



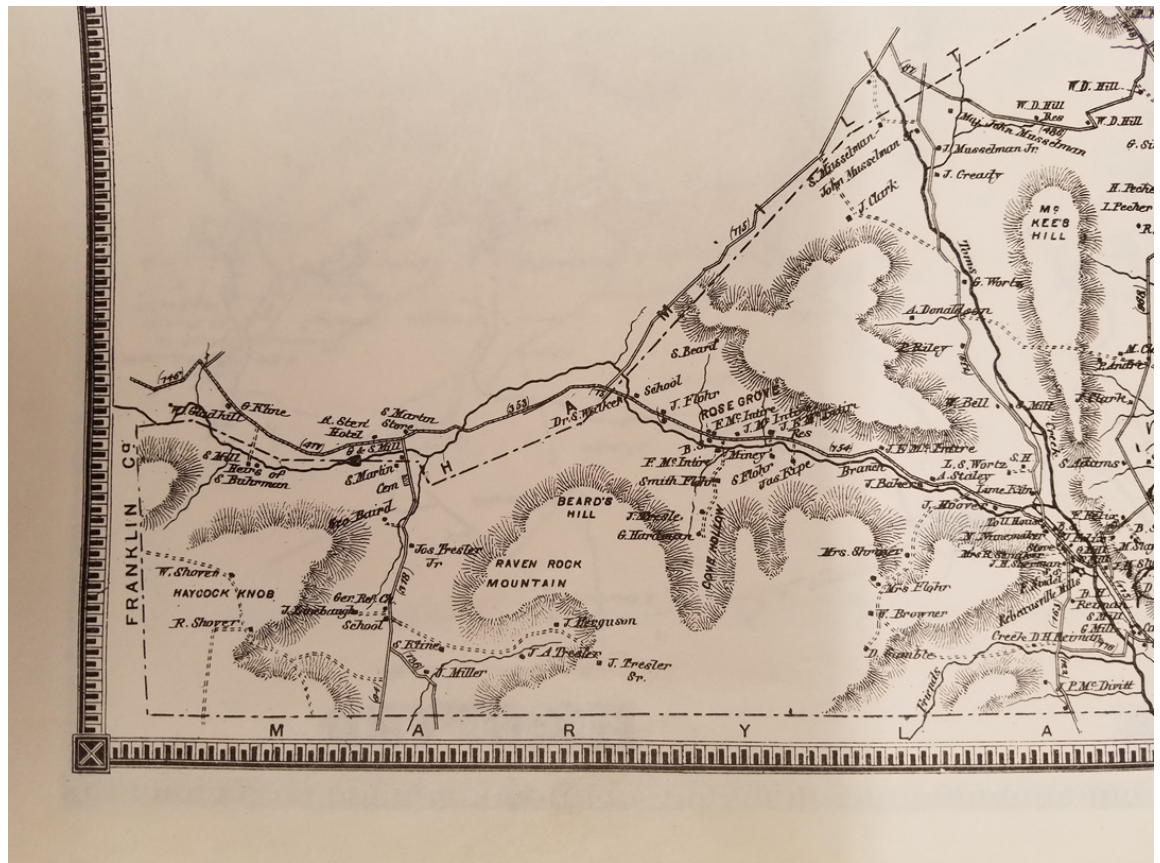
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Raven Rock Mountain Complex Site R, PA Archaeological Site Revisit

Carey. L. Baxter, Adam D. Smith, and Ellen R. Hartman

August 2019



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Final Technical Report (TR)

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Raven Rock Mountain Complex
Fairfield, PA 17320

Under Project 469449, "Work for RRMC

Abstract

The U.S. Congress codified the National Historic Preservation Act of 1966 (NHPA) in part by establishing the National Register of Historic Places (NRHP), which requires federal agencies to address their cultural resources. NHPA Section 110 requires federal agencies to inventory and evaluate their cultural resources, and Section 106 requires them to determine the effect of federal undertakings on those potentially eligible for the NRHP.

In 2017, ERDC-CERL was tasked with conducting a Phase I Archaeological survey of Raven Rock Mountain Complex (RRMC) Site R in Pennsylvania, which was built in 1951 and is now a division of the Washington Headquarters Service. In 2001, U.S. Army Corps of Engineers Baltimore District conducted an archaeological Phase I survey of the Site R facility. A 2017 historical resources survey of the facility recommended additional archaeological resources research to supplement the 2001 survey. This report provides supplemental historic context and field documentation of archaeological sites and features described in the 2001 report. In consultation with the Pennsylvania State Historic Preservation Officer, this work fulfills Section 110 processes for the land at Site R.

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Preface

This study was conducted for the Cultural Resources Program, Environmental, Safety, and Health Division, of Raven Rock Mountain Complex, under Project 469449, “Work for RRMC.” The technical monitor was Donna Swauger, Environmental Protection Specialist, Raven Rock Mountain Complex.

The work was performed by the Land and Heritage Conservation Branch (CNC) of the Installations Divisions (CN), U.S. Army Engineer Research and Development Center – Construction Engineering Research Laboratory (ERDC-CERL). At the time of publication, Dr. Michael L. Hargrave was Chief, CEERD-CNC, and Ms. Michelle J. Hanson was Chief, CEERD-CN. The Deputy Director of ERDC-CERL was Dr. Kirankumar Topudurti, and the Director was Dr. Lance D. Hansen.

COL Ivan P. Beckman was Commander of ERDC, and Dr. David W. Pittman was the Director.

Unit Conversion Factors

Multiply	By	To Obtain
acres	4,046.873	square meters
feet	0.3048	meters
inches	0.0254	meters
miles (U.S. statute)	1,609.347	meters
square feet	0.09290304	square meters
yards	0.9144	meters

Abbreviations

Term	Definition
AJCC	Alternate Joint Communications Center
ANSI	American National Standards Institute
BCP	BRAC Cleanup Plan
BRAC	Base Realignment and Closure
CERL	Construction Engineering Research Laboratory
DoD	U.S. Department of Defense
DoDI	Department of Defense Instruction
ERDC	U.S. Army Engineer Research and Development Center
ERDC-CERL	Engineer Research and Development Center, Construction Engineering Research Laboratory
GIS	Geographic Information System
GPS	Global Positioning System
HAER	Historic American Engineering Record
ICRMP	Integrated Cultural Resources Management Plan
IPUMS	Integrated Public Use Microdata Series
LiDAR	Light Detection and Ranging
LOC	Library of Congress
NHPA	National Historic Preservation Act of 1966
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSN	National Supply Number
OMB	Office of Management and Budget
PHMC	Pennsylvania Historical and Museum Commission
RRMC	Raven Rock Mountain Complex
SF	Standard Form
USDA	U.S. Department of Agriculture
USGS	U.S. Department of the Interior Geologic Survey

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1 Methodology

1.1 Background

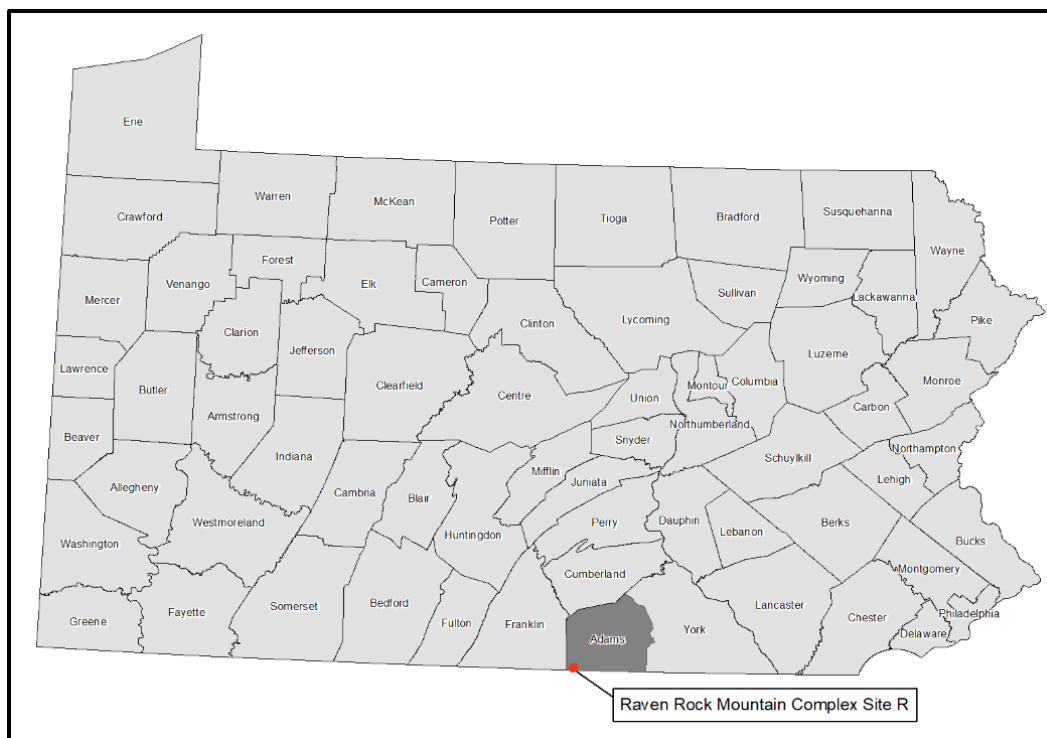
The U.S. Congress codified the National Historic Preservation Act of 1966 (NHPA), the nation's most effective cultural resources legislation to date, to provide guidelines and requirements for identifying tangible elements of our nation's past. This legislative requirement was met through creation of the National Register of Historic Places (NRHP). Contained within this piece of legislation (NHPA Sections 110 and 106) are requirements for federal agencies to address their cultural resources, defined as any prehistoric or historic district, site, building, structure, or object. Section 110 requires federal agencies to inventory and evaluate their cultural resources. Section 106 requires the determination of effect of federal undertakings on properties deemed eligible or potentially eligible for the NRHP.

Raven Rock Mountain Complex (RRMC) is a Department of Defense (DoD) facility located at Raven Rock Mountain near Blue Ridge Summit in Adams County, Pennsylvania. In 1951, the U.S. Army began construction of the facility, which opened in 1953. Raven Rock Mountain Complex Site R is located in south-central Pennsylvania (Figure 1).

There are DoD specific mandates regarding historic properties that supplement and support Section 106 and Section 110. Department of Defense Instruction (DoDI) 4715.16 requires places under DoD control to develop Integrated Cultural Resource Management Plans (ICRMPs). As part of the ICRMP and pursuant to the NHPA, DoD facilities are required to identify and manage historic properties on their lands.

In 2001, the U.S. Army Corps of Engineers Baltimore District performed an archaeological Phase I survey of Raven Rock Mountain Complex Site R (RRMC Site R), which was documented in a report titled *Phase 1 Cultural Resource Investigation, Alternative Joint Communications Center Site R - Raven Rock Mountain* (Baltimore District 2001). The report was submitted to the U.S. Army Garrison Fort Detrick, Directorate of Installation Services, Environmental Management Office. The report is kept on file at the RRMC environmental office.

Figure 1. Location of Raven Rock Mountain Complex Site R, in south-central Pennsylvania.



Source: ERDC-CERL (2018).

In 2017, RRMCC tasked ERDC-CERL to conduct a historical resources survey of the compound and to assist in the generation of an ICRMP. During examination of the historic documentation held at RRMCC, it was determined that additional research into the archaeological resources located on the mountain surface would be advisable. This work, which supplements the Phase I survey report (Baltimore 2001), was undertaken to provide needed documentation of the additional historical research conducted as part of the ICRMP generation. As such, this report addresses only the archaeological resources that existed on Raven Rock Mountain before DoD began to use the site. Specifically, this report includes additional historic context for the historic farmstead sites at RRMCC and documentation of the rock walls that occur throughout the installation.

1.1 Objective

The objective of this work was to supplement the archaeological Phase I survey of Raven Rock Mountain Complex Site R (Baltimore 2001) and to provide needed documentation of the additional historical research conducted as part of the ICRMP generation.

1.2 Researchers

This project was conducted by the U.S. Army Corps of Engineers, Engineering Research Development Center, Construction and Engineering Research Laboratory (ERDC-CERL) in Champaign, Illinois. The research team included Carey L. Baxter, Bachelor of Arts as lead archaeologist, with 18 years of experience in prehistoric and historic archaeology; Adam D. Smith, Master of Architecture, as project manager, with 20 years of experience in military architectural history; and Ellen R. Hartman, Master of Landscape Architecture, as research and field assistant, with 10 years of experience.

1.3 Approach

1.3.1 Site visits

ERDC-CERL personnel made three trips to Site R and Site C at RRMC to inventory historic materials, to conduct archival research at local and regional archives, and to map features at Site R in December 2017, February 2018, and March 2018. During those weeks, team members conducted site revisits and reevaluations of all archaeological resources at Site R.

1.3.2 Archival repositories

ERDC-CERL researchers conducted a review of books, archival repositories, and online resources related to the Raven Rock area before the establishment of RRMC in 1951. The following places were contacted and/or searched:

- NRHP listings and nomination forms (online at <https://www.nps.gov/Nr/publications/index.htm>);
- Historic drawings, maps, photographs, and information provided by the Environmental, Safety, and Health Division and the Geographic Information System (GIS) office at RRMC;
- Pennsylvania State Historic Preservation Office (online at <https://www.phmc.pa.gov/Preservation/Pages/default.aspx>);
- United States Library of Congress Maps Division (online at <https://www.loc.gov/maps/collections/?st=gallery>);
- The Integrated Public Use Microdata Series (IPUMS) U.S Census Data collections (online at <https://usa.ipums.org/usa/index.shtml>);
- Adams County Historical Society, Gettysburg, Pennsylvania;
- Adams County Court House, Gettysburg, Pennsylvania;
- Adams County Public Library, Gettysburg, Pennsylvania;
- Gettysburg National Military Park, Gettysburg, Pennsylvania;

- Blue Ridge Summit Free Library, Blue Ridge Summit, Pennsylvania;
- Alexander Hamilton Memorial Free Library, Waynesboro, Pennsylvania;
- Smithsburg Library, Smithsburg, Maryland;
- Western Maryland Room, Washington County Free Library, Hagerstown, Maryland.

1.3.3 Analysis and evaluation

After initial research was completed, the team analyzed the gathered information. Archival information and field information were integrated throughout the course of the project. The information available was contained in text documents, photographs, and historic maps. Using archival sources, the research team extracted relevant historical information. The material was then combined to tell the story in both text and images.

A cultural resource can retain or lose its historic integrity, meaning that it either does or does not convey its historic significance. From this evaluation process, a recommendation of eligibility for listing on the NRHP was made. The evaluation adhered to the following guidelines:

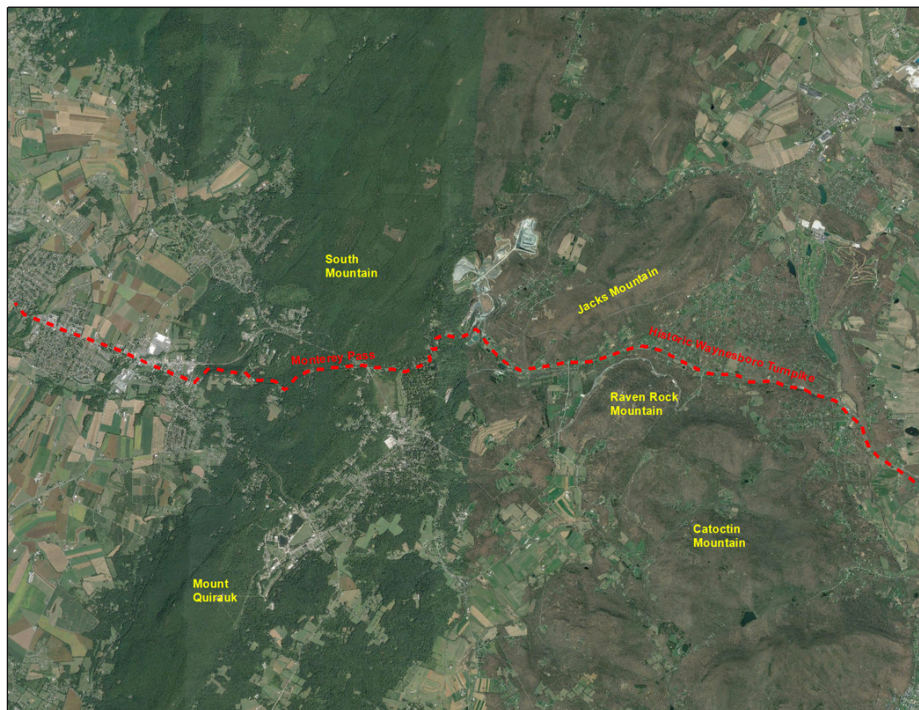
- National Register Bulletin #15, *How to Apply the National Register Criteria for Evaluation* (NPS 1997a);
- National Register Bulletin #16A, *How to Complete the National Register Registration Form* (NPS 1997b);
- National Register Bulletin, *How to Prepare National Historic Landmark Nominations* (NPS 1999);
- *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Grimmer 2017).

2 History and Setting of Raven Rock Mountain Site R

This chapter briefly describes Raven Rock Mountain. For a more complete description, refer to the U.S. Army Corps of Engineers, Baltimore District (2001) report.

2.1 Environmental Setting

Figure 2. Project Region.



Source: ERDC-CERL (2019).

Adams County lies mostly in the Piedmont province of Pennsylvania. Most of the county is dominantly undulating to rolling, and is dissected by many drainage ways and streams (Figure 2). Some of the county is nearly level. Hills are scattered throughout much of the Piedmont area. South Mountain, in the western and northern parts of the county, is in the Blue Ridge province, which has hills, ridges, and narrow valleys. Of the county's two main watersheds, the northern half drains into the Susquehanna River largely by the way of the Conewago Creek and its many tributaries. Most of the southern half drains into the Potomac River through Toms, Middle, Marsh, Rock, and Alloway Creeks and their tributaries (Natural Resources and Conservation Service, 2018).

Adams County is characterized by more than 100 different kinds of soil, which range widely in texture, natural drainage, depth, slope, and other characteristics. The soils in the South Mountain area are predominantly deep, well drained, and commonly very stony. In this area, slope and stones are major limitations to use of the soils. In the rest of the county the soils have more variable characteristics, including wetness, depth to bedrock, and slope, which are major limitations to their use. The land area is divided as follows: cropland, about 45%; woodland, 30%; pasture, 10%; urban, industrial, commercial, and other land, 15% (Natural Resources and Conservation Service 2018).

Raven Rock Mountain is a monolith of greenstone granite with numerous locations where the bedrock is exposed on the surface. Forty-five percent of Site R has slopes in excess of 25 degrees and an additional 45% of the project area has slopes ranging from 8 to 25 degrees. The soils consist of well drained silt loam heavily included with stone. Subsurface soils are usually encountered within 25 cm of the surface (Baltimore District 2001). The combination of soil types and slopes are not typically conducive to most habitation, or to agricultural or horticultural activities. Animal husbandry and/or hunting activities may be possible on the shallower sloped areas. The probability of prehistoric archaeological sites being located in these soil and slope types is very low.

2.2 Prehistoric Context

Archaeological sites in this area of Pennsylvania have been identified to all prehistoric periods known in the greater Pennsylvania area (Paleo-Indian, Archaic, Transitional and Woodland) (Baltimore District 2001). The environmental and physical diversity in the region would provide prehistoric hunter-gatherer or horticultural peoples with all the resources needed for settlement or survival. The nearest multi-period stratified site, however, is nearly 40 miles distant from the project area (Michels 1969) which indicates that this area was most likely not the epicenter of focused organized political or ceremonial activity. Before European settlement, the area was dominated by Iroquois Confederation affiliated groups such as the Susquehannock, Shawanese, and Delaware (Sanders et al. 1996). Ownership was transferred to Europeans, primarily the Penn family, through treaty and land purchase in the 18th century and was then made available for white settlement (Kline 1985, Baltimore District 2001).

2.3 Historic Context

Raven Rock Mountain is located within the area of the original 1681 land grant that established the colony of Pennsylvania (Kline 1985, Sanders et al. 1996). Early settlement of the colony was focused on the coastal regions. European settlement of the project area began in earnest after Iroquois Confederation ceded the land to William Pitt's descendants in 1723, with some brief disruption of the colonization mid-century due to the French and Indian War (Bloom 1992; Baltimore District 2001).

Early colonization was dominated by German speaking peoples, but by the mid-18th century the Scotch-Irish had supplanted the earlier settlers (Bloom 1992; Baltimore District 2001). Farmsteads were generally small in size (circa 100 acres) with most production focused on grains and animal fodder. Soils in the project area are not ideal for agriculture and household incomes were usually supplemented through hunting, trapping and fishing activities.

Adams County was established by a subdivision of York County in 1800 with Gettysburg the county seat. The census from that year reports a population for the county of 13,172 (Manson et al. 2018) with 114 of those people recorded as slaves. Nearly half (49%) of the population was under the age of 15. The population was predominantly rural as there were only six recorded towns within the county (Bloom 1992). The growth of the county was accelerated with the establishment of a road network. The Nicholson or Nichol's Gap Road was constructed in 1748 as part of the Great Wagon Road from Philadelphia to Pittsburgh (Fry and Jefferson 1753; Rouse 1995). This road follows the path of the current Buchanan Trail and Waynesboro Pike (State Highway 16). Communities sprung up along the road including Fountain Dale, located immediately north of Raven Rock Mountain. The railroad was established in Adams County in 1858 (Baltimore District 2001) at about the same time that the county population had doubled from the 1800 census (Manson et al. 2018).

The area around Raven Rock Mountain saw activity from both the Union and Confederate armies during the Civil War. In 1862 the Confederate cavalry raided parts of western Adams County, including Fairfield (Baltimore District 2001). Fairfield was again raided by Confederates in June 1863 followed by Union troops passing through the town at the end of the month (Coddington 1983; Miller 2013). Two union brigades were marched to Gettysburg on the Waynesboro Pike on 29 June 1863, placing them

within 0.1 miles of Site R property boundaries. Those troops reported signs of Confederate activity in the area (Coddington 1983). Portions of the Confederate army retreating from the Battle of Gettysburg along the Waynesboro Pike were harassed by Union troops in the vicinity of Site R, culminating in the Battle of Monterey Pass to the east of Site R on the 4th and 5th of July 1863 (Coddington 1983; Miller 2013).

After the Civil War, population growth and economic development slowed. The railroad network was located in the eastern portion of the county and most industrialization occurred there. With the improvement of the transportation network, however, agriculture shifted from subsistence grain crops to cash crops, most notably fruit, as well as animal husbandry (Bloom 1992; Baltimore District 2001). The agricultural products were not processed in the immediate area of Raven Rock Mountain but instead in the eastern portions of the county.

Tourism associated with the Gettysburg battlefield did not significantly impact the western portion of the county. In 1866 a fire started at Mont Alto (on the west side of South Mountain) that spread to a general forest fire over the southern part of South Mountain (Anonymous 1886). This fire significantly damaged the timber and charcoal production in the region further impacting the overall regional economy. In 1884 the Head-Light Copper Mine opened and a history of the county published 2 years later described it as an “important industry” in “permanent form” (Anonymous 1886, p 301). In 1914, however, the mine was described as a 160-ft tunnel that was idle (Stevens et al. 1914).

The modern military presence in the region began in 1926 when the Maryland National Guard established Camp Albert C. Ritchie on the eastern side of Mount Quirauk (Figure 2) (HAER 1968). The site had previously been used by the Buena Vista Ice Company. During World War II, the U.S. Army operated the Military Intelligence Training Center at the camp (Longe et al. 1998). After the war, the camp was briefly returned to the Maryland National Guard before being permanently acquired by the U.S. Army in 1948 to support the Alternate Joint Communications Center/Site R (AJCC) at Raven Rock Mountain (Longe et al. 1998). The federal government began purchasing property on Raven Rock Mountain in the early 1950s for the purpose of constructing the current facility.

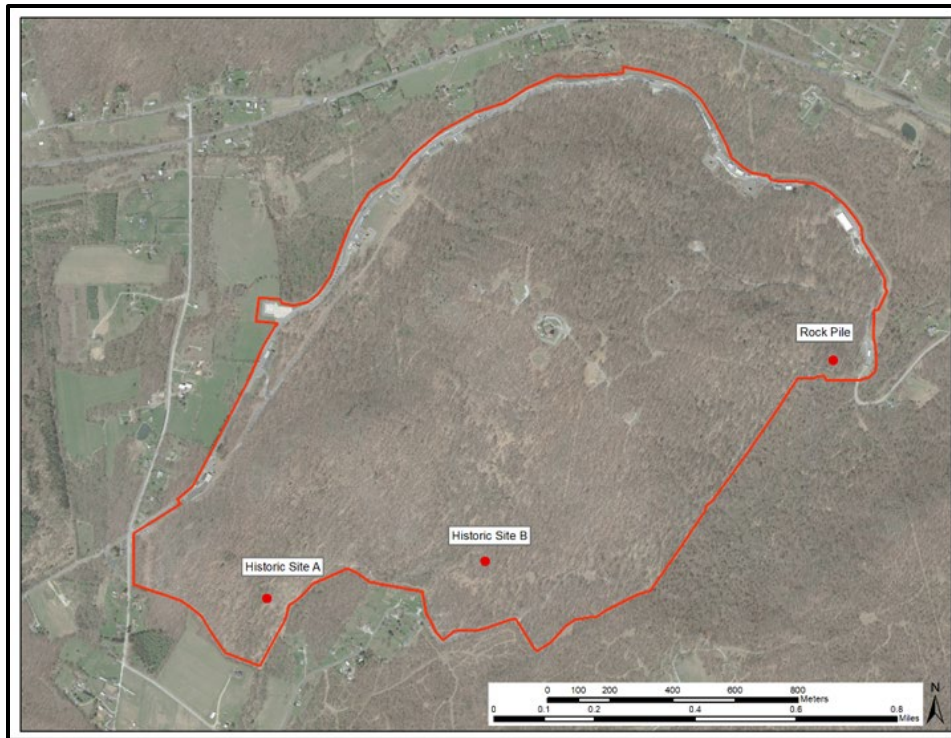
3 Site Revisits and Supplemental Research

The Baltimore District survey consisted of pedestrian survey, soil probes and shovel test pit excavations (Baltimore District 2001). This survey did not find any prehistoric resources within the Site R boundary. However, it did locate five historic period resources on Site R. These consist of historic road traces, dry laid rock field walls, two historic archaeological sites and a manmade rock pile (Figure 3). All of these sites were determined to be not eligible for inclusion in the NRHP. ERDC-CERL determined that additional documentation was needed for four of the five resources; the 2001 documentation of the historic road traces was determined to be sufficient. Note that the information presented below is intended to supplement the original report and not replace it.

It was determined that both historic sites A and B as well as the rock walls throughout the installation required additional mapping. After the walls had been mapped, but before the two historic farmsteads were mapped, a snowstorm occurred that made sites A and B inaccessible for safety reasons. Project constraints prevented additional fieldwork. It is suggested but not required that additional mapping of sites A and B occur before any activity on the site that may have adverse effects.

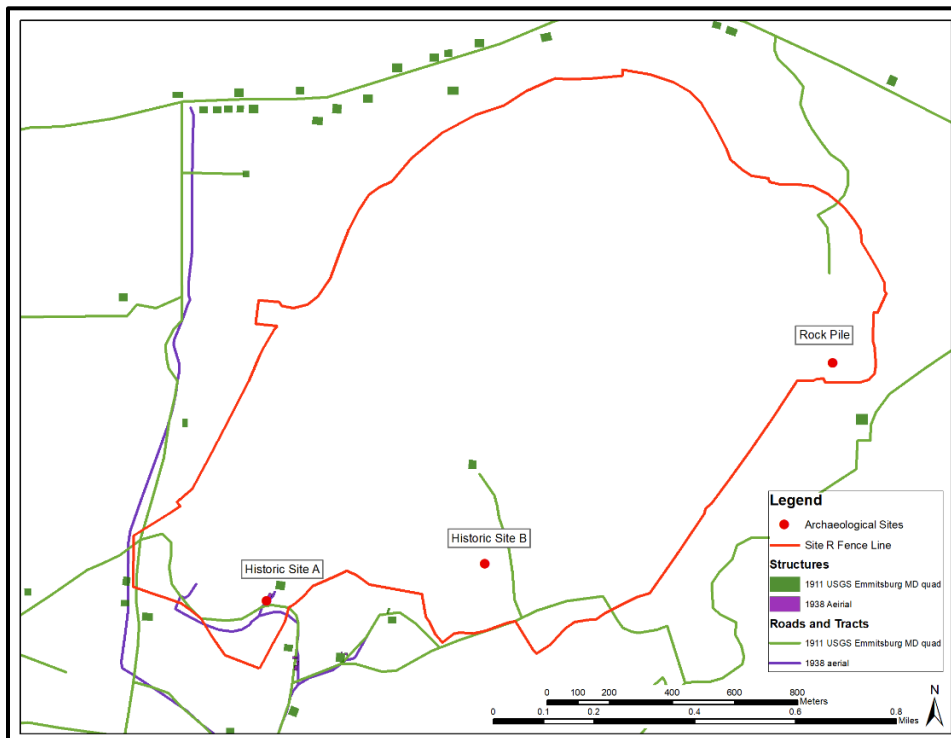
One key resource that was not included in the original report was a 1938 aerial photograph of Raven Rock Mountain. This was found as a hard copy document at RRMC and digitized for this project. Figure 4 shows the locations of roads and discernable buildings from that aerial photograph view along with the 1911 USGS Emmitsburg, Maryland quadrangle map. Additional resources that were used in this report include Light Detection and Ranging (LiDAR) survey data of RRMC provided by RRMC (images from the LiDAR data are not reproduced in this report) and maps of 1952-53 RRMC property boundaries that were located at RRMC and the Adams County Courthouse.

Figure 3. RRMC showing location of sites and property boundaries.



Source: ERDC-CERL (2018).

Figure 4. RRMC with locations of historic buildings and roads.

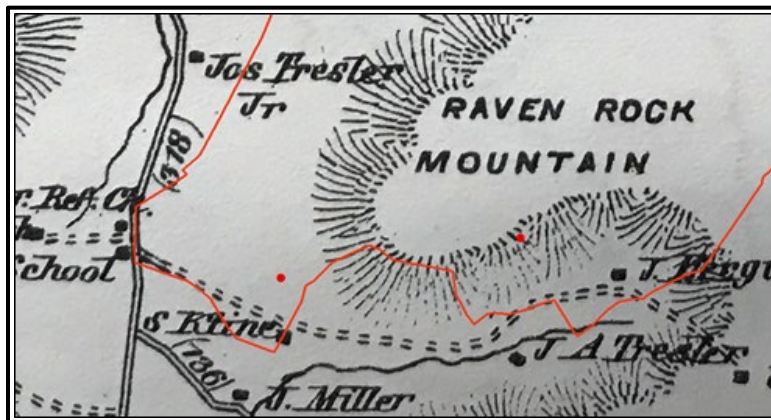


Source: ERDC-CERL (2018).

3.1 Historic Site Location A

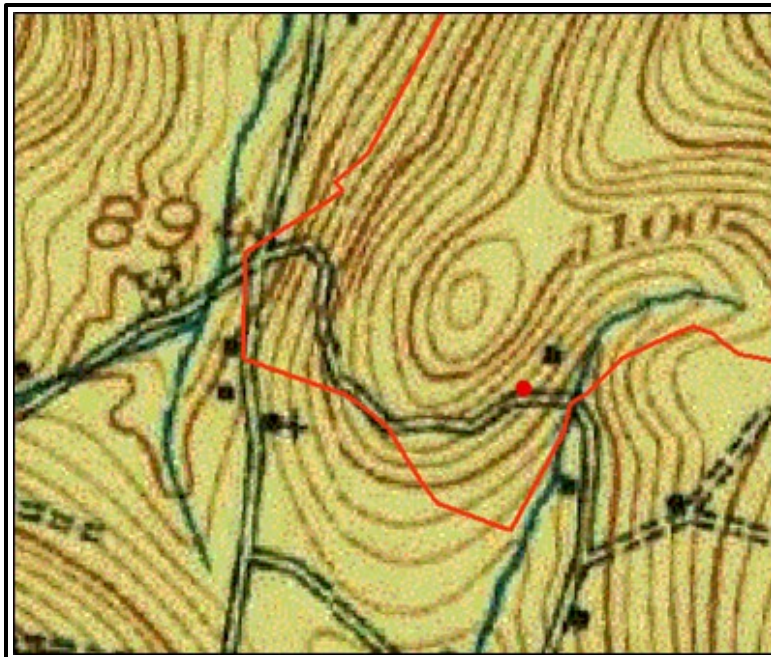
The 2001 report described Historic Site Location A (Site Survey No. 36-AD-440) as the “S. Klien” farmstead based on the Lake (1872) map (Figure 5) and 1911 USGS quadrangle map (Figure 6). It is the opinion of this author that the two structures shown in the 1872 and 1911 maps are not the same structure. While historic maps, including quadrangle maps, can show variance in the location of structures, they usually accurately indicate the side of the road on which structures are located.

Figure 5. Map of the southern portion of RRM, 1872.



Source: Lake (1872).

Figure 6. Portion of Quadrangle Map and Historic Site A. 1911.



Source: USGS (1911).

The property ownership maps of RRMC (Figures 7 and 8) show that the site is located on property tract A-113 and under the ownership of Gladhill. Table 1 lists the chain-of-title (documents held at the Adams County Courthouse, Office of the Recorder of Deeds, Gettysburg Pennsylvania.* The chain-of-title search indicates that the designation of the site as the S. Kline property is not accurate.† The property was never owned by a S. Kline and no member of the Cline/Kline family owned the property in 1872. An 1858 map of the property appears to be the most accurate as it describes both A. Tressler and J. Miller as residents/owners of properties in the area (Figure 9) (Anonymous 1858). The cemetery on Harbaugh Valley Road, approximately 0.6 miles or 1.0 km north of the installation main gate contains multiple burials for the Tressler, Miller, Kline/Cline, and Gladhill families.

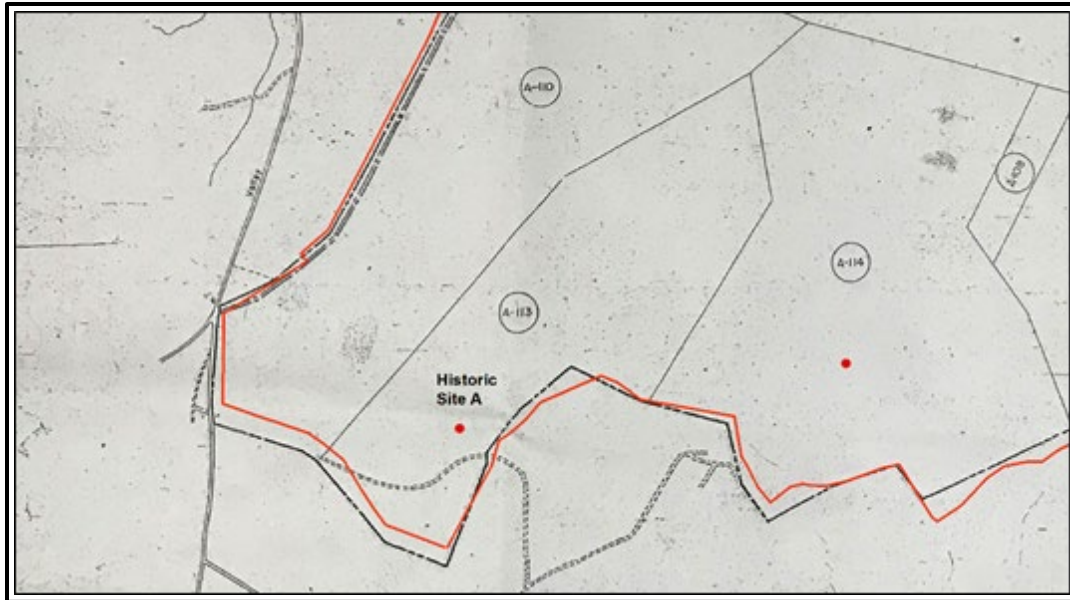
Adams County records also contain descriptions of the contents of the property in 1911. The land was transferred in a sheriff's deed to the ownership of Grant Gladhill. This deed described the property as "good timberland ... improved with a two story frame house, back barn, hog feed, chicken house and other outbuildings, a never failing spring of water, a young bearing apple orchard and a variety of other fruit" (Sheriff's Deed Book A, p 72, Adams County Courthouse). All regular grantor/grantee deed transfers in the county describe only the boundary lines of the property (usually based on trees, rock walls and streams) and do not include information on improvements to the property.

The 1938 aerial photograph of the site shows well cleared and tended fields along with several structures (Figure 10). Note that the sheriff's deed was only for 85 acres (more or less) but the property maps show more than 1,500 acres in the tract at the time of government purchase in 1952. The field boundaries on the 1938 aerial photograph correspond closely with the property lines on the two deed maps on the west, south, and east sides but both maps show that the property on the north side was well behind the tree line.

* The Adams County courthouse only has records for deeds dated after 1800.

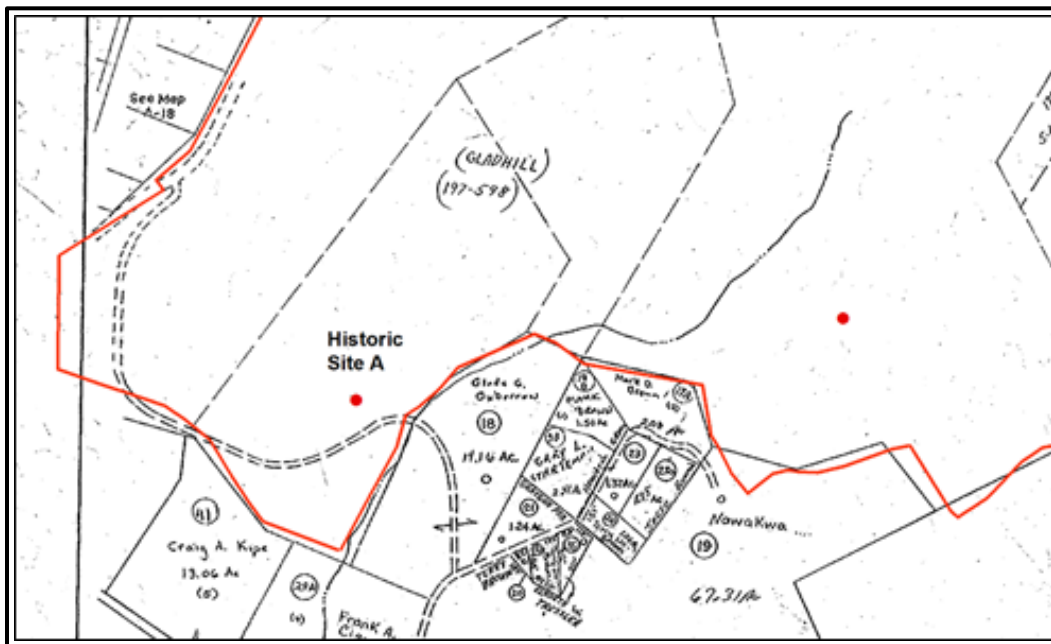
† The spellings Kline and Cline appeared to be used interchangeably during the late 19th and early 20th century. Charles P. Cline appeared as Cline in the 1899 Index of Grantees but as Kline in the 1899 Index of Grantors. Both spellings appear on gravestones in the local cemeteries.

Figure 7. Register of Acquisition map, dated 2/12/1953.*



Source: RRM files

Figure 8. Property map B-18 Liberty and Hamiltonban Township on file at Adams County Courthouse. This map is undated but probably dates to 1952.



Source: Adams County Courthouse records.

* Property and Acquisition maps are not drawn to survey grade. They are intended as general guides and references with the exact property boundaries points described in the text descriptions for each plot. As a result there is frequently some slight discrepancies in features like roads, rivers and property boundaries. In Figure 7, the red outline of the installation boundaries was taken from a survey grade map.

Table 1. Chain of Title, Tract A113 (data from Adams County Courthouse, Office of the Recorder of Deeds).

Date	Grantor	Grantee
29 Feb 1952	Esther Gladhill	U.S. Government
14 May 1921	Grant E. Gladhill and Emma G. Gladhill	Oscar W. Gladhill and Esther A. Gladhill
28 Aug 1911	Sheriffs Deed of lands from Charles P. Cline	Grant E. Gladhill and Wife
16 March 1899	Jacob Miller	Charles P. Cline
31 March 1865	Adam Tressler and Wife	Jacob Miller
15 Oct 1833	Sanford Shroder	Adam Tressler

Figure 9. 1858 map of project area.



Source: Library of Congress.

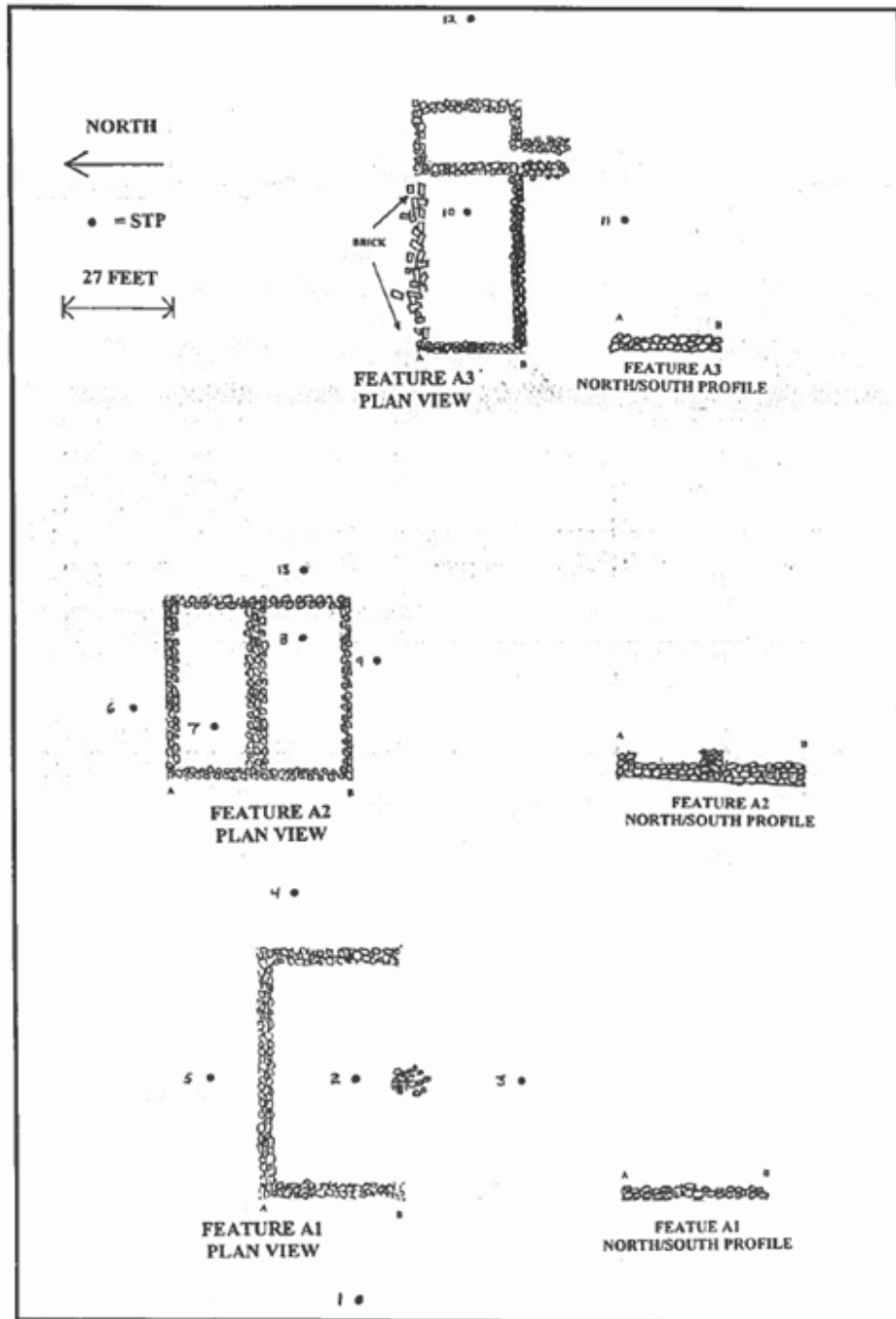
Figure 10. Historic Site A depicted on 1938 aerial map.



Source: RRM files.

The 2001 survey mapped the surviving stone foundations on the property in plan and profile (Figure 11). This map did not include any other features at the site. A site visit demonstrated that the road/driveway remnant was still clearly visible. It is hypothesized that feature A3 most likely represents the foundations of the frame house described in the sheriff's deed. This is based on the presence of brick in the foundation. The artifacts recovered in the 2001 shovel test pits in proximity to feature A3 included a significant amount of domestic debris (whiteware, stoneware, redware, milk, and bottle glass) in addition to architectural debris. The other test pits artifacts were dominated by architectural debris. The three-sided feature A1 is possibly the hog feed listed in the sheriff's deed based on the three-sided nature of the structure and the distance from the suspected farmhouse.

Figure 11. Historic Site A.



Source: Baltimore District (2001), Fig. 9.

The Baltimore District 2001 report describes this site as not eligible for the inclusion in the NRHP. Nothing in the supplemental research contradicts this determination. No further mitigation efforts are required. It is recommended that in future this site be referred to as the Gladhill farmstead and not the Kline farmstead

3.2 Historic Site B

Historic Site B (Site Survey No. 36-AD-339), which was described in the 2001 survey report as the J. Ferguson property, consisted of a single stone foundation 26ft x 26ft in size. The Lake (1872) map shows the nearest structure to the site location as belonging to J. Ferguson (Figure 5). Research conducted as part of this work indicates that attribution of this site to Ferguson is incorrect.

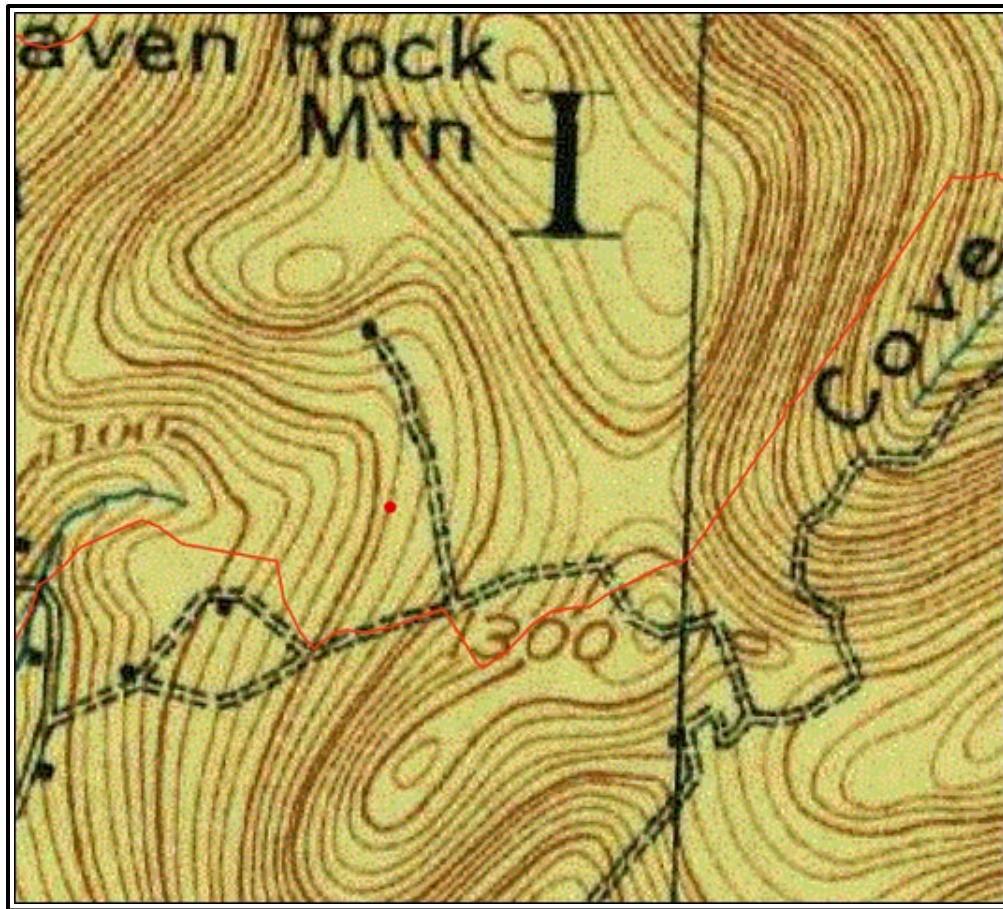
The property does not appear on the deed map on file at the Adams County Courthouse (Figure 8), but does appear as tract A114 on the property map held by RRMC (Figure 7). Table 2 lists the chain of title search for this tract. Tract A114 was never owned by the Ferguson family. All deed transfers describe it as being adjacent to the Ferguson property. This farm appears to have been the property of the Martin family for 141 years.

Table 2. Chain of Title, Tract A114 (data from Adams County Courthouse, Office of the Recorder of Deeds).

Date	Grantor	Grantee
23 Jan 1952	Charles S. Martin	U.S. Government
16 May 1924	Rebecca Martin	Charles S. Martin
17 April 1901	Clarence S. Martin	Rebecca Martin
4 June 1900	D.B. Martin and Wife	Clarence S. Martin
27 March 1851	John Martin and Wife	David Martin and Wife
14 March 1811	John Clark	John Martin

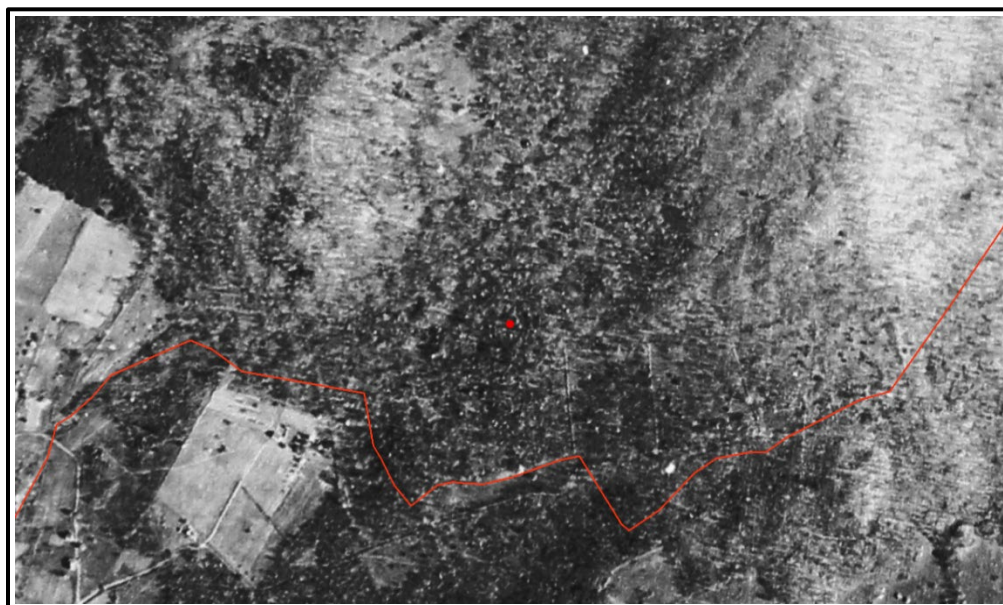
A structure that may be the foundation found at the site does appear on the 1911 USGS quad map (Figure 12) but this structure is approximately 1000 ft (300 m) north of the site coordinates. All other historical maps fail to depict this site. The 1938 aerial photograph of the mountain does not show a clearing and there are no structures other than a series of rock walls visible through the trees (Figure 13). The Lake (1872) map does show that an S. Martin owned a house and store in Fountain Dale on the northeast side of Raven Rock Mountain near the junction of the Harbaugh Valley Road and the Waynesboro Turnpike, but none of the owners of tract A114 have a first name that starts with “S” (Figure 14).

Figure 12. USGS quad map and Historic Site B, 1911.



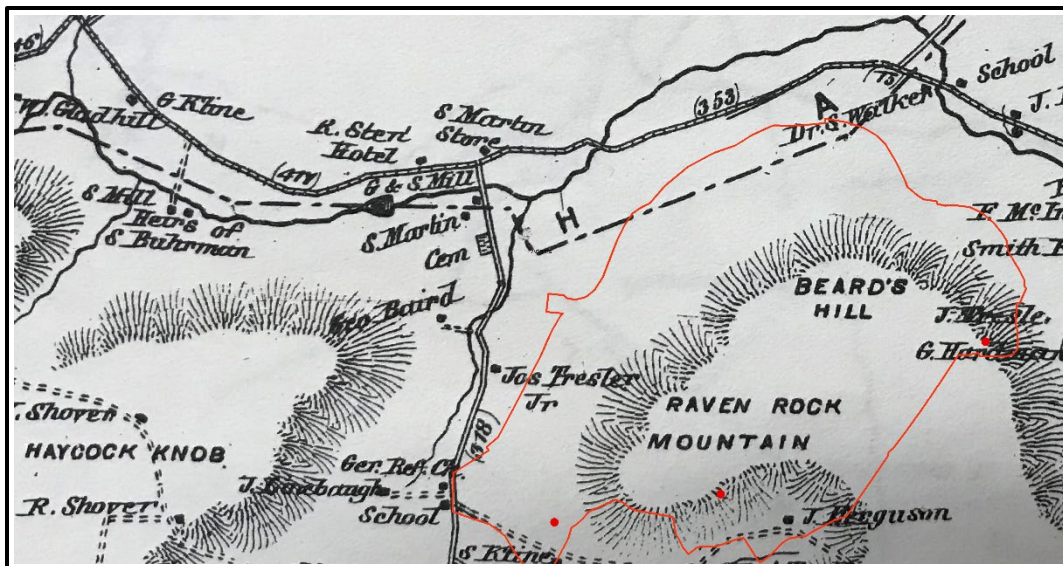
Source: USGS (1911).

Figure 13. Historic Site B depicted on 1938 aerial map.



Source: RRMC files.

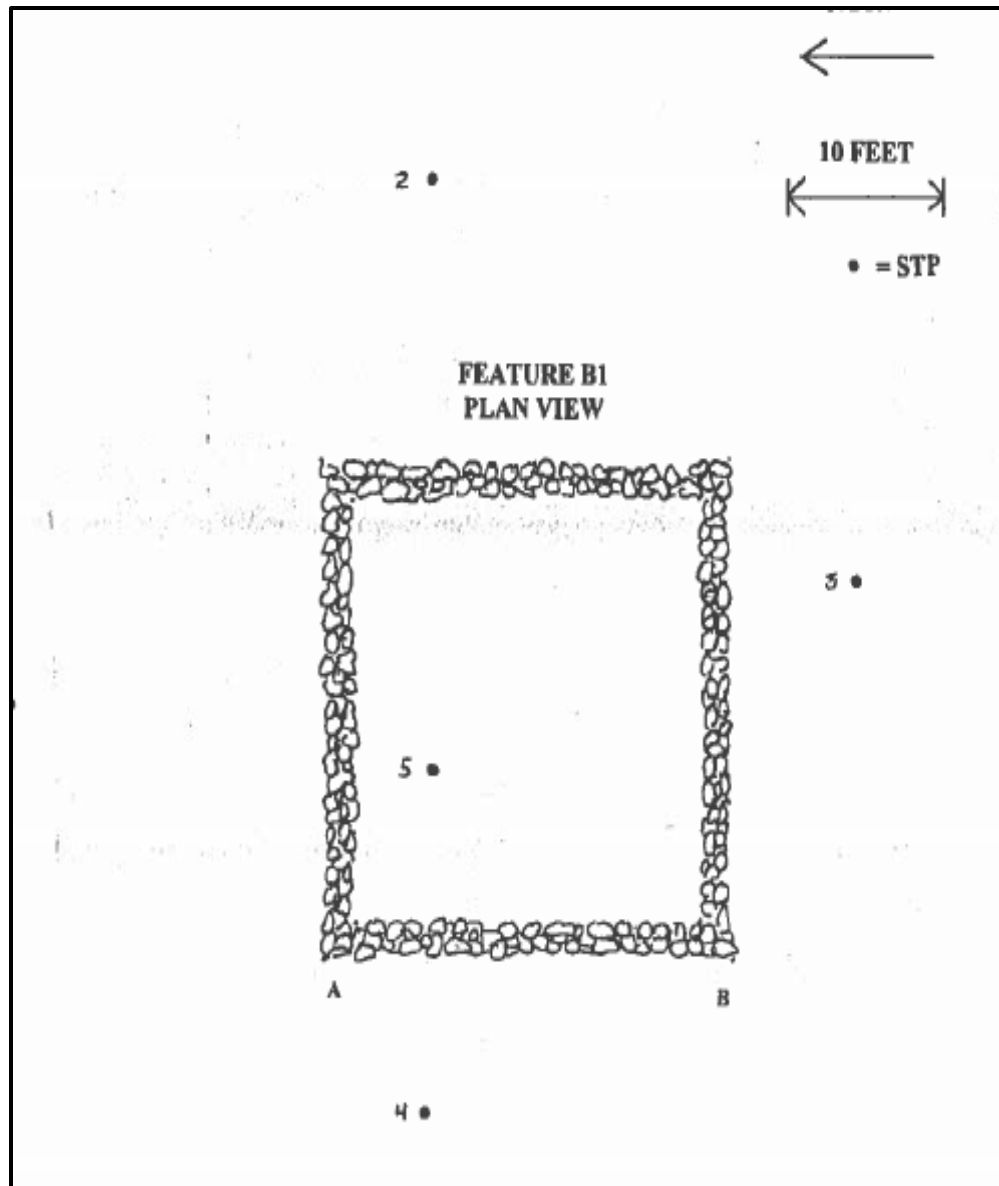
Figure 14. 1872 map showing the various Martins in the area of Raven Rock Mountain.



Source: Lake (1872).

The 2001 Survey map shows only a single foundation at the site (Figure 15). The 2001 report also states that RRMC personnel attested that the site had been impacted previously by cutting and filling activities associated with fruit orchard installation and maintenance. Shovel test pits at the site indicate ground disturbance and the introduction of fill material to the site. Some domestic artifacts including whiteware, redware, and bottle glass were found in the test pits. A 2017 ERDC-CERL site visit determined that there were multiple other features at the site. These included a road remnant, a two- or three-sided structure with stone foundations partially cut into a hillside near the mapped foundation and a large, probably artificially flattened area also adjacent to mapped foundation. Weather conditions prevented the ERDC-CERL field crew from mapping this site during available field time. It is recommended, but not required, that these features be mapped before conducting any construction that may have adverse effects.

Figure 15. Historic Site B.



Source: Baltimore District (2001).

The 2001 report finds that this site is not eligible for inclusion in the NRHP. Nothing found in the ERDC-CERL research contradicts that determination. This appears to have been a small site that has been disturbed by subsequent activities at the site. The number and quantity of artifacts reported in the 2001 report are small and the types described are generic 19th and 20th century material. The 1938 aerial photograph indicates that by the mid-20th century the site was already overgrown with trees and may not even have been occupied or maintained at the time of purchase by the U.S. government. No further mitigation at this site is required.

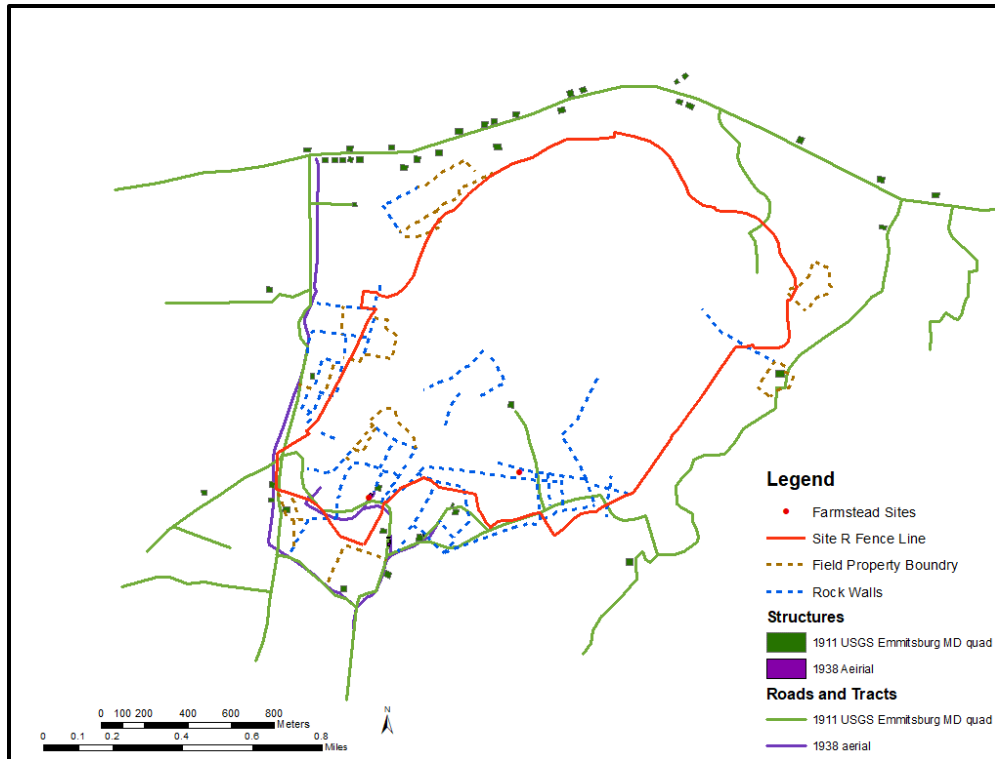
3.3 Rock Walls

Raven Rock Mountain is crisscrossed with a series of large dry laid rock field walls. These walls were noted in the 2001 report, but were not mapped or further investigated. ERDC-CERL determined that these resources should be mapped. LiDAR and the 1938 aerial map were used to create a GIS shape file of the rock walls and field boundaries (rock walls are visible southeast of Historic Site B in Figure 13). This shape file was then ground-truthed using a decimeter accuracy global positioning system (GPS) mapping device. The rock walls were easily verified and/or adjusted for more accurate positions but the field boundaries were no longer discernable on the landscape. Figure 16 shows the walls in relationship to historic roads and structures and Figure 17 depicts the walls in relationship to property boundaries in the 1952 deed map on file at the Adams County courthouse. There is a close correlation between the rock walls and property boundaries indicating that the walls are historic and tied to property ownership and use.

Rock walls that occur inside of properties may have been used to corral livestock into specific areas. Gettysburg National Battlefield contains many dry rock walls and when consulted, park rangers told the researchers that these walls predated the battle but were used by soldiers as cover from enemy fire. The rangers conveyed that the walls were built “horse high, hog wide” so that horses could not jump over them and hogs could not break through them. The sheriff’s deed for the Gladhill farmstead demonstrated that hogs were kept and fruit orchards were cultivated at this farm. It is likely that the rock walls were used to contain the animals that were being fattened up on the orchard windfalls. Driving in the vicinity of Raven Rock Mountain demonstrated that these are indeed a common feature in the historic landscape (Figures 18 and 19).

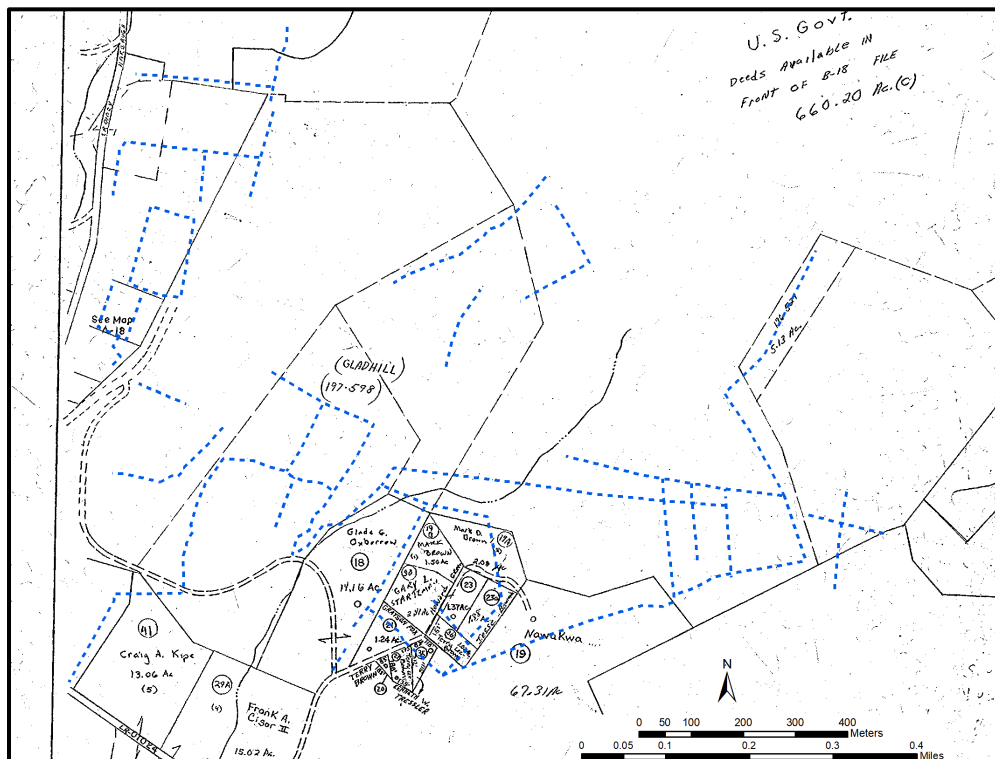
The 2001 Baltimore District report recommended that the rock walls at RRMC are not eligible for inclusion on the NRHP. The further documentation in this report supports that conclusion. The rock walls have now been mapped. If any construction threatens any existing walls it is suggested, but not required, that the walls be photographed before destruction. No mitigation of these features is required.

Figure 16. Rock Walls and field boundaries at Raven Rock Mountain.



Source: ERDC-CERL (2018).

Figure 17. Rock walls in relationship to 1952 property deed map.



Source: Adams County Courthouse records.

Figure 18. Rock wall near road in SW Adams County, Pennsylvania.



Source: ERDC-CERL (2017).

Figure 19. Rock wall among trees in southwest Adams County, Pennsylvania.



Source: ERDC-CERL (2017).

3.4 The Stone Pile

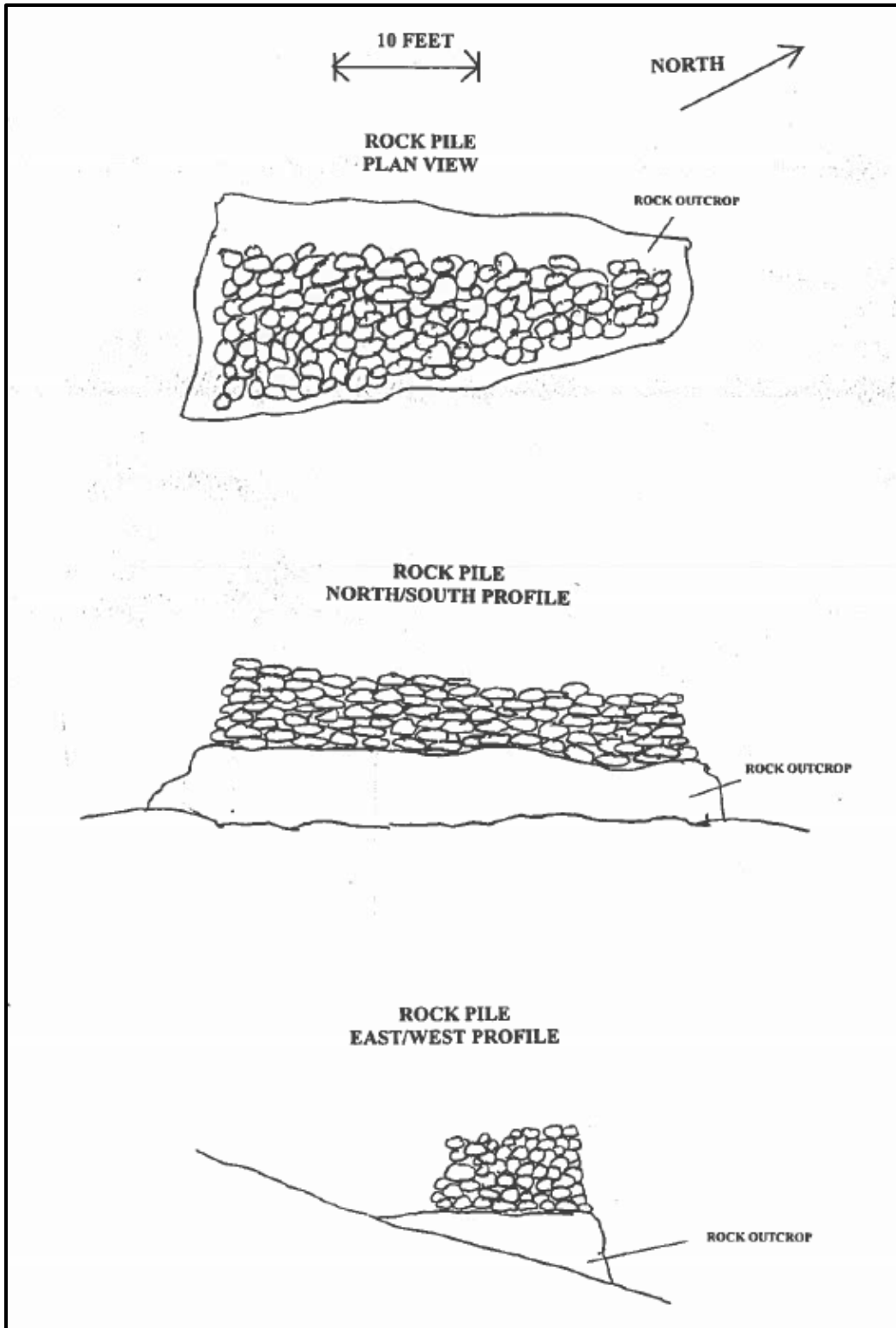
A manmade stone pile was reported and mapped in the 2001 survey (Figure 18). It is a large, flat topped pile of rocks that is sitting on a rock outcrop and conforms to the outcrop in plan shape. The age and function of this feature is unknown. The 2001 researchers consulted with Civil War historians and eliminated the possibility that this was a military construction (potential gun emplacement) associated with the Battle of Gettysburg based on the lack of sight lines to known military positions from the rock pile (Baltimore District 2001 p 19).

In 2009, however, historians and Cultural Resources Program Management staff from Gettysburg National Military Park examined the features (see letter dated 28 October 2009, Figure 2 in Appendix A, p 34). They noted that the site was situated in such a way as to provide long sight lines through gaps in South Mountain. These historians stated that they could not imagine any other use for these features than possible foundations of “signal stations of some sort, most likely of the Civil War era.” The authors of this letter recommended further research of the site to include archival and archaeological investigations

No artifacts have yet been found in association with this feature. The construction of this feature is similar to the dry rock walls that occur on the mountain but this pile does not enclose anything. The steepness of the surrounding hill would make plowing virtually impossible so the pile does not appear to be a field clearing pile. There is a possibility that this could be a Native American structure as cairns are not unknown feature types in pre-historic archaeology. Careful examination of the outcrop by ERDC-CERL researchers did not indicate the presence of any rock art or pictographs.

The author would like to present an alternative hypothesis that this feature was constructed to prevent livestock that might have been foraging on the mountain side from walking over the edge of the stone outcrop. The slope below the feature is much steeper than is indicated in the Figure 20 sketch map and any animal falling over the edge could sustain serious injury that might require the animal to be put down.

Figure 20. Rock Pile.



Source: Baltimore District (2001), Fig. 13.

The Lake (1872) map shows several residences or farmsteads within a few hundred yards of the rock pile (located outside of the RRMC property line) and rock walls are present in the vicinity of the stone pile so it is not unreasonable that animals might have been foraging in the area of the feature.

Because the age and function of this feature could not be determined the original Phase I report determined it to be not eligible and no further mitigation was required (Baltimore District 2001). ERDC-CERL's opinion is that this eligibility determination is incorrect specifically because we do not know the age and function of the feature. It is recommended that the site be determined potentially eligible to the NRHP. In 2010, the Commonwealth of Pennsylvania Bureau for Historic Preservation stated that, if the site were to be impacted, then the function and eligibility of the site should be determined with additional research (see letter dated June 1, 2010 in attached Appendix).

The site should be avoided. The recommended avoidance area is the stone pile and all land 25 meters (80 ft) in any direction of the pile. If any planned construction or other ground disturbance activity has the potential to impact the avoidance area, then additional investigation should be conducted to determine completely the age and function of this site. Additional care should be taken that any ground disturbance activity down slope of the site should not undermine the stability of the avoidance area. Future investigations of the site may include archival research, 3-D scanning of the feature, metal detection surveys, and/or controlled excavation of a portion of the feature or surround area to determine this features age and function.

4 Determination of Eligibility for the NRHP

NRHP eligibility is determined if a property possesses historic significance and sufficient integrity to represent that significance.

4.1 Significance

Significance is defined as the meaning or value ascribed to a cultural landscape based on the NRHP criteria for evaluation. There are four eligibility criteria against which site significance is evaluated for the NRHP. These four criteria are described in National Park Service Bulletin No. 15, *How to Apply the National Register Criteria for Evaluation* (NPS 1997a, p 11).

- Criterion A applies to properties associated with events that have made significant contributions to the broad patterns of history.
- Criterion B applies to properties associated with the lives of persons significant in our past.
- Criterion C applies to properties embodying the distinctive characteristics of a type, period, or method of construction; possessing high artistic values; or representing a significant and distinguishable entity, the components of which may lack individual distinction.
- Criterion D applies to properties that have yielded or are likely to yield, information important to prehistory or history.

4.2 Integrity

Integrity is defined as the authenticity of a property's identity, evinced by the survival of the site's physical characteristics. Archaeological integrity describes the quality of information and level of preservation for an archaeological site, district, or assemblage. Good archaeological integrity is ascribed to properties that are relatively intact and complete, and that have not been significantly impacted by later activities or natural processes. Poor integrity indicates that the site has been disturbed through the actions of people (such as ground disturbances or artifact collecting) or by natural processes such as erosion. The archaeological record, however, is complex; any determination of integrity must be made within the historical and modern context of the property.

Archaeological integrity is evaluated on seven aspects. These aspects of integrity are fully described in Bulletin No. 15 (NPS 1997a, p 44–49) and are summarized as

- **Location:** the place where the item was constructed/manufactured or a historic event occurred;
- **Design:** the elements that constitute the form, plan, space, structure and style of a property;
- **Setting:** the physical environment of a property;
- **Materials:** the physical elements or parts that were combined or deposited in a pattern or manner to form an archaeological property;
- **Workmanship:** the evidence of the labor and skill of a culture or people;
- **Feeling:** the expression of the aesthetic or historic sense of a particular period of the past; and
- **Association:** the direct link between an important historic event or person and a historic property. (Under Criterion D, the link is measured in the strength of association between data and important research questions.)

Archaeological properties rarely have undisturbed cultural deposits. Long-term occupation or repeated revisiting of sites creates complex stratigraphy. Features visible above ground and the distribution of artifacts may be used as evidence of below-ground integrity. For properties considered eligible under Criterion D, integrity relates directly to the ability of the site to provide information to the research questions defined within the archaeologist's or installation's research design. In general, however, archaeological integrity is demonstrated by the presence of spatial patterning of artifacts or features that represent differential uses or activities and the lack of serious disturbance to the property's archeological deposits (NPS 1997a, p 46–49).

4.3 Findings at Raven Rock Mountain Complex Site R

Five sites have been located at RRMC Site R. The NRHP evaluations for each site follow:

1. Historic road traces were located at various locations on the installation. Historic roads are a common feature type throughout the region. The location of the roads has been documented with historic maps. There is little probability that further archaeological investigation of these roads will yield any additional information about the inhabitants of the region. These features are not eligible for inclusion in the NRHP.

2. Historic Site A – 36-AD-440, the Gladhill site (previously called the Kline Site). This site is a 19th-20th century farmstead. The primary features of the site are foundation remnants of three square structures. Farmsteads of this type are present throughout the region. Standing, still occupied, farmsteads from this period are present outside the installation at a distance of less than 2 miles from this site. Phase 1 investigations of the site conducted in 2001 did not recover any artifact type not typically seen at habitation sites from this period. Archival research did not indicate that any person of historical significance or any historically significant event is associated with this farmstead. There is little probability that further archaeological investigation of this site will yield any additional information about the inhabitants of the region. This site is not eligible for inclusion in the NRHP.
3. Historic Site B – 36-AD-339, the Martin site (previously called the Ferguson Site). This site is similar in age and function but smaller than historic site A. The primary feature of the site is a single square foundation remnant. Phase 1 investigations of the site conducted in 2001 did not recover any artifact type not typically seen at sites of this type, but did recover evidence that the site had been previously impacted by ground disturbance activity that had degraded the integrity of the site. Oral history at RRMC also indicated previous activities with adverse effects occurred at this site. Historical research also indicated that the site may have been unoccupied for many years before U.S. Army purchase of the property, reducing the possible occupation span of the site. Archival research did not indicate that any person of historical significance or any historically significant event is associated with this farmstead. There is little probability that further archaeological investigation of this site will yield any additional information about the inhabitants of the region. This site is not eligible for inclusion in the NRHP.
4. The Rock Walls. Dry rock walls are a common feature type in the region. Rock walls of very similar size and construction technique were observed in a state of good maintenance on private property immediately outside of the installation fence line. The location of the rock walls was mapped using historic aerial photographs and LiDAR data and then ground truthed with surface survey and GPS data collection. Some of the rock walls on the property have already been impacted by construction activity on RRMC, decreasing the integrity of these features. There is little probability that further archaeological investigation of these walls will yield any additional information about the inhabitants of the region. This site is not eligible for inclusion in the NRHP.

5. The Stone Pile near the East Gate. The age and function of this feature has not been determined. The site appears to have good integrity with no evidence of recent disturbance of the pile or the ground around it. If the site is determined to be related the Civil War Battle of Gettysburg, it may have significance under criteria A, B or D. If the site is determined to be Native American burial or spiritual site, then it would fall under the protection of the Native American Graves and Repatriation Act. Until such time as the true nature of the site can be determined, it should be considered potentially eligible for inclusion on the NRHP. An avoidance area that includes the stone pile and all land within 25 meters (80 ft) in any direction from the site should be established. Ground disturbance activity including construction activity should not be conducted in the avoidance area until further investigation has been conducted to definitively determine the age and function of the site.

5 Final Recommendations for Eligibility and Conclusion

The 2001 Baltimore District survey of RRMC identified no prehistoric and five historic archaeological resources on the property. Baltimore District concluded that none of these sites were eligible or potentially eligible for inclusion to the NRHP.

After site revisits and additional historic and archival research, ERDC-CERL recommends the following.

1. Historic road traces. ERDC-CERL concurs with their findings that these features are not eligible for the NRHP and that no further documentation or mitigation is required.
2. Historic Site A – 36-AD-440, the Gladhill site. ERDC-CERL concurs that this site is not eligible for the NRHP and that no further documentation or mitigation is required.
3. Historic Site B – 36-AD-339, the Martin site. ERDC-CERL concurs that this site is not eligible for the NRHP and that no further documentation or mitigation is required.
4. The Rock Walls. ERDC-CERL concurs that these features are not eligible for the NRHP and that no further documentation or mitigation is required.
5. The Stone Pile. ERDC-CERL does not concur with Baltimore District's conclusion that this site is not eligible for the NRHP. Until the age and function of this feature can be determined it should be considered potentially eligible for the NRHP. Activity with adverse effects on the site should not occur within 25 meters (80 ft) of the feature. Potential future lines of inquiry for this feature include, but are not limited to, metal detector surveys, 3-D scanning, and/or controlled excavation of a portion of the feature or surrounding areas to determine if something is buried beneath it or to locate diagnostic artifacts.

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Archival resources

Adams County Courthouse, Gettysburg, Pennsylvania.

Land Records Adams County, Pennsylvania, 1800-Current.

Property map of land property lines and parcel number for Raven Rock Mountain, Undated but probably circa 1951.

Raven Rock Mountain Complex Site R.

Aerial photograph of unknown origin. Possibly originators are US DoD, USDA, USGS. Kept on file at RRMCM, Apr 23, 1938.

Property map of land acquisition dated 1952.

Appendix A: Related Documents

Figure 1. 2002 letter from the Pennsylvania Historical and Museum Commission (PHMC) to Fort Detrick in regards to the 2001 Baltimore District survey of Site R.

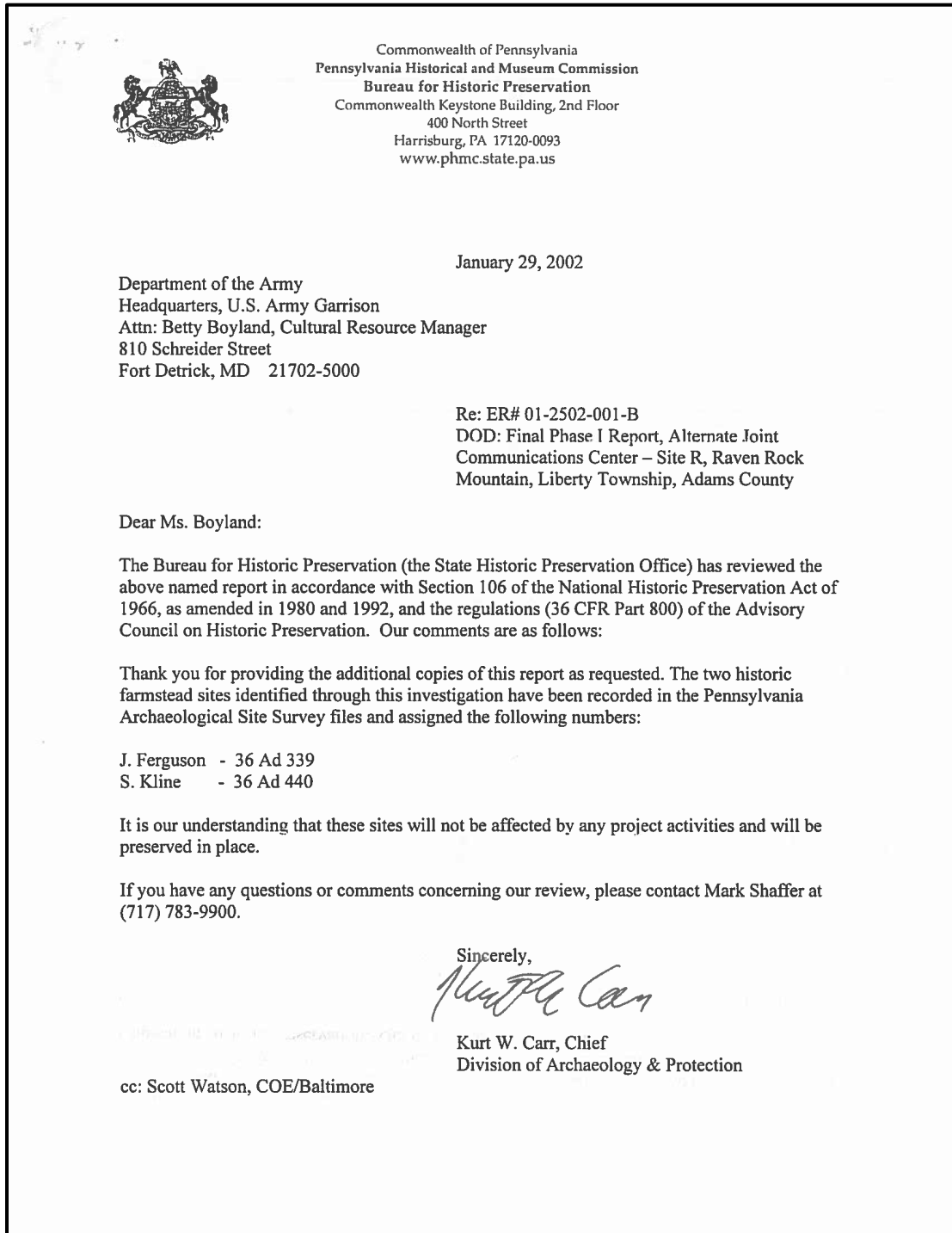


Figure 2. 2009 letter from Gettysburg National Military Park in regards to the stone structure near the East Gate.

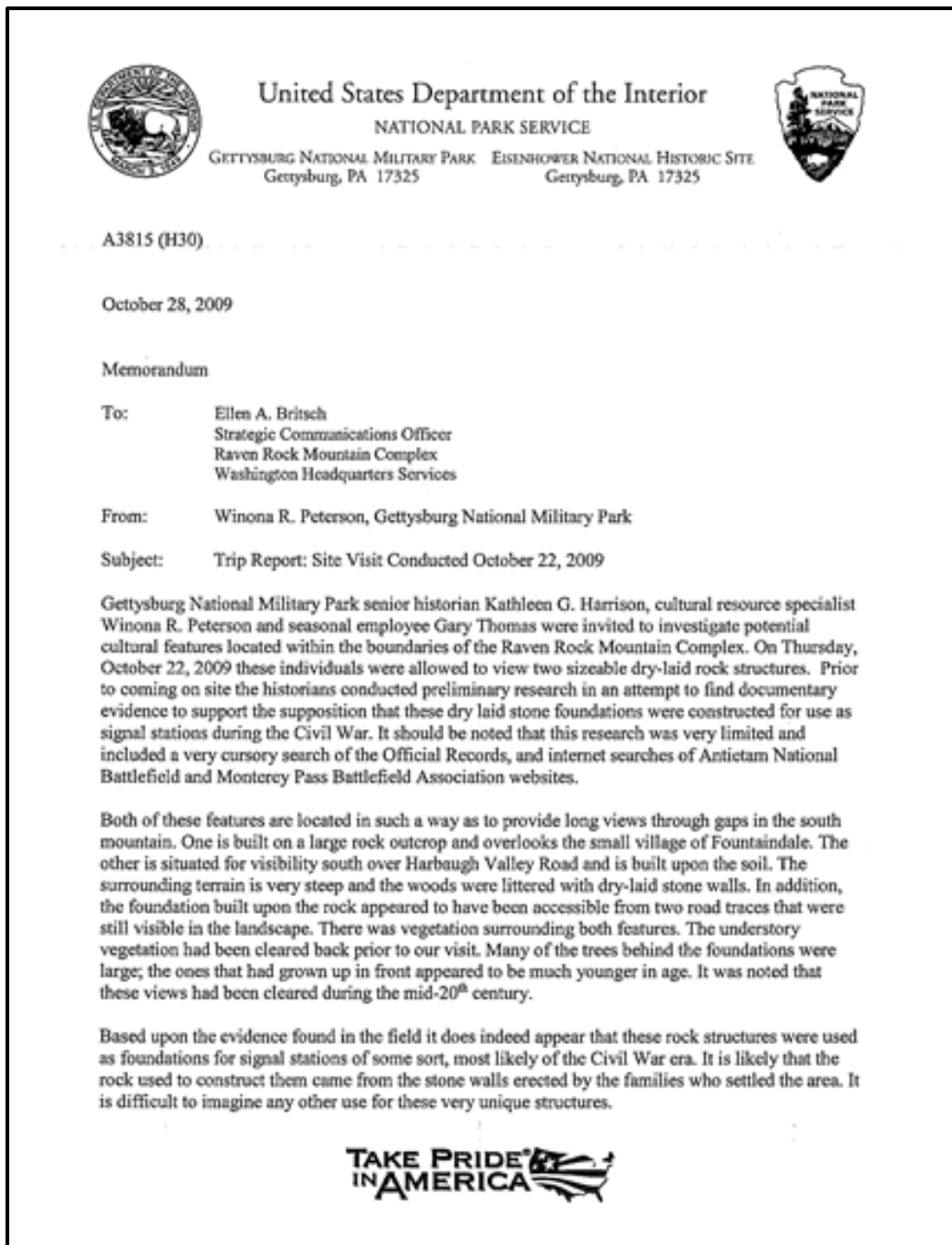


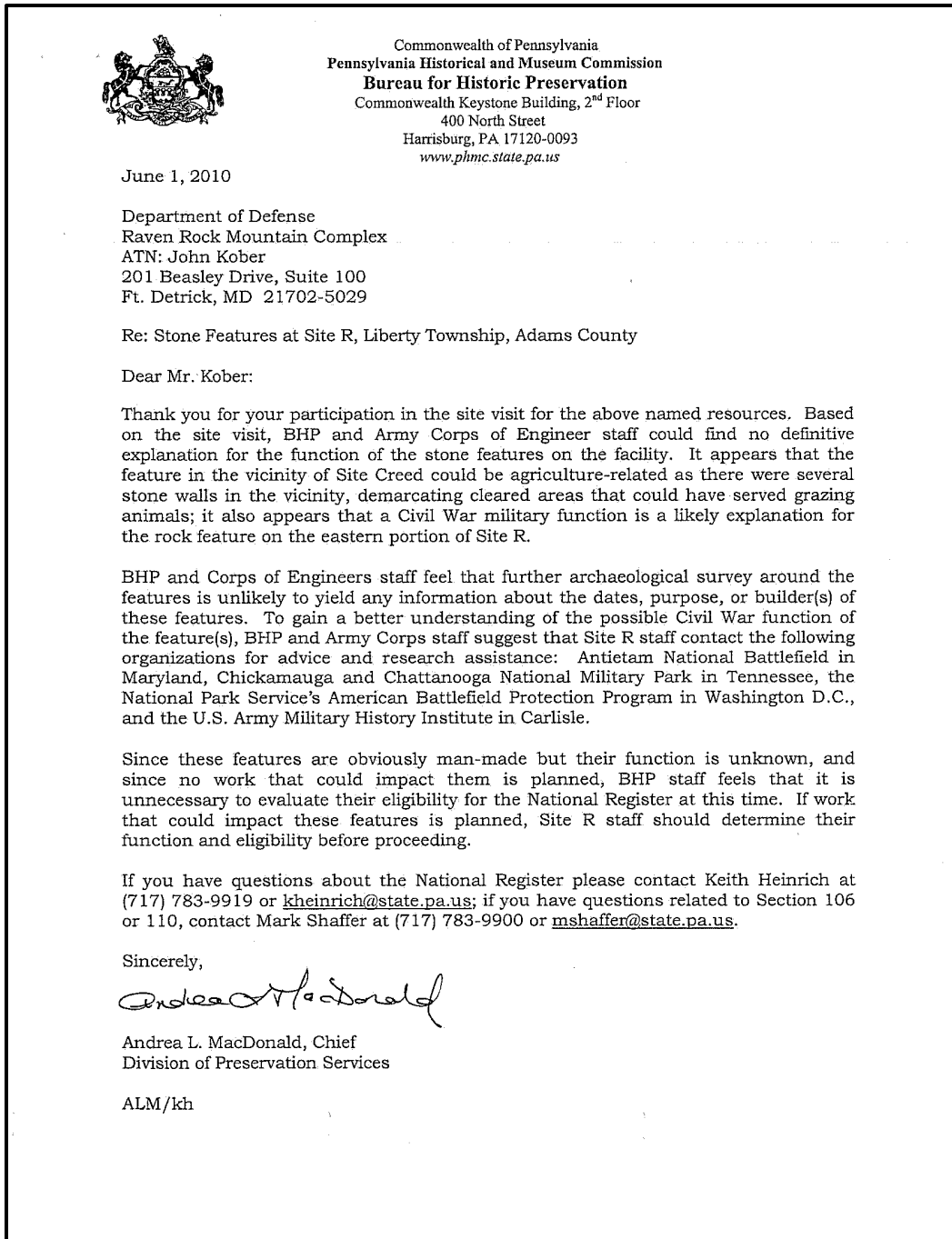
Figure 2. Cont'd.

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NPS staff recommended that a more thorough investigation of the Official Records and other military records be conducted as well as searches into the local historical society records. Peterson will send electronic copies of the limited research she did to Raven Rock staff. NPS also recommended that an archeological investigation be conducted within the general vicinity of these structures in an attempt to confirm their provenance. Since the installation is located in Adams County Pennsylvania it was recommended that Raven Rock staff contact the Pennsylvania Historical Museum Commission (PHMC) for guidance on how best to proceed. Peterson forwarded contact information to Ms. Ellen Britsch at Raven Rock to facilitate this discussion. She also contacted Mark Shaffer of PHMC to advise that a conversation would be forthcoming.

It was a rare treat to be included in the dialog concerning these interesting structures.

Figure 3. 2010 letter from PHMC in regards to the stone structure near the East Gate.



REPORT DOCUMENTATION PAGE

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13. SUPPLEMENTARY NOTES This study was funded by Raven Rock Mountain Complex, under reimbursable Project 469449, "Work for RRMC."						
14. ABSTRACT <p>The U.S. Congress codified the National Historic Preservation Act of 1966 (NHPA) in part by establishing the National Register of Historic Places (NRHP), which requires federal agencies to address their cultural re-sources. NHPA Section 110 requires federal agencies to inventory and evaluate their cultural resources, and Section 106 requires them to determine the effect of federal undertakings on those potentially eligible for the NRHP.</p> <p>In 2017, ERDC-CERL was tasked with conducting a Phase I Archaeological survey of Raven Rock Mountain Complex (RRMC) Site R in Pennsylvania, which was built in 1951 and is now a division of the Washington Headquarters Service. In 2001, U.S. Army Corps of Engineers Baltimore District conducted an archaeological Phase I survey of the Site R facility. A 2017 historical resources survey of the facility recommended additional archaeological resources research to supplement the 2001 survey. This report provides supplemental historic context and field documentation of archaeological sites and features described in the 2001 report. In consultation with the Pennsylvania State Historic Preservation Officer, this work fulfills Section 110 processes for the land at Site R.</p>						
15. SUBJECT TERMS Archaeological site location, Historic preservation, Cultural property--Protection, Archaeology, Military bases						
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