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FINAL

THE HISTORIC CONTEXT FOR THE COLD WAR AT FT. CAMPBELL, KENTUCKY

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MANAGEMENT SUMMARY

The purpose of this report is to provide a historic context for the Cold War at Ft. Campbell, Kentucky and Tennessee. The report includes a historic overview and synthesis of available information, identification of Cold War property types, the assessment of threats to their integrity, noting of management concerns, and recommendations of appropriate measures for further identification, evaluation, maintenance, and treatment of property types. Ft. Campbell was established in 1942 as Camp Campbell, a temporary post designed to meet Army requirements during the Second World War. In 1950, the post was made permanent and given the designation Ft. Campbell. Ft. Campbell remained in service the entire duration of the Cold War era (1946-1989) and evolved as a post responding to changing missions, technologies, and national and global situations. This involved the construction of various properties, some of which may be of Cold War historic significance. Following the Guidelines of the Secretary of the Interior and recommendations in the Integrated Cultural Resources Management Plan (Frank Schieppah Consultants, Inc. 2001b), the Cultural Resources Program at Ft. Campbell asked BHE Environmental, Inc., of Cincinnati, Ohio (BHE), under contract with the Louisville District Corps of Engineers to develop a Cold War Historic Context.

This report is developed from research conducted by BHE, with Gray & Pape, Inc., Cincinnati, at Ft. Campbell and at other relevant locations, and is intended to provide an Overview and Synthesis of currently available information. It is an important step towards identifying property types, which may be eligible to the National Register of Historic Places in the Cold War Historic Context. The report also identifies open questions for research and historical inquiry arising from the available information, and gaps in available records therein. It is organized into three sections. In Section I, the project is introduced and the methods used are discussed. The introduction includes details on the location and purpose of the project, and the relevant preservation themes and regulations that form the background for the project. Methodological considerations are discussed to explain the way in which the project has been developed, and the resources used to do so. Emphasis is given to the guidelines for identifying and evaluating Cold War-era properties, and the large-scale studies developed by the Army. The distinction made by the Army between Cold War, Cold War-era, and Vietnam War related properties is important. Cold War properties are those constructed during the Cold War and specifically significant to the Cold War between the United States and the Soviet Union. Examples of such properties include nuclear weapons manufacture and storage sites and Strategic Air Command bases. Cold War-era properties are those that were constructed during the Cold War but were not significant to the Cold War Historic Context. BASEOPS properties, typically constructed in the cantonment area, are prime examples of such properties. Properties related to the Vietnam War (which was not fought against the Soviet Union) are seen by the Army as being significant in the Vietnam War Context rather than the Cold War context. Following the Army's guidance, this Cold War Historic Context at Ft. Campbell does not consider Vietnam War related properties as significant to the Cold War.

In Section II, the history of Ft. Campbell during the Cold War is reviewed, with an emphasis on properties built and used at That time. Political and military Cold War history is discussed to understand how larger events may have shaped Ft. Campbell. Based upon an understanding of Ft. Campbell developments and the broader Cold War history, the overview is classified into four periods, plus a chapter on the establishment of the post, and the lead-up to the Cold War. The periods in Cold War history are the Truman era, the Eisenhower era, the Kennedy

and Vietnam era, and the era from the *Détente* to the end of the Cold War. This classification was created with the understanding that the Cold War was a continuous occurrence; changing policies and events from one period also persisted and was reflected in those of a later time. For each of the periods, the evolution of Ft. Campbell and its properties, including architectural characteristics, are discussed. The report provides a historical account of the post's evolution during the Cold War, with an emphasis on the development of properties constructed and used during that time. Events peculiar to the post, the American involvement in the Vietnam War, and new national and Army policies affecting the post changed the historic context for Ft. Campbell since the mid-1960s. Atomic warfare was no longer the main issue, nor was the Soviet Union the only enemy. While the Cold War remained important to global and national history in the period, which followed, it no longer seemed to have the significance on the evolution of Ft. Campbell as it did earlier. After 1965, there was a perceptible shift of focus at Ft. Campbell, away from the Cold War-specific missions and preparation. Clarksville Base began to close its operations; and the Vietnam War, rather than a hypothetical conflict with the Soviet Union, informed post missions. Consequently, the most significant period for the Cold War theme at Ft. Campbell was from 1948-49, when Clarksville Base opened, to the mid-1960s, when Cold War-specific missions began winding down. The Overview and Synthesis concludes with a discussion on identifying potential Cold War properties at Ft. Campbell and on open research topics and questions identified from the study.

Importantly, this account helps provide a context for identifying Cold War properties at the post for Section III of the report, and a basis for making recommendations for further evaluation, assessment, and management of Cold War properties at Ft. Campbell. These recommendations have been listed below.

- Most properties at Ft. Campbell from the Cold War period do not have direct associations with the Cold War and, per Army guidance, are considered Cold War-era properties.

- Many properties have been considered and explicitly eliminated from further consideration. Excluded properties include the Campbell Army Airfield, the Sabre Heliport, and other structures within the cantonment area. Of these, after considering the Campbell Army Airfield was found to be vastly modified and with poor integrity, while others had no direct significance for the Cold War.

- The only Cold War facility identified in the historic context is the Clarksville Base Historic District – as a district. Section II of the report thus focuses on Clarksville Base and discusses Cold War property types at Clarksville Base, detailing their character and condition.

Recommendations for maintenance and treatment of elements contributing to the Clarksville Base Historic District are given with an understanding that the individual eligibility of these elements has not been considered; only their status as components of the district has been given consideration.

Further evaluation of individual elements of Clarksville Base should be carried out, particularly for the Gravel Gertie (building 7811), A-Structures, buildings in the Plant I and Plant II Clusters, and other character-defining elements such as the bridges on the perimeter of Clarksville Base.

Ft. Campbell will need a separate assessment of properties that may have significant associations with the Vietnam War, as the Vietnam War Context has not been considered in this report.

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SECTION I

1.0 INTRODUCTION

The purpose of this project is to develop a historic context for Cold War-Era properties at Ft. Campbell, Kentucky and Tennessee. Ft. Campbell is located in Christian and Trigg counties in Kentucky, and Montgomery and Stewart counties in Tennessee. The area was once occupied by Native Americans and then by Euro Americans that settled in the region beginning in the Eighteenth Century. However, little remains of those early communities in what is now an Army post. The landscape of Ft. Campbell is typified by gently rolling hills to a near-level uplands dissected by creeks and streams. The Cumberland River Valley lies south and west of the post. While Interstate 24 is in close proximity to the post, State Route 41A provides access to it from the nearby cities of Hopkinsville, Kentucky, and Clarksville, Tennessee.

Ft. Campbell was established in 1942 as Camp Campbell, a temporary post designed to meet Army requirements during the Second World War. In 1950, the post was made permanent and given the designation Ft. Campbell. Ft. Campbell remained in service throughout the Cold War and served various missions. During the Cold War era (1946-1989), Ft. Campbell evolved as a post responding to changing missions, technologies, and international situations. For much of its history, Ft. Campbell has been home to the 101st Airborne Division. Additionally, Ft. Campbell housed an Army Basic Training Center during the Vietnam War, in large part to meet the requirements of that conflict.

During World War II, several hundred temporary buildings were constructed at the post. Following the precedent set by World War I, the Army expected that the temporary post would be closed after the end of World War II and the buildings demolished. However, the post was made permanent and many of the earliest buildings continued to function after World War II and throughout the Cold War; some buildings are still used today. In addition, the Army constructed several new properties during the intervening years. Ft. Campbell thus contains a number of properties that may or may not be of historic significance for their association with the Cold War.

Guidance from the Secretary of the Interior provides that properties be evaluated within applicable historic contexts, of which the Cold War is one. As recommended in the Integrated Cultural Resources Management Plan (Schieppah, Inc. 2001), the Cultural Resources Program at Ft. Campbell seeks to establish a historic context for the Cold War for the post, fully meeting the guidelines of the Secretary of the Interior. Responsibility to identify, evaluate, and manage historic properties of all types is found in Section 110 of the National Historic Preservation Act of 1966, as amended (NHPA). Guidelines for federal agency compliance with these provisions have been published by the Secretary of the Interior through the National Park Service (http://www2.cr.nps.gov/pad.htm). The Department of the Army's regulations and guidance pamphlets AR 200-4 and DA PAM 200-4 also require the identification, documentation, and informed management of historic properties. (U.S. Department of the Army 1998a, 1998b). The Army has developed broad studies and policies regarding Cold War-era properties with which the historic context is required to maintain consistency.

Guidelines for the establishment and use of historic contexts for management of historic properties also have been issued by the Secretary of the Interior (http://www.cr.nps.gov/local/arch_stnds_1.htm). This Cold War Historic Context is intended

to be used by Ft. Campbell as a planning document in order to adhere to the above legislation and policy.

Historic contexts reflect the state of knowledge and circumstances in effect at the time they are compiled. Periodic revision is needed based on changes of both available knowledge and circumstances that apply to the historic properties in question. This type of periodic review is particularly significant to this project since, as the well-known Cold War historian John Lewis Gaddis pointed out, much of Cold War history was written in unusual circumstances (Gaddis 1997). Unlike 'normal' history, written after an event has concluded, Cold War history was being written as the events in that context occurred. Thus, historians working during the time could not possibly have maintained an objective distance from the events that they were trying to record and discuss. Second, much of it was written by American historians who, for security and other reasons, had only limited access to documents. Rather than international histories of events having international dimensions, the texts of the time tended to look at the United States and Soviet Union as the protagonists. Further, with virtually no access to archives in the Eastern Bloc nations, the texts tended to focus, quite naturally, on western sources. It was only from the early 1990s, after its end, that scholars began to write 'normal' histories of the Cold War. Although much work has been done over the last decade, normal Cold War history is still a recent phenomenon (Gaddis 1997; Lane 2001). This overview is written to reflect and synthesize the current state of knowledge and available information on Cold War history in general, and on Ft. Campbell in particular.

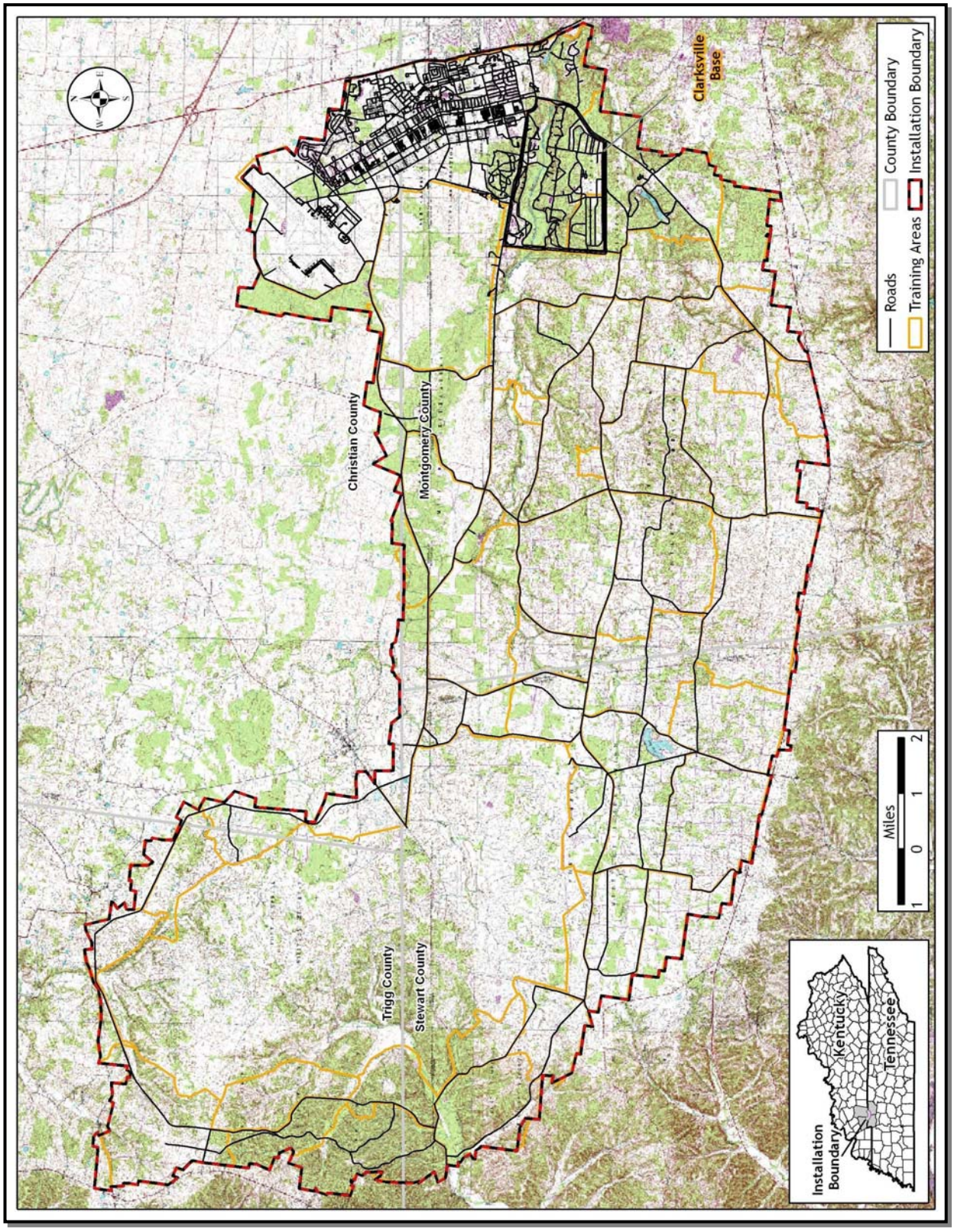

Figure 1. The Ft. Campbell Military Installation, Depicted on Modern USGS Topographic Mapping

2.0 ARMY HISTORIC PRESERVATION AND THE COLD WAR THEME

2.1 BACKGROUND

The Army's historic preservation program was formally established in 1974 by the Office of the Chief of Engineers, U.S. Army Corps of Engineers. Following the 1980 amendments to the National Historic Preservation Act, the Army developed specific historic preservation regulations. The Army Regulation 420-40 (Historic Preservation) directed Army posts to fund and prepare historic preservation plans that would meet the requirements of the amended NHPA. The purpose of this requirement was to ensure that the management of cultural resources was integrated into the posts' overall property management responsibilities. Recognizing that the different types of missions, different types of historic properties, and various needs of individual posts, would require unique guidelines, the Army asked each post to develop a plan, which would best serve its needs. Other military departments also developed historic preservation programs, many of which were modeled upon those of the Army (Ramirez 1997: 6-10).

While the most widely documented military resources have been those built during World War II or before, all military departments have made progress in documenting and preserving Cold War resources. The documentation of Cold War resources has required a unique approach, as most of the resources do not fall under the consideration of properties that are at least 50 years old. This has required a greater examination of the significance of resources to include criteria for exceptional resources. The end of the Cold War in 1989 led to a reconfiguration of American military forces, and consequently changes to the properties associated with those forces. Historians and preservationists have been concerned that these changes may result in the loss of significant Cold War cultural resources. In addition, the National Historic Preservation Act of 1966 requires that properties undergo review for historical significance whenever federally funded projects may affect them, a regulation that can apply to Cold War properties. Although 50 years or more is the normal age for consideration as potentially significant properties, the Department of the Interior's regulations allows younger properties to be nominated if they are of exceptional importance (Sherfy and Luce 1996). As Thomas F. King (1998: 86) points out, the so-called 50- year rule is in fact a "sliding" rule, not to be applied rigidly. According to King: "When the significance of a property – or for that matter the property itself – has hung around for forty years or so, one ought to start thinking about whether it might be eligible; on the other hand, the mere fact that a property turned fifty doesn't automatically make it eligible.".

The Department of Defense thus has a unique set of circumstances to consider when evaluating Cold War historic resources. It has an obligation to evaluate and try to preserve those properties that contribute to a better understanding of the Cold War. At the same time, the requirements of military missions and the need for updated technology must also be factored into management decisions. The designation of a Cold War property as historic will not automatically impede upgrades of facilities or limit their uses. Compliance with historic preservation regulations may support mission objectives and help avoid impeding future missions. In addition, preservation of existing facilities can often help military posts meet cost-savings goals. When all the costs and benefits are weighed, rehabilitating an older

structure can often be more efficient than demolition and construction of a new building. Preservation regulations do not necessarily trump other needs of military properties; often the process of preserving Cold War resources is one of compromise and mitigation. While historic preservation is an important priority, issues of national security take precedence where a mitigating solution cannot be developed.

Army posts such as Ft. Campbell are required to consider Cold War-era properties in their Integrated Cultural Resource Management Plans (ICRMPs) to comply with the Department of Interior guidelines (U. S. Department of the Army 1998a: 8-9). To aid posts to identify, evaluate, and manage Cold War cultural resources, the Army has developed large-scale studies, discussed below, with definitions, thematic guidelines, and property types that may be associated with the Cold War. In particular, two documents produced by the Department of the Army are of importance. The first of these is *Cold War Property Identification, Evaluation, and Management Guidelines* (U.S. Department of the Army n.d.). This document helps establish a standard for treating Cold War-era properties by defining important terms and regulations, providing an overview of Cold War history, and identifying themes and property types. The document also outlines the complexities associated with identifying Cold War properties, and the significant differences that one might encounter when compared with the evaluation of less unusual properties. It then suggests, in detail, criteria of evaluation and ways to manage historic properties associated with the era.

The second document, titled *Thematic Study and Guidelines: the Identification and Evaluation of Cold War Era Military-Industrial Historic Properties* (U.S. Army Environmental Center n.d.), develops some of the aspects of the first document in more detail. In particular, the political and military history of the Cold War, organized in chronological periods, is developed further. This is followed by a detailed discussion of the Army and military themes considered for identifying property types in an appropriate context. Next, the property types are discussed, by themes and by command. Last, the criteria for the evaluation of Cold War resources are considered succinctly. The two documents may be considered as complementing each other; the first laying greater stress on evaluation and management, while the latter discussing property types with themes and historic contexts to allow for a more substantial understanding of property types.

The historical narrative helps identify a significant period in Ft. Campbell's Cold War history, and consequently helps provide a context for identifying Cold War properties at the post. During the period 1946-1965, preparation for atomic warfare with the Soviet Union provided the overarching Cold War historic context to Ft. Campbell. American involvement in the Vietnam War and new national and Army policies, apart from developments peculiar to the post, changed the historic context for Ft. Campbell. Atomic warfare was no longer the main issue, nor was the Soviet Union the only enemy. To be certain, there continued to be periods of large-scale construction and improvements to facilities. However, the Cold War specificity that nuclear conflict had given Ft. Campbell and some of its properties until the mid-1960s was lost in the later period. As the Cold War gave way from threats of the use of force to negotiations and treaties signaling its end, so also the Cold War Historic Context at Ft. Campbell diminished in significance.

2.2 KEY CONCEPTS AND THEMES

For the purpose of Cold War property identification and evaluation, the Army uses the following definitions and concepts, taken from Cold War Property Identification (U.S. Department of the Army n.d.).

Cold War: The prolonged ideological, military, and political competition, tension, and conflict short of actual war between the U.S. and the Soviet Union from 1946-1989. The Cold War was marked by the effects of the policies of the two superpowers (U.S. Department of the Army n.d.: 2)

- the reliance on high technology for national security, culminating in the possession of nuclear weapons for strategic or political value;
- the establishment of spheres of interests and alliances with other nations;
- the division of Europe into two military alliances, the North Atlantic Treaty Organization (NATO) and the Warsaw Pact;
- the formation of military-industrial complexes, a complex union of military, universities, and industry formed to provide the technological edge deemed necessary for national security;
- attempts to prevent or start revolutions in smaller third world nations; and
- less–than-total confrontations between the superpowers such as the Berlin Blockade of 1948-49 and the Cuban missile crisis of 1962.

Cold War Property: Through physical design or association with people or events, a property that embodies the mistrust of the Soviet Union and in contrast, promotes American policies, objectives, and ideologies of this period. A Cold War property meets one or more of the following criteria (U.S. Department of the Army n.d.: 2).

1. The property was constructed or used between March 1946 and November 1989 in order to:
    - meet a specific or perceived Soviet military threat; or project force designed to influence Soviet policy;
    - or carry out major national objectives and policy toward the Soviet Union;
    - or affect global opinion of the relationship between the two superpowers.
2. Through its architectural or engineering design, the property clearly reflects one or more of the primary themes of the Cold War period.
3. The property is directly related to the US/Soviet relationship through association with a milestone event of the period.

4. The property is directly related to the US/Soviet relationship through association with the life of an exceptional figure during the period of their contribution.

5. Not normally considered a Cold War property, but an integral contributing part to a Cold War National Register Historic District and fundamental to the understanding of the district as a whole.

Cold War-Era Property: Any Army property that existed during the Cold War era (1946-1989), but is not considered a Cold War property, that is, of historic significance for the theme. Cold War-era properties do not reflect through design or association the US/Soviet relationship in a direct manner. BASEOPS buildings such as administration, powerhouses, swimming pools, barracks, etc., are Cold War-era properties. They are not considered a direct response to the Soviet threat, but were needed to maintain a standing army for any military mission, regardless of the adversary. Cold War-era properties are not exceptional for their Cold War associations unless they contain essential elements that would qualify them as Cold War properties.

BHE contacted Mr. Dave Berwick, the Army Affairs Coordinator of the ACHP, and Mr. Paul Lusignan of the National Register for their comment on the distinction made by the Army between Cold War and Cold War-era properties. Mr. Berwick had only begun reviewing the recent documents, but believed that the Army has produced the documents in good faith and that it was a good first step towards identifying Cold War properties. Mr. Berwick recommended that BHE speak with Mr. Lusignan, historian at the NRHP, familiar with Cold War resources (Berwick, August 14, 2003). Mr. Lusignan agreed with the Army that Cold War properties would need to be exceptionally significant since many of them were less than 50 years old. Mr. Lusignan also agreed, in broad terms, with the distinction between Cold War and Cold War-era properties drawn by the Army (Lusignan, August 15, 2003).

The Army understands that Cold War perceptions affected national policy towards the Soviet Union and in turn, helped shape the constructed environment of cultural resources from the era. The perceptions were a mixture of facts, contradictions, and misunderstandings about the nature, strengths, and motives of the rival nation. The Army has identified and classified the perceptions as general, ideological (about communism), technological, nuclear, and those related to national security. In turn, these perceptions have been interwoven into general and military themes (U.S. Department of the Army n.d.: 20-25). The text *Thematic Study, and Guidelines: Identification and Evaluation of the U.S. Army Cold War-Era Military Historical Properties* (U.S. Army Environmental Center n.d.), further identifies property types by themes specific to the Army and its operations in the Cold War. Together, the three U.S. Army documents just discussed form a hierarchy of themes that are complexly intertwined. The themes, which are important for determining the significance of Cold War properties, are summarized in Table 1.0 below.

Table 1. Cold War Themes

General Themes	Army Specific Themes	Military Property Themes
The Balance of Power Spheres of Influence Division of Europe Brinkmanship Arms Race Containment *Détente*	Mission Focus Continental Air Defense Adapting Conventional Forces Upholding NATO Commitment	Basic Scientific Research (Laboratories)
Ideological Confrontation Moral Imperative Propaganda Paranoia/Red Scare Secrecy American Peace Movement	Survival Military/Civilian Preparation for total war Survival of Strategic Command and Control Survival of American Government	Material Development Research, Development, and Engineering Centers Proving Grounds
Technological Imperative Military-Industrial Complex Military R & D Miniaturization of Space Survivability	Technology Research, development, testing, production, stockpiling, and deployment of exotic weapons/systems R & D on effects of these weapons on Soviet and American populations	Wholesale Logistical Operations Production Facilities Depots
Survival and Preparation for Hot War (Nuclear) Defense of Europe Civil Defense National Defense	*Militarization of Space* Using Space for National Security Surveillance	Air Defense, Ballistic Missile Defense, Army Missiles Air Defense Ballistic Missile Defense Research and Development

General Themes	Army Specific Themes	Military Property Themes
	Secrecy	Command and Control, Communications,Computers, Intelligence The Army School System
		Operational Forces
		Army Medical Activities
		Miscellaneous Themes Nuclear Power Program Army Aviation Activities Associated with Other Services or Department of Defense activities

2.3 COLD WAR PROPERTY IDENTIFICATION AND EVALUATION

The Army document *Cold War Property Identification, Evaluation, and Management Guidelines* (n.d.: 32-52) details the process of Cold War property identification and evaluation, and considers some of the exceptional circumstances they entail. To determine the significance of property types within an installation, several steps are necessary. The first step is the identification of significant resources. Typically, properties associated with base operations, such as housing, maintenance facilities, and administrative offices, are excluded from consideration as exceptionally significant Cold War properties, though on rare occasions such a property may possess unusual significance. Other than this general exception, any Real Property may be considered for Cold War exceptional significance.

After identification is complete, properties should be evaluated in terms of specific contextual themes. Evaluation is the process of determining if properties meet established criteria of significance with eligibility and, therefore, should be included in a historic property inventory for cultural resource management. Evaluation is one of the most important steps in the process, as it affects subsequent steps in the process. If a property is determined not eligible, no further action is taken with regards to the property's historic status and it can be affected without need to comply with preservation regulations. If a property is determined eligible and there is a proposed undertaking that will affect the property, it must next be determined how the historic property might be affected. If the affects will be adverse, alternatives to avoid or reduce harm to the property must be explored. If no specific undertaking is proposed, the determination that it is eligible triggers a federal agency's responsibility under Section 110 to preserve and maintain the property. Cold War properties, including those under the "50-year" horizon, are evaluated under the four standard criteria of significance (events, people, design,

and information potential) used for any property to be listed on or eligible for the National Register (U.S. Department of the Interior 1997). The document *Cold War Property Identification, Evaluation and Management Guidelines* (U.S. Department of the Army n.d.), is particularly useful as it provides examples of properties under each criterion that may or may not be eligible for National Register consideration. Cold War-era properties, that is, properties built during the Cold War but not specifically related to the Cold War, may be eligible on grounds not related to the Cold War.

The issue of integrity is important in determining the historic significance of Cold War properties, as it is for other properties. Integrity is defined as the ability of a property to convey its historic significance (U.S. Department of the Interior 1997: 44). The seven aspects of integrity are as follows:

1. Location – the relationship of a property to a specific place. Location is often intrinsic to the historical importance of a property. In the context of the Cold War, a property might be strategically located to offer military or technological advantage.

2. Design – the combination of elements that create the form, plan, space, structure, and style of a property. Cold War structures that exhibit specific security and safety measures in their design might be considered in the context of this aspect.

3. Setting – the physical environment that reflects the conditions under which a property was built and how it functioned in relation to its surroundings. For example, most Cold War properties functioned as part of a larger system of buildings or part of a military base. These other properties need to be considered as contributing to a larger understanding of the property under evaluation.

4. Materials – the physical elements of a property during its period of significance. Many Cold War properties, for example, made use of new metals and other construction materials.

5. Workmanship – the physical evidence of a craft or skill that illustrates a technology important to a property's significance. Defense-related properties often exhibit advanced technology craftsmanship that became a crucial part of the arms and space race with the Soviet Union.

6. Feeling – the impact of a property's physical features on the observer that, when taken together, evoke a historic sense of a particular period.

7. Association – the presence of physical features that form a direct link between a person or event and the property in the mind of the observer. According to the National Park Service guidance, both feeling and association are subjective and, as a result, retention of feeling and association in the absence of any other aspects of integrity is not sufficient to justify a finding of historical integrity (U.S. Department of the Interior 1997: 45).

A property will possess several, and usually most, of the seven aspects of integrity in order to convey significance (U.S. Department of the Interior 1997: 44). The elements taken together should convey the property's significance. Evaluators of Cold War properties must be especially sensitive to issues of integrity because of the effects of constant change upon the

defining characteristics of a property, which can happen with properties that are in continual use. Change does not automatically damage a property's integrity; for instance, if the technological change is reflective of larger strategic efforts of the Cold War, then change is actually important to the significance of the property. If the change is not reflective of the evolution of Cold War technology, however, it may represent a loss of integrity and a loss of the property's ability to convey its importance.

Cold War properties that are less than 50 years old must demonstrate exceptional importance in order to be considered significant. The National Register guidelines for determining exceptional importance are intentionally non-specific to allow for case-by-case interpretation of specific resources. The definition of exceptional, while necessarily vague, often leads to difficulties in identifying significant Cold War properties. The Cold War was an exceptional period in history, and each military installation tends to view its properties and efforts as essential and exceptional to the story of the Cold War. At the same time, designating most properties constructed or used during the Cold War as significant would dilute the effect of truly significant properties. Therefore, care must be taken in applying the guidelines for exceptional status.

In the evaluation of cultural resources, "exceptional" depends on the interrelation of three factors: scale, quantity, and comparison. Scale defines the limits or size of a particular group of resources, or parts of a resource, under consideration. Army guidelines for evaluating Cold War properties suggest that the geographic scale of the Cold War was global and national; therefore, a Cold War property must be significant on a national or global level (U.S. Department of the Army n.d.). A Cold War property significant on a global level, however, also may be significant at a local, state, or regional level. Evaluation of Cold War properties needs to consider these other levels of significance[1].

Quantity plays a role in defining the exceptional status of a Cold War property. Cold War properties can be divided into three quantity groups: unique, one-of-a-kind properties; properties that fit a particular type but with non-standardized plans; and multiple originals of a particular type built from standardized plans. Evaluating a property's quantity is difficult and requires experienced professional evaluation. While one-of-a-kind properties are not always considered exceptional, sometimes a certain percentage of multiple standardized structures may be considered significant as representative examples of the type retaining their historic integrity[2].

[1] BHE spoke with Paul Lusignan, Historian with the National Register of Historic Places, regarding the level of significance – local, regional, or national - as applied to Cold War properties. Mr. Lusignan thought that there may have been cases where entire communities were developed because of the Cold War, and these may be eligible under the Cold War theme for local significance. Examples of these types of properties may be found in Alaska, although Mr. Lusignan was not aware if Alaskan agencies had actually used the local significance to designate the properties significant and NR eligible. Further, Nike missile systems, which were intended to protect local areas in the United States, could have local significance. However, Cold War properties would usually need to be of national significance, and would likely be nominated in that category. This would not exclude the possibility that the property would have historic significance for another theme (Lusignan, August 15, 2003).

[2] The purpose of identification and evaluation of Cold War properties is to aid the Army in managing its properties per NHPA, 1966 (as amended). The selection of representative examples of standard properties can be a management decision especially when the properties are equally significant. Programmatic Agreements and Memoranda of Agreement between the installation, state, and federal agencies can provide guidance for the selection of properties to be retained and managed as historic properties.

Comparison between Cold War properties requires careful research, and is ultimately a matter of professional judgment. One-of-a-kind properties should be evaluated against similar properties in order to determine what should be considered exceptional. The U.S. Army's Cold War Property Identification, Evaluation, and Management Guidelines suggest the following questions be addressed when evaluating one–of-a-kind properties:

- How important is the property in comparison with other equally unique properties within the same thematic context?
- Is it among the most remarkable examples of the theme?
- Did the property directly lead to a technological breakthrough that gave a lasting advantage to the US over the Soviet Union, or was it a dead-end that symbolized a desperate search for technological superiority?
- Multiple properties should be evaluated as a type, and if it is determined that that type is exceptional, the properties should be contrasted against the known database of similar property types.

The identification, evaluation, documentation or retention of valuable historic resources are the necessary steps for installations seeking to ensure that historic preservation is integrated into ongoing programs to fulfill Section 110 responsibilities as mandated in the NHPA. The identification of historic resources on a military installation does not require mandatory retention of historic features nor does it require that military installations seek approval from governmental agencies before making changes to historic properties (U.S. Department of the Army 1998: 7-8). Rather, military installations and individual state historic preservation offices should work together to assess effects and consider alternatives to avoid or reduce effects on historic properties. The Section 106 Process, outlined in 36 CFR 800 of the NHPA, 1966 (as amended), Programmatic Agreements (PAs), and Memoranda of Agreement (MoA) are means by which such management decisions may be reached. Mitigating the adverse effects of an undertaking on properties will be unique to the individual property or property class, and may take many forms. Mitigation can include full or partial documentation of the structure (through photographs and drawings) before it is affected, repair or rehabilitation of part of the property instead of alteration or demolition, or a detailed and complete restoration of all or part of the property. These are only examples, and many other solutions can be reached depending upon each unique situation. As a last resort, when no mitigation or compromise is feasible, a property may be assessed as an "acceptable loss" and then will be subsequently destroyed. This should always be the last alternative when no other solution can be reached.

The Cold War Task Area (CWTA) has published a set of guidelines for the preservation and documentation of Cold War resources (Center for Air Force History, 1994). The CWTA maintains that while it is inappropriate for all Cold War-era resources i.e. all military hardware or "other property developed or constructed during the period" to be evaluated under the standards for National Register eligibility, every effort should be made to assess and identify important Cold War property types. In doing so, the CWTA asserts that "the function and design of the major resource types from the Cold War will be documented for the historical record". The information gathered from inventories and research should be compiled into electronic databases and generally made available. It also recommends that the various Department of Defense departments and agencies coordinate their declassification efforts to

make readily available research materials essential for understanding Cold War resources more quickly. In addition, defense industry contractors who hold similar records should be encouraged to commit to professional archival standards for their Department of Defense-related records. Furthermore, the Cold War Task Area recommends that the Cold War Project "continue to encourage and coordinate broad-based scholarly, environmental, and cultural resource management activities related to the legacy of Department of Defense during the Cold War.". (Center for Air Force History, 1994: 32).

3.0 METHODOLOGY

Archival research and literature review form the basis of the overview and synthesis, and are key to the project as a whole. The information reviewed may be classified in three hierarchical categories. The first of these, General References, encompasses the political, social, and cultural history of the Cold War. The second, Military References, includes aspects related specifically to the military history of that era. Since the role of the Army and the history of nuclear weapons form an important part of the overall Cold War Historic Context for Ft. Campbell, these are given special consideration. The last of these categories relates directly to Ft. Campbell history. The Annotated Bibliography that was submitted under separate cover reflects this classification. As is explained below, the hierarchical categories also form a basis for the organization of the report.

Research for the project was carried out at various locations. Several primary sources of information – ranging from Master Plans to Real Property records - were available in various departments at Ft. Campbell. These included the Cultural Resources Program, the Master Planning Division, and the Engineering Drawing Branch, all under the Public Works Business Center (PWBC) at Ft. Campbell. The Ft. Campbell Historical Foundation also provided access to its archives and collections. The Cultural Resources Program was an important source for prior studies and inventories conducted, including a study for the Clarksville Base nuclear storage facility. Other historical information, including the Ft. Campbell ICRMP (Frank Schieppah Consultants, Inc. 2001), maps, aerial images, and digital GIS files, was obtained also from the Cultural Resource Program. The available files and records at the Master Planning Division were a valuable source of information on Real Properties at Ft. Campbell and decision-making related to the Cold War era. The Engineering Drawing Branch maintains architectural and related drawings on all real properties and is a rich source for drawings of properties built and used during the Cold War. However, at least some potentially important information and documents at Master Planning and Engineering Drawing departments are not catalogued and, therefore, difficult to locate. These departments would be richer sources for information if the catalogues were to be completed. Records at the Ft. Campbell Historical Foundation and the Pratt Museum were useful. These included history files maintained over the years, newspaper collections, historical imagery, house histories, and other relevant information. A conversation with the Ft. Campbell historian, John O'Brien, was recorded in October 2002 and proved useful.

Studies on the broad political, social, and cultural aspects of the Cold War are plentiful and available in large public and academic libraries. For this study, the Public Library of Cincinnati and Hamilton County and the University of Cincinnati libraries were used extensively. Additionally, local resources such as the Montgomery County Public Library in Clarksville, Tennessee, also were accessed for information. Information obtained from the historic preservation officers at the Tennessee Heritage Commission and the Kentucky Heritage Council suggested that there was no literature available at those repositories regarding Cold War properties at Ft. Campbell.

Attempts were made to access related cultural resource studies and reports on Cold War facilities other than at Ft. Campbell. Some of these were obtained and were useful. Others are ongoing projects, which may become available upon their completion. The Air Force

History Support Office, the Naval History Department, and the Sandia National Laboratories Corporate Historian were also contacted, and some information about their activities with Ft. Campbell was gathered. The Internet proved to be a very valuable resource. Many of the documents declassified since the end of the Cold War have been posted on Internet sites. These include the National Security Archives, the Department of the Army Center of Military History, the Library of Congress, the Harvard Cold War Project, and the Parallel History Project (NASA and Warsaw Pact). As many of these documents relate to political, strategic, tactical, and military decisions made during the period, they provide significant information on the Cold War era.

There are gaps in the information available at Ft. Campbell and at other locations that need to be mentioned. A large amount of information on master plans appears to be lost or misplaced. The list of all master plan documents available at Ft. Campbell included with the annotated bibliography indicates the short-comings of available information, considering that these cover over 50 years of the post's history. Moreover, documents on real properties at the Master Planning office are not catalogued and many of the old files are in a condition of disuse. This makes it difficult to access and to even determine what information may be available. There is also missing information on demolished properties, with the demolition dates of only those removed since the 1990s available. The Engineering Drawing Division has a more comprehensive collection than the Master Planning Department; however, large portions of the collection are not catalogued, making it difficult to locate and even ascertain the presence of important drawings.

Secondly, gaps in available information are also due to the classified nature of many activities related to the Cold War and carried out at Ft. Campbell and the Clarksville Base atomic weapons storage facility. The Naval History Department and Sandia Laboratories, for instance, provided little information on Clarksville Base. The information that is available on Clarksville Base, even from official sources such as the Internet site of Pantex and from Sandia can, on occasion, be contradictory, and this is explained in relevant portions of the text. Contacting the Air Force History Department provided little information on the Campbell Air Force Base. The collections at significant sources such as the National Archives, the Library of Congress, and the Army Center of Military History may provide additional information. However, this would be possible only with lengthy and intensive research conducted at those locations, which was not within the scope of this project. There remains the possibility of more, significant information available at Ft. Campbell and other locations, and thus, scope for further research on Cold War properties, and a better understanding of the Cold War context of the post.

The organization of this overview is similar to the historical narrative in the document *Thematic Study and Guidelines: Identification and Evaluation of U.S. Army Cold War Era Military-Industrial Historic Properties* n.d., mentioned earlier. As stated earlier, the Cold War is discussed in four chronological periods; the Truman ERA, the Eisenhower ERA, the Kennedy and Vietnam ERA, and the period from Détente to the end of the Cold War. Finally, the overview presents a chapter on the lead-up to the Cold War and the establishment of the Camp Campbell Army Post. Each of these periods is discussed according to the hierarchical classification of the themes of political history, military history, and Ft. Campbell history. A potential theme for further research relates to any impact that Ft. Campbell Cold War history may have had on the local communities, and research issues and questions related to this aspect have been identified at the end of the document. The different thematic levels mentioned earlier are woven into the structure of the report. A consideration of the

difference between Cold War and Cold War-era properties has helped organize the sections on the history of Ft. Campbell in different eras. The Clarksville Base weapons storage facility is considered by the Tennessee Historical Commission as eligible for National Register listing by the Tennessee Historical Commission for its association with the Cold War, and is a potential Cold War-era district. Thus, developments at Clarksville Base are discussed prior to the other historical developments at Ft. Campbell in each of the applicable sections. The discussion of each of the periods concludes with the identification of research topics and questions. Table 2 provides an overview of the narrative in Section II.

SECTION II

4.0 HISTORIC OVERVIEW

In Section II, the Historic Overview, the history of Ft. Campbell, seen in the light of Cold War political and military history, is reviewed. The emphasis is on Ft. Campbell properties built and used at the time. Based upon an understanding of Ft. Campbell developments and Cold War history, the overview is classified into four periods, plus a chapter on the establishment of the post and the lead-up to the Cold War. The periods in Cold War history are the Truman era, the Eisenhower era, the Kennedy and Vietnam era, and the era from the Détente to the end of the Cold War. This classification was developed with the understanding that the Cold War was a continuous occurrence; changing policies and events from one period also persisted and were reflected in those of a later time. Each chapter is divided further into three sections to discuss the broad political context of the Cold War during the period, its ramifications for the American military during those phases, and developments at Ft. Campbell at the time. For each of the periods, the evolution of Ft. Campbell and its properties, including architectural characteristics, are discussed, with the preceding sections helping place them in the larger political and military contexts of the Cold War.

4.1 ALLIES AT THE END OF WORLD WAR II

4.1.1 POLITICAL CONTEXT

While American policies prior to the onset of the Cold War evolved with the changing presidential administrations, those of the Soviet Union reflected the world-view of Josef Stalin (Ball 1997: 11-18). Franklin D. Roosevelt's optimism in domestic and foreign policy had extended to the U.S. relationship with the Soviet Union. It was during FDR's presidency that diplomatic relations with the communist state were established in 1933. During the Second World War, Roosevelt's use of the Lend-Lease Act sent military supplies to the Soviet Union as well as to Britain. This optimism about relations with the Soviet Union did not always translate into trust, however. The Manhattan Project, begun in 1942, created to develop the atomic bomb, was kept secret from Stalin, although Winston Churchill, Prime Minister of Great Britain, was aware of the project almost from its inception. At the Yalta Conference in February 1945, the relationship between the U.S. and the Soviet Union strained, as each nation jockeyed for postwar influence in Europe and elsewhere. Although not understood in those terms at the time, the conference saw the beginnings of the post-war spheres of influence developing. During negotiations that included Stalin's agreement to declare war on Japan, the Soviet Union was given the right to occupy zones in Germany, Austria, and Korea, and returned territory lost in the 1904-1905 Russo-Japanese War.

When Harry S Truman became president of the United States, the guarded optimism of the previous administration changed to overt pessimism. During the Truman years, there was a growing fear of the expansionist tendencies of the Soviet Union in Europe. Truman himself believed that the spreading influence of a totalitarian state would undermine the wealth, military capability, and values of the American people and threaten the country's national security (Leffler 2001: 25). The spread of Soviet influence and ideology had to be contained, in American view.

However, European nations were not in a position to succeed politically or economically without American tutelage (Ball 1997: 11). Government officials, for example, saw the democratization and economic rebuilding of Germany as essential to filling the postwar "vacuum" and preventing Soviet expansion. The same policy was pursued with other European nations (Gaddis 1997: 199). To be certain, the two superpowers were still allies against Hitler's Germany. Truman and Stalin met at the Potsdam Conference (July 17-August 2, 1945) which clarified and implemented the agreements reached at Yalta. Because of the political bartering at Yalta and Potsdam in the 1940s, Europe in effect was divided. The Soviet Union exercised the greatest influence in the East and the United States and Great Britain in the West.

There was significant merit to the views of the Truman administration regarding Stalin's post-war expansionist policies. By 1944, Stalin had an explicit, if unannounced, vision of an entirely Socialist Europe after the war. Earlier in 1943, he authorized atomic weapon and energy research (Zubok 1999: 41-42). However, Stalin's plans for Europe's future rested on his own perceptions of an imperialist West led by the United States. During the course of the war, certain important events appeared to support Stalin's suspicions. The lengthy delay in opening a second front against Germany in Europe exacerbated Soviet perceptions of imperialist Western governments using the German Army to bleed the Soviet Union until both could be conquered. The American decision to drop atomic bombs on Japan contradicted the Yalta and Potsdam agreements. Stalin believed that the use of atomic weapons by the United States was aimed to show American superiority over the Soviet Union. In any event, the possession of a weapon of such extraordinary capacity for mass destruction, as well as the demonstrated willingness to use it, dramatically affect international relations.

Several international events signaled the early manifestation of the Cold War. Before World War II ended in June 1945, the United Nations was established to serve, in part, as a forum for the peaceful resolution of international disputes. Shortly after Japan's surrender, the United States announced its intention to occupy the Korean peninsula south of the 38th parallel, a likely counter to the Soviet presence in the north. In September 1945, Ho Chi Minh seized power in Hanoi and declared an independent Vietnam. French troops soon re-entered the country, thus beginning the prolonged French Indochina War. In Eastern Europe, the Soviet Union quickly consolidated its control over Poland, Czechoslovakia, and East Germany. Hungary and Yugoslavia soon became Communist states (Young 1999). Some of the most contentious issues of the Cold War were tangible less than a year after the end of World War II.

4.1.2 MILITARY CONTEXT

In the immediate aftermath of World War II, the United States military devoted considerable energy and manpower to the continued occupation of Western Europe, Japan, and other territories that had been the scene of conflict. With its obvious importance as an occupation force, the Army may have been able to influence national security policy in a manner not achievable in the coming years. According to Leffler (1992; 2001: 24) the prevailing thought that the potential manpower and war-making capacity of Europe, Asia, and Africa, was enormously greater than that of the western hemisphere was particularly pervasive in the Army. Ensuring that a significant aspect of these regions remain within the American sphere of influence, politically and economically, was invaluable for American national security and the continuation of the domestic way of life.

The occupation force, as one of its underlying concerns, potentially had to see that the German industrial complex was used for European economic recovery rather than for Soviet (or German) defense production.

Sensitivity to the Soviet Union's political ambitions caused many military and political leaders to approach demobilization with caution. It was believed by the Truman administration, however, that with their nuclear monopoly and the existing strengths, the Soviet threat and other national security goals could be achieved with a smaller military force. The overwhelming majority of servicemen had been drafted and the American public demanded that troops be allowed to return home as soon as possible after the decisive defeats of Germany and Japan. The War Department had developed an elaborate point system to reward length and circumstances of service but soon after Japan's surrender, the Government decided that all men with two years of service would be released (Weigley 1984: 486). Temporary military posts, used to train and deploy troops, were now used for demobilization. The reduction in military strength was drastic: four million of the eight million men in the Army were released from service immediately. While political upheavals continued in various parts of the world, Truman announced that the Army would be further reduced to 1.95 million men by June 1946. This number soon was increased by another 400,000 troops. As troop strength in the Army and Air Forces was reduced to 1.07 million, the Congress allowed the Selective Service Act of 1940, and its extensions were permitted to lapse. The largest peacetime Army in American history soon would be seen to fall short of perceived Cold War defense requirements.

4.1.3 CAMP CAMPBELL

In 1942, Camp Campbell was established on approximately 102,000 acres in four counties along the border of western Kentucky and Tennessee (Hart 1978: 3). The post was located in a rural area of Kentucky and Tennessee that primarily had been devoted to farmland and tobacco trade since the early nineteenth century. Numerous pioneer cemeteries were relocated and the existing farmhouses and outbuildings were either demolished or re-used, either for training or providing residential and administrative space (Darnell and Jones 1970). Despite promises made by Army representatives to retain the majority of the buildings on the land (Clarksville Leaf Chronicle January 30, 1942), practically all existing structures on the land were eventually removed. Currently, only four of the buildings that existed prior to Camp Campbell's creation are known to remain on the grounds of Ft. Campbell. Although no comprehensive records of the demolition were found, a 1944 layout map of Camp Campbell shows about 80 pre-existing structures, including several outbuildings remained at the post, indicating that the removal of buildings was well under way (Figure 5).

During WWII, Camp Campbell was used to train and deploy troops to battlefields in Europe and elsewhere. Units trained and deployed included the 1580th Service Command Unit, the 12th Armored Division, the 26th Yankee Division, the 20th Armored Division, a Women's Army Corps unit, and the 4th Armored Corps. Beginning in July 1943, Camp Campbell also served as a prisoner of war camp for captured German soldiers. Three stockades with a capacity for 3000 POWs were constructed. The last POWs were transferred from the post in April 1946 (Frank Schieppah Consultants, Inc. 2001b: 2-76, 2-77).

Red Highlighting Indicates 1942 Boundary of Camp Campbell

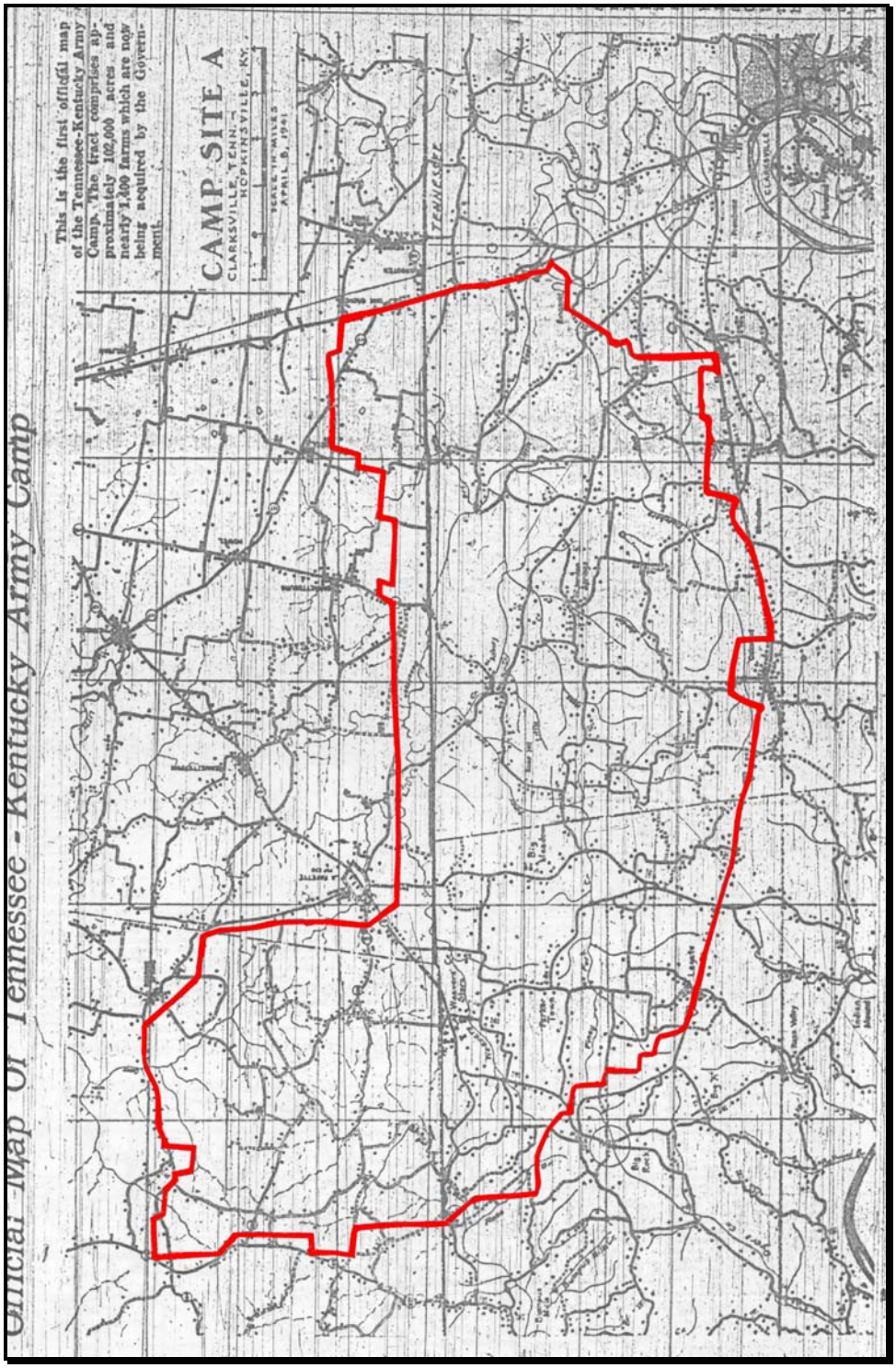

Figure 2. "Official Map of Tennessee-Kentucky Army Camp," published in the Clarksville Leaf Chronicle, Jan 30, 1942

Throughout this period, Camp Campbell remained a temporary military post. With the exception of the hospital, all of the buildings on post were of frame construction erected on

concrete block footings (Figure 4). The utilitarian structures generally were one to three stories high, with clapboard siding, wood-framed windows, and side-gabled asphalt shingle roofs. They were not originally intended for prolonged use, but many of the buildings have remained in service for more than five decades. Built in 1942, the hospital had a 2146-bed capacity, but this was cut-down to 646 by war's end, by closing off some wings and reducing the number of staff, as requirements decreased (Figure 3). Unlike other structures at the temporary post, the hospital was constructed of brick (Moser 1952: 27). The three-story building continued to serve as a medical facility until 1979, after which it housed other functions, including temporary housing quarters and NCO Academy facilities until 1993 (Chanchani 2003: 4; O'Brien 2002; Ft. Campbell Real Properties 2003). In 1993, all but three of the original 45 wings and structures were demolished.

Figure 3. Hospital Complex at Camp Campbell, Circa 1944.

As indicated in Site Maps and Master Plans from the period, the initial layout served as the basis of future developments in the post (Ft. Campbell Master Planning and Engineering Drawing Departments, PWBC). A 1943 site plan shows the basic layout of the camp with much of the wartime construction complete. This layout functioned as the core for subsequent development during the late 1940s and 1950s (Hart 1978: 39). The 1944 plan of the post (Figure 5) shows that US 41-W (present day US 41A) bounded the developed section of the post along the east and Tank Road (now known as Desert Storm Avenue) bounded it along the west. Kentucky Highway 117 and Morgan Road acted as the northeastern and northern boundaries and Lee Road was the southern boundary. The principal zones of the housing areas, the

administrative areas, and the training areas were set up. Troop housing was concentrated in almost 50 blocks of frame barracks along Indiana and Kentucky avenues. Housing was of extremely poor quality and living conditions for the soldiers were quite abysmal. Because Camp Campbell still was considered a temporary post to be removed after the war, no plans existed for improving the housing stock (O'Brien 2002).

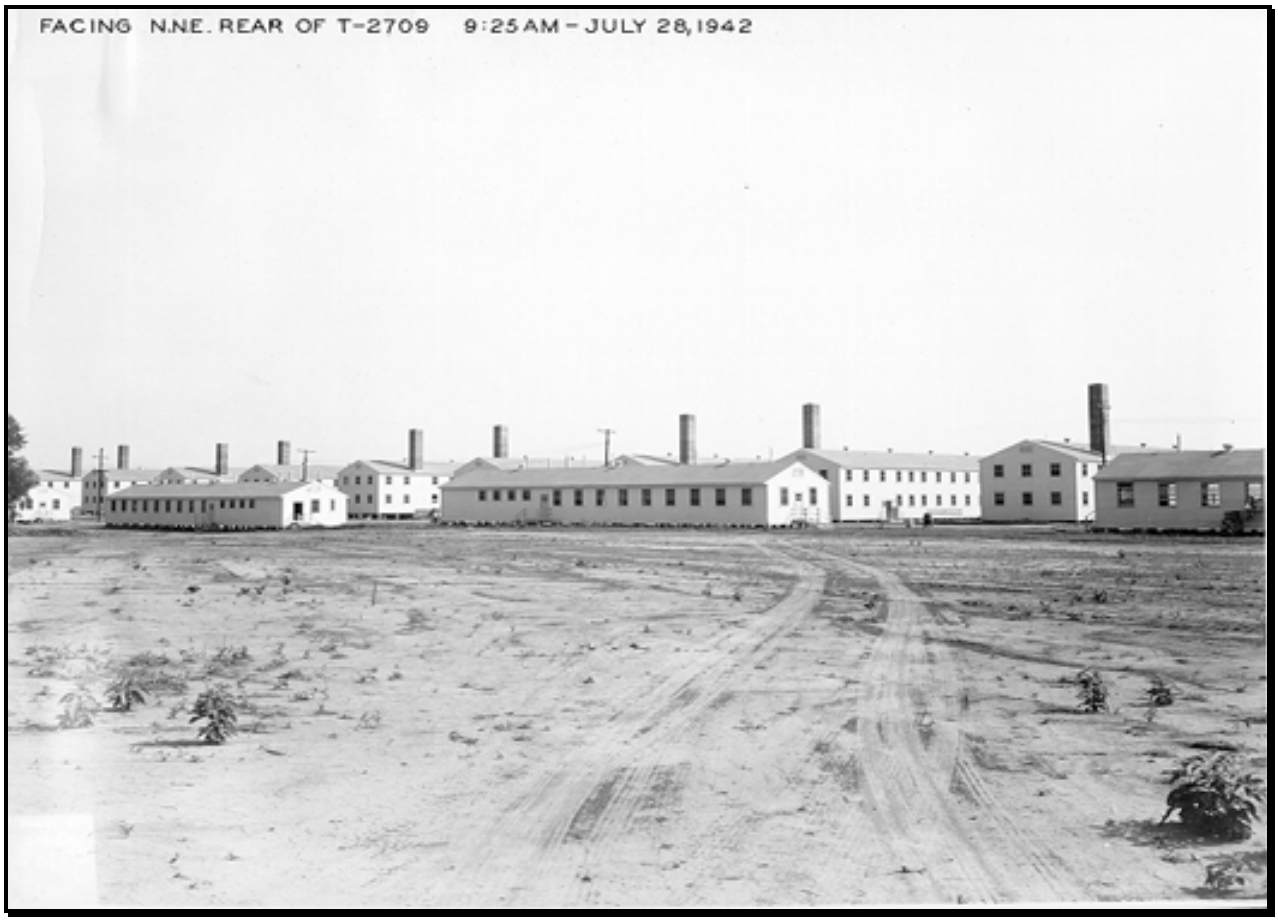

Figure 4. Photograph of Built Structures, World War II Mobilization Construction, July 28, 1942.

Administrative, service, storage, and training areas were located along the perimeter of the cantonment. Two railway lines penetrated the facility: one serving a series of loading bays near the southeastern corner of the post, and another extending out to the Army Airfield at the northwestern corner. Set slightly away from the remainder of the post, the Army Airfield was constructed at the same time as the rest of Camp Campbell's World War II resources, and was ready for occupancy in 1943. It occupied 3750 acres of land, of which 3280 acres were procured specifically for the airfield (Moser 1952: 27). The airfield was made a sub-base of Godman Field, Kentucky (USAF Historical Division, Research Studies Institute 1956). At the time, it was known as the Air Support Command Base, Clarksville, Tennessee – a misnomer since it was in Kentucky. It came to be called the Campbell Army Airfield because of its proximity to Camp Campbell (USAF Historical Division, Research Studies Institute 1956).

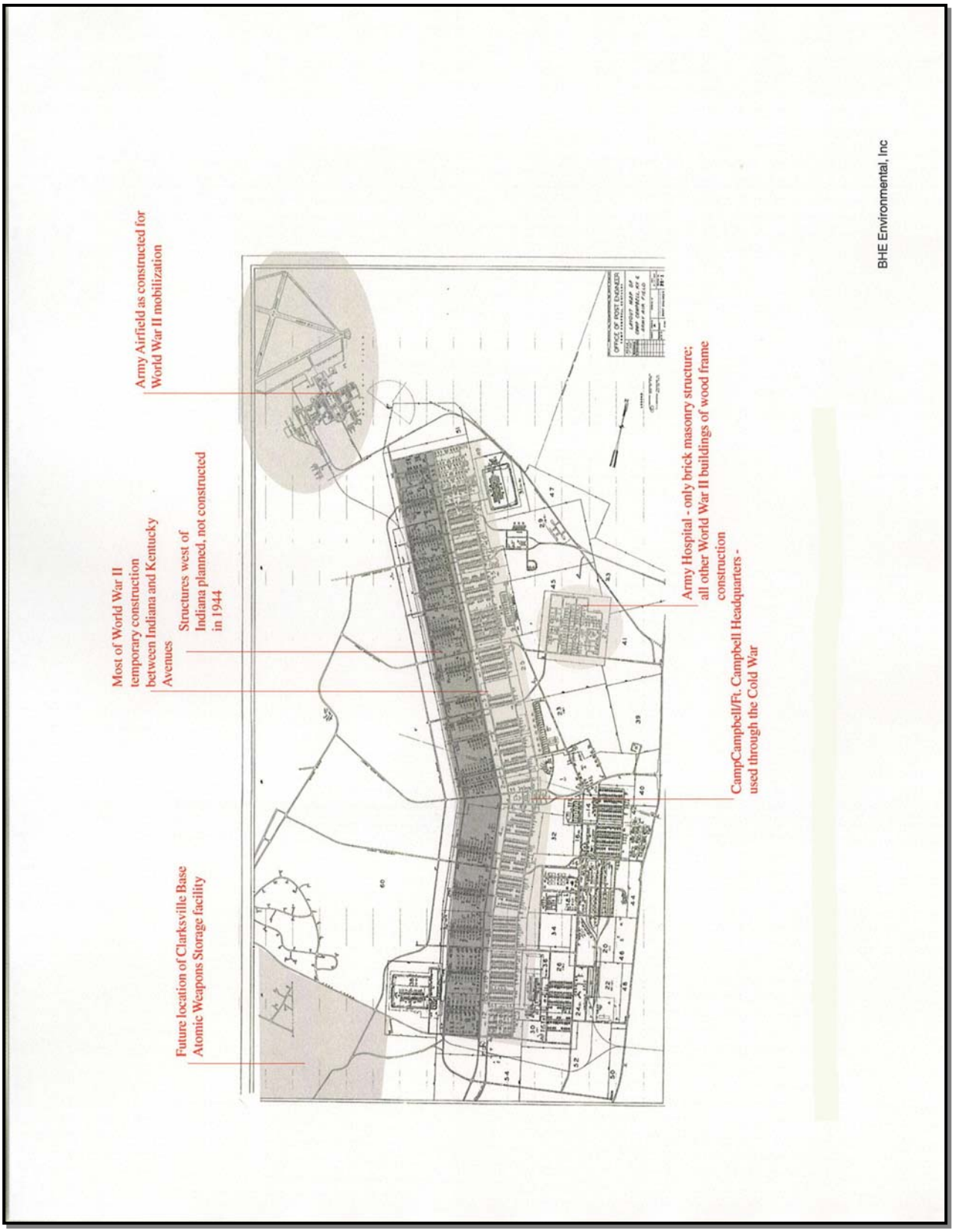

Figure 5. Camp Campbell Layout Ca. 1944, Depicting the Original World War II-Era Configuration

In 1944, the airfield had three runways: the east-west and north-south runways crossed one another and the northeast-southwest runway was situated roughly at a 45° angle to the other two runways. A small collection of service and residential buildings arranged in a grid pattern were located southeast of the runways (Figure 5).

In summary, at the end of World War II the cantonment was organized along the eastern edge of the post. The one-and-two story, wood-frame World War II-era mobilization buildings were constructed along Indiana and Kentucky avenues. Additional construction of similar buildings was planned west of Kentucky Avenue, but not completed. This area was later built-up as a loading and deployment area, as it was in close proximity to the railway line that ran through the post. As was typical of posts built for World War II mobilization, the facilities included chapels, clubs, recreational, and education facilities, to house and serve the troops preparing for deployment. Among these, the only building that had an air of permanence was the extensive, multi-winged hospital of brick construction. North of the cantonment was the Campbell Army Airfield, which was to become an Air Force facility before it was transferred back to the Army in 1959. With the railway line that extended to the airfield, and the proximity to the highway system, the post appeared to have been well placed for the transportation of materials and deployment of troops.

4.2 THE TRUMAN ADMINISTRATION AND THE CONTAINMENT POLICY

4.2.1 POLITICAL CONTEXT

The beginning of the Cold War generally is identified as March 1946, when Winston Churchill warned that an "Iron Curtain" had come down across Europe, dividing East from West and granting the Soviets hegemony over Eastern Europe. The Truman administration had come to believe that countries of Europe and Asia that were economically secure and that welcomed American values were vital to the nation's security. The American attitude toward Soviet ambitions was articulated clearly the following year when, in the July 1947 edition of Foreign Affairs, the diplomat George Kennan warned of Soviet expansionism and argued for a policy to prevent further communist encroachments globally. In 1946, Kennan, who was then the U.S. Charge in Moscow, had already written his famous telegram analyzing Soviet expansionist tendencies (Young 1999: 8). This recommendation became the basis for the containment policy adopted by the United States in the early years of the Cold War (U.S. Army Environmental Center n.d.: 17; Young 1999: 8-10).

Perceptions often manifested in actual events. The Soviet Union's ambitions extended well beyond its existing sphere of influence in Eastern Europe and led to alliances among western nations in the immediate post-war period. In 1945, Ho Chi Minh had seized power in Hanoi, and Hungary and Yugoslavia became communist states. Under strong Soviet influence, Romania became a Communist state in 1947, while talks between the United States and the Soviet Union regarding the future of the Korean peninsula broke down over disagreement of what constituted a "democratic" government. In 1948, a Soviet-sponsored coup led to establishment of a communist government in Czechoslovakia. The same year, the Soviet Union sought to eliminate Western penetration of East Germany by blockading Berlin, which continued to be occupied by Allied forces, leading to the Berlin Blockade and Airlift incidents. Communism also seemed to be spreading in Asia, as demonstrated by the formation of the People's Republic of China in 1949.

Western Europe and the United States attempted to contain these threats by forging alliances and entering defense and economic pacts. Earlier, in May 1946, the United States and Canada established a Military Cooperation Committee to discuss the potential threat posed by the Soviet Union and to formulate potential defense strategies.

In 1947, the United States, England, and Canada entered the Tripartite Agreement, under which they pledged to share discoveries and developments of military significance (Gaither 1997: 7). One of the most far-reaching alliances was forged by the NATO Pact. In April 1949, the North Atlantic Treaty Organization (NATO) was founded by the signatory nations of Great Britain, France, Italy, Canada, Belgium, the Netherlands, Luxembourg, and Iceland. The treaty was strengthened later by passage of the Mutual Defense Assistance Act, which guaranteed United States military assistance to its NATO allies (Young 1999: 14).

The same year, President Truman proposed investing over $400 million in an aid program to benefit European recovery. The program became known as the Truman Doctrine, which promised U.S. aid to "free peoples who are resisting attempted subjugation, by armed minorities or outside pressures". The Marshall Plan, developed to provide Europe with economic recovery, embodied a far-reaching effort. All European nations were invited to participate in the plan, and many of those in the American orbit welcomed it. The Soviet Union and its Eastern European satellites, however, regarded the program as another example of American imperialist intentions and declined. To counter the Marshall Plan, the Soviet Union formed Cominform, a committee to coordinate European communist parties in order to stop the threat of American imperialism (U.S. Army Environmental Center n.d.: 176).

The impact of the Cold War was being felt in Asia, too. China and the Soviet Union had signed a mutual corporation accord in 1950. Vietnam was a zone of conflict between France and the communist forces of Ho Chi Minh, and in 1950, the United States began its involvement to defend Vietnam. It was in Korea, however, that tensions escalated with immediate effect. The Republic of South Korea declared independence from the northern portion of the country in August 1948. The People's Republic of Korea was established in the north, but claimed jurisdiction over the entire Korean peninsula. North Korean troops crossed the 38th parallel in June 1950, aided by the Soviet Union and China. Truman ordered American troops to the peninsula immediately. After months of brutal combat, a stalemate was achieved at the 38th parallel. Peace talks began in November 1951, and after protracted negotiations, a cease-fire was agreed to by all parties in late 1953.

Communist fears and the threat of Soviet domination had significant and overwhelming impacts on the politics and culture of the United States. In March 1948, President Truman asked Congress to reinstitute the military draft. To prevent further communist incursions, the National Security Council (NSC) published a report, NSC-7, which argued for an anticommunist position (Gaither 1997: 8). Two years later, the National Security Council undertook a major study of the deteriorating international political situation. The resulting document, NSC-68, warned that the communist movement was bent on world domination. Without a nuclear monopoly, the West could not expect to deter Sino-Soviet aggression without risking retaliation in kind. The report concluded that conventional forces in Europe should be strengthened to the point that they could cope with a Soviet attack. The renewed emphasis on conventional re-armament was a direct counterpoint to the immediate post-World War II strategy of using the threat of a nuclear strike as a deterrent, and it was met with considerable resistance until the Korean War.

4.2.2 MILITARY CONTEXT

Although the strength of the U.S. military eventually increased in response to the Korean War, the period was marked more by structural and administrative changes for the military and less by technological advances, especially in conventional arms. With the addition of atomic bombs to the U.S.'s arsenal of weapons, the need for U.S. Army troops was reduced. In spite of the Korean War, where the Army had played an important part, the tendency to side-track conventional ground forces in favor of the Air Force and the Navy dominated even the administration of President Eisenhower. In terms of its material readiness, the military was greatly hampered by the fact that, in an effort to achieve a balanced budget, President Truman had deeply slashed defense spending during the first two years of his administration. Troop strength by mid-1950 was down to 591,487 soldiers. Development of non-atomic weapons had been almost nonexistent since the end of the war. The Army was equipped with aging conventional weapons such as the M-1 rifle, Sherman tanks, 75-mm bazookas, and 105-mm howitzers (Weigley 1984: 502).

Events in Korea proved to some military thinkers that conventional forces remained a crucial element in American military preparedness. However, for the remainder of the 1950s, the Army had to work diligently to remain relevant, in both the conventional and the atomic battlefield. Indeed, its relevance was challenged by the structural changes made after the war to the military. In 1947, Congress passed the National Security Act, which established the Army Air Corps as the Air Force, a separate and equal service, and designated the Air Force, Army, and Navy as executive departments headed by civilian secretaries. The Army retained its aviation corps but restrictions were placed on the aircraft that the Army could include within its arsenal (Kuranda et al. 2002). In 1949, the secretaries of the three branches were made subordinate to the Secretary of Defense to achieve greater cohesiveness (Gaither 1997: 8). The Act also created the Joint Chiefs of Staff, military chiefs of the Army, Navy, and Air Force; the National Security Council; Secretary of Defense; and other departments. Following agreements among the Joint Chiefs of Staff, the Army received primary responsibility for conducting operations on land, supplying anti-aircraft units to defend the United States against air attack, and providing occupation and security garrisons overseas. The Army Ground Forces were redesignated as the Army Field Forces (U.S. Army Environmental Center n.d.: 177-178). The creation of a separate and equal Air Force on September 18, 1947, however, greatly impacted the relevance of the Army during the next decade. The SAC (Strategic Air Command) was now part of the Air Force, and this meant that the new force would be primarily responsible for the delivery of atomic bombs.

Reliance on long-range bombers continued with the deployment of B-47 and B-36 in SAC squadrons by the early 1950s. The Air Force took the lead in this development. However, the Truman years also saw the founding of the nascent rocket program. In 1946, Operation Paperclip brought captured German rocket-and missile-research equipment to the United States. The Army began experimenting with German V1 and V2 missiles at White Sands Proving Ground. The possibility of delivering nuclear weapons with long-range rockets propelled the formation of a national space program, with the Army initially taking a leading role (Gaither 1997: 9). A study initiated by the Secretary of Defense in 1949 found that, by 1954 four rockets currently under development would probably be operational. This event signified the impending arrival of long-range missiles. Army scientists at White Sands fired a missile that marked the first penetration of space by a United States projectile. Development of nuclear-capable artillery also proceeded at a rapid rate during the late 1940s and early 1950s and

included nuclear rounds for 280-mm and 203-mm guns and the Honest John and Redstone battlefield missiles (Polmar 1982: 21). The Honest John Rockets would later become an important part of the Pentomic Army arsenal at Ft. Campbell and other posts.

The 1950s saw the loss of nuclear monopoly by the United States. In an effort to direct nuclear development toward peaceful purposes, the U.N. had, in 1946, established the International Atomic Energy Commission. However, the Soviet Union already had initiated its own nuclear and rocket research and development program and regarded the UN commission as an attempt by the West to obstruct its own nuclear program. The United States established its own civilian Atomic Energy Commission (AEC), which insured a federal role in atomic energy development rather than leaving this effort to private industry. According to the Department of Energy's Office of Scientific and Technical Information, "The commission maintained programs for nuclear weapons research, development, production, and testing; production of plutonium and weapons grade uranium; milling and refining of uranium ore; biomedical research into the effects of radiation and nuclear weapons; basic nuclear research in fields such as chemistry, physics, and metallurgy; development of nuclear reactors; promotion of a civilian nuclear power industry; and conduct of international Atoms-for-Peace activities. It was unique among federal agencies in combining responsibilities to both promote and regulate a technology" ("Historical Records of the Atomic Energy Commission," available at internet site: http://www.osti.gov/opennet/nsi_desc.html 2003). The federal government also operated the Armed Forces Special Weapons Project (AFSWP, also called AFWP) to manage nuclear weapons research, founded in January 1947. The AFSWP was responsible for "discharging all military functions related to atomic energy" in conjunction with the AEC (Records of the Defense Nuclear Agency 2003). The Soviet Union tested its first atomic bomb in 1949. In January 1950, President Truman responded to the perceived threat by ordering development of the hydrogen bomb, which promised almost unlimited destructive capacity (Freedman 2001: 35). In 1952, the United States tested its first hydrogen bomb, while the Soviets did the same in 1953.

4.2.3 FT. CAMPBELL IN TRANSITION

Camp Campbell remained in service after World War II, and eventually became Ft. Campbell, a permanent Army post, in 1950. As is discussed in this section, although there was little construction in the cantonment and other areas of the post during this time, the most important development was the establishment of the Clarksville Base atomic weapons storage facility within its boundary. What started as an apparently modest facility grew, with the American atomic weapons stockpile, into a large complex of under- and above-ground igloos, and other buildings and structures specifically for the purpose of weapons storage. In 1948, the military's AFWP began construction of Clarksville Base, an early atomic weapons storage facility occupying 5000 acres southwest of the cantonment area. United States Marines guarded the facility, which stored nuclear weapons stockpiled for the United States Navy. All operations at the site were classified with a "Q" security clearance, the highest level of clearance. Operations at the base were entirely separate from the Army's Camp Campbell (Gray et al. 1998: 7; Clarksville Base n.d.). The high levels of security at Clarksville Base, with four fences (including one electric) surrounding it was well-known, and as Gray et al. (1998) point out, a subject of folklore in the local communities. The firm of Black and Veatch designed all the primary structures, including the under- and above- ground A-Structures for storing atomic capsules, B-Structures for emergency treatment of personnel, C-Structures used

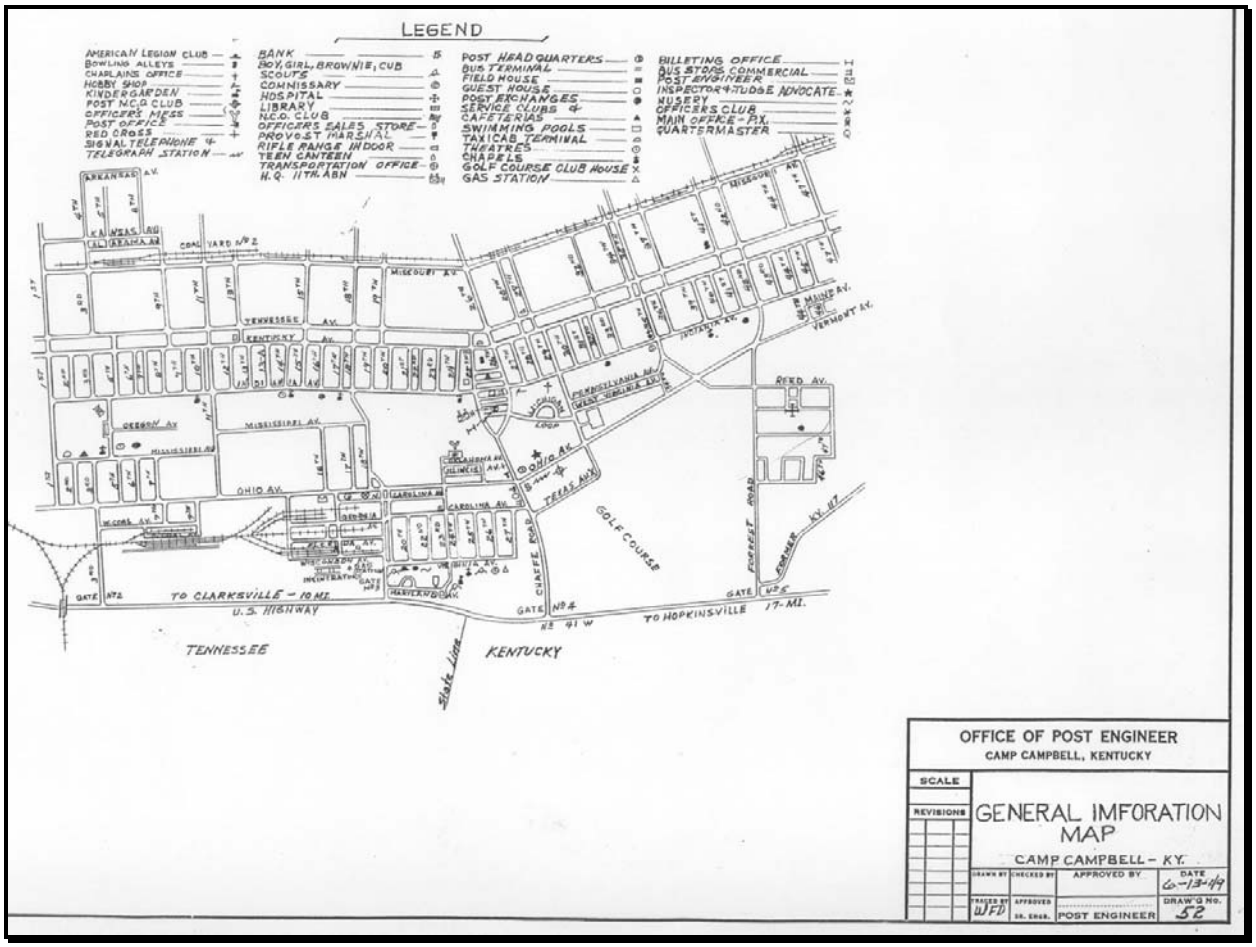

Figure 6. General Information Map, Camp Campbell, Kentucky (1949)

as inspection buildings, as well as the later S-Structures used for weapons testing and modification.

The pattern of construction at Clarksville Base from 1949 to 1952 is revealing of the development of the American nuclear arsenal itself. In 1949, the United States had a total of 250 nuclear weapons in its stockpile. The only significant construction that took place at Clarksville Base was of one Storage Igloo and one assembly and maintenance plant. The American stockpile increased to 450 warheads in 1950, while the number of storage igloos constructed at Clarksville Base during that year was 26. In 1951, the United States had 650 weapons; the number of storage igloos constructed at Clarksville Base was 27 during that year. Additionally, in 1952, the American stockpile had increased to 1,000 weapons; as many as 66 igloos were constructed at Clarksville Base that year. At this point, the storage capacity at Clarksville appeared to have met the requirements, as construction until the late-1950s was restricted to pill-box, shops, maintenance facilities, guard houses, a church, fire station, barracks, and recreational facilities (Gray et al. 1998: 16, 76-82; Geo-Marines, Inc. 1997). Until it met those requirements, however, the storage capacity of Clarksville Base continuously increased, it appears, in response to the increasing stockpiles of weapons.

At Camp Campbell itself, after World War II ended, the mission shifted from training and mobilization to assembly and temporary redeployment for returning troops. In October 1945, the highly decorated XVIII Airborne Corps returned from overseas duty in Europe and Japan, and was deactivated at Camp Campbell. The same year, the War Department recommended that Camp Campbell become a permanent military post. According to Moser, Camp Campbell had been identified as "satisfactory for postwar use" by the Army's Office of the Chief of Engineers. Several factors, ranging from the available highways and transportation facilities, its central, geographic location in the United States, and even political pressure from Congressmen and Senators of two states, may have been responsible for Ft. Campbell's designation as a permanent post (O'Brien 2002). When the 11th Airborne Division was stationed at Camp Campbell in 1949, the post's future was assured (Hart 1978: 39, 51). The recommendation to make Camp Campbell a permanent post was not acted upon for five years, but it remained in extensive active use during this time. Reflective of the increasing number of activities at the facility, its first master plan was adopted in 1947. The plan was a basic information folio aimed initially at constructing a facility to be occupied by only 15,000 troops (Hart 1978: 39, 54). The plan, as subsequently modified, became the basis for the next phase of construction. Funds, in the amount of $31,914,000 were appropriated in 1951-1952, for the construction of permanent barracks. These buildings were based on the 1947 master plan (Hart 1978: 39). In 1955, the plan was revised to decrease the amount of construction as the result of a reduction in authorized troop strength from the projected 33,000 to just over 17,000 (Hart 1978: 56). The redesignation of the Army Air Forces into the United States Air Force in 1947 impacted Camp Campbell's Army Airfield. The post was transferred to control of the Air Force and remained in use. In 1948, it was designated a SAC post and minor improvements were made to the runways and support buildings. The Campbell Air Force Base was staffed by personnel, "whose mission it is to make the airfield facilities available to the Tactical, Continental Air Command, and Strategic Air Command in support of the [101st] Division in its paratroop training program" (Anon, March 19, 1957).

When the Korean War broke out in June 1950, the 187th Infantry Regiment of the 11th Airborne was mobilized. The troops were sent to Japan and formed the nucleus of what would become the 187th Airborne Regimental Combat Team (ARCT). The ARCT was a reserve force, and was frequently called into action. It conducted the only two parachute assaults of the Korean War. The role of the ARCT in the Korean War as a support unit is underscored by the unit's involvement with unrest in the spring of 1952. In May 1952, Communist POWs housed on Koje-do, an island off the Korean Coast, began rioting, an expression of their frustration over the lagging peace talks at Panmunjon.

The ARCT was called in to help suppress the rioting. A two-hour battle on June 10, 1952, brought an end to the rioting. Following this duty, the 187th returned to Taegu, Korea, for training, where they remained until the truce of July 27, 1953. In October 1953, the unit was rotated back to Japan, where they stayed for 18 months. They were then rotated to Ft. Bragg, North Carolina, in July 1955. The 187th ARCT relocated to Ft. Campbell in late 1953, where many members became part of the newly reactivated 101st Airborne Division (Ft. Campbell, Don F. Pratt Museum 1996).

***The installation had already been home to the 11th Airborne, and was to become the permanent home for the 101st Airborne on 1956. Comparison with the 1944 Master Plan (see Figure 5) indicates that the construction originally planned for the area west of Kentucky Avenue was not completed, but was replaced by a lower-density built area.**

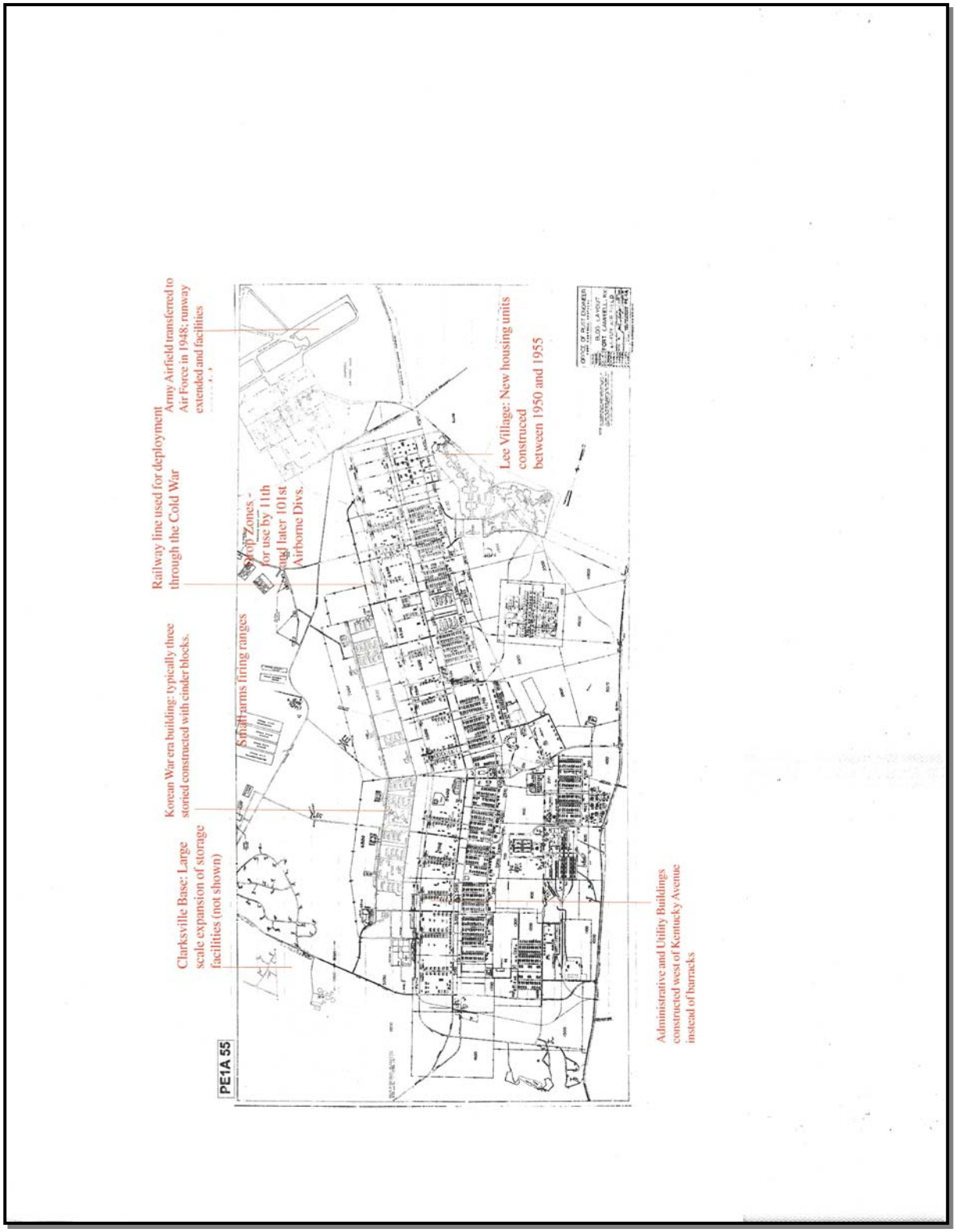

Figure 7. Building Layout, Ft. Campbell (1955)

Aside from the Clarksville Base atomic weapons storage facility, discussed above, it appears that no permanent construction took place at Ft. Campbell during the period from 1946 through 1948 (Hart 1978: 59, 82; Ft. Campbell Real Property Record). Only seven existing buildings were constructed, according to Real Property records, in 1949, and these were the Wilson Theater, a Community Fitness Center, an Indoor Swimming Pool, a Company Headquarter Building, and two properties listed as "General Institution Buildings". A 1949 General Information Map of Camp Campbell [cantonment area] (Figure 6) shows that the cantonment extended up to Missouri (present day Wickham) Avenue, and that the post included all the community and administrative facilities – their locations shown - required to run a post. With little new construction, however, most of these facilities were housed in buildings constructed during the World War. The plan was the best available indication of the development of the post only a year before it became a permanent post.

Until early 1948, the post served as a temporary redeployment center; in March 1948, however, the 3rd Infantry Division was permanently stationed there. A year later, the 11th Airborne Division returned from Japan to be stationed at Camp Campbell and replace the 3rd Infantry Division. The 11th Airborne "transformed Camp Campbell from an armored post into an airborne post" (Hart 1978: 42). The arrival of the 11th Airborne Division at Camp Campbell in 1949 marked the beginning of a major period of changes for the post and its missions (Hart 1978: 39, 42). The division remained at Camp (and later, Fort) Campbell for seven years, during which time it established a jump school, cleared drop zones, and expanded the air base facilities. Although the Office of the Chief of Engineers had recommended Camp Campbell as a permanent post in 1945, the Army did not act until after the 11th Airborne was stationed there. On April 14, 1950, Second Army Headquarters announced that the post would be renamed Ft. Campbell and made permanent (Hart 1978: 51). Troop strength under the 1947 Master Plan was for 15,000, but with the post's designation as a permanent facility in 1950, occupancy was projected as 33,000 troops. The 1947 plan was revised in 1951, when a double chevron plan was devised. This plan consisted of two parallel troop complexes filling the cantonment area, with training and recreation space in between (Hart 1978: 56). The Department of the Army in 1954 approved this plan, but in 1955, it was revised in response to a reduction in authorized troop strength to just over 17,000.

Ft. Campbell's change in status from a temporary to a permanent facility resulted in increased investment to develop permanent facilities (Hart 1978: 56). The buildings built during World War II were considered by the Army to be temporary structures. Lieutenant General William Miley, commander of the 11th Airborne Division, initiated action to obtain family housing for married personnel. The housing units were to be built under the provisions of the National Housing Act (commonly known as the Wherry Act), which provided for construction of privately funded family rental housing units on or near DOD posts (Moser 1952: 24). In November 1949, a block of 400 units was approved.

The following spring, Midwest Mortgage Company of Louisville, Kentucky, was selected as sponsor for the project. Approximately 65 acres of land were leased to American and Dixie Homes, both of which were subsidiaries of Midwest Mortgage and charged with undertaking construction. Between 1950 and 1952, 228 one-bedroom, 744 two-bedroom, and 228 three-bedroom Wherry apartments were built (Moser 1952: 24-25). In their design and amenities, the Wherry apartment units were comparable with contemporary private- and public-sector rental apartments. These units, located at the present-day Lee Village in the northeast portion of the post, were part of the first residential neighborhood constructed at Ft.

Campbell, and the only one under the Wherry Act (Black and Veatch 1987: II-76). Along with 796 sets of converted World War II mobilization quarters, the Wherry units made it possible to house nearly 2000 dependent families on post.

With the declaration that Ft. Campbell would assume permanent status, nearly $32 million was appropriated for construction projects, as discussed above. In November 1950, $620,000 was allocated to rehabilitate 20 blocks of barracks from the World War II era and to build outdoor tennis and basketball courts (Hart 1978: 57).

In June 1951, construction began on 8 new apartment-type barracks for unmarried troops. The three-story buildings, known now as Korean War-era billets, were built of reinforced concrete and cinder-blocks and were designed to house 225 men (Figure 8). Facilities for company mess halls and dayrooms were included in the buildings (Moser 1952: 25-26). At a cost of $365,000 each, the barracks were the first of their kind in the Army (Hart 1978: 56). Construction continued throughout 1951 at a rapid rate, with plans made for the following permanent buildings: 42 barracks, resulting in a total of 50 barracks (Hart 1978: 85) for enlisted men, 4 buildings for bachelor officer's quarters, 3 regimental headquarters, 11 motor repair shops, 1 communications building, 1 warehouse, and 1 guardhouse. Necessary roads, walks, parking areas, and sewer, water, and electric distribution systems also were built (Moser 1952: 26).

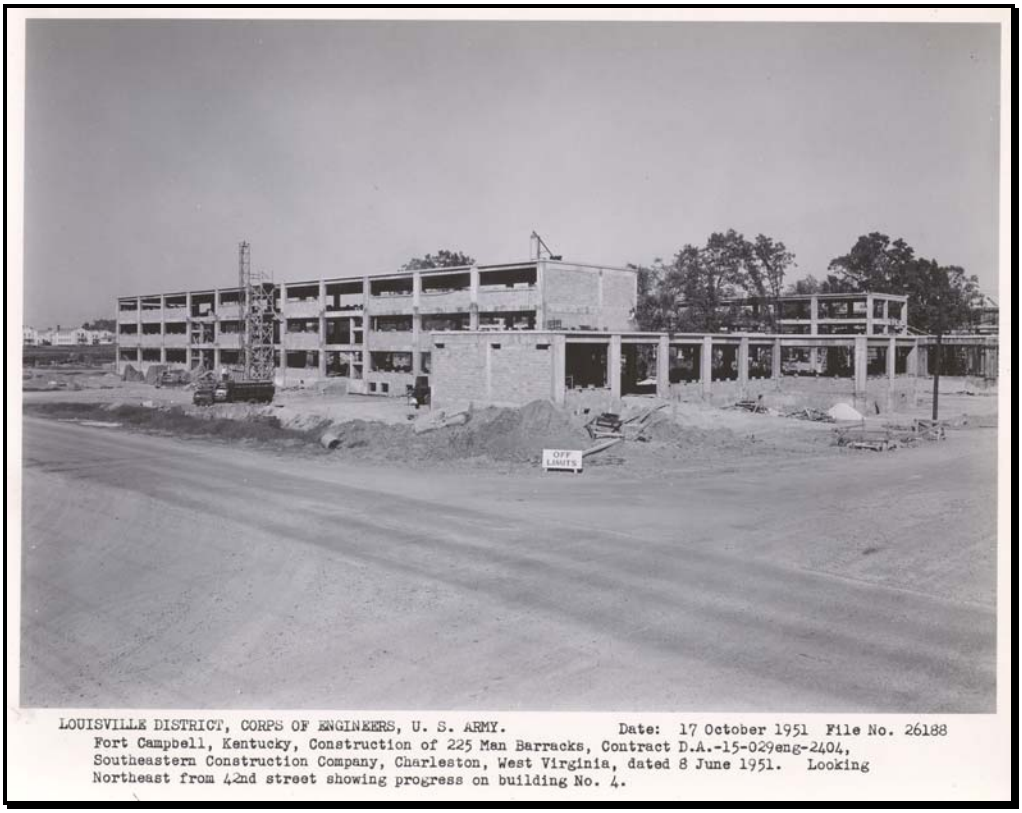

Figure 8. Construction of Korean War-Era Barracks on Ft. Campbell (17 October 1951).

When originally built during World War II, the hospital was designed and built for maximum capacity. As a result, the capacity of the hospital could be varied according to need. For example, at the end of World War II, the hospital's capacity was 2146, but soon afterward the capacity was cut to 646 (Chanchani 2003: 8-9). After the Korean War began, Ft. Campbell's

hospital was designated as a treatment center for casualties, and the bed capacity was increased to 1,350. The first group of Korean veterans arrived at the hospital in October 1950 (Moser 1952: 27). Public Law 815, enacted in September 1950, allowed the expenditure of funds for construction of school buildings on military reservations. Construction began on Ft. Campbell's first school building under this program. The building, Lincoln Elementary School at 4718 Polk Road, is still in use as an elementary school. The $480,000 school was of concrete block construction with a red brick veneer and featured asphalt tile floors and acoustical tile walls and ceilings. There were 25 classrooms, a visual aids room, auditorium, cafeteria, administrative offices, and a caretaker's apartment. As originally built, the building had a capacity of 800 students (Moser 1952: 26).

By 1952, Ft. Campbell's Post Engineer maintained 2136 temporary and 57 permanent buildings that functioned as classrooms, dayrooms, mess halls, billets, and offices for more than 28,000 enlisted troops and officers. Additional quarters for 350 government employees also were provided. According to Moser, "1700 civil service employees were utilized in practically every housekeeping activity" (1952: 27).

Apparently, these civilian employees were involved in the day-to-day operations of the military base, rather than "housekeeping" per se. Approximately 300 Air Force personnel staffed Campbell Air Force Base. In addition to staffing the base, they furnished airfield facilities to the Tactical and Continental Air Command in support of the 11th Airborne Division in the training of paratroopers (Moser 1952: 27). In 1953, Ft. Campbell became the first post to offer housing for bachelor non-commissioned officers (NCOs) (Hart 1978: 58). The only new neighborhood constructed until 1956 was the Lee Village (1950) which included one, two, three and four-bedroom quarters (Black and Veatch 1987: II-76). It was not possible to determine, from available information, whether the NCOs were housed in the one-bedroom units at Lee Village or in the converted World War II buildings.

Aside from the permanent construction projects, Ft. Campbell also became involved in testing some of the new training innovations of the early 1950s. These included the new electronic pop-up targets, and the T-10 parachute. In May 1950, the 11th Airborne participated in Exercise Swarmer at Fort Bragg, North Carolina. The largest peacetime airborne exercise ever held in the United States, it included 66,000 Army, Navy, and Air Force personnel.

The exercise tested the capabilities of air transportation to drop sufficient men, equipment, and supplies to seize and maintain a target without support of surface transportation.

It helped American airborne forces perfect their assault and resupply techniques, which proved invaluable during the Korean conflict. Along with unit training, the 11th Airborne Division became one of six Army divisions to provide basic combat training. An airborne school was introduced as well in July 1950 and proved to be in such demand that a second training school was offered the following summer (Hart 1978: 44-49). In March 1951, the 503rd Airborne Infantry Regiment was reactivated and assigned to the 11th Airborne, thus solidifying Ft. Campbell's status as an airborne division facility. The 503rd, as part of the 11th Airborne, was deployed to Korea (Siebert 1996).

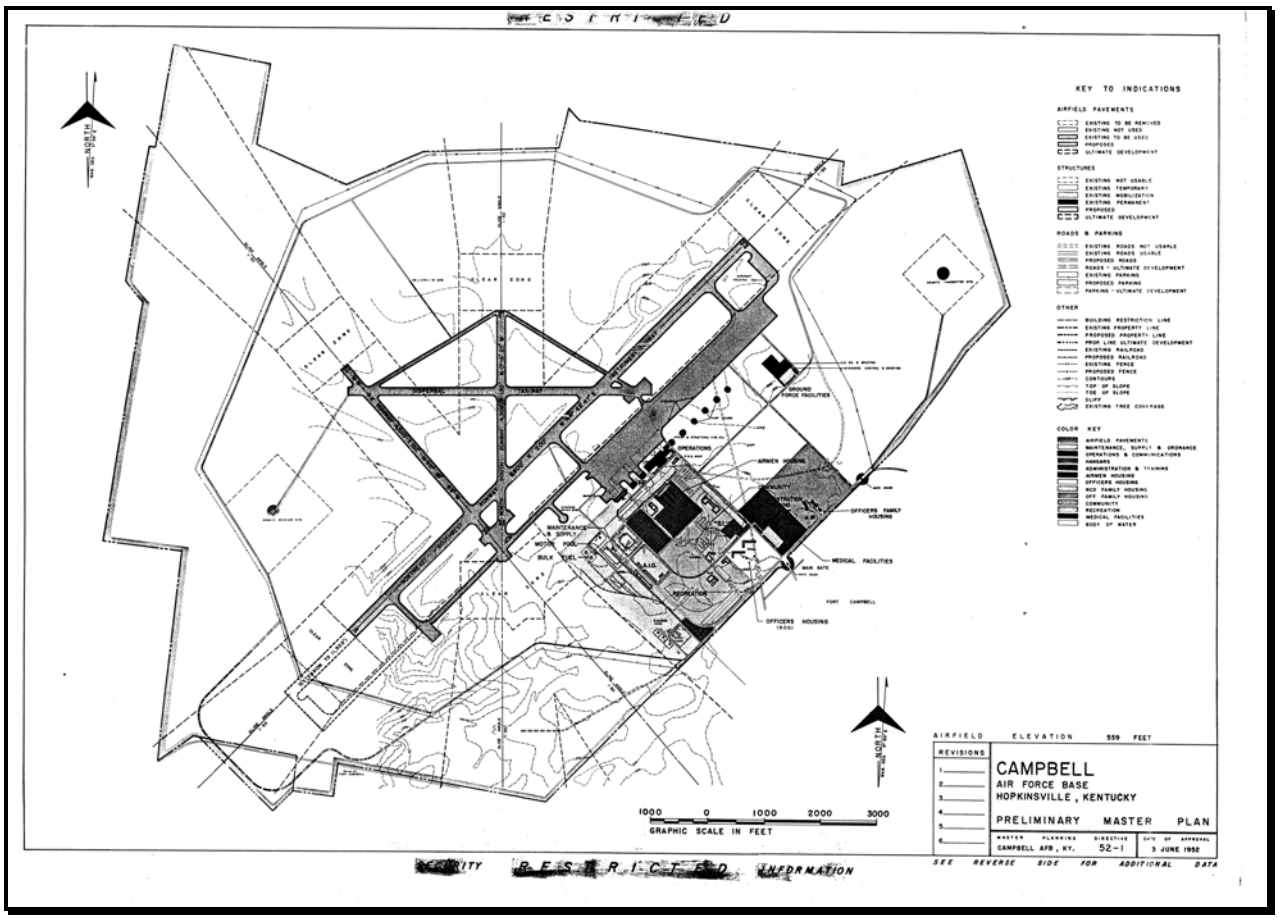

Figure 9. Master Plan, Campbell Air Force Base, Showing Construction Between 1952-1953.

A 1955 Building Layout Plan of Ft. Campbell (see Appendix I) shows the extent to which Ft. Campbell had developed five years after it was designated a permanent post[3]. The drawing shows that while most of the World War II mobilization buildings were still standing, several structures in the blocks between 42nd and 46th Streets had been demolished. These had been replaced by three-storied cinder-block billets typical of the Korean War era, and constructed in 1952. Other Korean War-era billets, constructed during the same time, were located west of Missouri (Present day Wickham) Avenue. There was no known prior building construction in this part of the cantonment. Instead of the World War II-type structures that had been planned west of Kentucky Avenue, only a few administrative, service and utility buildings were constructed. It may be recalled that plans for the construction of additional barracks and associated facilities were downsized based upon lower troop requirements. The only residential neighborhood was the Lee Village consisting of several apartment-type buildings constructed around looping roads. The building layout also shows that improvements were made to and construction done at the Campbell Air Force Base. Improvements were made to the runways. In addition, buildings were constructed in the early 1950s at the Air Force Base (Figure 9). The Ft. Campbell Real Property Records show that two Air Navigation Buildings

[3] The drawing is an important document because of the incomplete and sketchy data available on the demolition of the World War II mobilization structures.

constructed in 1952 and 1953, and one Fire Station, 1952, exist and are in current use. These additions to the Air Force Base, which were completed after the 11th Airborne Division was stationed at Ft. Campbell, indicate that the base was already addressing the needs to house an airborne division before the 101st Division arrived to be stationed permanently.

4.3 THE EISENHOWER ERA AND THE "NEW LOOK"

4.3.1 POLITICAL CONTEXT

Stalin's mixture of socialist expansionism and distrust of western imperialism had an overriding impact on Soviet foreign policy. After his death in 1953, Soviet leaders debated those policies with greater freedom. Nikita Khrushchev, who consolidated power in the following two years, had different views of the west and the United States. He saw Soviet national interests and those of communism as overlapping but distinct. Khrushchev believed that communism could be spread across the world in different ways, including free elections. He also believed that leaders in the United States, the "main adversary", exhibited contradictory views. Some of them were realists who saw the benefits of negotiating and compromising with a strong Soviet Union. Others were anti-Soviet capitalists who would not compromise or negotiate. With Soviet interests and an understanding that at least some in the west would be willing to negotiate and compromise, Khrushchev talked of peaceful coexistence with the west even in the early 1950s (Ball 1997: 66-68). Yet, the more visible aspects of Khrushchev's policy were demonstrated in the Soviet propaganda of its military strengths. The Soviet space program, the development of ICBMs, and public demonstrations of long-range bombers all fed this propaganda, as did the leaders' blustering statements to the west that "we will bury you". The propaganda worked; as the Americans would find out only later, the Soviet nuclear arsenal was weaker than estimated (Gaddis 1997).

The policies of the Eisenhower administration were guided by both domestic and international concerns. The international concerns were naturally dominated by the Soviet threat. The domestic concerns were the dangers of a weakening economy – a continuation of the Truman administration world-view. Large budget allocations for the military would mean, in the view of the Eisenhower administration, a greater threat to the country's economic health. As Secretary of State Dulles asserted, the United States was adopting a new concept – "the long haul". This meant steady development of defense as to not overburden the national economy (Ball 1997: 74-76). Eisenhower saw a reliance on nuclear defense rather than conventional forces as less expensive. The policy of containment set forth by the previous administration was replaced by one of a massive, nuclear retaliation coupled with the "New Look" of military defense. Unlike previous postwar periods that had seen a rapid demobilization of military force, the New Look military maintained personnel forces but gave primary focus to the development and maintenance of massive nuclear weapons capabilities. The ever-increasing nuclear stockpiles ensured that the United States maintained superiority over the Soviet Union through the 1950s. Like the Soviets, the United States believed that the main way to avert war with the Soviet Union was through negotiated settlements. A simultaneous desire by the Soviets to reduce military spending led Khrushchev to seek to ease tensions with the United States, leading to the "first détente" that emerged from the Geneva Summit of 1955 (Gaddis 1997: 207). Eisenhower and Khrushchev developed a cordial (if sometimes unstable) working relationship, although the United States continued to seek new methods of espionage and surveillance in order to assess the Soviet nuclear threat. This working relationship gave hope to many in the Eisenhower administration that a "peaceful coexistence" with the Soviet Union

could be reached, especially after Khrushchev's successful visit to the United States in 1959 (Gaddis 1997: 244). The 1960 Paris Summit was hoped by all to be a significant stride toward nuclear disarmament. The conference was effectively derailed; however, when the Soviets shot down an American U-2 spy plane on May 1, 1960, a few weeks before the summit was scheduled to begin. The infamous "U-2 incident" reversed the progress of the previous few years and increased aggressive rhetoric on both sides (Gaddis 1997: 247).

During this period, the Soviet Union, Europe, and the United States became a frozen front, with each nation consolidating its power and influence with allies and satellite nations. The United States continued policies it had begun in the immediate aftermath of World War II by expanding its alignments with other Western allies and continuously finding scope for involvement in international affairs. These included infrastructure improvements and equipment exchanges with one another for purposes of early warning and defense, as well as treaties pledging mutual defense. The Soviet Union also strengthened its alliances and ensured, sometimes with coercion, that communism thrived in Eastern Europe. In 1955, the Warsaw Pact was formed by the Soviet Union and its Eastern European satellites: Poland, Hungary, Bulgaria, Rumania, Czechoslovakia, and East Germany. For the Soviets, these nations provided not just strength in military numbers but also a buffer zone from America and its allies. United States and the west did little to change the course of events in Eastern Europe, implicitly accepting a status quo in Europe (Ball 1997).

That was not the case with other regions of the world, however. The newly independent colonies in Asia and Africa were the future territories for spreading their influence. Southeast Asia was of particular concern to President Eisenhower, particularly after the communist victory in China. Although the political furor over "who led China to Communism" occurred during the Truman administration, the formation of a communist China certainly affected Eisenhower's policy in Southeast Asia. The "fall" of China to communism changed the American Indo-China policy from one of tacit support to the French to material support against communist and nationalist forces (Crockatt 1995: 184). Thus, containment of communism in Southeast Asia was critical in Eisenhower's view, to prevent other countries from falling to communism like a "row of dominoes". Called the Domino Theory, this argument helped the administration to justify involvement in Indochina and elsewhere (Gaither 1997: 12). In the spring of 1954, President Eisenhower argued that American troops should be committed to aid French forces in Vietnam to prevent the country from becoming communist. The French forces, however, were decisively defeated by communists and nationalist forces at Dienbienphu on May 7, 1954. Partly in response to the fomenting crisis in Indochina, in September 1954 the United States entered the Southeast Asian Treaty Organization (SEATO) with Australia, New Zealand, Pakistan, Thailand, Great Britain, and the Philippines (Ball 1997: 123). The United States also signed a mutual defense treaty with Taiwan in 1954 and set the stage for future confrontations and negotiations with communist China.

The vestiges of European colonialism also were crumbling in the Middle East. Gamal Abdul Nasser, who had become president of Egypt after a 1953 revolution, repeatedly demanded that British military forces evacuate the Suez Canal region, which they had occupied since 1936. Britain left the canal zone in 1956, and in July of the same year Nasser nationalized the Suez Canal, outraging British and French stockholders who owned the canal company. Allied with Israeli forces, the British and French invaded Egypt to retake the canal zone. The United States opposed this action as a violation of self-determination, and the U.N. General Assembly

called for an immediate ceasefire and the withdrawal of the invading troops. Great Britain, France and Israel eventually accepted these terms.

Overall, the actions of Britain and France served to draw Nasser and Egypt into further relations with the USSR, who supported Nasser financially, and weakened Western Europe's influence in the Middle East (Young 1999: 95-96; Freedman 2001: 153-154).

Although President Eisenhower attempted to practice fiscal restraint in his budgets, defense spending increased steadily during his administration. The nascent arms race with the Soviet Union required ever-increasing expenditures as each nation strove for more and greater technological innovations to gain an edge over the other. In his 1961 farewell address, Eisenhower warned against the potentially ominous power of the "military-industrial complex" to harm democracy in the United States. Eisenhower feared that the increasingly influential power of military facilities yielded the "potential for the disastrous rise of misplaced power" in American government. He also warned that federal funding of scientific and technological research could lead to a public policy dominated by a "scientific-technological elite". In short, Eisenhower warned that the dramatic changes brought about during the Cold War to protect American freedoms could develop into threats to that very democracy (Eisenhower 1961). One of Eisenhower's most enduring legacies may be that, for the remainder of the Cold War, the implication of collusion between industry and the military influenced relationships between contractors and the federal defense establishment, congressional reactions to appropriations requests by the military, and media portrayals of military activities.

4.3.2 MILITARY CONTEXT

Throughout the 1950s, the Soviet Union engaged in a weapons research and development program as ambitious as that of the United States. The Soviets exploded their own hydrogen bomb in 1953, and immediately began working on the world's first intercontinental ballistic missile (ICBM), known as the R-7. In 1954, during a military exercise, the Soviet Union detonated a medium-yield atomic bomb within four to five miles of ground troops and then conducted maneuvers in the radiation zone through to ground zero. Although the full human cost of such an exercise is not known, the knowledge gained from the experiment was used in Soviet military manuals for decades to come. In 1956, the Soviets installed an air defense and radar network around Moscow and began constructing an antiballistic missile (ABM) test ground in Kazakhstan (Gaither 1997: 19). The United States had already begun, in 1955, the construction of the Distant Early Warning (DEW) Line of radar facilities that stretched from Alaska, across northern Canada, to Greenland. By 1957, both the United States and the Soviet Union included ICBMs in their weapons arsenals.

During 1957, tensions between the superpowers heightened when the Soviet Union launched the world's first artificial satellite, Sputnik, in October. In November, Sputnik 2 was launched, marking the beginnings of the Space Race that would escalate in the following decade. Three months later, the United States answered with the launch of its first satellite, Explorer I, into orbit. Partially in response to the Soviet satellite, the United States created the National Aeronautics and Space Administration (NASA) in 1958. The Mercury Project, the first space program intended to put a man in space, was established soon after. Following, the Advanced Research Projects Agency (ARPA) was established to oversee research primarily in weapons and defense projects, as well as the military aspects of space. This agency later became the

Defense Advanced Research Projects Agency (DARPA), which controlled much of the significant Cold War military research.

NSC 162/2, the official name for the defense strategy known as the "New Look," approved by Eisenhower in October 1953, stated that the purpose of maintaining military forces was not to conduct warfare, but to prevent it, a major shift in national security policy. Implementation of NSC 162/2 resulted in an effort to redefine the roles of the military services. For example, the Air Force, because it was in charge of the strategic bomber forces, was seen as the key to retaliating with nuclear weapons; its budget was increased accordingly. The Army's role was relatively marginal and, by the end of the decade, it received the smallest share of the defense budget among the three services (Gaither 1997: 14). The Army's budget did in fact see real decline under the New Look plan. The number of personnel declined, from a strength of 1.5 million soldiers at the end of the Korean War, to 1 million by 1955, to 859,000 by 1961. By 1955, the Army's budget was reduced to half of what it had been in 1953, and its share of the defense budget shrunk. (Bacevich 1986: 16-20).

Thus, a consequence of Eisenhower's New Look was that the Army was relegated to a less important role than the Navy and the Air Force. It was the Air Force that first successfully tested an ICBM in December 1957. The Army was seen as an instrument for mop-up and a force for occupation after a nuclear encounter (Bacevich 1986: 21). Although the Korean War proved that the need for conventional forces was far from over, the government believed that the next major war would be dominated by nuclear strikes. The introduction of tactical and battlefield nuclear weapons to the Army's arsenal saved it from irrelevance. The Army also was placed in charge of the antiballistic missile (ABM) development program. Consequently, by the mid-1950s, the Army's organizational structure, its training methods, and its budget were geared toward meeting the dual objectives of maintaining a conventional force and employing nuclear weapons if necessary (Gaither 1997: 18).

As Army Chief of Staff from 1955 to 1959, General Maxwell Taylor assumed a leading role in adapting the Army to meet the dictates of a national defense strategy based on nuclear weapons and deterrence. While in Korea, Taylor concluded the traditional triangular Army structure based on three large infantry regiments was outdated. Believing that modern communications allowed a division commander to oversee up to five subordinate units, Taylor developed the "Pentomic" concept, using contemporary communications technology specifically for the atomic battlefield. A Pentomic Division would consist of five separate combat groups, each comprised of an enhanced infantry battalion. Pentomic units came in three types: airborne, infantry, and armored. In 1956, the 101st Airborne Division served as the prototype for the airborne Pentomic unit under the direction of General Taylor. By combining the functions of the regiment and the battalion in the new combat group, the division eliminated a complete command echelon while its pattern of five subordinate elements at each remaining echelon greatly increased demands on commanders. The airborne emphasis on high mobility also meant it sacrificed tanks, armored personnel carriers, and cannon artillery heavier than 105mm. The first nuclear-capable surface-to-surface rockets, known as Honest John Rockets, were intended to compensate for the lack of heavy artillery, and the number of helicopters per unit increased from 10 to 37 to offset the lack of wheeled vehicles (Bacevich 1986: 106-108).

Reliance on tactical nuclear weapons, which as mentioned earlier saved the Army from irrelevance, was a centerpiece of the Pentomic concept, since the concept was heavily

motivated towards atomic conflicts. However, Army leaders argued that reliance on strategic nuclear weapons was a misguided strategy because, as nuclear weapons became more plentiful and evenly distributed, all nations would be hesitant to engage in nuclear war, and therefore, the most pressing threat remained from conventional non-nuclear attacks. Army leaders argued that the Army must maintain a large force to be prepared for any type of war (Bacevich 1986: 40-46). As previously noted, during the late 1940s and early 1950s, the Army developed several tactical nuclear weapons, including nuclear rounds for 280-mm (first fired, 1953) and 203-mm guns and the Honest John and Redstone battlefield missiles. Operation Flashburn, held in April and May 1954 at Fort Bragg, North Carolina, incorporated Honest John and Corporal Missiles in the first large training exercise planned around the atomic battlefield (Gaither 1997: 11-12). The 280-mm gun was deployed at several locations around Europe, but they remained in the field for only a short time. Their massive size and limited range rendered them impractical for use in many battlefield situations. The Army hoped to replace the gun by developing nuclear rounds for its 8-inch gun and 155-mm howitzer, but all artillery retained range limitations (Bacevich 1986: 82-84). Eventually, the Army turned to surface-to-surface missiles (SSM) to meet its tactical nuclear requirements. The first short-range Redstone (240-mile range) nuclear missiles were deployed by 1956 (Bacevich 1986: 82-87). The Army also employed non-nuclear surface-to-air missiles, including the Nike and Talos, in its defense strategies (Bacevich 1986: 77-80). During the mid-1950s, NIKE Ajax and Hercules missile batteries were deployed around key urban, industrial, and military centers in the United States to defend them from possible nuclear attack by Soviet long-range bombers. The Army Air Defense Command (ARADCOM) oversaw deployment of NIKE systems. The NIKE system remained in use for more than two decades, but ultimately was rendered obsolete by ICBMs and submarine deployed nuclear missiles, against which it offered no defense (Bacevich 1986: 78-80).

While the long-lasting effects of nuclear weapons were not fully appreciated in the 1950s, considerable evidence mounted during that decade to suggest that a tactical nuclear strategy would cause more harm than benefit to the Army. Exercises and war games suggested to Army leaders that the use of tactical nuclear weapons would cause widespread casualties among friendly troops and had the potential to cause extensive harm to innocent civilians near an area of engagement (Bacevich 1986: 92-96). The Army did not participate extensively in development of intermediate- and long-range nuclear weapons, as the Air Force jealously guarded its rights in this area of weapons development. The one intermediate-range missile developed by the Army, the 1500-mile range Jupiter missile, was the first to use an inertial guidance system. The missile was delivered to the Air Force for deployment in 1958 and the Army turned its energies to developing the Pershing I missile (Bacevich 1986: 87-88, 90). After the Army developed the Jupiter, Secretary of Defense Charles E. Wilson in early 1957 ruled that the Air Force had jurisdiction over intermediate-range ballistic missiles and declared that the missile would come under Air Force control when fielded. Wilson's successor, Neil H. McElroy granted the Army permission to develop a limited-range missile in late 1957, which became the Pershing I missile (Bacevich 1986: 87-91).

Other technological advances of the 1950s included the development of the Ordnance Variable Automatic Computer, known as ORDVAC, the fastest digital computer of the 1950s; the post of the nation's first nuclear reactor at Fort Belvoir, Virginia, in 1957; the first underground nuclear tests at the Nevada Test Site; and introduction of the nuclear-powered Nautilus submarine. The world's first laser was demonstrated in 1960. The military developed several major research facilities, most notably the Albert J. Myer Research and Development Center,

which made innumerable important contributions to space, missile, battlefield simulation, meteorology, and electronic technologies (Gaither 1997: 16, 19).

4.3.3 FT. CAMPBELL DURING THE PENTOMIC ERA

During the Pentomic Era, important events at Ft. Campbell were the arrival of the 101st Division at the post and the consequent construction activity at the post, the transfer of the Air Force Base to the Army, and an expansion of activities at Clarksville Base to include a modification center.

Owing to the classified nature of activities at Clarksville Base, information on its history is incomplete and sometimes, contradictory. There is an agreement among the different sources used, however, that changes were made to Clarksville Base when, in 1958, it was designated a modification center for atomic weapons, together with the Medina Modification Center in San Antonio, Texas. According to the organization history of Pantex (www.pantex.com), Mason and Hanger won the contract for the operation of the Clarksville and Medina Modification Centers in 1958. The mission of the modification centers was to perform stockpile surveillance, modifications, retrofits, and weapon retirements. The Medina Modification Center became operational in 1959, while the one in Clarksville went into operation in 1961. Correspondence with Sandia Labs historian, Ms. Rebecca Ulrich, (Ulrich 2003) indicates that that Sandia was also involved with operations at the Clarksville Modifications Center. The full extent of Sandia's involvement is not clear, owing to the classified nature of activities. However, multiple sources indicate that Sandia personnel conducted the Quality Assurance and Inspection of weapons at Q-Areas (www.globalsecurity.com; Karpin and Maroncelli n.d.).

The operations for a new modification center required construction of new buildings and structures. Ft. Campbell Real Properties data indicates that seventeen new buildings and structures were constructed between the years 1956 and 1961. The Assembly/Maintenance Plant or simply, the Plant (Building 7811-A-E) was constructed during the period 1957-1961. Plants constructed at Q-Area facilities after 1954 tended to be maintenance and assembly facilities for first generation thermonuclear weapons, and were designated Plant II or B (www.globalsecurity.com). The Modification and Disassembly Plant, called the Gravel Gertie was constructed in 1957, and was designed to withstand a 1 kiloton explosion in case a non-nuclear device accidentally went off (Karpin and Maroncelli n.d.). The S-Structure (Building 7825 A-B), also known as the surveillance structure, was constructed in 1961 according to the Real Property data. The S-Structure housed Quality Assurance and Inspection functions (www.globalsecurity.com). Other buildings constructed during the time were a "Q" Spares Warehouse, three shops, Assembly Plant Storage Building No. 2, a handling crew building, five barracks and dormitory buildings, a base supply warehouse, a bachelor officers quarters building, a headquarters building, and a chapel. Clarksville Base, throughout its years of operation, remained a top-secret facility. A composite aerial photograph of Ft. Campbell, prepared in 1958, shows Clarksville Base and the Air Force Base (then fulfilling SAC functions) blackened out, to indicate that the configuration of these was to be kept classified (Figure 10).

Figure 10. Composite Image of Camp/Ft. Campbell, 1945-1958.

By 1958, the transfer of the Campbell Air Force Base to the Army was already imminent. The details of the transfer are unknown at this time, pointing to an important topic of research as enumerated in the section, "Open Questions for Further Research". A 1958 Master plan drawing shows the projected changes to what was called the new Campbell Army Air Field (see Appendix I). These included the addition of maintenance and other supporting and operations facilities, as well as three large hangers and increased facilities to accommodate helicopters – fast becoming the Army aircraft of choice (U.S. Army Corps of Engineers 1958). The Army regained control of Campbell Air Force Base and its facilities in 1959. At that time, it was the largest Army airfield in the world, with three main runways occupying over 10 million square feet. The largest runway, at a length of 11,800 feet, could accommodate jet bombers. After the transition, Air Force personnel, stationed at the Air Force Base, continued to assist with operations, including weather services, air traffic control, and fire and rescue (Hart 1978: 87).

A drawing revised in 1963 (see Appendix I) projects further construction at the Airfield, but it also shows the completion of the hangers and other buildings indicated as permanent structures (U.S. Army Corps of Engineers 1962). This, perhaps, may be seen as an early indicator of the rising importance of the helicopter to afford greater mobility and tactical support to the Army (Kurunda et al. 2002).

During this time, significant changes also took place in Ft. Campbell itself. In the spring of 1955, the 11th Airborne Division was transferred to Germany. Movement of equipment and personnel was completed by the following January. Ft. Campbell next became the home of the newly reactivated 101st Airborne Division. This division has remained stationed at Ft. Campbell since 1955, except for a four-year period in the late 1960s when it was stationed in Vietnam. One of the most highly decorated units of World War II; the 101st Airborne Division has been activated and deactivated three times since 1946. The 101st Airborne Division was deactivated in November 1945, and reactivated in July 1948. It was again deactivated in 1949, and reactivated at the outbreak of the Korean War in 1950. The unit was deactivated for the third time at the end of 1953, and reactivated in mid-1954 at Ft. Jackson, South Carolina, and transferred to Ft. Campbell in 1956, (Hart 1978: 65).

When the division was transferred to Ft. Campbell in September 1956, it was with the intention of implementing the Army's new organizational concept, the Pentomic Division (Hart 1978: 65-67). The 101st Airborne became the Army's first Pentomic Division, with a new Table of Organization (Figure 11) and strategic mission (Figure 12). The five combat groups consisted of the 187th, 1-327th, 1-501st, 1-502nd, and 1-506th. Each battle group included a headquarters company, five rifle companies, an organic battery of mortars, and necessary reconnaissance, anti-tank, and logistics units (Turner Publishing Company 1995: 86). The artillery was grouped into five batteries of 105-mm howitzers, and a battery of Honest John nuclear-capable rockets. Five companies in the Support Group provided logistical, maintenance, and medical support, and separate signal, engineer, and aviation battalions were created. The Command and Control Battalion included four company-sized elements to furnish reconnaissance, intelligence, police, and administrative support. The total personnel strength for the division numbered 11,500 men, about 5,000 less than a conventional airborne division. New organic aircraft, including fixed-wing and helicopters, gave the division greater flexibility in its ability to mobilize (Hart 1978: 68-69). From December 1956 to March 1957, the 101st Airborne engaged in a four-month training period known as "Jump Light." A series of tests evaluated the new Pentomic organization, both conventional and nuclear. Emphasis was placed on mobility, flexibility, fire support, command and control, vulnerability to nuclear

attack, and capability of airborne assault (Figure 14). At the end of the test period, the Pentomic Division emerged as the new battle group structure for the United States Army (Hart 1978: 70-71), with a total of seven Pentomic Divisions stationed in the United States (Center of Military History, 1989). The chart below depicts five battalions and a support group and indicates the total strength of the division and each of the various groups.

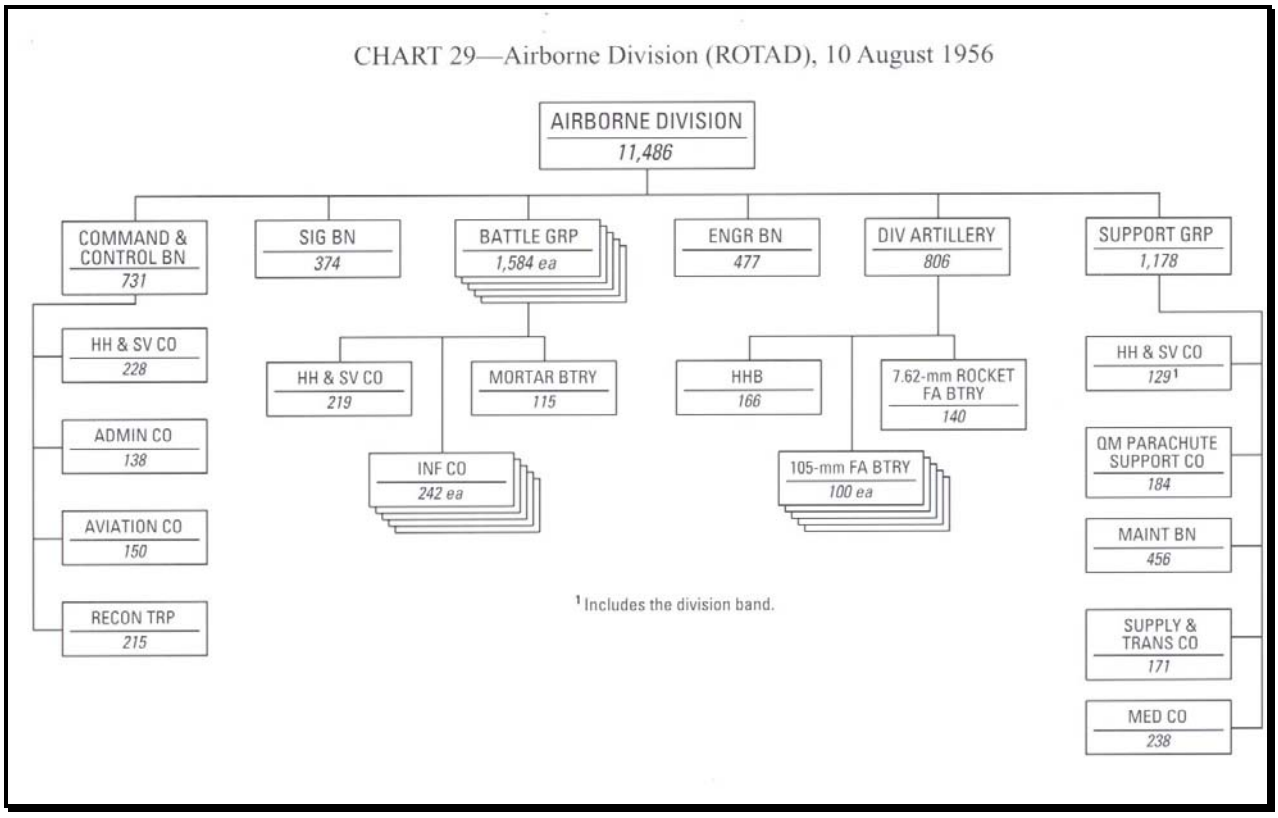

Figure 11. Organization Chart for an Airborne Division Under the Pentomic Concept, 1956

One of the 101st Airborne's early important missions was on a battlefield that had nothing to do with conventional or nuclear forces. In late 1957, the school board of Little Rock, Arkansas, decided to implement the United States Supreme Court's decision to integrate public schools. The enrollment of nine African American students at Central High School in Little Rock met with violent resistance from crowds of angry opponents. When Arkansas Governor Orval Faubus refused to require integration at the school, the federal government stepped in. President Eisenhower himself was reluctant to intervene in what he regarded as a state matter, but eventually was persuaded by events that the only way to restore order and ensure the rule of law was through use of federal troops (Burk 1984: 174-186). Approximately 1000 members of the 101st Airborne Division were sent to Little Rock in late September to implement integration of the school. The troops left gradually, with the last 225 leaving when the school closed for Thanksgiving break in November 1957 (Beals 1994: 244), having completed their mission successfully.

As had been the case when the 11th Airborne was stationed at Ft. Campbell, the 101st participated in several important and innovative military training programs. The 101st Airborne continued the 11th Airborne's policy of operating a basic airborne training school. Between 1956 and 1962, nearly 30,000 paratroopers completed training at Ft. Campbell.

Jumpmaster, air delivery, and air transportation courses were part of the jump school as well. In 1962, all basic airborne training became the responsibility of the Airborne Department of the U.S. Army Infantry School at Fort Benning, Georgia and the school at Ft. Campbell was closed (Hart 1978: 77).

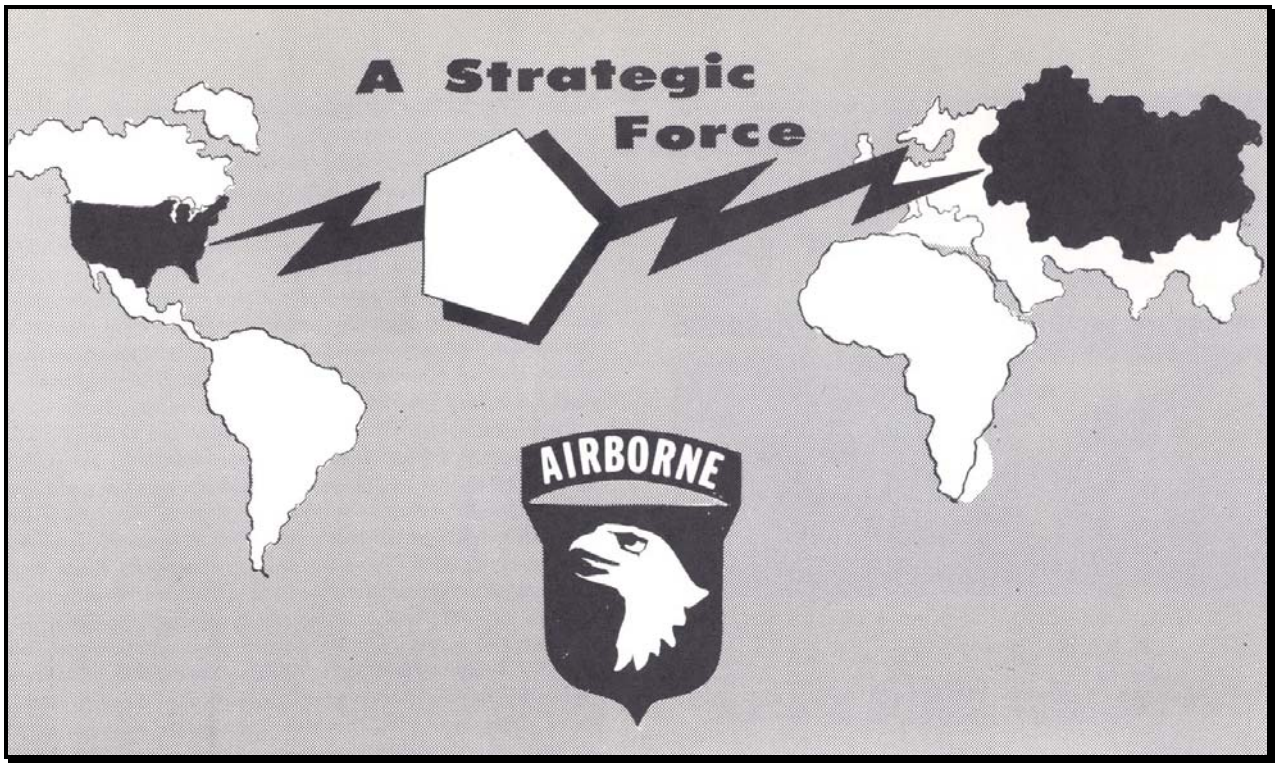

Figure 12. The 101st Airborne Division (Pentomic), Envisioned as a Strategic Force Against the Soviet Union (1956)

In 1958, Ft. Campbell became the first Army post to offer a Recondo School, at the behest of Commander General of the post, General William C. Westmoreland. Non-commissioned officers received training at the school in small unit tactics and leadership. Students learned cross-country navigation, hand-to-hand combat, survival skills, and the use of artillery, demolition, and communications equipment. The Recondo concept soon was adopted throughout the Army (Hart 1978: 81-82). In addition, in 1958, the Strategic Army Corps (STRAC) was formed and the 101st conducted the first STRAC alert that same month (Figure 12, above). The STRAC was "designed to meet the initial requirements of a limited war or to provide initial reinforcements to overseas units in a general war", and its mission was to be ready on a moment's notice (Turner Publishing Company 1995: 88). Several important exercises were conducted over the next several years, during which airborne assault techniques continued to be tested. In 1961, the 101st became part of the U.S. Armed Forces Strike Command, which was the successor of STRAC and represented the Kennedy administration's desire to develop flexible response capability to answer threats on a scale less than all-out nuclear war (Hart 1978: 73-74).

Figure 13. Layout Plan of Ft. Campbell, 1963.

Beginning in 1956, a second phase of extensive construction took place at the cantonment. In 1955, 310 units of family housing, 1 school, and 7 barracks were constructed. A new commissary was created from a remodeled warehouse and a block-long shopping center was added along Michigan Avenue. The main post exchange occupied over 18,000 square feet and included 10 concessions, such as a barber shop, dry cleaner, photo studio, shoe repair shop, record shop, watch repair shop, tailor, and television-radio repair shop. New housing included 92 ranch-style duplexes for officers in Werner Park (1956), 311 units for non-commissioned officers (NCOs) in Hammond Heights (1957), and 837 new quarters under the Capehart program, the successor to the Wherry program in Werner Park, Drennen Park, Hammond Heights, Stryker Village, and Gardener Hills. Apart from 152 units in Werner Park and 230 in Stryker Village, all Capehart construction was completed by 1960 (Black and Veatch 1987: II-76). Except for 13 single –family units in Drennen Park, all Capehart units were configured as single story duplex units (Black and Veatch 1987: II-76). A dispensary, battalion headquarters, high school, and theater also were built that year. In 1957, construction began on what was identified in Hart (1978: 82) as Ft. Campbell's first permanent chapel. The 1949 General Information Map (Fig. 4) shows that there were 7 chapels on the post at the time, of which five were on Indiana Avenue. The Ft. Campbell Real Properties records indicate that if any chapels were constructed between 1946 and 1957, they have since been demolished with no records on the dates of their construction. This indicates that the 1957 chapel was the first permanent, though not the only, chapel on post. At least one of the World War II chapels, located at 17th Street and Indiana Avenue, is still in use. The rate of construction showed no signs of slowing in 1958, when 441 officers and NCO housing units started, as well as another school and aircraft hangers. A dental clinic and a stadium with seating capacity of 8,500 were added in 1959.

From 1960 to 1962, two mess halls, a post exchange annex, a service station, a drive-in restaurant, and a bowling alley were added to Ft. Campbell's permanent building stock. In Drennan Park, 55 officers' quarters were constructed. Another 131 officers' quarters were built the following year, along with 181 NCO units (Hart 1978: 85-86).

Many of the resources built and accounted for at Ft. Campbell between 1956 and 1962 were BASEOPS improvements, not directly related to the Cold War, but instead provided housing for troops and amenities for military personnel and their families. They are representative of the evolving character of the United States armed forces during the mid-twentieth century, when the need for adequate housing, entertainment, medical and dental care, and shopping outlets were recognized as important aspects of troop morale and readiness.

The 1963 Basic Information Map (Office of Post Engineer 1963) indicates the extent to which Ft. Campbell had grown, especially in BASEOPS facilities, since the arrival of the 101st Airborne Division (see Appendix I). The map shows that two more blocks of World War II mobilization buildings, on the northern part of the cantonment area, were demolished but not replaced by any new structures. No records of the removal of these buildings were found, and it is not possible, from the available information, to determine the precise dates. Compared with the 1955 Drawing (Appendix I), the Airfield as depicted in this drawing also shows improvements, including new hangers, control, and support buildings as described earlier. The most dramatic change that took place after the arrival of the 101st Airborne was the development of new residential neighborhoods along the eastern edge of the cantonment. The layout of these neighborhoods, which included the Hammond Heights, Stryker Village, Turner Loop, Drennen Park, Werner Park, Gardener Hills, and Cole Park, was strikingly different from

the rectilinear, grid-like pattern of streets along which the World War II- and Korean War-era buildings were constructed. The newer neighborhoods, in the arrangement of buildings along looping streets and cul-de-sacs were similar to those in suburban developments in the post-World War II period in civilian society.

4.4 FLEXIBLE RESPONSE, 'MAD', AND VIETNAM

4.4.1 POLITICAL CONTEXT

According to Ball (1997), the concept of "credibility" came to the forefront of the American world-view in the 1960s. This was manifested in two ways: first in dealing with the nearing nuclear parity between the rival nations. Second, it was seen in the ability (or lack thereof) of the United States to show firmness in dealing with non-Western countries not already in the Soviet-Chinese orbit. In many respects, the stage for a new phase in the Cold War during the Kennedy and Johnson era had already been set by earlier events. In Europe, there had been a compromise since the end of the Second World War regarding the division of spheres of Western and Soviet influence. This provided the basis for no intervention from the West as the Soviet Union crushed revolts in Hungary and other nations in its influence. The closing of the Brandenburg Gate and the construction of the Berlin Wall gave the spheres of influence, as manifested in West and East Europe, a powerful, symbolic form. There were certainly possibilities of confrontation between the two superpowers as during the Berlin Crises. However, it was elsewhere in Asia, Latin American, and Africa that a different kind of a Cold War was to be fought. In the 1960s, these regions became the theaters where the United States and the Soviet Union attempted to spread their own, and contain each other's, influence.

In the 1950s, the United States had signed defense treaties and had attempted to install friendly regimes in newly emerging nations, sometimes with success. The Soviet Union had followed a similar pattern to exercise its influence over new nations. The installing of the Shah of Iran and the signing of the SEATO defense treaty were two American examples. The assistance to both Fidel Castro in Cuba and to communists in Indochina were examples of the Soviets helping forces friendly to them. With the Johnson Doctrine of helping Latin American countries that were against Communism, and the increasing involvement of the Soviets and the Americans in the so-called "third world", such policies continued through the 1960s. In addition, during this time, many of those policies and events from the earlier decade began to bear consequences.

In 1959, Fidel Castro seized power in Cuba and established a communist regime in the immediate neighborhood of the United States. The close ties of Cuba with the Soviet Union, ideologically and otherwise, were perceived as a very real threat to American national security, and prompted a number of actions during the Kennedy administration. The Bay of Pigs incident, in which a group of Cuban exiles attempted to overthrow the Castro regime with the backing of the CIA, was a humiliating failure for the United States. The threat of Soviet nuclear missiles in Cuba brought the United States and the Soviet Union close to direct confrontation, bringing to a head the relationship between Kennedy and Khrushchev. The crisis was averted only after the Soviet missiles were returned, and the United States agreed not to attempt to depose Castro (Young 1999).

A second region where conflict had its roots both in the Cold War and in colonialism was the erstwhile French Colony of Indochina. French attempts to retake the colony failed in the 1950s with the defeat of its military by the communist and nationalist Vietnamese forces under Ho Chi Minh. During this time, the main supplier and aid for Ho Chi Minh's forces was China. However, this was to change in the 1960s, when the Soviet Union began to invest heavily in Communist North Vietnam's attempt to "liberate" the South and unite the two regions (Ball 1997: 121-133). Initially, the United States played an advisory role in the military conflict between North and South Vietnam, and this continued in the Kennedy administration. However, under the Johnson administration, the scale and scope of the conflict changed dramatically, with U.S. forces playing a direct role in the fighting. In 1964, the first ground troops were sent to Vietnam. By 1965, there were over 180,000 U.S. troops there; in 1967, the number of troops had increased to nearly half a million. During the 1950s and early 1960s, Vietnam policy was seen as a way of containing the spread of Soviet and communist influence, and thus important to a broader world-view. As the conflict progressed, however, it also took on a life of its own. By the late-1960s, the situation of the earlier years had reversed. The period saw both the estrangement of China from the Soviet Union and its emergence as a major player in the Cold War. The establishment of formal relations with the United States was important for China as a means for keeping the Soviet Union out of Southeast Asia. For the United States, China was important for the influence it could exert on North Vietnam to negotiate the end of the war. At the beginning of the decade, involvement in Vietnam was a consequence of the Cold War, meant to stop communism from spreading in Indochina. By the end of the 1960s, the Cold War became, for the United States, a means of dealing with Vietnam (Ball 1997: 115-141).

The 1960s saw the spread of the Cold War not just to other nations, but also to outer space. By the late 1950s, both the Soviet Union and the United States already had active space and long-range missile programs. The race to dominate outer space had different manifestations. Perhaps the most public of this was space exploration, seen since the late 1950s in the manned missions undertaken by both countries. More directly affecting Cold War resources was the use of outer space as an arena for weapons development and intelligence gathering. On October 4, 1957, the Soviets had launched Sputnik I, the world's first artificial satellite, creating an illusion of technological gap in the eyes of the American public. As a direct result of the crisis, the National Aeronautics and Space Administration (NASA) began its operations in October 1958. NASA contributed not only to scientific research but also to national defense, and even incorporated facilities such as the Army Ballistic Missile Agency in Huntsville, Alabama, where Wernher Von Braun's team of engineers were involved in the development of large rockets (www.history.nasa.gov). The development and deployment of ICBMs brought the United States and the Soviet Union in easier, if more ominous, reach of each other. Until the late 1950s, there was little that the United States could do to verify Soviet claims of weapons capability. With the ability to gather intelligence from outer space, it became possible to get increasingly accurate information on Soviet missile systems and capabilities, and to gauge their capabilities. The dual nature of the American space program had a corollary with a similar nuclear program from the 1950s. Nuclear regulation was the responsibility of the AEC, which Congress first established in the Atomic Energy Act of 1946. Eight years later, Congress replaced that law with the Atomic Energy Act of 1954, which for the first time made the development of commercial nuclear power possible. The act assigned the AEC the functions of both encouraging the use of nuclear power and regulating its safety (US Nuclear Regulatory Commission Internet site: http://www.nrc.gov/who-we-are/history.html). AEC oversaw both civilian and military uses of nuclear power, including at Clarksville Base.

The 1960s and the early 1970s were also a period during which many treaties were proposed and signed that would in theory (although, as explained shortly, not always in fact) limit and modulate the testing and production of nuclear weapons. These included a partial test ban treaty of 1963, and the non-proliferation treaty of 1968. Indeed, towards the end of this period, but especially during the Nixon administration, belligerent attitudes of the rival nations replaced the concept of détente marked by ideas of peaceful competition and negotiations. China entered the atomic age with its own nuclear tests in 1964 and 1967. Under the Nixon administration, diplomatic channels opened for the first time with China, and the United States obtained its help to negotiate an end to the Vietnam War, increasingly being seen as a "quagmire" (Crockatt 2001: 139-58). The emerging public view of Vietnam was quite different from the optimistic picture presented during the early 1960s. The administration, however, had known for some time that the mission in Vietnam was fraught with increasing difficulties. During the beginning of the Vietnam War, an important American goal was an "independent, non-communist, Vietnam," according to Defense Secretary McNamara's 1964 communication to President Johnson. Only a year later, McNamara's Assistant Secretary for International Affairs, John McNaughton, listed American priorities as follows: 70% - To avoid a humiliating US defeat (to our reputation as guarantor); 20% - To keep SVN [South Vietnam] (and the adjacent) territories from Chinese hands; 10% - To permit the people of SVN to enjoy a better, freer life (Pentagon Papers 1971: 432, cited in Crockatt 1995: 241). According to Crockatt (1995: 248), finding a way out of Vietnam was an important motive for opening to China, which had significant influence over North Vietnam. For its part, Crockatt writes, China had begun to perceive the Soviet Union and not the United States as the major rival in the region, and was looking for ways to end its diplomatic isolation (1995: 247). The thawing of Sino-American relations and the growing differences between the Soviet Union (now under the leadership of Brezhnev) and China, led many to conceive of the Cold War as having a multi-polar rather than a bipolar structure, especially from the late-1960s.

4.4.2 MILITARY CONTEXT

Changes in American military capabilities and organization appear to have come both from internal policy changes and from the transforming Cold War theaters. President Eisenhower saw the health of the American economy as a vital aspect of its national security (Boll 1988). This had guided his defense policy in important ways. First, it led to putting a cap on all military spending, with a relatively frugal Army budget compared to that of the Air Force and the Navy. Second, it provided a foundation for a policy of massive retaliation, leading to large-scale nuclear weapons build-up in the United States. In turn, this had an impact of ascribing a hefty portion of the budget to the Air Force and the Navy and at the cost of a weakened Army. Eisenhower's policies faced opposition even from some of his own staff. Eisenhower's Chief of Staff, General Ridgeway, was opposed to reliance on nuclear weapons at the cost of traditional military strengths.

The opponents of Eisenhower's policy found voice in the Kennedy administration. Rather than a policy of Massive Retaliation, whereby a limited nuclear strike would trigger a full-scale response, the new administration followed a policy of graded, flexible response (Boll 1988: 111-119). Further, the new administration refused to put a cap on military spending. Instead, emphasis was made on the ability to defeat the enemy on any sort of battleground – conventional or nuclear. Flexible Response included the development of a second strike capability – that is, the ability of the United States to strike back after a full-scale nuclear attack by the Soviet Union. Domestically, the Flexible Response proved to be a costly concept,

raising questions about whether a nuclear war could be managed. Internationally, the policy met with greater success. In 1967, NATO adopted the Flexible Response policy.

Figure 14. The 101st Airborne as Pentomic Division; Jump-Training With 'Honest John' Nuclear Capable Rocket in Foreground

In the United States, the policy of Mutual Assured Destruction (MAD) announced by Secretary of State Robert McNamara in 1963 went had-in-hand with the Flexible Response, assuring that nuclear defense would not suffer. MAD addressed the growing parity of nuclear weapons and delivery systems of the United States and the Soviets. According to this concept, a nuclear war could be averted if destruction of both sides was assured during the conflict (Young 1999: 255). Eisenhower's Massive Retaliation policy was based upon the overwhelming superiority that the United States had over the Soviet's in nuclear weapons. MAD, on the other hand was based upon an emerging reality of the 1960s - the recognition by the United States that the Soviet Union would soon gain nuclear weapons parity with the United States (Young 1999: 248). The impact of MAD and Flexible Response may have been twofold. On the one hand, increasingly sophisticated weapons were developed to ensure mutual destruction, and hence avert potential nuclear war. Through the 1960s, there were substantial developments in missile and nuclear technologies. The Minuteman Missiles, first deployed in 1962, which used the more stable solid fuel and were more reliable and durable, formed an important part of the American arsenal. By the late 1960s, these were capable of carrying multiple warheads, making them more lethal (Miller 1998: 97-98). Unlike during the Eisenhower era, conventional warfare also began getting the attention it deserved, in the view of the Kennedy administration.

Pentomic Divisions were designed with the European battlefields in view, for it was expected that any future conflict between the Soviet Union and the United States would take place there. However, since the Cold War encompassed the globe rather than a single continent, the military reorganized with an aim to fight in different terrain and conditions than those of Europe. Further, a flexible response required troops that could also fight conventional wars at varying scales. Responding to the new policies, the Army organized itself in ROADs (Reorganization Objective Army Divisions), capable of fighting under varying conditions, and distanced itself from the concept of fighting only atomic warfare (Haffa 1984).

In practice, the Pentomic Division had proved to be weak in staying power and needed more men to be capable of sustained combat. Contemporary communications technology, which helped the division commander control five rather than three units, could not also offset the reductions in personnel per division. Although never tested in actual battles, military exercises indicated that the Pentomic Division did not have the capacity or capabilities to perform basic war-fighting functions necessary in combat – firepower and communications – or the ability to function on the lower levels of combat against insurgencies (Combat Studies Institute 2000). On December 16, 1960, Vice Chief of Staff of the U.S. Army, General Clyde D. Eddleman, ordered the U.S. Continental Army Command (USCONARC) to carry out a new study of division reorganization. In March 1961, CONARC submitted the completed study, called Reorganization Objective Army Divisions 1965 [ROAD 1965], to Army Chief of Staff George H. Decker. The Chief of Staff and the President approved ROAD reorganization in May 1961 for immediate implementation, but this was delayed by the need to respond to immediate international pressures. The CSI Study does not mention the international events that caused the delay. Judging by the date, the event is likely to have been the Bay of Pigs invasion of Cuba, which took place in the period April 17-20, 1961.

Under the ROAD concept, the Army began in early 1962 to test and form four types of divisions—infantry, armor, airborne, and mechanized, each with a common base and three brigade headquarters. In the combat mix of the ROAD Division the Army attained flexibility, since the numbers and types of battalions could be varied at will to carry out different missions. An infantry division might ordinarily have eight infantry and two armor battalions with a total strength of 16,000 men, but could control up to 15 battalions if the need arose. When terrain permitted, more armored or mechanized elements could be added; in swamps or jungles, the emphasis could be placed upon the infantry battalions (Hermes 1989: 609)[4]. Figure 15 shows the typical airborne ROAD Division Table of Organization, upon which the organization of the 101st Division was based.

The Army continued its involvement with other Cold War arenas such as the defense of Korea and Europe. Further, the Army was available when called to control domestic situations, such as those that concerned the Civil Rights Movement. The major military involvement during this period was, of course, Vietnam. The impact of Vietnam on American culture and society is well known, documented, debated, and studied. Crockatt (1995) points out that "Vietnam" for Americans implies "a whole complex of social conflicts associated with a great divide in American experience. The fact that with hindsight we can se that the lines of division were actually more complex than these perceptions suggest – public opinion [from that time] polls

[4] Paraphrased from: Center for Military History, Chapter 27: Global Pressures and the Flexible Response, American Military History. Washington, D.C. Center for Military History. The chapter is written by Walter Hermes.

show that the fissures were less clear-cut than portrayed by the media images – did not erase the dominant impression of crisis and division." [5] For the present purpose, the impact of the Vietnam conflict on the Army's specially trained divisions – especially the Airborne Divisions – needs consideration. The concept of "airmobility" of troops had already taken hold before Vietnam, and it was understood that helicopters were better suited to this concept than fixed wing aircraft (Figure 16).

Prior to the conflict, however, the airborne divisions were mainly parachute units transported to conflict arenas rapidly. These units often relied on fixed wing aircraft as opposed to rotary wing aircraft or helicopters. The use of helicopters as combat weapons during the Vietnam War transformed the nature of airborne units (Kuranda et al. 2002: 62). In later periods, the helicopter would provide both mobility as well as assault capabilities to the Army, and require new infrastructure at posts, including airfield facilities for rotary wing aircraft and training facilities for airborne troops.

4.4.3 FT. CAMPBELL AS AN ARMY TRAINING CENTER AND THE 101ST AS A ROAD DIVISION

From the mid-1960s, the direction of Ft. Campbell's history began to change in proclivity, with its missions directed less towards the Cold War with the Soviet Union, and increasingly addressing the needs of the Vietnam conflict. As seen in the deployment of the 101st Airborne Division to Vietnam and the opening of the Army Training Center in Ft. Campbell. Changes also took place at an organizational level, with the nuclear battle specific Pentomic Organization replaced with a more flexible ROAD organization for the 101st Division. Finally, operations at Clarksville Base also began to wind down, first with the closing of the modification center, and then, in 1969, with the closing and transfer of the base itself to the Army.

During the 1960s, Clarksville Base and the modification center also underwent significant changes. The Clarksville Modification Center became operational in 1961 and was run successfully until 1964 by Mason & Hanger. Judge Parker, a Clarksville resident who was part of the Clarksville Base civilian workforce recalled during an interview (Parker 2003) that the base had gone on high alert following the Kennedy assassination. Parker was scant on details, except indicating that the weapons seemed to be ready for deployment. How Clarksville Base reacted to emergencies is an important topic for further research.

In 1964, one year after the AEC assumed control of the Pantex Ordnance Plant, that agency announced that the modification centers at San Antonio and Clarksville would be closed. The activities would be transferred to Pantex and Iowa AEC plants (www.pantex.com). On September 24, 1965, the deactivation of the Weapons Modification Facility was completed, and the base was returned to military control. According to an article in the *Leaf Chronicle*, the deactivation would in no way affect the military status of the base, nor would there be any interruption in the base's military functions. The total number of civilians employed at the Clarksville Modification Center in 1964, when it was at its peak operation, were 235 with Mason & Hanger, 24 with Sandia Corporation, and 15 with the AEC. The reason cited publicly for the deactivation of the modification center was a general reorganization program affecting four facilities. Clarksville functions were being transferred to the recently opened (January 1965)

[5] Crockatt cites Erickson, S. et al, *American Public Opinion: Its Origins, Content and Impact*, 2nd Edition, New York: Wiley (1980).

AEC Amarillo, Texas and the Burlington, Iowa plants (Clarksville Leaf Chronicle September 24, 1965). Owing to the secretive nature of activities and still classified information, there are variances in information on the closure of the base. While the official history of Pantex confirms the information presented in the newspaper, data available on the Department of Energy Internet site is different. According to this source, the modification centers at Clarksville and Medina Bases were closed due to a scale-back initiated by President Lyndon Johnson (http://www.legacystory.apps.em.doe.gov/text/link/link2.htm). There is no information on the nature of the "scale-back", or on whether the opening of the Amarillo Office was part of that program.

Activities at Clarksville Base did not altogether cease. Clarksville Base was designated as a branch office for the AEC Amarillo office in 1965. From 1965 to 1969, the base was used by the Defense Atomic Support Agency (DASA) for the storage of classified materials (Karpin and Maroncelli n.d.). When DASA discovered, in 1969, that there was a build-up of radon gas in the buildings and tunnels of Clarksville Base, it shut the base down, declared it surplus, and relinquished it to Ft. Campbell. Since 1969, Clarksville Base has been part of the Army post and is no longer a separate facility. There were no details available on the nature of the classified materials stored there.

During the 1960s, few buildings were constructed at Clarksville Base. As mentioned earlier in the Overview and Synthesis, an S-Structure (Facility No. 7825 A, B) for the surveillance of components was constructed in 1961 and operated by Sandia Laboratories. The list of buildings and structures in Gray et al. (1998) shows two more buildings and structures constructed at Clarksville during this time. These are a shop (7865) constructed in 1966 and a "Q" Spares Warehouse constructed in 1967. The designation Q indicates that admission to this facility required the special clearance. Neither of these properties is listed on the digital database of real properties available from the master planning office. That list includes four properties that were constructed between 1960 and 1969, which are: a General Purpose Administration Building (7543) constructed in 1960, an OD Pool Service Building (7546) constructed in 1965, a Commanding Officer Headquarters Building (7565) constructed in 1960, and a storage building (7884) constructed in 1966. All but the storage building, which is in the southern portion of Clarksville Base, are near the entrance in the northwestern corner of the facility. Gray et al. (1998) does not list these four buildings in the report.

The changes in mission and organization of Ft. Campbell during the 1960s were responses to both policy changes and new international situations. In the 1950s, Ft. Campbell had been a testing ground for the atomic-age Army. The 101st Airborne was organized as a Pentomic Division apparently equipped with nuclear-capable missiles. In 1958, the division had participated in Exercise Quick Strike held at Ft. Campbell and Camp Brekinridge, which simulated a nuclear and chemical warfare environment. Just three years later, in 1961, the 101st became part of the US Armed Forces Strike Command – a product of the Kennedy administration's policy of flexible response to answer threats of a scale less than all out nuclear war (Hart 1978: 74). The organization of the Pentomic Division also changed during the Kennedy and Johnson administrations owing to weaknesses revealed when the divisions were tested in exercises. The 101st Airborne reorganized as a ROAD Division in early 1964, with an internal structure more akin to a conventional Army, with three tactical brigades instead of five. The structure was designed for greater flexibility, greater battlefield mobility, and stepped-up firepower. The division also had the Division Artillery, Support Command, 101st Aviation, 2nd Squadron, 17th Cavalry, 501st Signal Battalion, and 326th Engineer

Battalion (Turner Publishing Company 1995: 94). Further, each brigade was built around three battalions with a Headquarters Company and three infantry companies for each battalion (see Figure 15). The new organization was flexible in that it allowed the addition of extra brigades or battalions to suit different combat situations.

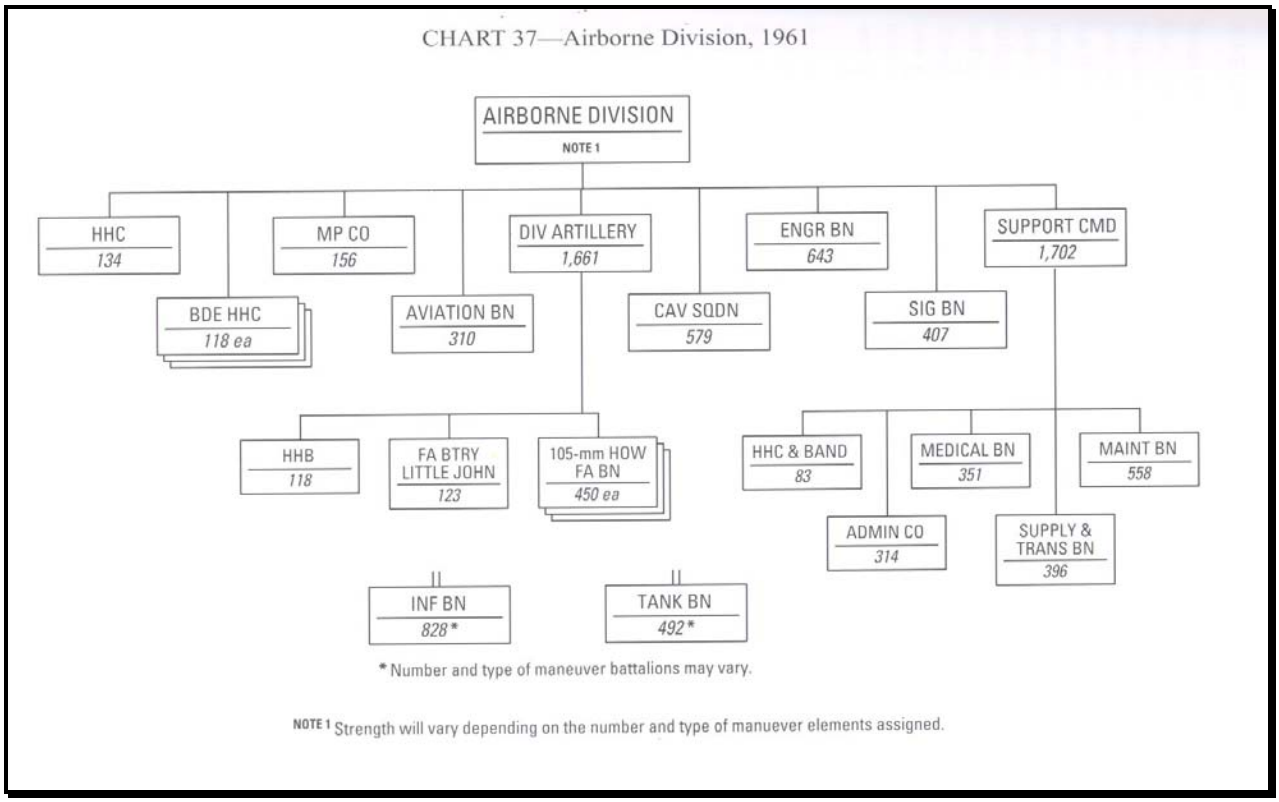

Figure 15. Organization Chart for the ROAD Airborne Division (1961)

The make-up of the 101st Airborne Division under the ROAD organization was as described below:

In the 101st Airborne, the 1st Brigade was made up of the 1st and 2nd Battalion 327th Airborne Infantry and the 2nd Battalion 501st Airborne Infantry. The Second Brigade was the 1st and 2nd 501st Airborne Infantry and the 1st Battalion 502nd Airborne Infantry. The 3rd Brigade was the 1st and 2nd 506th Airborne Infantry and the 3rd battalion 187th Airborne Infantry. The Division Artillery was built around the 319th, 320th, and 321st Airborne Artillery Battalions, and the Support Command consisted of the 326th Medical battalion, 801st Ordnance Battalion, and the 426th Supply and Transportation Battalion (Turner Publishing Company 1995: 94).

The use of rotary wing aircraft and the airmobile concept influenced the training of the 101st Division. In March 1965, months before the beginning of their deployment to Vietnam, the division had two major field exercises to train for the airmobile concept. On May 27, 1965, the 1st Brigade of the 101st Airborne Division received an order for a permanent change of station for duty in Vietnam. The 11th Air Assault (Test) Division, which was also stationed at Ft. Campbell, received orders to change its name to the 1st Cavalry Division and be deployed to Vietnam. In September 1967, just two months after infantry battalions from the 101st Airborne were called to quell race riots in Detroit, the remaining two brigades were ordered to

duty in Vietnam. The 2nd and 3rd Brigade reported for duty in Vietnam on December 13, 1967. The 101st Airborne was the last division to leave Vietnam in 1972, to return to Ft. Campbell as an Airmobile Division.

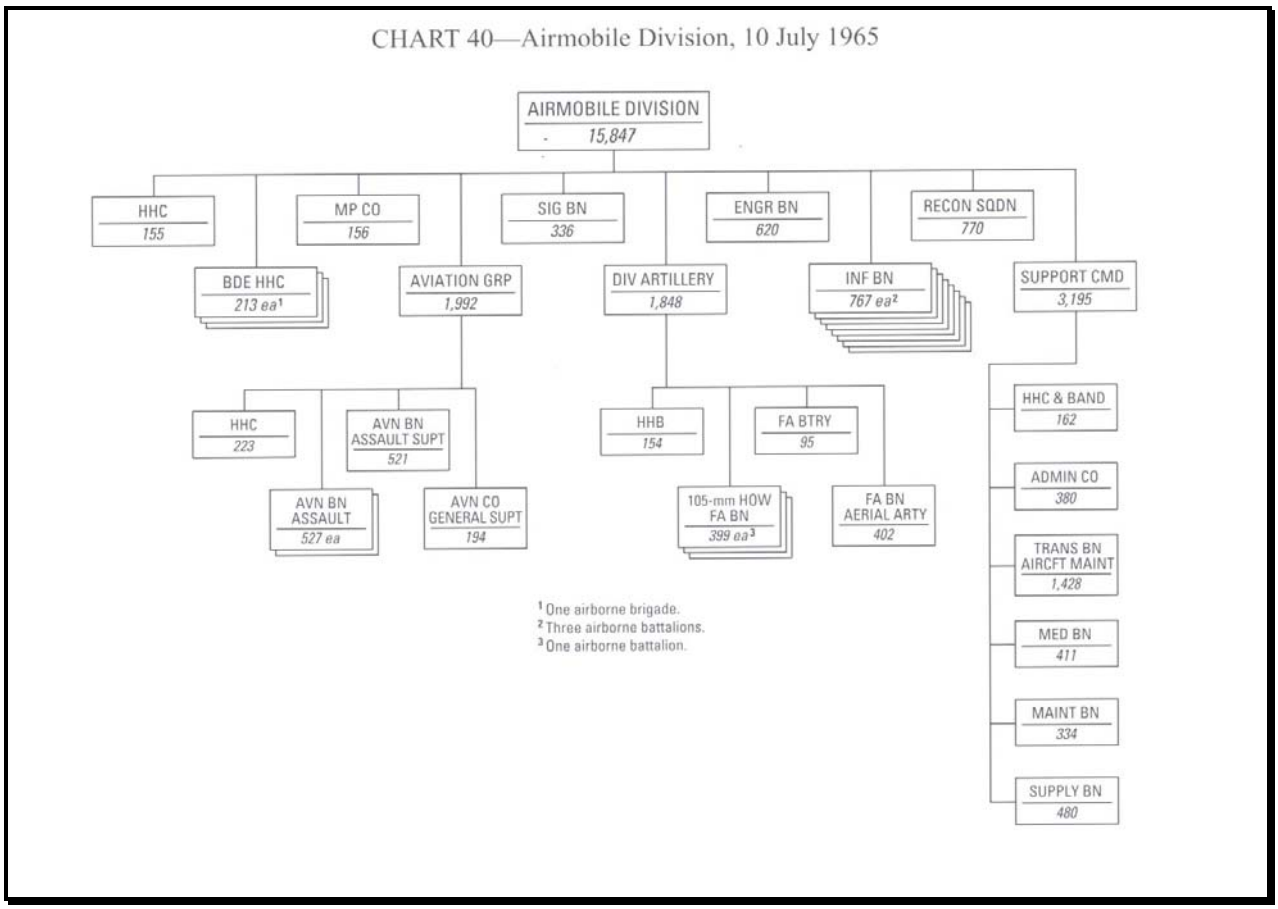

Figure 16. Organization Chart for the ROAD Airmobile Division (1965)

The departure of the 101st and the increasing needs for deployment of trained troops in Vietnam led to a new mission at Ft. Campbell. On May 2, 1966, a basic combat training center was activated at Ft. Campbell. A post planning group was formed to pave the way for opening of the Army Training Center (ATC). On July 6, 1966, the ATC received its first batch of 220 newly inducted soldiers, all of whom had been processed at the Ft. Benning Reception Center. The U.S. Army Reception Station, capable of processing 1100 persons a week, was officially opened on August 8, 1966. On September 1, more than 1000 members of the 1st Training Battalion, 1st Training Brigade assembled for the first graduation ceremony. Weekly graduations were a regular affair, thereafter. In four months after its inception, the ATC had grown to a facility of 330 officers, 2,165 enlisted men, and 34 civilians, capable of graduating 1,100 soldiers every week. Over a period of about 6 years, the Ft. Campbell ATC would have more than 50,000 troops graduating, many of whom were sent to Vietnam.

With the 101st Division in Vietnam and the end of the war not in sight, there was anxiety within the local community about the fate of the post and what the permanent mission of the post was to be. On September 7, 1967, the Secretary of Defense made an announcement that the 6th Infantry Division would be reactivated at Ft. Campbell. Although activated on

"austere" terms in November 1967, the 6th Infantry would never reach its full strength before its deactivation only eight months later. The deactivation was due to reductions in the 1969 Army budget and a policy decision to strengthen existing divisions rather than activating new ones (Hart 1978: 100). Following deactivation of the 6th Infantry, the main missions, in 1968 and 1969, of the Commanding General of Post at Ft. Campbell were:

- command the United States Army Training Center and Ft. Campbell, Kentucky;
- conduct basic combat training for Active Army and Reserve enlisted personnel;
- provide for the efficient and economical operation, administration, training, service, and supply of all individuals, units, and activities assigned, attached, or under the jurisdiction of the post, except for those functions and command responsibilities specifically retained by the United States Continental Army Commander, the Army Commander, or the head of a Department of the Army agency; and accomplish planning missions, as directed, for the development, employment, administrative and logistical support, and expansion of CONUS (Continental US) forces under conditions of cold, limited, and general war and contingencies (USATC 1969).

Running the ATC became the main mission of the post, as there was no evident prospect of an immediate return of the 101st Airborne Division. Until 1969, however, the ATC was organized separately from the post command. Effective August 18, 1969, the ATC command was provisionally combined with the post command, forming a new Unit called the US Army Training Center and Ft. Campbell (Provisional). The ATC Commanding General acted as the Deputy Post Commander. The training center was disestablished on April 15,1972, just days after the 101st Division returned to Ft. Campbell (USATC 1966-1972).

A comparison of the 1955 and 1963 Ft. Campbell Building Layout plans (Figures 7 and 13), together with data on Real Property available at the post Master Planning department shows that the early part of the decade saw a surge in the construction of recreational, housing, administrative, and infrastructure facilities. In the 1955 plan, there are large tracts of land on the eastern side of the post, near Highway 41A, that were vacant at the time. On the other hand, the 1963 plan shows large-scale developments of family housing on the eastern portion of the cantonment. Some of the new housing development, including NCO housing, officers housing, and Capehart Quarters, as described in the earlier section, was completed in 1957-1958. Capehart Housing, the second major family housing program for Army posts after World War II, was named for US Senator Homer Caperhart, who had recommended changes to its unsatisfactory predecessor, the Wherry Program. The Capehart Program was active from 1955-1962.

With the increase in the size of the 101st Airborne due to the new ROAD organization, housing development continued to meet the needs of the cantonment in the early 1960s. In 1960, 55 units in the neighborhood of Drennen Park, near Gate, were constructed for field grade officers. In 1961, 131 additional family quarters were constructed for company grade officers, and 181 units for NCOs at Hamilton Heights. In 1962, a $ 1.7 million conversion of one- to two-bedroom units was done in Lee Village. During 1964, 382 quarters were constructed for company grade officers and NCOs in Werner Park. This was the last substantial construction of family housing till the mid-1970s (Hart 1978: 85-7).

Community facilities were also constructed to support the increasing number of families residing at Ft. Campbell. The facilities included the NCO Club (1965), two post offices (1960, 1961), the Marshall Elementary School (1961), a golf clubhouse (1963), the Gardener Bowling Center (1966), the Eubanks Bowling Center (1962), a chapel (1962), and the Kuhn Dental Clinic (1963). Maintenance and infrastructure facilities such as gas distribution and storm drainage systems also were constructed and updated. Some dates for the construction of the buildings and structures in the Ft. Campbell Real Property Records and the post history by Hart (1978) vary slightly from each other. According to Hart, the chapel was constructed in 1963, and the dental clinic in 1964. Unless the record is missing from the more comprehensive Real Property list, the dates listed there will be considered official and accurate.

Construction projects carried out supported the changing needs of the 101st Division in the process of reorganization. Several underground ammunition storage structures were also constructed in 1964. Barracks for troop housing, dining facilities, and 10 battalion headquarters were constructed, many as late as 1969. Four aircraft hangers constructed in 1962 and 1963 accommodated the growing fleet of helicopters. Additional operational units at the airfield also constructed during the same period supported other aviation activities. Also in 1963, a new aircraft ramp was constructed at the airfield (Hart 1978).

The fate of World War II buildings during this phase is important. World War II buildings had always been regarded as temporary structures. Many older structures lining Indiana Avenue had fallen into disuse; some had not been used since the first brigade of the 101st Airborne had departed for Vietnam 10 months earlier (Hart 1978: 105). These were expected, by the post planners, to be demolished. However, they survived through the period, owing at least in part, to the Vietnam conflict and the resulting change of mission at Ft. Campbell. When the Army Advanced Training Center was to be opened in 1966, the post planning group decided that over 500 World War II buildings along the axis of Indiana Avenue from 11th Street to 50th Street would be used for training and as living quarters. Thus, rather than being demolished, these buildings were renovated and restored even as they were being used. The requirement to train new soldiers was so urgent that many of the buildings remained occupied while being renovated by civilian contractors. Because of this situation, cadres did much of the final preparation for the occupation of billets. Details of the precise rehabilitation plans could be determined from the information available. However, the 1987 Master Plan for Ft. Campbell indicated that the World War II temporary buildings between 42nd Street and 59th Street were rehabilitated as troop barracks in 1966 and 1970. Rehabilitation in 1966 was limited to 50th Street. It appears from the available information that the buildings along Indiana Avenue between 42nd and 50th Streets were used as troop barracks. According to the master Plan, these were two-story, 63 man barracks (Black & Veatech 1987: II-71). Ft. Campbell Real Property Records indicate that all the World War II buildings used as barracks during the 1960s have since been demolished.

Existing ranges also were expanded and renovated under this program. Ranges 4, 5, and 24 were expanded, and Ranges 8, 9, 25a, 26a, and 35 were renovated. Specifically constructed for training the cadres were the Ranges 11, 12, 19, 21, 23a, 36, 37, 38, and 39. Construction in the garrison area included physical training areas, test sites, a bayonet course, hand-to-hand pits, an obstacle course, drill fields, and confidence courses. All the construction and renovation, which cost an estimated $ 7.5 million, was completed in November 1966, two months after the graduation of the first group of new soldiers (ATC History 1966: 3-4).

Ft. Campbell's Cold War history, which in the 1940s and 1950s was dominated by atomic warfare, took a different direction in the 1960s. The presence in the 1940s and 1950s at Ft. Campbell of Clarksville Base, the Pentomic Army, and the Ft. Campbell Air Force Base – a Strategic Air Command (SAC) ready facility – all reinforced a central theme of nuclear warfare and defense. In 1959, the Air Force handed the base over to the Army, which promptly drew plans for its expansion. As Kurunda et al. (2002) have pointed out, this change was effective for the Army as a whole. For the 101st Airborne, the Vietnam conflict, in which the Army predominantly used the helicopter, contributed to its transformation into an Airmobile Division. In 1961 the Clarksville Modification Center was opened with the use of newer buildings constructed since 1957. In 1964, the 101st was reorganized as a ROAD Division, and the old Pentomic organization was abandoned. When the 101st began deploying to Vietnam in 1965, it did so as the more flexible ROAD Division. Also in 1965, the Clarksville Modification Center shut down, effectively ending all known civilian activity at the facility. In 1966, the ATC was activated, and by 1968, a year after the entire 101st Airborne Division departed to Vietnam, training new soldiers was a primary mission of the post. In 1969, Clarksville Base was deactivated and turned over by the Navy to the Army. By the end of the 1960s, the Cold War-specific nuclear theme that had dominated activities at Ft. Campbell appeared to have lost the significance it once had.

With most of the construction effort in the mid- to late-1960s going into the rehabilitation of existing structures, Ft. Campbell at the end of the Vietnam War was not significantly different in layout from 1965. The Ft. Campbell Real Property Records show that of the 853 existing buildings that were constructed between 1960 and 1969, only 35, including the Sink Library (1967) and the Museum (1968) were constructed during the period 1966-1969. Future planning at Ft. Campbell did not draw from its increasingly distant, nuclear conflict-related past, but rather from the more recent times. Even as Ft. Campbell functioned primarily as a basic combat training center, plans seemed to be underway for another major change of missions – that of supporting an Airmobile Division. The Analytical Report that accompanied the 1969 Master Plan for the post suggested that significant changes in the mission were under way. According to the report, in April 1969, a directive was issued for the long-term stationing of one combat division for which new facilities were required. These included the need for new training areas and significant additions to the Campbell Army Airfield. A new heliport to house about 240 helicopters was to be constructed at the Campbell Army Airfield. An additional heliport was to be constructed for 148 tactical helicopter units at an old landing site on Woodlawn Road about 4 miles from the Cantonment area. As stated earlier, by this time, the 101st and other Airborne Divisions in the Vietnam combat had adapted to the airmobile concept (Office of Post Engineer, 1969: 5-13). When the 101st returned in 1972, they did so with about 400 helicopters that needed to be accommodated. Plans made in 1969 were consonant with that requirement, indicating that they may have foreshadowed another change in missions for the post.

4.5 DÉTENTE TO THE END OF THE COLD WAR

4.5.1 POLITICAL CONTEXT

The late 1960s and early 1970s were marked by a perception that the Soviet Union had grown stronger after attaining nuclear and military parity. On the other hand, the Vietnam conflict seemed to have rendered the United States, in defeat, as weaker, and less effective. These two aspects shaped the American world-view, and by extension, policies during the 1970s (Ball

1997: 171-178). The policy of *détente* was a way to deal with the changed international power arithmetic. The movement towards a *détente* was consolidated during the Nixon presidency. Nixon and Kissinger saw a policy marked by conciliation and peaceful political competition with the Soviet Union and opening up to China as an effective way to "manage" the Cold War rivalries, while maintaining American strength internationally (Young 1999: 245)[6].

The Soviets conceived the *détente* in different terms. They saw it as a way to coexist without conflict, while what they understood to be the historically inevitable socialist revolution formented (Garthoff 2001: 159-160). Different perceptions notwithstanding, the principles of *détente* were first agreed upon by the two nations during a Nixon-Brezhnev summit in Moscow in 1972. They were consolidated under Presidents Nixon, Ford, and Carter. The late 1960s and early 1970s were marked by U.S. - Soviet negotiations and the signing of several treaties, including the SALT I (Strategic Arms Limitations Treaty), trade deals between the two superpowers, the signing of the Peaceful Nuclear Explosions Treaty, and the SALT II agreement.

Misunderstandings, cross-purposes, and conflicts severely tested the *détente* through the 1970s, until its end, from the American standpoint, with the Soviet invasion of Afghanistan in 1979. Promising peaceful, yet competitive coexistence, the *détente* was markedly unsuccessful in resolving differences between the superpowers and stopping proxy wars in other nations. From the American perspective, the invasion of Afghanistan by the Soviets was reason to end the détente. The reasons for the failings of the *détente* were many. First, as mentioned above, there were differences between the Soviets and the Americans on the nature and purpose of the détente. Second, there was a real failure to effectively use collaborative measures. The SALT treaties, for instance, did not go far enough in reducing strategic arms. Third, there was a failure to define international codes of conduct. Americans saw the Soviet invasion of Afghanistan in 1979 as egregious behavior. On the other hand, the Soviets saw American actions in the Dominican Republic as exemplifying its imperialist policies, and judged the rapprochement with China and its policies towards it as using double standards in foreign policy. Fourth, there were significant misconceptions on the part of each nation regarding the intentions of the other. The United States saw events like the Soviet invasion of Afghanistan as Moscow using the *détente* to further the expansion of its power. The Soviets invaded Afghanistan reluctantly, based on their understanding of the internal situation in that nation and that the United States, thawing relations with China, was continuing its policy of "encirclement" of the Soviet Union with its allies. Fifth, each side saw the increasing military strength of the other as a threat. The NATO military build up of the late-1970s, actually in response to a perceived Soviet build up, was seen as a danger by Moscow. On the other hand, the U.S. wrongly estimated the Soviet military spending to be higher than it actually was, and this contributed to its own increased outlays particularly in the late 1970s. Last, there was a

[6] The thrust of the concept of *détente* discussed here is, according to Crockatt (1995:203) one that is generally accepted by Western analysts. The view, which takes into account the changing international system, nonetheless emphasizes the bilateral relationship between the United States and the Soviet Union. This accepted view is similar to the one the Army has adopted regarding the Cold War itself, which sees it as bipolar. Crockatt identifies the merits of the view on the détente, which helps comprehend international and policy changes, and the continued importance of competition during a period of intense negotiations. He also opens the discussion to another framework of analysis, which sees the Soviet-U.S. relationship as a sub-system of a more potent international system. Détente, accordingly, was adopted by the superpowers to maintain and manage their positions in the world that was changing so as to render the Cold War itself irrelevant.

misunderstanding by each nation of the internal political systems and processes of the other nation (Garthoff 2001). Yet, with all its failures, the *détente* was successful in ensuring that the relations between the superpowers now rested on regular contacts from lower level meetings to summits. The culture of negotiations continued despite the worsening of relations between the two nations in the late-1970s and early 1980s (Crockatt 2001: 234).

The *détente* even raised complex issues on the control and management of the nuclear arsenals of both the Soviet Union and the United States. Although it had opened possibilities of negotiation on strategic weapons, many deeply-set differences between the superpowers remained unresolved until the end of the Cold War. American leaders viewed the détente as a way to manage the nuclear parity of the Soviet Union with the United States. The SALT treaties, negotiated during the *détente*, were seen as tools to manage the relationship between the two nations. Contentious issues regarding the deployment of nuclear weapons and defense systems remained in place almost throughout this period. Talks and treaties resolved some of these issues, while others remained unresolved practically until the end of the Cold War. These issues are discussed below.

The development of ABM systems by the United States (announced, 1967) and the Soviet Union (deployed in Moscow in 1964) caused concern on the parts of both. The development by the Soviets of large missile systems capable of wiping out the American Minuteman missiles in a first strike gave Washington reason for anxiety. The induction of MIRVs (Multiple Independent Reentry Vehicles, tested in 1967), capable of rendering the ABM systems defenseless, by the United States and later the Soviets, remained an unresolved issue until the START talks of the 1980s. These weapons systems were discussed for the SALT I Treaty, which, as mentioned earlier, was rejected by President Ronald Reagan. President Reagan renamed the strategic arms talks START, which took place in 1983. START I talks resulted in ceilings on launchers (SLMB and ICBM bombers) and warheads, cuts by 30% of overall strategic arsenals, limitations on submarine launched cruise missiles, agreement on on-site verifications, a reduction of 50% on heavy warheads by the Soviet Union, and restrictions on proliferation of Nuclear Technology.

The deployment of Pershing and Cruise Missiles – Intermediate Nuclear Forces or INF - in Europe by NATO was cause for Soviet concern since these were capable of reaching Moscow (Young 1999: 160-163). Bombers such as the Soviet Tupelov-22 (induction in 1967), ostensibly for use in China and Europe, were nonetheless capable of reaching the United States and became an issue during the Ford administration in 1974. The rejection of the SALT agreements by Reagan and the proposal to develop and test SDI systems outside the laboratory were serious issues through the 1980s. The rejection of earlier SALT agreement by Reagan was part of his aggressive policy towards the Soviet Union, as explained in the Section 4.5.1. Reagan's insistence on pursuing the SDI Program was a major area of disagreement with the Soviet Union in the Reykjavik meeting of Reagan and Gorbachev. The Soviets were vehemently opposed to the so-called Star Wars program. Developments of systems such as the ABM were seen as strategic to strengthen the American (or Soviet) position and be used as bargaining chips during SALT talks (Brands 2001: 194-196). Regardless of the *détente*, which successfully opened regular negotiations between the superpowers, the development of increasingly advanced weapon systems seemed to continue through the last two decades of the Cold War.

The *détente* of the 1970s did not stop the Soviet Union and the United States from increasing their influence and attempts to curtail their rivals influence over third-world countries. In the

Middle East, West Asia, Africa, and Central and South America, the two nations continually waged proxy wars fought in actuality between rival factions and states. While it is outside the scope of this project to discuss the several complex conflicts in and between third-world nations during the 1970s and 1980s, some of the important ones may be discussed to estimate the mixed results of Soviet and American involvement. In the Middle East, Soviet influence over the Arab states had grown since the 1967 Arab-Israel war, in which Israel had won. Indeed, in President Nixon's estimate, it had greatly reduced American influence over Arab states. The 1973 Yom Kippur War was initiated by Egypt without the behest of the Soviet Union, resulting in a weakening of relations between those two nations. The United States played a significant, diplomatic role in bringing the conflict to an end, and succeeded in limiting Soviet influence in Arab states (Crockatt 1995: 290-295). The intervention did not conclusively end conflicts in the Middle East, which continue even to this day. Consequences of the revolution in Iran (1978 – 1979) were vastly different for the United States. The fall of the friendly regime of the Shah of Iran, the return of Ayatollah Khomeini as the new leader, and the hostage crisis, were marks of failure for the United States, especially since the new regime was backed by the Soviet Union. In Afghanistan, which the Soviet Union invaded in part to halt the further spread of American influence, it proved to be disastrous for the Soviet Union, which lost militarily as well as diplomatically in its relationship with third-world nations (Crockatt 1995: 288-290).

Although many of the conflicts did not entail the direct involvement of the Soviet Union or the United States, there were occasions when this did happen. The Soviet Union under Brezhnev adopted an aggressive policy towards third-world nations, more willing to participate directly in conflicts than the United States. An example of this was the internal strife in Angola (1975-76). Following its independence from Portuguese rule in 1974, three rival factions competed for ruling the nation. A joint Soviet-Cuban operation, in which Cuban troops directly participated, ensured that the faction supported by them came to power. The Americans were more reluctant to participate in direct conflicts, although the invasion of Granada (1983) and the involvement of American troops in the Nicaragua crisis (1979 – 1990) to curb the spread of communism are two notable examples of military intervention (Young 1999: 115 – 116, 122 – 123). In the light of their involvement in these conflicts, it was natural for the superpowers to question each other's commitment to the *détente*, bringing to view the imperfections of that arrangement.

Through much of his term, President Jimmy Carter had tried to maintain the *détente* between the superpowers. He had, in 1978, deferred the production of the neutron bomb and restored full diplomatic relations with China. A year later, in June 1979, he signed the SALT II Treaty with his Soviet counterpart, Brezhnev. The last quarter of that year saw the eruption of a crisis when Iranian students took American diplomats hostage and the Afghanistan invasion by the Soviet Union. Due to the fallout from the Afghanistan conflict, the U.S. Congress did not ratify the SALT II Treaty. Many, including future president Ronald Reagan, saw the Afghanistan invasion as a failure of the *détente* policy. According to Crockatt, members of the Carter administration viewed the *détente* in skeptical terms (Crockatt 1995). Reagan, who defeated Carter in presidential elections, had a firm conviction that the United States had capitulated to Soviet pressure during the previous administration, and that the Soviet threat was global. Not surprisingly, the Reagan administration ended the détente, at least as it had existed in the 1970s. The first term of the Reagan administration was, in fact, one of renewed confrontation with the Soviet Union, which President Reagan called an "evil empire." Even before he announced the Strategic Defense Initiative (SDI) missile defense system, Reagan's aggressive,

confrontational policy towards the Soviet Union was clear for all to see. In May 1982, the president said that the United States was not legally committed to the SALT treaty. In June of that year, he initiated the first arms sale to China, thereby irking the Soviet Union. In August, he announced the stockpiling of the neutron bomb. The "evil empire" speech of March 9, 1983, was quickly followed by the announcement of the SDI "Star Wars" defense system (Young 1999: 56-58).

Reagan's second term as president was different in attitude and policy from his first term. However, the second Reagan term saw a shift in that policy – one marked by a new "thaw". Determining that the United States had regained its military and geopolitical position through a huge military build up, Reagan now asserted the need for dialogue with the Soviet Union. Soon after his election victory in November 1984, the administration announced that Secretary of State George Schultz and his Soviet counterpart Andrei Gromyko would meet in Geneva. That meeting resulted in the agreement for START, INF, and Defensive Systems talks. There were as many as five meetings between Reagan and Mikhail Gorbachev, his Soviet counterpart who came to power in March 1985. Gorbachev, leading domestic Soviet reforms with his policies of *glasnost* and *perestroika*, also was more open to arms control and arms reduction, calling several times for an end to nuclear arms. Gorbachev's aim of *glasnost* (openness in Russian) was to bring about openness and bring greater self-criticism to bear in Soviet society so as to root out inefficiency and corruption in government and society. As a consequence of the policy, the press became freer, industries were made self-managing, and government bodies opened to plural voting (Young 1999: 248). *Perestroika*: Gorbachev's policy of "restructuring" Soviet society, to encourage better management, worker discipline, and use of technology. He saw it not as a way of changing Soviet society fundamentally, but rather restoring Socialism to the way of Lenin (Young 1999: 260). Gorbachev's domestic policies deeply affected Eastern Europe and encouraged the downfall of many communist regimes in Europe, which were already under pressure since the early 1980s. Consider the beginning of the Solidarity Movement in Poland in 1980 and the first multi-candidate elections in Hungary in 1985. Gorbachev's domestic policies helped foster the tearing down of the Berlin Wall in 1989 (Brands 2001: 185-186). The Cold War, which had lasted over four decades, thus ended with a speed that was foreseen by few.

4.5.2 MILITARY CONTEXT

With the abolition of the draft in 1972, the Army was converted to an all-volunteer force (VOLAR) in 1973. The Vietnam War had rendered the forces in Europe weak, even though the defense of Europe had ostensibly been the major mission of the American military overseas. Whatever the stated mission of the American military may have been, the Vietnam conflict had become, in the late-1960s, the implicit mission of its armed forces. As mentioned above, the Soviet Union had perceptibly augmented its military and had reached nuclear parity. The Arab-Israel conflict and the Afghanistan invasion had provided military planners important information on the nature of future conflicts. These and other important factors fostered a major reorganization of the Army through the 1970s and 1980s.

The combat readiness of all Army units towards the end of the Vietnam conflict had severely declined, particularly in Europe. The U.S. Forces associated with NATO had deteriorated, since meeting the needs of troops in Vietnam was the primary concern for the Army. Although the Army had four divisions in Europe as before, they were chronically short of staff and money for the maintenance of equipment and troops. Not only had the Vietnam War sapped valuable

resources from the European resources, but it also had revealed weaknesses in the Selective Services Act, 1940, to preparing for modern warfare. Earlier training concepts were tied directly to the mobilization of a growing conscription force around a nucleus of a small standing Army. Training was designed to teach a mass number of draftees the basic skills to serve in a unit. All training was conducted under the Army Training Plan, which dictated the contents and duration of the training courses. The plan did not contain specific standards of proficiency (Center of Army Lessons Learned [CALL] 2003). The Vietnam War, with the rapid turnover it entailed of personnel, had exposed the flaws in this system. The soldiers sent to the Southeast Asian theater during the Vietnam War were not properly trained to do their individual tasks. Even units sent to Vietnam could not perform adequately or complete the unit training cycle. According to an analysis by CALL, Ft. Leavenworth, the reality of the training prior to 1973 was that the Army was preparing for the World War II scenario (CALL 2003).

During the same period, the Soviet Army was improving in quality and growing in quantity. Moreover, the nature of conflict was changing. The Yom Kippur War of 1973 brought the realization that Soviet weapons systems had become increasingly sophisticated and more lethal. From that war, the United States learned that the Arabs, equipped with Soviet weapons, were able to inflict heavy damage to the Israeli forces. However, it also learned that the outnumbered Israeli military was able to hold its own and overpower the enemy by virtue of its technological superiority (CALL 2003). All these pointed to the need to reorganize and strengthen the Army and be prepared for new types of conflict in the future.

Starting in 1970, the government and military planners began taking several steps to address these problems. In April 1970, President Nixon proposed that the nation start to move in the direction of an all-volunteer Army and end the Selective Service. Responding to the President's proposal, the Army, the service most dependent on the draft, instituted a Modern Volunteer Army Program in October 1970 (Hermes 1989: 618). The principal task of the program was to increase levels of enlistment, reenlistment, and officer retention in both the active and Reserve forces. Besides the enlarged recruiting effort, which included substantial advertising and publicity campaigns, the program consisted of a variety of steps designed to promote professionalism within the Army and to raise the quality of life for its individual members (Hermes 1989: 619). Over the next three years, the number of conscripts steadily reduced, both because of the gradual pullout from Vietnam and also because the draft was being phased out. In 1970, the year when President Nixon made his announcement, 162,746 soldiers were drafted. In 1973, only 646 soldiers were drafted into the Army. The last man inducted into the Army was on June 30, 1973 (www.sss.gov 2003).

The Army instituted organizational changes that also began to be realized in 1973. In 1973, the Army replaced CONARC and the Combat Developments Command with two new commands, namely TRADOC and FORSCOM. TRADOC was responsible for all of the Army's branch schools, initial entry training, ROTC program, and the Command and General Staff College, as well as smaller schools. FORSCOM was responsible for all of the Army's deployable units within the continental United States and for the supporting structure that normally functioned within a theater of operation. With TRADOC, the Army renewed its emphasis on training (U.S. Army Environmental Center : 54-56). Army planners faced a possible future conflict that would begin with little or no warning and confront allied forces with a numerically superior foe such as the Soviet Union. Between 1966 and 1980, the number of Soviet tanks had increased from 35,000 to 50,000; artillery and rocket launchers from 11,000 to 40,800. The number of Soviet

Divisions rose to 173 (U.S. Army Environmental Center: 52).Combat in such a war was likely to be violent and sustained, entailing deep thrusts by armored forces, intense artillery and counter battery fire, and a fluid battlefield with a high degree of mobility.

Army doctrine to fight this war, codified in 1976 in FM (Field Manual) 100-5, drew heavily on the experience of armored operations in World War II and recent fighting between the Arab states and Israel (Center of Military History 1989: 691-693). Future wars would be heavily mechanized, and American and NATO forces would face overwhelmingly large numbers of enemy forces. Indeed, war exercises from the 1970s appeared less focused on counter-insurgency, as had been the case in Vietnam. According to the official Army history:

From a study of about 1,000 armored battles, Army planners deduced that an outnumbered defender could force a superior enemy to concentrate his forces and reveal his intentions, and thus bring to bear in the all-important initial phase of the battle sufficient forces and firepower in the critical area to defeat his main attack. The conversion of the 1st Cavalry Division, the unit that exemplified combat operations in South Vietnam, from an Airmobile Division to a new triple capabilities (TRICAP) division symbolized the post-Vietnam Army's reorientation toward combat in Europe. Infused with additional mechanized and artillery forces to give it greater flexibility and firepower, the division's triple capabilities—armor, airmobility, and air cavalry—better suited it to carry out the tactical concepts (Center of Military History 1989: 691-693).

There were other lessons learned from combat in Vietnam that were beneficial. The Vietnam experience also played a positive part in the molding of the post-Vietnam Army, particularly in the experience of armor and artillery forces in coordinating operations with airmobile forces such as the 101st Airborne Division. Army doctrine rested heavily on concepts of airmobility that had evolved during Vietnam. Helicopters were still expected to move forces from one sector of the battlefield to another, to carry out reconnaissance and surveillance, to provide aerial fire support, and to serve as antitank weapons systems. In many respects, the role contemplated for helicopters in the post-Vietnam Army harkened back to concepts of airmobility originally formulated for the atomic battlefield of the early 1960s, but modified by combat in Vietnam. Like the Army of the Vietnam era, the postwar Army emphasized technology and firepower over manpower (Center of Military History 1989: 692-693).

4.5.3 FT. CAMPBELL, AIR MOBILE, AND AIR ASSAULT DIVISIONS

Until the mobilization for the Vietnam War, the nuclear battlefield, with the Soviet Union as the enemy, dominated missions and training at Ft. Campbell. At the time, not only was Clarksville Base actively used for storage, but its functions were also augmented by the activation of the modification center in 1961. The new airmobile and air assault concepts were tested at Ft. Campbell for the nuclear battlefield, which the Army believed would require high levels of troop mobility. The signs of change from that theme were visible with the change of organization from the Pentomic Division with atomic warfare as its primary focus to the ROAD Division capable of fighting on varied battlefields. During the Vietnam conflict, the focus of the Army shifted from the European theater to Southeast Asia, and this was clearly reflected in the deployment of the 101st Airborne to Vietnam and the new, dominant mission at Ft. Campbell of training new recruits for that war.

By the time that the 101st Airborne Division was given orders to return home in 1971, plans were underway in Ft. Campbell to close the Army Training Center. Clarksville Base was closed since 1969. The Cold War with the Soviet Union, as the rival began to dominate international policy and military planning, especially with the weaknesses of the American military to fight new types of conflict with an increasingly powerful Warsaw Pact alliance. As discussed earlier, the government and Army planners understood that apart from improving the material readiness of the Army, deeper changes affecting its organization, training, and missions were necessary. At the same time, the more successful tactical aspects of the Vietnam War, such as the airmobility concept, needed to be further developed. Ft. Campbell had consistently reflected national defense concerns through the early Cold War and the Vietnam conflict. With the end of the Vietnam War, Ft. Campbell history continued to reflect the broad, national aim making the Army a professional, well-trained and equipped force that could defeat a large enemy force.

The return of the 101st Division to Ft. Campbell was not certain at the end of the Vietnam War. When the 101st Division was deployed in Vietnam, starting in 1965, its transformation from an Airborne Division of paratroopers using fixed wing aircraft to an Airmobile Division with the helicopter as the aircraft of choice was not complete. During the Vietnam conflict, the division reorganized as the nation's second Airmobile Division in 1968. The 1st Cavalry Division was the first Airmobile Division. The 1st Cavalry Division is presently organized as an armored division. The 101st Division did, at that point, include an Airborne Brigade. As discussed shortly, the total reorganization of the division into an Airmobile Division took place in 1974, after its return to Ft. Campbell. At the end of the war, the division was equipped with 400 helicopters, for which Ft. Campbell's Army Airfield did not have the capacity (Hart 1978: 112). In 1971, the Defense Department decided that the 101st Airborne would return to Ft. Campbell, and requested $ 26.2 million to build an airfield complex to meet the needs of an Airmobile Division. This request was challenged by the House Appropriations Committee, which suggested that the 101st be sent to Ft. Stewart Georgia, where the Hunter Airfield could accommodate the Airmobile Division. The Army disagreed and pointed out that Ft. Stewart lacked the necessary housing facilities for 17,000 people and the cost of that construction would outweigh the cost of an airmobile facility for Ft. Campbell. The strength of that argument, together with the considerable political pressure from the Kentucky and Tennessee Congressmen, and Clarksville and Hopkinsville citizens, ensured that the 101st would return to Ft. Campbell (Hart 1978: 112-113; Turner Publishing Company 1995: 100).

The 101st Division returned from Vietnam at approximately 20% of its authorized strength; on the day of its official welcome, April 6, 1972, it had a total of only about 4,000 troops. Most of the personnel had been transferred to other units to complete their Vietnam cycle, or had been discharged. The shortfall in personnel in the 101st Division was not unique. As discussed in the earlier section, this was part of the problems that the Army as a whole was facing at the end of the Vietnam War. As with all other Army units, with the draft ending, the 101st Division had to reconstitute itself as a VOLAR (all-volunteer Army). The "Unit of Choice" (UOC) recruiting program had already begun at Ft. Campbell by the 173rd Brigade in November 1971. The UOC Program guaranteed tour periods of 16 months with the unit of choice. The 101st Airborne had begun the program while on duty in Vietnam, and continued it at Ft. Campbell, with an aim to recruit 10,000 volunteers. At Ft. Campbell, the recruiting program began in 1972 with a geographic area of 300 square miles. Assigning different parts of the nations to six major unit commands gradually enlarged the program. At the end of 1972, the 101st Division

had recruited 10,446 soldiers, and was on its way to achieving a combat-ready status (Hart 1978: 116 – 117).

Since returning from Vietnam, the 101st had comprised two airmobile brigades and one airborne brigade, with the airborne brigade separately deployable. Defense planners had insisted that the division serve as a quick-reaction force until a newly conceived 13-division force was combat ready. By early 1974 the 13-division Regular Army Force was deemed combat ready and contingency plans no longer required an airborne brigade in the 101st. United States Army Forces Command (FORSCOM) reorganized the division as a completely airmobile organization. The 13 divisions of the Regular Army were complemented with 8 National Guard Divisions; the "Total Army" envisaged at the time thus included a total of 21 divisions. To compensate for its loss of airborne status in recruiting, Maj. Gen. Sidney B. Berry, the commander of the 101st, decided to capitalize on the division's air assault training. He requested that the divisions' parenthetical designation be changed from "airmobile" to "air assault" and that the personnel who completed air assault training be authorized to wear a special badge. The only other airborne division in the 13- division Regular Army was the 82nd Airborne Division stationed at Ft. Bragg, North Carolina. The 101st Airborne (Air Assault) was the only division with air assault capabilities. The Army Staff approved the change in designation and eventually authorized the air assault badge (Wilson 1998: 355-356).

The 101st participated in the large-scale military exercise, REFORGER 76, in Germany in 1976. The division proved its worth by successfully encountering a much larger, fully mechanized simulated Soviet invasion. The air assault concept was successfully tested in this battlefield. With its existence confirmed by that success, the 101st became the test bed for everything involving helicopters. It received new Howitzers and the Black Hawk helicopter (first flown in 1974). It was the first unit that included the premier Apache helicopter, which began production in 1982 after extensive testing in the late 1970s, as an organic part of the 101st Division. During Major General John Wickam's command of the 101st Airborne (1976-1978), a three-phase training cycle was implemented, with one brigade devoted to general support, one to local training, and one to major field exercises. As Ft. Campbell was too small for some of the far-ranging operations toward which the division was evolving, they were carried out in Ft. Chaffee, Ft. Bragg, and part of the neighboring area, the Land between the Lakes in Kentucky. Three-phase training continues at Ft. Campbell's Air Assault School to the present day. The typical length of the cycle is three weeks, with one week devoted to each of the phases as described on the Internet site of the school (http://www.campbell.Army.mil/aas/air_assault_school.htm). The modernized division trained in the Middle East in the 1980s, and since 1982 have been, and continue to be, part of a rotating peacekeeping mission in the Sinai region (Turner Publishing Company 1995: 100-101).

Major construction and improvements at Ft. Campbell in the 1970s (involving 623 real properties) and 1980s (involving 135 real properties) focused on housing and community facilities as well as aviation and training facilities. The changed role of the 101st Airborne to an Air Assault Division necessitated the construction of new aviation facilities. The real need for more housing, service facilities, and barracks necessitated major construction in the cantonment area in the mid-1970s. Not the least, the make-up of the all-volunteer Army was different from the conscripted Army. Professional VOLAR soldiers remained in the Army for longer terms than did conscripted soldiers and tended to be older men and women with families. One of the goals of the VOLAR program was a higher retention of officers and NCOs,

for whom better quality housing than what was currently available at Ft. Campbell would be required. The improvement and expansion of service, community and recreation facilities at the post went hand-in-hand with the expansion of family and troop housing.

The spate of construction and improvements that took place at Ft. Campbell from 1972 to 1978 began with a new management program initiated by Major General Cushman in 1972 called Operation Improve (Hart 1978: 126-127). Operation Improve helped identify a variety of problems on post, including those related with on-post crime, education, handling of new personnel, soldier's pay, their living conditions, and the condition of physical facilities. A most pressing problem identified, after the first ever "Town Meeting" held on March 22, 1972, was inadequate housing (Hart 1978: 127). In 1972, there were 2,854 sets of family quarters, most of which were constructed between 1951 and 1964. A survey conducted later that year indicated that there was a shortage of 3,500 sets of quarters for military personnel. By the end of 1973, with the 101st Airborne Division reaching its authorized strength of 14,446 soldiers, there were nearly 18,000 personnel stationed at the post. The first improvements done to adequately house troops were to the barracks that were built along the western edge of the cantonment since the Korean War with a budget of $ 31,458,000. The modernized barracks, the first of which was opened in August 1973, had private and semi-private rooms instead of platoon sized bays, were air-conditioned, and had private bathrooms for senior NCOs (Hart 1978: 130). On a budget of $20, 480,000, a contract was awarded for the construction of three new company barracks, with associated administrative areas, battalion headquarters and classrooms, and dining facilities (Hart 1978: 131). The three-storied brick and concrete block buildings were completed in 1977 - 1978, and are located between Indiana and Tennessee Avenues and 54th Street. The barracks and associated structures are built symmetrically around a central open space. An adjacent, identical set of structures was begun in 1977-78 and completed in 1982 - 1983, and adjoined 50th Street (Ft. Campbell Master Planning 2003).

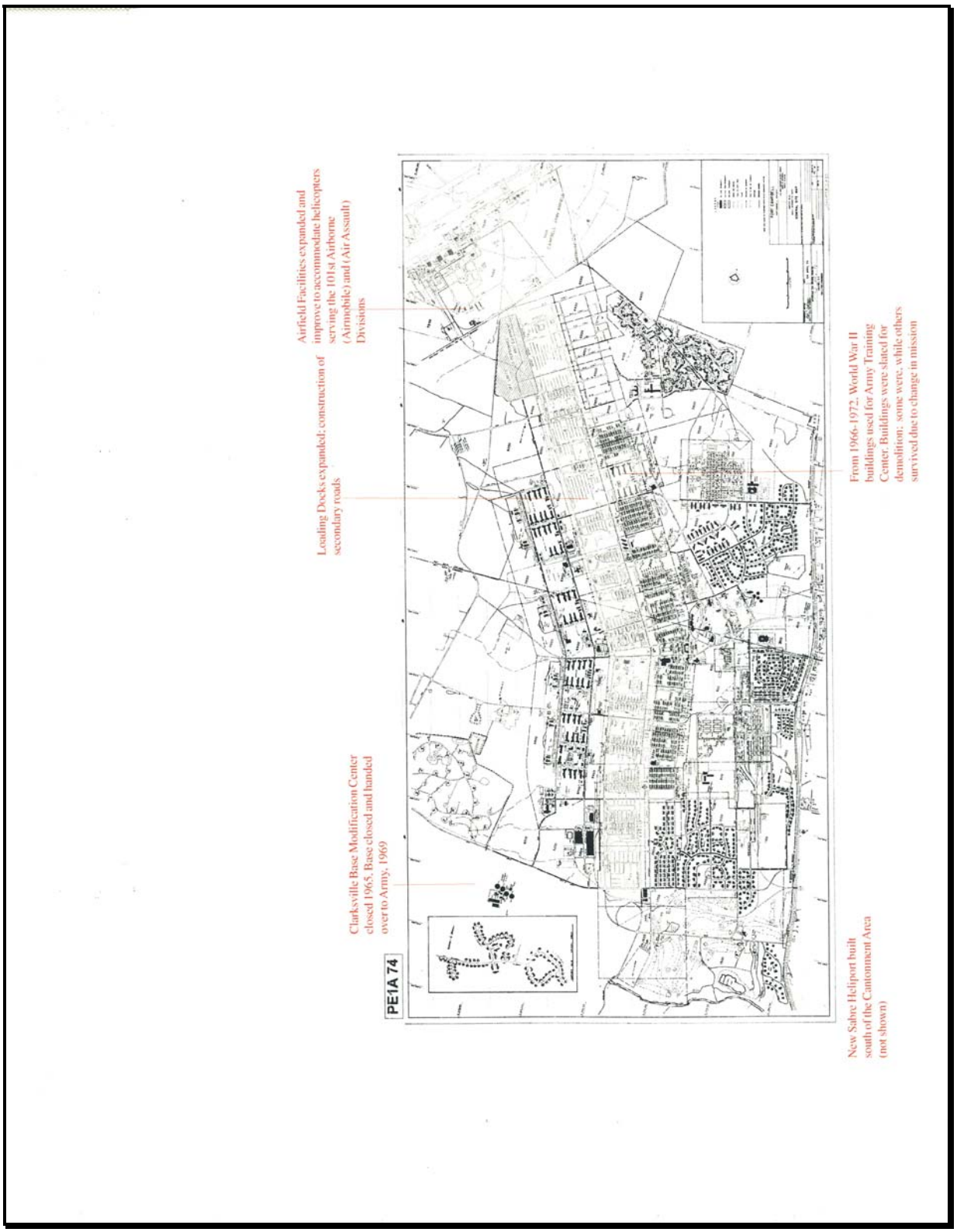

Figure 17. Layout Plan of Ft. Campbell, Following Return of the 101st Airborne from Vietnam (1974)

Major building activity for family housing was underway in 1975, with the construction of 630 housing units near the Campbell Army Airfield for the cost of $ 15,360,000 (Hart 1978: 128). The neighborhood, known as Pierce Village, consisted of 315 duplex structures with 500 three-bedroom, 100 four-bedroom, and 30 five-bedroom units. Pierce Village was the only neighborhood with five-bedroom units in Ft. Campbell at the time (Black and Veatch 1987). The neighborhood was configured around cul-de-sac streets. In 1977, a further 370 quarters for officers and NCOs were constructed in Drennen Park and Hammond Heights. Hammond Heights consisted of NCO family dwelling units configured in looping arrangements on both sides of Forest Road, close to the Marshall Elementary School and Gate 6 in the northeastern part of the cantonment. The neighborhood was developed earlier, with housing units constructed in 1957 and 1960. In 1977, 220 multi-family units were added to the neighborhood. The development in Drennen Park included 10 single-family units and 90 multi-family units added to the pre-existing neighborhood (Black and Veatch 1987: II-76). Further, 100 multi-family units were added to Lee Village, which already had over 1,000 family units located along both sides of Morgan Road. The last housing development during the Cold War, completed in 1978, was at LaPointe Village where 250, two-storied, multi-family units were constructed. LaPointe Village is located adjacent to the Campbell Army Airfield, west of Pierce Village (Black and Veatch 1987: II-79; Ft. Campbell Master Planning 2003).

With no new housing construction from 1978 to 1989, the Ft. Campbell Master Plan (Black and Veatch 1987: II-75) provides an accurate indication of the housing stock at Ft. Campbell at the end of the Cold War. The on-post housing consisted of 4,153 dwelling units, occupying a total of 1,094 acres, with an average density (Dwelling Units/Acre) of 2.7. In 1987, there were nine barracks, with 80 buildings. The peacetime capacity of the barracks was 10,886 troops. The barracks were located between 14th and 46th streets and Colorado and Kansas Avenues to the west, between 42nd and 59th Streets and Tennessee and Indiana Avenues to the east, 4 buildings at the Campbell Army Airfield, and 6 at Clarksville Base (Black and Veatch 1987: II-72). The barracks were a mix of rehabilitated World War II buildings, Korean War-era buildings, and the modular-type buildings constructed in the 1970s.

A number of community and recreation facilities were also constructed during the period 1970-1989. In 1970, several new branches of the Post Exchange opened in troop areas for easier access to soldiers, a large commissary opened in 1976, and in 1977 a new PX Shoppette also opened. The Olive Gymnasium (1974), the Gertsch Gymnasium (1978), and the Lozada Gymnasium (1978) also opened during this time, in addition to the Lee Service Club (1971), a Recreation Center (1976), and the EM Club (1984) (Ft. Campbell Master Planning 2003). Other facilities that opened during this time were a post office (1976) and two dental clinics (1977, 1979). The construction of the Blanchfield Army Hospital, a modern facility that would replace the existing World War II-era hospital, began in 1977 with an estimated budget of $ 37,000,000. The 241-bed hospital, named for the Colonel Florence A. Blanchfield, the Chief of Army Nurse Corps during the period 1943-1947, opened in 1982.

In order to provide the necessary training for air assault soldiers, the 101st began to operate several training schools at Ft. Campbell. The Air Transportability School, opened in 1973, provided instruction in planning, preparing, and loading a unit and its equipment for deployment by air. The announcement of the new Air Assault Division also signaled training facilities for that new division that opened in 1974. One of the most important schools opened at Ft. Campbell during that era was the Noncommissioned Officer Academy. NCOs had played a crucial part in the Vietnam War, taking charge of much of the combat leadership. The Army

met the acute lack of NCOs during that conflict with the initiation of two short, 10-week courses for NCOs. Senior NCOs received the program with mixed feelings, with many criticizing it for undermining the prestige of the NCO. Towards the end of FY 1971, the Army initiated a Non-Commissioned Officer Education System, designed to educate NCOs on subjects and skills to enhance their performance and skills. At Ft. Campbell, the Third Army and the 101st Airborne (Airmobile) Division opened the NCO Academy in 1972 as part of the Army-wide NCO education program. The original course, designed for platoon sergeants and squad leaders, taught drill and ceremonies, land navigation, physical training, and military leadership. Later, the Basic Leadership Course and Combat Support Courses were also taught (Hart 1978: 121-123).

Improvements were also made to the training and operations facilities at Ft. Campbell. Problems related to the inadequacy of ranges for the new divisional weapons were remedied without difficulty by improving range facilities[7]. The restructured 101st Airborne (Air Assault) Division also needed new airfield facilities at Ft. Campbell. The unit came back from Vietnam with 400 helicopters for which the post lacked the required infrastructure. The Eagle Army Heliport (later called the Destiny Heliport) associated with the Campbell Army Airfield and north of it lacked adequate facilities for 400 helicopters. This made it necessary to both expand the existing facilities at the Campbell Army Airfield and build a separate, independent airfield for rotary wing aircraft. In 1974 and 1975, several new hangers and associated buildings were constructed adjacent to the existing airfield facilities. The construction was in three phases, of which the first two were associated with the existing airfield, and the last was devoted to the construction of the new, independent heliport (Hart 1978: 136). The new buildings and structures included the following: Hangers 5, 6, 7, 8, & 9 constructed in 1974, Hangers 10 and 11, a Flight Control Tower, a Navigation Building, Airfield Operations Facility, and Fire and Rescue Facilities constructed in 1975 (Ft. Campbell Real Properties)[8]. The new heliport – known as the S Heliport - was constructed south of the cantonment area. The buildings constructed in 1976 included a Navigation Building, a Control Tower, two fire stations, and two fuel storage facilities.

Construction at the airfields continued though the 1980s. At the Destiny Heliport – the older facility, which was part of the Airfield complex - a new control tower, was constructed in 1985, and an additional hanger was constructed in 1988. At the S Heliport, later construction included a new hanger (1987) and two Company Headquarters Buildings (1987 and 1989).

The range of changes that took place in the physical development of Ft. Campbell after the return of the 101st Division were a consequence of both the broader changes taking place in the Army and those that related specifically to the training and operation of a new type of division. The VOLAR program was aimed at an Army consisting of highly trained officers, NCOs, and enlisted men, but was also aimed at providing better living conditions for the all-volunteer Army. Large-scale housing and community projects at Ft. Campbell fulfilled that purpose, and met the housing needs that were projected in Operation Improve (Figure 17). New training facilities for the Airmobile and Air Assault Divisions were for meeting the training requirements of the 101st Airborne Division – now predominantly using helicopters rather than fixed wing

[7] No information was available on the nature of improvements of the range facilities, indicating an open area for further research.

[8] Hart (1978:135-136) suggests that the construction associated with the existing airfield continued until 1976; the Real Property records show that the new buildings were operational by 1975.

aircraft (Figure 17). The NCO Academy founded at Ft. Campbell, while aimed at meeting the requirements for trained NCOs at Ft. Campbell, was a response to a larger, Army-wide problem of inadequate numbers of Non-Commissioned Officers. New construction at the airfields was necessary to fulfill the missions of a helicopter-based Air Assault Division. Improvements to ranges were necessary for the new, technologically-advanced weapons that the 101st Division both tested and were equipped. These physical changes were important because they helped recreate the post-Vietnam 101st Division, according to the Army's aim of reinventing itself as a professional, well-equipped, technologically-advanced force that could defeat a larger Army such as that of the Soviet Union.

Photograph Courtesy of the Ft. Campbell Historic Foundation

Figure 18. Aerial View of the Sabre Heliport

Most of the large-scale construction at Ft. Campbell for the Cold War period was completed during the 1970s, with the construction of 623 properties. As telling as the difference in numbers, is the difference in the physical configuration of the construction at Ft. Campbell in the 1970s and 1980s. In the 1970s, buildings were predominantly constructed in clusters, and

this was true for both cantonment as well as training and operation facilities[9]. Most of the construction, to be certain, was of planned residential communities and neighborhoods, and these have been described above. Buildings were also grouped together at training and operation areas, of which the clearest examples are at the airfields.

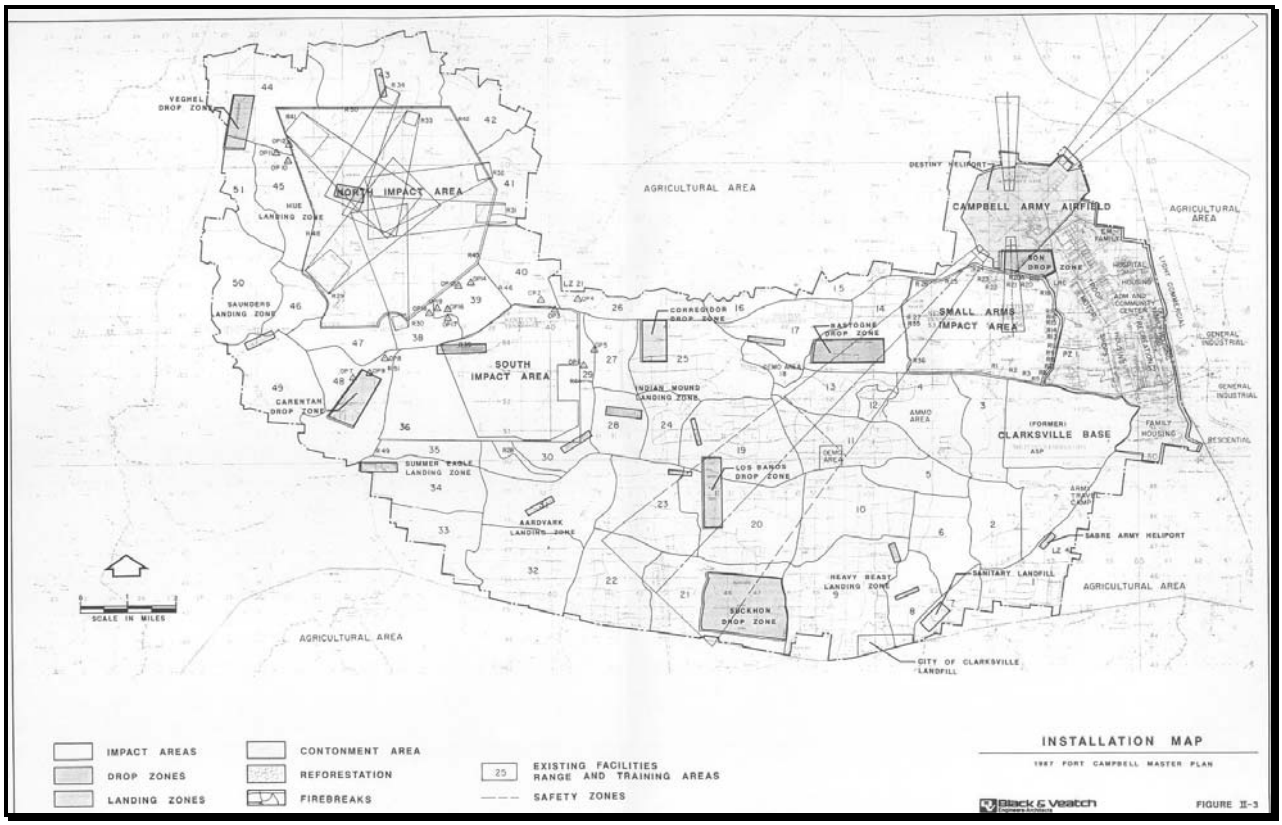

Figure 19. Layout Plan of Ft. Campbell, From the Master Plan (Black and Veatch 1987).

A cluster of hangers, control and navigation buildings was constructed at the Campbell Army Airfield, in the north cantonment area. The Sabre Heliport, with its several buildings constructed during the 1970s, was itself a grouping of buildings closely related in function. By comparison, the buildings constructed in the 1980s are scattered throughout the post, the additions, sometimes large, as in the Blanchfield Hospital, to fulfill or complement existing facilities and functions. It is telling that no new residential communities were constructed in the 1980s. The only major troop housing constructed was already planned in the 1970s. As did the earlier periods of major construction at Ft. Campbell –during the World War II mobilization, when the post was made permanent, and following the arrival of the 101st Airborne Division as a Pentomic Division - this period corresponded with significant changes in the 101st Division and the Army itself. As the 101st Division reinvented itself first as an Airmobile and later, as an Air Assault Division, so also the Army underwent massive reorganization during the 1970s. Changes in BASEOPS facilities and in operation and training facilities, as the narrative above indicates, were not just to update and improve existing

[9] The maps showing the development of Ft. Campbell during the periods 1946-49, 1950-59, 1960-69, 1970-79, and 1980-89 are included in the concluding section of this volume.

facilities, but also to meet new requirements in housing, community facilities, operation and training, and other supporting functions.

The 1987 plan (Black and Veatch) offers a clear picture of the physical development and land use patterns at Ft. Campbell near the end of the Cold War. Of the total base area of 105,027 acres, 74,816 acres were used for training and maneuver (Black and Veatch 1887). A total of 30,211 acres was used for other purposes, including BASEOPS. The built-up area land uses, as a percentage of the total area, was as follows: Administration – 0.4; Operational Training – 34.7; Operational Maintenance – 4.3; Supply, Storage, and Post Maintenance – 8.6; Commercial Services – 0.4; Community Facilities – 2.9; Troop Housing – 4.3; Family Housing – 7.9; Recreation Facilities – 5.7; Open Space – 30.6; and Lakes – 0.2. The Ft. Campbell Post Map included with the Master plan showed that near the end of the Cold War, Ft. Campbell appeared to have evolved to indicate peculiar zoning patterns. The cantonment area was located in the eastern part of the post in Christian and Montgomery counties. The cantonment was zoned in "strips" lined up from the west to the east. The motor shops, i.e. maintenance facilities, were predominantly located near the western edge of the cantonment, followed by troop housing, recreation, administration and community facilities, and family and officers' housing consecutively to the east (Figure 19).

5.0 CONCLUDING REMARKS FOR THE OVERVIEW AND SYNTHESIS

5.1 POTENTIAL COLD WAR PROPERTIES AT FT. CAMPBELL

5.1.1 A SUMMARY OF THE EVOLUTION OF FT. CAMPBELL DURING THE COLD WAR

Political and military decision-making, conflicts such as the Korean War and the Vietnam War, as well as other real and perceived threats to the United States and its interests, helped shape the missions at Ft. Campbell from 1946 to 1989. During the period 1946-1965, preparation for atomic warfare with the Soviet Union provided the overarching Cold War Historic Context. American involvement in the Vietnam War, apart from developments peculiar to the post, changed the historic context for Ft. Campbell. Atomic warfare was no longer the main issue, nor was the Soviet Union the only enemy. The Cold War specificity that nuclear conflict had given some properties at Ft. Campbell until the mid-1960s was lost in the later period. The 1970s were a period of transformation for the Army from a weakened force following the Vietnam conflict to a well-equipped, professional one. Although the new Army was ready to fight troops vastly superior in numbers such as the Soviet military, it was in fact well prepared to fight a variety of conflicts at different scales. As the Cold War gave way from threats of the use of force to negotiations and treaties signaling its end, so also the Cold War Historic Context at Ft. Campbell diminished.

General Information Maps and Master Plans from the 1940s indicate the physical development of the post before it became a permanent facility. The cantonment was set up along the eastern edge of the post, stretching along Highway 41. The wood-frame, World War II-era temporary buildings stood along Indiana and Kentucky Avenues. As was typical of posts for World War II mobilization, the facilities included chapels, clubs, recreation and education facilities, and the necessary, if temporary, infrastructure to house troops in a self-sufficient manner. Among these, the only building that had an air of permanence was the extensive, multi-winged hospital of brick construction. North of the cantonment was the Campbell Army Airfield, which was to become an Air Force facility before it was transferred back to the Army. With the railway line that extended to the airfield, and the proximity to the highway system, the post appeared to have been well placed for the transportation of materials and deployment of troops. Clarksville Base had been constructed in 1948. With the impending permanent status for the post, plans were under way in the late 1940s for construction in the cantonment area. The existing layout of the post served as the basis for new construction.

Ft. Campbell was established in 1950 as home to an armored division. The 1950s saw changes in BASEOPs as well as training and mobilization facilities. The post changed from a temporary one for training, deploying, and demobilizing infantry troops, to a permanent station for airborne divisions. Drop zones and other training areas were constructed specifically to fulfill the training requirements of the 11th and later, the 101st Airborne Divisions, seen as a vital force to counter the Soviet threat. The new Pentomic Army concept of the mid-1950s may have had an impact on the development of training areas, the character of which points to, as the next section indicates, an open research question. Towards the end of the 1950s, the Airfield, now in the control of the Army, laid out plans for increased rotary wing facilities. This foreshadowed the increasing importance of the helicopter for an “airmobile” armed force.

In the late 1950s, Clarksville Base saw large-scale increases in storage facilities, incorporated the maintenance and testing of weapons components, and new facilities were constructed there for that purpose. The Air Force Base, which had seen improvements and new construction in the 1950s, was transferred to the Army in 1959. This signaled a period of new construction there, importantly for rotary wing aircraft. This period also saw significant improvements and changes within the cantonment. During the Korean War and its immediate aftermath, barracks were constructed along Kansas (Desert Storm) Avenue and Colorado Avenue, west of the World War II structures and the railway line. The existing Korean War-era billets may be identified quite easily by their location, box-like forms, and cinder-block construction. The post also benefited from Wherry-era housing constructed east of the World War II structures and in close proximity to Highway 41.

The Pentomic Army concept was rejected in the early 1960s in favor of the more flexible and multi-faceted ROAD Divisions and this change was implemented at Ft. Campbell. During this time, the Campbell Army Airfield saw the construction of additional permanent hangers and an aircraft ramp. Maintenance and ammunitions storage facilities also were constructed during this time. The large-scale construction of residential neighborhoods, begun in the late-1950s continued though the early 1960s. The incorporation of additional units within the ROAD Divisions meant a qualitative change in the population of the post, with an increased number of officers. In 1965, the Clarksville Base Modification Center was closed, and the base itself was closed and transferred to the Army in 1969. This period saw the construction of new battalion headquarters and additional recreation facilities, including theaters and the NCO Club, at Ft. Campbell. While many of the buildings from this period continued to be functional structures, there was a greater variation in style, materials, and aesthetic quality of the architecture. Buildings like the Mann Theater and the NCO Club followed the trends of modernism in architecture. Some were finished with stucco, while others were of concrete sheathed with a brick veneer. Yet others such as aircraft hangers were constructed of industrial materials. The mid- to late-1960s saw the 101st Airborne leaving for Vietnam and the base being used for basic training. World War II temporary structures, slated for demolition, were instead restored for use as troop housing and training and schooling purposes. Additional training areas and other facilities were constructed specifically for basic training, while existing ones improved. Most of the construction for the decade was over by 1965, with only 35 existing buildings constructed since the 101st returned from Vietnam in the 1970s as a unit that had extensive experience in the airmobility concept and the use of helicopters during combat. Upon their return, the mission for the division was further modified as an Air Assault Division. Through to the end of the Cold War, attention was paid to strengthen the Army and incorporate the use of high technologies. The most significant construction during that period related to the airfield facilities. The existing Campbell Army Airfield was significantly enlarged to accommodate helicopters. An additional, independent heliport – the Sabre Heliport - also was constructed as a self-sufficient facility. At the cantonment, new housing was constructed for the voluntary Army. This was the last phase of major building activity until the end of the Cold War. The 1980s saw the openings of several buildings, but these were interspersed throughout the cantonment to fulfill new and complement existing post functions.

Installation histories, maps, Master Plans, and Architectural Drawings archived at different PWBC departments at Ft. Campbell help explain the development of the post over the Cold War years. It appears that the World War II layout of the post had a continuous impact on the future development of the post. Yet, different periods in its history saw the growth and development of different parts of the post. Moreover, there were, on occasion, significant

variations in the use of construction materials, and in aesthetics of buildings and structures from different periods, and these variations are visible in Ft. Campbell buildings in the following way: The existing one-and two-story, wood -frame World War II buildings, with pitched roofs and individual concrete footings, are found between Indiana and Kentucky Avenues. The Korean War-era billets, three-story concrete frame, cinder-block structures, are found further west. Within the overall scheme are buildings such as the NCO club representative of a modernist style in vogue during the time of their construction in the 1960s. The lists of real properties from different periods of their construction have been included in the relevant parts of the Overview and Synthesis.

SECTION III

PROPERTY TYPES, MANAGEMENT CONCERNS AND RECOMMENDATIONS

6.0 IDENTIFYING FT. CAMPBELL COLD WAR AND COLD WAR-ERA PROPERTIES AND PROPERTY TYPES

The Overview and Synthesis has helped discern that the most significant period at Ft. Campbell related to the Cold War theme was from the mid-1940s to the mid-1960s. During this period, the concept of atomic warfare and the mission of maintaining nuclear superiority over the Soviet Union were reflected in the Pentomic organization of the Army and at the Clarksville Base nuclear storage facility. In the 1960s, the emphasis began to shift from nuclear warfare to conflict in a variety of conditions and from Europe as a potential theater for conflict with Soviet forces to other threats and theaters, such as Vietnam. The change in organization of the 101st Division from a Pentomic Unit to the new ROAD Division signaled the end of the emphasis on nuclear warfare. The closing of the Clarksville Base Modification Center in 1965 and the storage facility itself in 1969 marked the end of an era when a large facility within the boundary of Ft. Campbell was devoted almost exclusively to nuclear defense, and primarily against the Soviet Union. Although the Soviet threat remained important until the end of the Cold War, at Ft. Campbell it did not regain the level of significance it had until the mid-1960s.

This study has maintained consistency with the large-scale studies and policy regarding Cold War-era properties developed by the Army. As discussed in Section I of the Overview and Synthesis, the studies provided the distinction between Cold War and Cold War-era properties. Accordingly, while Cold War properties are historically significant, Cold War-era properties are those built during the same time period but not relevant to the Cold War Historic Context, nor significant for association with the Cold War. Usually, all the properties related to BASEOPs, such as housing, administrative, medical, recreational and educational facilities are considered to be Cold War-era properties in that they did not contribute directly to, nor were they consequences of, the Cold War. On the other hand, facilities related to training, deployment, testing, research and development, and command and control, and which were essential to the Cold War, may be eligible for NRHP. This classification is important because it helps identify the particular Cold War properties and property types among the many Cold War-era properties at posts such as Ft. Campbell. Moreover, the U.S. ARMY ENVIRONMENTAL CENTER technical document, *Guidelines for Documenting and Evaluating Historic Military Landscapes*, suggests what may be expected of Army Cold War properties in very general terms. Construction during the Cold War involved integrating new missions at existing posts. Cinder-blocks replaced wood-frame construction in many buildings. National trends in architecture were followed, but often overshadowed by utilitarian functions. Often, exteriors of the buildings offered few clues about their interior arrangement. These general characteristics appear to be applicable to Ft. Campbell buildings from the time.

While most of the buildings at Ft. Campbell are Cold War-era properties, the overview and synthesis also indicated that the post was significant to Cold War history. Seeing the Ft. Campbell Historical Context developed in the Overview and Synthesis in the light of Table 1.0: Cold War Themes, makes it clear that the post had an important part during the Cold War. Indeed, it contributed to all three categories outlined in the table, i.e., General Themes, Army Specific Themes, and Military Property Themes. In particular, the Campbell Army Airfield, as a Strategic Air Command Base during the 1950s, and the Clarksville Base atomic weapons storage facility were important Cold War facilities. As home to the Clarksville Base atomic weapons

storage facility at least through the mid-1960s, Ft. Campbell was part of the arms race with the Soviet Union, and helped provide the muscle for the policies of containment and massive retaliation. Simultaneously, the SAC Air Force Base helped provide the necessary readiness in case the nation became embroiled in a hot conflict with its Cold War rival. Ft. Campbell thus provided a means to maintain, with the Soviet Union, a Balance of Power. Especially during the 1950s, Ft. Campbell also helped the United States *prepare for a "hot" nuclear war*, with its stockpile of atomic weapons at Clarksville Base and with the training of the Pentomic Division. The training of the Pentomic Division was Army-specific, and was the *Mission Focus* of Ft. Campbell, from 1956 to the mid-1960s division reorganization and the deployment of the 101st Division to Vietnam, as the adaptation of conventional forces for nuclear war.

The significance of Ft. Campbell to Cold War history was three-fold, then. First, it was significant since it housed an atomic weapons storage facility. Second, it was significant to Cold War history because it was home to an SAC airbase. Third, Ft. Campbell was also home to an Airborne Pentomic Division during the 1950s. Existing properties related to each of these three historical facts may be considered Cold War properties, provided they retain their physical and historic integrity. Let us consider each of these elements to see if there are known Cold War properties associated with them.

Campbell Air Force Base as an SAC facility

Although the Air Force Base was an SAC facility during the 1950s, it has been considerably modified since the Army took it over. The overview and synthesis clearly indicates that starting from the early 1960s, a large number of buildings, hangers, infrastructural and other facilities were constructed for rotary wings aircraft. Since 1959, the airfield, as it was now called, was no longer an SAC Base. Further large scale construction and modifications at the base continued during the 1970s, especially following the Vietnam War. While Figure 9 above indicates the arrangement of the Air Force Base in 1952, Figures 10, 11, 12, 16 and 20 indicate the changes that took place since. GIS data available indicates that the modernization of the airfield did not stop with the end of the Cold War, but has continued into the 21st century. In BHE's opinion, the airfield no longer retains its integrity to its Cold War history due to the magnitude of changes and later construction.

Pentomic Division and its Training

The overview and synthesis clearly indicates that the 101st Airborne Pentomic Division did train at Ft. Campbell among other locations. Some of the existing training facilities were constructed and operational during the Cold War, while others, constructed during World War II, were subject to continued use, possibly modified to suit airborne instead of armored divisions. Only those properties used for training significant to the Cold War can be considered as potentially eligible for NRHP listing. Based upon available information, there is little to indicate that the training areas were designed or customized specifically for training troops to fight in an atomic battlefield. There was no available information, for instance, if a nuclear battlefield was ever simulated in Ft. Campbell to train the Pentomic Divisions. As the training and other areas remain in use in the present day, it seems likely that they either have been modified or were not designed specifically for Cold War conflict. Based upon available information, it is not likely that these areas constitute significant Cold War properties.

The same is true for other infrastructural facilities used for training and operation. The railway line, along with the infrastructure of loading docks, motor pools, and other related properties, all visibly connected with the Campbell Army Airfield, also may be significant as part of the mobilization and deployment scheme during the Cold War, but were not, based on currently available information, designed specifically to meet Soviet threats. Indeed, they remained functional after the Cold War and were used during the 1991 Gulf War and during more recent conflicts disassociated with the Cold War.

Indeed, Clarksville Base, which the Tennessee Historical Commission has concurred as eligible for NRHP listing as a historic district for its early Cold War significance, is the only known part of the base with several Cold War property types. The remainder of this section is devoted entirely to Clarksville Base, and includes a historical review of the facility, a description of the facility and its components, the definition of its various Cold War property types, threats and management concerns to the base, its components and properties, and recommendations for their maintenance and management.

7.0 CLARKSVILLE BASE HISTORIC DISTRICT

7.1 HISTORICAL REVIEW

Clarksville Base has been referred to in several sections of the overview and synthesis (Section II) of this report. In order to grasp the significance of Clarksville Base to the Cold War, it is valuable to summarize the historical information that is available on this high security facility. Clarksville Base was the second of the thirteen early atomic weapons storage facilities constructed in the United States during the Cold War (www.globalsecurity.org). The approximately 2,620-acre facility is located entirely within Ft. Campbell, immediately southwest of the cantonment area. Camp Campbell (renamed Ft. Campbell in 1950 after it became a permanent Army post) was established in 1942 as a 105,000-acre temporary facility to train and deploy armored divisions during World War II. Camp Campbell remained in service after World War II, and eventually became Ft. Campbell, a permanent Army post, in 1950.

There was little construction in the cantonment and other areas of the post from the end of World War II until Ft. Campbell was made a permanent post. During this period the establishment of the Clarksville Base atomic weapons storage facility within its boundary was certainly an important development, particularly in light of the important role it would play during the Cold War. The early stages of construction indicated that the base had limited weapons storage capacity though the area designated for Clarksville Base was large. Indeed, Ft. Campbell Real Property data shows only three structures, namely 7834, 7882, and 7873 were constructed by 1949 (Ft. Campbell Master Planning, January 2004). However, there were indications that a much larger and more complex storage facility was envisioned by the AEC and the AFSWP. Architectural Drawings of Clarksville Base in the collection of the Ft. Campbell Engineering Division provide more concrete evidence regarding the planning of the base. Drawings C1-101 and C1-102, dated February 19, 1947 (last revised, 1957), executed by the firm of Black and Veatch, represented what was simply called "Project 76" at the time. The development of Clarksville Base was largely limited to the northern part of the facility. Drawing C1-101, also executed in 1947 but revised for the last time in 1957, by contrast, shows that much of the infrastructure of Clarksville Base was in place by this time. These drawings give clear evidence that the base took on its shape during the 1950s.

Clarksville Base evolved, with the American atomic weapons stockpile, into a large complex of under- and above-ground igloos and other buildings and structures specifically for the purpose of weapons storage and maintenance. United States Marines guarded the facility. Operations at the base were entirely separate from the Army's Camp Campbell (Gray et al. 1998: 7). All operations at the site were classified with a "Q" security clearance, the highest level of clearance. The high levels of security at Clarksville Base, with four fences (including one electric fence) surrounding it was well-known, and as Gray et al. (1998: 54-55) point out, a subject of folklore and rumors in the local communities. The firm of Black and Veatch designed all the primary structures, including the under- and above-ground A-Structures for storing atomic capsules, B-Structures for emergency treatment of personnel, C-Structures used as inspection buildings, as well as the later S-Structures used for weapons testing and modification.

The pattern of construction at Clarksville Base from 1949 to 1952 is revealing of the development of the American nuclear arsenal itself. In 1949, the United States had a total of 250 nuclear weapons in its stockpile. The only significant construction that took place at Clarksville Base was of one Storage Igloo and one assembly and maintenance plant. The American stockpile increased to 450 warheads in 1950, while the number of storage igloos constructed at Clarksville Base during that year was 26. This situation is depicted in Drawing No. C1-102. In 1951, the United States had 650 weapons; the number of storage igloos constructed at Clarksville Base was 27 during that year. Moreover, in 1952, the American stockpile had increased to 1,000 weapons; as many as 66 igloos were constructed at Clarksville Base that year. At this point the storage capacity at Clarksville Base appeared to have met the requirements, as construction until the late-1950s was restricted to pill-boxes, shops, maintenance facilities, guard houses, a church, fire station, barracks, and recreational facilities (Gray et al. 1998: 16, 76-82). Until it met those requirements, however, the storage capacity of Clarksville Base continuously increased.

Owing to the classified nature of activities at Clarksville Base, information on its history is incomplete and sometimes, contradictory. There is an agreement among the different sources used, however, that changes were made to Clarksville Base when, in 1958, it was designated also a modification center for atomic weapons, together with the Medina Modification Center in San Antonio, Texas. According to the organization history of Pantex (www.pantex.com), Mason & Hanger won the contract for the operation of the Clarksville and Medina Modification Centers in 1958. The mission of the modification centers was to perform stockpile surveillance, modifications, retrofits, and weapon retirements. The Medina Modification Center became operational in 1959, while the one at Clarksville Base went into operation in 1961. BHE correspondence with Sandia Labs historian, Ms. Rebecca Ulrich, (Ulrich 2003) indicates that Sandia Labs was also involved with operations at the Clarksville Modifications Center. The full extent of Sandia's involvement is not clear, owing to the classified nature of activities. However, multiple sources indicate that Sandia personnel conducted the Quality Assurance and Inspection of weapons at Q-Areas (www.globalsecurity.org; Karpin and Maroncelli n.d.).

The operations for a new modification center required construction of new buildings and structures. Ft. Campbell Real Properties data indicates that seventeen new buildings and structures were constructed between the years 1956 and 1961. The Assembly/Maintenance Plant or simply, the Plant (Building 7811-A-E) was constructed during the period 1957-1961. Plants constructed at Q-Area facilities after 1954 tended to be maintenance and assembly facilities for first generation thermonuclear weapons, and were designated Plant II or B (www.globalsecurity.org). The Modification and Disassembly Plant, called the Gravel Gertie, was constructed in 1957, and was designed to withstand a 1-kiloton explosion in case a non-nuclear device accidentally went off (Karpin and Maroncelli n.d.). The S-Structure (Building 7825 A-B), also known as the surveillance structure, was constructed in 1961, according to the Real Property data (Ft. Campbell Master Planning). The S-Structure housed Quality Assurance and Inspection functions (www.globalsecurity.org). Other buildings constructed during the time were a "Q" Spares Warehouse, three shops, Assembly Plant Storage Building No. 2, a handling crew building, five barracks and dormitory buildings, a base supply warehouse, a bachelor officers quarters building, a headquarters building, and a chapel. Clarksville Base, throughout its years of operation, remained a top-secret facility. A composite aerial photograph of Ft. Campbell, prepared in 1958, shows Clarksville Base and the Air Force Base

(then fulfilling Strategic Air Command functions) blackened out, to indicate that the configuration of these was to be kept classified.

During the 1960s, Clarksville Base and the modification center also underwent significant changes, adding new functions to the storage facility before ultimately winding down operations. The Clarksville Modification Center became operational in 1961 and was run successfully until 1964 by Mason & Hanger. Judge Parker, a Clarksville resident who was part of the Clarksville Base civilian workforce, recalled during an interview (Parker 2003) that the base had been put on high alert following the Kennedy assassination. Parker, whose access at the base was restricted to certain areas, was scant on detail, indicating only that weapons seemed ready for deployment, if the need arose.

In 1964, one year after the AEC assumed control of the Pantex Ordnance Plant, that agency announced that modification centers at San Antonio and Clarksville would be closed. Modification-related activities would be transferred to Pantex and Iowa AEC plants (www.pantex.com). On September 24, 1965, the deactivation of the weapons modification facility was completed, and all remaining operations at the base were carried out by the military. According to an article in the *Leaf Chronicle*, the deactivation would in no way affect the military status of Clarksville Base, nor cause any interruption to the base's military functions. The total number of civilians employed at the Clarksville Modification Center in 1964, when it was at its peak operation, was 235 with Mason & Hanger, 24 with Sandia Corporation, and 15 with the AEC. The reason cited publicly for the deactivation of the modification center was a general reorganization program affecting four facilities. Clarksville functions were being transferred to the recently opened (January 1965) AEC Amarillo, Texas and the Burlington, Iowa plants. Owing to the secretive nature of activities and still classified information, there are variances in information on the closure of the base. While the official history of Pantex confirms the information, data available on the Department of Energy Internet site is different (http://legacystory.apps.em.doe.gov/text/link/link2.htm). According to the Department of Energy, the modification centers at Clarksville and Medina Bases were closed due to a scale-back initiated by President Lyndon Johnson. There is no information on the nature of the "scale-back", or on whether the opening of the Amarillo office was part of that program.

Activities at Clarksville Base did not altogether cease. Clarksville Base was designated as a branch office for the AEC Amarillo office in 1965. From 1965 to 1969, the base was used by the Defense Atomic Support Agency (DASA) for the storage of classified materials (Karpin and Maroncelli n.d.). When DASA discovered, in 1969, that there was a build-up of radon gas in the buildings and tunnels of Clarksville Base, it shut the base down, declared it surplus, and relinquished it to Ft. Campbell. No longer a separate facility, since 1969, Clarksville Base has been part of the Army post. There were no details available on the nature of the classified materials stored there.

During the 1960s, few buildings were constructed at Clarksville Base. As mentioned earlier in the Overview and Synthesis, an S-Structure (Facility No. 7825 A, B) for the surveillance of components was constructed in 1961 and operated by Sandia Laboratories. The list of buildings and structures in Gray et al. (1998) shows two more buildings and structures constructed at Clarksville during this time. These are a shop (7865) constructed in 1966 and a "Q" Spares Warehouse constructed in 1967. The designation Q was assigned to the high security part of Clarksville Base beyond its administration area, i.e., the weapons and weapon

component storage and maintenance area. The "Q" Spares Warehouse, located near the plant structures, was likely used for the storage of equipment and parts related to this high-security area at Clarksville Base. Neither of these properties is listed on the digital database of real properties available from the Master Planning Office. That list includes four properties that were constructed between 1960 and 1969, which are: a General Purpose Administration Building (7543) constructed in 1960, an OD Pool Service Building (7546) constructed in 1965, a Commanding Officer Headquarters Building (7565) constructed in 1960, and a storage building (7884) constructed in 1966. All but the storage building, which is in the southern portion of Clarksville Base, are near the entrance in the northwestern corner of the facility. Gray et al. (1998) do not list these four buildings in the report.

7.2 THE LOCATION AND ENVIRONMENT

Clarksville Base is located in the in the eastern part of Ft. Campbell, adjacent to and southwest of the cantonment, in Montgomery County, Tennessee (Figure 20). It encompasses an area of about 2,620 acres. Clarksville Base is bound by Ft. Campbell's Mabry Road to its north, Lee Road and 101st Airborne Division Road (101st Airborne Division Road) to the east, Jordan Springs Road to the south, and McNair Road to the west until it meets Jordan Springs Road. The main entrance to Clarksville Base is off Mabry Road, approximately one-half mile from its intersection with McNair Road. During its years of operation, Clarksville Base was surrounded by four parallel perimeter fences, one of which was electrified, and by perimeter patrol roads inside the outermost fence and the innermost fence respectively. Only portions of the original fences remain in place, while the perimeter roads, called Fence Patrol Road and Service Road are still functional. Near the main entrance, the Service Road skews away from the perimeter of Clarksville Base and also serves into the administration area in its vicinity.

The Clarksville Base properties that are most clearly visible from outside its boundaries are near the main entrance. This group of approximately 16 buildings, structures, and communityfacilities are situated on relatively level terrain when compared to other portions of Clarksville Base. They are constructed of a variety of materials, ranging from exposed brickwork to concrete blocks and sheet metal. This group of buildings was part of the Administration area, as it will be referred to here, where those entering the base would be checked for the appropriate clearance. The barracks and community facilities specific to the marines who guarded the base and the civilians who worked at Clarksville Base were also located here.

There are other ways to access Clarksville Base. Further east from the main entrance and closer to the cantonment area, Clarksville Base can be accessed via East End Road, also leading off Mabry Road. A group of warehouses, the old sewage plant located further east, and the railway unloading dock are closest to this entrance. The Texas Loop Road area in the southeastern part of the base, with the 7900 series of above-ground igloos can be reached from Jordon Springs Road near its intersection with 101st Airborne Road. Last, McNair Road is connected to the western part of the Patrol Road to provide access to the fenced-off 8000 series above-ground igloos in the southwestern area of Clarksville Base.

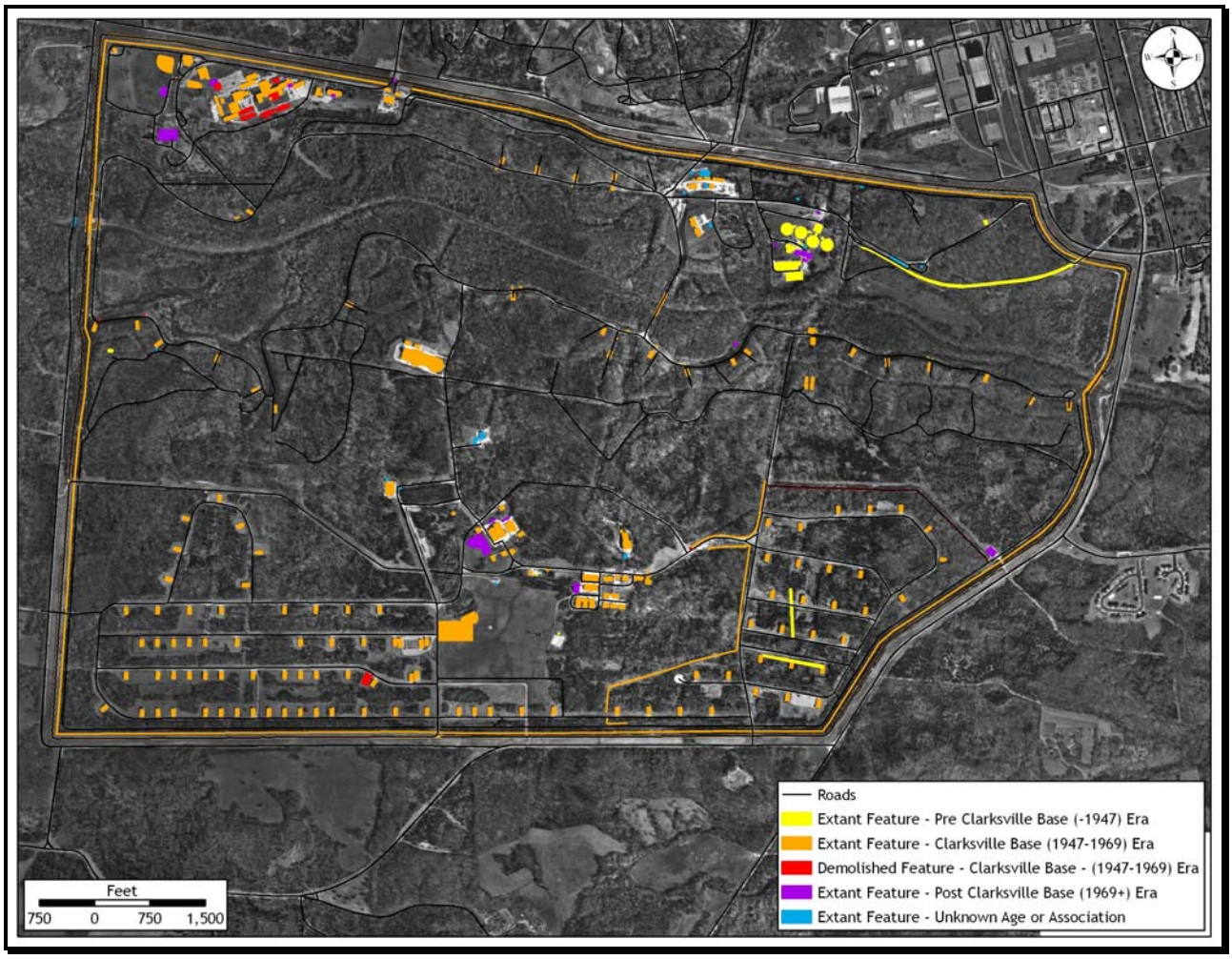

Figure 20. Current Configuration of Clarksville Base, Showing All Known Features Extant on the Base

Roads in different parts of Clarksville Base are arranged in different ways, with some looping to connect parts of the base and others laid out parallel to each other. Some roads such as Georgia and Ohio Roads which run east-west through the northern and central part of Clarksville Base are curvilinear, appearing to have been designed to follow natural contours of the undulating terrain in that part of the base. Other roads, such as those in the vicinity of the main entrance and near the centrally placed plant areas, appear to have been designed to serve groups of buildings with linked functions. Yet other roads, such as those in the relatively flat southern portion of the base, take the form of parallel rectilinear paths within a ring road. The portion of the base within the Texas Loop Road is an example of this arrangement. Finally, patrol roads encircling Clarksville Base served to help guard the facility.

The topography of Clarksville Base is varied, with the northern part of the base being steeply sloped as compared to the southern part. Running in the east-west direction through the base across its north-central area is the West Fork Creek. The creek, set in a valley and surrounded by a thick vegetation of trees, lies between Georgia Road and Ohio Road, where many of the Igloo Structures are located. The slopes of the terrain, which the roads follow, together with the thick vegetation, provide a cover for much of the storage areas. Groups of related

buildings and structures appear to have been constructed in areas cleared from vegetation. The cover of trees and the uneven terrain visually isolate one building group from another. In order to conduct a detailed survey of Clarksville Base, BHE divided the base into 7 survey areas, which are:

- Administration Area: The buildings numbered in the 7500 range were located in the northwest corner of Clarksville Base, south of Mabry Road and east of 101st Airborne Division Road. These buildings included the administrative, residential, and community functions associated with Clarksville Base.

- East/East Interior Road: The buildings in the 7600 range were located in the north and northeast part of Clarksville Base. These tended to be mainly warehouses and utility facilities such as a large sewage plant, though, as the survey revealed, they also included the rail unloading dock and administrative/maintenance facilities for the 101st Airborne Division run by the Readiness Business Center (RBC), and an electrical distribution center.

- North and South Service Roads (Georgia Road – Ohio Road Area): The buildings in the 7700 range were storage igloos located mainly along the east-west oriented Georgia and Ohio Roads. Pillboxes to guard the igloos were located close to some of these structures. Only a few of the buildings in the 7700 range properties were utility facilities, such as those housing standby generators and pump-houses. These buildings were isolated structures, apparently not associated with neighboring properties, but rather with the base infrastructure.

- Plant Groups: Buildings in the 7800 range included the plant and maintenance and surveillance (or S-) Structures located in the area known as the south block of Clarksville Base. The 7800 range of buildings also included storage facilities, administrative buildings, and warehouses to support the maintenance and surveillance functions of the base. These structures and buildings were located in the central and south-central part of Clarksville Base.

- Texas Loop: The buildings in the 7900 range are located in the southeast corner of Clarksville Base, in the area encompassed by the Texas Loop Road. All of these are identically-planned above-ground storage igloos.

- The 8000-Group Area: The buildings in the 8000 range are located in the south-central and southwest portion of Clarksville Base. The area in which these buildings are located is fenced off. The information obtained from the Ft. Campbell Cultural Resources Program that these buildings would be inaccessible due to security concern, was confirmed during the preliminary site visit. While the field survey of this area was not carried out, all available information from other sources on the buildings and structures in the area was recorded on the individual inventory forms.

- The Boundary: Comprising the Perimeter Patrol Road, Remaining Portions of the Fence, and the East and West End Bridges.

In turn, these areas were seen to comprise of a total of 13 isolated clusters (Table 10, Appendix), each with buildings of similar or complementary functions. In this report, the clusters are referred to as:

1. Administration Area
2. Forestry Complex (located in the East-East Interior Road area)
3. RBC Complex (located in the East-East Interior Road area)
4. Sewage Plant (located in the East-East Interior Road area)
5. Rail Unloading Dock (located in the East-East Interior Road area)
6. North-South Service Road
7. Plant I Buildings (located in the Plant area)
8. Plant II Buildings (located in the Plant area)
9. Base Spares Warehouse (located in the Plant area)
10. S-Structure Cluster (located in the Plant area)
11. Louisiana Road Cluster (located in the Plant Area)
12. Texas Loop Cluster
13. 8000 Group Cluster

Of these clusters, only the sewage plant, constructed in 1942 during World War II, has no buildings significant to the Cold War context at Clarksville Base. References are made to these survey areas and clusters through the rest of this report.

8.0 DEFINITION OF COLD WAR PROPERTY TYPES AT FT. CAMPBELL

The study conducted by Gray et al. (1998) identifies seven building types at Clarksville Base, plus the "infrastructural facilities". Under infrastructural facilities, Gray et al. included not only the core facilities such as sewage, water supply, electrical, and communication systems, but also administrative facilities, community buildings, and other support structures. The core infrastructural facilities at Clarksville Base were discussed in the earlier section. The aim here is to provide a comprehensive list of property types at Clarksville Base, which includes the seven property types identified by Gray et al. as well as a more detailed classification of buildings and structures not included in those seven types. Discrepancies between information in Gray et al. and other sources have also been noted.

The seven property types listed by Gray et al. are:

A-Structures

A-Structures were designed specifically for the storage of nuclear weapons components, such as atomic bomb detonator pits (for atomic bombs) and booster capsules for thermonuclear (TN) bombs. Gray et al. identify three types of A-Structures, based on their forms and construction, at Clarksville Base – those located within a tunnel complex, those within reinforced concrete above-ground storage igloos, and those within converted, below-ground igloos. The study identifies building 7740 as an A-Structure located within a tunnel complex. Architectural drawings accompanying the text show that the A-Structure consisted of four rooms accessible from a corridor, with each room having metal shelves on which capsules could be stored.

The second type of A-Structure at Clarksville Base was built above ground. There were two above-ground A-Structures at Clarksville Base, namely Buildings 7787 and 7724, and both of them contained four independent vault rooms with 10 ft thick partition walls, and loading docks outside.

The third type of A-Structure (represented by buildings 7704, 7708, 7726, 7728, 7732, 7734, and 7746) were 7877, appears to have a false second story. Moreover, seven A-Structures, as mentioned above, were retrofitted from existing underground Igloo Structures. The drawings of the A-Structures, however, do show that the basic layout described on the Internet site, of a concrete building with four single-entry rooms accessed from a narrow corridor, was accurate.

Looking at the Gray et al. description in the light of the data provided by the Internet site, it becomes apparent that Clarksville Base had both types of A-Structures, with the above-ground structures being the A-Structures for atomic weapons detonators and the below-ground A2-Structures for the thermo-nuclear detonators. It is pertinent that the below-ground structures were converted igloos. As the Internet site makes clear, the necessity for A2-Structures was felt only after 1954, when the TN (thermo-nuclear) bomb became available. The older Igloo Structures at Clarksville Base (most of which were constructed by 1952), accordingly, were likely to have been converted to A2-Structures only later, after 1954.

Figure 21. Front Entrance of A-Structure (Building Number 7724) on Clarksville Base

B-Structure

The medical wing, a set of three small rooms located at the end of a 50-ft long corridor in building 7740, was known also as the B-Structure. The rooms were characterized by tile-lined floors, an emergency shower for decontamination, and explosion proof lights.

C-Structure

Personnel working in Q-Areas used C-Structures to maintain the pits and capsules stored in the A- and A2-Structures. The early atom bombs required polonium/beryllium detonator pits to generate the explosive sequence. Polonium-210 had a half-life of 138 days, which meant that the pits had to be replaced periodically. The later TN bomb required a sealed neutron initiator rather than the polonium/beryllium pit. The TN initiators still required periodic disassembly to verify the integrity of fissile material (www.globalsecurity.org).

The Gray et al. report on Clarksville Base partially differs from the www.globalsecurity.org description of the functions of the C-Structure. According to Gray et al, the new types of sealed initiators did not require routine maintenance, and therefore, after 1960, when the old detonators had been phased out, all activities at C-Structures ceased. Gray et al. do not provide a source for the information in their report. In the light of the information from other

sources mentioned above, if the activities ceased at the C-Structures, it would not be for the reasons cited above. With the close association of material stored in the A- and A2-Structures, it is not surprising that at Clarksville Base, these two types of structures were either within the same complex, as in building 7740 (which also included the B-Structure) or in close proximity, as that of building 7874 with the other A-Structures.

Assembly/Maintenance Buildings (Plant Buildings)

Two types of Plant buildings – Plant I (or A) and Plant II (or B) were constructed at weapons storage facilities such as Clarksville Base. Plant buildings were used for the maintenance of the non-nuclear components of atomic and nuclear weapons. Plant I buildings were generally constructed prior to 1954. Plant II buildings were used for the maintenance of non-nuclear components of TN weapons, and were constructed after 1954 (www.globalsecurity.org).

Figure 22. Plant I Structure (Building No. 7834), Looking South

Clarksville Base has both Plant I and Plant II buildings constructed during the periods 1949-53 (Building 7834) and 1957-60 (Building 7811), respectively. It should be pointed out that the Plant Structures were not stand-alone, self-contained buildings, but were structures that required ancillary facilities such as battery charging buildings, warehouses and storage facilities, and office and administrative spaces. At Ft. Campbell, as will be detailed in the

survey report, both Plant I and Plant II Structures were located with groups of support buildings.

Figure 23. Plant II Structure (Building No. 7811), Looking Northeast

S-Structure

The S-Structure (or Surveillance Structure) was an additional maintenance building to augment quality control by separating routine maintenance and assembly functions performed in Plants I and II from other distinct quality assurance activities. The S-Structure contained electrical and mechanical bays, a calibration room, and a photography laboratory. At Clarksville Base, Building 7825 is the S-Structure. It is located on Louisiana Road, roughly midway between the two Plant Structure building groups.

Igloos

According to the available data, there are 115 storage igloos at Clarksville Base, making this the most prolific building type there. The storage igloos were meant strictly for storage of atomic and TN weapons (the nuclear or atomic component as opposed to the non-nuclear components) and weapons parts. No assembly/modification or surveillance activity took place there. Of the igloo structures, 19 are underground, constructed into existing hillsides, while the rest are above-ground, earth covered structures.

Figure 24. Above-Ground Storage Igloo (Building No. 7917), Looking North

Modification/Disassembly Plant

Although this has been described as a separate structure, it is in reality a part of the Plant (II) Buildings complex. The Modification/Disassembly Plant was commonly referred to as "Gravel Gertie"; its main room is a concrete, circular-shaped plan with a conical roof and an attached underground storage tank. The Gravel Gertie was connected with the Plant Buildings via a tunnel-like corridor. The Gravel Gertie was used to disassemble high-explosive shells from the nuclear assembly components. A wire-mesh that contained several tons of gravel was placed over the roof of this structure. In case of an accidental explosion, the energy in the explosion would be dissipated in lifting the gravel, which would also act as a filter to absorb radioactive material before it was released into the atmosphere (Gray et al. 1998). When Gray and her team were conducting their survey of Clarksville Base, the Gravel Gertie was sealed off due to the presence of contaminants. However, BHE was able to visit the Gravel Gertie in 2003, and found the structure, now off the hazardous buildings list, to be in a disused condition.

There were several other property types at Clarksville Base constructed during the years of its operation. While these properties did not partake in the primary missions at Clarksville Base (storage and maintenance of atomic and TN weapons), they nonetheless provided support to the base and its tenants. In order to obtain a more in-depth understanding of Clarksville Base for developing a management plan for the historic district, a finer-tuned classification of these

property types is needed beyond that provided in the Gray et al. report. The other property types at the base that also need to be discussed are listed below:

Administrative Facilities

The main complex of administrative buildings at Clarksville Base is located near its main entrance. The administrative buildings are typically functional and modernistic in character, constructed of brick, drywall with brick veneer, or cinder-blocks. Often, the functions of administration were combined with other functions as in building 7523. This large block includes office space, barracks for unmarried soldiers, and a mess hall. Administrative facilities were also located elsewhere at the base serving specific groups of buildings. The Plant groups of buildings have their own administrative areas, either combined with the Plant building (in Plant II) or as a separate property (the Plant I group).

Residential and Community Facilities

Residential and community facilities were located near the main entrance to Clarksville Base alongside the administrative facilities. There were seven buildings housing barracks, of which three (7520, 7523, 7580) remain standing, while four have been removed. Other community facilities included a recreation club, dining facilities, basketball and tennis courts, as well as playfields. A church, (the Hope Chapel, Building 7514) was also located within this complex of buildings. As mentioned earlier, all the community facilities located near the main entrance were fenced off and separated from the rest of the base. The residential and community buildings were typically functional, modernistic buildings constructed of brick, drywall with a brick veneer, or cinder-blocks[10].

Warehouses and General Storage Facilities

Warehouses and general storage facilities are scattered throughout Clarksville Base, associated with various clusters of buildings and structures. A majority of these facilities were constructed out of metal sheets, giving them the appearance of temporary facilities, although there are some warehouses and general storage facilities built of sturdier materials such as concrete.

Security Buildings – Guardhouses and Pillboxes

Apart from the guardhouse (building 7502) at the main entrance, there were guardhouses within Clarksville Base, in particular, near the South Plant area and associated with the S-Structure. Guardhouses were typically simple, constructed of brick or cinder-blocks. Pillboxes were placed only at certain locations, which may have had particular significance for security. In total, there were five pillboxes, one (7707) on Georgia Road and four (7721, 7723, 7731, 7733) on Ohio Road. Pillboxes could be either entirely above ground or partly below ground. All the pillboxes were located near either A-Structures or storage igloos.

[10] Apart from the barracks located at Clarksville Base itself, additional family housing for Clarksville Base officers and enlisted men was constructed at Ft. Campbell between 1957 and 1960. Gardner Hills was located south of the cantonment area and adjacent to the Little West Fork Creek. It was composed of 232 dwelling units, including one unit for a senior officer, 41 units for field grade officers, 28 units for company grade officers, and 162 units for enlisted men. There were 134 two-bedroom, 92 three-bedroom, and six four-bedroom units at Gardner Hills (Black and Veatch 1987:II-79). Gardner Hills is outside the boundary of Clarksville Base.

Figure 25. Pillbox (Building No. 7721) Located In Front of Underground Storage Igloos

9.0 SUMMARY OF THE CURRENT CONDITION OF THE CLARKSVILLE BASE HISTORIC DISTRICT

The Clarksville Base Historic District retains its integrity, although it has not served its historic purpose for over three decades. There have been changes to Clarksville Base since it was transferred from the Navy to Army command in 1969. Portions of the original fence around the boundary of the base have been removed. East End Road has been extended north to Mabry Road, to provide another access to Clarksville Base. The original boundary has itself not changed. Although a few properties, landscape elements, and features have been added, some altered, and yet others removed, the overall site-plan and layout of the base retains its historic character. With all the building clusters intact, the street layout largely unaltered, and only minor alterations to the landscape, the environment of Clarksville Base continues to demonstrate it historic significance.

Buildings that were part of the atomic weapons storage facility remain clearly identifiable as such. Old architectural drawings and the available Real Property data on Clarksville Base properties helped identify demolished properties and new construction. Properties at Clarksville Base have generally remained intact and have retained their historic integrity, though their uses have changed. Two properties that were of primary significance[11] to Clarksville Base's mission need to be mentioned as their conditions have altered significantly. Property 7740, important since it included A-, B-, and C-type Structures, is listed as hazardous. Plant II building 7711, including the Gravel Gertie, has, deteriorated due to lack of use, as has the rail unloading dock. The building exteriors, on the other hand, have not been altered significantly, and they continue to reinforce the historic character of the district. The varacity that Clarksville Base has retained its integrity, with a majority of its properties in a fair to good condition, has an important implication as recommendations are made for their management. It indicates that, to a great extent, the new functions and uses of these properties are compatible with their historic character. On the other hand, some individual properties have not retained their integrity, as new uses have necessitated significant changes in form and layout, or as lack of use has led to deteriorated condition. Table 9 identifies properties that are contributing, of primary or secondary significance, and whether they have retained their integrity.

9.1 CONDITION OF THE DIFFERENT PROPERTY TYPES AT CLARKSVILLE BASE, AND RECOMMENDATIONS FOR THEIR MAINTENANCE AND TREATMENT

A-Structures

Of the six A-Structures, BHE found that three (7704, 7708, 7746), apart from the hazardous A-B-C-Structure 7740, were listed as hazardous and therefore inaccessible. The other structures were used for storage, and do not appear to have been modified in a significant way. Indeed,

[11] Properties of primary significance at Clarksville Base were those directly used for the storage and maintenance of atomic weapons and components. On the other hand, properties of secondary significance were those that supported the main functions at Clarksville Base. For instance, the A-Structures were properties of primary significance, while the ordinary warehouses were of secondary significance. This classification was developed by BHE for the *Clarksville Base Inventory and Management Plan* (Chanchani and Leary, 2006).

as mentioned above, several of the modified A-Structures (including 7704 and 7708) were originally storage igloos converted to their new uses.

Although they are not used to store the same materials as their historic uses would indicate, storage is a compatible use and the structures have not been modified in a significant way. They continue to convey their association with the early Cold War through their construction materials, form, and layout at Clarksville Base.

A-B-C-Structure

As discerned from the construction drawings for Structure 7740, the A-B-C-Structure at Clarksville Base, with its entrance recessed into existing landform, comprised of an entrance vestibule with additional security gates, which led to a lengthy tunnel-like corridor. Closest to the entrance, flanking either side of the corridor, were two rooms, the smaller B-Structure and the larger C-Structure. The tunnel extended approximately 567 ft in length, at the end of which were four compartment-like rooms comprising the A-Structure. The entire length was connected with electrical and ventilating systems, and there was plumbing provided for the B-Structure, which was the medical wing. Counters and shelves were built for the personnel to work on, and an underground water tank (7741) was also provided to supply water. Two pillboxes located across from the A-Structure were used to guard it while it was in use. Structure 7740 is currently classified as a contaminated structure. The associated pillboxes are covered with vegetation and in need of maintenance and repair.

Features of A-B-C-Structure 7740 to be preserved:

- The approach to the structure, deeply recessed and built into existing landform.
- All original poured concrete features and elements, including the walls, the vaulted roof, and floor.
- All infrastructure, including plumbing, original furniture and fixtures, and storage shelves.
- The layout of the structure, with its tunnel and the rooms extending from it.
- The original metal security gates, both outside and inside the structure.
- The underground water tank.
- The setting, which includes the surrounding cover of vegetation, and the associated pillboxes, and the road leading to the approach.

Above-ground A-Structures

As discerned from Drawing TLC1-503 for structure 7724, the above-ground A-Structure at Clarksville Base had a platform with a built-in guard post leading, via metal security gates, to a tunnel that turned at right angles as it approached the four compartments that comprised the storage area for weapons components. The four compartments (or vaults) were accessible from a central, double-loaded corridor that extended from the tunnel. The entire facility was equipped with electrical, lighting, and ventilating systems.

Features of above-ground A-Structures to be preserved:

- The setting, including the roads, surrounding vegetation cover, and all associated pillboxes.
- The approach, the security gate, the concrete platform and guard post.
- All poured concrete features, including the walls, the vaulted roof, and the floor.
- The interior layout, including the tunnel, the corridor, and the four compartments.
- All original fixtures, furniture and shelving, and lighting, electrical, and ventilating systems.

B-Structure

The A-B-C-Structure, which it is part of, is an important part of the environment and layout of the North and South Service Road area, and is a contributing element to a cluster of primary significance. It is valuable to note that this structure has lost its integrity, not because of the uses it was put to since the base closed, but rather because of the hazardous condition that it was in due to radon contamination. Refer to the A-B-C-Structure 7740 for features to be preserved.

C-Structure

There are two C-Structures at Clarksville Base – one within the A-B-C-Structure 7740 and one in building 7874 near the Plant I area. While 7740 is contaminated, as mentioned above, 7874 is a brick-faced concrete structure that is still in use. It was not possible to verify the use of that structure as access to it is restricted. Minor changes to the exterior include the filling of openings with brickwork, which indicates that new uses may have altered the structure and affected its integrity. Refer to the A-B-C-Structure 7740 above for features to be preserved for that building. The building is currently used as a facility suitable for performing bench shop work, such as electrical, mechanical, and hydraulic repair of missiles, weapons support radar equipment, and communications and electronic equipment repair. While the interior was not surveyed due to security reasons, current uses of the property are different from the designed use, and could have resulted in changes to the interior layout.

Features to be preserved for building 7874 are listed below:

- material, openings, partitions, equipment, and infrastructure should be preserved.

Assembly/Maintenance Buildings (Plant Buildings)

While Plant I building is being used to train Special Operation Forces, Plant II building is in use partly as an administrative facility, while the rest of it is in disuse. Both buildings have retained their integrity in the exterior. Due to security concerns it was not possible to survey the interior of Plant I building. The portion of the Plant II building being used as administrative space was designed for that use, based upon a review of architectural drawings of that building. The disused portion of the building is in a neglected and deteriorating condition. However, it has not been modified in any significant way, and conveys its

association with its early Cold War uses though its form, construction materials, equipment, and security apparatus that is in place, although not functional.

Features to be preserved for Plant Building 7834:

The setting, including the approach road to the north and the surrounding vegetation, the large surfaced area to the south, the associated surrounding buildings, including those used for storage, as well as the battery plant building.

- Entrances on both the north and south faces of the building.
- The vegetation cover on top of the building.
- All original poured concrete features.
- Original HVAC, plumbing and other systems associated with the building.
- All original interior and exterior features as ascertained from the "as built" architectural drawings, including the wall finishing material, openings, partitions, equipment, and infrastructure should be preserved.

Features to be preserved for Plant Building (and Gravel Gertie) 7811:

- The setting, including the approach road to the north and the surrounding vegetation, the large surfaced area to the south, the associated surrounding buildings, including those used for storage, as well as the battery plant building.
- The south facade of the Plant Building with its concrete face and heavy metallic doors, and the contrasting north facade of the building, which takes on the appearance of an administrative and storage building.
- Entrances on the north and south faces of the structure.
- The vegetation cover on top of the structure.
- The concrete hallway along the northern part of the building that provides access to the various work spaces and the work spaces themselves, including all systems and equipment built into them.
- The Gravel Gertie, including the approach to the space from the interior hallway, the entrance on the south facade, the form and character of the interior space itself, and all systems – electrical, plumbing, HVAC, and infrastructure associated with the structure.

S-Structure

The S-Structure is currently used as an ammunition repair and repacking building. The general condition of the S-Structure is good, and it has retained its integrity. Some additional storage areas have been added to the north face of the building, but these do not impact the integrity of the building. The renovations and changes to the interior also do not adversely affect its

integrity. Comparing the existing building with old plans of the buildings shows that rooms constructed of structurally independent metal walls in the center of the large space have been removed. Other changes include modern fixtures, floor finishing by painting over the existing concrete floor.

Features to be preserved for the S-Structure 7725:

- The approaches to the S-Structure, including the surrounding fence and the two guard houses.
- Surrounding vegetation cover.
- The exterior appearance, form and character of the building.
- The original interior features of the building.
- All original systems associated with the historic use of the building, including plumbing, HVAC, and electrical.
- The surrounding open space, including the parking area.

Igloos

The Igloo Storage Buildings at Clarksville Base are used for storage of ammunition and equipment. With the exception of two buildings 7744 and 7750, which are listed as hazardous structures, all are in a fair to good condition, showing their association with the Cold War era though their construction materials, design, and layout within Clarksville Base.

Features of Igloo Storage Buildings to be preserved:

- The surrounding landscape for each structure, including the vegetation, the roads, the approach, and associated security apparatus such as pillboxes.
- The vegetation above the structures that helped provide cover.
- All poured concrete features of the structures.
- The metallic security gates for each structure, including all associated hardware.
- All remaining built-in furnishings and systems, including electrical, plumbing, and HVAC.

Modification/Disassembly Plant

When Gray and her team were conducting their survey of Clarksville Base, the Gravel Gertie was sealed off due to the presence of contaminants. However, BHE was able to visit the Gravel Gertie in 2003, and found the structure, now off the hazardous buildings list, to be in a disused condition. Although it still embodies its association with its Cold War uses though its design, construction material, equipment and security apparatus, its condition, largely due to

its disuse, is a serious management concern. For features to be preserved, see Plant II Structure above.

Administrative Facilities

The administrative facilities, generally of secondary significance, have generally been used in compatible ways. The office buildings continue to be used for administrative purposes, though by different agencies at Ft. Campbell. Portions of building 7520 that are being used for administrative purposes have been partitioned using drywall partitions. Some of these buildings have been modified significantly inside, while the exteriors remain largely unmodified. Several of the buildings need regular upkeep and maintenance and minor repairs, as has been described in the accompanying inventory.

Features of administrative facilities to be preserved:

- The grouping of these buildings, the approaches, and the exterior spaces, including the landscaping and parking areas.
- Associated security apparatus such as fencing and guardhouses.
- The exterior features of the building – modifications to the interior may be carried out in a manner that they do not impact the exterior features such as walls and openings.
- Original built-in features and furnishings.

Residential and Community Facilities

The Residential and Community facilities, generally of secondary significance, have generally been used in compatible ways. The housing barracks continue to house troops. Portions of building 7520 are being used for administrative purposes, and have been partitioned using drywall partitions. Some of these buildings have been modified significantly inside, while the exteriors remain largely unmodified. Several of the buildings need regular upkeep and maintenance and minor repairs, as has been described in the accompanying inventory.

Features of residential and community facilities to be preserved:

- The grouping of these buildings, the approaches, and the exterior spaces, including the landscaping and parking areas.
- Associated security apparatus such as fencing and guardhouses.
- The exterior features of the building – modifications to the interior may be carried out in a manner that they do not impact the exterior features such as walls and openings.
- Original built-in features and furnishings.
- For outdoor facilities such as courts and the swimming pool, their layout in association with the surrounding landscape and structures and all original features and buildings associated with them.

Warehouses and General Storage Facilities

While many of the warehouses, which generally are of secondary significance, continue to be used as storage areas, others have been converted to administrative spaces. In general, those that continue to be used as warehouses have retained their integrity. On the other hand, conversion of warehouses to habitable spaces necessarily entails significant changes, particularly to their interiors. Taking the example of the warehouses in the Forestry Department Cluster off East End Road, where the changes to the interior have affected exterior appearance, one can say that these converted warehouses tend to not retain their integrity. Some of the old warehouses are in disuse and their condition is poor.

Features to be preserved:

- The grouping of these buildings, the approaches, and the exterior spaces, including the landscaping and parking areas.
- Associated security apparatus such as fencing and guardhouses.
- The exterior features and materials (whether metal sheets or cinder-blocks) of the building – modifications to the interior may be carried out in a manner that they do not impact the exterior features such as walls and openings.

Security Buildings – Guardhouses and Pillboxes

Typically, guardhouses, which are either used as guardhouses (as in the case of those associated with the S-Structure) or as administrative facilities (as in the Administration Area), have generally retained their integrity. On the other hand, pillboxes are in disuse and in a poor condition of neglect, often covered with an outgrowth of vegetation that they were not meant to be.

Features of pillboxes, guardhouses and guard posts to be preserved:

- These buildings and structures should be considered always in association with the structures they provide security to – maintaining the integrity of those structures is crucial to preserving the security apparatus.
- The surrounding landscape, roads, fencing, and vegetation associated with the security apparatus.
- The original material and finishes, such as poured concrete and metal for pillboxes and the guard posts at the bridges, and brick and cinder-blocks for the guardhouses.
- For the guard posts on the bridges, associated security features on and below the bridges and unobstructed views to areas and roads outside Clarksville Base.

10.0 ASSESSMENT OF THREATS AND MANAGEMENT CONCERNS FOR CLARKSVILLE BASE HISTORIC DISTRICT CLUSTERS, SURVEY AREAS, AND PROPERTY TYPES

This section is comprised of two parts. The first part discusses management concerns for each survey area of Clarksville Base. The second section synthesizes the findings for each survey area to identify the broad range of management concerns for Clarksville Base entirely.

10.1 MANAGEMENT CONCERNS PARTICULAR TO EACH SURVEY AREA

10.1.1 ADMINISTRATION AREA

Regular upkeep and maintenance: The condition of the buildings and structures in this area is generally fair to good. Some of the buildings, however, exhibited need for more regular upkeep and maintenance. A particular concern was regarding building 7523, where the concrete parapets and floor surfaces need repair. Building 7572 is the one property in the area in a deteriorated condition, possibly because it is targeted for demolition according to Ft. Campbell Real Property data.

There is no Real Property record for the Tyler Field memorial stone northwest of building 7541 in Ft. Campbell's database. The plaque on the stone indicates that Tyler Field was named for a U.S. Marine soldier who died while at duty on Clarksville Base. The plaque may be a record of an important event at Clarksville Base during that period of its operation. During the survey of Clarksville Base, BHE observed that the plaque was coming loose, and informed the Cultural Resources Program about it. The plaque has since been firmly attached to the base.

One building (7572) in the area is slated for demolition. While the building was constructed in 1950 and was therefore a part of Clarksville Base when it was used for weapons storage and maintenance, the structure was of secondary importance to those operations. The removal of this property will not, in BHE's opinion, have a significant impact on the integrity of the area and of Clarksville Base as a whole. As mentioned above, BHE found digitized, historical drawings for the building. These drawings, and any other drawings and photographs related to the building, the area, or Clarksville Base itself that depicts the location of the building 7572, should be preserved as a record of pre-existing conditions before the removal of the building.

10.1.2 INTERIOR ROAD EAST/ EAST AREA

Regular upkeep and maintenance: While the condition of the buildings and structures is generally fair to good, some of the buildings exhibited need for regular upkeep and maintenance. Particularly in the Forestry Department cluster of buildings, there are several buildings that require varying degrees of attention. The inventory forms provide details for the observed maintenance requirements for individual properties.

Missing and Incorrect Real Property Data: There are errors, as well as missing data, for properties in the survey area in the Ft. Campbell Database (updated to January 2004). In particular, the Real Property data on buildings 7620 and 7621 need updating. There is no data

on properties 7602, 7605, 7606, and 7626 in the Real Property records. This data should be included in the records.

Rail Unloading Dock: There is a large amount of debris and scrap material kept near the old rail unloading dock that should be removed to better maintain the roadway leading to the area.

Impact of large-scale alterations: The extension of East End Road to Mabry Road gives an indication of the affects such an alteration may have on the ability of the base to convey its historic significance. The impact of such projects, which do not directly affect individual properties, should be considered for indirect, yet possibly significant impact.

10.1.3 NORTH AND SOUTH SERVICE ROAD AREA

Regular upkeep and maintenance

While the condition of the buildings and structures is generally fair to good, some of the buildings exhibited need for regular upkeep and maintenance. Notable exceptions to this are the pillboxes and the hazardous structures.

Missing and Incorrect Real Property Data

By classifying some buildings as "hazardous" in their design use, the Ft. Campbell Real Property data inaccurately implies that they were designed to be hazardous. This classification should be reserved for "Current Use" and the "Current Use" code.

Pillboxes

Unlike other contaminated structures, the pillboxes suffered from disuse and the consequent deterioration. These structures were constructed out of concrete and were structurally strong and sound. BHE recommends that the outgrowth of vegetation that covers them be removed, so it may become possible to see if the structures have suffered any permanent damage due to disuse, or whether they can be restored and used in a manner compatible to their design use.

Hazardous Buildings and Structures

Unless they can be decontaminated, these structures cannot be used, and their unusable interiors have not retained their integrity. However, their exteriors have not been modified, and still contribute to the overall landscape. The exteriors of these buildings should be maintained as important to the larger environment.

10.1.4 PLANT AREA

Regular upkeep and maintenance

While the condition of the buildings and structures is generally fair to good, some of the buildings exhibited need for upkeep and maintenance. Concerns regarding disused, deteriorating and hazardous buildings are outlined below (# 3)

Missing and Inaccurate Real Property Data

BHE's review of existing information on real properties, and comparison of that data with the results of the survey, showed that several of the properties here are classified incorrectly in their design use, their current use, or in both categories. Building 7832 has been classified as a concrete Igloo Storage Unit, while it is actually a metal shed used for storage. Building 7834 has been incorrectly classified as a Headquarter Building in its design use, when this was the Plant I building used for the maintenance of atomic weapons components. Building 7835 was the battery charging plant for Plant Unit I, and not a "lounge" as it has been classified in the design use. Building 7843 is a metal shed and not a concrete igloo storage unit as classified in the Real Property records. Building 7855 has been classified as an Igloo Storage Unit, but, as historic architectural drawings confirm, this was a base equipment warehouse constructed of cinder-blocks. According to the staff at the building, a retired Navy officer who had worked there said that the building was used to dismantle warheads (there is no other evidence that this activity took place in the building). The cinder-block constructed building 7857 was a Q-Spare warehouse, and not an igloo storage unit as mentioned in the Real Property records.

Additionally, Real Property data for buildings 7813, 7824, 7831, 7854, and 7847, the newly constructed 7835A, 7835B, two buildings located in the warehouse cluster, and the obstacle course is missing.

The Design and Current Use Category codes used by the Army often provide specific information on the property type, including materials and type of construction. The accuracy of this data is crucial in ensuring that appropriate management and preservation decisions are made for historic properties and districts. It is therefore valuable for preservation purposes to correct errors in data, more so when they occur with such regularity within a historic district.

Hazardous and Disused Buildings

Unless it can be decontaminated, building 7847 cannot be used. The exterior of the building remains an integral part of the overall landscape, and it is recommended that it be maintained. The disused portion of building 7811 (Plant II) is of concern, since there are visible signs of deterioration. This is a building of primary significance – one that still conveys its historic integrity in the context of the overall landscape though it is partly not in use. As mentioned earlier, portions of the building have not been in use possibly since the base closed. BHE noticed water leakage in several places, an indication of some structural damage.

New Construction

As mentioned earlier four new buildings and an obstacle course have been constructed in this survey area since the base closed its operations. The level of new construction in this area has been higher than in other parts of Clarksville Base. The integrity of the survey area is not adversely affected by the new construction, but any further construction should be carefully monitored for its effects.

10.1.5 TEXAS LOOP AREA

Regular Upkeep and Maintenance

While the condition of the buildings and structures is generally fair to good, some of the buildings exhibited need for regular upkeep and maintenance. As pointed out above, the

condition of the roads here is poor compared to the better maintained roads in other parts of the base. Repairs and resurfacing may be suggested for these roads.

Individual Structures

Regular upkeep and maintenance is required for the Igloo Structures. The gates, which are showing signs of rusting, call for a recommendation of preventative treatment.

10.1.6 BOUNDARY AREA

Perimeter Patrol Road

The Perimeter Patrol Road is generally in a fair to good condition, requiring only regular upkeep and maintenance. Near the 8000 Group, the road has been fenced off and is not accessible as it was during the early Cold War. This, however, does not constitute a permanent change to the condition of the road. Any proposed project that affects the current layout of the Perimeter Patrol Road would be a management concern, as it could potentially affect the integrity of the boundary of the Clarksville Base Historic District.

Bridges

The bridges themselves are sound and in a usable condition. The security apparatus of the bridges is not currently functional, and with the change in use of Clarksville Base from its early Cold War mission, is not expected to be used. Indeed, the security apparatus is in a neglected condition, as exemplified in the guard post and the metallic gates under the bridge. This has led to acts of vandalism, as exemplified in the graffiti on the face of the bridges, which is a management concern for the historically significant element. Regular upkeep of these elements, which only serve to enforce the association of the base with its Cold War history, is recommended. A particular concern regarding the West End Bridge is the collection of debris along its structural elements.

Fence

The little that remains of the original fence is in a neglected condition, and has not retained its integrity as part of Clarksville Base's security apparatus. The remaining portions of the fences do help define the boundary of the base, and should be maintained where possible.

11.0 A SUMMARY OF MANAGEMENT CONCERNS FOR THE CLARKSVILLE BASE HISTORIC DISTRICT

The following is a summary list of management concerns synthesized from the collected data and on-site observations in the different survey areas:

Regular upkeep and maintenance

The condition of many of the buildings and structures in Clarksville Base is generally fair to good. Some buildings, however, require further maintenance. This is also true for visible infrastructural features at Clarksville Base, such as roads, parking areas, and security fences. While roads and parking areas are generally well-paved, roads in certain parts of Clarksville Base, such as the Texas Loop area, are marked significantly by potholes and cracks.

Missing and Inaccurate Real Property Data

BHE's review of existing information on real properties, and comparison of that data with the results of the survey, showed that the several properties have been classified incorrectly in their design use, their current use, and have incorrect information on their construction and materials. The design and current use category codes used by the Army provide substantial information on the property type, construction material for different components, and type of construction. The accuracy of these data is crucial in ensuring that appropriate management and preservation decisions are made for historic properties and districts based upon the character, construction, and uses of the properties. Another significant concern is that up to 30 properties may not have been listed in the database, and thus may have gone unrecorded prior to BHE's survey. These need to be accounted for and accurately located for their inclusion in Ft. Campbell's GIS and other databases.

Disused and Unused Properties

While most properties at Clarksville Base are used by the different tenants at the base, some have fallen into disuse. Properties, such as pillboxes and Plant buildings, were designed for very specific uses. This makes it difficult to adapt them to other functions after they outlived the intended ones. Other more adaptable properties simply appear to not have been used for some time. Typically, disused properties also tend to suffer from less maintenance. As a consequence, they tend to be in a deteriorating condition, which affects their integrity.

Hazardous Buildings

Typically, hazardous buildings (such as 7740) cannot be used, not having retained their integrity. The disused portion of building 7811 (Plant II) is of concern, since there are visible signs of deterioration. This was a building of primary significance to Clarksville Base's mission – and one, which still conveys its historic integrity from its architectural character and form. As mentioned earlier, portions of the building have not been in use possibly since the base closed. BHE noticed water leakage in several places – in indication of some structural damage.

Demolitions

BHE identified at least one building (7572) which has been targeted by PWBC for demolition. In addition, there is evidence that some buildings and structures have been demolished. Currently, the removal of these properties has not significantly affected the integrity of the Clarksville Base Historic District. However, the continued removal of buildings could affect the integrity of clusters of properties and Clarksville Base and cause a concern for the management of historic properties.

Impact of Large-scale alterations to the Environment

The extension of East End Road to Mabry Road gives an indication of the affects such an alteration may have on the ability of the base to convey its historic significance. The impact of such projects, which do not directly affect individual properties, should be considered for indirect, yet possibly significant impact.

New Construction

Plant Area I, as discussed earlier, is most affected by new construction, while there are instances of new buildings and structures in other parts of Clarksville Base. The new buildings tend to be modest, functional structures that blend in with existing buildings in their clusters and in Clarksville Base. These buildings, planned within the existing layout of Clarksville Base, have not adversely affected its integrity. However, continued construction, coupled with demolition of contributing structures and elements, can be cause of concern.

12.0 RECOMMENDATIONS FOR THE MANAGEMENT AND PRESERVATION OF THE CLARKSVILLE BASE HISTORIC DISTRICT

To paraphrase from DA PAM 200-4, Section 110 of the NHPA (as amended) is intended to ensure that historic preservation is integrated into the ongoing program of Federal agencies. Army implementation of AR 200-4, DA PAM 200-4, and installation-specific actions and plans (such as the Programmatic Agreement of Ft. Campbell with the ACHP, Kentucky Heritage Council, and Tennessee Historical Commission) and plans for NHPA Section 106 compliance and historic property management, help satisfy this requirement (DA PAM 200-4: 8). Section 110, accordingly, requires Federal agencies to "assume responsibility for preserving historic properties owned or controlled by the agency in a manner consistent with the mission, including the identification, evaluation, and nomination of historic properties for listing in the NRHP (DA PAM 200-4: 8)." Further responsibilities, which apply in particular to the Clarksville Base Historic District, include using, to the maximum extent feasible, historic properties; ensuring that those historic properties subject to damage or other alterations are documented prior to such alteration; and carrying out programs and projects that further the purpose of the NHPA. Activities carried out towards the fulfillment of Section 110 responsibilities should be based upon the guidelines and recommendations provided by the Secretary of the Interior and with Appendix D of DA PAM 200-4, i.e., the Army Historic Building Management Standards. A list of useful Preservation Briefs published by the National Park Service is included in the Appendix to this report.

The aim of these recommendations is to ensure that due consideration is given to the Clarksville Base Historic District as Ft. Campbell continues to fulfill its mission. Clarksville Base and its properties, which no longer serve their intended or design uses, have functioned towards the fulfillment of Ft. Campbell's missions since 1969. The research, documentation, survey, and inventory of Clarksville Base showed that the base has been able to fulfill Ft. Campbell missions without significant changes to its form, character, and layout, with the understanding that Army and Ft. Campbell missions may change, as they have in the past, and require substantial changes to Clarksville Base to fulfill them. BHE also recommends the planning for such a possibility. Both possibilities – the continued use of Clarksville Base's properties as in the past, and the significant alterations necessitated due to changing missions at Ft. Campbell - should be kept in view while making management and preservation recommendations. The following sections provide both general recommendations for regular maintenance of the properties and features, and for dealing with major alterations and changes at Clarksville Base.

Evaluation of Individual Properties

Only the eligibility of Clarksville Base as a district has been considered here. Individual buildings and elements at Clarksville Base may themselves be eligible in the Cold War Historic Context. Further evaluation of individual elements, particularly the Gravel Gertie (building 7811), A-Structures, buildings in the Plant I and Plant II complexes, and other character-defining elements such as the two bridges along the perimeter, is recommended.

Continued Use of Properties

BHE recommends that all contributing properties at Clarksville Base be used in a way that is compatible with their historic characters. This will ensure the likelihood of regular maintenance of the properties and help arrest deterioration.

Unusable Properties

BHE recommends maintenance of unusable properties to arrest any deterioration, so they continue to retain their integrity.

Continual Updating of the Clarksville Base Inventory

It is necessarily incomplete, since portions of Clarksville Base were restricted from the survey, and the available information on the base and some of its properties is limited in scope or remains classified. BHE recommends keeping the Inventory active by ensuring that it is regularly updated as larger portions of the base become available to survey and more information on the base and its properties is declassified.

Integrated Database

A large portion of data on Clarksville Base – architectural drawings and meta-data related to the drawings, aerial photos, GIS maps and linked Real Property data, as well as the Inventory developed for this project – is available in electronic/digital format. The data sets are maintained by different departments at Ft. Campbell. For instance, the Clarksville Base Inventory is maintained by Ft. Campbell Cultural Resources Program, the Real Property data is located at the Ft. Campbell Master Planning department, while the digitized architectural drawings and meta-data are located at the Ft. Campbell Engineering Drawing department. Additionally, there may be other data-sets related to Clarksville Base that are classified or inaccessible, maintained by other departments at Ft. Campbell. BHE recommends that as far as possible, these different data sets be integrated using a common platform, so they can be accessed by different departments on a need-to-know basis. This would improve communication between the different departments which are associated with and/or responsible for Clarksville Base's properties, and keep the Cultural Resources Program updated on any activities or projects at the base that may amount to an undertaking affecting historic properties.

Archive of Drawings and Historical Records

BHE recommends that although several architectural and construction drawings related to Clarksville Base have been digitized, the original hard copies should be carefully preserved and archived. As the Inventory indicates, the drawings for some of the properties and facilities at Clarksville Base are either missing or have not been digitized. All available drawings related to the base should be digitized. In case any other architectural and construction drawings of the base are also located, they too should be digitized, information pertaining to them included in the meta-data kept with the Engineering Drawing Division, and the drawings themselves should be carefully preserved with other Clarksville Base drawings.

Updating of Declassified Information

A possibly significant amount of information on activities at Clarksville Base remains classified with the Department of the Navy and other agencies working at Clarksville Base. BHE recommends that the Clarksville Base information data and historic context be updated in case any pertinent information is declassified.

Following the Section 106 Process

Any project planned at Clarksville Base or its vicinity should be carefully assessed following the process laid out in Section 106 of the NHPA and the Programmatic Agreement between Ft. Campbell, Tennessee Historical Commission, Kentucky Heritage Council, and ACHP. In short, it should be determined if the project is an undertaking likely to affect historic properties, the affected properties identified and evaluated for any adverse effects, and appropriate steps considered, in consultation with the Tennessee Historical Commission, to mitigate the effects.

Documentation Prior to an Undertaking

BHE recommends that, prior to an undertaking, potentially affected properties and the surrounding context at Clarksville Base should be documented with color digital photographs. In case the conditions in the Area of Potential Effect are different from those documented in the inventory and this report, a note should be made of those changes. The Inventory should be updated to reflect those changes. This will ensure that Ft. Campbell has up-to-date information on properties prior to any undertakings.

Documentation of Regular Maintenance Activities

BHE recommends that a log be kept by an appropriate agency at Ft. Campbell for all regular upkeep and maintenance activities at Clarksville Base. The maintenance of properties and features at the Clarksville Base Historic District should be coordinated with the Ft. Campbell Cultural Resources Program.

12.1 MAJOR UNDERTAKINGS

The NHPA, ACHP and Army guidelines do not require the Army to preserve all its historic properties. Rather, they identify the Army's responsibilities for managing historic properties in a way consistent with the Army's mission, and require only considering the effects of any undertaking on historic properties (DA Pam 200-4: 8). The Army may need to carry out major undertakings that can adversely affect historic properties, for example major new construction or removal of historic properties, in order to fulfill its missions. It may not be possible to leave historic properties unaffected and carry out the necessary undertaking. The management plan for the Clarksville Base Historic District, located entirely within an active Army post, should also take into consideration the possibility of major undertakings affecting some or all properties at Clarksville Base. BHE makes the following recommendations for the management of properties and for mitigation in case of major undertakings affecting the Clarksville Base Historic District following the process described in Section 106 of the NHPA and in Army guidelines:

The recommendations made in sections 12.1 and 12.2 should be followed for all undertakings.

A broad goal of the Section 106 process is to ensure consultation with all interested parties. An attempt should be made by the Army to identify all interested parties in case of an undertaking. Interested parties include the Tennessee Historical Commission, citizens of the Clarksville area who had associations with Clarksville Base, as well as a broad spectrum of people who worked at Clarksville Base as scientists, technicians, and security personnel. It is recommended that a public notice on the project, inviting comment and involvement of interested parties, to the extent that work within a secure facility such as Ft. Campbell allows, should be made.

It is important for Ft. Campbell and the Army to identify historic preservation concerns for the Clarksville Base Historic District, its building clusters, individual properties, landscape features and other elements, during the planning process. The guidelines set by the NHPA, Army guidelines, and programmatic agreements between SHPOs, ACHP and Ft. Campbell must be consistently followed and initiated early in the planning process. Consultations with the Tennessee Historical Commission should be commenced at an early stage of the project. Consultations should continue through the project, and mitigation measures should be considered in consultation with interested parties.

A large amount of information on Clarksville Base and other similar storage facilities associated with the early Cold War remains classified. BHE recommends a broader study be undertaken by a historian or team of historians provided with greater security clearance, especially of the archives of Department of the Navy, Pentax, and Sandia Labs on operations at Clarksville Base. This further research will also help fulfill any requirements of recommendation #5 below.

The need for **HABS/HAER type documentation** may be determined on a case–by-case basis. The Clarksville Base Inventory, along with existing architectural and construction drawings and available historic contexts, in BHE's opinion, would help fulfill, though not complete, the requirements of such documentation. As the Clarksville Base Inventory indicates, the original site plans and architectural drawings for a majority of the properties at Clarksville Base are available and digitized. Additionally, BHE has documented the properties with color digital and 35mm black-and-white photographs. The visual documentation, along with the Inventory and Historic Context developed for this study and earlier studies can be considered an a priori effort to address, in part, the effects of an undertaking. Below is a summary review of key points and suggestions based upon BHE's review of *Secretary of Interior's Standards and Guidelines for Architectural and Engineering Documentation: HABS/HAER Standards* (Department of the Interior 1990).

Appendix B (Mitigative Documentation Program) states that "Under the provisions of the amended National Historic Preservation Act, Federal Agencies are required to produce documentation to HABS/HAER standards on buildings, structures, sites, and objects that are listed in or eligible for listing in the NRHP and that are threatened with demolition or substantial alteration by projects with Federal involvement." Accordingly, HABS/HAER documentation of significant buildings and structures may be necessitated by the scale and effect of proposed projects at Clarksville Base.

Drawings and Photographs: Upon a review of HABS guidelines, BHE believes that there is material ready for many, but not all, requirements for HABS/HAER documentation. HABS/HAER requires that all photographs be taken with a camera that takes film of large format negatives. The size of the negative should be 4x5, 5x7, or 8x10. While we have both

35 mm black and white photos and digital photos taken as part of the Clarksville Base Inventory and Management plan, they are, by HABS definition "field photography" intended for the purpose of producing documentation. Special, large-format photos of structures would be required for Level I or II documentation.

In BHE's opinion, existing drawings meet HABS Level II standards, especially as several of them are "as-built," meaning that they accurately depicted the structures as they were constructed. It is believed that the Engineering Drawing Division has the equipment to print these out on Mylar, as required by HABS. Copies of these drawings can be produced on Mylar.

Consideration should also be made that HABS documentation is typically maintained by the Library of Congress, and is given full public access, including on the internet. Due to the high level of security at the post and the types of buildings under consideration, public access to these drawings may need to be restricted.

There is provision for such a situation in the HABS/HAER standards (1990: 6). Accordingly, for HABS standards for Level II documentation (page 6 of the guidelines),

"If existing drawings are housed in an accessible collection and cared for archivally, their reproduction for HABS/HAER may not be necessary." At present, these drawings are not cared for archivally. Archiving them at Ft. Campbell or another government repository would be an alternative to reproducing them for storage at the Library of Congress. This may also be a more secure arrangement, though limitations to access would likely need to be worked out with HABS/NPS.

Written Data: The management plan and the Gray et al report provide sufficient data on Clarksville Base for a HABS history and description, keeping in view also that a good deal of information is classified. The information would need to be set per HABS/HAER standards.

Level of Documentation: BHE suggest Level I documentation, with new measured drawings, for the two plant structures (including the gravel gertie), the S-Structure, typical (not all) Igloo Structures, typical A-, B-, and A-B-C-Structures, the two bridges with security posts, and typical pillboxes if:

- "as-built" drawings do not exist. The "as-built" drawings depict the original conditions better than newly executed drawings of possibly modified structures.
- the condition of the original drawings is poor. BHE has accessed the digitized versions of the drawings but not the original set. The conditions of the original drawings would need to be verified at the Engineering Drawing Division.

13.0 CONCLUSIONS

This report, which was developed from research conducted by BHE (with the assistance of Gray & Pape), included an historic overview and synthesis of available information, identification of Cold War property types, the assessment of threats to their integrity, noting of management concerns, and recommendations of appropriate measures for further identification, evaluation, maintenance, and treatment of property types. The detailed overview and synthesis helped identify that Ft. Campbell was significant during the early Cold War as home to the Pentomic Division, to an SAC Base, and to the Clarksville Base atomic weapons storage facility. Based upon available information, Clarksville Base is the only facility that is significant to Cold War history. Based upon available information, other properties at Ft. Campbell are either Cold War-era properties, constructed during that period but not significant in the Cold War context, or have not retained their integrity.

This, after considering the significance of the vastly modified Campbell Army Airfield and other facilities at the post, Section II focused on Clarksville Base as the district with Cold War properties. This section discusses Cold War property types at Clarksville Base, their character, and their condition in detail. Threats to their integrity and management concerns and guidelines for each property type, for different areas at Clarksville Base, and for the base as a whole, were also discussed in order to fulfill the requirements of the scope of work for this study.

In concluding this report, it should be noted that there are several research questions, regarding Ft. Campbell and its operations, Clarksville Base, the Airfield, and other facilities, that remain unanswered either due to a lack of available information or because the information on these aspects is classified. These research questions are listed below. Answering these questions may be vital to a better understanding of Ft. Campbell's Historic Context and indeed, to the identification of other Cold War properties that currently available information cannot help identify or define.

13.1 OPEN QUESTIONS FOR FURTHER RESEARCH

The Overview and Synthesis has opened further avenues for investigation and has led to important issues to be addressed. There are gaps in the information on properties available at Ft. Campbell that need to be mentioned. A large amount of information on master plans appears to be lost or misplaced. The list of all master plan documents available at Ft. Campbell included with the annotated bibliography indicates the shortfalls in available information, considering that these cover over 50 years of the post's history. Moreover, documents on real properties at the Master Planning office are not catalogued and many of the old files are in a condition of disuse. This can make it difficult to access and to determine what information may be available. There are also gaps in the information on demolished properties, with the demolition dates of only those removed since the 1990s available. The situation at the Engineering Drawing Division is similar, although an attempt is being made to catalogue and digitize the collections.

Secondly, gaps in available information can be attributed to the classified nature of many activities carried out at Ft. Campbell and at Clarksville Base. Attempts to contact the Naval History Department and Sandia Laboratories, for instance, provided scant information. As indicated in the text, the information that is available on Clarksville Base, even from official sources such as on the Internet site of Pantex and from Sandia, on occasion, can be contradictory. Similarly, contacting the Air Force History Department provided little information on the Clarksville Air Force Base. The collections on location at significant sources such as the National Archives, the Library of Congress, and the Army Center of Military History may provide additional information not accessible within the scope of this project. While property types related to the Cold War can be determined from the information gathered, there remains the possibility of more, significant information available at Ft. Campbell and other sources, and thus, scope for further research on Cold War properties. Important research questions relating to Ft. Campbell and Clarksville Base are listed below.

13.1.1 FT. CAMPBELL AND THE AIR FIELD

- What considerations prompted the conversion of the post from a temporary World War II post to a permanent post during the Cold War?

- Apart from those uses identified in this report, were there any other purposes that World War II temporary structures served during the Cold War? Why were these buildings not demolished and replaced with permanent structures during the Cold War, especially since post buildings with a 'temporary designation' are typically demolished after 5 years?

- How were the training facilities built during World War II used during the Cold War? Did they have to be modified in any way?

- Which of the World War II buildings were converted into family quarters in the late-1940s and early 1950s, during the Cold War? What was the original layout of those quarters, and how was it altered during the Cold War?

- How were the Korean War-era billets planned and what was their interior arrangement? How were the sites for these buildings selected?

- Were the billets constructed immediately following the Korean War of the same design and layout? What, if any, were the differences from the earlier buildings, and what considerations prompted these changes?

- What were the considerations that went into the development, in 1947, of the first master plan for the post? Beyond the basic information folio available, were there any details for zoning, future buildings, and post requirements that were enumerated? Were these adhered to, or, in what ways did the actual construction deviate from the master plan, and why?

- Considering that it was initially home to an armored division, did Ft. Campbell change in its physical configuration and property types as it became home to the 11th Airborne (and later 101st Airborne Division) in the 1950s? How, if at all, was this change factored into the master plans for the post developed in the 1950s?

- Were there any properties constructed for the first airborne training exercise at Ft. Campbell, held in 1950? What purpose did they serve, and where and how were they laid out on the post? Did they lay ground and provide guidance for future training and operation areas, after Ft. Campbell became home to the 11th and 101st Airborne Divisions?

- What was taken into account when planning BASEOPS facilities in the 1950s? How were the interior layouts of new residential quarters in the 1950s different from the converted World War II mobilization buildings at Ft. Campbell?

- How did the arrival of the 101st Division factor into the master plans for the post? Considering that the 101st Division – a Pentomic Division – was organized differently from conventional divisions in the Army, did the new demographic make-up of the division affect the way housing and BASEOPS facilities were planned from 1956 to 1965? Did the facilities, as constructed, adequately fulfill the requirements set forth in the Master Plans?

- What kind of training exercises did the Pentomic 101st Division carry out at Ft. Campbell? Were there any properties related with these exercises, and do these still exist? What did the exercise Jump Light, conducted in 1957, comprise, and were there any properties associated with that, which exist in the present day? What did the training exercise Quick Strike, conducted in part at Ft. Campbell in 1958, require in terms of real properties? Do any of those properties exist today?

- How did the re-organization of the 101st Airborne from a Pentomic to a more conventional ROAD Division in the 1960s affect the demography of the 101st Division? Did this change have any impact on the adequacy of existing housing stock and BASEOPS facilities?

- Were there any properties associated with the March 1965 training of the 101st Division in the airmobile concept, and do they still exist? Where in Ft. Campbell was the exercise conducted? Was that training held in anticipation of the forthcoming deployment to Vietnam, or was it held keeping in view the threat that the Soviet Union posed? Did that exercise and the properties used continue to serve the post-Vietnam Airmobile Division?

- Precisely which World War II-era buildings were rehabilitated into training and living quarters in 1966 to house new ATC mission? Which were rehabilitated in 1970? Which ones were used as residences, and which ones for training and administration? How were those buildings used once the ATC was closed in 1972?

- What were the general guidelines followed by the Army for housing and BASEOPS facilities following the end of the Vietnam War? Were there any standard plans, drawn in the early 1970s for VOLAR Housing, applicable for all Army posts? If so, did the large-scale residential development at Ft. Campbell through the 1970s follow or deviate from these plans?

- How was "Operation Improve", conducted in 1972 to find out inadequacies in facilities and management at Ft. Campbell, actually carried out? Specifically for property and

physical development of the post, how did the findings of that exercise contribute to programs for new construction and to the master plans drawn in the 1970s?

- What considerations were made to draw the master plans in the 1970s? How did these differ from those drawn preceding the Vietnam War?
- Did the troop and officer make-up of the reorganized Airmobile and Air Assault Divisions of the 1970s affect BASEOPS planning?
- With most of the major Cold War-era construction completed by the end of the 1970s, how were the master plans drawn in the 1980s different from those drawn in the 1970s?
- What buildings were demolished during the Cold War era? How many of these were constructed earlier, and how many during the period 1946-1989?
- Following the end of the Cold War, how many of the properties constructed and used during the Cold War fell out of use? Which ones changed in use, and how many were demolished? How does the fate of Cold War properties after the end of that war indicate their specificity to the Cold War theme?
- What were the weapons and aircraft tested at Ft. Campbell through the length of the Cold War? Where were these tested? Were there any properties associated with their testing?
- What additions, changes, and improvements were made to training and operations facilities through the length of the Cold War? What caused those changes?
- How have those facilities been changed, if at all, since the end of the Cold War? Are SOPs (Standard Operating Procedures) for training and deployment factored in for the planning and layout of properties at Ft. Campbell? If so, how have they impacted the layout of Ft. Campbell?
- What arrangement existed between the Army and the Air Force related to the use of the Air Force Base by the Army to train its paratroopers? Were there any properties at the Air Force Base used exclusively by the Army or the Air Force? How were these used?
- What are the details of the transfer of the Airfield, first from the Army to the Air Force and later, back to the Army? Why was the Airfield returned to the Army in 1959?
- How did the Air Force Base serve Continental Air Command and Strategic Air Command functions? Do existing structures from that period indicate any of those functions? Were there any linkages between the SAC Base and Clarksville Base?
- To what extent did the properties at the airfield adapt to the change from fixed to rotary wing aircraft? How did the layout of the airfield change with the change in type of aircraft?
- How, if at all, did new technologies affect the new construction at the airfields and the heliport?

- What was the impact of the Cold War on local residents? How did the presence of Ft. Campbell affect the local view of the Cold War?

- Did the Cold War as it was played during different periods at Ft. Campbell have an economic impact on the local residents of the region? Did it have an environmental impact on the area?

13.1.2 CLARKSVILLE BASE

- What prompted the selection of Clarksville Base as a site for an atomic weapons storage facility? Were these the same considerations applied to the selection of other early weapons storage facilities, or were they different? In what ways, if at all, were site-selection criteria different for Clarksville Base?

- What planning and design issues did Black and Veatch (1987) take into consideration when designing and laying out Clarksville Base? How is the layout of Clarksville Base similar to the other early atomic weapons storage facilities? In what ways, if at all, is it unique?

- Did the presence of Clarksville Base affect the growth and evolution of Ft. Campbell? What impact, if any, did its closure have on planning and development at Ft. Campbell?

- Did the presence of Clarksville Base have a significant economic impact in the Clarksville-Hopkinsville area? Did its closing affect the local economy?

- How did the local communities react to the presence of Clarksville Base? Was there any pattern to the folklore surrounding the secret facility? Did it bring to the local residents an awareness of Cold War threats and their implications?

- What, if any, were the environmental considerations that went into the planning of Clarksville Base and the design of the structures? What, if any, were the environmental impacts of activities at Clarksville Base on the people who worked there and on residents in the neighboring areas?

- How was access to different properties at Clarksville Base controlled, and how did the special Q-Clearance for access actually work? Were there different rules of access for military and civilian personnel at the base? Did clearance and access rules have an impact on the layout of properties at Clarksville Base during the initial planning stages, and if so, how did they affect the configuration of the base? Did clearance issues continue to influence development of the base in the 1950s and1960s, and if so, how?

- What functions did the personnel from the different agencies sharing responsibility at the base – those from Sandia Labs, AEC, and Pantex – fulfill? How, if at all, did the presence of several agencies impact the layout of the base?

- How were authority and functions divided among civilian and military personnel at Clarksville Base? Did this distribution of authority and functions influence the configuration of the base?

- What activities were actually carried out at the various structures on the base? How were these activities carried out, and by which agency?

- What was the nature of the relationship between Clarksville Base, Ft. Campbell, and the Air Force Base? How did they share commonly available resources such as transportation networks? Was there a common mechanism for their response to emergencies during the Cold War, for example the Cuban Missile Crisis?

- In what ways were the structures designed in the late-1950s for later generations of weapons different from those of the first generation?

- Did Clarksville Base store warheads that could be used, or were specifically designed for use by Pentomic Divisions equipped with nuclear capable Honest John Rockets?

- What functions did Clarksville Base fulfill from 1965, when the modification center was closed, to 1969, when the base was closed and handed over to the Army? Why was the base closed?

- To what extent has Clarksville Base, including its landscape and the configuration and uses of properties, changed since it was closed in 1969? What purpose did it serve from 1969 to 1989, and are these purposes reflected in any way in changes to properties and landscape?

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APPENDIX A

Cold War Historic Overview for Ft. Campbell, Kentucky

APPENDIX B

Ft. Campbell World War II-Era Properties - Existing

APPENDIX C

Ft. Campbell Real Properties, 1946-1949

APPENDIX D

Ft. Campbell Real Properties, 1950-1959

APPENDIX E

Ft. Campbell Real Properties, 1960-1969

APPENDIX F

Ft. Campbell Real Properties, 1970-1979

APPENDIX G

Ft. Campbell Real Properties, 1980-1989

APPENDIX H

Inventory of Clarksville Base Properties and Clusters

APPENDIX I

Photographic Copies of Two Planning Documents Related to the Development of the Campbell Army Airfield

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
FORT CAMPBELL, KENTUCKY 42223-5000

JUN 08 2006

REPLY TO
ATTENTION OF

Directorate of Public Works

Herbert Harper, Director
Tennessee Historical Commission
Clover Bottom Mansion
2941 Lebanon Road
Nashville, Tennessee 37243-0442

Dear Mr. Harper:

The programmatic agreement for operations, maintenance and development at Fort Campbell, stipulation B.5 requires the development of appropriate historic contexts to support evaluation and other management decisions related to historic properties.

Three contexts documents enclosed were researched and developed in several phases for Fort Campbell by BHE contractors. An additional historic context is still in development which will support evaluation and management decisions for archaeological sites of the historic era. The three completed documents are:

- Historic Context Statement for Prehistory at Fort Campbell, Kentucky
- Historic Context for World War II at Fort Campbell, Kentucky
- Historic Context for the Cold War at Fort Campbell, Kentucky

Fort Campbell feels that these historic contexts will provide the background for nearly all the historic properties and appropriately execute the responsibility stated in the programmatic agreement.

If you have any further questions or concerns regarding this matter, please contact Mr. Richard D. Davis, Cultural Resources Program Coordinator, 270-798-7437, email richard.davis9@us.army.mil.

Sincerely,

Rondal G. Ballard
Chief, Environmental Division

Enclosures

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
FORT CAMPBELL, KENTUCKY 42223-5000

JUN 08 2006

REPLY TO
ATTENTION OF

Directorate of Public Works

Mr. David L. Morgan, Director and SHPO
Kentucky Heritage Council
State Historic Preservation Office
300 Washington Street
Frankfort, Kentucky 40601

Dear Mr. Morgan:

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Sincerely,

Rondal G. Ballard
Chief, Environmental Division

Enclosures

June 30, 2006

TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

Mt. Richard Davis
Directorate of Public Works/IMSE-CAM-PW
865 16th. Street
Ft. Campbell, Kentucky, 42223-5130

RE: DOA, COLD WAR ERA CONTEXT STUDY, FT. CAMPBELL, MONTGOMERY COUNTY

Dear Mt. Davis:

In response to your request, received on Wednesday, June 14, 2006, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicant for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800. You may wish to familiarize yourself with these procedures (Federal Register, December 12, 2000, pages 77698-77739) if you are unsure about the Section 106 process. You may also find additional information concerning the Section 106 process and the Tennessee SHPO's documentation requirements at www.state.tn.us/environment/hist/sect106.shtm.

Based on available information, we concur with the findings and recommendations made in the document concerning historic properties that are eligible for listing in the National Register of Historic Places. Questions and comments may be directed to Joe Garrison (615) 532-1550-103. Your cooperation is appreciated.

Sincerely,

Herbert L. Harper

Herbert L. Harper
Executive Director and
Deputy State Historic
Preservation Officer

HLH/jyg