	Late cut nail, Proximal	2
U 30	Z 2	944	148	K	Bottle/Jar Body, Blown Molded	1
U 30	Z 2	944	148	K	Whiteware: Undecorated	2
U 31	Z 1A	944	144	A	Late cut nail, Proximal	2
U 31	Z 1A	944	144	A	Metal Rivet	1
U 31	Z 1A	944	144	A	Metal Washer	1
U 31	Z 1B	944	144	A	Bolt	12
U 31	Z 1B	944	144	A	Cut nail unspecified	24
U 31	Z 1B	944	144	A	Flat Glass, Blue-green	16
U 31	Z 1B	944	144	A	Late cut nail, 12d	1
U 31	Z 1B	944	144	A	Late cut nail, 2d	1
U 31	Z 1B	944	144	A	Late cut nail, 3d	1

Appendix C (cont'd)

U 31	Z 1B	944	144	A	Late cut nail, 4d	2
U 31	Z 1B	944	144	A	Late cut nail, 6d	2
U 31	Z 1B	944	144	A	Late cut nail, 7d	1
U 31	Z 1B	944	144	A	Late cut nail, 8d	10
U 31	Z 1B	944	144	A	Late cut nail, 9d	1
U 31	Z 1B	944	144	A	Late cut nail, Proximal	32
U 31	Z 1B	944	144	A	Metal Band	4
U 31	Z 1B	944	144	A	Metal Staple	2
U 31	Z 1B	944	144	A	Metal Washer	1
U 31	Z 1B	944	144	A	Nut	1
U 31	Z 1B	944	144	A	Screw, Pointed End	6
U 31	Z 1B	944	144	C	Glass Button	1
U 31	Z 1B	944	144	O	Other Metal - Unidentified	23
U 31	Z 1B	944	144	R	Shotgun Shell, Brass	1
U 31	Z 1B	944	144	T	Metal Wagon Part	1
U 31	Z 1B	944	144	T	Other Transportation Metal	1
U 31	Z 2	944	144	A	Bolt	1
U 31	Z 2	944	144	A	Cut nail unspecified	33
U 31	Z 2	944	144	A	Flat Glass, Blue-green	10
U 31	Z 2	944	144	A	Late cut nail, 10d	3
U 31	Z 2	944	144	A	Late cut nail, 3d	2
U 31	Z 2	944	144	A	Late cut nail, 4d	2
U 31	Z 2	944	144	A	Late cut nail, 6d	3
U 31	Z 2	944	144	A	Late cut nail, 8d	7
U 31	Z 2	944	144	A	Late cut nail, 9d	1
U 31	Z 2	944	144	A	Late cut nail, Proximal	28
U 31	Z 2	944	144	A	Metal Band	4
U 31	Z 2	944	144	A	Metal Washer	2
U 31	Z 2	944	144	A	Other Metal Fastener	1
U 31	Z 2	944	144	A	Screw, Pointed End	2
U 31	Z 2	944	144	J	Bar Stock (Blacksmithing)	4
U 31	Z 2	944	144	J	Other Metal Tool	1
U 31	Z 2	944	144	K	Hollow ware (cast or wrought)	5
U 31	Z 2	944	144	O	Other Metal - Unidentified	30
U 31	Z 2	944	144	T	Other Transportation Metal	1

Appendix C (cont'd)

U 31	Z 3	944	144	A	Late cut nail, Proximal	1
U 32	Z 1A	955	131	A	Cut nail unspecified	4
U 32	Z 1A	955	131	A	Flat Glass, Blue-green	8
U 32	Z 1A	955	131	A	Late cut nail, Proximal	4
U 32	Z 1A	955	131	A	Metal Band	2
U 32	Z 1A	955	131	A	Nut	1
U 32	Z 1A	955	131	A	Unidentified Nail	1
U 32	Z 1A	955	131	O	Other Metal - Unidentified	2
U 32	Z 1A	955	131	X	Coal	3
U 32	Z 2	955	131	A	Bolt	8
U 32	Z 2	955	131	A	Cut nail unspecified	30
U 32	Z 2	955	131	A	Flat Glass, Blue-green	59
U 32	Z 2	955	131	A	Late cut nail, 10d	1
U 32	Z 2	955	131	A	Late cut nail, 16d	1
U 32	Z 2	955	131	A	Late cut nail, 2d	4
U 32	Z 2	955	131	A	Late cut nail, 3d	3
U 32	Z 2	955	131	A	Late cut nail, 4d	8
U 32	Z 2	955	131	A	Late cut nail, 6d	8
U 32	Z 2	955	131	A	Late cut nail, 7d	2
U 32	Z 2	955	131	A	Late cut nail, 8d	9
U 32	Z 2	955	131	A	Late cut nail, 9d	1
U 32	Z 2	955	131	A	Late cut nail, Proximal	21
U 32	Z 2	955	131	A	Metal Band	33
U 32	Z 2	955	131	A	Metal Brace	4
U 32	Z 2	955	131	A	Metal Brad	2
U 32	Z 2	955	131	A	Metal Washer	2
U 32	Z 2	955	131	A	Nut	1
U 32	Z 2	955	131	A	Screw, Pointed End	4
U 32	Z 2	955	131	A	Unidentified Metal Fastener	1
U 32	Z 2	955	131	A	Unidentified Nail	8
U 32	Z 2	955	131	A	Wrought nail, 9d	1
U 32	Z 2	955	131	C	Metal Button, Iron/Steel	1
U 32	Z 2	955	131	J	Bar Stock (Blacksmithing)	8
U 32	Z 2	955	131	J	Slag	1
U 32	Z 2	955	131	K	Bottle/Jar Body, Unidentified Manufacture	1

Appendix C (cont'd)

U 32	Z 2	955	131	K	Bottle/Jar Lip, Hand Formed	1
U 32	Z 2	955	131	K	Tin Can Rim	3
U 32	Z 2	955	131	K	Tin Can Unidentified Body	6
U 32	Z 2	955	131	K	Undetermined Glass Body, Unidentified Manufacture	2
U 32	Z 2	955	131	O	Other Metal - Unidentified	75
U 32	Z 2	955	131	P	Smoking Pipe Part	1
U 32	Z 2	955	131	P	Unidentified Key or Pin	1
U 32	Z 2	955	131	T	Metal Harness Part	5
U 32	Z 2	955	131	T	Metal Wagon Part	3
U 32	Z 2	955	131	X	Coal	30
U 33	Z 1A	950	131	A	Flat Glass, Blue-green	230
U 33	Z 1A	950	131	A	Late cut nail, 3d	1
U 33	Z 1A	950	131	A	Late cut nail, Proximal	3
U 33	Z 1A	950	131	A	Metal Band	2
U 33	Z 1A	950	131	O	Other Metal - Unidentified	2
U 33	Z 1B	950	131	A	Bolt	8
U 33	Z 1B	950	131	A	Cut nail unspecified	24
U 33	Z 1B	950	131	A	Flat Glass, Blue-green	869
U 33	Z 1B	950	131	A	Late cut nail, 10d	1
U 33	Z 1B	950	131	A	Late cut nail, 3d	5
U 33	Z 1B	950	131	A	Late cut nail, 4d	11
U 33	Z 1B	950	131	A	Late cut nail, 5d	2
U 33	Z 1B	950	131	A	Late cut nail, 6d	4
U 33	Z 1B	950	131	A	Late cut nail, 8d	7
U 33	Z 1B	950	131	A	Late cut nail, Proximal	26
U 33	Z 1B	950	131	A	Metal Band	4
U 33	Z 1B	950	131	A	Metal Brad	1
U 33	Z 1B	950	131	A	Metal Hinge	1
U 33	Z 1B	950	131	A	Screw, Pointed End	1
U 33	Z 1B	950	131	A	Unidentified Nail	1
U 33	Z 1B	950	131	A	Wrought nail, Proximal	1
U 33	Z 1B	950	131	K	Bottle/Jar Body, Blown Molded	2
U 33	Z 1B	950	131	K	Bottle/Jar Body, Unidentified Manufacture	3
U 33	Z 1B	950	131	K	Bottle/Jar Lip, Hand Formed	1
U 33	Z 1B	950	131	K	Whiteware: Undecorated	1

Appendix C (cont'd)

U 33	Z 1B	950	131	O	Other Metal - Unidentified	2
U 33	Z 2	950	131	A	Bolt	6
U 33	Z 2	950	131	A	Cut nail unspecified	24
U 33	Z 2	950	131	A	Flat Glass, Blue-green	1172
U 33	Z 2	950	131	A	Late cut nail, 10d	1
U 33	Z 2	950	131	A	Late cut nail, 2d	3
U 33	Z 2	950	131	A	Late cut nail, 3d	4
U 33	Z 2	950	131	A	Late cut nail, 4d	10
U 33	Z 2	950	131	A	Late cut nail, 6d	12
U 33	Z 2	950	131	A	Late cut nail, 8d	14
U 33	Z 2	950	131	A	Late cut nail, Proximal	32
U 33	Z 2	950	131	A	Metal Band	5
U 33	Z 2	950	131	A	Metal Brad	1
U 33	Z 2	950	131	A	Metal Washer	2
U 33	Z 2	950	131	A	Screw, Pointed End	3
U 33	Z 2	950	131	A	Screw, Undetermined/Broken	3
U 33	Z 2	950	131	A	Unidentified Nail	2
U 33	Z 2	950	131	A	Wrought nail, 6d	1
U 33	Z 2	950	131	J	Bar Stock (Blacksmithing)	10
U 33	Z 2	950	131	K	Bottle/Jar Body, Blown Molded	5
U 33	Z 2	950	131	K	Bottle/Jar Lip, Unfused Finish/Early Lipping Tool	1
U 33	Z 2	950	131	K	Undetermined Glass Body, Machine Made	1
U 33	Z 2	950	131	O	Other Metal - Unidentified	4
U 33	Z 2	950	131	T	Metal Harness Part	2
U 33	Z 2	950	131	T	Metal Wagon Part	1
U 34	Z 1	955	129	A	Bolt	6
U 34	Z 1	955	129	A	Cut nail unspecified	8
U 34	Z 1	955	129	A	Flat Glass, Blue-green	5
U 34	Z 1	955	129	A	Late cut nail, 3d	1
U 34	Z 1	955	129	A	Late cut nail, 4d	2
U 34	Z 1	955	129	A	Late cut nail, 5d	2
U 34	Z 1	955	129	A	Late cut nail, 6d	2
U 34	Z 1	955	129	A	Late cut nail, 8d	1
U 34	Z 1	955	129	A	Late cut nail, 9d	1
U 34	Z 1	955	129	A	Late cut nail, Proximal	8

Appendix C (cont'd)

U 34	Z 1	955	129	A	Metal Band	3
U 34	Z 1	955	129	A	Metal Brad	1
U 34	Z 1	955	129	A	Unidentified Nail	3
U 34	Z 1	955	129	C	Metal Other	1
U 34	Z 1	955	129	J	Bar Stock (Blacksmithing)	4
U 34	Z 1	955	129	K	Whiteware: Undecorated	1
U 34	Z 1	955	129	O	Other Metal - Unidentified	4
U 34	Z 1	955	129	X	Coal	1
U 34	Z 2	955	129	A	Bolt	28
U 34	Z 2	955	129	A	Brick, Fragment (Not Identifiable)	6
U 34	Z 2	955	129	A	Cut nail unspecified	76
U 34	Z 2	955	129	A	Flat Glass, Blue-green	36
U 34	Z 2	955	129	A	Late cut nail, 10d	4
U 34	Z 2	955	129	A	Late cut nail, 12d	3
U 34	Z 2	955	129	A	Late cut nail, 2d	5
U 34	Z 2	955	129	A	Late cut nail, 3d	4
U 34	Z 2	955	129	A	Late cut nail, 4d	16
U 34	Z 2	955	129	A	Late cut nail, 5d	1
U 34	Z 2	955	129	A	Late cut nail, 6d	13
U 34	Z 2	955	129	A	Late cut nail, 7d	2
U 34	Z 2	955	129	A	Late cut nail, 8d	14
U 34	Z 2	955	129	A	Late cut nail, 9d	1
U 34	Z 2	955	129	A	Late cut nail, Proximal	48
U 34	Z 2	955	129	A	Metal Band	27
U 34	Z 2	955	129	A	Metal Brad	3
U 34	Z 2	955	129	A	Metal Washer	1
U 34	Z 2	955	129	A	Nut	7
U 34	Z 2	955	129	A	Screw, Pointed End	3
U 34	Z 2	955	129	A	Wrought nail, 8d	1
U 34	Z 2	955	129	J	Bar Stock (Blacksmithing)	21
U 34	Z 2	955	129	J	Machinery:Chain	1
U 34	Z 2	955	129	J	Machinery:Other	1
U 34	Z 2	955	129	J	Other Blacksmithing Tool	3
U 34	Z 2	955	129	K	Bottle/Jar Body, Blown Molded	1
U 34	Z 2	955	129	K	Bottle/Jar Lip, Hand Formed	1

Appendix C (cont'd)

U 34	Z 2	955	129	K	Utensil Handle	1
U 34	Z 2	955	129	K	Whiteware: Underglaze Transfer Printed	1
U 34	Z 2	955	129	O	Other Metal - Unidentified	18
U 34	Z 2	955	129	P	Smoking Pipe Part	1
U 34	Z 2	955	129	R	Bullet	1
U 34	Z 2	955	129	T	Metal Harness Part	1
U 34	Z 2	955	129	T	Metal Wagon Part	5
U 34	Z 2	955	129	X	Coal	17
U 34	Z 2	955	129	X	Coal Cinder/Slag	1
U 34	Z 3	955	129	A	Bolt	1
U 34	Z 3	955	129	A	Flat Glass, Blue-green	2
U 34	Z 3	955	129	A	Late cut nail, Proximal	1
U 35	Z 1	953	125	A	Bolt	4
U 35	Z 1	953	125	A	Cut nail unspecified	11
U 35	Z 1	953	125	A	Flat Glass, Blue-green	37
U 35	Z 1	953	125	A	Late cut nail, 3d	1
U 35	Z 1	953	125	A	Late cut nail, 4d	4
U 35	Z 1	953	125	A	Late cut nail, 6d	2
U 35	Z 1	953	125	A	Late cut nail, 8d	2
U 35	Z 1	953	125	A	Late cut nail, Proximal	10
U 35	Z 1	953	125	A	Metal Band	3
U 35	Z 1	953	125	A	Metal Hinge	1
U 35	Z 1	953	125	A	Screw, Pointed End	3
U 35	Z 1	953	125	A	Screw, Undetermined/Broken	1
U 35	Z 1	953	125	A	Unidentified Metal Fastener	1
U 35	Z 1	953	125	A	Wrought nail, 6d	1
U 35	Z 1	953	125	A	Wrought nail, 8d	1
U 35	Z 1	953	125	J	Bar Stock (Blacksmithing)	6
U 35	Z 1	953	125	J	Other Blacksmithing Tool	1
U 35	Z 1	953	125	K	Bottle/Jar Body, Machine Made	11
U 35	Z 1	953	125	O	Other Metal - Unidentified	4
U 35	Z 1	953	125	T	Metal Harness Part	2
U 35	Z 1	953	125	T	Metal Wagon Part	3
U 35	Z 1	953	125	X	Coal	2
U 35	Z 2	953	125	A	Bolt	13

Appendix C (cont'd)

U 35	Z 2	953	125	A	Cut nail unspecified	25
U 35	Z 2	953	125	A	Flat Glass, Blue-green	67
U 35	Z 2	953	125	A	Late cut nail, 10d	1
U 35	Z 2	953	125	A	Late cut nail, 12d	1
U 35	Z 2	953	125	A	Late cut nail, 2d	1
U 35	Z 2	953	125	A	Late cut nail, 3d	3
U 35	Z 2	953	125	A	Late cut nail, 4d	9
U 35	Z 2	953	125	A	Late cut nail, 6d	2
U 35	Z 2	953	125	A	Late cut nail, 7d	3
U 35	Z 2	953	125	A	Late cut nail, 8d	10
U 35	Z 2	953	125	A	Late cut nail, 9d	1
U 35	Z 2	953	125	A	Late cut nail, Proximal	44
U 35	Z 2	953	125	A	Metal Band	18
U 35	Z 2	953	125	A	Metal Hinge	1
U 35	Z 2	953	125	A	Metal Washer	3
U 35	Z 2	953	125	A	Nut	4
U 35	Z 2	953	125	A	Screw, Pointed End	2
U 35	Z 2	953	125	A	Screw, Undetermined/Broken	1
U 35	Z 2	953	125	A	Unidentified Nail	5
U 35	Z 2	953	125	A	Wrought nail, 7d	1
U 35	Z 2	953	125	J	Bar Stock (Blacksmithing)	18
U 35	Z 2	953	125	J	Machinery:Unidentified	1
U 35	Z 2	953	125	J	Other Blacksmithing Tool	1
U 35	Z 2	953	125	K	Bottle/Jar Base, Owen's Scar	1
U 35	Z 2	953	125	K	Bottle/Jar Body, Machine Made	22
U 35	Z 2	953	125	K	Bottle/Jar Lip, Machine Made	1
U 35	Z 2	953	125	O	Other Metal - Unidentified	8
U 35	Z 2	953	125	R	Rimfire Cartridge Other	1
U 35	Z 2	953	125	T	Animal Shoe Nail	3
U 35	Z 2	953	125	T	Metal Harness Part	5
U 35	Z 2	953	125	T	Metal Wagon Part	1
U 35	Z 2	953	125	X	Coal	12
U 35	Z 2	953	125	X	Coal Cinder/Slag	1
U 36	Z 1A	942	143	A	Flat Glass, Blue-green	1
U 36	Z 1B	942	143	A	Cut nail unspecified	2

Appendix C (cont'd)

U 36	Z 1B	942	143	A	Flat Glass, Blue-green	8
U 36	Z 1B	942	143	A	Late cut nail, 6d	1
U 36	Z 1B	942	143	A	Late cut nail, Proximal	2
U 36	Z 1B	942	143	A	Metal Wire	9
U 36	Z 1B	942	143	K	Bottle/Jar Body, Unidentified Manufacture	1
U 36	Z 1B	942	143	K	Tin Can Unidentified Body	5
U 36	Z 1B	942	143	O	Other Metal - Unidentified	4
U 36	Z 2	942	143	A	Cut nail unspecified	5
U 36	Z 2	942	143	A	Flat Glass, Blue-green	7
U 36	Z 2	942	143	A	Late cut nail, 3d	1
U 36	Z 2	942	143	A	Late cut nail, 6d	1
U 36	Z 2	942	143	A	Late cut nail, 8d	1
U 36	Z 2	942	143	A	Late cut nail, Proximal	12
U 36	Z 2	942	143	J	Bar Stock (Blacksmithing)	1
U 36	Z 2	942	143	O	Other Metal - Unidentified	2
U 36	Z 2	942	143	T	Metal Harness Part	1
U 36	Z 2	942	143	X	Coal	4
U 37	Z 1	955	121	A	Flat Glass, Blue-green	94
U 37	Z 1	955	121	A	Metal Band	2
U 37	Z 1	955	121	K	Bottle/Jar Body, Blown Molded	1
U 37	Z 2	955	121	A	Bolt	1
U 37	Z 2	955	121	A	Cut nail unspecified	1
U 37	Z 2	955	121	A	Flat Glass, Blue-green	216
U 37	Z 2	955	121	A	Late cut nail, 2d	1
U 37	Z 2	955	121	A	Late cut nail, 3d	1
U 37	Z 2	955	121	A	Late cut nail, 4d	1
U 37	Z 2	955	121	A	Late cut nail, 6d	2
U 37	Z 2	955	121	A	Late cut nail, 8d	1
U 37	Z 2	955	121	A	Late cut nail, Proximal	4
U 37	Z 2	955	121	A	Metal Band	5
U 37	Z 2	955	121	C	Leather Shoe Part	1
U 37	Z 2	955	121	J	Bar Stock (Blacksmithing)	2
U 37	Z 2	955	121	K	Bottle/Jar Body, Blown Molded	1
U 37	Z 2	955	121	K	Undetermined Glass Body, Unidentified Manufacture	1
U 37	Z 2	955	121	K	Whiteware: Molded	1

Appendix C (cont'd)

U 37	Z 2	955	121	P	Pocket Knife	1
U 37	Z 2	955	121	X	Charcoal	3
U 38	Z 1	955	127	A	Cut nail unspecified	5
U 38	Z 1	955	127	A	Flat Glass, Blue-green	19
U 38	Z 1	955	127	A	Late cut nail, 2d	1
U 38	Z 1	955	127	A	Late cut nail, 4d	1
U 38	Z 1	955	127	A	Late cut nail, Proximal	4
U 38	Z 1	955	127	A	Metal Band	9
U 38	Z 1	955	127	A	Metal Washer	1
U 38	Z 1	955	127	A	Screw, Pointed End	2
U 38	Z 1	955	127	K	Undetermined Glass Body, Unidentified Manufacture	1
U 38	Z 1	955	127	K	Whiteware: Undecorated	1
U 38	Z 1	955	127	O	Other Metal - Unidentified	3
U 38	Z 1	955	127	X	Coal	2
U 38	Z 1	955	127	X	Coal Cinder/Slag	1
U 38	Z 2	955	127	A	Bolt	1
U 38	Z 2	955	127	A	Brick, Hand Made, Unglazed	1
U 38	Z 2	955	127	A	Cut nail unspecified	5
U 38	Z 2	955	127	A	Flat Glass, Blue-green	13
U 38	Z 2	955	127	A	Late cut nail, 10d	1
U 38	Z 2	955	127	A	Late cut nail, 16d	1
U 38	Z 2	955	127	A	Late cut nail, 2d	2
U 38	Z 2	955	127	A	Late cut nail, 4d	3
U 38	Z 2	955	127	A	Late cut nail, 5d	2
U 38	Z 2	955	127	A	Late cut nail, 6d	2
U 38	Z 2	955	127	A	Late cut nail, 7d	1
U 38	Z 2	955	127	A	Late cut nail, 8d	2
U 38	Z 2	955	127	A	Late cut nail, Proximal	2
U 38	Z 2	955	127	A	Metal Band	8
U 38	Z 2	955	127	A	Screw, Pointed End	1
U 38	Z 2	955	127	J	Bar Stock (Blacksmithing)	1
U 38	Z 2	955	127	O	Other Metal - Unidentified	4
U 38	Z 2	955	127	T	Metal Wagon Part	1
U 39	Z 1	955	117	A	Cut nail unspecified	3
U 39	Z 1	955	117	A	Flat Glass, Blue-green	63

Appendix C (cont'd)

U 39	Z 1	955	117	A	Late cut nail, 2d	2
U 39	Z 1	955	117	A	Late cut nail, 3d	1
U 39	Z 1	955	117	A	Late cut nail, 6d	1
U 39	Z 1	955	117	A	Late cut nail, 8d	2
U 39	Z 1	955	117	A	Late cut nail, Proximal	5
U 39	Z 1	955	117	A	Metal Band	6
U 39	Z 1	955	117	A	Metal Wire	2
U 39	Z 1	955	117	K	Bottle/Jar Body, Blown Molded	2
U 39	Z 1	955	117	K	Pot	10
U 39	Z 1	955	117	O	Other Metal - Unidentified	4
U 39	Z 1	955	117	X	Coal	1
U 39	Z 2A	955	117	A	Cut nail unspecified	20
U 39	Z 2A	955	117	A	Flat Glass, Blue-green	96
U 39	Z 2A	955	117	A	Late cut nail, 10d	4
U 39	Z 2A	955	117	A	Late cut nail, 16d	1
U 39	Z 2A	955	117	A	Late cut nail, 2d	2
U 39	Z 2A	955	117	A	Late cut nail, 3d	4
U 39	Z 2A	955	117	A	Late cut nail, 40d	1
U 39	Z 2A	955	117	A	Late cut nail, 4d	10
U 39	Z 2A	955	117	A	Late cut nail, 6d	1
U 39	Z 2A	955	117	A	Late cut nail, 7d	1
U 39	Z 2A	955	117	A	Late cut nail, Proximal	29
U 39	Z 2A	955	117	A	Metal Band	9
U 39	Z 2A	955	117	A	Metal Brad	1
U 39	Z 2A	955	117	C	Bone Button	1
U 39	Z 2A	955	117	C	Button	1
U 39	Z 2A	955	117	C	Metal Button, Iron/Steel	1
U 39	Z 2A	955	117	K	Whiteware: Undecorated	2
U 39	Z 2A	955	117	O	Other Metal - Unidentified	8
U 39	Z 2A	955	117	T	Metal Harness Part	1
U 39	Z 2A	955	117	X	Coal	1
U 39	Z 2B	955	117	A	Cut nail unspecified	3
U 39	Z 2B	955	117	A	Flat Glass, Blue-green	6
U 39	Z 2B	955	117	A	Late cut nail, 2d	1
U 39	Z 2B	955	117	A	Late cut nail, 3d	1

Appendix C (cont'd)

U 39	Z 2B	955	117	A	Late cut nail, 4d	1
U 39	Z 2B	955	117	A	Late cut nail, 5d	1
U 39	Z 2B	955	117	A	Late cut nail, 6d	3
U 39	Z 2B	955	117	A	Late cut nail, 8d	2
U 39	Z 2B	955	117	A	Late cut nail, Proximal	6
U 39	Z 2B	955	117	K	Whiteware: Undecorated	1
U 39	Z 2B	955	117	P	Watch Part	1
U 5	Z 1A	948	144	A	Cut nail unspecified	8
U 5	Z 1A	948	144	A	Flat Glass, Blue-green	4
U 5	Z 1A	948	144	A	Late cut nail, 2d	2
U 5	Z 1A	948	144	A	Late cut nail, 4d	1
U 5	Z 1A	948	144	A	Late cut nail, 5d	1
U 5	Z 1A	948	144	A	Late cut nail, 8d	1
U 5	Z 1A	948	144	A	Late cut nail, Proximal	11
U 5	Z 1A	948	144	A	Metal Band	1
U 5	Z 1A	948	144	A	Metal Washer	1
U 5	Z 1A	948	144	A	Screw, Pointed End	1
U 5	Z 1A	948	144	A	Screw, Undetermined/Broken	1
U 5	Z 1A	948	144	A	Unidentified Nail	1
U 5	Z 1A	948	144	K	Bottle/Jar Body, Blown Molded	1
U 5	Z 1A	948	144	O	Other Metal - Unidentified	3
U 5	Z 1A	948	144	T	Animal Shoe Nail	1
U 5	Z 1A	948	144	X	Coal	3
U 5	Z 1B	948	144	A	Bolt	4
U 5	Z 1B	948	144	A	Cut nail unspecified	40
U 5	Z 1B	948	144	A	Flat Glass, Blue-green	15
U 5	Z 1B	948	144	A	Late cut nail, 2d	6
U 5	Z 1B	948	144	A	Late cut nail, 3d	1
U 5	Z 1B	948	144	A	Late cut nail, 4d	4
U 5	Z 1B	948	144	A	Late cut nail, 5d	1
U 5	Z 1B	948	144	A	Late cut nail, 6d	1
U 5	Z 1B	948	144	A	Late cut nail, 7d	1
U 5	Z 1B	948	144	A	Late cut nail, 8d	2
U 5	Z 1B	948	144	A	Late cut nail, 9d	1
U 5	Z 1B	948	144	A	Late cut nail, Proximal	25

Appendix C (cont'd)

U 5	Z 1B	948	144	A	Metal Band	3
U 5	Z 1B	948	144	A	Metal Brad	2
U 5	Z 1B	948	144	A	Nut	2
U 5	Z 1B	948	144	A	Screw, Pointed End	1
U 5	Z 1B	948	144	A	Unidentified Nail	3
U 5	Z 1B	948	144	J	Bar Stock (Blacksmithing)	1
U 5	Z 1B	948	144	K	Bottle/Jar Body, Blown Molded	2
U 5	Z 1B	948	144	K	Bottle/Jar Body, Unidentified Manufacture	1
U 5	Z 1B	948	144	O	Other Metal - Unidentified	28
U 5	Z 1B	948	144	T	Animal Shoe Nail	1
U 5	Z 1B	948	144	X	Coal	10
U 5	Z 1B	948	144	X	Coal Cinder/Slag	3
U 5	Z 2	948	144	A	Bolt	27
U 5	Z 2	948	144	A	Brick, Fragment (Not Identifiable)	3
U 5	Z 2	948	144	A	Brick, Hand Made, Unglazed	1
U 5	Z 2	948	144	A	Cut nail unspecified	178
U 5	Z 2	948	144	A	Flat Glass, Blue-green	65
U 5	Z 2	948	144	A	Late cut nail, 10d	2
U 5	Z 2	948	144	A	Late cut nail, 12d	2
U 5	Z 2	948	144	A	Late cut nail, 2d	10
U 5	Z 2	948	144	A	Late cut nail, 3d	9
U 5	Z 2	948	144	A	Late cut nail, 4d	14
U 5	Z 2	948	144	A	Late cut nail, 5d	18
U 5	Z 2	948	144	A	Late cut nail, 6d	4
U 5	Z 2	948	144	A	Late cut nail, 7d	9
U 5	Z 2	948	144	A	Late cut nail, 8d	11
U 5	Z 2	948	144	A	Late cut nail, 9d	2
U 5	Z 2	948	144	A	Late cut nail, Proximal	179
U 5	Z 2	948	144	A	Metal Band	72
U 5	Z 2	948	144	A	Metal Brad	7
U 5	Z 2	948	144	A	Metal Tack	2
U 5	Z 2	948	144	A	Metal Washer	6
U 5	Z 2	948	144	A	Nut	6
U 5	Z 2	948	144	A	Screw, Pointed End	9
U 5	Z 2	948	144	A	Screw, Undetermined/Broken	4

Appendix C (cont'd)

U 5	Z 2	948	144	A	Unidentified Nail	52
U 5	Z 2	948	144	A	Wrought nail, 6d	1
U 5	Z 2	948	144	J	Bar Stock (Blacksmithing)	22
U 5	Z 2	948	144	J	Machinery:Other	1
U 5	Z 2	948	144	J	Other Activity Stone	1
U 5	Z 2	948	144	J	Slag	1
U 5	Z 2	948	144	K	Bottle/Jar Body, Blown Molded	5
U 5	Z 2	948	144	K	Bottle/Jar Body, Unidentified Manufacture	8
U 5	Z 2	948	144	K	Tin Can Rim	1
U 5	Z 2	948	144	K	Undetermined Glass Body, Unidentified Manufacture	2
U 5	Z 2	948	144	O	Other Metal - Unidentified	143
U 5	Z 2	948	144	T	Animal Shoe Nail	8
U 5	Z 2	948	144	T	Metal Harness Part	7
U 5	Z 2	948	144	X	Coal	3
U 5	Z 2	948	144	X	Coal Cinder/Slag	3
U 5	Z 3	948	144	A	Cut nail unspecified	1

¹ Key

A = Architecture	C = Clothing
F = Furniture	J = Job/Activity
K = Kitchen	O = Other
P = Personal	R = Arms
T = Transportation	X = Fuel

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