

**ATTACHMENT B**

**Endangered Species Impact Analysis**

DEPARTMENT OF  
DEFENSE, VETERANS AND EMERGENCY MANAGEMENT  
Directorate of Facilities Engineering  
Headquarters, Maine Army National Guard  
Camp Keyes, Augusta, Maine 04333-0033

26 February 2015

MEMORANDUM FOR RECORD

SUBJECT: ESA Section 7 Consultation for LZ and Raven Tower Project, Plymouth

1. A Record of Environmental Consideration (REC) has been prepared by the MEARNG for the development of two new landing zones and a Raven UAV observation tower at the Plymouth Training Site.
2. The proposed action consists of construction and subsequent intermittent training activities.
3. The proposed action requires an internal Section 7 review and effects determination for the presence or potential habitat of federally listed species as required by the ESA of 1973, as amended.
4. The U.S. Fish & Wildlife Service (USFWS) Maine Field Office in Orono, Maine, has approved the following list of federally listed species and critical habitat for the project site:

Common Name	Scientific Name	Habitat Present w/in Project Area	Determination
Gulf of Maine Distinct Population of Atlantic Salmon	<i>Salmo salar</i>	No	No Effect

5. Review of species surveys for the facility location listed above has shown that no state or federally listed species, or their designated Critical Habitats, have been documented at the project site. Therefore, the MEARNG has determined “**no effect**” will occur as a result of the project action.
6. The POC for this action is Mr. Timothy Bickford, Natural Resources Manager, MEARNG at (207) 430-5923 or [timothy.a.bickford2.nfg@mail.mil](mailto:timothy.a.bickford2.nfg@mail.mil).

TIMOTHY BICKFORD  
EN, MEARNG  
Natural Resource Manager

**Species Summary Table**

Your name: Andrew Flint, MEARNG EPM

Project name used in IPaC: Plymouth LZs

Date: 4-February-2015

Step 2 Listed or candidate species that are likely present according to the Official Species List from IPaC?	Step 2 Is your action area in critical habitat (only for Canada lynx or Atlantic salmon)? Yes or No	Step 3A Is suitable habitat for listed or candidate species present in your action area? "suitable habitat present" "suitable habitat not present" "Don't know"	Step 3B Does the species occur in your action area? "Species present" "Species not present" "Don't know"	Step 4 Is your project likely to take or disturb eagles and require an Eagle Act permit? "Will not disturb" "May disturb" "Don't know"	Step 5 Determinations for the Endangered Species Act – only Federal agencies complete this column "No effect" "May effect"	Notes and Documentation (provide additional information if needed)
"No Species" or IPaC species list Bald eagle nests from Step 4.	No	suitable habitat not present (upland)	Don't know		No effect	
Bald eagle				Will not disturb		

**Notes:**



## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Maine Ecological Services Field Office

17 GODFREY DRIVE, SUITE 2

ORONO, ME 4473

PHONE: (207)866-3344 FAX: (207)866-3351

URL: [www.fws.gov/mainefieldoffice/index.html](http://www.fws.gov/mainefieldoffice/index.html)

Consultation Code: 05E1ME00-2015-SLI-0064

February 04, 2015

Event Code: 05E1ME00-2015-E-00107

Project Name: Plymouth LZs

**Subject:** List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

#### To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: [http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html) Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: <http://www.fws.gov/mainefieldoffice/Project%20review4.html>

Additionally, wind energy projects should follow the wind energy guidelines: <http://www.fws.gov/windenergy/> for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm> and at:

<http://www.towerkill.com>; and at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior  
Fish and Wildlife Service

Project name: Plymouth LZs

## Official Species List

**Provided by:**

Maine Ecological Services Field Office  
17 GODFREY DRIVE, SUITE 2  
ORONO, ME 4473  
(207) 866-3344  
<http://www.fws.gov/mainefieldoffice/index.html>

**Consultation Code:** 05E1ME00-2015-SLI-0064

**Event Code:** 05E1ME00-2015-E-00107

**Project Type:** Military Operations / Maneuvers

**Project Name:** Plymouth LZs

**Project Description:** 2 new LZ, intermittent UH-60 training, UAV tower, intermittent UAV training

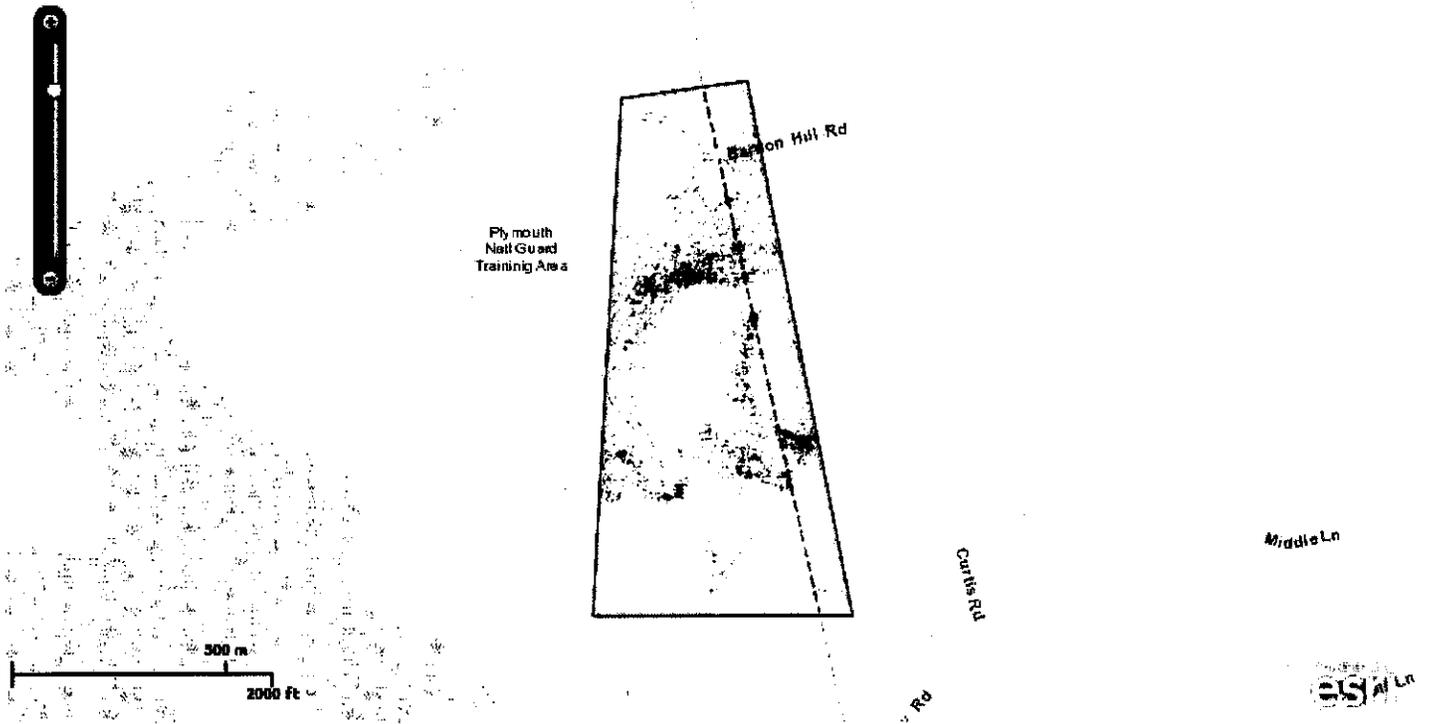
**Please Note:** The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior  
Fish and Wildlife Service

Project name: Plymouth LZs

**Project Location Map:**



**Project Coordinates:** MULTIPOLYGON (((-69.1873196 44.8093759, -69.1835517 44.8097351, -69.1804618 44.7985298, -69.188178 44.7985359, -69.1873196 44.8093759)))

**Project Counties:** Penobscot, ME



United States Department of Interior  
Fish and Wildlife Service

Project name: Plymouth LZs

## Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Fishes	Status	Has Critical Habitat	Condition(s)
Atlantic salmon ( <i>Salmo salar</i> ) Population: Gulf of Maine DPS	Endangered	Final designated	



United States Department of Interior  
Fish and Wildlife Service

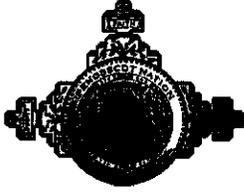
Project name: Plymouth LZs

## **Critical habitats that lie within your project area**

There are no critical habitats within your project area.

**ATTACHMENT C**

**Cultural Resource Impact Analysis**



**Penobscot Nation  
Cultural & Historic Preservation Department  
Tribal Historic Preservation Office  
12 Wabanaki Way, Indian Island, ME 04468**

March 3, 2015

Elizabeth E. Barton, Cultural Resources Manager  
Department of Defense – Veterans and Emergency Management  
Maine Army National Guard  
33 State House Station  
Camp Keyes, Augusta, ME 04333-0033

**SUBJECT: Proposed building of new Landing Zone (LZ) at Plymouth Training Site**

Dear Ms. Barton,

The Penobscot Nation Tribal Historic Preservation Office (THPO) has received and reviewed the proposed building of two new helicopter landing zones at the Plymouth Training Site for the Maine Army National Guard. This project also includes building a small tower to fly radio controlled planes (“UAVs”) within the boundaries of the Training Site. These projects will not affect any Penobscot cultural or historic interests within the Area of Potential Effect of the Plymouth Training Site.

Thank you for consulting with the Penobscot Nation Tribal Historic Preservation Office with the proposed building of the Landing Zone and UAV Tower at the Maine Army National Guard Plymouth Training Site. If you have any questions or comments, please feel free to contact me at any time via email at [chris.sockalexis@penobscotnation.org](mailto:chris.sockalexis@penobscotnation.org) or by calling (207) 817-7471.

Sincerely,

A handwritten signature in black ink that reads "Chris Sockalexis".

Chris Sockalexis, THPO  
Penobscot Nation



MAINE HISTORIC PRESERVATION COMMISSION  
55 CAPITOL STREET  
65 STATE HOUSE STATION  
AUGUSTA, MAINE  
04333

JOHN ELIAS BALDACCI  
GOVERNOR

EARLE G. SHETTLEWORTH, JR.  
DIRECTOR

May 11, 2004

David H. Brandt, P.E.  
State Environmental Specialist  
ME Army National Guard  
Dept. of Defense, Veterans & Emergency Management  
State House Station 33  
Camp Keyes, Augusta, ME 04333-0033

Project: MHPC #0249-02 - Plymouth Training Site; Proj.#ENV03-940B; Phase 1B  
Location: Plymouth, ME

Dear Mr. Brandt:

I have reviewed the results of the archaeological survey received April 26, 2004 to continue consultation on the above referenced project. This project was reviewed pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

Based on the location, scope of work, and results of the archaeological survey, I concur with the findings of the report and have concluded that this project will have no effect upon historic properties [architectural or archaeological].

Please contact Mike Johnson of this office if we can be of further assistance in this matter.

Sincerely,

  
Earle G. Shettleworth, Jr.  
State Historic Preservation Officer

EGS/mj

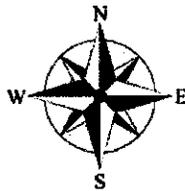
**ARCHAEOLOGICAL PLANNING LEVEL PHASE IB SURVEY  
FOR PLYMOUTH TRAINING SITE  
PLYMOUTH (PENOBSCOT COUNTY), MAINE  
PROJECT #ENV03-940B**

Submitted to

Department of Defense, Veterans and Emergency Management  
Headquarters, Maine Army National Guard  
Camp Keyes  
Augusta, Maine 04333-0033

Kathleen Wheeler, Ph. D., Principal Investigator

Prepared by  
Anthony Booth, B. A.  
Michelle Hannum, M. A.  
Kathleen Wheeler, Ph. D.



**INDEPENDENT ARCHAEOLOGICAL  
CONSULTING, LLC**

97 Morning Street  
Portsmouth, NH 03801

**FINAL REPORT**

March 22, 2004

## PROJECT SUMMARY

**Project Name:** Phase IB Archaeological Survey  
**Client:** Maine Army National Guard (MEARNG)  
**Project #:** ENV03-940B  
**Location:** Plymouth Training Site, Plymouth, Maine.  
**Project Area** (size, dimensions): 40-m-x-30-m (1200 m<sup>2</sup>)  
**Expected Impacts:** None  
**Dates of Fieldwork:** September 9 and 11, 2003

**Findings:** Investigations at the Jacob Curtis Farmstead site (ME 353-001) produced 609 artifacts primarily of architectural materials, some domestic ceramics, farm-related objects, and post-abandonment detritus. The archaeological evidence indicates that Curtis family constructed the site in the mid-19<sup>th</sup> century and that they occupied it until the early-20<sup>th</sup> century. The structure was abandoned about this time, and partially disturbed and filled by MEARNG activities later in the 20<sup>th</sup> century. These filling activities appear to be the result of mechanical grading and bulldozing of earth. The artifacts support deed research of an occupation beginning in 1843 and continuing into the 1920s.

Examination of the farmstead concluded that the property was constructed in the “big house, little house, back house, barn” (or “connected farm”) configuration (Hubka 1984). All four features are present at the site along with a filled well and a relict apple orchard in the northern dooryard. The privy was not located during the survey. The style of farmstead is unique to New England and represents an example of farmstead that evolved and adapted to Maine’s changing agricultural landscape.

**Recommendations:** IAC did not test outside of the approximate 40-m-x-30-m area that included the foundation features. Testing in the surrounding fields and forests on the opposite sides of the access road may locate archaeological deposits related to agricultural practices, but these are apt to be ephemeral and difficult to locate.

Because of the modern earth-moving episodes, the preserved portion of the Jacob Curtis Farmstead site (ME 353-001) is restricted to a small area immediately surrounding the house cellar and attached building foundations. The north dooryard – typically the most-used area at a farmstead – had poor integrity and few artifacts. The main dwelling cellarhole has been partially filled from the road, and the barn foundation has been similarly disturbed at the western end of the farm complex. The site is considered not eligible for National Register of Historic Places (NRHP) because of the poor site integrity. No further archaeological survey is recommended at the site.

<i>Project Summary</i> .....	<i>i</i>
<i>Table of Contents</i> .....	<i>ii</i>
<i>List of Figures</i> .....	<i>iii</i>
<i>List of Tables</i> .....	<i>iii</i>
<i>List of Plates</i> .....	<i>iii</i>

## TABLE OF CONTENTS

<b>INTRODUCTION</b> .....	1
<b>PROJECT LOCATION</b> .....	3
<b>EUROAMERICAN CULTURAL CONTEXT</b> .....	4
<b>The Curtis Family</b> .....	4
<b>METHODS</b> .....	11
<b>RESULTS OF THE PHASE IB SITE LOCATIONAL SURVEY</b> .....	12
<b>Subsurface Testing</b> .....	12
<b>Features</b> .....	18
<b>INTERPRETATIONS AND RECOMMENDATIONS</b> .....	22
<b>The Big House (Feature 1)</b> .....	22
<b>Little House (Feature 2)</b> .....	22
<b>Back House (Feature 3)</b> .....	25
<b>Barn (Feature 4)</b> .....	25
<b>Recommendations</b> .....	25
<b>REFERENCES</b> .....	27
<b>APPENDIX A</b> .....	28

## INTRODUCTION

Independent Archaeological Consulting, LLC, (IAC) completed an Archaeological Planning Level Phase IB Survey (Project #ENV03-940B) at the Plymouth Training Site (hereafter Training Site) for the Maine Army National Guard in Plymouth, Maine (Figure 1). The Phase IB work is authorized under Section 106 of the Historic Preservation Act of 1966 (P.L. 89-665), as amended, and as implemented by regulations of the Advisory Council of Historic Preservation (36 CFR Part 800). The Federal funds for this project are provided to the MEARNG by the National Guard Bureau pursuant to a Federal-State Master Cooperative Agreement.

Investigations were conducted pursuant to Section 110 of the National Historic Preservation Act to identify archaeological resources in areas assessed in Phase IA evaluations as sensitive (Baldwin, Crane, and Cowie 2002). The results and recommendations from the present study will be used in planning for future development at the Training Site, specifically at the Henry/Jacob Curtis Farmstead Site.

A 2002 Phase IB site locational survey conducted by the University of Maine at Farmington-Archaeology Research Center (UMF-ARC) identified and documented the site (Baldwin, Crane, and Cowie 2002). Due to time restraints, no subsurface testing was conducted during this survey. UMF-ARC recommended that detailed mapping, background research, and additional Phase IB survey be completed to determine whether intact archaeological deposits remain preserved at this location.

During the 2003 Phase IB survey, IAC focused their investigations on determining the size and arrangement of the farmstead and on ascertaining the limits of archaeological deposits. As a result, archaeologists excavated 21 shovel test pits (with a total horizontal exposure of 5.25 m<sup>2</sup>), which produced a total of 606 artifacts. Three surface artifacts were collected, resulting in a total of 609 artifacts retrieved. The artifact assemblage consists primarily of architectural materials, along with some domestic ceramics, farm-related objects, and post-abandonment detritus (e. g. beer bottles, tires, and shotgun shells). The artifacts range in time from the mid 19<sup>th</sup> century to the first half of the 20<sup>th</sup> century, supporting deed research of an occupation beginning in 1843 (Penobscot County Deeds [PCD] 139/328 1843).

Examination of the farmstead concluded that the property was constructed in the “big house, little house, back house, barn” (or connected-farm) configuration (Hubka 1984). All four features – big or main house, ell or little house, shed or back house, and barn – are present at the site along with indications of an apple orchard within the dooryard. A filled well was noted at the northeast corner of the “back house,” but no signs of a privy shaft were noted during the IAC survey. The style of farmstead is unique to New England and represents an example of farmstead that evolved and adapted to Maine’s changing agricultural landscape.

While the structural arrangement of the Jacob Curtis Farmstead embodies a distinctive characteristic of farm type, exemplified in the connected farm configuration, the Jacob Curtis site (ME 353-001) is not considered potentially eligible for National Register of Historic Places (NRHP) because of compromised site integrity. The site has been truncated on all four sides by a road intersection and dumping. The main cellarhole has been partially filled from road push to the west, and the north dooryard is covered with concrete slabs and other mechanically-moved fill. Because of the poor site integrity, the Jacob Curtis Farmstead is not considered eligible for listing on the National Register, and no further archaeological survey is recommended.

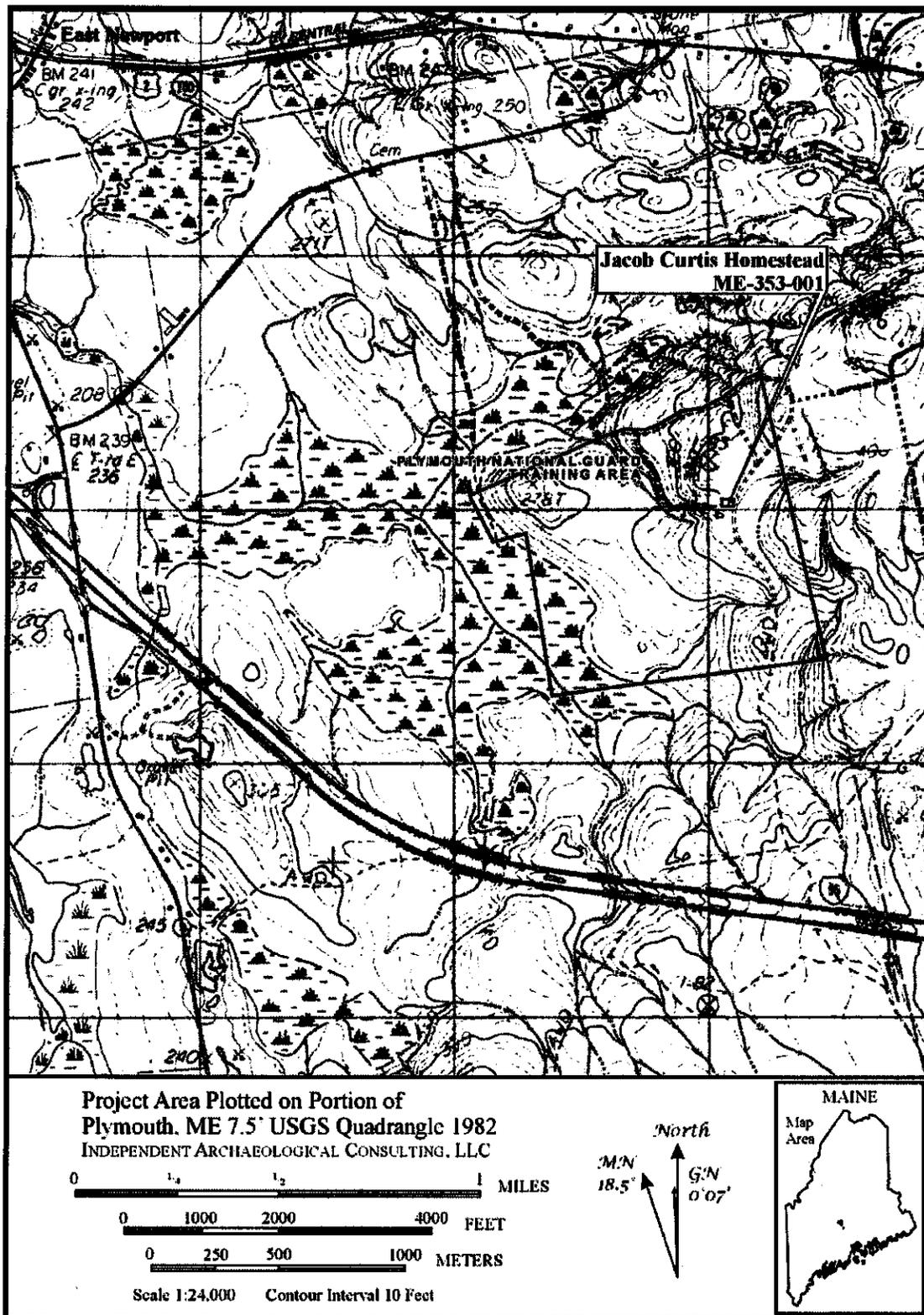


Figure 1. Location of the Jacob Curtis Farmstead Site in Plymouth, Maine.

## PROJECT LOCATION

Baldwin, Crane, and Cowie (2002) fully describe the location of the Maine Army National Guard Training Site in Plymouth, and IAC offers only a summary here. Plymouth has a generally hilly topography, with elevations averaging 76 m to 137 m (250 ft to 450 ft) above mean sea level (AMSL). The project area itself lies on the south side of an unnamed hill at an elevation of 106.7 m (350 ft) AMSL. Major streams in the area feed Sebasticook Lake approximately 4 km (2.5 mi) northwest of the project area. The nearest major drainage to the project area is Martin Stream, which flows into the East Branch of the Sebasticook River 7.2 km (4.5 mi) to the west.

The Maine Army National Guard Training Site is located in the north portion of Plymouth. Located in the northeast section of the Training Site, the Henry/Jacob Curtis Farmstead site (ME 353-001) is roughly rectangular and bounded on the south and east by a gravel road, on the north by piles of earth and concrete fill, and on the west by a grassy field. Other grassy fields, mown once a year by the army, surround the area to the north, west, and south. The Henry/Jacob Curtis Farmstead site is in a wooded area consisting of sumac, birch, oak, apple trees, and underbrush, including poison ivy (Plate 1).



Plate 1. View of the Cellarhole in the Woods, View to Southwest.

The soil in the project area is glacial till consisting of silt, clay, angular gravel, and angular to subangular stones, cobbles, and boulders. It is well drained and supports a variety of trees and grasses that are habitat for chipmunks, rabbits, deer, ruffed grouse, and other animals.

## EUROAMERICAN CULTURAL CONTEXT

Plymouth sits in the southwest corner of Penobscot County, Maine. The town is bounded by Newport to the north; Etna to the east; Dixmont to the southeast; Troy to the south and southwest (Waldo County) with Detroit to the west and Palmyra to the northwest (both in Somerset County). The first Euroamerican settlement of the area began circa 1810. Sixteen years later Plymouth achieved incorporation, being formed from portions of Etna and Chandlersville (now Detroit).

The main body of water in town is Plymouth Pond, which lies near the center of town. Martin Stream connects Plymouth Pond to Sebasticook Lake in Newport. There were five falls along this stream and in 1881, all but one was improved and used for the many manufacturing facilities (Varney 1881). The principal falls are located at Plymouth Village, at the center of town where manufacturing included lumbering, tanning, carriage and furniture manufacturing, carpentering, coopering, and smithing.

The State of Maine purchased 211 acres from the Town of Plymouth in 1974 and another 101 acres from Ray Wing in 1989 for the Maine Army National Guard Plymouth Training Site. Bardon Hill Road provides the chief access to the facility and is depicted on maps dating as early as 1881 (Baldwin, Crane, and Cowie 2002). Located along this road is the remains of the Henry/Jacob Curtis Homestead, site ME 353-001.

### **The Curtis Family**

The Curtis family of Plymouth first appears in census records in 1850. It is in this year that Henry Curtis, then 42, is living with his wife, Mary J., and their six children - son, William (18); daughter, Martha J. (16); son, Joseph (14); daughter (?), Almy (12); daughter (?), Almyra (10); and son, George (an infant). Henry and Mary had at least one other son, Jacob, born in 1855 (Figure 2). Henry Curtis is a farmer and the 1850 agricultural census lists Henry Curtis' assets as:

- 40 acres of improved land
- 60 acres of unimproved land
- \$500 cash value of the farm
- \$25 cash value of the farm implements
- \$115 cash value for the livestock
- 2 cows
- 2 oxen
- 1 cattle
- 6 sheep
- 9 bushels of wheat
- 20 bushels of Indian corn
- 35 bushels of oats
- 20-33 pounds wool
- 150-160 pounds butter

The household makeup changes slightly in the 1860 census. William, Martha, Almy, and Almyra are no longer living with Henry and Mary, presumably having married and started a household of their own. Joseph is listed as 19 years old, having only aged five years since the 1850 census. (This may be a reporting error or Joseph may have altered his age to avoid the draft for the Civil War.) George is now 10 years old and Jacob, born in 1855, is five years old. The census lists

two females, Sarah, aged 17, and Eleanor, aged 14, but the relation to Henry and Mary is unclear. Also listed is David Witham, 21, a farmhand.

## *Descendants of Henry Curtis*

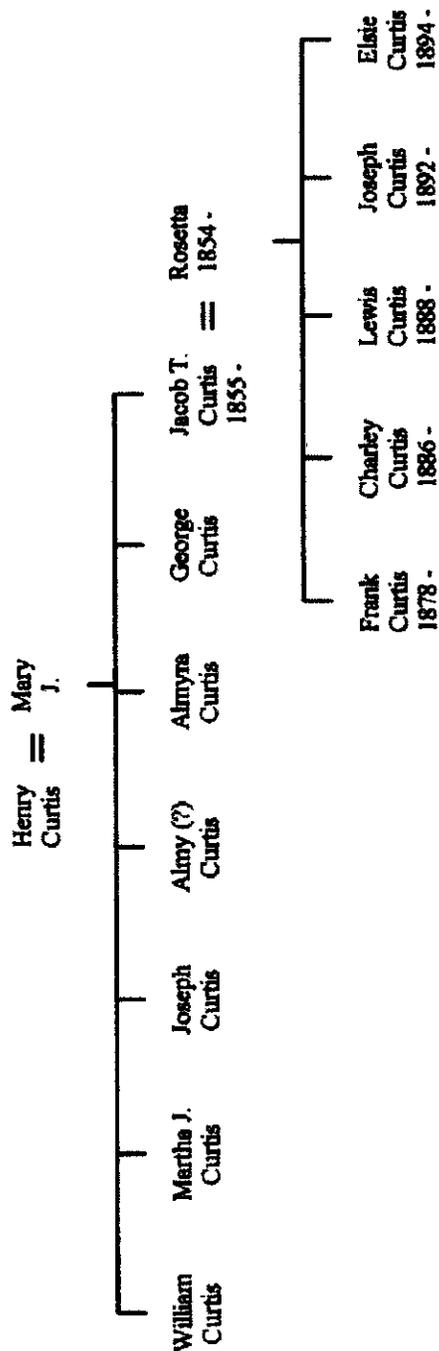


Figure 2. Partial Genealogy for the Curtis Family of Plymouth, Maine.

In 1870, Mary is listed as the head of household, Henry presumably passing away sometime in that 10-year period. The 1870 agricultural census states that the improved acreage has remained the same, having a cash value of \$600; however, the unimproved acreage is now 15 acres and the farmstead has 20 acres of wooded land. The census suggests that the farm is doing well and they have expanded their crop.

\$290 cash value for the livestock  
1 horse  
2 cows  
4 cattle  
1 swine  
\$375 cash value of all products  
11 bushels of wheat  
20 bushels of Indian corn  
115 bushels of oats  
6 bushels of barley  
10 bushels of buckwheat  
5 bushels of peas and beans  
150 bushels of Irish potatoes  
325 pounds of butter  
6 tons of hay

By 1880, Jacob, single at age 26, is listed as head of the household, although the farm itself belongs to Joseph Eaton (Figure 3). In that year Joseph Eaton owns 450 acres, totaling a value of \$10,000; livestock, \$1,200; \$1,000 in farm products; and pays out \$200 in wages. Jacob is listed as a farmer in 1880, and as Joseph owns the farmstead, Jacob may be employed as a farmer for Joseph and collecting a portion of those wages. Living with Jacob is his brother, George (31); his widowed mother, Mary (68); sister-in-law, Rosa T. (25); niece, Sarah (4); and nephew, Frank (2).

It is interesting to note that in the 1900 census, Jacob is head of household living with his wife, Rosetta (45); nephew, Frank (22); son, Charley (13); son, Lewis (11); son, Joseph (8); daughter, Elsie (6); and his mother, Mary (87). Missing from the household are George, who would have been 51 years old, and Sarah, who would have been 24 years old. Sarah might have married and moved from Jacob's household and George may have passed away by this year. The ages of Rosetta and Frank, combined with the absence of George, suggests that George died and Rosetta (or Rose) remarried Jacob and the couple have four more children (Charley, Lewis, Joseph, and Elsie). Jacob's nephew Frank (by Rosetta's previous marriage to Jacob's brother George) was recorded as a "son" by census takers.

The 1910 census lists Jacob as head of household, his wife, children (Charles, Joseph, and Elsie), and boarder, McGrath. Mary Curtis is not listed, presumably passing within that ten year time period. In the 1920 census, there are two families living in the Curtis household – Jacob and Rosetta and Jacob's son, Charles (aged 32) and Florence (aged 18).

The property known as the Jacob Curtis Farmstead first came into family possession in 1843 when Henry<sup>1</sup> Curtis bought the southern half of Lot #257 from Benjamin Brown, Jr. (Penobscot County Deed [PCD] 139/328) (see Figures 3 and 4). The land passes to his wife, Mary, upon his death. George<sup>2</sup> Curtis, eldest son, is executor and deeds the farmstead to his youngest brother, Jacob<sup>2</sup> in 1871. Deed land includes part of Lot #257 “..which I purchased of JWE Curtis by deed September 1, 1871 (with exceptions), formerly owned by late Henry Curtis and in my right as

heir 'being the homestead farm of the late Henry Curtis'" (PCD 484/137). George also deeds the northern half of Lot #257 to Almon Brown that same year.

In 1885, Jacob T. Curtis sold the entire part of Lot #223, 50 acres in south end of Lot #257 (some being occupied by Jacob T. Curtis), and Lot #224 for \$450 to Joseph W. Eaton ((PCD 570/349) (see Figure 3). Seven years later, Joseph W. Eaton sold Jacob T. Curtis the same mentioned properties for \$700 (PCD 623/393).

Although deeds documentation states that the Curtis family owned and operated a farmstead in Lot #257 beginning in the year 1843 and continued into the 20<sup>th</sup> century, the farmstead does not appear on the 1875 (Sherman) map (Figure 5). The map does show the C. Curtis homestead below the Training Site.

By the late 1970s/early 1980s, the farmstead no longer has a superstructure and it appeared to have sustained fire damage (Dave Brandt personal communications to Ellen Marlatt on September 24, 2003). During a Phase IB survey of the Training Site, archaeologists from the University of Maine Farmington Archaeology Research Center (UMF-ARC) recorded the farmstead (Baldwin, Crane, and Cowie 2002). UMF-ARC recorded a foundation constructed on dry-laid fieldstones measuring 13.7-m-x-9.0-m (45-ft-x-30-ft). Remains indicated that the structure had a cellar with an exterior bulkhead entrance and a fieldstone stair leading to the cellar. Also noted were a filled-in well and evidence of outbuildings. An old stand of apple and ornamental trees are in the yard.

	Benjamin Brown		
PCD 139/328	↓	1843	South 1/2 of Lot 257
	Henry Curtis		
	⋮		
	Mary Curtis et. al. (Heirs of Henry Curtis)		
PCD 484/137	↓	1871	Land being part of Lot 257
	George Curtis		
PCD 484/138	↓	1877	
	Jacob T. Curtis		
PCD 570/349	↓	1885	Lot 223, 80 acres; Lot 224; and 50 acres of Lot 257
	Joseph W. Eaton		
PCD 623/393	↓	1892	The above mentioned property
	Jacob T. Curtis		

Figure 3. Partial Chain of Title for the Curtis Property.



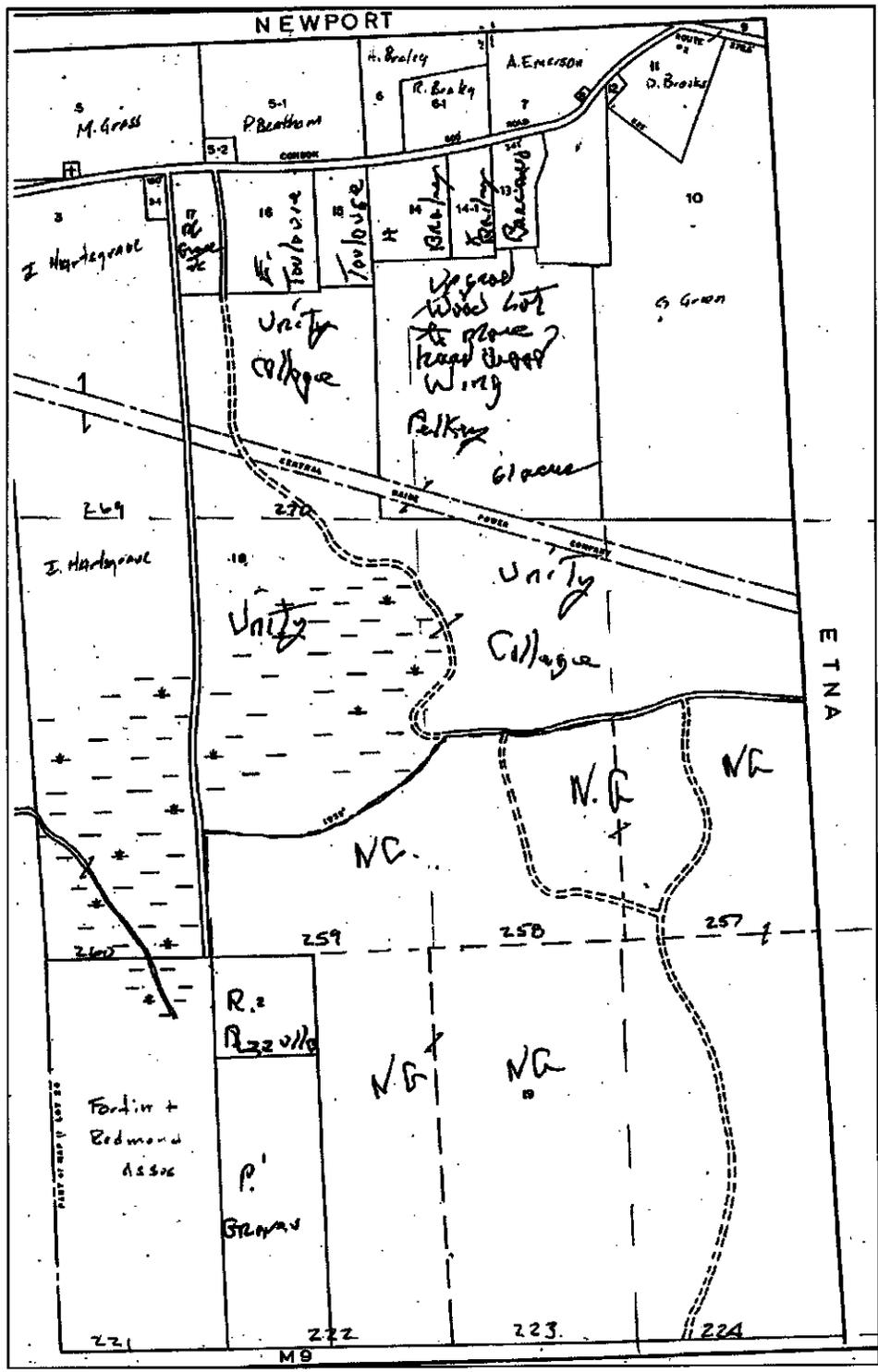


Figure 5. Lot # 257 in Plymouth, Maine (Courtesy MEARNNG).

## METHODS

The Phase IB locational survey was completed in accordance with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716, September 29, 1993) under the supervision of Principal Investigator, Dr. Kathleen Wheeler, and Project Archaeologist, Anthony Booth. Assisting in fieldwork were Technicians Christopher Noll and Steven Roy.

Over the course of three days between September 9 and 11, 2003, IAC archaeologists conducted archaeological investigations at the Jacob Curtis Farmstead site (ME-353-001). The first day began at noon when IAC archaeologists met Maine Army National Guard (MEARNG) Engineer, Dave Brandt, who directed them to the project area. The site was overgrown with a mix of secondary growth deciduous trees and underbrush, including poison ivy, which obscured most of the features. Archaeological testing could not proceed without a clearing effort. IAC field crew, assisted by Dave Brandt, began the process of clearing using loppers, machetes, and hand saws. This clearing process took five hours, removing most of the vegetation from the foundation features. The archaeologists returned on Wednesday, September 10, equipped with a chain saw to finish the clearing process.

IAC used a metal detector to make an informal sweep of the area around the foundation features to get a sense of artifact concentrations. The results of the metal detection survey indicated that metal objects were mostly within 8 m (26 ft) of the foundations, and shovel test pits were accordingly laid out in close proximity to the foundation features.

Once the area was clear of obstacles, archaeologists laid out transects with compass and tape and excavated 21 shovel test pits (STPs). Time constraints and the limited extent of undisturbed yard deposits reduced the planned number of 25 STPs to only 21 completed. Archaeologists excavated shovel test pits as 0.5-m-x-0.5-m squares, with soils removed by arbitrary 10-cm levels within natural and cultural strata, and all soils screened through ¼" wire mesh. Soil profiles from STPs were recorded on standardized forms with the soil color, composition, and degree of compaction noted. Profiles and/or plan views were completed for features. All artifacts were placed in bags labeled with their horizontal and vertical provenience.

Mr. Booth took photos of representative STP profiles, along with general views of the project area. He was also responsible for drafting an overall map of shovel test pits, drawn to scale in relation to topography, bodies of water, and extant features using both tape and compass and total transit. The archaeologists returned all artifacts and documentation to IAC's archaeology laboratory in Portsmouth, New Hampshire for processing and analysis. Artifacts were cleaned, identified, catalogued, using Microsoft Access Database, and prepared for permanent curation in polyethylene bags and acid-free boxes. Artifacts and related field documentation will be deposited with the Maine Army National Guard at Camp Keyes in Augusta upon completion of the final report.

## **RESULTS OF PHASE IB SITE LOCATIONAL SURVEY**

IAC carried out Phase IB investigations to determine the size and arrangement of the Jacob Curtis farmstead and to ascertain integrity and limits of archaeological deposits. In doing so, archaeologists excavated 21 shovel test pits, recovering 606 artifacts. Surface artifacts are visible across the site, and archaeologists collected three of them from within architectural features. The artifact assemblage consists primarily of architectural materials, along with some domestic ceramics, farm-related objects, and post-abandonment detritus. This collection represents an occupation of the farmstead ranging in time from the mid 19<sup>th</sup> century to the first half of the 20<sup>th</sup> century.

### **Subsurface Testing**

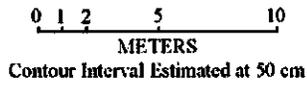
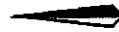
Archaeologists excavated shovel test pits along transects running the length of the stone features and another extended perpendicular north of Feature 1 (Figure 6). Shovel test pits ranged in depth of 10 to 60 centimeters below surface (cmbs), generally ending in culturally sterile glacial till. Soil stratification revealed thin soil development over glacial till (Plate 2). Across the site the A horizon was a 10- to 20-cm thick brown-dark brown (10YR4/3-10YR3/3) silty loam. Along Transect 4 this horizon is grayish brown silty clay with angular gravel. The B horizon consists of a yellowish brown (10YR5/4) slightly oxidized fine silty clay. Shovel test pits along the south side (back yard) of the foundations varied, illustrating road or house construction activities. Soil development is absent in shovel test pits 2-2 and 3-1, and may represent high-use areas of the back yard (Plate 3).

Testing initially began along an 8-m interval, with test pits numbered from one to five (along Transect 1). When test pits quickly became sterile at either end of the transects, archaeologists began sampling at 4-m intervals, in between STPs. These testholes were numbered as half-units, as shown in Figure 6. Two long transects (Transects 1 and 2) followed the north and south sides of the farm complex, while two others traversed along a perpendicular axis to the farm complex. Site limits were also confirmed with the results of the metal detection survey, as noted above.

**MEARNG Plymouth**  
**J. Curtis Farmstead (ME-353-001)**  
**Phase IB, 2003**

INDEPENDENT ARCHAEOLOGICAL CONSULTING, LLC

*Mag. North*



- |  |              |  |                  |
|--|--------------|--|------------------|
|  | Bucket       |  | Datum            |
|  | Contour Line |  | Positive STP     |
|  | Tree Trunk   |  | Negative STP     |
|  | Treeline     |  | Brick            |
|  |              |  | Foundation Stone |

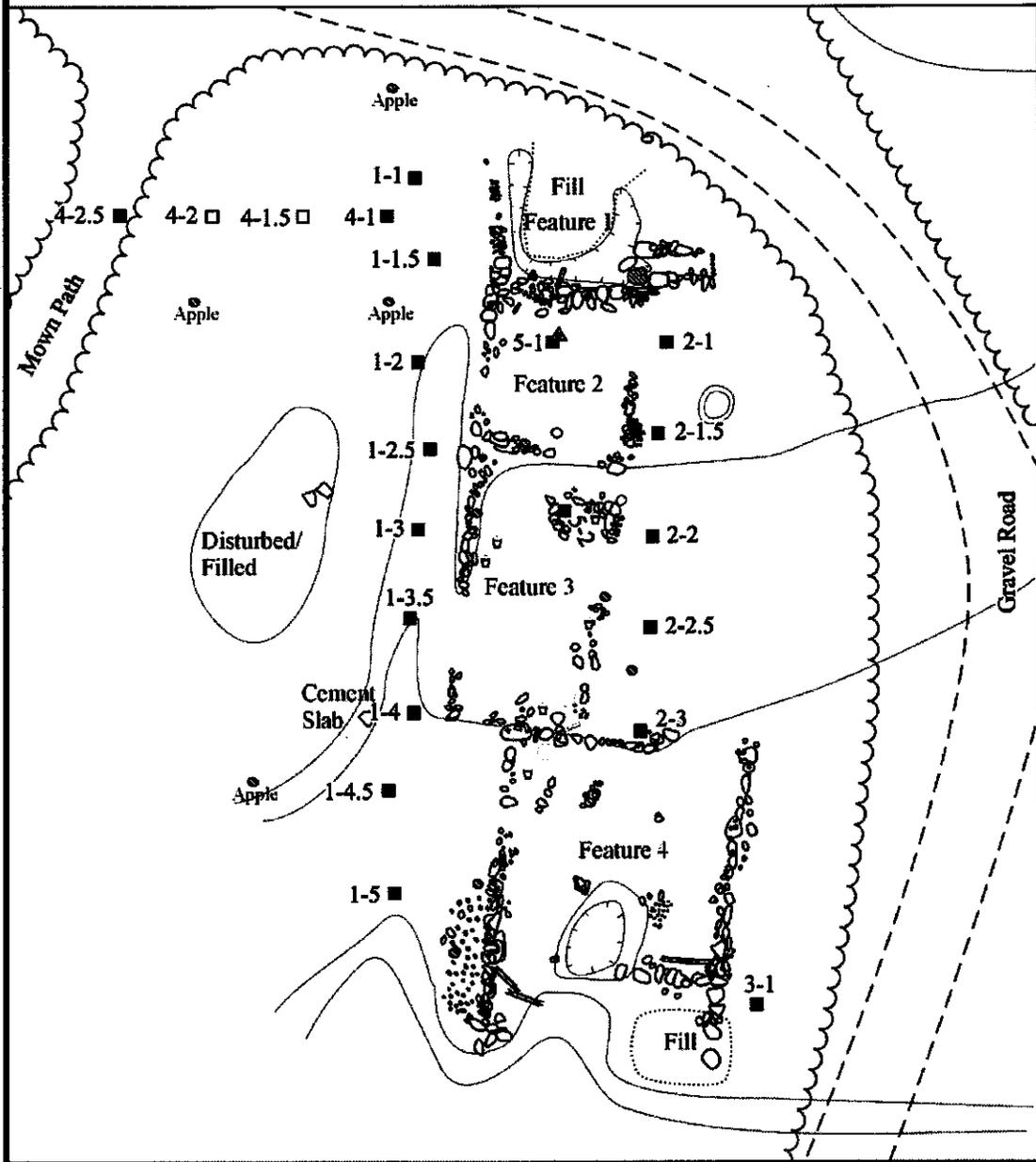


Figure 6. Site Map Showing Location of Testholes.

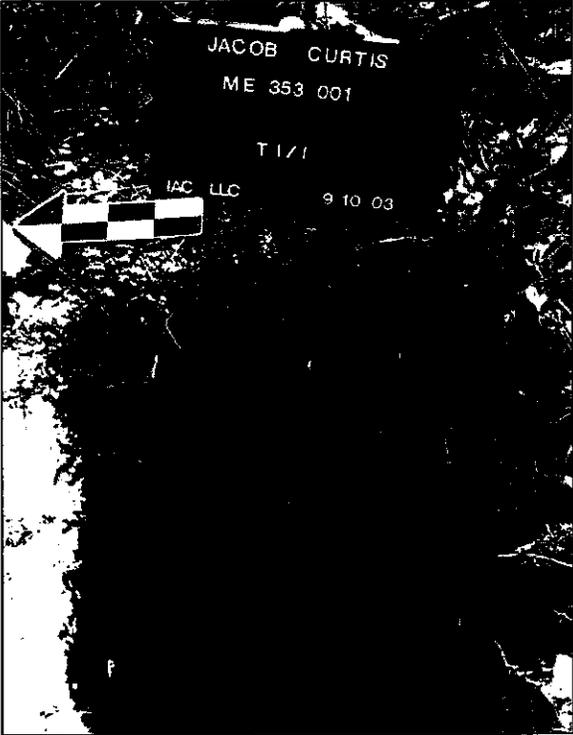


Plate 2. STP 1-1 East Wall Profile.



Plate 3. STP 2-2 North Wall Profile.

Archaeological deposits at the Jacob Curtis site are generally light and restricted to the top 30 cmbs of subsurface testing. Only two of the 21 shovel test pits (STP 4-1.5 and 4-2) were sterile (Table 1). The artifact assemblage (n = 609) consists primarily of architectural materials, along with some domestic ceramics, farm-related objects, and post-abandonment detritus (e. g. beer bottles, tires, and shotgun shells). Materials range in date from the mid 19<sup>th</sup> century to the mid 20<sup>th</sup> century, with the majority from the late-19<sup>th</sup>- and early-20<sup>th</sup>-centuries.

Table 1. Testhole Tally at the Jacob Curtis Farmstead Site.

Tran-STP	Testhole Size	Pos	Neg	Artifact Total
1-1	0.5 m x 0.5 m	x		3
1-1.5	0.5 m x 0.5 m	x		16
1-2	0.5 m x 0.5 m	x		10
1-2.5	0.5 m x 0.5 m	x		46
1-3	0.5 m x 0.5 m	x		16
1-3.5	0.5 m x 0.5 m	x		32
1-4	0.5 m x 0.5 m	x		28
1-4.5	0.5 m x 0.5 m	x		2
1-5	0.5 m x 0.5 m	x		16
2-1	0.5 m x 0.5 m	x		63
2-1.5	0.5 m x 0.5 m	x		55
2-2	0.5 m x 0.5 m	x		31
2-2.5	0.5 m x 0.5 m	x		47
2-3	0.5 m x 0.5 m	x		22
3-1	0.5 m x 0.5 m	x		137
4-1	0.5 m x 0.5 m	x		7
4-1.5	0.5 m x 0.5 m		x	0
4-2	0.5 m x 0.5 m		x	0
4-2.5	0.5 m x 0.5 m	x		*
5-1	0.5 m x 0.5 m	x		21
5-2	0.5 m x 0.5 m	x		54
Surface		x		3
Totals	5.25 m sq.	19	2	609

Key: Tran-STP=Transect-Shovel Test Pit, Pos=Positive Shovel Test Pit, Neg=Negative Shovel Test Pit,  
\* refers to testholes where cultural material was present, but not retained.

Archaeologists recovered 606 artifacts from 21 shovel test pits, 72.7% (n = 441) of which represent architectural components (Table 2; Appendix A). This category of artifact includes nails (both cut and wire), window glass, roofing shingle, and brick. Dominating in this assemblage is the amount of nails present (n = 267). Machine-cut nails (n = 144), wire nails (n = 110), and unidentified nails (n = 13) are present at the site, indicating a time-range from 1800 to present times. Nails were found in all conditions (whole, partial, pulled, and clinched). Although found across the site, the majority of nails were found along Transects 2 and 3, in the south yard fronting along the access road.

Representing the domestic-use of the farmstead are the items such as ceramic fragments, bottle glass fragments, apparel components (e. g., eyelet and buttons), pipe stems, gun plates, lamp chimney glass, a tub of Vicks vapor rub, and butchered bone. Archaeologists recovered 55 ceramic fragments from the site, including redware, white granite, Rockingham, American stoneware, commercial china, and whiteware (see Table 2; Appendix A). The majority (n = 35) of the recovered ceramic assemblage is white granite, popular from the mid-19<sup>th</sup> century into the 20<sup>th</sup> century (and still produced today).

Artifacts related to farm-use of the site include horseshoe nails, thermometer, barrel hoops, saw, metal buckets, hinges, harness leather, and what may be part of a wagon or carriage. These items were found across the site, most notably inside the features (Figure 7).

Table 2. Artifact Distribution at the Jacob Curtis site.

Tran-STP	Total	Cerm	Bott	Faun	Arch	Other	% Cerm	% Bott	%Faun	% Arch.	% Other
1-1	3	0	0	0	2	1	0.0%	0.0%	0.0%	66.7%	33.3%
1-1.5	16	6	2	0	7	1	37.5%	12.5%	0.0%	43.8%	6.3%
1-2	10	6	0	1	3	0	60.0%	0.0%	10.0%	30.0%	0.0%
1-2.5	46	1	9	2	23	11	2.2%	19.6%	4.3%	50.0%	23.9%
1-3	16	4	1	0	9	2	25.0%	6.3%	0.0%	56.3%	12.5%
1-3.5	32	18	4	0	8	2	56.3%	12.5%	0.0%	25.0%	6.3%
1-4	28	9	3	2	12	2	32.1%	10.7%	7.1%	42.9%	7.1%
1-4.5	2	0	0	0	2	0	0.0%	0.0%	0.0%	100.0%	0.0%
1-5	16	4	2	0	6	4	25.0%	12.5%	0.0%	37.5%	25.0%
2-1	63	4	0	0	56	3	6.3%	0.0%	0.0%	88.9%	4.8%
2-1.5	55	1	0	1	47	6	1.8%	0.0%	1.8%	85.5%	10.9%
2-2	31	0	0	0	28	3	0.0%	0.0%	0.0%	90.3%	9.7%
2-2.5	47	1	0	0	37	9	2.1%	0.0%	0.0%	78.7%	19.1%
2-3	22	0	1	0	19	2	0.0%	4.5%	0.0%	86.4%	9.1%
3-1	137	0	2	0	130	5	0.0%	1.5%	0.0%	94.9%	3.6%
4-1	7	0	0	0	6	1	0.0%	0.0%	0.0%	85.7%	14.3%
4-1.5	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
4-2	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
4-2.5	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
5-1	21	0	0	0	20	1	0.0%	0.0%	0.0%	95.2%	4.8%
5-2	54	1	3	0	26	24	1.9%	5.6%	0.0%	48.1%	44.4%
Surface	3	0	1	0	2	0	0.0%	33.3%	0.0%	66.7%	0.0%
Totals	609	55	28	6	443	77	9.0%	4.6%	1.0%	72.7%	12.6%

Key: Tran-STP=Transect-Shovel Test Pit, Cerm=Ceramic, Bott=Bottle Glass, Faun=Faunal, Arch=Architectural

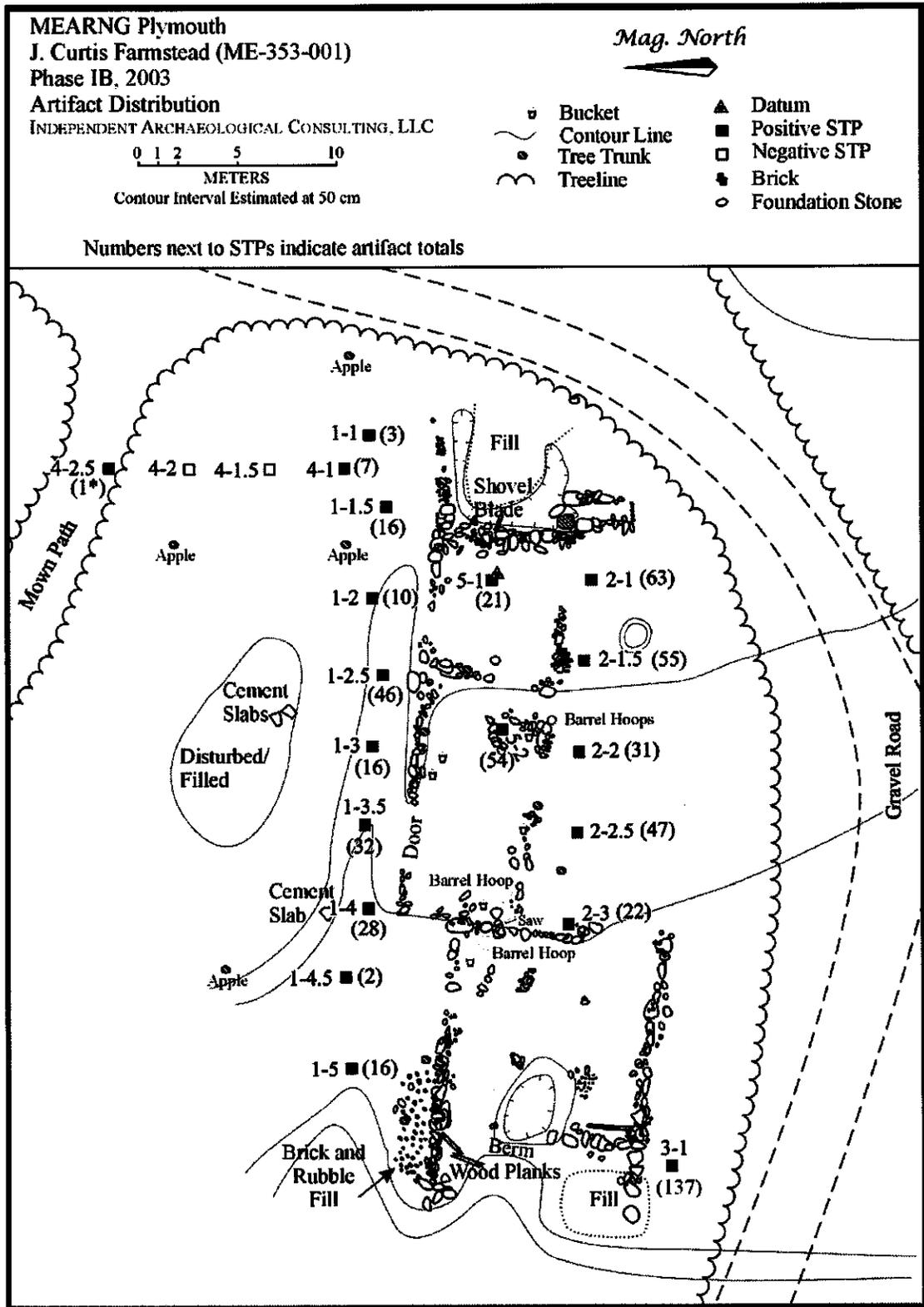


Figure 7. Artifact Distribution at the Jacob Curtis Farmstead Site.

## Features

The Jacob Curtis Farmstead site consists of a 40-m-x-30-m (131.2-ft-x-98.4-ft) house/barn complex represented by four foundations. Each feature is described below and an interpretation of each can be found in the following section.

Feature 1 sits at the eastern end of complex and measures approximately 6-m-x-6-m (19.7-ft-x-19.7-ft) (see Figure 6). Portions of the south wall and the entire east wall are missing or covered by fill that has been pushed into the cellarhole from the gravel road (Plate 4). This made exact measurements difficult to acquire. The house has a bulkhead with fieldstone steps leading into the south wall at its southwest corner (Plate 5).

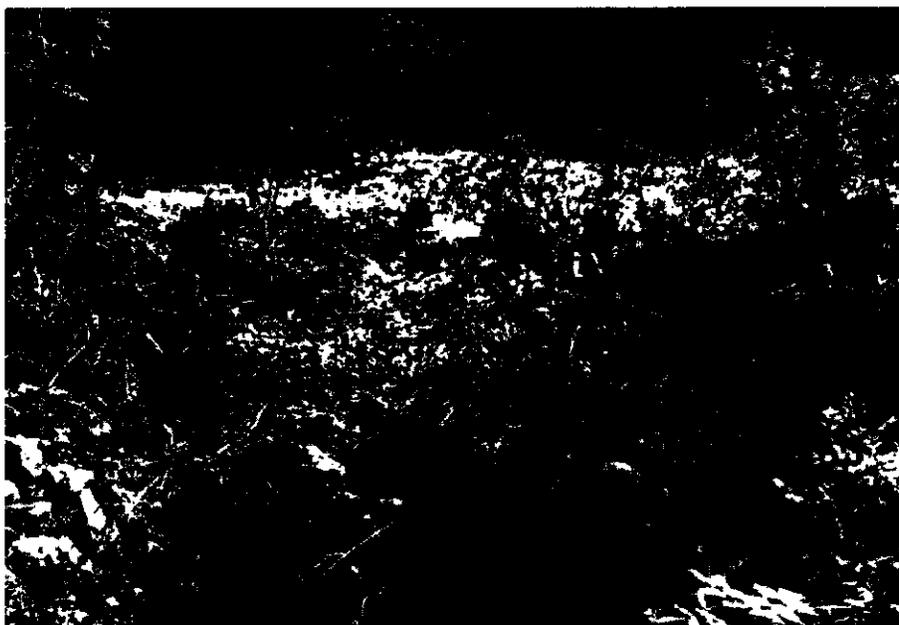


Plate 4. Partially Filled House Cellarhole, Looking East.



Plate 5. Bulkhead in South Wall of House Foundation, Looking South.

Attached to the west side of Feature 1 is Feature 2, an addition measuring 6-m-x-6-m (19.7-ft-x-19.7-ft). Bricks are scattered across the site, but there is a concentration at a mound along the south wall of the house addition and at the north side of the house (see Figure 6). This concentration may be indicative of chimney location. A four-foot-wide gap between Features 2 and 3 separate the two features. A large flat stone, possibly a doorstep, is on the outside of this gap on the north wall.

Foundations for Feature 3 measure approximately 10-m-x-6-m (32.8-ft-x-19.7-ft) (see Figure 6). This structure has a 10-ft wide gap on the north wall, which may be the result of post-abandonment processes or represents a doorway. At the northwest corner is a large flat stone, possibly a doorstep leading into the barn. In the northeast corner is a small, circular ring of stones that may indicate the site of a filled well.

The Feature 4 barn foundation measures 11 m by 11 m (36 ft by 36 ft) with well-preserved walls on the east and south sides. The western wall has been disturbed by filling from the road, where large piles of earth have been scraped up against and into the building foundation (Plates 6 and 7). Another break in the feature wall is along the eastern wall, again, an indication of a door in this location. Within the barn foundation was some rotting wood and charred wood, evidence of the wooden superstructure. The charred wood may have been a burn pile post-dating the abandonment of the site. Four stone footings inside the barn once supported wooden piers.



Plate 6. South Wall of Barn Foundation, Looking West.



Plate 7. Northwest Section of Barn Foundation, Looking North.

A large pile of brick rubble is at the northwest corner of the barn. It does not appear to be chimney fall and is probably a result of intentional clearing of some part of the site. MEARNG disturbances at the site generally are restricted to Feature 1, closest to the gravel road, and the northern yard where dumping is evident along the lower portions of the site. It is not clear if the material originated on site or somewhere else. Large chunks of concrete in the fill to the north of the foundation suggest the fill came from off-site.

## INTERPRETATIONS AND RECOMMENDATIONS

Arrangement of the farmstead mimics that of the “connected farm”, commonly referred to as the “big house, little house, back house, barn”, in which the house and barn are joined through a series of support structures to form a continuous building complex (Hubka 1984) (Figure 8). The Curtis farmstead is consistent with this configuration, represented by four structural features constructed of dry-laid fieldstones (Figure 9).

### **The Big House (Feature 1)**

First in the arrangement of structures is the big house, commonly called the farmhouse. In this building were the formal parlor and bedrooms. Although the big house tended to be larger and more ornate, the majority of waking hours were spent in the other buildings on the farm (Hubka 1984). At the Jacob Curtis farmstead, post-demolition activity has compromised this feature, destroying the north and west walls and leaving no remnants of the chimney, making it very difficult to determine size and house type (i. e., half, hall-and-parlor, center-chimney).

Certain remaining elements on Feature 1 help determine portions of house layout and auxiliary farm features, such as the back yard and door yard. Big houses tend to have front entranceways that face the road (Hubka 1984). Placement of the bulkhead, abutting walls, and the current roadway indicate that the front entranceway was along the east wall of the big house. It is unclear whether this structure had a doorway along its northern wall leading to the dooryard. However, apple trees, approximately 30 to 50 years old, growing near the foundations imply that an informal orchard grew in this northern area. Early farmers usually had a small family orchard in close proximity to the house, and some apple trees were usually planted near the “dooryard” (Sanford, Huffer, and Huffer 1995:17). These trees would have provided apples for cider, vinegar and general consumption.

Overall, the distribution of artifacts indicates the north side of the house (the back yard) to be an area of refuse deposition, as indicated by higher concentrations of domestic items (i.e. ceramics, bottle glass) in comparison to other areas of the site (see Figure 7). This area produced 35.8% (n = 218) of the total artifact assemblage. This area; however, has been disturbed as evidenced by the uneven ground and the mound containing concrete slabs north of Transect 2. The disturbance is most likely associated with the construction of the gravel road to the south.

### **Little House (Feature 2)**

We interpreted Feature 2 as the Little House, which served as the kitchen and active living center for the farm family. Along with the kitchen, this building usually contained a summer kitchen (or workroom) and a wood house. Hubka notes that the Little House – kitchen and support structures – constituted the major work areas for the women of the farm (Hubka 1984:6).

As with the Big House, portions of walls are missing on the Little House. A large gap exists along the southern wall, and two smaller gaps are located on the north and west walls. These later two may be entryways – the north one into the door yard and the west one leading into the Feature 3 (Back House). A four-foot-wide gap, or hallway, between the little and back houses separated the domestic spaces of the big and little houses from the work space of the back house. A large flat stone, possibly a doorstep, is on the outside of this gap on the north wall. Bricks are scattered across the site, but there is a concentration at a mound along the south wall of this feature (see Figure 7). These concentrations may be indicative of chimney locations.

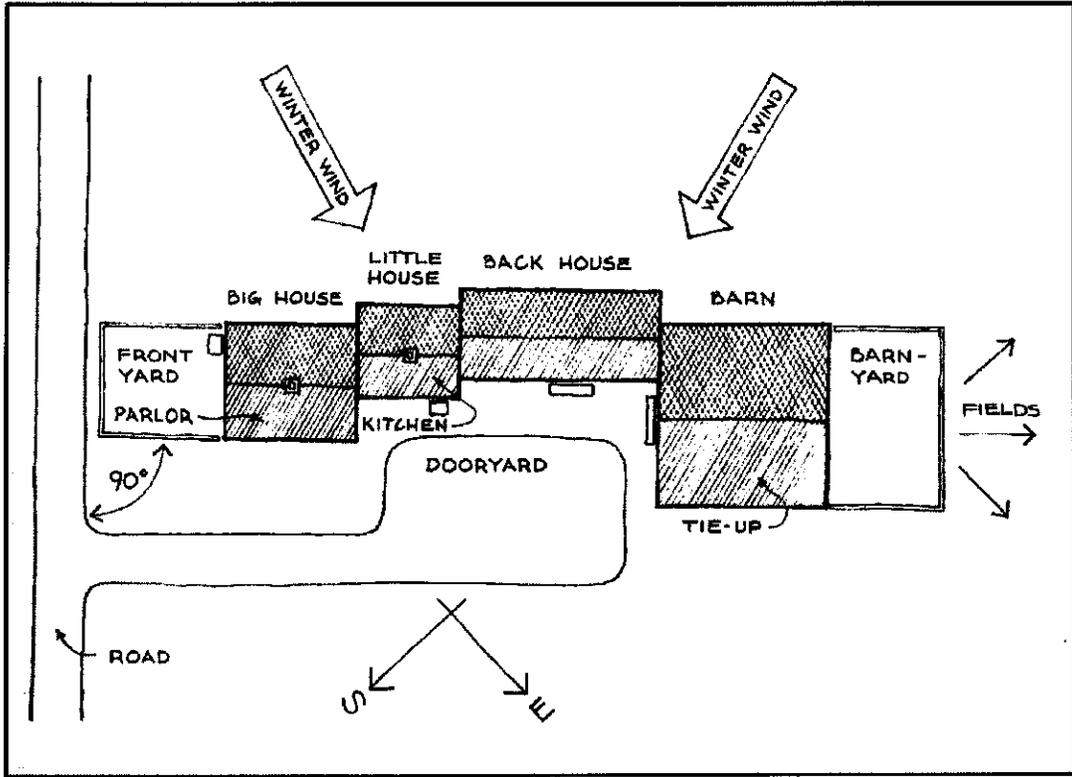


Figure 8. Layout of the Connected Farm (from Hubka 1984).

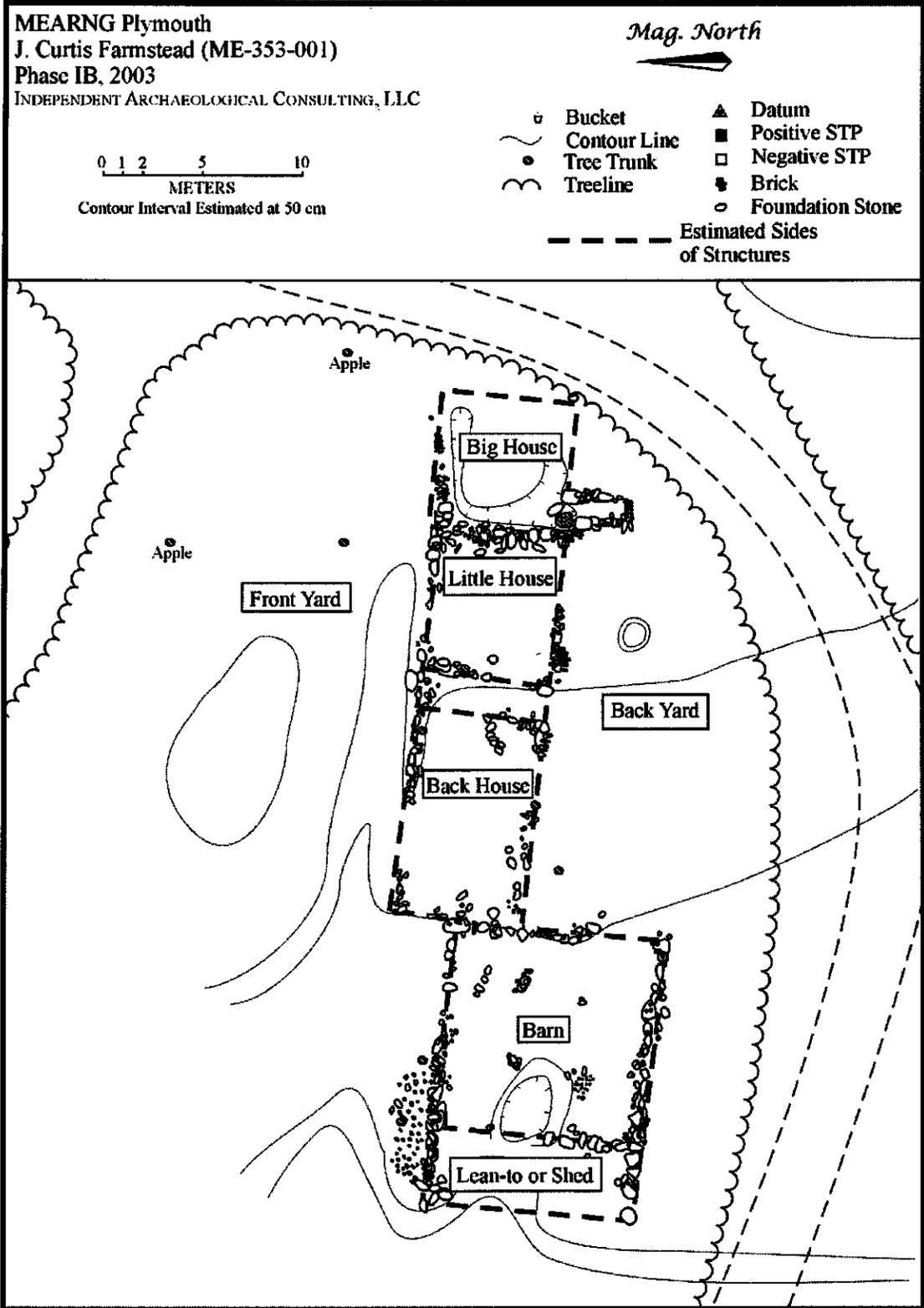


Figure 9. Layout of the Jacob Curtis Farmstead.

### **Back House (Feature 3)**

The third feature represents the back house, a structure separating the kitchen from the major barn. Contained in this building were wagon bays, multi-purpose work areas, and the privy, the later located closest to the barn. During the middle of the 19<sup>th</sup> century the “little” and “back” houses were often joined. At the Jacob Curtis Farmstead, the two structures are separated by what appears to be a four-foot entryway. A 10-foot wide gap in the north wall certainly accommodates a wagon, or the gap may be the result of post-demolition disturbances. The privy was not relocated, but at the northeast corner of the back house was a filled well.

One shovel test pit, STP 5-2, along the eastern wall produced 54 artifacts. The area is furthest from the barn. Artifacts represent an assortment of domestic and farming activities. Among the number are cut nails, wire nails, Ball jar fragments, bottle glass, commercial China fragments, window glass, fabric, a file, a can, and a button. This may represent a work area or simply a trash deposit.

### **Barn (Feature 4)**

Barns built before 1800 used the “English” style of construction – barn door on the side of the building that opened into a central threshing room (Sanford, Huffer, and Huffer 1995). Bays flanked this central room. These barns did not have cellars. Barns built post-1850 had the main doors on the gable ends with the central passageway running the length of the building for wagon traffic (Sanford, Huffer, and Huffer 1995). Frequently these barns were built with a cellar where manure or crops could be stored, or built on split levels, marked by a ramp.

At the Jacob Curtis Farmstead, the barn structure is represented by the north and south wall, and a portion of the east wall. Entry into the barn may have been accessed from the east and west ends. There are four concentrations of stone that may be footings, indicating that this structure had both an upper and lower floor. No indications of interior floor plans could be ascertained from feature remains. An open extension to the west end may be a lean-to or extra room.

### **Recommendations**

Phase IB site investigations at the Jacob Curtis Farmstead site (ME 353-001) produced 609 artifacts primarily of architectural materials, some domestic ceramics, farm-related objects, and post-abandonment detritus. The archaeological evidence indicates that the Curtis family constructed the site in the mid-19<sup>th</sup> century and that they occupied it until the early-20<sup>th</sup> century. The structure was abandoned at about this time, and partially disturbed and filled by MEARNG activities later in the 20<sup>th</sup> century. These filling activities appear to be the result of mechanical grading and bulldozing of earth. The artifacts support deed research of an occupation beginning in 1843 and continuing into the 1920s.

Army National Guard activities on the property resulted in the construction and maintenance of access roads. This activity has disturbed the immediate area surrounding the big house and barn foundations on all four sides. IAC did not test outside of the approximate 40-m-x-30-m area that included the foundation features. Testing in the surrounding fields and forests on the opposite sides of the access road may locate archaeological deposits related to agricultural practices, but these are apt to be ephemeral and difficult to locate.