HISTORIC PROPERTIES REPORT

PUEBLO DEPOT ACTIVITY

PUEBLO, COLORADO

FINAL REPORT

AUGUST 1984

This document was prepared by the MacDonald and Mack Partnership, Minneapolis, Minnesota, under Contract CX-0001-2-0033 between Building Technology Incorporated, Silver Spring, Maryland, and the Historic American Buildings Survey/Historic American Engineering Record, National Park Service, U.S. Department of the Interior.

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EXECUTIVE SUMMARY

Pueblo Depot Activity (PUDA) is a government-owned, government-operated installation occupying 22,654 acres in southeastern Colorado, about fifteen miles east of the City of Pueblo. The installation is part of the Army's Depot System Command (DESCOM). Constructed in 1942-1943 to store and ship ammunition and general military supplies, PUDA currently comprises 1,275 buildings, three-fourths of which date from the World War II period. Although the vast majority of the depot's buildings are stock-plan magazines and warehouses, the installation also contains maintenance and repair shops, several of which were adapted to the cleaning and reconditioning of artillery in 1944. Immediately after World War II, the depot's workshops were remodeled and expanded for remanufacturing a variety of materiel, including tanks and combat vehicles. During the 1960s, PUDA further diversified its activities by becoming a major maintenance and rebuild center for guided missiles.

PUDA's maintenance and remanufacturing facilities functioned nearly at full capacity during the Vietnam War, but the mid-1970s ushered in a period of operational retrenchment. As part of a general Army modernization and consolidation program, the depot's combat vehicle remanufacturing operation was terminated in 1974, followed by the curtailment, a year later, of most of the installation's missile maintenance responsibilities. In 1976, PUDA was relieved of administrative autonomy and designated a satellite installation of Tooele Army Depot in Utah. At present, PUDA continues as a maintenance center for Pershing missile systems and as a storage-supply depot for ammunition and supplies. There are no Category I, Category II, or Category III historic properties at the installation.

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PREFACE

This report presents the results of an historic properties survey of the Pueblo Depot Activity (PUDA). Prepared for the United States Army Materiel Development and Readiness Command (DARCOM), the report is intended to assist the Army in bringing this installation into compliance with the National Historic Preservation Act of 1966 and its amendments, and related federal laws and regulations. To this end, the report focuses on the identification, evaluation, documentation, nomination, and preservation of historic properties at the PUDA. Chapter 1 sets forth the survey's scope and methodology; Chapter 2 presents an architectural, historical, and technological overview of the installation and its properties; and Chapter 3 identifies significant properties by Army category and sets forth preservation recommendations. Illustrations and an annotated bibliography supplement the text.

This report is part of a program initiated through a memorandum of agreement between the National Park Service, Department of the Interior, and the U.S. Department of the Army. The program covers 74 DARCOM installations and has two components: 1) a survey of historic properties (districts, buildings, structures, and objects), and 2) the development of archaeological overviews. Stanley H. Fried, Chief, Real Estate Branch of Headquarters DARCOM, directed the program for the Army, and Dr. Robert J. Kapsch, Chief of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) directed the program for the National Park Service. Sally Kress Tompkins was program manager, and Robie S. Lange was

project manager for the historic properties survey. Technical assistance was provided by Donald C. Jackson.

Building Technology Incorporated acted as primary contractor to HABS/HAER for the historic properties survey. William A. Brenner was BTI's principal-in-charge and Dr. Larry D. Lankton was the chief technical consultant. Major subcontractors were the MacDonald and Mack Partnership and Jeffrey A. Hess. The author of this report was Jeffrey A. Hess. The author would like to thank the many employees at PUDA who graciously assisted him in his research and field surveys. He especially acknowledges the help of Col. Kenneth Kawano, Commander; John Grande, Public Affairs Officer; Edward B. St. Clair, Jr., Facilities Engineer; and Melvin H. Bird, Engineering Technician.

The complete HABS/HAER documentation for this installation will be included in the HABS/HAER collections at the Library of Congress, Prints and Photographs Division, under the designation HAER No. CO-22.

Chapter 1

INTRODUCTION

SCOPE

This report is based on an historic properties survey conducted in September 1983 of all Army-owned properties located within the official boundaries of the Pueblo Depot Activity (PUDA). The survey included the following tasks:

- Completion of documentary research on the history of the installation and its properties.

- Completion of a field inventory of all properties at the installation.

- Preparation of a combined architectural, historical, and technological overview for the installation.

- Evaluation of historic properties and development of recommendations for preservation of these properties.

Also completed as a part of the historic properties survey of the installation, but not included in this report, are HABS/HAER Inventory cards for 27 individual properties. These cards, which constitute HABS/HAER Documentation Level IV, will be provided to the Department of the Army. Archival copies of the cards, with their accompanying photographic

negatives, will be transmitted to the HARS/HAER collections at the Library of Congress.

The methodology used to complete these tasks is described in the following section of this report.

METHODOLOGY

1. Documentary Research

PUDA was one of several government-owned, government-operated facilities constructed in the continental United States during 1940-1943 to store and ship ammunition and other military supplies. Since the installation was part of a national depot network, an evaluation of its historical significance requires a general understanding of the military warehousing program. To identify relevant published sources, research was conducted in standard bibliographies of military history, engineering, and the applied sciences. Unpublished sources were identified by researching the historical and technical archives of the U.S. Army Depot System Command (DESCOM) at Letterkenny Army Depot in Chambersburg, Pennsylvania, and of the U.S. Army Armament, Munitions and Chemical Command (AMCCOM) at Rock Island Arsenal in Rock Island, Illinois.[1]

In addition to such industry-wide research, a concerted effort was made to locate sources dealing specifically with the history of PUDA. This site-specific research was conducted primarily at the

installation's engineering and public relations archives at PUDA, and the Denver Public Library in Denver, Colorado. The Colorado State Historic Preservation (Colorado Historical Society, Denver) was also contacted for information on PUDA but had no relevant data.

Army records used for the field inventory included current Real Property Inventory (RPI) printouts that listed all officially recorded buildings and structures by facility classification and date of construction; the installation's property record cards; base maps and photographs supplied by installation personnel; and installation master planning, archaeological, environmental assessment, and related reports and documents. A complete listing of this documentary material may be found in the bibliography.

2. Field Inventory

An architectural field survey was conducted in September 1983 by Jeffrey A. Hess. Following general discussions of the project with John Grande, Public Affairs Officer, and Edward B. St. CLair, Jr., Facilities Engineer, the surveyor was permitted to inspect most exterior and interior areas of the installation. Mr. St. Clair served as escort. For either safety or security reasons, the following areas were not accessible for survey: Building 416, Building 417, and the test range (see Appendix).

Field inventory procedures were based on the HABS/HAER Guidelines for Inventories of Historic Buildings and Engineering and Industrial

Structures.[2] All areas and properties were visually surveyed. Building locations and approximate dates of construction were noted from the installation's property records and field-verified. Interior surveys were made of the major facilities to permit adequate evaluation of architectural features, building technology, and production equipment.

Field inventory forms were prepared for, and black and white 35 mm photographs taken of all buildings and structures through 1945 except basic utilitarian structures of no architectural, historical, or technological interest. When groups of similar ("prototypical") buildings were found, one field form was normally prepared to represent all buildings of that type. Field inventory forms were also completed for representative post-1945 buildings and structures.[3] Information collected on the field forms was later evaluated, condensed, and transferred to HABS/HAER Inventory cards.

3. Historical Overview

A combined architectural, historical, and technological overview was prepared from information developed from the documentary research and the field inventory. It was written in two parts: 1) an introductory description of the installation, and 2) a history of the installation by periods of development, beginning with pre-military land uses. Maps and photographs were selected to supplement the text as appropriate.

The objectives of the overview were to 1) establish the periods of major construction at the installation, 2) identify important events and individuals associated with specific historic properties, 3) describe patterns and locations of historic property types, and 4) analyze specific building and industrial technologies employed at the installation.

4. Property Evaluation and Preservation Measures

Based on information developed in the historical overviews, properties were first evaluated for historical significance in accordance with the eligibility criteria for nomination to the National Register of Historic Places. These criteria require that eligible properties possess integrity of location, design, setting, materials, workmanship, fecling, and association, and that they meet one or more of the following:[4]

A. Are associated with events that have made a significant contribution to the broad patterns of our history.

B. Are associated with the lives of persons significant in the nation's past.

C. Embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and

distinguishable entity whose components may lack individual distinction.

D. Have yielded, or may be likely to yield, information important in pre-history or history.

Properties thus evaluated were further assessed for placement in one of five Army historic property categories as described in Army Regulation 420-40:[5]

Category I	Properties of major importance
Category II	Properties of importance
Category III	Properties of minor importance
Category IV	Properties of little or no importance
Category V	Properties detrimental to the significance of adjacent historic properties.

Based on an extensive review of the architectural, historical, and technological resources identified on DARCOM installations nationwide, four criteria were developed to help determine the appropriate categorization level for each Army property. These criteria were used to assess the importance not only of properties of traditional historical interest, but also of the vast number of standardized or prototypical buildings, structures and production processes that were built and put into service during World War II, as well as of properties associated with many post-war technological achievements. The four criteria were often used in combination and are as follows:

1) Degree of importance as a work of architectural, engineering, or industrial design. This criterion took into account the qualitative factors by which design is normally judged: artistic merit, workmanship, appropriate use of materials, and functionality.

2) Degree of rarity as a remaining example of a once widely used architectural, engineering, or industrial design or process. This criterion was applied primarily to the many standardized or prototypical DARCOM buildings, structures, or industrial processes. The more widespread or influential the design or process, the greater the importance of the remaining examples of the design or process was considered to be. This criterion was also used for non-military structures such as farmhouses and other once prevalent building types.

3) Degree of integrity or completeness. This criterion compared the current condition, appearance, and function of a building, structure, architectural assemblage, or industrial process to its original or most historically important condition, appearance, and function. Those properties that were highly intact were generally considered of greater importance than those that were not.

4) Degree of association with an important person, program, or event. This criterion was used to examine the relationship

of a property to a famous personage, wartime project, or similar factor that lent the property special importance.

The majority of DARCOM properties were built just prior to or during World War II, and special attention was given to their evaluation. Those that still remain do not often possess individual importance, but collectively they represent the remnants of a vast construction undertaking whose architectural, historical, and technological importance needed to be assessed before their numbers diminished further. This assessment centered on an extensive review of the military construction of the 1940-1945 period, and its contribution to the history of World War II and the post-war Army landscape.

Because technology has advanced so rapidly since the war, post-World War II properties were also given attention. These properties were evaluated in terms of the nation's more recent accomplishments in weaponry, rocketry, electronics, and related technological and scientific endeavors. Thus the traditional definition of "historic" as a property 50 or more years old was not germane in the assessment of either World War II or post-war DARCOM buildings and structures; rather, the historic importance of all properties was evaluated as completely as possible regardless of age.

Property designations by category are expected to be useful for approximately ten years, after which all categorizations should be reviewed and updated.

Following this categorization procedure, Category I, II, and III historic properties were analyzed in terms of:

- Current structural condition and state of repair. This information was taken from the field inventory forms and photographs, and was often supplemented by rechecking with facilities engineering personnel.

- The nature of possible future adverse impacts to the property. This information was gathered from the installation's master planning documents and rechecked with facilities engineering personnel.

Based on the above considerations, the general preservation recommendations presented in Chapter 3 for Category I, II, and III historic properties were developed. Special preservation recommendations were created for individual properties as circumstances required.

5. Report Review

Prior to being completed in final form, this report was subjected to an in-house review by Building Technology Incorporated. It was then sent in draft to the subject installation for comment and clearance and, with its associated historical materials, to HABS/HAER staff for technical review. When the installation cleared the report, additional draft copies were sent to DARCOM, the appropriate State

Historic Preservation Officer, and, when requested, to the archaeological contractor performing parallel work at the installation. The report was revised based on all comments collected, then published in final form.

NOTES

1. The following bibliographies of published sources were consulted: Industrial Arts Index, 1938-1957; Applied Science and Technology Index, 1958-1980; Engineering Index, 1938-1983; Robin Higham, ed., A Guide to the Sources of United States Military History (Hamden, Conn.: Archon Books, 1975); John E. Jessup and Robert W. Coakley, A Guide to the Study and Use of Military History (Washington, D.C.: U.S. Government Printing Office, 1979); "Military Installations," Public Works History in the United States, eds., Suellen M. Hoy and Michael C. Robinson (Nashville: American Association for State and Local History, 1982), pp. 380-400. DESCOM, with headquarters at Letterkenny Army Depot in Chambersburg, Pennsylvania, is the military agency responsible for supervising the operation of government-owned depots. AMCCOM (formerly ARRCOM, or Army Materiel Readiness Command) is the military agency responsible for supervising the operation of government-owned munitions plants, which frequently contain sizeable storage facilities. AMCCOM headquarters are located at Rock Island Arsenal in Rock Island, Illinois. Although there are no comprehensive indices to DESCOM and AMCCOM archival holdings, microfiche copies of many unpublished reports by both agencies are listed in ARRCOM, Catalog of Common Sources, Fiscal Year 1983, 2 vols. (no pl.: Historical Office, ARRCOM, Rock Island Arsenal, n.d.).

2. Historic American Buildings Survey/Historic American Engineering Record, National Park Service, Guidelines for Inventories of Historic Buildings and Engineering and Industrial Structures (unpublished draft, 1982).

3. Representative post-World War II buildings and structures were defined as properties that were: (a) "representative" by virtue of construction type, architectural type, function, or a combination of these, (b) of obvious Category I, II, or III historic importance, or (c) prominent on the installation by virtue of size, location, or other distinctive feature.

4. National Park Service, How to Complete National Register Forms (Washington, D.C.: U.S. Government Printing Office, January 1977).

5. Army Regulation 420-40, Historic Preservation (Headquarters, U.S. Army: Washington, D.C., 15 April 1984).

Chapter 2

HISTORICAL OVERVIEW

BACKGROUND

Pueblo Depot Activity (PUDA) is a government-owned, government-operated installation occupying 22,654 acres in southeastern Colorado, about fifteen miles east of the City of Pueblo. Constructed in 1942-1943 to store and ship ammunition and general military supplies, PUDA currently comprises 1,275 buildings, three-fourths of which date from the World War II period. Although the vast majority of the depot's buildings are stock-plan magazines and warehouses, the installation also contains maintenance and repair shops, several of which were adapted to the cleaning and reconditioning of artillery in 1944. Immediately after World War II, the depot's workshops were remodeled and expanded for remanufacturing a variety of materiel, including tanks and combat vehicles. During the 1960s, PUDA further diversified its activities by becoming a major maintenance and rebuild center for guided missiles.

PUDA's maintenance and remanufacturing facilities functioned nearly at full capacity during the Vietnam War, but the mid-1970s ushered in a period of operational retrenchment. As part of a general Army modernization and consolidation program, the depot's combat vehicle remanufacturing operation was terminated in 1974, followed by the curtailment, a year later, of most of the installation's missile maintenance responsibilities. In 1976, PUDA was relieved of administrative autonomy and designated a satellite installation of Tooele Army Depot in Utah. At present, PUDA continues as a

maintenance center for Pershing missile systems and as a storage-supply depot for ammunition and supplies.

WORLD WAR II

At the outbreak of war in Europe in September 1939, the United States had virtually no industrial capacity for manufacturing military ammunition. This situation changed dramatically in June 1940, when Congress, alarmed by the fall of France, authorized the construction of several government-owned munitions plants to outfit a new army of two million men. Although raising troops and manufacturing ordnance were essential for military preparedness, their ultimate success depended upon a third measure that, initially, received inadequate attention. As historian Constance McLaughlin Green observes in her study of Ordnance Department planning during World War II: "The corresponding need for a series of new depots to store the materiel that the enlarged procurement program must accumulate was not immediately understood."[1] Construction of new munitions plants was well under way before military planners in the fall of 1940 began selecting sites for eight new ammunition depots. An additional eight depots were authorized in the summer of 1941. PUDA was included in the second group of depots.[2]

Site Selection and Former Land Use

The selection of the PUDA site was governed by the same basic criteria used in evaluating locations for most of the new depots. These considerations included:

(1) a location at least two hundred miles from the coast as a defense against possible enemy bombardment
(2) proximity to a major railroad line
(3) remoteness from large centers of population
(4) availability of large tracts of land to permit necessary safe distances between ammunition magazines
(5) suitable soil and topography to reduce construction and operation costs.[3]

Located about fifteen miles east of the City of Pueblo in Pueblo County, Colorado, the PUDA site satisfied all criteria (Figure 1). Requiring only modest spur-track construction, the site had easy access to the main lines of both the Missouri Pacific Railroad and the Atchison, Topeka and Santa Fe Railway. The area's sandy loam, underlaid by shale and cap rock, made "soil conditions excellent for foundations, railroad, and road construction."[4] In addition, the region offered the advantage of a "dry climate that would minimize rusting and other deterioration" of ordnance.[5] When the government took possession of the 25,000-acre site in February 1942, the new installation was a rolling expanse of unpopulated, undeveloped grazing land.[6] There is no record of structures on the land at the time of government acquisition.

Construction and Operation

Under the general supervision of the U.S. Army Corps of Engineers (Denver District), construction work at PUDA commenced on March 4, 1942, and

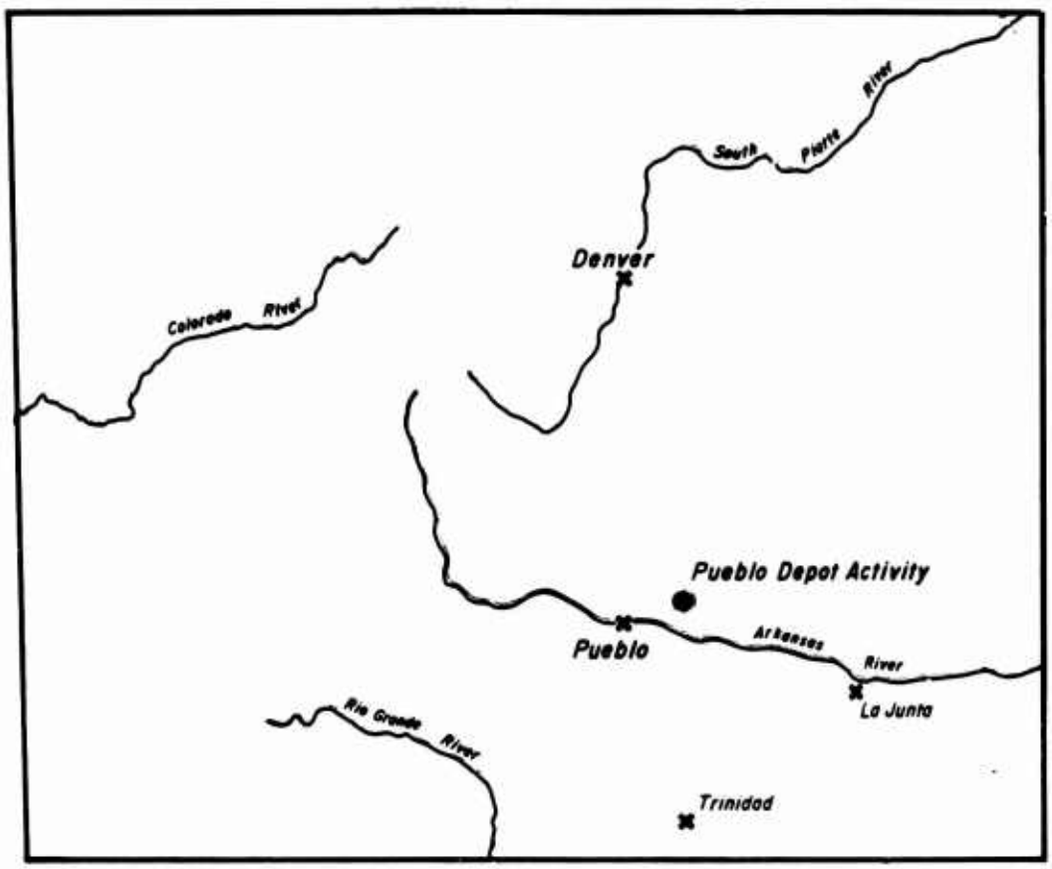

Figure 1: Map of Colorado showing location of Pueblo Depot Activity. (Source: "Installation Environmental Assessment, Tooele Army Depot, Pueblo Depot Activity, unpublished report prepared by Inland Pacific Engineering Compnay, Haworth and Anderson, Inc., Spokane, Washington, December 1982, PUDA Administrative Archives.)

continued to completion on May 18, 1943. Wilson and Company of Salina, Kansas provided architectural and engineering services. More than a dozen construction firms participated in the project, with major contracts awarded to Lembke and Hearn Construction Company of Albuquerque, J. T. McDowell and Sons of Denver, Midwest Construction & Asphalt Company of Chicago, and Sharp and Fellows of Los Angeles. During the fifteen-month construction period, about 1,000 buildings were erected, eighty percent of which were conventional, earth-sheltered, reinforced-concrete storage igloos (A-H series buildings) for ammunition.[7] Occupying the northern three-fourths of the installation, the igloos were divided into eight approximately equal blocks according to the following standard plan (Figures 2, 3, 4):

> Igloos were built in blocks of not more than 100 each, the blocks being 1,400 feet apart. . . . For safety considerations, there had to be a distance of 400 feet between igloos. Unless there were mounds before the doors to serve as barricades, the igloos had to be staggered so that the front of each was at least 800 feet from the rear of the one opposite.[8]

Except for a block of twelve, standard, above-ground, clay-tile magazines (Buildings 701, 706, 711, 716, 731, 736, 741, 746, 761, 766, 771, 776) (Figure 5) in the southeast corner of the igloo area, the remainder of the depot's principal buildings were located in the southern quarter of the installation.[9] These structures formed two major groupings: an administration-and-maintenance area to the west, and a warehouse-and-shop area to the east (Figures 6, 7). The utilitarian-style architecture of both areas reflected the Army's general wartime construction policy for depots: "The first consideration was economy in money, time, and critical materials."[10] PUDA's administration-and-shop area, for example, made

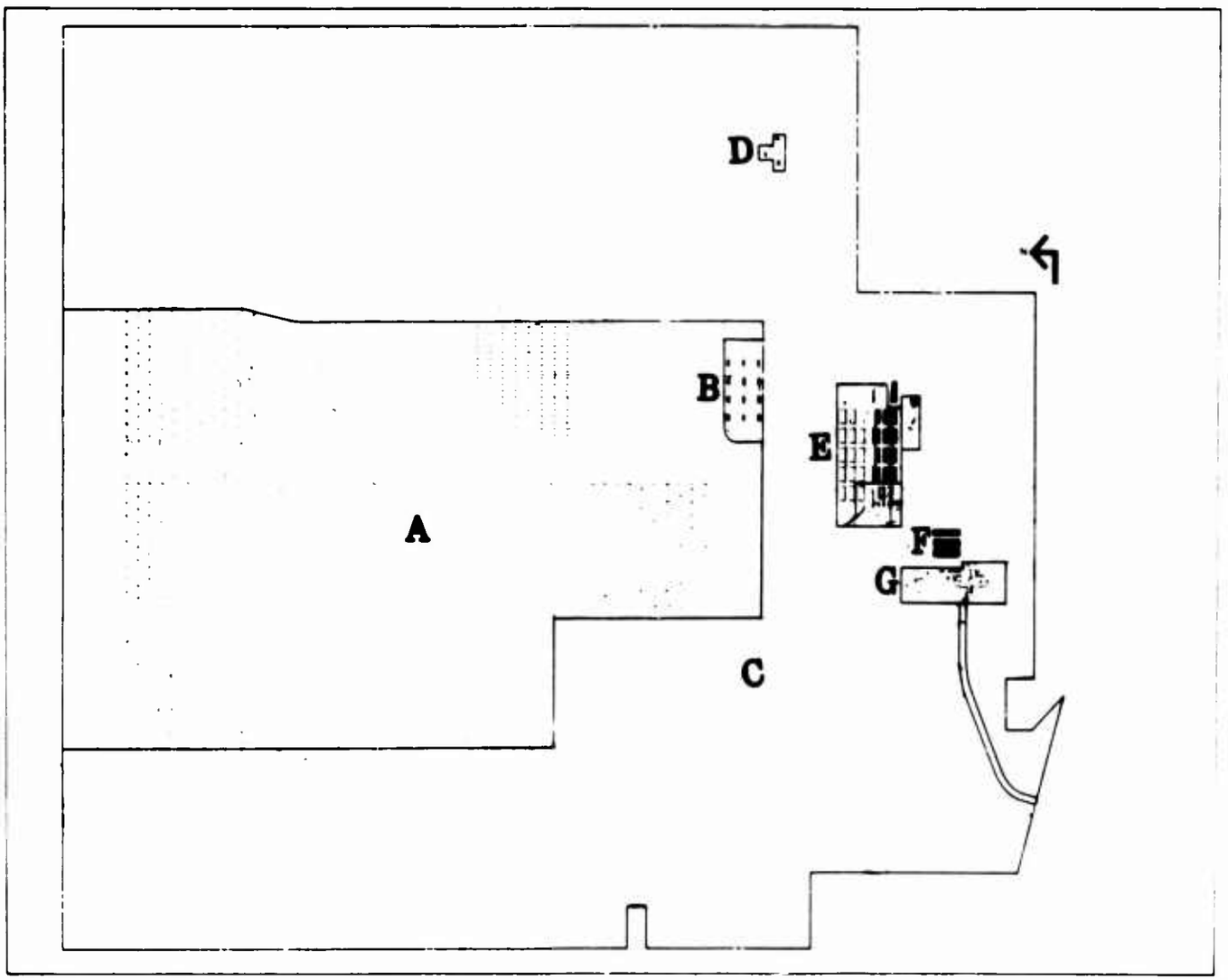

Figure 2: Area plan of Pueblo Depot Activity. (Source: Adapted from unpublished drawing 18-02-06, 1981, PUDA Facilities Engineer's Office.)

A. Igloo area
B. Standard magazine area
C. Ammunition renovation area (TAWS-series buildings)
D. Missile workshop area
E. Warehouse-shop area
F. GSA warehouse area
G. Administration-maintenance area

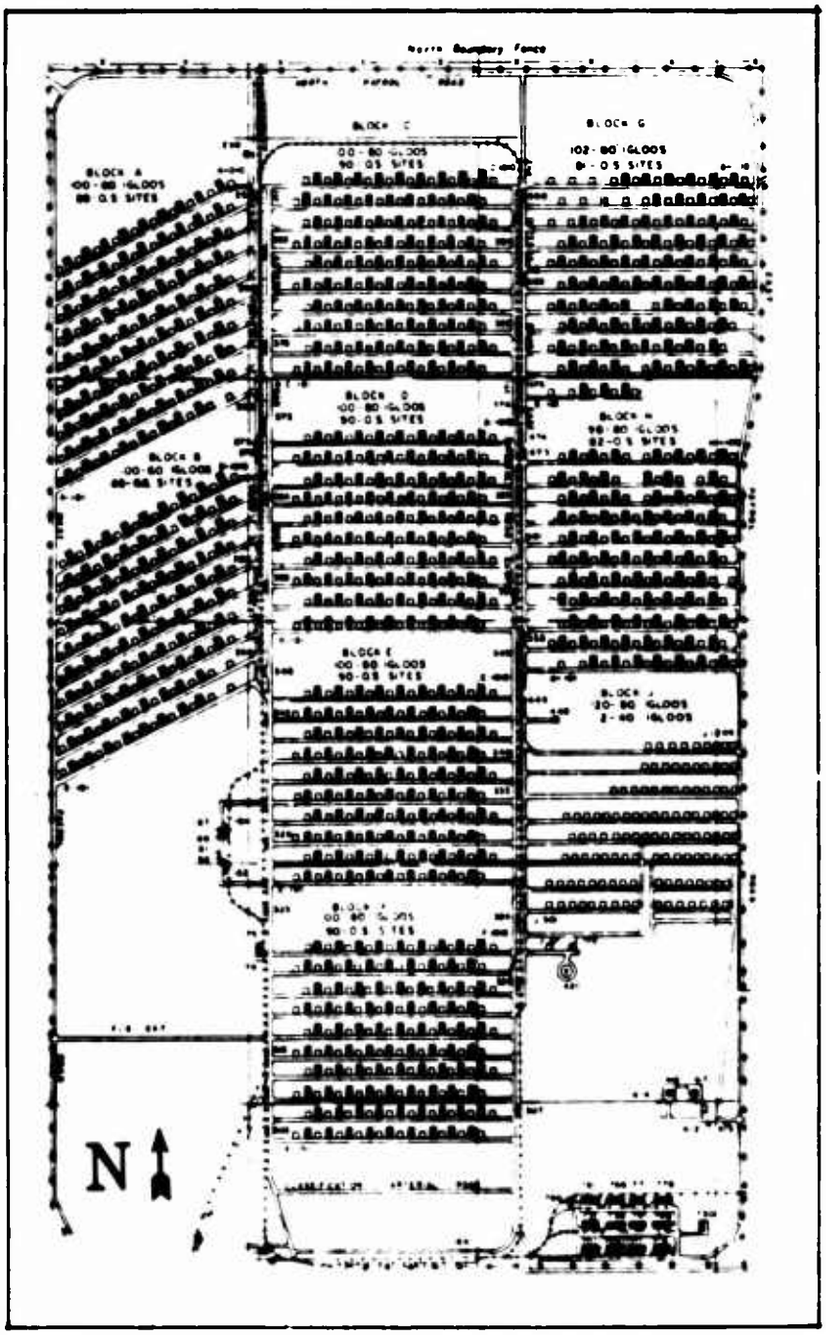

Figure 3: Site plan of earth-sheltered igloo and above-ground magazine areas. (Source: Unpublished drawing PNS-6, PUDA Facilities Engineer's Office.)

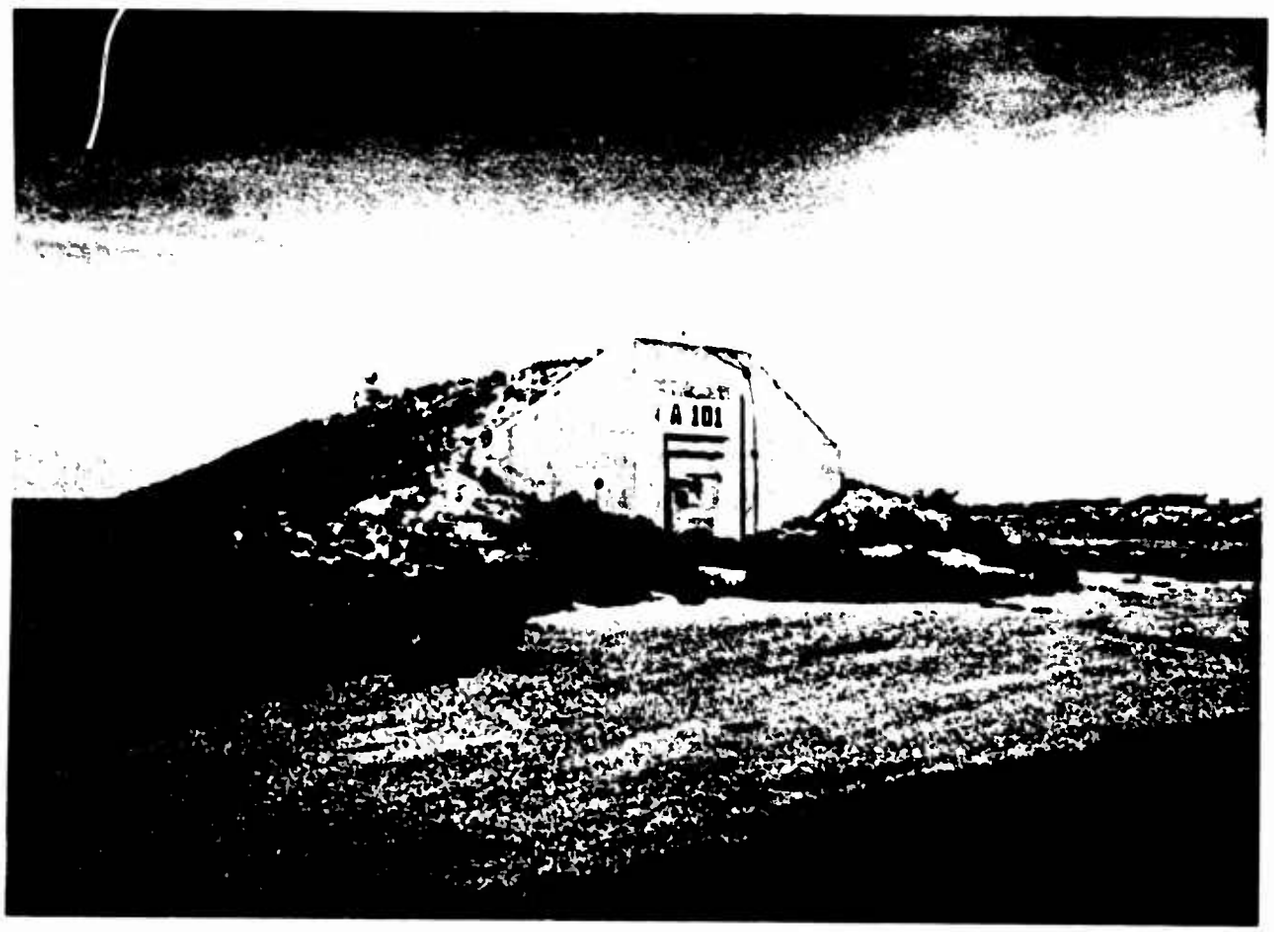

Figure 4: Building A101 is representative of the approximately 800 earth-sheltered igloos at Pueblo Depot Activity. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 5: Building 761 is representative of the installation's twelve above-ground magazines that were converted to ammunition renovation workshops in the early 1950s. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

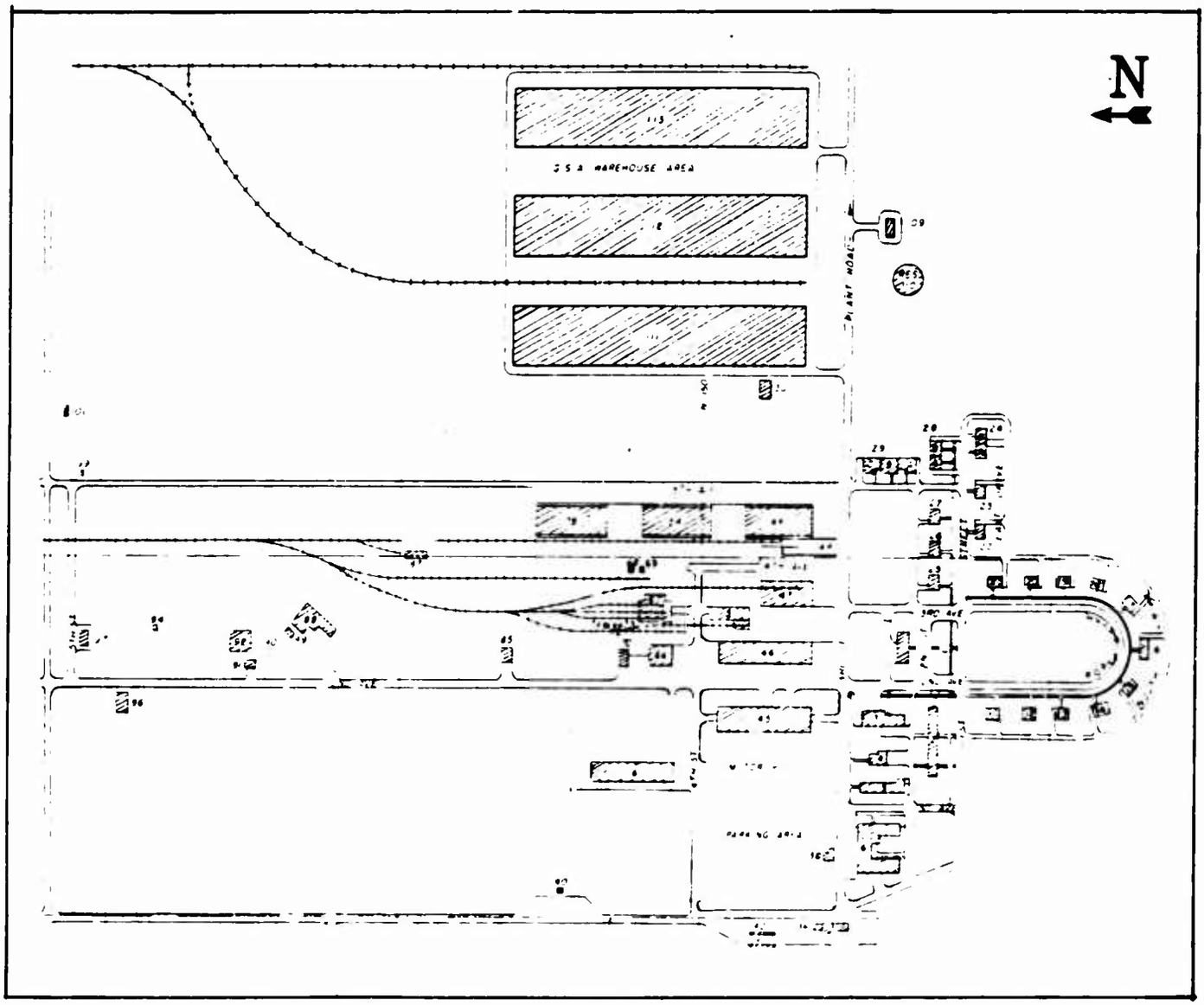

Figure 6: Site plan of administration-and-maintenance area at Pueblo Depot Activity. (Source: Unpublished drawing PNS-2, PUDA Facilities Engineer's Office.)

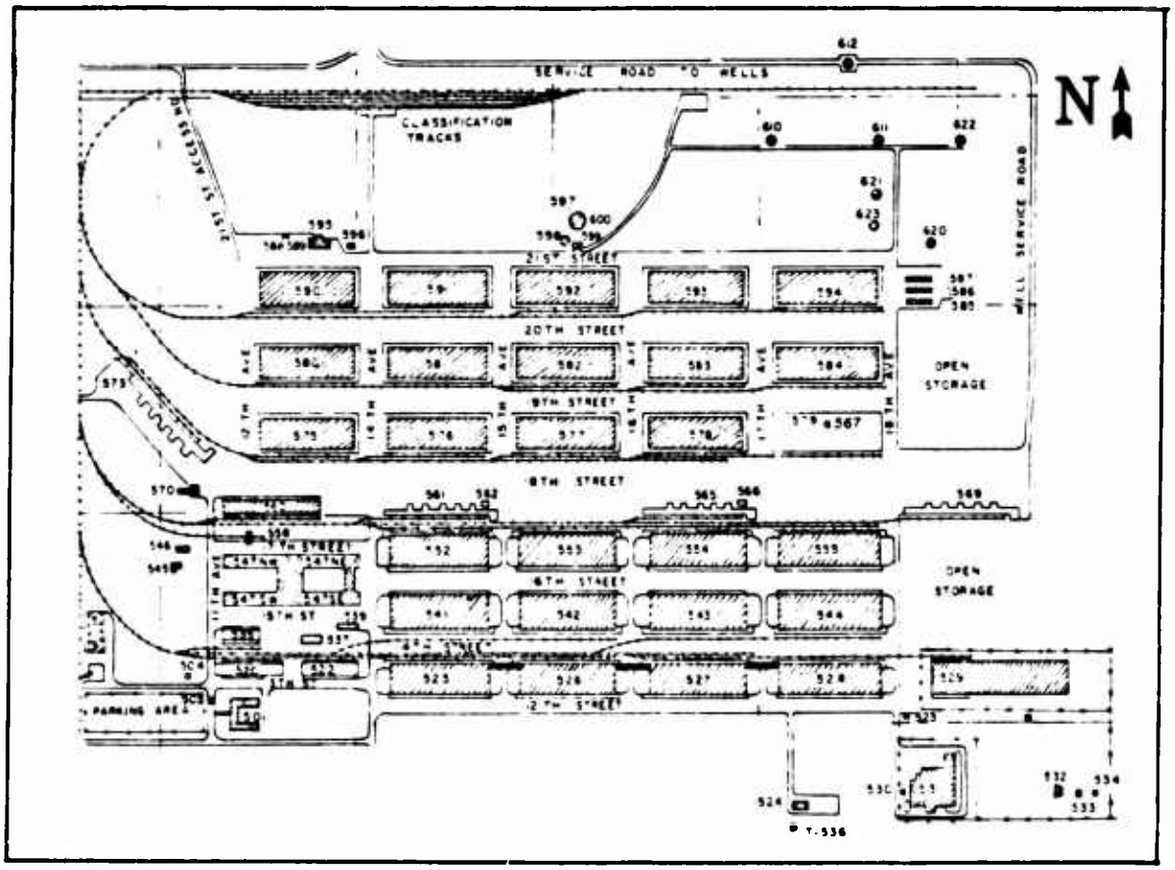

Figure 7: Site plan of warehouse-and-shop area at Pueblo Depot Activity. (Source: Unpublished drawing PNS-5, PUDA Facilities Engineer's Office.)

extensive use of light, wood-frame, "mobilization" construction, which was "designed to last five years."[11] Structures in this category included the Post Headquarters (Building S1), Fire Station (Building S3), Health Clinic (Building S5), Officers' Residences (Buildings S11-S12, S25-S27), and Bachelor Officers' Quarters (Buildings T126, S127), Motor Repair Shop (Building S46), and Locomotive Repair Shop (Building S67) (Figures 8-14).

Facilities in the warehouse-and-shop area were designed to store and repair a variety of military supplies, including combat vehicles. Following general wartime specifications for depots, "warehouses [Buildings 525-528, 541-544, 552-555] [Figures 15, 16] were . . . of light frame construction, with fire walls only where necessary, with roofing specifications not to exceed a 10-year limit, and without excessive roof spans; sheds [Buildings S575-S578, S580-S584, S590-S594] [Figure 17] were . . . of open-type light frame construction without concrete floors."[12] The most durable structures in this area of the depot were four ordnance repair shops (Buildings 547, 548, 550, 551) (Figures 18, 19), which exhibited steel framing and corrugated-metal siding and roofing.

Throughout World War II, PUDA was a government-operated installation, managed by Ordnance Department personnel who supervised a civilian work force. Although two-thirds of the depot's activity involved the storage and shipment of ammunition, the installation also warehoused "more . . . kinds of supplies than any other depot of its type in the United States." In 1944, a random sampling of its inventory included tires, twine, medical supplies, mattresses, combat vehicles, and household goods for overseas officers.[13] In that same year, the depot further diversified its

Figure 8: Post Headquarters (Building S1). (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 9: Fire Station (Building S3). (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 10: Health Clinic (Building S5). (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 11: Building S25 is typical of the five houses built for staff officers in 1942-1943. (Source: Field inventory photograph, 1983 Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 12: Building T125 is representative of the officers' barracks built at the depot in 1942-1943. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 13: Originally constructed as a machine shop, Building S47 now serves as a roads and grounds facility. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 14: Locomotive Repair Shop (Building S67). (Source: Field Inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

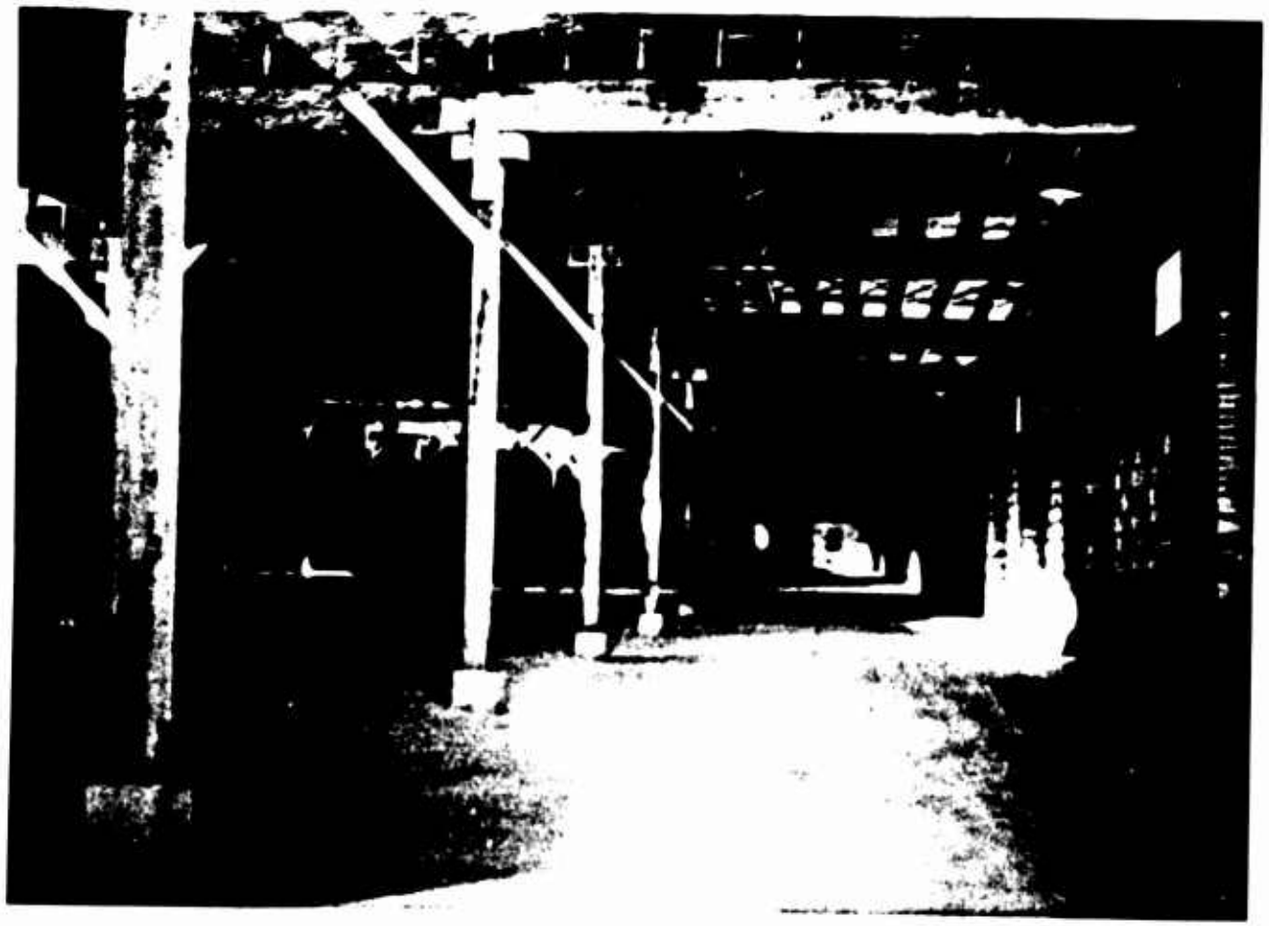

Figure 15: Wood framing employed in depot's warehouses (Buildings 525-528, 541-544, 552-555). (Source: "Completion Report, Pueblo Ordnance Depot," unpublished report prepared by U.S. Army Corps of Engineers, 1943, PUDA Facilities Engineer's Office.)

Figure 16: Building 555 is representative of the wood-frame, clay-tile warehouses constructed at the depot in 1942-1943. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 17: Building 578 is typical of the depot's fourteen structures that were originally constructed as open sheds and converted to enclosed warehouses after World War II. (Source: Field inventory photorgraph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

Figure 18: Interior view of Building 547, one of the ordnance repair shops constructed with steel framing. (Source: "Completion Report, Pueblo Ordnance Depot," unpublished report prepared by U. S. Army Corps of Engineers, 1943, PUDA Facilities Engineer's Office.)

Figure 19: Originally constructed as a general ordnance repair shop, Building 547 was converted into a tank rebuilding facility after World War II. It is currently leased to a private firm. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

operations by converting several general repair shops (Buildings 547, 548, 550, 551) into artillery shops, which cleaned and packed antitank guns for both overseas shipment and long-term storage (Figure 20).[14] In May 1945, PUDA was designated a tank and combat vehicle repair center, and after V-J Day, the four adjacent artillery shops (Buildings 547, 548, 550, 551) were remodeled into a single H-shaped structure (Building 547) for that purpose.[15]

During the immediate post-war period, the depot's "principal activities included the receipt of returned material from overseas, the preservation of reusable material, destruction of deteriorated items, and the rewarehousing of all ammunition for long term storage." In support of these operations, a new ammunition renovation center (Buildings TAWS 1-12) (Figure 21) was completed in the southwest sector of the installation in 1948. The center was responsible for "recover[ing] explosives, projectile cases and bomb cases which then were made available for reuse."[16]

KOREAN WAR TO THE PRESENT

The Korean War dramatically increased ammunition handling activities at PUDA, and the depot's work force climbed to a record level of 8,000 employees. The need for increased storage space resulted in the construction of 120 additional earth-sheltered igloos (J-series buildings) and three identical cinder-block warehouses (Buildings 111-113) (Figure 22) measuring 200 feet by 1,000 feet. At the same time, the ammunition reclamation program was expanded by the conversion of twelve warehouses

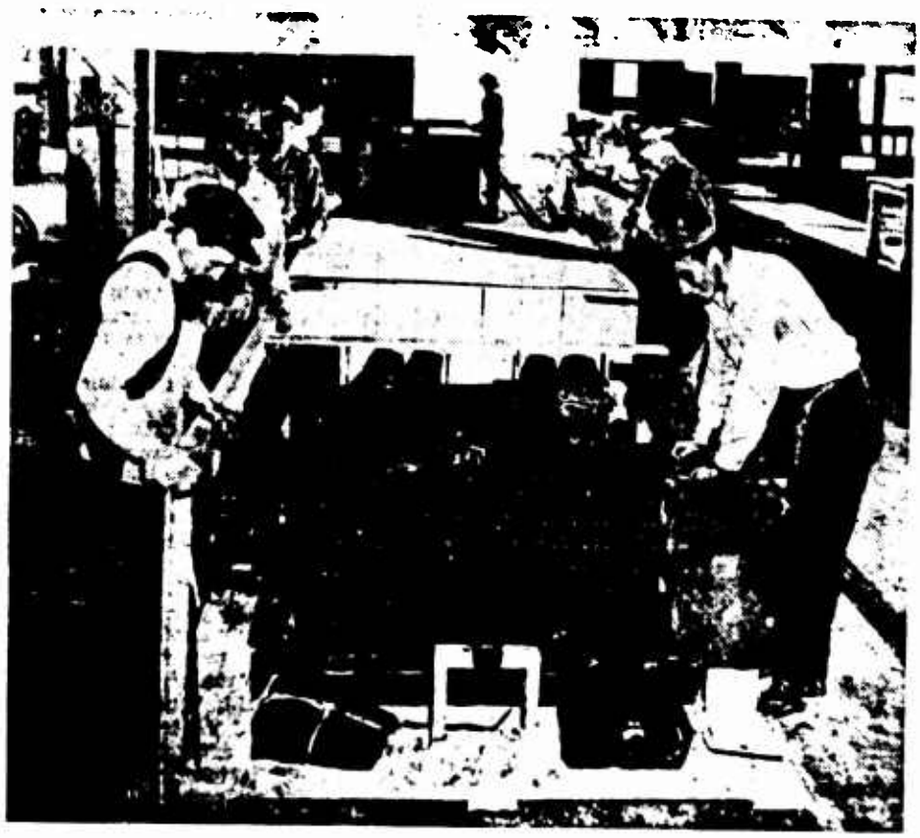

Figure 20: Depot workers pack anti-tanks guns for shipment during World War II. (Source: Pueblo Chieftain, October 16, 1944.)

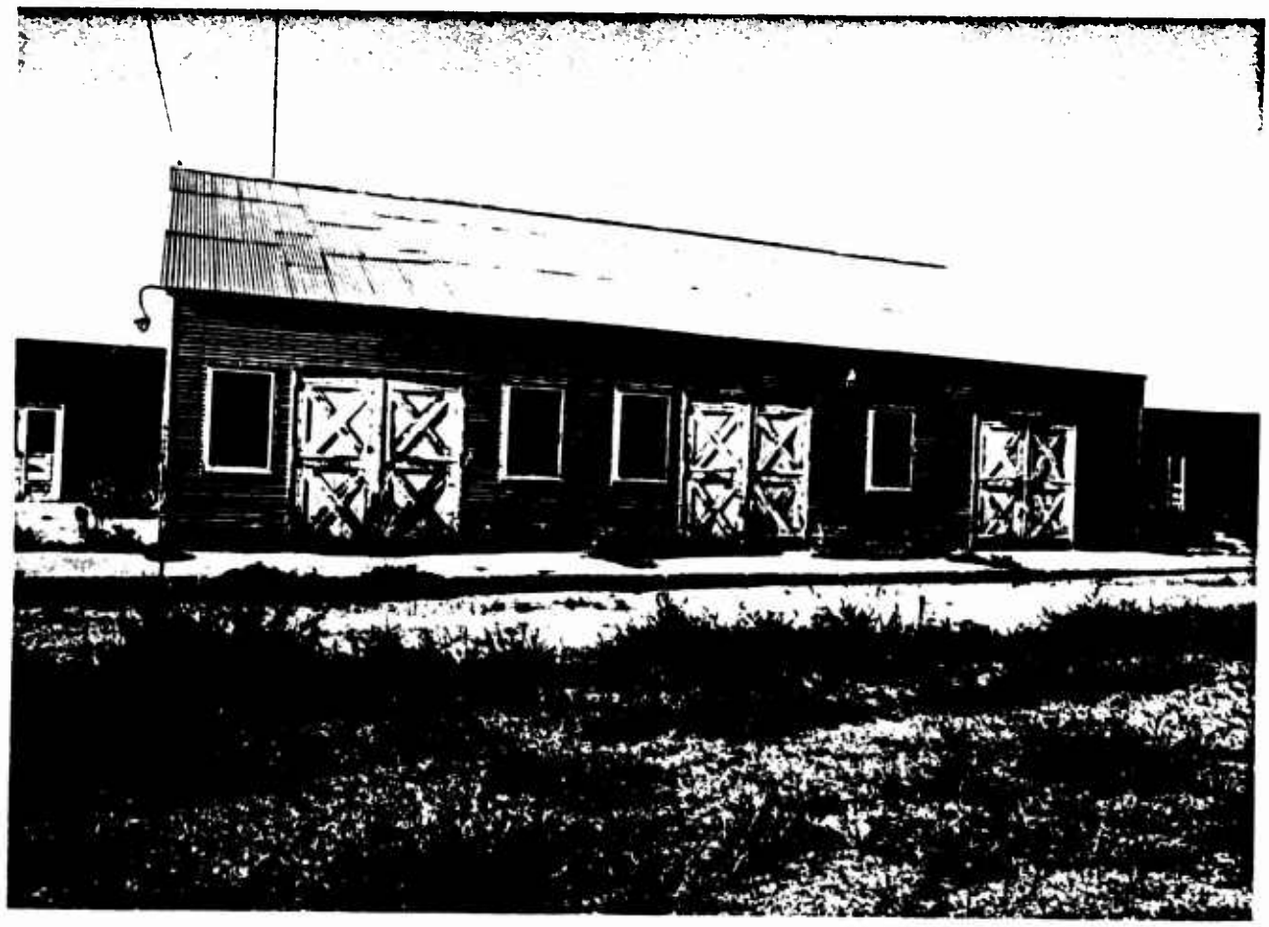

Figure 21: Building T-AWS8 is one of a dozen similar structures erected in 1947 to serve as an ammunition renovation center. The building is now vacant. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

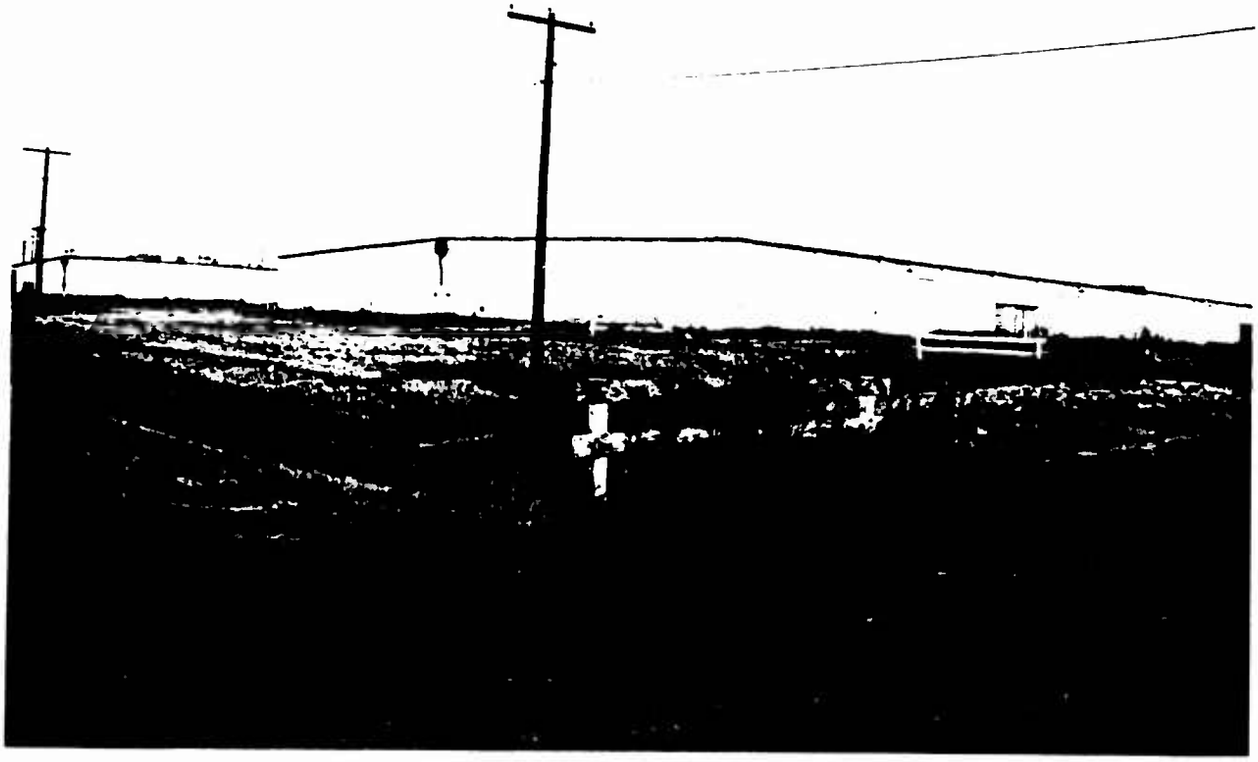

Figure 22: Building 112 is one of three identical warehouses constructed in the early 1950s for the General Services Administration to store critical materials. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

(Buildings 701, 706, 711, 716, 731, 736, 741, 746, 761, 766, 771, 776) into renovation workshops. The depot's "remanufacturing" program, which had previously focused on reconditioning tanks and combat vehicles, was also augmented by remodeling an ordnance repair shop (Building 520) into a facility for "rebuilding . . . watches, binoculars and fire control instruments."[17] But the most significant expansion of PUDA's role occurred in the late 1950s, when the installation was selected as a maintenance center for guided missiles, which eventually led to the construction of a variety of test, repair, and rebuild facilities (Buildings 231, 416, 417, 529, 531, 532, 940) (Figure 23).[18] To house the depot's increased technical and supervisory staff, the government in the mid-1960s authorized the construction of a residential district due south of the administration area, consisting of eleven single-family dwellings, two duplexes, and one three-family apartment complex.

PUDA's maintenance and rebuild facilities functioned nearly at full capacity during the Vietnam War, but the mid-1970s ushered in a period of operational retrenchment.[19] As part of a general Army modernization and consolidation program, the depot's combat vehicle remanufacturing program was terminated in 1974, and a year later, most of the installation's missile maintenance responsibilities were transferred to Letterkenny Army Depot in Pennsylvania. In 1976, PUDA was relieved of administrative autonomy and designated a satellite installation of Tooele Army Depot in Utah. At present, PUDA continues as a maintenance center for Pershing missile systems and as a storage-supply depot for ammunition.[20]

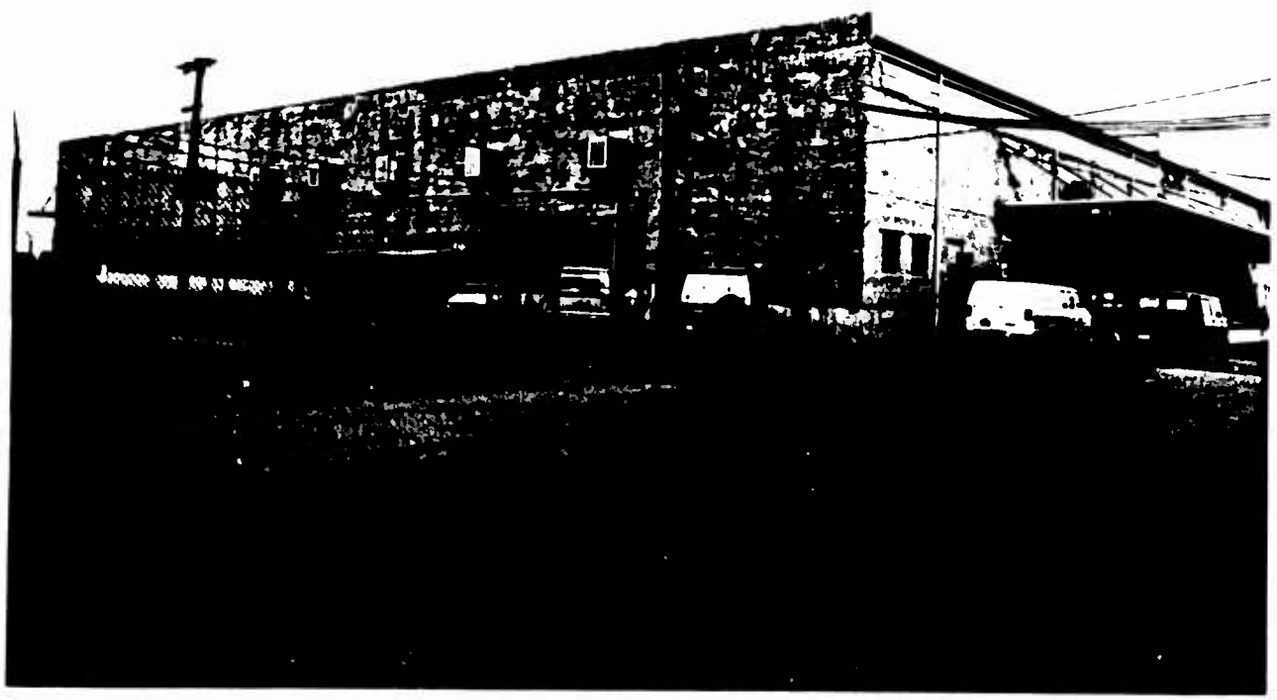

Figure 23: Constructed in the warehouse-and-shop area in the late 1950s, Building 529 was the depot's first missile maintenance facility. (Source: Field inventory photograph, 1983, Jeffrey A. Hess, MacDonald and Mack Partnership.)

NOTES

1. Constance McLaughlin Green and others, The Ordnance Department: Planning Munitions for War (Wash., D.C.: Office of the Chief of Military History, Department of the Army, 1955), p. 80.

2. Green, p. 81; Harry C. Thomson and Lida Mayo, The Ordnance Department: Procurement and Supply (Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1960), pp. 363-378. Originally designated Pueblo Ordnance Depot, the installation was renamed Pueblo Army Depot in 1962, and so remained until the adoption of its present name, Pueblo Depot Activity, in 1976. For purposes of brevity and clarity, this report consistently refers to the installation as Pueblo Depot Activity (PUDA).

3. Green, p. 81; Thomson and Mayo, p. 367.

4. "History and Mission of Pueblo Depot Activity," p. 8, unpublished brochure, 1979, PUDA Facilities Engineer's Office.

5. Thomson and Mayo, p. 373.

6. The site's previous land use is noted in Thomson and Mayo, p. 374. After World War II, several tracts of land were deemed superfluous to the depot's operational needs and removed from its jurisdiction. At present, PUDA comprises 22,654 acres.

7. "Completion Report, Pueblo Ordnance Depot," pp. 19-27, unpublished report prepared by U.S. Army Corps of Engineers, 1943, PUDA Facilities Engineer's Office.

8. Thomson and Mayo, p. 368. Thomson and Mayo (p. 361) note that the magazine was "called an 'igloo' from its resemblance to Eskimo shelters [.] It was a low, earth-covered structure of reinforced concrete, its sides arched to form a semicircular roof. The shape directed the power of an explosion upward rather than outward. It was the best type of storage yet devised for such dangerous ammunition as loaded bombs and large-caliber shells."

9. The standard clay-tile magazine is described in E. E. MacMorland, "Ordnance Supply System," Mechanical Engineering, 67 (December 1945), 791-792. According to MacMorland (791), the typical ammunition depot contained "700 or 800 igloo magazines, and . . . 6 to 15 standard above-ground magazines."

10. Thomson and Mayo, p. 381.

11. Thomson and Mayo, p. 378. The various buildings at PUDA are categorized as "mobilization," "semi-permanent," and "permanent" in "Completion Report," pp. 8-19.

12. Thomson and Mayo, p. 381. Subsequent improvements included the construction of masonry firewalls in warehouses, and the addition of concrete floors and full, exterior, wood-frame walls to sheds ("Ordnance Warehouse Floors are Paved," Pueblo Chieftain, February 25, 1944; "Pueblo Ordnance Depot Improvements Indicate Big Year in 1946," Pueblo Star-Journal, January 4, 1946; author's interview with Melvin H. Bird, Engineering Technician, PUDA, March 26, 1984).

13. Doris Blackburn, "Pueblo Ordnance Depot," Pueblo Star-Journal, November 10, 1944.

14. "Germans and Japs Get 'Christmas Boxes' Too," Pueblo Star-Journal, October 16, 1944; "Pueblo's Part in War Effort Expanded," Pueblo Star-Journal, March 4, 1945.

15. "Pueblo Ordnance Depot," Pueblo Star-Journal, May 8, 1945; "Ammunition Center Being Built at POD," Pueblo Star-Journal, May 15, 1951; "Growing Ordnance Depot Starts Second Decade of Operation," Pueblo Star-Journal, January 1, 1953.

16. "Growing Ordnance Depot Starts Second Decade of Operation."

17. "Growing Ordnance Depot Starts Second Decade of Operation." The three warehouses were built for the General Services Administration for stockpiling such critical materials as aluminum, rubber, and mercury; see "Three Huge Warehouses for Ordnance Depot," Pueblo Star-Journal, July 18, 1952.

18. On the depot's guided missile program, see "DARCOM Installation and Activity Brochure [for PUDA]," unpublished, 1981, p. 3, ARRCOM Historical Office, Rock Island Arsenal; "POD Given Jobs on All Missiles," Pueblo Star-Journal, August 4, 1961; "Building Projects Progress," Pueblo Star-Journal, December 6, 1968.

19. "Combat vehicles, battered and torn, from war-scorched Vietnam form ragged lines on newly paved storage areas at the Pueblo Army Depot. Inside long converted warehouses, skilled technicians rebuild the equipment to like-new condition for use in future conflict . . . . The precise, production-line systems at Pueblo are operating at almost full capacity, and have several years of work in backlog"; see "Versatility Marks Depot Rebuilding," unidentified newspaper clipping, 1970, PUDA Public Affairs Office.

20. "DARCOM Installation and Activity Brochure," pp. 4-5.

Chapter 3

PRESERVATION RECOMMENDATIONS

BACKGROUND

Army Regulation 420-40 requires that an historic preservation plan be developed as an integral part of each installation's planning and long-range maintenance and development scheduling.[1] The purpose of such a program is to:

- Preserve historic properties to reflect the Army's role in history and its continuing concern for the protection of the nation's heritage.
- Implement historic preservation projects as an integral part of the installation's maintenance and construction programs.
- Find adaptive uses for historic properties in order to maintain them as actively used facilities on the installation.
- Eliminate damage or destruction due to improper maintenance, repair, or use that may alter or destroy the significant elements of any property.
- Enhance the most historically significant areas of the installation through appropriate landscaping and conservation.

To meet these overall preservation objectives, the general preservation recommendations set forth below have been developed:

Category I Historic Properties

All Category I historic properties not currently listed on or nominated to the National Register of Historic Places are assumed to be eligible for

nomination regardless of age. The following general preservation recommendations apply to these properties:

a) Each Category I historic property should be treated as if it were on the National Register, whether listed or not. Properties not currently listed should be nominated. Category I historic properties should not be altered or demolished. All work on such properties shall be performed in accordance with Sections 106 and 110(f) of the National Historic Preservation Act as amended in 1980, and the regulations of the Advisory Council for Historic Preservation (ACHP) as outlined in the "Protection of Historic and Cultural Properties" (36 CFR 800).

b) An individual preservation plan should be developed and put into effect for each Category I historic property. This plan should delineate the appropriate restoration or preservation program to be carried out for the property. It should include a maintenance and repair schedule and estimated initial and annual costs. The preservation plan should be approved by the State Historic Preservation Officer and the Advisory Council in accordance with the above-referenced ACHP regulation. Until the historic preservation plan is put into effect, Category I historic properties should be maintained in accordance with the recommended approaches of the Secretary of Interior's Standards for Rehabilitation and

Revised Guidelines for Rehabilitating Historic Buildings[2] and in consultation with the State Historic Preservation Officer.

c) Each Category I historic property should be documented in accordance with Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) Documentation Level II, and the documentation submitted for inclusion in the HABS/HAER collections in the Library of Congress.[3] When no adequate architectural drawings exist for a Category I historic property, it should be documented in accordance with Documentation Level I of these standards. In cases where standard measured drawings are unable to record significant features of a property or technological process, interpretive drawings also should be prepared.

Category II Historic Properties

All Category II historic properties not currently listed on or nominated to the National Register of Historic Places are assumed to be eligible for nomination regardless of age. The following general preservation recommendations apply to these properties:

a) Each Category II historic property should be treated as if it were on the National Register, whether listed or not. Properties not currently listed should be nominated. Category II historic properties should not be altered or demolished. All work on such properties shall be performed

in accordance with Sections 106 and 110(f) of the National Historic Preservation Act as amended in 1980, and the regulations of the Advisory Council for Historic Preservation (ACHP) as outlined in the "Protection of Historic and Cultural Properties" (36 CFR 800).

b) An individual preservation plan should be developed and put into effect for each Category II historic property. This plan should delineate the appropriate preservation or rehabilitation program to be carried out for the property or for those parts of the property which contribute to its historical, architectural, or technological importance. It should include a maintenance and repair schedule and estimated initial and annual costs. The preservation plan should be approved by the State Historic Preservation Officer and the Advisory Council in accordance with the above-referenced ACHP regulations. Until the historic preservation plan is put into effect, Category II historic properties should be maintained in accordance with the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation and Revised Guidelines for Rehabilitating Historic Buildings[4] and in consultation with the State Historic Preservation Officer.

c) Each Category II historic property should be documented in accordance with Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) Documentation Level

II, and the documentation submitted for inclusion in the HABS/HAER collections in the Library of Congress.[5]

Category III Historic Properties

The following preservation recommendations apply to Category III historic properties:

a) Category III historic properties listed on or eligible for nomination to the National Register as part of a district or thematic group should be treated in accordance with Sections 106 and 110(f) of the National Historic Preservation Act as amended in 1980, and the regulations of the Advisory Council for Historic Preservation as outlined in the "Protection of Historic and Cultural Properties" (36 CFR 800). Such properties should not be demolished and their facades, or those parts of the property that contribute to the historical landscape, should be protected from major modifications. Preservation plans should be developed for groupings of Category III historic properties within a district or thematic group. The scope of these plans should be limited to those parts of each property that contribute to the district or group's importance. Until such plans are put into effect, these properties should be maintained in accordance with the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation and Revised

Guidelines for Rehabilitating Historic Buildings[6] and in consultation with the State Historic Preservation Officer.

b) Category III historic properties not listed on or eligible for nomination to the National Register as part of a district or thematic group should receive routine maintenance. Such properties should not be demolished, and their facades, or those parts of the property that contribute to the historical landscape, should be protected from modification. If the properties are unoccupied, they should, as a minimum, be maintained in stable condition and prevented from deteriorating.

HABS/HAER Documentation Level IV has been completed for all Category III historic properties, and no additional documentation is required as long as they are not endangered. Category III historic properties that are endangered for operational or other reasons should be documented in accordance with HABS/HAER Documentation Level III, and submitted for inclusion in the HABS/HAER collections in the Library of Congress.[7] Similar structures need only be documented once.

CATEGORY I HISTORIC PROPERTIES

There are no Category I historic properties at PUDA.

CATEGORY II HISTORIC PROPERTIES

There are no Category II historic properties at PUDA.

CATEGORY III HISTORIC PROPERTIES

There are no Category II historic properties at PUDA.

NOTES

1. Army Regulation 420-40, Historic Preservation (Headquarters, U.S. Army: Washington, D.C., 15 April 1984).

2. National Park Service, Secretary of Interior's Standards for Rehabilitation and Revised Guidelines for Rehabilitating Historic Buildings, 1983 (Washington, D.C.: Preservation Assistance Division, National Park Service, 1983).

3. National Park Service, "Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines," Federal Register, Part IV, 28 September 1983, pp. 44730-44734.

4. National Park Service, Secretary of the Interior's Standards.

5. National Park Service, "Archeology and Historic Preservation."

6. National Park Service, Secretary of the Interior's Standards.

7. National Park Service, "Archeology and Historic Preservation."

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"POD Given Jobs on All Missiles." Pueblo Star-Journal, August 4, 1961.

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"Pueblo's Part in War Effort Expanded." Pueblo Star-Journal, March 4, 1945.

Thomson, Harry C. and Mayo, Lida. The Ordnance Department: Procurement and Supply. Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1960. Standard history of development and production of munitions by United States during World War II; contains good overview of depot system.

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United States Army Armament Materiel Readiness Command. Catalog of Common Sources, Fiscal Year 1983. No pl.: AMCCOM Historical Office, Rock Island Arsenal, n.d. 2 vols.

DEPARTMENT OF THE ARMY
U S ARMY DEPOT ACTIVITY PUEBLO
PUEBLO, COLORADO 81001

IN REPLY REFER TO
Facilities Engineer

Mr. Jeffrey A. Hess
215 Grain Exchange Building
Minneapolis, Minnesota 55415

Dear Mr. Hess:

The purpose of this letter is to confirm that there were three locations not accessible during your visit.

In the ammunition area, G-Block, Buildings 416 and 417 were not accessible due to bans on taking pictures. The function test range could not be entered because of active munition testing.

If I or my staff can be of further assistance please call or write.

Sincerely,

Edward B. St Clair, Jr.
Facilities Engineer

Copy furnished:

Commander, Tooele Army Depot, ATTN: SDSTE-ASF, Tooele, Utah 84074