

ARCHEOLOGICAL INVENTORY AND EVALUATION AT THE CARRIGAN AND BURCH PROPERTIES, LINCOLN HOME NATIONAL HISTORIC SITE, SPRINGFIELD ILLINOIS

BY
JANIS L. DIAL-JONES



NATIONAL PARK SERVICE
MIDWEST ARCHEOLOGICAL CENTER

ARCHEOLOGICAL INVENTORY AND EVALUATION AT
THE CARRIGAN AND BURCH PROPERTIES, LINCOLN
HOME NATIONAL HISTORIC SITE, SPRINGFIELD
ILLINOIS

BY
JANIS L. DIAL-JONES

Midwest Archeological Center
Technical Report 125

NATIONAL PARK SERVICE
Midwest Archeological Center

**United States Department of the Interior
National Park Service
Midwest Archeological Center
Lincoln, Nebraska
2010**

This report has been reviewed against the criteria contained in 43CFR Part 7, Subpart A, Section 7.18 (a) (1) and, upon recommendation of the Midwest Regional Office and the Midwest Archeological Center, has been classified as

Available

Making the report available meets the criteria of 43CFR Part 7, Subpart A, Section 7.18 (a) (1).



ABSTRACT

The Midwest Archeological Center conducted field investigations at Lincoln Home National Historic Site in Springfield, Illinois in 2005 and 2006 in conjunction with the preparation of Historic Structure Reports on two of the houses that originally stood in the Abraham Lincoln neighborhood in close proximity to the Lincoln Home itself, the Carrigan house immediately next door to the north and the Burch house directly across Eighth Street to the west. An archeological inventory and evaluation of each of those two properties was undertaken for two purposes: 1) to collect archeological data that would be considered in combination with historic archival documentation to determine if sufficient information exists to enable the accurate reconstruction of the two houses, and 2) to assess the potential impact of reconstruction on any significant historic archeological resources present on the two properties.

Multiple episodes of building construction, modification, adaptive reuse, repair, and demolition have taken place at the two properties over the past 150 years, resulting in an archeological record that is complicated, particularly at Carrigan. Substantial remains of the Carrigan house and associated features were identified during the project, including foundation walls, several cellars, an intact cistern, and the possible remains of corner supports or shallow foundations for two outbuildings. When the Carrigan house was replaced by a second house in 1879, elements of the original structure were incorporated into the new one in areas where the footprints of the two houses overlapped, serving to preserve many of the Carrigan features that probably otherwise would not have survived.

Much of the Burch property was found to have been heavily disturbed by the construction and later demolition of two early twentieth century commercial buildings and an apartment house. Nevertheless, two remnant sections of the north Burch house foundation were identified together with two chimney-related features and a small interior well. The truncated lower portion of a mortar-lined cistern was also identified immediately outside the projected location of the southwest corner of the house. Recommendations for management of the archeological resources on the Carrigan and Burch properties are provided. Several possible directions for future archeological research are suggested.

ACKNOWLEDGEMENTS

A number of individuals contributed to the project from the planning and initial fieldwork through report production, many of whom are recognized in the introductory chapter to the report. The success of the project was due in large measure to the outstanding support provided by staff of the Lincoln Home NHS, particularly Dick Lusardi, Jim Sanders, Vee Pollock, Susan Haake, Tim Townsend, John Popolis, Jr., and Kathy DeHart. It was a pleasure to work in a park with such active interest in archeology on the part of the staff and visiting public. As always, the project was enhanced by the invaluable contributions of my friend and colleague Al O'Bright. Thanks to Center Manager Mark Lynott and former Park Archeology Program Manager Tom Thiessen for the opportunity to conduct the project, and heartfelt appreciation to Center staff Jeff Richner, Karin Roberts, Steve DeVore, Lisa Stanley-Smith, Darin Schlake, and Allan Weber for lending their time and talents to the project. Special thanks to Susan Haake and Curtis Mann, Lincoln Library, Springfield, for assistance in identifying historic photographs for reproduction in this report.

TABLE OF CONTENTS

Abstract.....	i
Acknowledgements	iii
Table of Contents.....	v
List of Figures.....	vii
List of Tables	xii

CHAPTER 1

INTRODUCTION	1
Building Construction on the Carrigan and Burch Properties.....	2
Previous Archeological Investigations at Carrigan	5
2005 Project Objectives.....	6
2006 Project Objectives.....	7
Field Methodology	12

CHAPTER 2

ARCHEOLOGICAL INVESTIGATIONS AT CARRIGAN	15
Results of the 2005 Investigations	15
Test Unit 1	15
Test Unit 2.....	16
Test Unit 3/Trenches 2 and 3.....	17
Foundation for the back addition to the Carrigan house.....	17
Carrigan south porch support.....	18
Cellar entry features	18
Cellar fill.....	19
Cistern	19
Irwin house foundation	19
Test Unit 4.....	20
Test Unit 5.....	20
Test Unit 6.....	21
Trench 1	21
Trench 4	22
Trench 5	23
Trench 6	23
Results of the 2006 Investigations	24
Test Unit 5 Continued	24
Test Unit 6 Continued	25
Test Units 7, 8, and 10/Trench 8	26
West foundation wall of the Carrigan back addition and cellar entry	28
North foundation wall of the Carrigan back addition.....	28
North foundation wall of the ell	29
Possible brick pier	30
Cellar fill.....	30
Possible fence post.....	31
Test Unit 9/Trench 7.....	31
Foundation for the back addition to the Carrigan house.....	32

Chimney	32
Drain tile from cistern	33
Brick support pad in cellar floor	33
Brick scatter outside the north foundation	34
Probable fence post.....	34
Test Unit 11	34
Test Unit 12.....	34
Test Unit 13.....	35
Test Unit 14.....	36
Trench 9.....	37
Trench 10.....	37
Project Objectives at Carrigan in 2006.....	38
Historic Grade Associated with the Carrigan House.....	42
Summary and Future Research Questions	43
Management Recommendations.....	46

CHAPTER 3

ARCHEOLOGICAL INVESTIGATIONS AT BURCH	49
Results of the 2005 Investigations	49
Test Unit 1/Trench 4.....	49
Test Unit 2.....	50
Test Unit 3/Trench 6.....	51
Foundation at the back of the house	52
Well	52
Probable chimney base.....	52
Trench 1	53
Trench 2	53
Trench 3	54
Trench 5	54
Results of the 2006 Investigations	54
Test Units 4, 5, and 7/Trenches 6 and 7	55
Foundation at the back of the house	56
Probable chimney base toward the back of the house	56
Foundation toward the front of the house.....	57
Probable chimney-related feature toward the front of the house	57
Test Unit 6.....	58
Trench 8.....	59
Trench 9.....	59
Trench 10.....	60
Project Objectives at Burch in 2006	60
Summary and Future Research Questions	63
Management Recommendations.....	65
Figures.....	67
Table 1.....	151
References Cited.....	153
APPENDIX A.....	159
APPENDIX B.....	177
APPENDIX C.....	181

LIST OF FIGURES

Figure 1. Lincoln Home National Historic Site, Springfield, Illinois.....	67
Figure 2. Plan view of the Carrigan property with the locations of structures that formerly stood on the property	69
Figure 3. Plan view of the Carrigan property with archeological features relating to the Carrigan and Irwin houses exposed by Mansberger in 1997 during removal of the Corneau house.....	71
Figure 4. Plan view of the Carrigan property with references for the 2005 archeological field methodology.....	73
Figure 5. Plan view of the Carrigan property with archeological features relating to the Carrigan and Irwin houses identified in 2005	75
Figure 6. Plan view of the Carrigan property with references for the 2006 archeological field methodology.	77
Figure 7. Plan view of the Carrigan property with archeological features identified in 1997, 2005, and 2006 relative to the locations of the Carrigan house and outbuildings as depicted in 1858.	79
Figure 8. Plan view of the Carrigan property with archeological features identified in 1997, 2005, and 2006 relative to the locations of the Irwin house and outbuildings as depicted in 1917.	81
Figure 9. Plan view of the Carrigan property with the probable footprint of the Carrigan house based on the archeological features identified in 1997, 2005, and 2006.....	83
Figure 10. Closeup plan view of archeological features identified at the front of the Carrigan property.....	85
Figure 11. Closeup plan view of archeological features identified in the middle of the Carrigan property that relate to the back sections of the Carrigan and Irwin houses.	87
Figure 12. Closeup plan view of archeological features identified toward the back of the Carrigan property.....	89
Figure 13. Photograph of the Carrigan house immediately left of the Lincoln Home, taken in the 1860s.....	91
Figure 14. Photograph of the Carrigan house left of the Lincoln Home, taken in 1865.....	91

Figure 15. Digitally-enhanced portion of a photograph taken in 1867 showing the front of the Carrigan house.....	92
Figure 16. Photograph of the Carrigan house visible through the trees left of the Lincoln Home, taken in the 1870s.....	92
Figure 17. Photograph of the Irwin house left of the Lincoln Home, taken about 1900.....	93
Figure 18. Photograph showing a rear view of the Lincoln Home and the Irwin house taken around 1890.....	93
Figure 19. Photograph of the Corneau house when it was located at the front of the Carrigan property.	94
Figure 20. Portion of the 1873 bird’s eye view drawing of Springfield by Augustus Koch showing the Carrigan property.....	94
Figure 21. Photograph of the Burch house, taken about 1880.....	95
Figure 22. Photograph of the Burch lot taken in 1973 with a commercial building on the east end of the property and an apartment building on the west end of the property.....	95
Figure 23. Plan view of the Burch property with the locations of structures that formerly stood on the property.....	97
Figure 24. Plan view of the Burch property with references for the 2005 archeological field methodology.	99
Figure 25. Plan view of the Burch property with archeological features identified in 2005.....	101
Figure 26. Plan view of the Burch property with references for the 2006 archeological field methodology.	103
Figure 27. Plan view of the Burch property with archeological features identified in 2005 and 2006.....	105
Figure 28. Closeup plan view of archeological features identified at the front of the Burch property.	107
Figure 29. Closeup plan view of archeological features identified in the middle of the Burch property that relate to the back section of the Burch house.....	109
Figure 30. Closeup plan view of archeological features identified at the back of the Burch property.....	111

Figure 31. Carrigan lot, Test Unit 1, north unit wall profile showing the bottom of the builders trench for the Carrigan house foundation and the southwest corner of the brick cellar floor	113
Figure 32. Carrigan lot, Test Unit 1, north unit wall profile drawing.....	113
Figure 33. Carrigan lot, Test Unit 1, east unit wall profile showing the bottom of the builders trench for the Carrigan house foundation and the southwest corner of the brick cellar floor	114
Figure 34. Carrigan lot, Test Unit 1, east unit wall profile drawing.	114
Figure 35. Carrigan lot, southeast corner of the foundation for the front section of the Carrigan house at the bottom of Test Unit 2.....	115
Figure 36. Carrigan lot, Test Unit 2, plan view of the southeast corner of the brick foundation for the front section of the Carrigan house.....	115
Figure 37. Carrigan lot, Test Unit 2, west unit wall profile drawing	116
Figure 38. Carrigan lot, Test Unit 3/Trench 2, view southeast to remains of the southeast corner of the Carrigan/Irwin house, back cellar entry features, drain tile, and iron pipe.	117
Figure 39. Carrigan lot, Test Unit 3/Trenches 2 and 3, view east to back cellar entry features	117
Figure 40. Carrigan lot, Trench 3, structural remains including the southwest corner of the Carrigan back addition, an Irwin house wall, and Carrigan half-bricks	118
Figure 41. Carrigan lot, Test Unit 3, east unit wall profile	119
Figure 42. Carrigan lot, Test Unit 3, east unit wall profile drawing.	119
Figure 43. Carrigan lot, Trench 2, cistern-related features.....	120
Figure 44. Carrigan lot, view southeast across Test Unit 5 excavated in 2005 with the northwest corner of the Carrigan house foundation	120
Figure 45. Carrigan lot, Test Unit 5, closeup of bottom two courses of brick at the northwest corner of the Carrigan house.....	121
Figure 46. Carrigan lot, Test Unit 6, brick alignment interpreted as the remains of a porch support.	121
Figure 47. Carrigan lot, Trench 4, brick cellar floor and brick foundation remains at a jog in the front wall of the Carrigan house.....	122

Figure 48. Carrigan lot, Trench 4, schematic drawing of the jog in the front wall of the Carrigan house..... 122

Figure 49. Carrigan lot, Trench 5, north foundation wall of the Carrigan house. 123

Figure 50. Carrigan lot, Trench 6, north foundation of the Irwin house..... 123

Figure 51. Carrigan lot, Trench 6, west unit wall profile drawing..... 124

Figure 52. Carrigan lot, Trench 6, rough arc of Carrigan brick atop a north Irwin foundation wall..... 125

Figure 53. Carrigan lot, Test Unit 6, North Extension, view south to a section of the Irwin house foundation..... 125

Figure 54. Carrigan lot, Test Unit 6, North Extension, east unit wall profile drawing. 126

Figure 55. Carrigan lot, Test Units 7, 8, and 10 West Extension and Trench 8, north foundation walls of the Carrigan back addition and ell, arc of Carrigan brick, and possible four-brick pier 127

Figure 56. Carrigan lot, Test Unit 7, view south to the arc of Carrigan-era brick mortared to the north Irwin house foundation. 128

Figure 57. Carrigan lot, Test Unit 8, view south to the juncture of the back addition and the ell, and possible four-brick pier 129

Figure 58. Carrigan lot, Test Unit 8, view southwest to the exterior face of the north foundation at the intersection of the back addition and the ell..... 129

Figure 59. Carrigan lot, Trench 8, view north to the remains of the west foundation wall of the Carrigan back addition including the southwest and northwest corners and possible cellar entryway 130

Figure 60. Carrigan lot, Trench 8, view north to closeup of the interior face of the north foundation at the juncture of the back addition and ell..... 131

Figure 61. Carrigan lot, Trench 8, view northeast to closeup of the interior face of the north foundation at the juncture of the back addition and ell..... 132

Figure 62. Carrigan lot, Trench 8 West Extension, view northwest to the interior face of the north foundation wall of the ell..... 133

Figure 63. Carrigan lot, Trench 7, view northeast to the remains of the back wall of the back addition to the Carrigan house, and the base of an early Irwin house chimney.....	134
Figure 64. Carrigan lot, Trench 7, remains of the back wall of the back addition to the Carrigan house, an early Irwin house chimney, and drain tile.....	135
Figure 65. Carrigan lot, Trench 7, view north to the remains of the back wall of the back addition to the Carrigan house and other features.....	136
Figure 66. Carrigan lot, Trench 7, brick support pad at the northeast corner of the back cellar floor.....	137
Figure 67. Carrigan lot, Trench 7, view south to the remains of the back wall of the back addition to the Carrigan house and other features.....	138
Figure 68. Carrigan lot, Test Unit 12, North Extension, view west to an irregular cluster of brick fragments at the projected northwest corner of the small Carrigan outbuilding.....	139
Figure 69. Carrigan lot, Test Unit 13, view west to a jumble of brick fragments identified fairly near the projected location of the northeast corner of the small Carrigan outbuilding.....	139
Figure 70. Carrigan lot, Test Unit 14, view south to a partial alignment of brick fragments exposed near the projected location of the Carrigan barn	140
Figure 71. Carrigan lot, Trench 9, remains of the north foundation wall for the front section of the Carrigan house.....	140
Figure 72. Carrigan lot, Trench 10, small partial ring of brick standing on a brick pad that is thought to represent a furnace-related feature of the Irwin house.....	141
Figure 73. Burch lot, Test Unit 2, north unit wall profile showing yellow brown clay fill and remnants of a brick cistern cap.....	141
Figure 74. Burch lot, Test Unit 2, west unit wall profile showing the thin layer of yellow brown clay fill, remnants of a brick cistern cap, and mortar lining.....	142
Figure 75. Burch lot, Trench 6, view southwest to remains of the north foundation of the Burch house with the northwest corner of the house.	142

Figure 76. Burch lot, Test Unit 3, view north to the remains of an interior well along the north wall of the Burch house foundation and an interior wall 143

Figure 77. Burch lot, Test Unit 3, view north to the remains of the interior well along the north wall of the Burch house foundation after partial excavation. 143

Figure 78. Burch lot, Trench 6 and Test Unit 3, view northwest to remains of the north foundation of the Burch house, an interior wall, and an interior well 144

Figure 79. Burch lot, east end of Trench 6, view south to a probable chimney base along the interior face of the north foundation of the Burch house. 145

Figure 80. Burch lot, Trench 2, south trench wall profile drawing. 146

Figure 81. Burch lot, Test Unit 5, view northeast to remains of the north foundation of the Burch house, an interior wall, and a probable chimney base. 147

Figure 82. Burch lot, Test Unit 4, view northwest to remains of the north foundation near the front of the Burch house and a probable chimney-related feature on the south/interior side of the foundation. 148

Figure 83. Burch lot, Test Unit 6, east unit wall profile showing yellow and white clay fill in the area where a twentieth century apartment building stood, and post hole stain. 149

Figure 84. Burch lot, Test Unit 6, plan view at 90 cm below the present ground surface showing soil differences between the northern and southern halves of the unit, drain tile and post hole stain. 149

Figure 85. Burch lot, Trench 10, north trench wall profile drawing. 150

LIST OF TABLES

Table 1. Elevations of Carrigan property features. 151

CHAPTER 1

INTRODUCTION

The Midwest Archeological Center conducted field investigations at Lincoln Home National Historic Site in Springfield, Illinois in 2005 and 2006 in conjunction with the preparation of Historic Structure Reports (HSRs) on two of the houses that originally stood in the Abraham Lincoln neighborhood in close proximity to the Lincoln Home itself, the Carrigan house (HS-25) immediately next door to the north and the Burch house (HS-26) directly across Eighth Street to the west (Figure 1). Completion of the HSRs was a key milestone in a long-range plan to reconstruct those two houses on their original sites, as identified in the park's 1970 Master Plan (U.S. Department of the Interior, National Park Service 1970). At the time of fieldwork, the park hoped to accomplish the proposed reconstruction prior to the 2009 bicentennial celebration of Lincoln's birth.

The Lincoln Home National Historic Site was established to commemorate the life and work of U.S. President Abraham Lincoln and to preserve his home at Eighth and Jackson Streets and the surrounding neighborhood. Abraham and Mary Lincoln purchased the house in 1844 and lived there until February 1861, when they moved to Washington, D.C. following Lincoln's election to the presidency. While the Lincoln Home itself has been well maintained over the years, many of the other original houses in the neighborhood are now gone, including both the Carrigan and Burch houses.

An archeological inventory and evaluation of each of those two properties was therefore undertaken in 2005 for two purposes: 1) to collect archeological data that would be considered in combination with historic archival documentation to determine if sufficient information exists to enable the accurate reconstruction of the two houses, and 2) to assess the potential impact of reconstruction on any significant historic archeological resources present on the two properties. The primary focus of this work was to identify the actual location and footprint of each house based upon any intact remnants of the original foundations and associated architectural features such as cellars, cisterns, wells, etc. This task was known in advance to be complicated by the construction of later structures on both properties, and we were consequently unsure how much evidence of the original buildings had survived. During limited archeological investigations at the west end of the Carrigan lot in 1997, archeologist Floyd Mansberger of Fever River Research determined that several structural features of the Carrigan house were partially intact, including disturbed foundation walls, a two-room cellar with a rear extension, the former locations of two posts that may have supported the front porch, a stone step, and brick step supports (Mansberger 1997a, 1997b). Mansberger also identified two corners of the front section of the Carrigan house. The Burch lot was more problematic in that there were no known prior archeological investigations there by which to help judge the condition of the site.

The 2005 archeological fieldwork was conducted in two phases. It began with a geophysical survey of the two house lots conducted by Center Archeologist Steve DeVore from April 26-28, 2005, followed by archeological test excavations from May 17-26, 2005 under the direction of the author. Upon return to the park in early July for

a meeting on the HSRs, one additional day was spent collecting supplemental field data and an additional brick sample at Burch. The field crew in May included Center Museum Technician Lisa Stanley, Archeological Technicians Jennifer Lahowetz and Tyrel Moss, NPS Midwest Regional Office Historical Architect Al O'Bright, and Lincoln Home Maintenance Mechanic Supervisor Vee Pollock operating a backhoe. The laboratory analysis of artifacts collected in 2005 was undertaken by the author with assistance from Moss. The site maps for the fieldwork conducted in 2005 were prepared by Center Museum Curator Karin Roberts using AutoCAD. The project was coordinated with then Lincoln Home Superintendent Richard Lusardi and Historian Tim Townsend, as well as O'Bright, who also served as the Contracting Officer's Technical Representative on the contract written with RATIO Architects, Inc., Indianapolis, to prepare the HSRs.

A Center team returned to the park May 9-25, 2006 in an unanticipated continuation of the work begun in 2005 to conduct additional archeological inventory and evaluation to address several specific outstanding questions about the footprint of each house and the associated outbuildings raised as part of the HSR process. Several of those questions were defined by RATIO Architects during the preparation of the HSRs based upon their analysis of historic archival sources of information on the Carrigan and Burch houses and a review of the archeological data available from 2005 and earlier work (Young 2005). Other questions were raised later by the archeological team based upon the results of testing in 2005. The archeological work in 2006 thus represented a continuation of the effort begun in 2005 and built upon those results.

The archeological investigations in 2006 were again directed by the author with a field crew including Center Archeological Technicians Brennan Dolan, Arlo McKee, and Callie Unverzagt; National Council for Preservation Education Intern Amanda Landon; O'Bright; and Pollock. McKee was responsible for the collection of total station map data in 2006. The laboratory analysis of artifacts collected in 2006 was undertaken by the author with assistance from Unverzagt and Landon. The identification of faunal remains collected during the project was undertaken by Center Archeologist Ken Cannon (2006) and Dolan. The project was coordinated with Lincoln Home Superintendent James Sanders. The on-site logistics were coordinated with Pollock, Townsend, and Chief of Operations Kathy DeHart. Collections-related issues for both seasons of work were coordinated with Lincoln Home Museum Curator Susan Haake. Center staff Jeff Richner and Dawn Bringelson, and O'Bright reviewed this report in draft form and provided helpful comment. The Carrigan property has been assigned state site number 11SG1327, and the Burch property has been assigned state site number 11SG1328.

BUILDING CONSTRUCTION ON THE CARRIGAN AND BURCH PROPERTIES

The Burch property is a vacant lot today, and the Carrigan property is also largely vacant except for a relatively small modern building and adjacent concrete pad at the rear of the property. The primary structures built on the Carrigan and Burch properties in the past appear in historic photographs and are depicted in a series of historic maps and bird's eye illustrations of the neighborhood, notably including two City of Springfield maps dating from 1854 and 1858, and a series of Sanborn Insurance Maps dating from 1884 through 1941 (RATIO Architects, Inc. 2006a and 2006b).

The Carrigan house is thought to have been built in 1839 on Lot 6 in Block 10 of the Elijah Iles Addition to the City of Springfield (RATIO Architects, Inc. 2006a:7-8). Lot 6 and the northern three-quarters of adjacent Lot 7 were combined under single ownership at an early date and managed as one residential property, which was immediately north of the Lincoln Home lot itself. The combined lot measured approximately 70 ft north-south by 152 ft east-west. The Carrigan house was a simple wood frame structure with a brick foundation and stood on the property throughout the Lincoln era. It was replaced by a Victorian style house in 1879 that is generally referred to as the Irwin house (RATIO Architects, Inc. 2006a:10). The Irwin house then stood on the property until 1923, when it was purchased by the State of Illinois and demolished as a potential fire hazard to the Lincoln Home. Afterward, the lot apparently remained vacant until about 1950, when a small utilitarian building was constructed at the rear of the property by the State of Illinois. In the 1960s, the nearby historic Corneau house was temporarily moved to the front of the Carrigan lot, then relocated back to its original site in the 1990s.

The HSR for Carrigan provides an accounting of the owners and occupants of the property over the years. The Carrigan family for whom the original house has been named did not actually own the house, but rented it from 1859 until 1863 (RATIO Architects, Inc. 2006a:8). Henry and Susan Carrigan emigrated from Ireland in 1840 and eventually owned and operated an hotel in Springfield. Henry was also involved in local politics, running unsuccessfully for City Marshall in 1859 on the democratic ticket. They had three children, all boys, one of whom died several years prior to their residence in the house on Eighth Street. The Carrigan house and property appear poorly maintained in many historic photographs, speculatively reflecting its use as a rental property during much of its history including before and after the Carrigan family tenure there. The later Irwin house is named for Isreal and Almira Irwin, who owned and occupied the second house from 1900 until it was demolished in 1923 (RATIO Architects 2006a:10).

The locations of early structures on the Carrigan property depicted on several historic maps are presented in Figure 2 as a composite of several overlays. The structures present on the property in 1858 included the Carrigan house itself, a small outbuilding behind the house that was built along the north property line, and a barn in the southeast corner of the lot (Sides 1858). The structures mapped in 1890, 1896, and 1917 reflect the later Irwin house and its associated outbuildings (Sanborn-Perris Map and Publishing Company 1890; Sanborn Map and Publishing Company 1896, 1917). All of the plan maps of the Carrigan property prepared for the current archeological project showing the locations of the archeological features identified in 2005 and 2006 and other relevant information are presented consecutively as Figures 2 through 12 for ease in reference, although discussions of the individual plan maps are dispersed throughout the report.

Photographs of the Lincoln Home taken over the years frequently included a partial view of the Carrigan house and the later Irwin house. The Carrigan HSR includes a discussion of a number of those photographs, focusing on architectural details that can be discerned from the photos, the types and location of fencing, and landscaping of the property. Several photographs showing the houses that stood on the Carrigan property over the years are reproduced in this report as Figures 13-19. The photograph reproduced as Figure 13 was taken in the 1860s and shows the Carrigan

house immediately left (north) of the Lincoln Home. Two brick chimneys stood along the north and south walls of the front section of the house. Even accounting for distance from the photographer, the south chimney appears significantly larger than the north chimney. A porch extended from the back of the front section, as indicated by louvered porch lattice and a slight change in the slope of the roof. The ell section of the house with a dormer window and another chimney are also visible in the background.

Figure 14 is a photograph taken in 1865 that again shows the porch that extended from the back of the front section of the Carrigan house. It appears that the porch continued in an L shape along the south side of the ell, as louvered porch lattice is visible there as well. A chimney is visible toward the back of the house, immediately behind a second dormer on the ell. Figure 15 is a digitally-enhanced portion of a photograph taken in 1867 showing the front of the Carrigan house and the two chimneys that stood along the north and south walls of that section of the house. The photograph reproduced as Figure 16 was taken in the 1870s and shows the Carrigan house visible through the trees left of the Lincoln Home.

Figure 17 is a photograph taken around 1900 that shows the later Irwin house adjacent to the Lincoln Home. Figure 18 is a photograph taken around 1890 that shows a rear view of both the Lincoln Home (left in the photo) and the Irwin house (right in the photo). Finally, Figure 19 is a photograph of the Corneau house when it was located at the front of the Carrigan property in the late twentieth century.

Three panoramic drawings of the City of Springfield dated 1867, 1870, and 1873 also depict the Carrigan house and property, although the accuracy of the drawings is open to question. The 1873 bird's eye drawing by Augustus Koch, included here as Figure 20, is notable because it illustrates the north elevation of the Carrigan house, a view not represented in known historic photographs (RATIO Architects, Inc. 2006a:35, 38).

The Burch house was built in 1845 on Lot 9 in Block 7 of the Elijah Iles Addition directly across Eighth Street to the west from the Lincoln Home (RATIO Architects, Inc. 2006b:6-11). The house was constructed of brick and was fairly long east-west with a stepped southern wall line. A small frame addition to the back was built sometime between 1858 and 1890. The lot measured approximately 40 ft north-south by 152 ft east-west. There are only two known photographs of the Burch house, both taken around 1880, that show similar views of the house (RATIO Architects 2006b:17-20). One of those photos is reproduced here as Figure 21. The Burch family, for whom the house is named today, owned and occupied the property from 1859 to 1879. William Burch was born in Kentucky in 1814 and worked in several professions over the course of his lifetime. He was also involved in local Springfield politics. He lived in the house with two children from his first marriage, and also briefly with his second wife who died just two years after they were married.

Sometime between 1896 and 1917, the Burch house was removed and a commercial building constructed on the front (east end) of the property. That building was later enlarged (Figure 22) and a second smaller building, a garage, was constructed behind the first one. A two-story apartment building was constructed on the rear

(west end) of the property between 1919 and 1921 (Figure 22). Those buildings were demolished in 1973.

The locations of structures on the Burch property over the years depicted on several historic maps are presented in Figure 23, again as a composite of several overlays. The 1858, 1890, and 1896 structures reflect different plottings of the Burch house and its associated outbuildings (Sides 1858; Sanborn-Perris Map and Publishing Company 1890; Sanborn Map and Publishing Company 1896). The 1917 and 1941 structures relate to the later buildings constructed on the property after the Burch house was gone (Sanborn Map and Publishing Company 1917, 1941). Plan maps of the Burch property indicating the locations of the archeological features that were identified in 2005 and 2006 and other relevant information are presented consecutively as Figures 23 through 30. Discussions of the individual plan maps are dispersed throughout the report.

As a result of the multiple building construction and demolition histories at both properties, the archeological record in each case was anticipated to be somewhat complex. Both properties lie within the historic zone at the park, which was listed in the National Register of Historic Places in 1976 (revised 1980).

PREVIOUS ARCHEOLOGICAL INVESTIGATIONS AT CARRIGAN

1987 – During monitoring of trenching for an electrical line, Archeologist Vergil Noble of the Midwest Archeological Center identified a partial brick foundation at the far eastern end of Lot 6 immediately adjacent to the alley (Noble 1988:77-78). Noble reported that ceramic artifacts recovered from those foundation remains may date to the mid- to late nineteenth century. Noble noted that dense concentrations of historic materials were encountered along the trench line, confirming that the zone adjacent to the alley contains substantial archeological deposits that undoubtedly relate to various outbuildings and refuse from the Lincoln era and later occupation of the property.

1997 – Limited archeological investigations were conducted at the west end of the Carrigan property by Floyd Mansberger of Fever River Research in conjunction with the relocation of the historic Corneau house from this lot back to its original site. Mansberger's letter reports, field notes, and maps from that project are reproduced in the Carrigan HSR (Mansberger 1997a, 1997b). Prior to the removal of the Corneau house, Mansberger excavated two test trenches in the narrow front yard between the house and the wooden boardwalk. After the house was moved, he conducted additional limited excavations and shovel skimming in the area where it stood and ultimately exposed various structural features that he interpreted as the remains of the two previous houses that stood on the property, the original Carrigan house and the 1879 Irwin house. Mansberger distinguished the remains of the two houses based on the use of different types of brick in their construction. The remains of the Carrigan house included disturbed brick foundation walls, a two-room cellar with a small rear extension, two front porch foundation posts, brick step supports, a possible stone-and-brick cheek wall for frame steps, and a dressed stone step. The southeast and southwest corners of the front section of the Carrigan house were also identified at that time (Figure 3).

Mansberger determined that the south room of the cellar measured approximately 17 $\frac{3}{4}$ ft north-south by 15 $\frac{3}{4}$ ft east-west and had a brick floor laid in a running bond pattern, meaning that the bricks were laid end-to-end in rows with the bricks in adjacent rows offset from each other. The north room of the cellar measured approximately 14 $\frac{3}{4}$ ft east-west by an unknown distance north-south, as it extended beyond the area of excavation, and had a packed dirt floor. A four-foot wide doorway separated the two rooms. While the back (east) walls of the two rooms appeared to be roughly aligned, the south room was slightly wider east-west, creating what appeared to be a 9-in jog in the front (west) wall line of the house. The rear cellar extension measured approximately 4 ft 8 in x 7 ft 9 in, the function of which was unclear. Brickwork interpreted as the remains of the later Irwin house lay atop the robbed wall trench for the Carrigan house toward the back of the cellar.

2005 PROJECT OBJECTIVES

The primary focus of the 2005 investigations was to identify the actual on-the-ground location and footprint of the Carrigan and Burch houses based upon any intact remains of the original foundations and associated architectural features such as cellars, cisterns, and wells. At that time, the known readily-available sources of information about the series of buildings that stood on the two properties over the years included a few historic photographs, several historic maps and bird's eye view illustrations of the neighborhood, and the results of previous limited archeological investigations at the Carrigan lot (Mansberger 1997a, 1997b; Noble 1988). The 2005 fieldwork was conducted in two phases: 1) geophysical surveys of the two house lots were conducted to help identify the locations of structural foundations and any other architectural features below the ground surface, and 2) archeological test excavations were conducted to investigate the house locations indicated in historic photographs, maps, and drawings; to investigate the origin of several geophysical anomalies; and to re-expose selected features identified during previous archeological work by Mansberger at the Carrigan property. The original outbuildings at Carrigan were not identified as a priority for investigation in 2005, and there is no known documentary evidence of major outbuildings on the Burch property prior to 1870, when a single large outbuilding was depicted in a panoramic drawing of Springfield (Beck and Pauli 1870) several years after the period of primary historical significance for the park. Consequently, there was no archeological testing of outbuilding locations in 2005.

A number of intact archeological features were ultimately exposed at the Carrigan lot in 2005 that were interpreted as the remains of the Carrigan and Irwin houses and related features. Several sections of the brick Carrigan house foundations were exposed, and it became clear that the house did indeed consist of three primary sections, as historic maps suggested: the original front section of the house (that may itself have been built in two phases), an adjoining ell, and a back addition. With regard to the back addition, there has been some confusion in the literature regarding the nature of the structure attached to the back of the house. It was previously suggested in the park Cultural Landscape Report (LANDSCAPES, Urbana Group, and Myers Schmalenberger Meisner n.d.:94) that the structure was an adjacent outbuilding as opposed to a part of the house itself. Two other brick features identified in 2005 extending from the south side of the house are thought to represent supports for the porch seen in historic

photographs (Figure 14). A second cellar was discovered under the back addition, and a cistern was identified off the southeast corner of the addition. Both the cistern and back addition had clearly been modified for subsequent reuse in conjunction with the later Irwin house.

At the Burch lot, a single intact section of the Burch house foundation was identified that included the northwest corner of the house and one interior wall intersection. Part of an interior brick-lined well and a probable chimney base were exposed immediately adjacent to the foundation. A section of cistern wall was also identified at a location that was probably immediately outside the southwest corner of the house.

2006 PROJECT OBJECTIVES

The 2006 investigations were designed to accomplish specific objectives that were based on unanswered questions about the footprint of each house and the associated outbuildings. Several of those questions were defined by RATIO Architects during preparation of the HSRs based upon their analysis of historic archival materials on the Carrigan and Burch houses and a review of the 2005 archeological results (Young 2005), and other questions were raised by the archeological team based upon the results of testing in 2005. RATIO Architects performed a comparative analysis of the various historic maps and concluded that the 1896 Sanborn fire insurance map (Sanborn Map and Publishing Company 1896) appeared to be the most accurate and complete in several respects. Specifically, they determined that the 1896 map had more precise notation than earlier maps, provided additional information not included on the earlier maps, aligned most closely with the position of the northwest corner of the Burch house identified archeologically in 2005, and reflected greater attention to detail in general (RATIO Architects, Inc. 2006b; Young 2005). Although the 1854 and 1858 maps were prepared closer in time to the period of historical significance at the park, RATIO Architects concluded that those two early maps are not very accurate. As a consequence, the footprint of the Burch house as documented on the 1896 Sanborn map was used in designing the archeological testing program at that lot in 2006. Unfortunately, the Carrigan house had already been replaced by the Irwin house by 1896, so was not represented on that map.

The specific project objectives at Carrigan and Burch in 2006 are indicated below.

Project Objectives at Carrigan in 2006:

1. Identify and describe any remaining evidence of the north chimney on the front section of the Carrigan house. A test unit would be excavated 2.0-2.5 m east of the known location of the northwest corner of the Carrigan house (identified archeologically in 2005) to look for evidence of the chimney that historic photos indicate stood at the peak of the north gable on the front section of the house (Figure 15). A high amplitude ground penetrating radar anomaly was previously identified at that approximate location (DeVore 2005:40 Figure 28).

2. Identify and describe any remaining evidence of the back chimney on the Carrigan house. Historic photographs indicate that another chimney stood toward the back of the Carrigan house, but its exact location within the house was unknown (Figure 14). During the 2005 archeological investigations, a north-south interior Carrigan house wall was identified toward the back of the house that was thought to possibly represent the original east wall of the Carrigan ell, as well as the west wall of the back addition. Only the southernmost end of that wall was exposed in 2005. A test trench would be excavated along that wall to look for evidence of the chimney.

If no evidence of a chimney was identified along that wall, a second chimney test would be excavated along the far back north-south wall of the house (i.e., the east wall of the back addition). A high amplitude ground penetrating radar anomaly was previously identified along that back wall line (DeVore 2005:40 Figure 28). A third chimney test would also be excavated along the north wall of the back addition.

3. Search for evidence of a possible north porch. In their analysis of the 1873 bird's eye view drawing of Springfield (Figure 20), RATIO Architects noticed a slight change in the north roofline at the back of the house that was thought to possibly indicate a porch extending farther to the north than the north house foundation identified archeologically in 2005 (Young 2005). Further, it was unclear to RATIO if that porch was depicted on the ell or the back addition. In addition, the author previously observed that the 1858 City of Springfield map (Sides 1858) may indicate a porch along the north wall at the front of the house, depicted as a line on the map that extends from the northwest corner of the house northward to the lot line (Figure 2).

Consequently, three test units would be excavated in the following locations to search for evidence of porch supports:

- a. North from the northwest corner at the front of the house.
- b. The first chimney test discussed under objective 2 above would be extended north to the lot line. The north-south Carrigan house wall at that location was thought to represent the original east wall of the ell/west wall of the back addition. If a porch was attached to either the ell or the addition, porch supports would undoubtedly have been needed in that area.

Further, the jog or offset in the north wall line of the Carrigan house depicted in the 1854 and 1858 maps (McManus 1854; Sides 1858), presumably representing a back addition to the house or possibly a porch, might also have been located in that same area (Figure 2). Since the specific location of the offset was not identified during the 2005 investigations, we hoped that it might yet be identified in 2006.

- c. The far back northeast corner of the house (i.e., northeast corner of the back addition) would first be identified archeologically. A test unit would then be excavated north to the lot line.
4. Investigate the interface between any Carrigan house foundations along the ell and the south porch supports identified in 2005, and determine how far south and east those porch supports may originally have extended. During the 2005 investigations, shallow brick alignments were identified extending from the south side of the house in Test Unit 6 and the South Extension of Trench 3. They were interpreted as part of the support system for the porch that appears along that section of the house in several historic photos (Figure 14). Test Unit 6, excavated in 2005, would be extended to the north to investigate how the porch supports in that unit may have interfaced with the main house foundation, and extended to the south to investigate how far the porch extended in that direction. Optionally, another test unit would be excavated to the east along a line extended from the southernmost remaining porch support to look for additional such supports.
5. Determine the function of a rough brick arc identified along the north wall line. During the 2005 investigations, a rough arc of mortared Carrigan-era brick of unknown function was identified in Trench 6 immediately outside and partially overlapping the north wall line of the house. A test unit would be excavated in that area to define the extent of the feature and determine its relationship to the Carrigan and Irwin houses.
6. Search for evidence of the small outbuilding that stood behind the Carrigan house along the north lot line. Testing would be conducted to look for evidence of the small outbuilding indicated on the 1854 and 1858 City of Springfield maps (McManus 1854; Sides 1858) along the north property line (Figure 2). A magnetic gradient anomaly was previously identified near the projected southwest corner of that outbuilding near geophysical survey grid coordinate 15N, 30E (DeVore 2005:37 Figure 25). Since there was no obvious corresponding conductivity anomaly at that same location, it was thought that the source of the magnetic anomaly might be structural (DeVore 2005:14).
7. Search for evidence of the barn that stood in the southeast corner of the lot (RATIO Architects, Inc. 2006a:14, 18). Most/all of the location of the historic barn is now covered by a modern building and adjacent concrete pad and was therefore inaccessible to archeological investigation (Figure 2). However, the northwest corner of the barn may have extended a short distance into the present open yard. A test unit would be excavated there to search for any remaining evidence of that corner.
8. Investigate the source of a strong geophysical anomaly identified near the center of the Carrigan/Irwin house site. A high amplitude ground-penetrating radar anomaly was identified in 2005 at 16-17N, 14E on the geophysical survey grid that was thought to possibly relate to structural features associated with

either the Carrigan house or the Irwin house (DeVore 2005:15, 40 Figure 28). A test unit would be excavated there to investigate the source of the anomaly.

Project Objectives at Burch in 2006:

1. Identify and describe any remaining evidence of the northeast corner of the Burch house. A test would be excavated approximately 60 ½ ft (18.5 m) east of the known northwest corner of the Burch house (identified archeologically in 2005) to look for evidence of the northeast corner, a dimension derived from the 1896 Sanborn fire insurance map of the Lincoln neighborhood (Sanborn Map and Publishing Company 1896). As discussed above, an analysis of historic maps of the area by RATIO Architects indicated that the 1896 map appears to be the most accurate and was therefore used when designing the 2006 testing program at Burch.
2. Identify and describe any remaining evidence of the north chimney on the front section of the Burch house. If that chimney stood at the peak of the gable on the north face of the Burch house, it would have been located approximately 17 ½ ft (5.33 m) west of the northeast corner of the house, based on the footprint of the house on the 1896 Sanborn fire insurance map. However, a backhoe trench (Trench 1) excavated to sterile subsoil at that exact location in 2005 exposed no evidence of the chimney or the house foundation itself, that area having been completely reworked during construction/demolition of a later commercial building.

However, an historic photograph of the Burch house (Figure 21) appears to show that particular chimney located slightly closer to the front of the house than the peak of the gable. Ground penetrating radar and magnetic gradient anomalies were also previously identified in that same general area in proximity to geophysical survey grid coordinate 11.5N, 40E that were thought might relate to structural features of the Burch house. Therefore, the 2006 testing program included the excavation of a trench extending from the northeast corner test (described under item 1 above) west to Trench 1 from 2005.

3. Continue excavation of the north foundation at the back of the Burch house to look for additional wall intersections, as a means to project the location of the southwest corner of the house at the open back porch. Informal probing conducted in July 2005 suggested that the north foundation remnant exposed in Trench 6 continued to the east below the level of the 2005 spring excavation. As part of the 2006 investigations, it was therefore planned to extend Trench 6 to the east to expose the entire length of the remaining wall as far as it goes, looking in particular for any additional wall intersections. The 1896 map of the Burch house depicts a north-south wall extending from the north foundation to the southwest corner of the house at the open back porch (Figure 23). If such a wall line could be identified on the ground, it could be used to help extrapolate the location of the southwest corner, which was located in an area already known to be heavily disturbed (the area

of Trench 5 from the 2005 investigations). At least one section of the north foundation would also be fully exposed to the bottom on the interior-facing surface in order to collect additional information on construction methods and presence/absence of a cellar.

4. Search for any remaining evidence of the foundation that supported the eastern edge of the open back porch along the south side of the Burch house. A test trench would be excavated to search for the east foundation of the open back porch. That foundation is plotted on the 1896 map approximately 16 ft (4.9 m) east of the southwest corner of the house, and approximately 18 ft 10 in (5.75 m) west of the southeast corner of the house (Figure 23). That test trench was therefore to be positioned on the ground based on the results of other testing to project the location of the southwest corner at the open back porch (described under objective 3 above), and to identify the location of the southeast corner (described under objective 5 below).
5. Identify and describe any remaining evidence of the southeast corner of the Burch house. A test trench would be excavated to look for the southeast corner of the house. The Burch house was depicted on the 1896 map as approximately 25 ½ ft (7.8 m) across the front, while RATIO Architects scaled the house to be 24 ft (7.3 m) across the front, presumably based on a horizontal brick count taken from historic photos in combination with the known size of the bricks that were used (2006b:51-52, Ultimate Treatment Layouts). The trench excavated in 2006 would be large enough to take both possibilities into account, and would be positioned on the ground based in part on the results of other testing to identify the northeast corner of the house (described under objective 1 above).
6. Excavate a stratigraphic test in the area of the modern apartment building that stood on the west half of the property to evaluate the archeological potential of that portion of the lot and determine the level of adverse impacts there. A backhoe trench would be excavated in the area where an early twentieth century apartment building was constructed at the rear of the property. The trench would be positioned to cross the projected east wall of that building and would allow us to evaluate the stratigraphy in that area.
7. Investigate the source of a strong geophysical anomaly just inside the north lot line toward the rear of the property. A test unit would be excavated to investigate the source of a strong magnetic gradient anomaly previously identified at geophysical grid coordinate 11.5N, 3E. While there is no known documentation of privy locations during the historic occupation of the house, privies were typically placed toward the rear of the property. Given the construction of the apartment building at the back of the property in the early twentieth century, it was unknown how much evidence of earlier features had survived.
8. Optionally, investigate the source of a small complex of geophysical anomalies toward the middle of the Burch lot. If time permitted, a test unit would be

excavated at geophysical survey grid position 2.5-3N, 23E at the location of a small complex of ground penetrating radar anomalies. That location was away from known buildings plotted on historic maps.

FIELD METHODOLOGY

The archeological field methods employed in 2005 and 2006 were selected to maximize data collection relevant to the above project objectives while keeping within the constraints imposed by the limited evaluative scope of the project. The archeological field investigations were coordinated with NPS Midwest Regional Office Historical Architect Al O'Bright to ensure that all architectural data relevant to the proposed reconstruction of the Carrigan and Burch houses were properly recorded. While some artifactual material was collected, field efforts focused primarily upon the identification and interpretation of the remains of architectural features below the ground surface.

In preparation for fieldwork, a series of overlays of the historic Carrigan and Burch property maps was prepared to a common scale to facilitate a comparative study of building locations on each property over time, and later entered in AutoCad (Figures 2 and 23). The overlays were prepared using the 1858 City of Springfield map (Sides 1858) and the 1890, 1896, 1917, and 1941 Sanborn fire insurance maps (Sanborn-Perris Map and Publishing Company 1890; Sanborn Map and Publishing Company 1896, 1917, 1941). The locations of Mansberger's 1997 test units at Carrigan and the cellar-related features he identified there were also plotted to this scale for comparative purposes (Figure 3).

Center Archeologist Steve DeVore and the author traveled to the park April 25-29, 2005 to conduct geophysical surveys of the two house lots using fluxgate gradiometer, conductivity meter, resistivity meter, and ground penetrating radar equipment (DeVore 2005). Even when reviewing preliminary geophysical maps in the field, it was immediately apparent that the geophysical information would prove useful for understanding current ground conditions at the two properties. For example, the conductivity meter survey provided good information on the locations of several utility lines that cross the Carrigan property, and the resistivity meter survey provided a clear indication of the area that was impacted by temporary relocation of the Corneau house to the Carrigan lot and its subsequent removal. A detailed study of the geophysical data was later undertaken in the lab by the author with input from DeVore. All of the historic map overlays and geophysical datasets were then analyzed in combination to determine the placement of the initial test units and trenches excavated in May 2005, and to inform the ongoing process of decision-making about additional testing as fieldwork progressed.

Given the depth at which many architectural features lie at the two properties (over 1 m below ground surface in some areas), use of the backhoe became essential as a supplement to hand excavation. Structural remains and architectural features identified during the course of fieldwork were exposed only to the extent necessary to determine the function of the feature and collect other basic descriptive information, and were then left largely intact. Several brick and mortar samples were collected from selected features, so are available for future analysis as well. All exposed structural remains and

architectural features were photographed and mapped using standard archeological procedures prior to backfilling.

In 2005, horizontal provenience across the Carrigan site was maintained relative to an arbitrarily designated mapping point, Datum A, in the southern half of the property (Figure 4). The angles to points across the site were measured in degrees and minutes east of a 0 baseline running from Datum A to the northeast corner of the east extension of the park's Visitor Center (86 degrees 16 minutes west of magnetic north) using a theodolite placed over Datum A. Distances to points at the site were taped from Datum A whenever possible, using the metric system. A second mapping point designated Datum B was also eventually established near the southeast corner of the Carrigan house foundation in order to facilitate the mapping of features in that area (Figure 4). Upon return to the park for a brief visit in July 2005, a few additional measurements were taken relative to the 10N, 20E geophysical grid stake. Vertical control at Carrigan was maintained relative to the present ground surface at Datum A (597.99 ft) (the elevation at Datum A was calculated from the elevation of the water valve in the Carrigan parking at 594.17 ft above mean sea level, per Hanson Professional Services Inc. 2005). An electronic total station was used for mapping during the 2006 field investigations, again placed at Datum A (Figure 6), which also allowed for the refinement of some of the map data collected the previous year.

A similar approach to site mapping was taken at the Burch lot. Horizontal provenience across the Burch site in 2005 and 2006 was maintained relative to an arbitrarily designated mapping point, Datum C, in the south central portion of that lot (Figures 24 and 26). The angles to points across the site were measured east of a 0 baseline running from Datum C to the same corner of the Visitor Center used for mapping at Carrigan (54 degrees 47 minutes west of magnetic north). Vertical control at Burch was maintained relative to the present ground surface at Datum C (595.55 ft) (calculated from the same water valve as for Datum A at Carrigan).

Six archeological test units and six backhoe trenches were excavated at the Carrigan lot in 2005 (Figure 4). The test units were excavated by hand using standard archeological procedures that included skim-shoveling until features were identified, and troweling to further expose the features. Three Carrigan house-related features previously identified by Floyd Mansberger in 1997 (1997a, 1997b) were re-exposed in 2005, including the southeast and southwest corners of the front portion of the house and a short section of the foundation along the front of the house at an apparent jog in the wall line. Other features previously identified by Mansberger relating to the Carrigan and Irwin houses were not re-investigated during the present project, as some documentation on them was already available for use in the HSR. All features exposed in 2005 and the base of excavation in all test units and trenches were covered with plastic prior to backfilling. Three archeological test units and five backhoe trenches were excavated at the Burch lot in 2005 (Figure 24). All Burch house-related features were covered with plastic prior to backfilling.

Eight additional archeological test units and four additional backhoe trenches were excavated at Carrigan in 2006, and the excavation of two test units from 2005 was continued or extended (Figure 6). Due to some initial uncertainty about the on-the-

ground position of the north lot line at Carrigan, several test units were extended to the north while excavation was in progress. Four additional test units and four additional backhoe trenches were excavated at Burch in 2006 (Figure 26). All features exposed in 2006 and the base of excavation in all test units and trenches at Carrigan were covered with plastic prior to backfilling. All features exposed at Burch in 2006 were covered with plastic prior to backfilling, as well as the base of excavation in Test Unit 6.

The excavation of individual test units and trenches generally proceeded until a potential feature was encountered, and most fill was not screened. Most units and trenches were not fully excavated to undisturbed subsoil, but only to the depth necessary to define the extent of any structural features. However, Test Unit 3 at Carrigan was excavated partially by cultural strata and some of that fill was screened through ¼-inch hardware cloth, most notably the portion of the deposit that lay immediately south/outside the foundation wall in the area of a cellar entryway. Most of the excavated fill from Test Unit 6 at Burch was also screened through ¼-inch hardware cloth.

Two strategies for artifact collection were implemented during the project. First, the fill excavated from selected proveniences was screened, as mentioned above. In those instances, the artifactual residue in the screen was bagged and returned to the Center for analysis. When that residue included large quantities of structural debris such as numerous brick fragments, typically only a sample of such material was collected. However, the bulk of the excavated fill was not screened. Artifacts that were collected from the latter proveniences generally represented diagnostic objects observed during the course of excavation. Given the careful approach taken to the hand-excavation of the test units, the recovery of diagnostic artifacts from those units should have been nearly complete. In contrast, the recovery of diagnostic artifacts from the backhoe trenches was fortuitous. Information on the archeological materials retained as part of the park's museum collection for this project is provided in Appendix A. Each provenience from which artifacts were collected is associated with a three-part unique bag catalog code that was assigned in the field (for example, 10BLOCK67-TU3-1). A description of those proveniences is provided in Appendix B. The identification of faunal remains collected at Carrigan and Burch is provided in Appendix C. The collected archeological materials and the associated field and other archeological project records are presently curated at the Midwest Archeological Center as museum accession LIHO-384/MWAC-1086.

CHAPTER 2

ARCHEOLOGICAL INVESTIGATIONS AT CARRIGAN

RESULTS OF THE 2005 INVESTIGATIONS

Six archeological test units and six backhoe trenches were excavated at the Carrigan lot in 2005 (Figure 4), within which were exposed a number of intact architectural features interpreted as the remains of the Carrigan house and the later Irwin house. The brick Carrigan house foundations were exposed in several areas and represented much of the footprint of the building, including the intact northwest and southeast corners of the front section of the house, a short section of foundation along the front (west) wall of the house at an apparent jog in the wall line, one section of the north foundation toward the back of the house, and the southeast and southwest corners of the back addition (Figure 5). Two other brick features identified along the south wall of the ell and the back addition were interpreted as remnants of the support system for the porch that extended from this wall of the house, as seen in historic photographs (Figure 14). Unfortunately, portions of the latter two features were missing due to subsequent construction of the Irwin house and later trenching for utility lines across the lot, so that the southern edge of the porch could not be identified within the limits of the 2005 excavations. Efforts to identify evidence of the continuation of that porch along the back of the front section of the house, per historic photographs (Figure 13), were negative.

A second cellar was discovered under the back addition to the Carrigan house with several partially intact cellar entry features including a finished break in the foundation that formed the east cellar entry jamb, sloped brick paving that may have underlain wooden entry steps, the remnants of brick cheek walls on either side of the paving, and two large displaced possible stone steps (Figure 5). An intact cistern constructed of the same basic type of brick and mortar used in the construction of the Carrigan house was also identified immediately off the southeast corner of the back addition. The cistern had clearly been reused in conjunction with the Irwin house. Further, it appeared that the back cellar of the Carrigan house was also incorporated into the later Irwin house. A separate section of the foundation of the Irwin house was aligned along and mortared to a short section of Carrigan brick thought to represent a remnant of the supporting structure for the south porch. A section of the north foundation of the Irwin house was also exposed that represented either a later addition or repair to that house. All of these features are described in greater detail below within discussions of the individual test units and backhoe trenches where they were exposed.

Test Unit 1

This one-meter square was excavated to re-expose the southwest corner of the brick cellar floor at the front of the Carrigan house identified in 1997 by archeologist Floyd Mansberger (1997a, 1997b). Mansberger indicated that the brick foundation wall that originally stood around the perimeter of the cellar had been removed in that area, but that the brick cellar floor was intact. And, indeed, we exposed two soft orange bricks at 95 cm below surface (593.79 ft in elevation) lying flat side-by-side in the northeast

corner of Test Unit 1, presumably representing the southwest corner of the cellar floor (Figure 5). While the brick foundation was missing, the bottom of the builders trench for the foundation was still clearly defined in the north and east walls of the unit cut into the natural soil profile, but now backfilled with clay (Figures 31-34).

Test Unit 2

This one-meter square was excavated to re-expose the southeast corner of the Carrigan house foundation for the front section of the house initially identified in 1997 by archeologist Floyd Mansberger (1997a, 1997b). Mansberger noted that the brick foundation wall in that area was still intact, but he did not otherwise record the dimensions of the wall or describe how it was constructed.

We found that the lower five courses of brick were still represented in the portion of the foundation within Test Unit 2, including four courses at the corner itself (Figures 5, 35-37). The south wall of the foundation was three wythe (composed of three vertical stacks of brick that measured 13 inches across) and the east wall was two wythe (composed of two stacks that measured 8 ½ inches across), a difference that may have related to the need for additional support for the chimney that stood at the peak of the gable along the south wall (Figure 13). The bricks in the foundation measured 8 ¼-8 ½ in x 4 ¼ in x 2 in, and were laid up in soft sand-lime mortar.

A very small section of the brick cellar floor was also exposed in the northwest corner of Test Unit 2, the top surface of which lay generally at the same level as the top of the base course of brick in the foundation. The present ground surface at Test Unit 2 is somewhat higher than at Test Unit 1, so the cellar floor in Test Unit 2 lay approximately 126 cm below surface in that unit, but was comparable in elevation (593.77 ft) to the portion of the cellar floor exposed in Test Unit 1.

The 1858 City of Springfield map (Sides 1858) depicted the footprint of the front section of the house as deeper east-west than the distance between the southeast and southwest corners originally identified by Mansberger (Figure 3). Since Mansberger did not provide dimensions for the brick wall he exposed, it was initially unclear if the wall he found represented the house foundation or a brick cellar wall lining that was inset from the actual foundation. However, no other possible house support features were observed outside/beyond the brick wall surrounding the cellar during the excavation of Test Units 1 and 2, and that wall was certainly substantial enough to have functioned as a house foundation. More likely, the 1858 map footprint was depicted incorrectly on the lot. In Figure 4, the 1858 map footprint has been repositioned to align with the southwest corner of the house as identified by Mansberger, with the result that the front section of the footprint extends roughly 1.75 m east of the southeast corner. That extension may represent the area of the porch seen in historic photographs (Figure 13), and is consistent with the supposition that the porch in this area probably had less substantial supports that were similar to the shallow brick alignment identified in Test Unit 6 along the south wall of the ell interpreted as a porch support feature.

Test Unit 3/Trenches 2 and 3

Test Unit 3 measured 1 x 2 m and was positioned over a strong radar anomaly that was initially thought to reflect a well or cistern (Figure 4). Ultimately, the south foundation wall for the back addition to the Carrigan house was exposed at the east edge of Test Unit 3 at a cellar entryway. Other cellar entry features were also exposed, including an area of sloped brick paving that may have underlain wooden entry steps, and the remnants of brick cheek walls on either side of the paving. Two large dressed stones lay jumbled in the lower fill in the entryway that were undoubtedly the source of the radar anomaly (Figure 5).

Trench 2 was excavated to the east to look for a continuation of the Carrigan house foundation identified in Test Unit 3 (Figure 4). When the 1858 map footprint of the Carrigan house is repositioned on the lot to match with the southwest corner of the house identified by Mansberger (Figure 4), the footprint at the back of the house extends several meters east of the cellar entry identified in Test Unit 3. However, a cistern was exposed in that area instead in a position that would have precluded the house foundation from extending beyond it to the east (Figure 5), and the southeast corner of the house was ultimately identified at the western end of Trench 2. We considered the possibility that the area of the extended footprint may have been covered by an open-sided extension of the roof or similar structure to provide sheltered access to the cistern that would not have required a solid brick foundation. However, no in situ structural features were identified in the eastern half of Trench 2, only scattered brick rubble.

Trench 3 was initially excavated along a line extended west from the Carrigan foundation identified in Test Unit 3 in order to look for a continuation of the foundation in that direction as well (Figure 4). Trench 3 was ultimately expanded to the north in the process of removing a large flattened metal container/chute in the fill, and to the south to follow a brick wall line of the Irwin house and a short section of Carrigan brick in an effort to determine the eastern extent of the south Carrigan porch. The east edge of that porch is undoubtedly represented by the jog in the south wall line toward the back of the house, as depicted in the 1854 and 1858 map footprints. The southern end of Trench 3 was found to have been heavily disturbed by the installation of several utility lines and old soft brick fragments were mixed into the soil around the lines. Test Unit 3, Trench 2, and Trench 3 were excavated to variable depths, but generally only as necessary to expose and define this complex of related structural features.

Foundation for the back addition to the Carrigan house – The southeast corner of the back addition to the Carrigan house, as defined by the corner of a substantial brick foundation, was identified in the West Extension of Trench 2 (Figures 5 and 38). The foundation extended north into unexcavated fill, and west a short distance to the finished east jamb of the cellar entry exposed in Test Unit 3. The foundation was two wythe (8 - 8 ½ inches wide) and constructed of soft orange bricks that measured approximately 8 ¼ in x 4 in x 2 1/8 in. They were laid up in soft light brown sand-lime mortar. Mortar was present on the top surfaces of the highest bricks, indicating that at least one additional course was originally present. The foundation was painted gray/white or whitewashed on the interior-facing and cellar opening surfaces, with no application on the exterior surface (Figure 39).

A continuation of the south foundation was partially exposed west of the cellar entryway a short distance that extended to the southwest corner of the addition (Figure 40). The foundation then turned north into unexcavated fill. The foundation here was also two wythe, and a spread footing was exposed along the north side of the foundation.

Carrigan south porch support – A short section of Carrigan-era brick was exposed at the north end of the South Extension of Trench 3 up against and slightly overlapping a section of Irwin foundation (Figures 5 and 40). The Carrigan feature was composed of a single course of four soft orange half-bricks that were mortared together with brown sand-lime mortar oriented in a line north-south. Mortar was also present on the top surface of the bricks. This arrangement of half-bricks at a relatively shallow depth was suggestive of the line of half-bricks along the eastern edge of the spread footing for the south porch support identified in Test Unit 6, prompting the tentative interpretation of the feature in Trench 3 as a small remnant of another porch support (see below for a description of the brick porch support feature identified in Test Unit 6). The eastern edges of the half-bricks in Test Unit 6 and Trench 3 are approximately 10 ft apart east-west. The top of the half-bricks in Test Unit 6 lay at an elevation of 596.68 – 596.74 ft, while the top of the half-bricks in Trench 3 lay at an elevation of 597.10 ft, a difference of 4-5 inches. It is possible that the Carrigan half-bricks in Trench 3 were not in situ, but were reused as a block during construction of the adjacent Irwin foundation, although this did not appear to be the case as the Carrigan half-bricks were largely off to the side and would have served no obvious purpose there. Carrigan-era brick was apparently scavenged and reused during the construction of this portion of the Irwin house, as the Irwin foundation in Trench 3 included a mix of the old soft orange bricks and later hard-fired bricks mortared together with sandy white mortar. However, this section of Carrigan half-bricks constitutes the only archeological evidence collected to date that may bear on the eastern extent of the south Carrigan porch. The porch could not have extended much farther to the east, or it would have blocked the entryway into the back cellar. Scattered brick rubble was visible in the south wall of Trench 3 roughly five feet east of the Carrigan half-bricks at a shallower depth, but that rubble was not thought to relate to the Carrigan porch.

Cellar entry features – As mentioned above, several cellar entry features were exposed including the foundation wall finished flush to form the east jamb of the cellar entry, an area of sloped brick paving that may have underlain wooden entry steps, the remnants of brick cheek walls on either side of the paving, and two possible displaced stone steps (Figures 5, 38, and 39). The brick paving was composed of a number of soft orange bricks laid flat that sloped upward from north to south beginning at the exterior edge of the foundation. It was 45-47 inches across east to west (39 inches between cheek walls, and about 4 inches under each cheek wall). The large stones blocking the entryway lay partially over the brick paving, so that a full investigation of the paving was not possible without removing the stone, which was not done. Only a few bricks remained in the cheek walls.

The two large dressed stones were partially exposed, but determined to measure 34 in x 15 ¼ in x 5 ¾ in, and 44 in x 14 in x 7 ½ inches at the thickest point but partially cut down to 5 inches in thickness. Both stones were left in place, and a third stone was eventually exposed in the cellar fill nearby in 2006. Since the back cellar of the Carrigan

house was clearly reused as part of the later Irwin house, the stones may speculatively relate to Irwin-era use of the cellar or may have served a different function altogether.

Cellar fill – Site fill in the area of the back cellar was composed of multiple distinct layers of soil and other materials including structural debris and numerous artifacts (Figures 41 and 42). Diagnostic artifacts recovered from the fill represent a mix of early (Carrigan house-era) and late (Irwin house-era) items, with late nineteenth/early twentieth century artifacts predominating. For reference during any future archeological investigations at the site, most of the deposit immediately outside the cellar entry between the east cellar entry jamb and the southeast corner of the house was not excavated. Similar locations immediately outside doorways were often used historically for trash discard.

Cistern – The top of a circular cistern was partially exposed in Trench 2 outside the southeast corner of the Carrigan house foundation, capped with soft low-fired brick (Figures 5 and 43). The top center opening was 34 inches in diameter, and the outside diameter of the cap was approximately 7 ft. The top of the cistern is approximately 597.73 ft in elevation. At this point, it is not known if the cap originally protruded above the historic ground surface or was subsurface. However, the cistern sits relatively high in elevation in comparison, for example, to the brick porch support identified in Test Unit 6 (see section below on Historic Grade Associated with the Carrigan House), so may have extended above the ground surface.

A section of 4-inch diameter salt-glazed stoneware drain tile with a bell-shaped opening protruded from the west side of the cistern cap. Since this type of drain tile dates to about the turn of the twentieth century, it reflects the reuse of the Carrigan-era cistern during the Irwin house occupation of the property. That section of drain tile would originally have been connected to another section exposed nearby that continued northwest into unexcavated fill, the two now separated by a missing elbow. It was initially assumed that the drain tile directed rain runoff from the Irwin house roof into the cistern. However, when additional sections of the drain tile were exposed in 2006, it was found to continue down and beneath the back cellar floor, and so appears instead to have functioned to direct water overflow from the cistern to a sewer line in the Irwin house.

A 1 ½-inch steel pipe extends presumably from the cistern to just inside the back foundation wall of the house (Figures 38 and 43) (the juncture of the pipe and cistern was not actually exposed), and would have been used to obtain water from the cistern for use in the house. A flat slab of limestone shimmed to level with a smaller rock was mortared to the top of the cistern in the southwest quadrant (Figure 43). No fill was removed from the cistern during this project.

Irwin house foundation – Excavations in Trench 3 also exposed a corner section of the Irwin house foundation, clearly constructed to connect with the back addition to the Carrigan house (Figures 5 and 40). Carrigan house-type brick that may have been scavenged elsewhere around the house was reused in the Irwin foundation, which included both soft orange and hard-fired bricks mortared together with sandy white mortar. A single wythe of Irwin brick was butted against and extended south from the

southwest corner of the Carrigan back addition. The Irwin wall then turned west and was expanded to two wythe in that direction and continued into unexcavated fill. It also turned east a short distance one wythe wide, paralleling the south wall of the back addition, then turned south again and widened to two wythe. Several courses of the latter section were exposed, and mortar was present on the top surface of the highest remaining course. The south end of the wall was broken irregularly. As mentioned above, that south section of the Irwin foundation was laid against and slightly under four Carrigan half-bricks. The Irwin brick at the same level as the half-bricks had been cut to fit around the half-bricks so that the west face of the Irwin wall was flush. While it is possible that the Carrigan half-bricks in Trench 3 were not in situ and were reused as a block during construction of the Irwin foundation, that did not appear to have been the case.

Test Unit 4

Test Unit 4 was a one-meter square opened over the projected location of an intact section of the Carrigan house foundation at a small rear extension of the front cellar previously identified by Mansberger (1997a, 1997b). Since a well-preserved section of the foundation was ultimately exposed in Test Unit 2, there was no need to continue the excavation of Test Unit 4 at that time. Therefore, excavation was halted at 30 cm below the present ground surface.

Test Unit 5

This two-meter square was opened in 2005 to look for evidence of the northwest corner of the Carrigan house and supports for a porch that may have extended along the north side of the house. The 1858 City of Springfield map (Sides 1858) may have indicated that a porch was present along the north wall at the front of the house, depicted on the map as a line that extended from the northwest corner of the house northward to the lot line (Figure 2). Test Unit 5 was situated immediately north of a large basswood tree, so that much of the unit fill was found to consist of a jumble of brick fragments and a few artifacts among a mass of large roots. Due to a re-evaluation of project priorities during the course of the 2005 field investigations, the work in this unit was scaled back while excavation was in progress. Excavation of roughly three-quarters of the unit was halted at 40-60 cm below surface, while excavation of most of the southeast quarter continued to a depth of 110 cm below surface where remnants of the Carrigan house foundation were exposed (Figures 4, 5, and 44). Efforts to identify porch supports in that area were thus discontinued in 2005.

The base course of brick in the north foundation wall was identified in situ at the northwest corner of the house and extended east into unexcavated site deposit (Figure 5). Excavation exposed five bricks in that course, laid side-by-side with long axis oriented north-south as a header course, meaning that only the ends of the bricks would have been visible on the finished face of the wall (Figure 45). Two bricks from the second course were also exposed, with long axis oriented east-west. Dark soil fill in the builders trench for the foundation extended slightly beyond the outside edge of the brick. However, the west foundation wall of the house that originally extended southward from the corner brick was gone.

The several bricks exposed in this area measured $7\frac{3}{4}$ - $8\frac{1}{4}$ in x 4 in x 2 in, and remnant patches of brown sand-lime mortar still adhered to the bricks. The top of the base course lay at an elevation of 593.99 ft, approximately $2\frac{1}{2}$ inches higher than the top of the base course in Test Unit 2.

Test Unit 6

Test Unit 6 was excavated to look for the Carrigan house foundation, or porch supports extending from the foundation, along the south wall of the ell. Historic photographs of the house show a porch with louvered porch lattice along that wall (Figure 14). The test unit initially measured 0.75 m east-west x 2 m north-south, but was later extended 0.5 m to the south to more fully expose a Carrigan-related brick alignment. That alignment was first identified at a depth of approximately 32 cm below the present ground surface. It was ultimately interpreted as the remnant of a brick porch support structure with a shallow spread footing.

Three courses of brick were represented in the feature (Figures 5 and 46). The base course or spread footing was constructed of a line of full-sized bricks placed side-by-side with the long axis of the bricks oriented east-west and butted against a line of half bricks along the east side. The second course of brick was two wythe centered on the footing with the long axis of the bricks oriented north-south. The bricks were mortared together with soft light brown sand-lime mortar, which was also present on the upper surface of the third course of brick, suggesting that at least one additional course was originally present. The line of bricks had been cut in two places by modern utility line trenching, and another trench occurred immediately south of the southernmost brick in the unit. As a result, it was unknown if that brick represented the original end of the porch support, or if the support extended farther south into the unexcavated deposit beyond Test Unit 6.

The top of the spread footing lay at an elevation of 596.68 – 596.74 ft. Excavation of the unit was halted at 45 cm below surface. See the section on Trench 3 for a description of the other possible south porch support identified in 2005.

Trench 1

This backhoe trench was excavated to look for supports for the porch that extended from the east/back side of the front section of the Carrigan house. As explained in the discussion of Test Unit 2 above, Figure 4 illustrates the 1858 map footprint of the house repositioned to align with the known southwest corner of the house, thereby extending the footprint for the front section roughly 1.75 m east of the southeast corner of the front cellar. That extension may represent the area covered by the porch seen in historic photographs (Figure 13). If the supports for that porch were similar in construction to the porch supports later identified in Test Unit 6 along the south wall of the ell, they would have been relatively shallow (the bottom of the supports in Test Unit 6 lay less than 50 cm below the present ground surface) and much less substantial than the main house foundation itself.

Trench 1 measured approximately 0.7 m north-south x 3.4 m east-west and was excavated to a depth of approximately 1 m. Fill in the western section of the trench had been impacted by ground disturbance undoubtedly related to the relocation of the Corneau house to and from this property (Figure 3). No evidence of porch supports or other intact architectural features was observed. A few artifacts, some modern, were observed in the trench fill during excavation.

Trench 4

This backhoe trench was excavated to further investigate the offset or jog in the front (west) foundation wall of the Carrigan house previously identified by Mansberger (1997a, 1997b). Mansberger exposed the remains of a two-room cellar at the front of the house, the north room having a packed dirt floor and the south room having a brick floor laid in a running bond pattern (Figure 3). He also described the west wall of the north room as inset approximately 9 inches in comparison to the west wall of the south room. The foundation wall itself was only partially intact in that area, but the builders trench for the wall was still well-defined along those sections where the brick itself had been removed.

Upon re-exposure, we confirmed this offset in the front wall line, measured to be 8 ½ inches or a single brick length, although the area of the offset had been disturbed by root growth from the nearby basswood tree (Figures 5, 47, and 48). The offset may indicate that the front section of the house was built in two phases, a possibility that is supported by other evidence as well. The brick in the walls along the south and west sides of the north room is redder in color and slightly harder than the very soft orange brick that was used in the foundation around and as flooring in the south room. The common wall between the two rooms therefore appeared to relate to construction of the north room, suggesting that the north room was built first and that the south room was joined to that existing elevation. In addition, the two chimney stacks on the front section of the house were different sizes, with a small stack along the north wall of the house and a larger stack along the south wall (Figure 13). That difference may also relate to two separate episodes of house construction.

A number of the bricks in the floor at the northwest corner of the south room were also re-exposed in 2005, confirming the running bond pattern previously described by Mansberger. The top of the cellar floor lay at an elevation of 593.63 ft, less than two inches different in elevation from the continuation of that brick cellar floor in Test Units 1 and 2.

While Trench 4 measured approximately 1.35 m north-south x 1.7 m east-west, only the western half was excavated to the full depth at which the Carrigan house features lay at approximately 1 m below surface. A single fragment of thin flat glass (1.2 mm in thickness) was recovered from fill in the west foundation builders trench in an area that did not appear to have been previously excavated by Mansberger, i.e., it lay beyond the old sheet plastic presumably laid by Mansberger, and would appear to represent a fragment of window glass used in the Carrigan house.

Trench 5

This backhoe trench was excavated to expose a short section of the north foundation wall toward the back of the Carrigan house that was initially located through probing (Figure 5). Placement of the trench was constrained by the need to work around the bushes growing along the north property line at that time. The top remaining course of brick in the foundation was exposed at approximately 50 cm below the present ground surface, the top surface of which was still covered with soft brown sand-lime mortar (Figure 49). Since we were primarily interested in the overall location and footprint of the house at that point in the project, we exposed only the top several courses of brick down to a depth of approximately 75 cm below surface. Trench 5 was 1.8 m long x 0.5 m wide.

Trench 6

Trench 6 was excavated to look for the jog in the north wall of the Carrigan house that was depicted in the 1854 and 1858 City of Springfield maps (McManus 1854; Sides 1858) and presumed to represent the point at which an addition was attached to the back of the house (Figure 3). The trench was excavated through a combination of backhoe and hand-excavation and was ultimately irregular in outline, but was 1.9 m north-south and 1.4 m east-west in maximum extent. A curious interface of Carrigan and Irwin features was exposed within the trench, including an Irwin brick foundation wall mortared to and partially beneath what appeared to be an earlier Carrigan brick structure with a rough arc shape (Figure 5).

A largely intact section of the Irwin house foundation was exposed in Trench 6, constructed of hard-fired extruded brick and hard gray mortar containing Portland cement (Figure 44). Some of the bricks were impressed with lettering that read "Springfield ILL POSTON" and were undoubtedly manufactured by the Poston Brick Company of Springfield founded in 1916 (Poston 1985). Given that the Irwin house was built around 1880, this wall would therefore seem to represent a later addition or repair to the house. The bricks were laid in a common bond pattern, meaning that a single header course (ends of bricks facing outward) was followed by several stretcher courses (long sides of bricks facing outward). The base course served as a spread footing. Mortar was present on the top surface of the uppermost course of remaining brick, suggesting that at least one additional course was originally present. This wall also appeared to define the northern perimeter of a cellar with a dirt floor. Trench fill on the cellar (south) side of the Irwin wall was excavated to the dirt floor level at a depth of 137 cm below surface. Trench fill on the outside (north side) of the wall and along the west end of the wall was excavated to a depth sufficient to expose 1-2 courses of brick in the wall.

The west end of the Irwin wall ended abruptly, with empty spaces at the end of every other course of brick (Figure 50). The west trench wall immediately adjacent to and at a right angle to the Irwin brick wall exhibited a natural soil profile that had been truncated at 40 cm below surface and was overlain by a layer of mottled disturbed soil (Figure 51). While fill along the actual west end of the Irwin wall was not excavated, the presence of a natural soil profile immediately adjacent to the end and extending toward

the interior of the house suggests that the Irwin wall originally ended at that point and did not continue farther west, unless it continued at a very shallow level.

At the east trench wall, several soft Carrigan bricks were exposed partially atop the Irwin wall (Figure 52). The Carrigan bricks were mortared together with soft light brown sand-lime mortar in a slight arc. The north end of each Carrigan brick was broken irregularly, and the top surfaces were covered with a thick layer of the old mortar. Those Carrigan bricks were then mortared to the top course of the Irwin brick with hard white Irwin-era mortar. Two Irwin bricks had been broken to fit against the Carrigan bricks so that the interior surface of the Irwin wall was flush. The top of the Carrigan brick arc lay approximately 25 cm below the ground surface at an elevation of 597.25 ft. One additional Carrigan brick was also visible protruding slightly out from the third course of the Irwin wall along the back side. The original function served by those Carrigan bricks was unknown and there was insufficient time in 2005 to investigate further by extending our excavations to the north. At the time, we thought that the feature might be in situ and represent the remnant of a larger structure. The reason it was retained and incorporated into the Irwin wall was also unknown at that time.

RESULTS OF THE 2006 INVESTIGATIONS

Eight additional archeological test units and four additional backhoe trenches were excavated at Carrigan in 2006, and excavation of two of the 2005 test units was continued or extended (Figure 6). The 2006 investigations were designed to address several specific unanswered questions about the footprint of the Carrigan house and the associated outbuildings. However, multiple episodes of building construction, modification, adaptive reuse, repair, and demolition have taken place at the Carrigan property over the years, resulting in an archeological record that is relatively complicated. This became even more apparent than was understood to be the case at the conclusion of the 2005 investigations. While several important questions were answered in 2006, new information about the Carrigan house emerged and new questions were also defined.

In the course of investigating the architectural features of the Carrigan house that were the original focus of work in 2006, several additional features were identified including another Carrigan-era cellar under the east (back) end of the ell together with a short section of the Carrigan foundation in that area, the juncture of the north foundation of the ell and the north foundation of the back addition, and multiple modifications to the structure that date to the Irwin house-related occupation of the property. All of these features are described below within discussions of the individual test units and backhoe trenches where they were exposed, and are represented in Figures 7-12.

Test Unit 5 Continued

The excavation of Test Unit 5 was begun in 2005 to look for the northwest corner of the Carrigan house and for any evidence that a porch may originally have extended from the north wall of the house in that area. The unit measured 2 m x 2 m (Figure 4). However, efforts to identify porch supports in that area were discontinued due to

a re-evaluation of project priorities, so that only the southeast quarter of the unit was ultimately excavated to the level at which the Carrigan foundation was identified at 110 cm below the present ground surface. Excavation of the unit was resumed in 2006 to continue the search for porch supports, but within a limited 1 x 2 m area that extended northward to the lot line (Figure 6).

The northwest corner of the Carrigan foundation was re-exposed in 2006 and the remainder of the 1 m x 2 m unit taken down to that same approximate level (Figure 10). No evidence of porch supports or features of any kind were identified, other than the Carrigan foundation itself.

Test Unit 6 Continued

During the 2005 archeological investigations, shallow brick alignments were identified extending southward from the area of the Carrigan ell within Test Unit 6 (Figure 5). Those alignments were interpreted as part of the support system for the porch visible along that section of the Carrigan house in several historic photographs. In 2006, Test Unit 6 was extended to the north to investigate the area of possible interface between a main house foundation and those south porch supports, and also extended to the south to determine if additional intact brick alignments were located in that area as well (Figure 6). However, no additional alignments were located either north or south of those identified in 2005, and there was no evidence of the main foundation for the Carrigan ell. Instead, a short section of the Irwin house foundation was exposed (Figure 7).

Test Unit 6 was extended 1 m to the south. Several scattered brick fragments were ultimately exposed in that area that lay at the same approximate level as the base course of the porch supports in Test Unit 6 from 2005, but that appeared to be unrelated.

Test Unit 6 was also extended 80-100 cm to the north, where it intersected the south edge of Trench 10. A short section of the Irwin house foundation was exposed running east-west at a depth of 67 cm below the present ground surface, and 65 cm north of the intact Carrigan brick alignment in Test Unit 6 from 2005 (Figures 11 and 53). The Irwin wall was finished flush at the western end, which is almost aligned with the western edge of the Carrigan porch supports. This positioning raises the possibility that the Carrigan porch supports were reused somehow during construction of the Irwin house, but there is no direct connection between the two features. The approximate location of the Irwin house footprint relative to those features is presented in Figure 8.

This section of Irwin foundation was only partially exposed, with two courses of the south face exposed and six courses of the north face exposed. It was two wythe (about 8 ½ inches wide) and constructed mostly of hard-fired brick, although two older soft orange bricks were also incorporated into the wall. The bricks were joined with a white sandy mortar, although traces of brown sand-lime mortar were also present. Mortar still adhered to the top surface of the highest remaining bricks, indicating that at least one additional course was originally present. Much mortar was present on the south (presumably exterior) face of the wall, having extruded from between the bricks during wall construction.

Unit fill above and north of the Irwin wall consisted of plaster, brick, and other building rubble, as also described below for the fill in adjacent Trench 10. However, the wall had been laid up against undisturbed subsoil to the south (Figure 54). While the top of the remaining portion of the wall lay at an elevation of 595.82 ft, the top of undisturbed subsoil immediately to the south was higher and lay at an elevation of 596.25 ft (by comparison, the porch supports within Test Unit 6 from 2005 were laid at an elevation of 596.51-596.57 ft – see section below on Historic Grade Associated with the Carrigan House). There was no indication of the main foundation for the Carrigan ell.

Test Units 7, 8, and 10/Trench 8

Test Unit 7 was a one-meter square that was excavated to further investigate the arc of Carrigan-era brick that lay partially atop a section of the Irwin house foundation identified in 2005 in Trench 6 (Figures 6 and 52). A fairly large area was opened to the sides and north of the feature, and it was ultimately determined that the arc was one brick deep and included only the five bricks previously exposed with no associated soil staining or other materials. The arc was mortared to a section of the Irwin house foundation that was constructed partly of bricks manufactured by the Poston Brick Company (dating to 1916 or later) and mortar containing Portland cement that appeared to represent a foundation repair made fairly late in the Irwin house period (Figures 11, 55, and 56). The arc is therefore now thought to reflect the reuse of older salvaged brick in the repair of that wall. However, the arc and the soil deposit immediately beneath the arc were left intact at the conclusion of the current project, so could be investigated further in the future.

Test Unit 8 was positioned to look for possible porch supports in the area immediately outside the Carrigan house foundation and northward from the north end of the interior wall where the back addition to the Carrigan house was attached to the ell (Figure 6). Test Unit 8 was directly east of Test Unit 7 and measured 220 cm east-west. The southern boundary of the unit was defined by the interior edge of the foundation wall, so that the unit measured 103 cm north-south at the ell foundation and 125 cm north-south at the back addition foundation. Test Unit 8 was later extended 45 cm north to the north lot line.

A possible four-brick pier was identified immediately adjacent to the foundation at the juncture of the ell and back addition, composed of soft early brick (Figures 11, 55, and 57). Light brown mortar was present on the top surfaces of the bricks, but they were not mortared together. However, this feature lay immediately adjacent to and slightly above a section of the Carrigan foundation that had been extensively reworked on at least two occasions, probably both during the Irwin house period. It also lay higher than any other feature along the north wall of the house, including the adjacent remaining sections of the foundation. It therefore seems most likely to relate to the Irwin occupation of the property and reflect their reuse of earlier building materials for their own purposes.

Eventually, the outside (north) face of the foundation at the intersection of the ell and back addition was fully exposed at Test Unit 8 so that we could study the

construction of those walls more closely (Figure 58). The remains of a possible fence post were also identified along the north lot line at the northwest corner of Test Unit 8.

Test Unit 10 was positioned in the middle of the north foundation wall for the back addition to the Carrigan house to look for evidence of the back Carrigan chimney, and initially measured 135 cm north-south x 60 cm east-west (Figure 6). Several jumbled bricks were exposed at 1 m below the present ground surface extending roughly east-west across the unit in the area where the foundation wall would originally have stood. The bricks lay along and immediately south of a distinct soil change that undoubtedly represented the edge of the builders trench for the foundation, with dark brown silt loam containing plaster and brick fragments to the south, and yellow-brown clay to the north. A complete machine-made glass vial with an Owens scar, part of a machine-made glass jar, and a probable light bulb fragment were recovered below the brick rubble at a depth of 120 cm below surface, all of which date to the late nineteenth or early twentieth centuries. At the cellar floor level (125 cm below surface), no in situ bricks remained in the foundation (Figure 11). Two courses of conventionally-laid in situ brick were visible in both the east and west walls of Test Unit 10, with a gap of approximately 28 inches between them. Bricks laid on edge projected a short distance into the gap from both sides at the back of the builders trench, a non-standard orientation for a base course that was eventually found to be consistent with the construction methods for that entire foundation wall, as described more below. No evidence of chimney construction was found. Test Unit 10 was later extended 70 cm to the west to connect with Test Unit 8, but the extension was excavated only to a depth sufficient to expose the top 5-6 remaining courses of brick in the foundation in that area.

Trench 8 was excavated along the west wall of the back Carrigan addition, which is the area where the back addition would have been attached to the ell (Figure 6). The original purpose for investigating that wall was to look for evidence of the back Carrigan chimney. While no evidence of chimney construction was found, other new information about the Carrigan house was learned. The southwest corner of the foundation for the back addition previously identified in 2005 was re-exposed (Figures 11 and 59). Several courses of the west foundation wall for the addition were also exposed in the southern half of Trench 8 that ended in a jumble of large broken chunks of concrete, undoubtedly part of the fill that was deposited after the Irwin house was demolished. While examination of the end of the wall was hindered by the presence of several of the largest chunks of concrete, it appeared to have a finished end that may represent an entryway that connected the cellars located beneath the back addition and the ell (see below for more information on the ell cellar). A short section of the north end of the west wall was also exposed in Trench 8 extending southward from the northwest corner of the addition, but most of it was gone (Figures 60 and 61).

The juncture of the north foundation walls for the ell and the back addition was also exposed at the north end of Trench 8 (Figures 11, 60, and 61). The back addition was offset 12 inches to the south in comparison to the north wall line of the ell, so that the two walls were in contact in an area less than 3 inches wide at a single-wythe pilaster on the end of the ell foundation. At that juncture, the addition wall and the ell pilaster were butted together without tie-in, i.e., they were not toothed together or interlocking. Based

on the jog or offset in the north wall line of the Carrigan house depicted in historic maps, we expected the back addition to be offset to the north rather than to the south.

Before this juncture was exposed, it was thought that the west wall of the back addition in the southern half of Trench 8 might also represent the original east wall of the ell prior to construction of the back addition, or at least reflect the original **location** of the east wall of the ell which might have been reworked/replaced during construction of the back addition. However, the position of the pilaster at the eastern end of the north wall of the ell suggests instead that the east wall of the ell probably lay alongside the west wall of the back addition in an area that was not specifically investigated during the present project.

Trench 8 was extended west along the interior face of the north foundation wall of the ell to the edge of the Trench 6 excavation from 2005. That wall clearly defined another cellar that was located at the back of the ell. The wall included an original Carrigan section that had been extensively reworked during the Irwin house period, and a section that was constructed partly of Poston bricks (dating to 1916 or later) and mortar containing Portland cement that appeared to represent a foundation patch or repair made fairly late in the Irwin house period (Figure 62). The western end of that patch was exposed in 2005 within Trench 6.

Toward the end of the 2006 field session, the unstable west excavation wall of Trench 8 collapsed, causing some damage to the remains of the west foundation wall of the back addition. All other architectural features in Trench 8 were left intact at the conclusion of the project.

West foundation wall of the Carrigan back addition and cellar entry – As indicated above, several courses of the west foundation wall of the back addition were exposed in Trench 8, extending from the southwest corner of the addition northward approximately 1.75 m to what appeared to be a finished end partially covered by concrete debris (Figures 11 and 59). That finished end may represent an entryway or doorway between the cellars located beneath the back addition and the ell. Mortar had been applied to the finished end of the wall, so that the bricks may have been laid up to a wooden door frame, as one possibility. The wall was two wythe with a spread footing that projected 2-2 ¼ inches beyond both faces of the wall. The top of the footing at the southwest interior corner of the back addition lay at an elevation of 594.03 ft, similar to the top of footing elsewhere around the back cellar (see discussion of Trench 7, and the elevation of the footing in the northwest corner of the back cellar below).

The northwest corner of the addition was intact, but only a very short section of the west wall directly south of that corner was present, the end of which had been roughly dismantled/demolished with broken and missing bricks (Figures 60 and 61).

North foundation wall of the Carrigan back addition – The north foundation wall of the back addition was of similar construction and materials to the other walls of the addition, with two wythe of soft early brick laid up in light brown sand-lime mortar with a gray/white paint or whitewash finish (Figures 11 and 55). However, the top two remaining courses of brick were laid in white sand-lime mortar, suggesting that those

bricks were re-set at some later point, possibly during construction of the Irwin house. The north and west walls of the addition appeared to be well-toothed to each other at the outer wythe only. As described above, there was a gap in the north wall in the area of Test Unit 10, where it had apparently been dismantled.

When a section of the exterior (north) face of that foundation wall was exposed (Figure 58), it was found that the footing was spread to the interior only and the narrow gap behind that brick was filled against the builders trench with irregular brick rubble with no projection outside the exterior face of the wall, possible done to simplify construction as there would have been no need to backfill above an outside spread footing. The top of the footing at the northwest interior corner of the back addition lay at an elevation of 594.09 ft, again similar to the top of footing elsewhere around the back cellar (see discussion of Trench 7, and the elevation of the footing in the southwest corner of the back cellar above).

North foundation wall of the ell – The portion of the north ell foundation exposed in 2006 included an original Carrigan section that had been extensively reworked during the Irwin house period, and a section that was constructed partly of Poston bricks (dating to 1916 or later) set in very hard gray mortar containing Portland cement that appeared to represent a foundation repair made fairly late in the Irwin house period (Figures 11 and 62). In the original Carrigan section, the old soft brick had been laid in a medium brown sand-lime mortar in a common bond pattern. However, this section had been reworked at a later date, as it also included a few dense machine-made bricks (unmarked), and the top two remaining courses of brick were set in a white sand-lime mortar, similar to the top two remaining courses in the north addition wall. A single-wythe pilaster extended south from the east end of the wall that also included a mix of the early soft and dense machine-made brick set in light brown mortar (Figures 60 and 61). The top three courses of the pilaster appeared to be laid in Portland cement mortar, and some of the lower courses had been shallowly repointed with Portland cement mortar over the brown sand-lime mortar. The pilaster was well-toothed to the main wall. When the exterior (north) face of this section of the wall was exposed, it was found to exhibit the same non-standard construction methods as the north wall of the Carrigan addition (Figure 58). Both brown mortar and white mortar were visible on the exterior face, both applied carelessly.

The Poston brick portion of the wall had been toothed into the Carrigan portion of the wall, but was angled 3-degrees farther toward the north (Figure 11 and 62). The eastern end of this patch was a single wythe, and the western end was two wythe. The arc of Carrigan-era brick described above was mortared to the top of this section of the wall (Figures 55 and 56). Overall, this section displayed sloppy workmanship.

This entire foundation wall had a two-inch spread footing on the interior side (Figure 62). The two footing bricks at the east end of the wall below the original Carrigan section had been replaced with later bricks. The top of the footing lay at an elevation of 593.56 ft, which was approximately 5-6 inches deeper than the footing in the back addition.

Possible brick pier – As described above, a possible four-brick pier was identified immediately adjacent to the foundation at the juncture of the ell and back addition, composed of two complete soft early bricks and two half-bricks laid flat (Figures 11, 55, and 57). They lay directly atop soil. Light brown mortar was present on the top surfaces of the bricks, but they were not mortared together. However, this feature lay immediately adjacent to and slightly above a section of the Carrigan foundation that had been extensively reworked on at least two occasions, probably both during the Irwin house period. It also lay higher than any other feature along the north wall of the house, including the adjacent remaining sections of the foundation. If this feature related to the Carrigan house, it is difficult to envision how it could have remained intact while the adjacent foundation wall was rebuilt and later demolished. It probably relates to the Irwin house occupation of the property and reflects yet another example of their reuse of earlier building materials. However, the origin and function of the feature is uncertain.

The top of the possible pier lay at an elevation of 597.31-597.36 ft. This feature was removed in the process of exposing the exterior face of the north foundation wall at the juncture of the back addition and the ell.

Cellar fill – The cellar fill at the north end of Trench 8 and in Trench 8 West Extension consisted of concrete and other building debris that included large quantities of plaster. That plaster had been applied to a brick surface, not lath, as indicated by the pattern of keys on the reverse side of the fragments. Additionally, no lath was observed in the cellar fill at the site, although the preservation of organic materials in the fill was very good. However, both the Irwin and Carrigan houses were of wood frame construction and none of the brick foundation remains that have been exposed at the site to date have plaster applied to them. Consequently, neither house would seem to have been the source of that plaster. This raises the possibility that the cellar voids left after demolition of the Irwin house in 1923 may have been at least partially filled with debris from another structure(s) in the neighborhood or around town. While the original house on the adjacent property to the north was brick construction (the Bugg house on Lot 5 of Block 10), that house was already gone by 1917 (LANDSCAPES, Urbana Group, Myers Schmalenberger Meisner n.d.:138) prior to removal of the Irwin house, so could not have served as the source of the plaster. If fill materials were brought to the site from elsewhere, this has implications for the interpretation of certain archeological deposits at the site, particularly fill in the Irwin cellars, and the artifacts contained within those deposits.

The Irwin house and lot were purchased by the State of Illinois in 1923 and the State Department of Public Works and Buildings was responsible for grading the property and planting vegetation after the house was gone (*Illinois State Journal*, 11 November 1923:Part 4, Page 2). On behalf of the author, local archival research was conducted by John Reinhardt, Supervisor, Inventory Control/Reference Section, Illinois State Archives; Curtis Mann, Springfield City Historian, Sangamon Valley Collection, Lincoln Library; and John Popolis, Jr., Museum Technician, Lincoln Home National Historic Site to try to find information in State records about how the demolition of the Irwin house was accomplished, and any mention of fill materials brought to the site as

part of the site renovation process. It was learned that this work at the site was performed under contract to the State, but no details of that work emerged.

Possible fence post – The remains of a possible fence post were identified along the north lot line at the northwest corner of Test Unit 8 (Figure 11). The feature was exposed at a depth of 54-56 cm below the present ground surface and consisted of decayed wood fragments in a square-shaped void.

Test Unit 9/Trench 7

Trench 7 was excavated along the far back (east) wall of the Carrigan back addition (Figure 6) to look for evidence of the chimney seen in historic photographs that stood toward the back of the house (Figure 14). The remains of that wall of the house were exposed along its entire length from the southeast corner identified in 2005 to the northeast corner, together with several other features (Figures 11, 63-67). A small chimney stack was exposed along the interior side of the wall midway between the two corners. However, that chimney was considerably smaller in size than the Carrigan chimney would have been and is thought instead to represent an early Irwin house addition. A small chimney is visible at the back of the Irwin house in a rear view photograph taken around 1892 (Figure 18). No other evidence of chimney construction was identified along that wall.

In addition, two other in situ features were identified in Trench 7. The stoneware drain tile from the cistern was found to extend beneath the cellar floor immediately south of the chimney, and a brick pad or support was identified at the northeast corner of the cellar floor that was associated with an area of unpainted foundation wall with cut nails. A large displaced dressed stone was also partially exposed in the cellar fill (two other such stones were exposed nearby in Test Unit 3/Trench 3 in 2005).

With regard to a tentative construction sequence for those features, it appeared that the foundation wall itself was constructed first and dates to the Carrigan-era. The chimney was built at a later date, probably during the initial construction of the Irwin house in 1879 or shortly afterward. The stoneware drain line from the cistern most likely functioned to direct the overflow of water from the cistern to a sewer line in the Irwin house. The city sewer system in that part of town was not established until 1887-1888 (LANDSCAPES, Urbana Group, and Myers Schmalenberger Meisner n.d.:116), so the cistern drain line would not have been installed until afterward.

Most of the interior of the back cellar had been painted or whitewashed, except for the foundation wall behind the small Irwin chimney (the chimney itself was painted) and portions of the lower wall surfaces in the northeast corner above the brick pad. Since the foundation wall behind the chimney was unpainted, the paint application would have dated to the Irwin house period after the chimney was built. While the brick pad was built using old soft brick, the absence of paint on the walls above it indicates that the structure it supported was in use (or at least present) during the Irwin period.

Test Unit 9 was excavated to look for evidence of porch supports in the area immediately north of the northeast corner of the back addition (Figure 6). The unit originally measured 115 cm north-south x 125 cm east-west, but was later extended 55 cm north to the lot line. No porch supports were identified in that area. However, an irregular scatter of brick fragments was exposed in Test Unit 9 a short distance (90 cm) north of the northeast corner of the house. The scatter was at least 1 m in horizontal extent, and extended from 5-70 cm below the present ground surface. A chunk of early concrete containing Portland cement was exposed at the bottom of the feature. While its origin is unknown, it is thought to date to the Irwin house era or later. Excavation of the south two-thirds of Test Unit 9 was halted at 92 cm below surface, and excavation of the north extension was halted at 78 cm below surface. In addition to the brick scatter, a ground rod was exposed immediately outside the north foundation wall, and the remains of a wooden post were identified along the north lot line that probably related to a more recent fence line (Figure 11).

Foundation for the back addition to the Carrigan house – The remains of the entire back (east) wall of the back addition were exposed along the top and most of the interior face, which was laid in a common bond pattern (Figures 11, 65, and 67). The exterior face of the east wall was exposed down 1-2 courses. The southeast corner of the addition and the east cellar entry jamb previously identified in 2005 were re-exposed in 2006. A portion of the north foundation wall was also exposed extending west from the northeast corner of the addition. The interior face of the north wall was fully exposed, and the exterior face was exposed down seven courses from the top. The entire foundation was two wythe and constructed of soft orange brick joined with soft light brown sand-lime mortar. Fourteen courses were still represented at the northeast corner, and ten courses were represented in the section immediately behind the chimney.

The spread footing course projected two inches beyond the interior face of the wall. The footing course for the east wall was a header course, while the second course in the north wall was a header course (different from the western end of this same north wall in Trench 8 where the footing was a header course). The top of the footing course in Trench 7 lay at an elevation of 593.99-594.02 ft, which is similar to the top of footing elsewhere around the back cellar (see discussion of Trench 8). Gray/white paint or whitewash had been applied to the interior surface of the foundation wall and around the exterior surfaces of the chimney. No finish had been applied to the foundation wall behind the chimney or to a portion of the wall in the northeast corner of the cellar (see discussion of brick support pad below).

Chimney – A small chimney stack was exposed along the interior face of the east foundation wall midway between the northeast and southeast corners (Figures 11 and 63). The existing foundation wall itself served as the east wall of the chimney, while the north, west, and south walls of the chimney were newly constructed. Those new walls were a single brick wythe and were not toothed to the existing foundation wall, so were undoubtedly a later addition. As suggested above, the chimney is thought to date to the early Irwin house era. The later bricks in the chimney were all approximately the same size (approx. 8 ¼ in x 4 in x 2 1/8 in) and appeared to be slightly redder in color than the orange brick used in the adjacent foundation wall. The chimney bricks were joined with light brown sand-lime mortar that appeared to be very similar to the mortar used in the

adjacent Carrigan wall, but was slightly redder in color. There was a two-inch footing around the base of the chimney. The adjacent wall footing ran independently of the footing around the chimney.

The chimney stack extended out from the foundation by 1 ft 1 inch and measured 1 ft 9 ¼ inches north-south. Nine courses of brick remained in the chimney when it was initially exposed, extending 55 cm above the top of the footing. The interior flue cavity measured 9 in x 13 in and was filled with soot. Broken clay chimney flue tile fragments with soot probably originating from higher in the stack were scattered in the cellar fill and general building demolition debris that extended south and southwest from the stack. One relatively large flue tile fragment was collected that measures 8 inches wide with 5/8-inch thick walls; other dimensions are unknown. Three courses of brick were dismantled to investigate the construction of the stack. A sleeper brick was exposed on the west face of the stack at courses 6 and 7 that may have served as a cleanout port (Figure 64). Given the amount of soot found at the flue base, the chimney was probably used with a coal-burning stove that stood off to the side.

Drain tile from cistern – The stoneware drain tile found connected to the cistern in 2005 was determined to extend beneath the back cellar floor immediately south of the chimney, probably in order to direct the overflow of rainwater from the cistern to a sewer line within the house. The full length of the drainage line between the cistern and the house was not exposed, but it appeared to run northwest and downward from the western side of the cistern to pass beneath the east foundation wall and head toward the interior of the house (Figures 11 and 64). The top of the drain tile lay 8.5 cm below the top of the wall and chimney footing in the cellar (elevation near west trench wall was 593.72 ft). The section of drain tile immediately outside the lower portion of the east foundation wall was unglazed, but the sections closer to the cistern exposed last year and at least one section beneath the cellar floor were glazed. A glazed elbow section immediately outside the wall is inserted into the bell opening of the unglazed section, and the two are attached with hard gray mortar. In the area where the drain tile passes beneath the foundation wall, the footing bricks were displaced slightly outward and gray-brown sand-lime mortar had been applied over the light brown mortar that adhered to the top of those bricks, suggesting that footing repairs were needed after the pipe was installed. The gray-brown mortar extends into corner of the footing around the chimney and onto the footing of the chimney itself, indicating that the chimney was present at the time the mortar was applied. A dark red pressed brick was also mortared to the top of the displaced footing bricks. The paint/whitewash finish on the cellar wall in that area extended down to a level slightly above the top of the gray mortar on the footing, suggesting that dirt from the cellar floor may have covered the footing at the time the finish was applied.

Brick support pad in cellar floor – A brick support pad was identified at the northeast corner of the cellar floor composed of four complete soft bricks and two half-bricks, laid flat without mortar (Figures 11 and 66). The bricks had been set on the dirt floor so that the top surfaces of the bricks lay at the same elevation as the top of the adjacent spread footing course of the foundation (593.99 ft). The interior surface of the adjacent north foundation wall and a portion of the interior surface of the adjacent east foundation wall (from the corner extending south 14 inches) was unpainted from

the footing up eight courses of brick (20 inches), with paint applied above that level. A number of cut nails had been driven into the unpainted surface area, all but one of which had been sheared off. The one intact nail protruded 2 inches out from the wall. It appears that a fixture or structure of wood was attached here that rested on the floor-level brick pad.

Brick scatter outside the north foundation – As indicated above, an irregular scatter of brick fragments was exposed in Test Unit 9 a short distance (90 cm) north of the northeast corner of the house. The scatter was at least 1 m in horizontal extent, and extended from 5-70 cm below the present ground surface. A chunk of early concrete containing Portland cement was exposed at the bottom of the feature. While its origin is unknown, it is thought to date to the Irwin house era or later. A number of artifacts were mixed into the soil around the bricks down to a depth of about 50 cm below the ground surface, dating from the mid- through late nineteenth century.

Probable fence post – The remains of a circular wooden post were identified along the north lot line at the north edge of Test Unit 9 that probably relates to a recent fence line (Figure 11). The top of the post was exposed at 15 cm below the present ground surface and extended to about 50 cm below the surface. It was about 6 cm diameter.

Test Unit 11

Test Unit 11 was excavated to look for evidence of the southwest corner of the small outbuilding that stood behind the Carrigan house along the north lot line (Figures 6 and 7). A magnetic gradient anomaly was previously identified near the projected location of that corner close to geophysical survey grid coordinate 15N, 30E (DeVore 2005:37 Figure 25) that was thought might relate to the structure. It must be noted, however, that the approximate location of this outbuilding was projected using measurements derived from the 1858 City of Springfield map, which we now know was not very accurate in its placement of the Carrigan house itself on the property.

Test Unit 11 measured 2 m north-south x 0.5 m (northern half) and 1 m (southern half) east-west. The projected location of the southwest corner of the outbuilding lay in the northern half of the unit. The unit was excavated to 60-65 cm below the present ground surface without encountering features of any kind. The soil was a uniform very dark silt loam with a few small fragments of brick, mortar, coal, slag, charcoal, and flat glass. One bone button back was collected at 55 cm below the ground surface. The source of the magnetic anomaly remains unidentified and may lie outside Test Unit 11.

Test Unit 12

Test Unit 12 was excavated to look for any remaining evidence of the northwest corner and west wall of the small Carrigan outbuilding that stood along the north lot line (Figures 6 and 7). The unit measured 3 m north-south x 1 m east-west, and extended a short distance on to the adjacent Bugg lot. An irregular cluster of brick fragments 65 cm in maximum horizontal extent (Figures 12 and 68) was exposed at the projected location of the northwest corner of the outbuilding at a depth of 30 cm below the present ground

surface and extending to a depth of approximately 50 cm (597.74-597.08 ft). There was no systematic orientation or pattern to the distribution of the fragments in the cluster. Most of the fragments were soft low-fired brick. One fragment was considerably harder, but may have been an early brick as well. No mortar was visible on or around the fragments. Beginning at 35-38 cm below the ground surface, the soil throughout the unit became a uniformly dark compact silt loam.

Artifacts collected around the feature from 40-50 cm below the ground surface in the northern 1 m of Test Unit 12 represent a likely mix of materials from the Carrigan and Irwin house eras. Artifacts collected from the soil between the brick fragments from 30-50 cm included no obviously late materials (undecorated whiteware, stoneware, and redware sherds; curved glass; 1 flat glass fragment measuring 1.0 mm in thickness; 1 white porcelain button; and 1 indeterminate large mammal bone fragment).

The feature is located exactly at the projected northwest corner of the outbuilding, and a small scatter of old brick fragments is not inconsistent with what may remain from what was probably an insubstantial and relatively informal corner support or pier originally. No other outbuildings or structures are presently known to have been located in that section of the lot. However, later disturbance around the feature is reflected in the artifacts recovered from that area. If the feature **does** represent the remains of a corner pier, it has been broken up and dispersed somewhat. It may alternatively relate to a non-structural deposit of discarded building debris coincidentally located where the old Carrigan outbuilding formerly stood. There were no soil changes or other evidence of the west wall of the outbuilding.

Excavation of the unit was halted at 50 cm below the ground surface. The feature was left in place and covered with plastic prior to backfilling.

Test Unit 13

Test Unit 13 was excavated to look for any remaining evidence of the northeast corner and east wall of the Carrigan outbuilding that stood along the north lot line (Figures 6 and 7). The unit measured 2.5 m north-south x 1 m east-west. A jumble of brick fragments was identified fairly near the projected location of the northeast corner of the outbuilding (40 cm to the southeast) (Figures 12 and 69). The top of those brick fragments ranged from 50.5-65.5 cm below the present ground surface (the highest brick lay at an elevation of 597.09 ft). The feature extended an unknown distance into the west wall of the unit, but the portion of the feature within Test Unit 13 was 70 cm in maximum horizontal extent. The feature extended to an undetermined depth. There was no systematic orientation or pattern to the distribution of the brick fragments in the feature. Whatever the original distribution of the fragments, they had also clearly been displaced by the growth of several large tree roots. Most of the fragments were soft low-fired brick, but there was also one hard machine-made brick fragment (which was collected). No mortar was visible on or around the fragments.

Most of a broken glass shoofly flask lay beneath one of the low-fired brick fragments in the feature (both were collected). The bottle was mold-blown with a crudely tooled wine or brandy finish. A small air vent mark is present on the shoulder

of the bottle, indicating that it was likely manufactured after about 1880 (Society for Historical Archaeology 2009). The presence of this late 19th century bottle suggests that the feature post-dates the Carrigan house era and relates instead to Irwin house or later activities on the property. If some of the early brick in the feature originally related to a corner support for the small Carrigan outbuilding, they were subsequently displaced.

Soil throughout the unit was a fairly uniform dark gray silt loam, becoming slightly lighter in color with increased clay content at about 80 cm in depth. The middle section of Test Unit 13 was excavated to a depth of 1 m, and the northern 50 cm of the unit was excavated to a depth of 85 cm. Other than the two bricks and the bottle mentioned above that were collected, the remainder of the feature was left intact and covered with plastic prior to backfilling.

Test Unit 14

Test Unit 14 was excavated to look for evidence of the Carrigan era barn that stood at the southeast corner of the lot (Figures 6 and 7). The approximate location of the barn was projected using measurements derived from the 1858 City of Springfield map. Most/all of the barn site is now covered by a modern building and adjacent concrete pad, so was inaccessible to archeological investigation in 2006. However, the 1858 map plotting suggests that the northwest corner of the barn extended a short distance into the present open yard. Test Unit 14 was opened over the projected location of that corner, initially as a 1 m square that was eventually extended 30 cm to the north. None of the later known outbuildings at the back of the property apparently extended into this area (Figure 2).

A partial alignment of brick fragments was exposed at 35 cm below the present ground surface in the northern half of the unit (elevation of 597.57 ft) (Figures 12 and 70). Those fragments lay at the same approximate level and were one layer of brick deep. The bricks were deteriorated and appeared to have been crushed in place. Several fragments were oriented north-south and lay side-by-side extending roughly east-west across the unit and beyond into the east and west walls of the unit. There was no mortar on or around the fragments. Soil throughout most of the unit was a compact dark gray brown silt loam. However, an area of reddish crumbly soil was located in the northeast quarter of the unit extending from a depth of 35 cm downward roughly 10 cm. Artifacts were numerous in the upper fill of the unit, but decreased with depth and included mid- to late nineteenth century materials.

Given the location of this brick alignment near the projected location of the northwest corner of the Carrigan era barn, it may indeed represent the remains of an insubstantial foundation for the barn. However, it may instead represent part of a former walkway or other landscaping feature. Given the small section of the feature that was exposed, its function is difficult to determine.

The southern portion of the unit was excavated to a depth of 70 cm, and the northern portion was excavated to 48 cm. With the exception of two brick fragments that were collected from the feature, it was otherwise left intact and covered with plastic prior to backfilling.

Trench 9

Trench 9 was excavated (Figure 6) to look for any remaining evidence of the north chimney on the front section of the Carrigan house. Historic photographs indicate that this chimney stood at the peak of the north gable on the front section of the house (Figure 15), which should be approximately 7-7 ½ ft east of the known northwest corner of the house previously exposed within Test Unit 5. A high amplitude ground penetrating radar anomaly was previously identified at that approximate location (DeVore 2005:40 figure 28) that was thought might relate to remains of the chimney. Trench 9 ultimately measured 1.2 m north-south x 3.1 m east-west in maximum extent.

A remnant of the original brick Carrigan house foundation was exposed in Trench 9 at a depth of 88 cm below the present ground surface that clearly represented a continuation of the foundation wall exposed a short distance west in Test Unit 5 (Figures 10 and 71). Upon full exposure, this remnant was found to be two wythe along its entire length (8 ½ inches wide) and composed of soft orange brick measuring 8-8 ½ in x 4 in x 2 in joined with dark red brown sand-lime mortar. The bottom five courses of the foundation were still present and extended to a depth of 120 cm below the ground surface. The base course was a header course with the long axis of the bricks oriented north-south. The top of the base course lay at an elevation of 593.95 ft, only ½ inch different in elevation than the top of the base course in Test Unit 5 (593.99 ft). This foundation also apparently served as the north wall of the north room in the front cellar of the house.

The foundation extended from the west wall of Trench 9 and ended abruptly 9 ft east of the known northwest corner of the house, well beyond the area where the chimney is thought to have stood. However, no evidence of chimney construction was found. A slight indication of the back of the builders trench for the foundation was observed during excavation along the north edge of the extant section of wall, visible from 50 cm below ground surface down to the base course in a straight line that paralleled the foundation without deviation. The source of the radar anomaly was undoubtedly the foundation wall itself.

Trench 10

Trench 10 was excavated toward the center of the Carrigan/Irwin house site (Figure 6) to investigate the source of a high amplitude ground-penetrating radar anomaly (DeVore 2005:15, 40 Figure 28). During excavation, it was apparent that Trench 10 was located at the western end of a large rubble-filled basin, now known to have been a cellar beneath the ell of the Carrigan house that was later incorporated into the Irwin house (fill graded from rubble to a soil deposit at the west wall of Trench 10, possibly an indication of the western extent of the cellar). The rubble included large chunks of broken concrete, bricks, and plaster in a dense deposit extending from 35-140 cm below the present ground surface and appeared to represent structural demolition debris. The rubble itself was undoubtedly the source of the geophysical anomaly. However, a small partial ring of brick standing on a brick pad was exposed beneath the debris that may have related to a central heating system for the Irwin house (Figure 11).

The feature itself had been constructed on a level clay floor and was composed of hard-fired brick and mortar (Figure 72). Five courses of brick were represented in the partial ring. The top of the brick base lay at an elevation of 593.59 ft, very similar in depth to the top of the brick footing for the north foundation wall of the ell exposed in Trench 8 (593.56 ft), both of which were probably set directly on the clay floor of the same cellar space. Large chunks of coal were also observed in the rubble fill immediately around the feature.

PROJECT OBJECTIVES AT CARRIGAN IN 2006

1. Identify and describe any remaining evidence of the north chimney on the front section of the Carrigan house.

Trench 9 was excavated along the north wall line for the Carrigan house at the projected location of the chimney that historic photographs indicate stood at the peak of the north gable on the front section of the house (approximately 7-7 ½ ft east of the known northwest corner of the house identified in 2005). A remnant of the original brick Carrigan house foundation was exposed in the trench, the top of which lay at a depth of 88 cm below the present ground surface. Upon full exposure, this remnant was found to be two wythe along its entire length. The bottom five courses of the foundation were still present and extended to a depth of 120 cm below the ground surface. This foundation also apparently served as the north wall of the north room in the front cellar of the house. The foundation extended from the west wall of Trench 9 and ended abruptly 9 ft east of the known northwest corner of the house, well beyond the area where the chimney is thought to have stood. However, no evidence of chimney construction was found. A slight indication of a builders trench for the foundation was observed during excavation, visible from 50 cm below ground surface down to the base course in a straight line that paralleled the foundation without deviation.

2. Identify and describe any remaining evidence of the back chimney on the Carrigan house.

Historic photographs indicate that another chimney stood toward the back of the Carrigan house, but its exact location within the house was unknown (Figure 14). Several alternative locations for the chimney were investigated during the current project. During test excavations in 2005 and again during the 2006 field investigations, it was apparent that the back sections of the Carrigan house were modified and adaptively reused/repared as part of the later Irwin house construction and occupation, adding to the complexity of the architectural remains in that area. Further, it was not always clear when certain of those modifications were made during the Carrigan/Irwin continuum of use of those features. While no physical evidence of the Carrigan chimney was found in any area, this simply indicates that it was removed during later occupation of the structure.

Specifically, test trenches/units were excavated along three different wall lines at the back of the house to look for evidence of this chimney. Trench 7 was excavated along the far back (east) wall of the back Carrigan addition. A small chimney stack was identified along the interior side of that wall midway between the northeast and

southeast corners of the addition. However, while the wall itself was constructed as part of the Carrigan house, the chimney was butted against the wall and is thought to represent an early Irwin house addition to the structure. This chimney was considerably smaller in size than the Carrigan chimney seen in historic photographs. A small chimney can be seen at the back of the Irwin house in a rear view photograph taken around 1892 (Figure 18). No other evidence of chimney construction was identified along that wall.

Trench 8 was excavated along an interior north-south wall that represented the west wall of the back addition to the Carrigan house. The wall is discontinuous and ended about midway along from the southwest corner of the back addition. That end of the wall appeared to have been finished flush and may represent a doorway that connected the cellars located beneath the back addition and the ell. However, the area of the possible doorway was partially blocked by later demolition debris in the form of large chunks of broken concrete that were not removed during the current project due to the unstable nature of the fill, precluding further investigation at that time. No evidence of a chimney was observed anywhere along that wall line.

Test Unit 10 was excavated in the middle of the north wall of the back Carrigan addition. While intact remnants of the foundation were visible in the east and west unit walls, the short section of the foundation that would have stood within the area of Test Unit 10 was missing. While this entire wall line was not fully exposed, no evidence of a chimney was observed within Test Unit 10 or any other test trench/unit that lay along it (including Trench 7, Trench 8, Test Unit 8, Test Unit 9, and Test Unit 10 Extension). However, an attempt on-site to recreate the view of the photographer who took the historic photograph reproduced in Figure 14 suggested that this was the most likely location of the back Carrigan chimney.

3. Search for evidence of a possible north porch.

During their analysis of the 1873 bird's eye view drawing of Springfield (Figure 20), RATIO Architects noticed a slight change in the north roofline at the back of the Carrigan house that was thought to possibly indicate a porch extending farther to the north than the north house foundation identified archeologically in 2005. Further, it was unclear to RATIO if that porch was depicted on the ell or the back addition to the house. The 1854 and 1858 City of Springfield maps also depict a north jog in the wall line toward the back of the house that might have related to a porch. The author also previously observed that the 1858 City of Springfield map may indicate a porch along the north wall at the front of the house, depicted as a line on the map that extends from the northwest corner of the house northward to the lot line.

Test units were therefore excavated specifically to search for evidence of porch supports in three separate locations: northward from the northwest corner at the front of the house (Test Unit 5), northward from the northern end of the interior wall discussed under objective 2 above that represented the west wall of the back addition to the Carrigan house (Test Unit 8), and northward from the northeast corner at the far back end of the house (Test Unit 9). However, no Carrigan-era porch supports were identified in any of those excavations.

No features of any kind were identified in Test Unit 5 north of the northwest corner of the Carrigan house.

A possible four-brick pier or pad was identified within Test Unit 8 immediately outside the north foundation at the juncture of the ell and back addition. The function/origin of that feature is unclear, but it was located along a section of the foundation that was extensively reworked during the Irwin house era. It likely dates to the Irwin house occupation of the property.

An irregular scatter of brick fragments was exposed in Test Unit 9 a short distance (90 cm) north of the northeast corner at the back of the house. The scatter was at least 1 m in horizontal extent, and extended from 5 – 70 cm below the present ground surface. A chunk of early concrete containing Portland cement was exposed at the bottom of the feature. While its origin is unknown, it is thought to date to the Irwin house era or later.

Other features identified in the area north of the foundation toward the back of the house included a rough arc of early brick and two possible wooden posts. The brick arc was exposed in Test Unit 7 along the north wall of the house. That feature is thought to reflect the reuse of salvaged brick during foundation repair late during the Irwin house era. The remains of two wooden posts were also identified along the north lot line approximately 16 ¼ ft apart in this same general area that may represent a more recent fence line.

The northward jog in the footprint toward the back of the house depicted on the 1854 and 1858 maps could not be confirmed archeologically. That offset presumably related somehow to the back addition. However, the north foundation wall of the back addition itself was offset 12 inches to the south in comparison to the north foundation wall of the ell, rather than offset to the north. While the offset depicted on historic maps may have indicated the location of a porch, this issue is unresolved.

4. Investigate the interface between any Carrigan house foundations along the ell and the south porch supports identified in 2005, and determine how far south and east those porch supports may originally have extended.

During the 2005 archeological investigations, shallow brick alignments were identified extending out from the south side of the Carrigan house site within Test Unit 6 and the South Extension of Trench 3. Those brick alignments were interpreted as part of the support system for the porch visible along that side of the house in several historic photographs. In 2006, Test Unit 6 was extended to the north to investigate the area of possible interface between a main house foundation and the south porch supports, and also extended to the south to determine if additional intact brick alignments were located in that area as well.

However, no additional brick alignments were located either north or south of those identified in 2005. Several scattered brick fragments were exposed to the south that appeared unrelated to those in the alignments. A short section of the Irwin house foundation was exposed running east-west 65 cm north of the intact Carrigan brick

alignment in Test Unit 6. The Irwin foundation was finished flush at the western end, which is almost aligned with the western edge of the Carrigan porch supports. This positioning raises the possibility that the Carrigan porch supports were reused somehow during construction of the Irwin house, as were other Carrigan structures around the site, but there was no direct connection between the two features. Due to time constraints for the project, no optional tests were excavated farther east to look for additional porch supports. However, if the short brick alignment in the South Extension of Trench 3 does indeed represent a small remnant of the south porch support system, the porch could not have extended much farther east without blocking access into the back cellar.

5. Determine the function of a rough brick arc identified along the north wall line.

As mentioned in the discussion of objective 3 above, a rough arc of early brick was exposed along the north wall of the Carrigan/Irwin house. This feature was initially identified during the 2005 archeological fieldwork and was further investigated in 2006. A large area was opened around the feature (Test Unit 7), and the north foundation in this general area was also more fully exposed. The feature is located along a section of the foundation that was repaired during the late Irwin period, and the feature is thus thought to reflect the reuse of salvaged brick in that repair effort.

6. Search for evidence of the small outbuilding that stood behind the Carrigan house along the north lot line.

The approximate location of this outbuilding was projected using measurements derived from the 1858 City of Springfield map (which was not very accurate in its placement of the Carrigan house itself on the property). Test units were opened over the projected locations of three corners of the outbuilding (NE, NW, and SW) and portions of the east and west wall lines. An irregular cluster of brick fragments was exposed at/near each of the two projected northern corners at depths of 30 cm below the present ground surface in Test Unit 12 (NW corner of the outbuilding) and approximately 50 cm below surface in Test Unit 13 (NE corner of the outbuilding). There was no systematic orientation or pattern to the distribution of the fragments in either cluster. Whatever the original distribution of the fragments exposed in Test Unit 13, they had also clearly been displaced by the growth of several large tree roots. There was no mortar on or around the fragments in either cluster.

Most of a broken glass shoofly flask lay beneath one of the brick fragments in the cluster in Test Unit 13. A small air vent mark on the shoulder of the bottle indicates that it was likely manufactured after about 1880 (Society for Historical Archaeology 2009). The presence of this late 19th century bottle suggests that that particular feature post-dates the Carrigan house era and relates instead to Irwin house or later activities on the property. If some of the early brick in the feature originally related to a corner support for the small Carrigan outbuilding, it was subsequently displaced.

Given the positions of the two features, they may indeed represent the scattered remains of what were probably originally insubstantial and relatively informal supports or piers for the Carrigan outbuilding. No other outbuildings/structures are presently

known to have been located in this portion of the Carrigan lot. They may alternatively relate to non-structural deposits of discarded building debris.

7. Search for evidence of the barn that stood in the southeast corner of the lot.

A partial alignment of brick fragments was exposed at 35 cm below the present ground surface within Test Unit 14, which was excavated at/near the projected location of the northwest corner of the Carrigan barn (again, that projection was based upon measurements derived from the 1858 City of Springfield map). Most of the southeast corner of the lot is now covered by a modern building and concrete pad and was inaccessible to archeological investigation in 2006. However, the projected northwest corner of the barn is located a short distance into the current open yard. None of the later known outbuildings at the back of the property apparently extended into this area.

The brick fragments in that alignment lay at the same approximate level and were one layer of brick deep. The bricks were deteriorated and appeared to have been crushed in place. Several fragments were oriented north-south and lay side-by-side extending roughly east-west across Test Unit 14 and beyond into the east and west walls of the unit. There was no mortar on or around the fragments. Given the location of this feature near the projected northwest corner of the Carrigan era barn, it may indeed represent the remains of an insubstantial foundation for the barn. However, it may instead represent part of a former walkway or other landscaping feature. Given the small section of the feature that was exposed, its function is difficult to determine.

8. Investigate the source of a strong geophysical anomaly identified near the center of the Carrigan/Irwin house site.

A high amplitude ground-penetrating radar anomaly was identified in 2005 near the center of the Carrigan/Irwin house site at 16-17N, 14E on the geophysical survey grid that was thought to possibly relate to structural features associated with one of the houses (DeVore 2005:15, 40 Figure 28). Trench 10 was excavated at this location in order to identify the source of the anomaly. During excavation, it was apparent that the trench was located at the western end of a large rubble-filled basin that was undoubtedly originally a cellar beneath the ell of the Carrigan house that was later incorporated into the Irwin house. The rubble included large chunks of broken concrete, bricks, and plaster in a dense deposit that appeared to represent structural demolition debris. The rubble itself was undoubtedly the source of the geophysical anomaly. However, a small partial ring of brick standing on a brick pad was exposed beneath the debris and is thought to represent a furnace-related feature of the Irwin house.

HISTORIC GRADE ASSOCIATED WITH THE CARRIGAN HOUSE

The Carrigan house stood on the property from 1839 until 1879, a period of 40 years, during which time additional construction on the property, landscaping, and other activities undoubtedly altered the elevation of the ground surface around the house somewhat. Archeological data were collected at the site that may be interpreted as evidence bearing on the elevation of the ground surface during that period of time. The strongest line of evidence to date relates to the Carrigan-era brick alignment in

Test Unit 6 interpreted as a remnant of the support system for the porch that extended from the south side of the Carrigan house along the ell. While we don't know exactly when the ell addition was built, it was clearly represented in the footprint of the house depicted in the 1854 and 1858 City of Springfield maps (McManus 1854; Sides 1858). The brick alignment in Test Unit 6 had been cut by modern utility line trenching across the property, but the remaining sections of that feature were in situ.

If this interpretation of the feature is correct, it means that the porch support system was shallow in comparison to the main house foundations around the front and back cellars, and so may have been constructed directly atop the ground surface at that time. The top of the spread footing for the feature was calculated to lie at an elevation of 596.68 – 596.74 ft (see previous section on excavations in Test Unit 6 in 2005). Given the two-inch thickness of the brick in the footing, the **bottom** of the spread footing should therefore lie at an elevation of approximately 596.51 – 596.57 ft. The feature was left intact at the conclusion of the present project, so these elevations may be rechecked in the future. As an aside, the ground beneath the feature was also left undisturbed and may represent a sealed deposit from the earliest years of occupation of the property.

Several other lines of archeological evidence potentially bearing on the elevation of historic grade were also considered, but are more problematic. For example, a short section of Carrigan half-bricks identified in Trench 3 may represent another remnant of the south porch support system, but it was not completely clear if the positioning of that feature had been affected by the construction of an adjacent wall of the Irwin house. The cap on the Carrigan-era cistern immediately off the southeast corner of the house is still intact, but it is not known if the cap originally lay above or below the historic ground surface. Similarly, remains of the north foundation at the back of the Carrigan house are still intact at a fairly high level, but were partially reworked during reuse of the foundation as part of the Irwin house and it is not known how high the Carrigan foundation originally extended above the ground surface.

SUMMARY AND FUTURE RESEARCH QUESTIONS

The Carrigan house is thought to have been built in 1839 and may initially have been a relatively small structure that consisted of the northern portion only of what would later become the front section of the house (see previous discussion of Trench 4). RATIO Architects, Inc. (2006a:7) have suggested that the ell section of the house was likely built during the original phase of construction. Either way, the house had been enlarged multiple times by the time that the 1854 City of Springfield map was compiled. Surviving remains of the Carrigan house foundations and other associated features were first documented in 1997 by archeologist Floyd Mansberger in conjunction with the relocation of the Corneau house from the front of the Carrigan property back to its original site. Now, additional substantial remains of the Carrigan house have been identified, and the present investigations have confirmed that the house ultimately included a front section apparently built in two phases, an ell, an L-shaped porch that was located in the inner angle formed by the front section of the house and ell, and a back addition. Our present understanding of the overall footprint of the house and its actual placement on the lot is presented in Figure 9. Questions about the footprint (and other aspects of construction) remain unanswered, due in part to the loss of some

relatively shallow features during later construction and other activities on the property, but also due to the limited exploratory nature of the present archeological inventory and evaluation study which was not intended to result in a full excavation of the house site. Future archeological investigations may provide an opportunity to answer some of those questions.

The primary focus of the present project was to identify the actual location and footprint of the Carrigan house based upon any intact remnants of the original foundations and associated architectural features, but was later expanded to secondarily include a search for evidence of the two known Carrigan outbuildings. As a consequence, most of the archeological test units/trenches were placed in the area of the house site itself and resulted in the collection of much information about subsurface architectural features of the house, particularly with regard to details of foundation wall and cellar placement and construction. For example, the Carrigan house foundations in general were constructed two wythe of low-fired brick laid up in soft sand-lime mortar, except for the south wall of the front section of the house that was three wythe (Test Unit 2). That difference may have related to the need for additional support for the large chimney that originally stood midway along that wall, as seen in historic photographs. As it turned out, all of the foundation remains exposed to date were located in areas of the house with large subterranean cellars, so that we have no information about the main house foundations between the cellars, as was perhaps the case for much of the ell.

Four cellars or cellar rooms have now been identified under the different sections of the house, all excavated to slightly different depths during original construction, as determined archeologically by comparing the elevations of the top of the base course of brick in the foundation walls around the perimeter of the different rooms (not to be confused with the elevation of the cellar floors) (Table 1). With regard to the two cellar rooms under the front section of the Carrigan house, the south room appears to have been almost 2 ½ inches deeper than the north room, which may have been planned to accommodate the brick flooring that was installed in the south room, so that the walking surface across the two rooms would be level (dirt in the north room and brick in the south room). The cellar identified at the back of the ell was almost 5 inches deeper than the north front cellar. The cellar beneath the back addition to the Carrigan house was similar in depth to the north front cellar. The cellars beneath the ell and the back addition appear to have been connected by an entryway or doorway through their common wall, but the two cellars were slightly over 5 ½ inches different in depth. Both of those cellars had dirt floors. The full extent of the cellar beneath the ell is presently unknown, but probably extended at least as far west as the probable Irwin house furnace-related feature identified in Trench 10 (Figure 9), which was comparable in depth. Additional details regarding the two cellar rooms beneath the front section of the house were recorded by Mansberger (1997a, 1997b), including the presence of a small rear extension on the south room.

As mentioned in the previous section, the best line of evidence to date bearing on historic grade associated with the Carrigan house suggests that the historic ground surface adjacent to the ell addition to the house generally lay around 596 ½ ft in elevation, about 1 ½ ft lower than today. The historic ground surface toward the back of the property may have been slightly higher by comparison (note the elevation of features at/

near projected outbuilding corners), and the historic ground surface along the front of the property sloped fairly steeply down to the historic boardwalk level, as seen in historic photographs. If the inference made here regarding historic grade is approximately correct, then the floors of the front and back cellars were about 2 ¾ ft below the historic ground surface, and the floor of the ell cellar was slightly over 3 ft below the historic ground surface. Of course, the amount of headroom in the cellars would have depended on the height of the overlying floor joists. A brief description of the cellar space beneath the house was included in a letter dated October 27, 1867 written by Benjamin Briggs, who was renting the house at that time, to his sister (Briggs 1867).

We pay eight dollars per month rent, and have the privilege of using the cellar which is deep and large for this country. But by mutual consent it has been given up to the rats who took complete possession of it without asking any questions.

The Carrigan house was replaced by the Irwin house in 1879. A number of architectural features of the Irwin house were also exposed during the present project, and it was immediately apparent that elements of the Carrigan house were adaptively reused as part of the Irwin house in areas where the footprints of the two structures would have overlapped, an interesting subject itself. This reuse undoubtedly related to economies in construction of the later house, but it also served to preserve many original Carrigan features that probably otherwise would not have survived, including the two back cellars and the Carrigan era cistern. After the Irwin house was demolished in 1923, the former cellar voids beneath the house were filled with building debris, much of which may have originated from a completely different structure in the neighborhood or elsewhere around town, with implications for interpretation of certain archeological deposits at the site, particularly fill in the Irwin cellars, and the artifacts contained within those deposits. Note, however, that intact Carrigan house features have now been exposed at a broad range of depths across the site, from the top of the cistern exposed at 20 cm (8 inches) below the present ground surface to the brick cellar floor in Test Unit 2 exposed at 126 cm (4 ft 1 ½ inches) below the ground surface, and the base of the cistern may extend deeper yet.

Clusters of brick fragments were identified at/near the locations of two of the projected corners of the Carrigan outbuilding that stood along the north property line (Test Units 12 and 13), and a partial brick alignment was identified near the projected location of the northwest corner of the Carrigan barn (Test Unit 14), possibly representing the remains of corner supports or shallow foundations for those structures. However, the presence of a late nineteenth century bottle among the brick fragments in one of the clusters suggests that either a preexisting feature at that location was disturbed during a later time period, or the cluster itself post-dates the Carrigan house era and is not related to the Carrigan outbuilding at all.

Multiple episodes of building construction, modification, adaptive reuse, repair, and demolition have taken place at the Carrigan property over the years, resulting in an archeological record that is relatively complicated. Much has been learned, but many questions remain about the Carrigan house and its outbuildings, as well as questions about how the rest of the property was utilized in support of the household. Several of the many possible directions for future archeological investigation are outlined below.

- Look for additional Carrigan foundation walls and associated features along the ell to help confirm/refine the footprint of the house in that area, particularly in those areas not impacted by the temporary relocation of the Corneau house to the property (Figures 3 and 9). If much of the ell was constructed without an underlying cellar, the remains of shallow foundations could still exist for interior as well as exterior walls of the house (as seen for the Burch house), providing information on the partitioning of interior spaces.
- No historic wells have yet been identified on the property. Given the construction history of the Carrigan house, more than one well may have been used over time and such features might be sealed beneath later additions to the house, providing information that could bear on the location of doorways and use of space in earlier configurations of the house.
- Mansberger (1997a, 1997b) exposed the remains of an early to mid-19th century porch and steps in his Test 1 along the southern half of the front wall line of the Carrigan house. Several lines of evidence suggest that the front section of the house was built in two phases, with the northern section possibly constructed first, so that the front entry into the house may have been relocated over time. Additional archeological investigation along the front of the house might provide insight into that issue.
- Independent of structure-related investigations (such as the present project), the Carrigan property could be included in a cultural landscape study of the park as recommended by Osborn (2001:23-25) that would involve large block excavations on several lots to learn more about the full range of cultural features that were part of the urban environment in nineteenth century Springfield, as well as where those features were located on the properties, i.e., site structure (Mansberger 2005:20-25). Depending on the nature of the features identified and the resulting artifactual assemblages, such a study could also further our understanding of variation in the socioeconomic status of the different households represented (Mansberger 1987), with the Carrigan property representing a lower socioeconomic situation as a rental property.
- Investigate the sources of other geophysical anomalies adjacent to the house and elsewhere on the property (DeVore 2005).

MANAGEMENT RECOMMENDATIONS

Any future construction on the Carrigan property would almost certainly impact significant archeological resources associated with the early historic occupation of the property because of the relatively shallow depth of several known intact features related to the original house, the cistern, and possibly the barn, and the high potential for additional as yet unidentified features. If adverse impacts to those resources cannot be avoided during construction, the park will be required to develop a formal data recovery plan in consultation with the Illinois State Historic Preservation Office to mitigate the impacts. If construction on the property involves the design and fabrication of some form of representation of the original Carrigan house, additional archeological research

at the site would also undoubtedly contribute to that effort, depending on the level of historical accuracy desired. The present archeological inventory and evaluation project involved the limited exposure of architectural features around the site, so that our current understanding of the footprint of the Carrigan house, for example, still partially involves guesswork in “connecting the dots”. Of particular note, the Carrigan house HSR (RATIO Architects, Inc. 2006a) was completed in mid-May 2006 while the 2006 archeological investigations were underway, so that the results of those investigations were not incorporated into the document.

CHAPTER 3

ARCHEOLOGICAL INVESTIGATIONS AT BURCH

RESULTS OF THE 2005 INVESTIGATIONS

Three archeological test units and five backhoe trenches were excavated at the Burch lot in 2005 (Figure 24). A single intact 14 ½ ft section of the Burch house foundation was identified along the north property line at a depth of 31 cm below the present ground surface that included the northwest corner of the house and one interior wall intersection. Half of an interior brick-lined well and a probable chimney base were exposed immediately adjacent to the foundation (Figure 25). The lower portion of a mortar-lined cistern was also identified at a depth of 73-114 cm below the ground surface at a location that was probably immediately outside the southwest corner of the house.

Most of the eastern end of the lot appeared to have been severely impacted by the construction and subsequent demolition of a large commercial building. A large quantity of yellow-brown clay was apparently brought to the site to fill the large subterranean void left after the commercial building was removed and is quite distinctive from the surrounding natural soil profile. One short intact section of a separate brick foundation was identified at a depth of 1.27 m below the present ground surface that may have related to one of the commercial buildings that stood on the property or to a somewhat older structure. Given the extent of fill, the primary commercial building probably had a subterranean or basement level, the construction of which undoubtedly destroyed most of the Burch house foundation. However, the western edge of the clay fill was identified in two locations so there is still a possibility that other features related to the Burch house occupation of the property are present further back on the lot.

The results of the 2005 investigations at Burch are described in greater detail below within the context of discussions of the individual test units and backhoe trenches.

Test Unit 1/Trench 4

Test Unit 1 began as a one-meter square placed to investigate the area of the southeast corner of the Burch house as it was plotted on the 1858 City of Springfield map (Sides 1858). Due to initial uncertainty about the actual on-the-ground position of the south lot line, it became necessary to extend the unit 0.5 m to the north in order to encompass the projected southeast corner location (Figure 24). The south wall line of the Burch house depicted on the 1896 Sanborn Insurance Map (Sanborn Map and Publishing Company 1896) also crossed the northern extension of Test Unit 1. Excavation of the unit began by hand, but that process was eventually expedited for the western half of the unit through use of the backhoe. Consequently, the portion of the unit partially excavated by backhoe was also designated Trench 4.

Topsoil in the area of Test Unit 1/Trench 4 extended to a depth of 26 cm below the present ground surface, underlain by a distinctive compact yellow-brown silty clay fill that extended to variable depths ranging from 120-170 cm below the ground surface.

That yellow fill was reportedly brought to the site following demolition of the later commercial building that stood on the front of the property, and contained scattered chunks of sandstone, broken concrete, and brick fragments, the latter including a few soft orange bricks and others with impressed lettering indicating manufacture by the Poston Brick Company of Springfield founded in 1916 (Poston 1985). A layer of dark brown soil fill beneath the yellow fill then extended to a depth of 180 cm below the ground surface directly atop sterile clay subsoil. The dark brown fill contained a jumble of bricks, most of which were hard-fired with hard gray mortar. However, no evidence of the Burch house was found.

Test Unit 2

Test Unit 2 initially measured 1 m north-south x 1.75 m east-west, but was soon expanded to a 1.8 m square (Figure 24). It was positioned to investigate an area where the 1858, 1890, and 1896 map depictions of the footprint of the Burch house all converged at/near the southwest corner, and also where several gradiometer and conductivity meter anomalies were identified during the geophysical surveys of the lot. While that initial area of Test Unit 2 was excavated by hand, the unit was later expanded 1.25 m to the east using the backhoe.

Topsoil within Test Unit 2 ranged in depth from 12-27 cm below the present ground surface, and was underlain by the same yellow-brown clay fill described above in Test Unit 1/Trench 4. Again, that fill was very compact and included scattered fragments of sandstone, concrete, and brick. However, Test Unit 2 lay at the extreme western edge of that extensive fill deposit and the bottom of the deposit sloped up along the west side of the unit where it thinned from 80+ cm to 3-14 cm in thickness. A small in situ remnant of a cistern wall was identified near the northwest corner of Test Unit 2 in the area of interface between the upward sloping fill deposit and the adjacent natural soil deposit to the west, as explained more below.

Jumbled piles of brick (both low- and hard-fired) and large chunks of broken concrete lay directly beneath the yellow clay fill in the northern half of the original section of Test Unit 2 (exposed at 93 cm below the ground surface) and in the eastern extension of Test Unit 2 (exposed at 117 cm below the ground surface). The bricks and concrete in the eastern extension were mixed into a dark brown soil fill that extended into the southeast corner of the original section of the unit and included some asphalt. That dark soil fill lay atop sterile clay subsoil at 158 cm below the ground surface.

The jumbled brick in the northern half of the original section of Test Unit 2 was found to lie directly atop the truncated lower portion of a circular cistern at 114 cm below the ground surface, the cistern now filled with dark soil (Figures 25, 73, and 74). A remnant section of the mortar lining for that cistern (mortar that had been applied directly to the soil wall of the cistern cavity) and an attached section of the original brick cistern cap were identified along the west wall of the unit at 73 cm below the ground surface (593.8 ft in elevation) at the interface between the upward sloping western edge of the yellow clay fill and the adjacent brown silt loam. The top of the cistern was apparently clipped during some past episode of construction or demolition at the site, leaving only the base and part of the west side intact. While the piles of mixed early

and late brick and concrete may relate to the commercial buildings that stood on the property, no intact foundations for those buildings were present within Test Unit 2.

Fill in the cistern consisted of dark brown/black silt loam with a few artifacts. The cistern fill was excavated to a depth of 142 cm below the ground surface, and the artifacts recovered from that fill included one undecorated whiteware sherd, most of a colorless glass jar with embossed patent information indicating manufacture in 1906 or later, one relatively thick late fragment of flat glass (2.5 mm in thickness), and three ½-inch diameter cobalt blue clay marbles. Cistern fill continued down below the level of our excavation. While most of the mortar lining for the cistern was gone in this area, probing indicated that the lining was still intact farther down into the feature.

A comparison of historic maps of the Burch house indicates that a small addition was constructed at the back of the house sometime between 1858 and 1890 (Figure 23). That addition was built along the south wall at the far back end of the house, so that the south exterior wall line of the house was simplified from having three steps or jogs to having two. Historic photographs indicate that the addition was wood frame construction (Figure 21). During preparation of the HSR for the Burch house, RATIO Architects raised questions about that small frame addition, specifically whether there was any remaining archeological evidence for that structure and the function it may have served (Young 2005).

Figure 25 shows the position of Test Unit 2 and the cistern relative to the 1896 map footprint of the Burch house moved to align with the known northwest corner of the house and including that late frame addition. The projected southwest corner of the addition and adjacent walls were all encompassed within Test Unit 2. Other than the cistern, however, no evidence of the Burch house was found in that area. Although the eastern extent of the cistern fill was indistinct, it appears that the cistern was located immediately outside and behind (west of) the addition. Given the very close proximity of the cistern to the projected location of the addition (perhaps too close), it is possible that the cistern pre-dated construction of the addition.

Test Unit 3/Trench 6

The excavation of Trench 6 was begun along the north lot line in the area of a ground penetrating radar anomaly at geophysical survey grid coordinates 11-13N, 26E (DeVore 2005:36 Figure 24). An intact section of the Burch house foundation was identified at that location at a depth of only 31 cm below the present ground surface, so that the trench was extended to both the east and west to continue exposing the foundation (Figures 24 and 25). Since this discovery was made late in the afternoon on the second-to-last day of the project in May 2005, very little time remained to investigate it. Only the top of the foundation was exposed for most of its length, which was sufficient to identify the northwest corner at the back of the house, one interior wall intersection, and part of an interior brick-lined well that butted against the north foundation wall immediately east of that wall intersection (Figures 75-78). Test Unit 3 was opened to investigate the well and measured 1 m north-south x 1.6 m east-west. In July 2005, a probable chimney base was also discovered along the foundation while the author and O'Bright were collecting a brick sample (Figure 79). The layout of those

features identified in 2005 relative to the 1896 map footprint of the house is presented in Figure 25. Another interior wall intersection was then identified in 2006 in the course of examining the chimney base.

Trench 6 was extended to the west far enough to cross the location of the far back west wall of the house as depicted on the 1858 City of Springfield map (Figure 24). No Burch house related features were identified in that area, which is not surprising given that we now know that the 1858 map was not very accurate. However, a solid chunk of concrete undoubtedly related to later construction/activities on the property was exposed in that area about 1.4 m west of the Burch house foundation.

Foundation at the back of the house – A single intact 14 ½ ft section of the north Burch house foundation was identified at a depth of 31 cm below the present ground surface, together with a short section of the far back (west) wall of the house that extended southward from the northwest corner, and a short section of one interior wall (as mentioned above, a second interior wall was identified in 2006). All of the north-south walls were toothed to the main exterior east-west wall. The walls were two wythe and constructed of low-fired brick measuring 8 ¼ in x 4 in x 2 in joined with soft brown sand-lime mortar. Four to five courses of brick remained in the walls, with the bottom of the base course at the relatively shallow elevation of 594.16 ft (top of base course at 594.33 ft) with no evidence of cellar construction. Mortar was present on the top surface of the bricks in the fifth course, suggesting that at least one additional course was originally present.

Well – The remains of a small circular brick-lined well were exposed in the northwest corner of the interior room/space created by the intersection of the north foundation wall and the interior wall identified in 2005. The small voids between the foundation walls and the circular well structure had been filled with additional brick. Most of the northern half of the well was present. A marked soil change extended roughly east-west across Test Unit 3 where demolition at some point in the past had removed the southern half of the well (inset in Figure 25). The distinctive yellow-brown clay fill with sandstone fragments described in other units/trenches around the site extended southward from the feature, and a very dark grayish brown sandy loam lay within the remaining northern half of the well and immediately east of the well along the north foundation wall. Below that dark sandy loam, the interior of the well was filled with white sand. Excavation of the well interior was halted at 82 cm below the ground surface. East of the well, natural silt loam seemed to have been encountered at 52 cm below the ground surface at the same approximate level as the bottom of the base course in the north foundation wall.

The outside diameter of the well was approximately 34 inches. The inside diameter was approximately 28 inches at the top of the feature where the brick lining had been stepped inward slightly. The inside diameter was 30 inches farther down in the well.

Probable chimney base – A brick footing pad was identified along the interior face of the north foundation wall that probably served as the base for a chimney (Figure 79). The pad measured 12 ¼ inches north-south x 16 ½-17 inches east-west. While it

was probably originally fully butted against the north foundation wall, it is now slightly displaced away from the wall which may have occurred during demolition activities. Only the top remaining course of brick in the pad was exposed in 2005, composed of six bricks joined with white sand-lime mortar that was harder than the mortar used in the adjacent foundation wall so may have contained natural cement. This feature was investigated further in 2006.

Trench 1

Trench 1 was excavated to look for the north foundation of the Burch house toward the front of the property (Figure 24). It measured 2.8 m north-south x 1 m east-west and crossed a short distance over the north property line onto the adjacent Brown lot. No evidence of the Burch house was found. However, the stratigraphy there was instructive of later activities on the property. Immediately below the topsoil, there was a distinct soil change at the approximate lot line. The lot line lay along the north edge of a large basin of yellow-brown silty clay fill (identified elsewhere around the site) that extended to a depth of 170 cm below the present ground surface. That yellow-brown fill was underlain by a layer of dark brown clay loam fill that extended to a depth of 180 cm below the ground surface, in turn atop sterile clay subsoil. The deposit north of the basin consisted of a natural soil profile. The fill layers contained scattered old soft orange bricks and hard-fired bricks, some of the latter manufactured by the Poston Brick Company.

Trench 2

Trench 2 was excavated to look for the far back (west) foundation wall of the Burch house, and was extended to the west far enough to cross the location of the west wall as depicted on the 1858 City of Springfield map (Figure 24). The trench measured 0.75 m north-south x 6 m east-west. This trench crosscut the western edge of the deep extensive yellow-brown clay fill deposit in the front half of the property at roughly the same distance back on the lot as exposed in Test Unit 2 (a relatively thin layer of yellow-brown clay also lay directly beneath topsoil toward the west end of Trench 2). A pile of brick rubble was exposed near the edge of that deep fill deposit, and a remnant of two courses of a brick wall was exposed at the bottom of the pile (Figures 25 and 80). The brick had been set on clay subsoil at a depth of 138 cm below the present ground surface (592.01 ft in elevation). A brick and mortar sample collected from that remnant section of wall consists of a low-fired red brick with sandy white mortar.

That wall remnant may have related to one of the commercial buildings that stood on the front half of the property documented on the 1941 Sanborn map, and in fact matches well with the position of the east wall of the smaller of the two buildings, which was a garage (Figure 25). Based on the depth of disturbance on the front half of the lot, the larger commercial building may be a more likely possibility, as it did apparently have a basement generally consistent with the depth of this feature. The construction materials are suggestive of a somewhat older structure, but characteristics of the feature do not correspond with known information about the Burch house itself. This wall remnant does not align with the far back west wall of the Burch house as identified in Trench 6, and none of the historic maps illustrated an ancillary structure in that area.

The foundation at the northwest corner of the Burch house was investigated further in 2006 and confirmed to be shallow, while this wall remnant was deep and probably associated with a basement/cellar. The mortar that was used in the feature and that used in the Burch house foundation were dissimilar in color and texture. It is possible that the feature related to a previously undocumented Burch-era structure, such as an exterior cellar, which could be pursued during future archeological investigations at the site.

Trench 3

Trench 3 was excavated to look for the front (east) foundation wall of the Burch house (Figure 24). The trench measured 0.75 m north-south x 3 m east-west, and was placed to cross the different front wall line positions depicted on the 1858, 1890, and 1896 historic maps. However, as mentioned previously, the northwest corner of the Burch house was identified at the end of the 2005 fieldwork at Burch. When the 1896 map depiction of the footprint of the house was later moved for analytical purposes to match with that known corner (Figure 25), Trench 3 did not then cross that repositioned front wall line.

The stratigraphy in Trench 3 was similar to that observed elsewhere around the front half of the property with topsoil underlain by a thick deposit of yellow-brown silty clay fill that extended to a depth of 165 cm below the present ground surface, in turn underlain by dark brown loam fill. A few old soft orange bricks and later Poston Brick Company bricks were scattered in the fill. No evidence of the Burch house or any other features were identified, and excavation of the trench was halted at 180 cm below the ground surface.

Trench 5

Trench 5 was excavated along the south wall line of the Burch house in an area where the 1858, 1890, and 1896 map depictions of the house footprint were fairly close together (Figure 24). When the 1896 map footprint was later moved to match with the known northwest corner of the house (Figure 25), the southwest corner of the open back porch on the Burch house and a relatively long section of the adjacent west wall line then fell squarely within Trench 5. Trench 5 measured 2.9 m north-south x 0.75 m east-west. Again, the stratigraphy in Trench 5 was similar to that observed elsewhere around the front half of the property with topsoil underlain by a thick deposit of yellow-brown clay fill that extended to a depth of 110 cm below the present ground surface, in turn underlain by dark brown loam fill. A considerable amount of brick rubble that included both old low-fired and later Poston brick was mixed into the fill, particularly the lower dark layer of fill, together with iron pipe and an electrical box and wire. Some of the older bricks appeared to have been heat-altered. However, no features associated with the Burch house or other structures were encountered. Excavation of Trench 5 was halted at 220 cm below the ground surface.

RESULTS OF THE 2006 INVESTIGATIONS

Four additional test units and four additional backhoe trenches were excavated at Burch in 2006 (Figure 26). The 2006 investigations were designed to address

several specific unanswered questions about the footprint of the Burch house and the archeological potential of the back of the lot for features and deposits related to the Burch house occupation of the property. Despite major twentieth century impact to the front (east) half of the property, a second short remnant of the Burch house foundation was identified in an area that would have been located toward the front of the house, again just inside the north property line. A probable chimney-related feature was located along the interior face of that foundation remnant. At the back of the house, another interior wall intersection was exposed along the north foundation wall.

Archeological testing was also conducted along the projected north and east wall lines of the early twentieth century apartment building that stood on the west half of the property. The area within the footprint of the apartment building was found to have been heavily disturbed down to a depth of at least .90 m along the north wall line and 1.45 m along the east wall line, and the deposits in those areas included large quantities of yellow-brown clay that was probably brought to the site as fill following the demolition of the apartment building, as occurred on the east half of the property following the demolition of buildings there as well. However, the narrow remaining deposit between the north wall line of the apartment house and the north property line may relate largely to the Burch house occupation of the property. The base of a deep post-hole stain was exposed in that area.

The results of these investigations are described in greater detail below within discussions of the individual test units and backhoe trenches that were excavated in 2006. Plan maps showing the features that were identified during those investigations and other relevant information are included in Figures 27-30.

Test Units 4, 5, and 7/Trenches 6 and 7

Test Unit 5 was excavated to further investigate the remains of the north foundation wall identified in 2005 (in Trench 6) toward the back of the Burch house and an adjacent brick pad that probably represented the base for a chimney (Figure 26). This unit measured 1 m north-south x 1.5 m east-west. In the process of exposing those two features, another interior wall intersection was discovered immediately west of the brick pad (Figures 27 and 29). A portion of Trench 6 from 2005 was reopened to the west of Test Unit 5 to re-expose the foundation in that area. Test Unit 7 was then excavated at the west end of the foundation to determine the depth of the foundation at the northwest corner of the house. Test Unit 7 measured 30 cm north-south x 40 cm east-west (Figures 26).

Trench 7 was excavated along the remaining length of the north foundation wall line projected from Test Unit 5 eastward to a position close to the front property line, so was 65-70 cm north-south x 15.7 m east-west (Figure 26). Topsoil in the eastern end of Trench 7 was approximately 18 cm deep and generally lay directly atop yellow-brown clay fill. However, the eastern edge of that fill deposit was clearly defined at 2.15 m inside the front fence/property line. The back section of the foundation identified in 2005 was found to extend only another 8 inches to the east and no other wall intersections were exposed in that area (Figure 29). However, another remnant section of the north foundation was identified toward the front of the house, together with the remains of

a possible hearth support or chimney base, a feature undoubtedly associated with the chimney that appeared in historic photographs (Figures 27 and 28). Test Unit 4 was defined to investigate that second foundation remnant and the chimney-related feature, and measured 1.12 m north-south x 2.6 m east-west. Unfortunately, the northeast corner of the house foundation was gone.

Foundation at the back of the house – As mentioned above, another interior wall intersection was discovered immediately west of the brick chimney pad, both of which were angled slightly to the east, possibly displaced during later building construction/demolition at the site, an issue discussed further below (Figures 29 and 81). When the 1896 map footprint of the house is overlain on the archeological map and repositioned to match at the known northwest corner, this newly identified interior wall aligns almost exactly with a north-south interior wall on the footprint. This would seem to lend additional support to the previous assessment by RATIO Architects of the accuracy of the 1896 map. This north-south interior wall was toothed to the east-west exterior wall, and the mortar used in both walls appeared to be the same, a soft brown sand-lime mix. The base courses for the two walls lay at the same depth.

The main exterior east-west foundation wall was determined to extend only another 8 inches to the east beyond the section exposed in 2005, so that this surviving remnant of the foundation is slightly over 15 ft in overall length. It was initially hoped that this section would be intact far enough to the east to include the next intersection with the north-south wall that extended to the southwest corner of the house at the open back porch, as depicted on the 1896 map footprint (Figure 27), to be used as a means to help project the location of that corner. However, the extant section of the north wall ended well short of the area where that interior wall would have stood.

All three of the north-south foundation walls were toothed to the main east-west wall, and all of the walls were two wythe and constructed of low-fired brick measuring 8 ¼ in x 4 in x 2 in joined with soft brown sand-lime mortar. As already determined in 2005, four and five courses of brick remained in the walls, with the bottom of the base course at the relatively shallow elevation of 594.16 ft with no evidence of cellar construction. None of the walls had a spread footing. The base course of the north wall was a header course. The base course in the north-south interior wall adjacent to the chimney base was a stretcher course.

Probable chimney base toward the back of the house – The materials used in construction of the probable chimney base or pad were different from those used in construction of the adjacent foundation walls, suggesting two separate construction episodes (Figure 29). The bricks used in the chimney pad were consistently 1/4 in thicker than the wall brick and measured 8 3/8 in x 4 in x 2 ¼ in. Those bricks were joined with white sand-lime mortar that was harder than the mortar used in the foundation walls and may have contained natural cement. The chimney pad also stood independent of the adjacent foundation walls and was not toothed to those walls.

Eleven courses of brick remained in the chimney pad, the bottom course of which was laid 44 cm deeper than the adjacent foundation walls (the bottom of the base course in the chimney pad lay at an elevation of 592.73 ft). The bottom two courses were

corbelled outward on the east, south, and west faces of the pad in an unusual method of construction for this type of feature, since a spread footing was more typically laid to better distribute the heavy point load of a chimney stack.

Both the upper nine courses of the chimney pad and the adjacent remnant of interior wall were angled slightly eastward and therefore slightly out of square with respect to the north foundation wall (angled $\frac{1}{2}$ in for every 12 in of run to the south). While this may have been caused by demolition work, there was no evidence of broken bricks or joints indicating that had been the case. It is therefore possible that the wall and chimney base were originally laid up skewed.

Foundation toward the front of the house – Trench 7 was excavated along the entire projected north wall line at the front of the house and extended 1.6 m east of/ beyond the projected northeast corner location. No evidence of that corner was found. However, another short shallow intact remnant of the north foundation of the house was newly identified approximately 8 ft west of the projected corner together with a probable chimney-related feature that extended from the south or interior face of the foundation (Figures 27, 28, and 82). That foundation wall and chimney feature complex was undoubtedly the source of the geophysical anomalies previously identified in that area.

Four courses of brick were still present in that section of the foundation, including a spread footing. The top of the footing course lay at an elevation of 594.18 ft, just 4.5 cm lower than the top of the base course in the foundation at the back of the house. There was probably a crawl space beneath the front section of the house, but no cellar. The spread footing was composed of a line of header bricks with long axis oriented north-south and an adjacent line of stretcher bricks to the south with long axis oriented east-west. Mortar still adhered to the upper surface of the top remaining course of brick, suggesting that at least one additional course was originally present. The eastern end of this section of the foundation is 52 ft 8 $\frac{1}{2}$ inches from the northwest corner of the house.

Probable chimney-related feature toward the front of the house – An historic photograph of the Burch house shows a chimney along the north wall located slightly closer to the front of the house than the peak of the gable (Figure 21). The remnant section of the north foundation identified in 2006 described above was located between 8 ft and 15 ft west of the projected location of the northeast corner of the house in the area where that chimney most likely stood. A number of additional bricks extended from the south (interior) face of the foundation that appeared to be at least partially in situ (Figures 28 and 82) and were probably related to that chimney structure.

Some of the bricks within the feature were mortared together and portions of two courses of brick were represented. However, there was no mortar between the foundation wall and the feature. The feature included a number of brick fragments as well as complete bricks and had been damaged, probably by demolition activities. Both the foundation and the feature lay within a very dark gray silt loam, while the soil immediately south of the feature changed abruptly to the yellow-brown clay fill believed to be associated with site renovation following demolition of the commercial building that stood at this location (Figure 28). The brick and mortar in the feature appeared

similar to that used in the adjacent foundation wall. This feature may relate to a former hearth support or chimney base, although it was probably too shallow to support a point load chimney stack.

Test Unit 6

This 1 x 2 m test unit was excavated to investigate the source of a strong magnetic gradient anomaly just inside the north lot line toward the rear of the property at geophysical grid coordinate 11.5N, 3E (DeVore 2005:Figure 21) (Figure 26). This location was a short distance away from documented outbuildings associated with the Burch house occupation of the property (Figure 23), but in an area that was thought might contain privy deposits. Test Unit 6 was also cross-cut by the projected north wall line of a twentieth century apartment building, and it was consequently unknown how much evidence of earlier features had survived.

The topsoil within Test Unit 6 was variable in depth and extended 20-45 cm below the present ground surface. An irregular band of yellow and white clay was first exposed at a depth of 35 cm below the ground surface running east-west across the unit. At 45 cm below the ground surface, fill in the southern half of the unit consisted almost entirely of yellow and white clay with a few lenses of dark soil. That clay deposit continued downward to the base of excavation in the southeast quarter of Test Unit 6 at 90 cm below the ground surface (Figure 83) and down to 58-80 cm below the ground surface in the southwest quarter of the unit. The clay deposit was thus coincident with the documented location of the apartment building (Figures 30 and 84). It would seem to represent fill that was brought to the site after the apartment house was demolished/removed in a sequence of events similar to that which apparently occurred following the demolition/removal of the commercial building on the front half of the property.

In the southwest quarter of Test Unit 6, the clay fill lay atop very dark brown mottled soil that in turn lay over and around a partial line of crushed drain tile. The tile was originally 8 inches in diameter and consistent in capacity with that to be expected for a building with several residences/apartments. The tile had been set to drain from west to east. As an indication of the degree to which this particular deposit had been churned, a bright green painted redware sherd recovered from the topsoil in Test Unit 6 at 0-25 cm below the ground surface was refitted to another such sherd recovered in the clay fill at 90 cm below the ground surface in the southeast corner of the unit.

By contrast, soil in the north half of Test Unit 6 was an homogenous dark brown loam that graded into dark yellow-brown clay between 80 and 90 cm below the ground surface (Figure 84). That loam contained several broken concrete slabs and numerous artifacts throughout that included a mix of materials dating from the mid-nineteenth century through the turn-of-the-twentieth century. Given that the Burch house was not replaced until sometime between 1896 and 1917, all of those artifacts may relate to the Burch house occupation of the property. However, no obvious privy deposits were identified. A 5 ½ inch dark circular post-hole stain was exposed in the northeast quarter of the unit at a depth of about 90 cm below the ground surface (593.57 ft in elevation) (Figure 30 and 84). It proved to be only 1.5 cm deep, so extended to 91.5 cm below the ground surface. The origin and dating of that feature are unknown.

Trench 8

Trench 8 was excavated to look for evidence of the southeast corner of the Burch house (Figure 26). Since multiple projections for that corner are possible, depending upon the source of information on the footprint and location of the house, the test trench excavated in that area was scaled to investigate the most likely possibilities, all measured from the known northwest corner of the house. The negative results of trenching to look for the northeast corner of the house were known prior to the start of trenching in this area, so that the uncertainty in the projection of that corner only served to increase the level of uncertainty about this one. However, given the relatively shallow nature of the foundation remnant newly identified along the north wall line near the front of the house (in Trench 7/Test Unit 4), it was determined that trenching to a depth of 50 cm below the present ground surface would be sufficient to expose any remaining evidence of the corner.

Two primary projections for the southeast corner were considered: 1) a projection based on the 1896 City of Springfield map with a north wall dimension of approximately 60 ½ ft and an east wall dimension of approximately 25 ½ ft, and 2) a projection based on the footprint developed by RATIO Architects with a north wall dimension of approximately 60 ft and an east wall dimension of approximately 24 ft. A considerable area around those projected corner locations was opened. Trench 8 measured approximately 2.2 m north-south x 2.75 m east-west with a short extension off the northwest corner (Figure 26). However, no evidence of the Burch house was found. The topsoil in that area was approximately 28 cm deep and lay directly atop yellow-brown silty clay fill. Within Test Unit 1/Trench 4 excavated in 2005 immediately west/southwest of Trench 8, this same fill extended to a depth of 1.2-1.7 m below the ground surface.

Trench 9

Trench 9 was excavated to look for evidence of the foundation that supported the eastern edge of the open back porch along the south side of the Burch house (Figure 26). A relatively large area was opened around the approximate location of that wall line due to considerable uncertainty in projecting its position. Trench 9 measured 2.7-2.8 m north-south x approximately 3.8 m east-west. That wall line was plotted on the 1896 map approximately 18 ft 10 in west of the southeast corner of the house, and was plotted by RATIO Architects approximately 15 ft 4 in west of the southeast corner. However, the southeast corner of the house was gone (Trench 8), as was the northeast corner of the house which would at least have defined the front wall line. The intersection of the north foundation and the interior wall that originally extended to the southwest corner of the house was also gone (Trench 7), another key feature that could have been used to project the location of the open back porch.

As with Trench 8, Trench 9 was excavated to a depth of 50 below the present ground surface, which would have been sufficient to expose any remaining evidence of a shallow foundation similar to that identified along the north wall of the front section of the house (Trench 7/Test Unit 4). However, no evidence of the open back porch

foundation was found. The topsoil in that area was 18-25 cm deep and again lay directly atop yellow-brown clay fill.

Trench 10

Trench 10 was positioned to crosscut the projected location of the east wall of the early twentieth century apartment building that stood on the back half of the Burch lot, and was excavated in order to evaluate the archeological potential of that portion of the lot and determine the level of modern impact there (Figure 26). The location of the apartment building was projected from measurements derived from the 1941 Sanborn fire insurance map of the property (Sanborn Map and Publishing Company 1941). Trench 10 itself measured 0.55 m north-south x 4.5 m east-west. The trench was excavated by backhoe to a maximum depth of 1.72 m below the present ground surface (Figure 85). Disturbed deposits undoubtedly related to the demolition of the apartment building extended to a depth of approximately 1.45 m below the ground surface. Those deposits included chunks of asphalt and both soft and hard extruded bricks, the latter with Portland cement mortar still adhering to them. The layer immediately beneath the topsoil consisted of a light yellowish brown mottled clay that appeared very similar to the yellow-brown clay fill identified elsewhere around the site and thought to be associated with site renovation following the demolition of the later buildings on the property. The disturbed deposits were underlain by homogenous dark gray clay subsoil.

PROJECT OBJECTIVES AT BURCH IN 2006

1. Identify and describe any remaining evidence of the northeast corner of the Burch house.

The approximate location of the northeast corner of the Burch house was projected on the ground using a north wall dimension (approximately 60 ½ ft) derived from the 1896 Sanborn fire insurance map of the property and measured from the known northwest corner of the house (the northwest corner was identified archeologically in 2005). An analysis of historic maps of the Lincoln neighborhood by RATIO Architects indicated that the 1896 map appears to be the most accurate, and it was therefore used extensively in designing the 2006 testing program at Burch. Trench 7 was excavated along the entire projected north wall line at the front of the house and extended 5 ¼ ft (1.6 m) east of/beyond the projected northeast corner location. However, no evidence of the corner was found.

However, a short intact remnant of the north foundation of the Burch house was newly identified approximately 8 ft west of the projected corner. That remnant section of the foundation consisted of four courses of brick including a spread footing and was relatively shallow. This suggests that there was probably a crawl space beneath the front section of the Burch house, but no cellar.

2. Identify and describe any remaining evidence of the north chimney on the front section of the Burch house.

An historic photograph of the Burch house appears to show the north chimney located slightly closer to the front of the house than the peak of the gable. As mentioned in the discussion of objective 1 above, a remnant section of the north foundation was newly identified between 8 ft and 15 ft west of the projected location of the northeast corner of the house in the area where the chimney most likely stood (Trench 7/Test Unit 4). A number of additional bricks extended from the south (interior) face of the foundation that appeared to be partially in situ, although damaged. This feature may relate to a former hearth support or chimney base.

3. Continue excavation of the north foundation at the back of the Burch house to look for additional wall intersections, as a means to project the location of the southwest corner of the house at the open back porch.

During the 2005 archeological investigations, a 14 ½ ft intact section of the Burch house foundation was identified just inside the north property line at the back of the house that included the northwest corner of the house and one interior wall intersection, together with half of an adjacent interior brick-lined well and a probable brick footing pad for a chimney stack. During the 2006 investigations, the excavations in that area were expanded and it was determined that the foundation remnant itself extended only another 8 inches to the east (Trench 7), well short of the area where the interior wall that extended to the open back porch would have stood.

However, another interior wall intersection was discovered immediately adjacent to the west side of the probable chimney pad (Test Unit 5). When the 1896 map footprint of the house is overlain on the archeological map and repositioned to match at the known northwest corner, this newly identified interior wall intersection aligns almost exactly with a north-south interior wall on the footprint. This would seem to lend additional support to the previous assessment by RATIO Architects of the accuracy of the 1896 map.

4. Look for any remaining evidence of the foundation that supported the eastern edge of the open back porch along the south side of the Burch house.

A relatively large area was opened around the approximate location of this wall line due to considerable uncertainty in projecting its position (Trench 9). This wall line was plotted on the 1896 map approximately 18 ft 10 in west of the southeast corner of the house, and was plotted by RATIO Architects approximately 15 ft 4 in west of the southeast corner. However, the southeast corner of the house was gone (Trench 8), as was the northeast of the house which would at least have defined the front wall line. The intersection of the north foundation and the interior wall that originally extended to the southwest corner of the house was also gone (Trench 7), another key feature that could have been used to project the location of the open back porch.

However, no evidence of the foundation for the open back porch was found. Topsoil throughout Trench 9 was uniformly underlain by the yellow-brown silty clay fill that was reportedly brought to the site following demolition of the commercial building that later stood on the front half of the property.

5. Identify and describe any remaining evidence of the southeast corner of the Burch house.

A relatively large area was opened around the projected location of the southeast corner of the house (Trench 8). Since multiple projections for that corner are possible, depending upon the source of information on the footprint and location of the house, the test trench excavated in that area was scaled to investigate the most likely possibilities, all measured from the known northwest corner of the house. The negative results of trenching to look for the northeast corner of the house were known prior to the start of trenching in this area, so that the level of uncertainty in the projection of that corner only served to increase the uncertainty about this one. However, given the relatively shallow nature of the foundation remnant newly identified along the north wall line near the front of the house described under objectives 1 and 2 above, it was determined that trenching to a depth of 50 cm below the present ground surface would be sufficient to expose any remaining evidence of the corner.

Two primary projections for the southeast corner were considered: 1) a projection based on the 1896 City of Springfield map with a north wall dimension of approximately 60 ½ ft and an east wall dimension of approximately 25 ½ ft, and 2) a projection based on the footprint developed by RATIO Architects with a north wall dimension of approximately 60 ft and an east wall dimension of approximately 24 ft.

Unfortunately, the results of this trenching were negative. All evidence of the southeast corner of the Burch house was apparently destroyed during later building construction/demolition at the site. Again, the topsoil in this area lay directly atop yellow-brown silty clay fill. Within Test Unit 1/Trench 4 excavated in 2005 immediately west/southwest of Trench 8, this same fill extended to a depth of 1.2-1.7 m below the present ground surface.

6. Excavate a stratigraphic test in the area of the early twentieth century apartment building that stood on the west half of the property to evaluate the archeological potential of that portion of the lot and determine the level of adverse impacts there.

A stratigraphic test (Trench 10) was excavated across the projected east wall line of the apartment building. That test was excavated by backhoe to a maximum depth of 1.72 m below the present ground surface. Disturbed deposits undoubtedly related to the demolition of the apartment building extended to a depth of approximately 1.45 m below the ground surface. Those deposits included chunks of asphalt and both soft and hard extruded bricks, the latter with Portland cement mortar still adhering to them. The disturbed deposits were underlain by homogenous dark gray clay subsoil.

7. Investigate the source of a strong geophysical anomaly just inside the north lot line toward the rear of the property. While there is no known documentation of actual privy locations during the historic occupation of the house, such privies were probably placed toward the rear of the property. Given the construction of an apartment building at the back of the property in the early twentieth century, it was unknown how much evidence of earlier features had survived.

A 1 x 2 m test unit (Test Unit 6) was excavated over the geophysical anomaly. From a depth of 35-90 cm below the present ground surface, there was a distinct soil change between the northern and southern halves of the unit approximately coincident with the projected north wall line of the apartment house. The southern half of the unit contained a yellow and white clay deposit that would seem to represent fill that was brought to the site after the apartment house was demolished and removed in a sequence of events similar to that which apparently occurred following the demolition/removal of the commercial building on the front half of the property. The northern half of the unit consisted of an homogenous dark brown loam that contained several broken slabs of concrete and a mix of artifacts dating from the mid-nineteenth century through the turn-of-the-twentieth century. Given that the Burch house was not replaced until sometime between 1896 and 1917, all of those artifacts may relate to the Burch house occupation of the property. However, no obvious privy deposits were identified. The base of a 5 ½ inch circular post-hole stain was exposed at a depth of 90 cm below the ground surface in the northeast quarter of Test Unit 6, the origin and dating of which is unknown.

8. Optionally, investigate the source of a small complex of geophysical anomalies toward the middle of the Burch lot. If time permitted, a test unit would be excavated at geophysical survey grid position 2.5-3N, 23E at the location of a small complex of ground penetrating radar anomalies. That location was away from known buildings plotted on historic maps.

Given the additional time and effort required to properly investigate and document the numerous architectural features exposed at Carrigan in combination with difficult weather conditions during much of the fieldwork, this particular objective was determined to be of lesser priority and was not pursued.

SUMMARY AND FUTURE RESEARCH QUESTIONS

The Burch house was built in 1845, and the 1854 and 1858 City of Springfield maps depict the house as a fairly long structure east-west with a stepped southern wall line. A small addition was then built at the far back end of the house sometime between 1858 and 1890. While the main house was constructed of brick, historic photographs indicate that this small addition was wood frame construction. Remains of the north foundation at the back of the house have now been identified archeologically (just 31 cm below the present ground surface) that include the northwest corner of the house and two interior wall intersections, which allows us to anchor the footprint of the house in that area. A comparative analysis of the several historic maps of the house and property was conducted by RATIO Architects, who concluded that the 1896 Sanborn fire insurance map appeared to be the most accurate and complete of the group, so provides the best available source of information on the footprint and layout of the house. When that footprint is repositioned to match with the known northwest corner of the house as identified on the ground, one of the interior walls identified archeologically aligns very well with an interior wall depicted on the 1896 map, further supporting the conclusion by RATIO Architects (that interior wall was found after the analysis by RATIO Architects was completed). The brick in the two interior walls and the far back west wall of the house were all toothed to the north foundation wall indicating that those features were

constructed at the same time. A probable chimney base was identified in an interior corner created by the juncture of the north foundation and one of the interior walls, but was not toothed to either wall and was constructed of different brick and mortar, so was probably added at a later date. Half of a small circular brick-lined well was also exposed in another interior corner at the back of the house. Together, the chimney base and the well suggest that the northern rooms at the back of the house served a kitchen function.

The lower portion of a mortar-lined cistern was identified immediately outside the projected southwest corner of the house, truncated at a depth of 1.14 m below the present ground surface (592.46 ft in elevation) with soil fill in the cistern continuing downward. The eastern extent of the cistern fill was indistinct, but it appeared to be in very close proximity to the projected west wall of the small late wood frame addition to the house, raising the possibility that the cistern pre-dated construction of the addition. Another remnant of the north Burch house foundation was exposed toward the front of the house together with a probable chimney-related feature, which may have been a former hearth support or chimney base. A chimney in that location on the house is visible in an historic photograph that was taken about 1880 (Figure 21). The positions of all of these features relative to the 1896 map footprint of the house (moved to match with the northwest corner identified archeologically) are presented in Figure 27.

The primary focus of the current project was to identify the actual location and footprint of the Burch house based upon any intact remnants of the original foundations and associated architectural features, but was later expanded to secondarily include an assessment of deposits at the back of the property. As a consequence, most of the archeological test units/trenches were placed in the area of the house site itself. Unfortunately, most of the front (east) half of the property was severely impacted by later construction/demolition activities, so that very little evidence of the Burch house has survived. We do now know that the main house foundation was constructed two wythe of low-fired brick laid up in soft brown sand-lime mortar. Both remaining sections of the foundation were relatively shallow with no evidence of cellar construction in those areas, so that there was probably just a crawl space beneath those areas of the house. The top of the spread footing toward the front of the house lay at an elevation of 594.18 ft, less than 2 inches lower than the top of the base course of the foundation at the back of the house at 594.33 ft. Unfortunately, no direct evidence for the elevation of historic grade during the occupation of the Burch house was identified.

A short remnant section of another brick wall of slightly different construction materials was exposed at considerable depth (592.01 ft) just outside/west of the projected far back west wall line of the Burch house. That wall may relate to one of the later commercial buildings that stood on the property (Figure 25). However, a brick and mortar sample collected from the wall consists of a low-fired red brick with sandy white mortar, suggestive of an older structure. While this feature is somewhat problematic, it may relate to a previously undocumented Burch-era structure, such as an exterior cellar, which could be pursued during future archeological investigations at the site.

The Burch house was demolished/removed sometime between 1896 and 1917, after which two commercial buildings were constructed on the front half of the property and an apartment house was constructed at the rear of the property. When

those buildings were demolished in 1973, most of the structural debris was apparently hauled away and a large quantity of yellow-brown clay brought to the site to fill the large basement voids. Archeological testing along the north lot line toward the back of the property indicated that the narrow deposit between that lot line and the north wall line of the apartment house may still relate in large part to the Burch house occupation of the property.

Two of several possible directions for future archeological investigation at the Burch lot are outlined below.

- The lower portion of an early mortar-lined cistern and a short section of a problematic brick wall were identified in test units just outside the back of the Burch house site, albeit at considerable depth. Those two features lie in an area with the potential for additional intact features related to the Burch house occupation of the property, along/beyond the western edge of the area that was scooped out during demolition of the large commercial building that stood on the front half of the property. Those two features and the deposit between them and immediately to the west warrant further investigation.
- Investigate the sources of other geophysical anomalies on the property (DeVore 2005).

MANAGEMENT RECOMMENDATIONS

Future construction on the Burch property may impact significant archeological resources associated with the early historic occupation of the property including both features and archeological artifact deposits. Such resources are now known to exist just inside the north property line and in the area that was along the back of the Burch house, with some potential for additional as yet unidentified features in untested sections of the lot. If adverse impacts to significant resources cannot be avoided during construction, the park will be required to develop a formal data recovery plan in consultation with the Illinois State Historic Preservation Office to mitigate the impacts. As with the Carrigan house HSR, the Burch house HSR (RATIO Architects, Inc. 2006b) was also completed in mid-May 2006 while the 2006 archeological investigations were underway, so that the results of those investigations were not incorporated into the document.

FIGURES

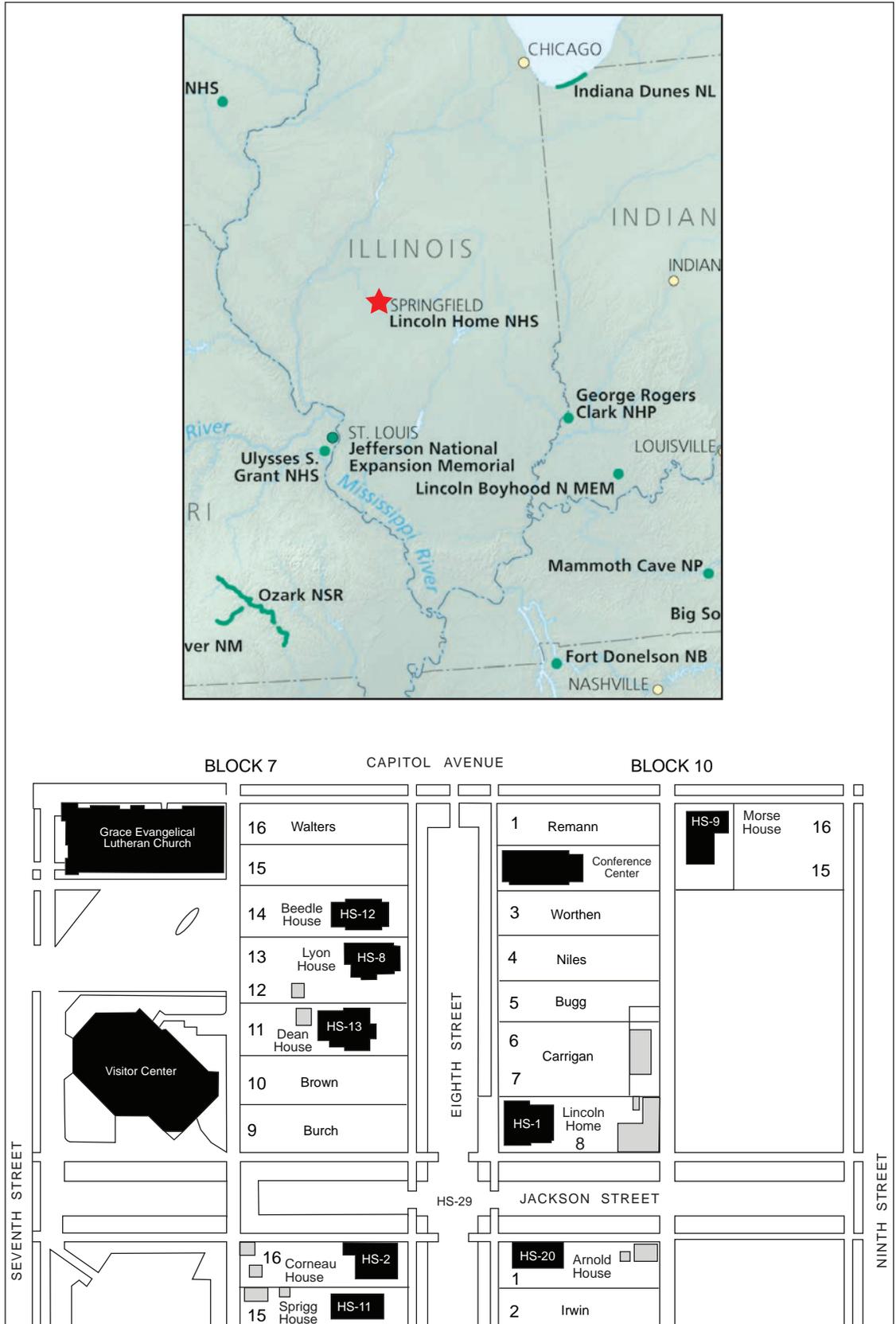
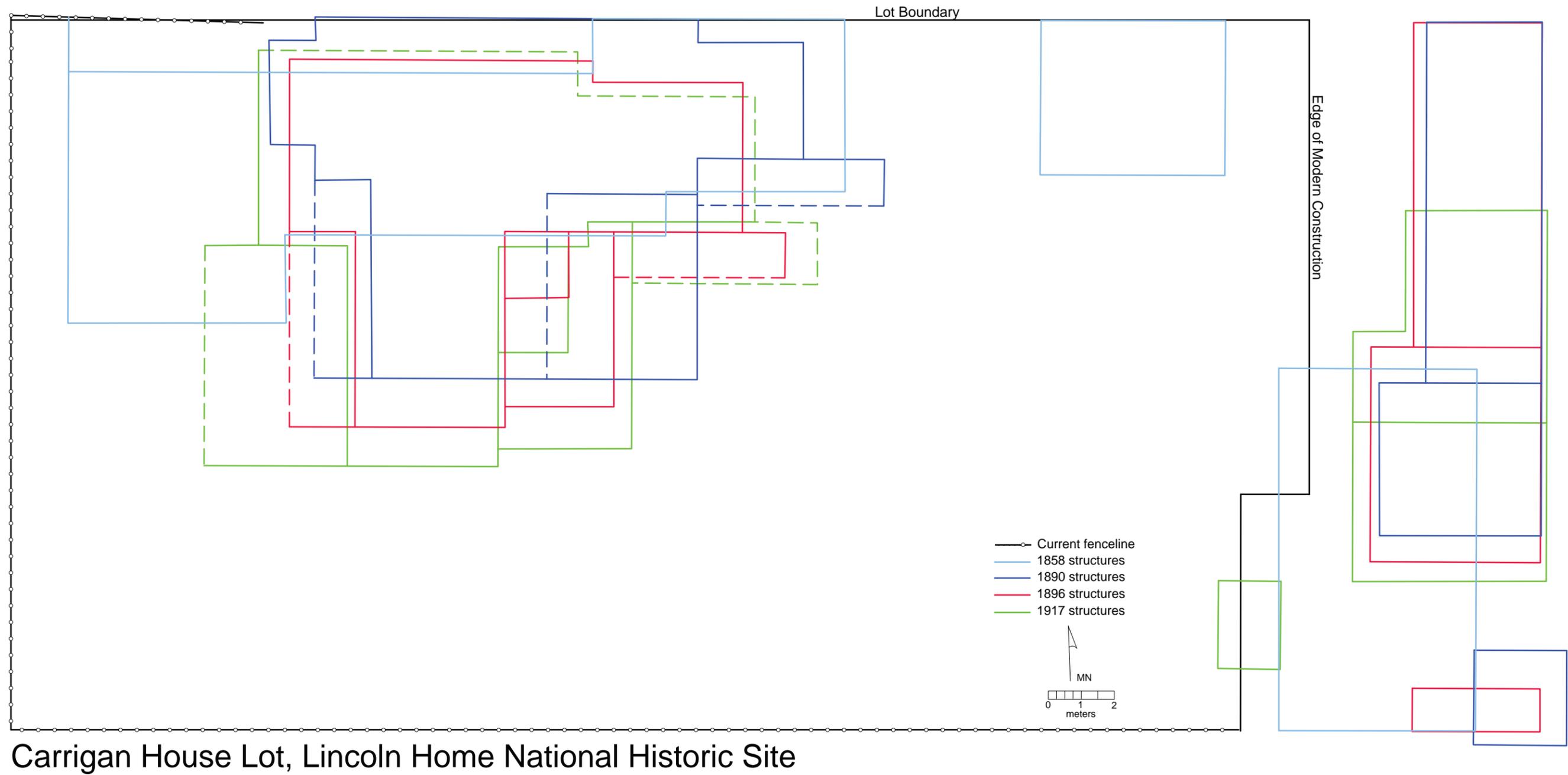


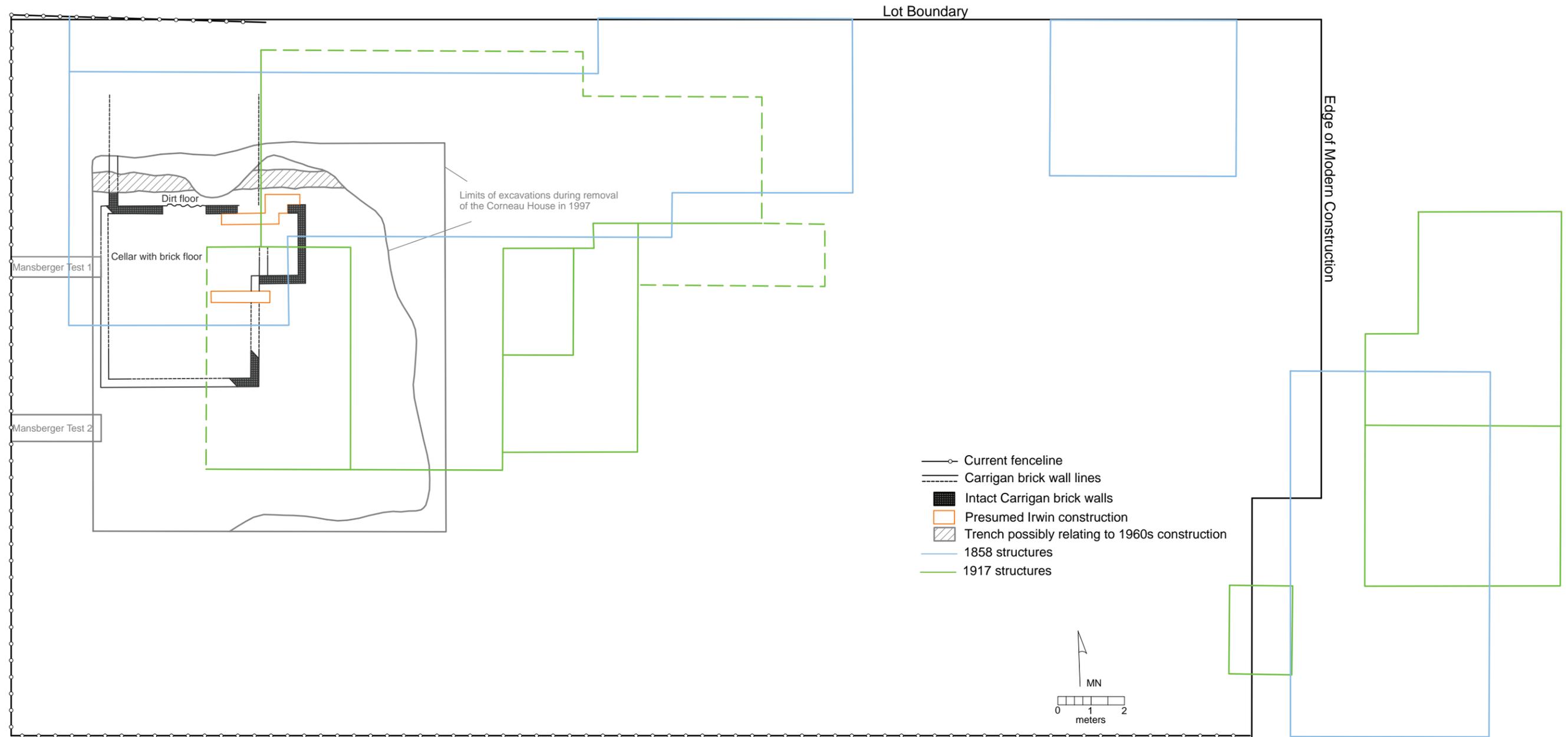
Figure 1. Lincoln Home National Historic Site, Springfield, Illinois.

FIGURES



Carrigan House Lot, Lincoln Home National Historic Site

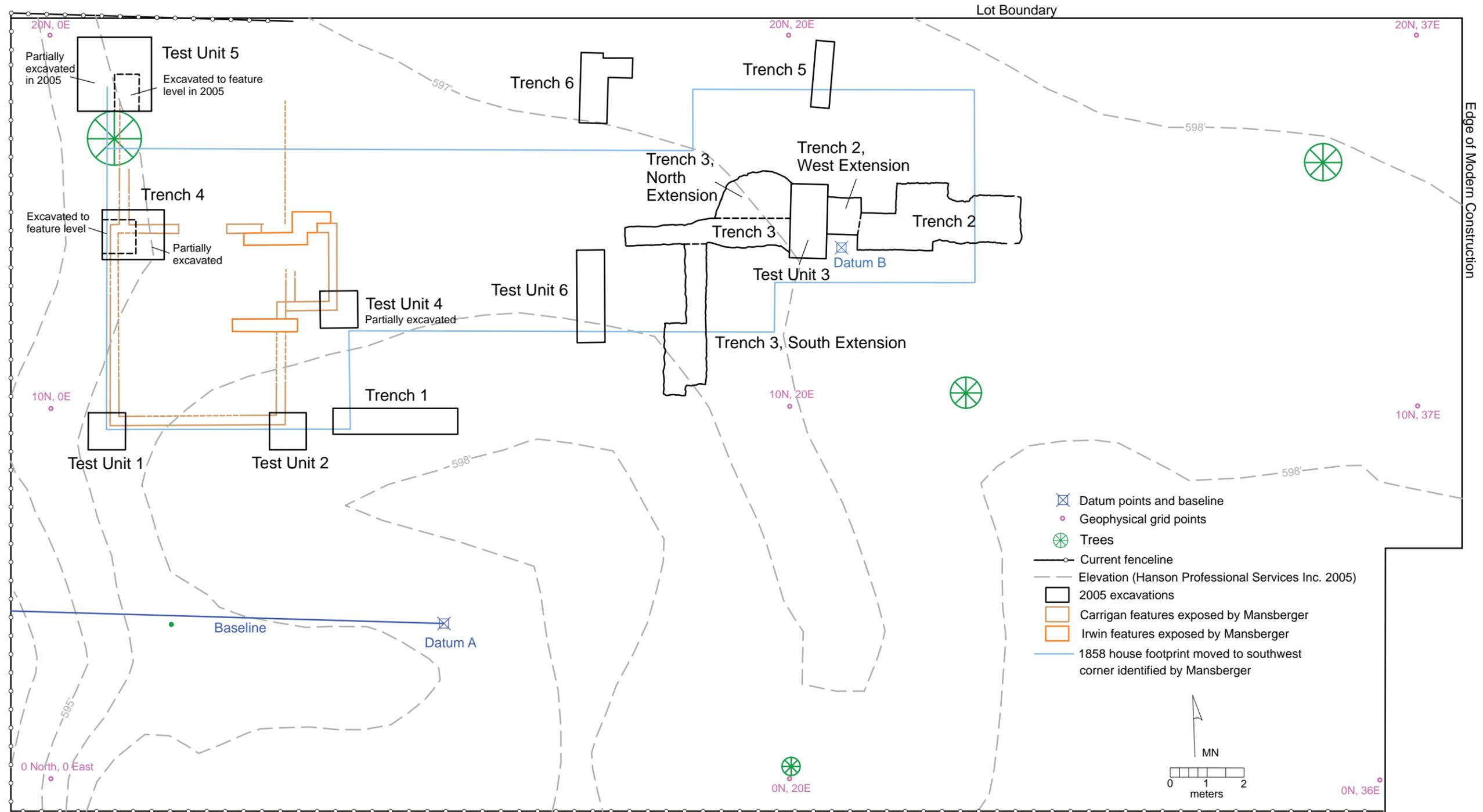
Figure 2. Plan view of the Carrigan property with the locations of structures that formerly stood on the property as depicted on several historic maps.



Carrigan House Lot, Lincoln Home National Historic Site

Figure 3. Plan view of the Carrigan property with archeological features relating to the Carrigan and Irwin houses exposed by Mansberger in 1997 during removal of the Corneau house.

FIGURES



Carrigan House Lot, Lincoln Home National Historic Site

Figure 4. Plan view of the Carrigan property with references for the 2005 archeological field methodology.

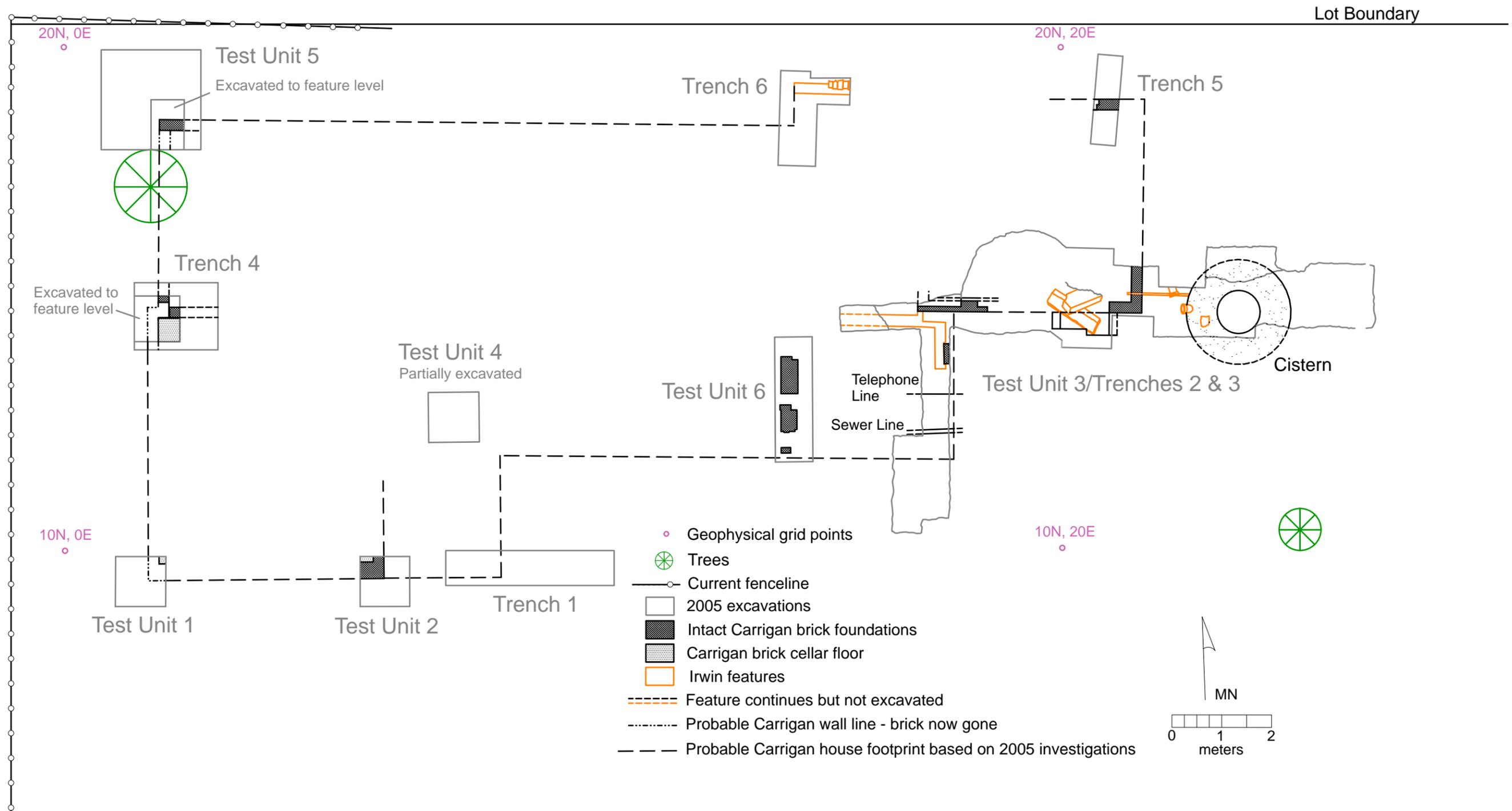
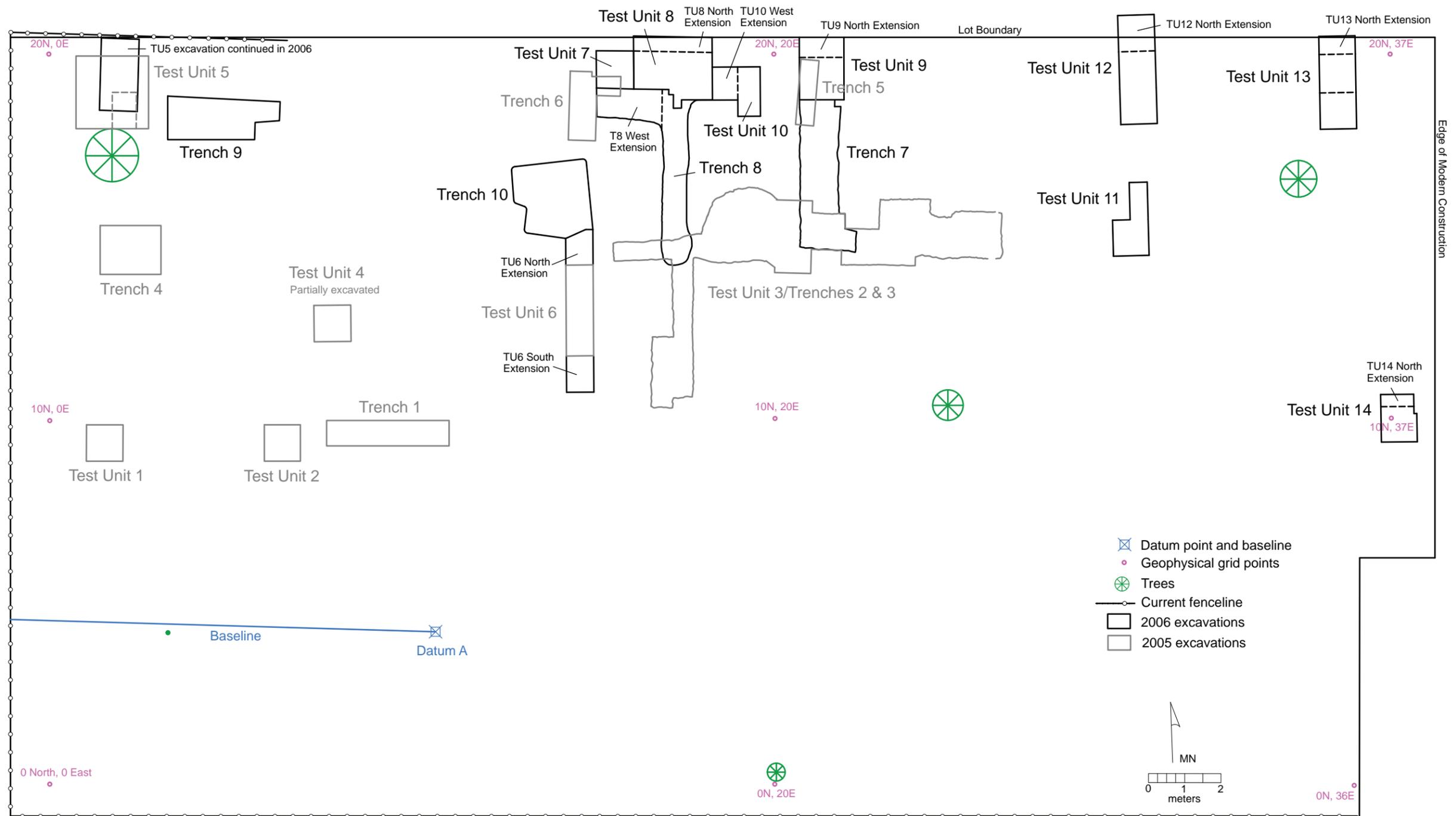


Figure 5. Plan view of the Carrigan property with archeological features relating to the Carrigan and Irwin houses identified in 2005.

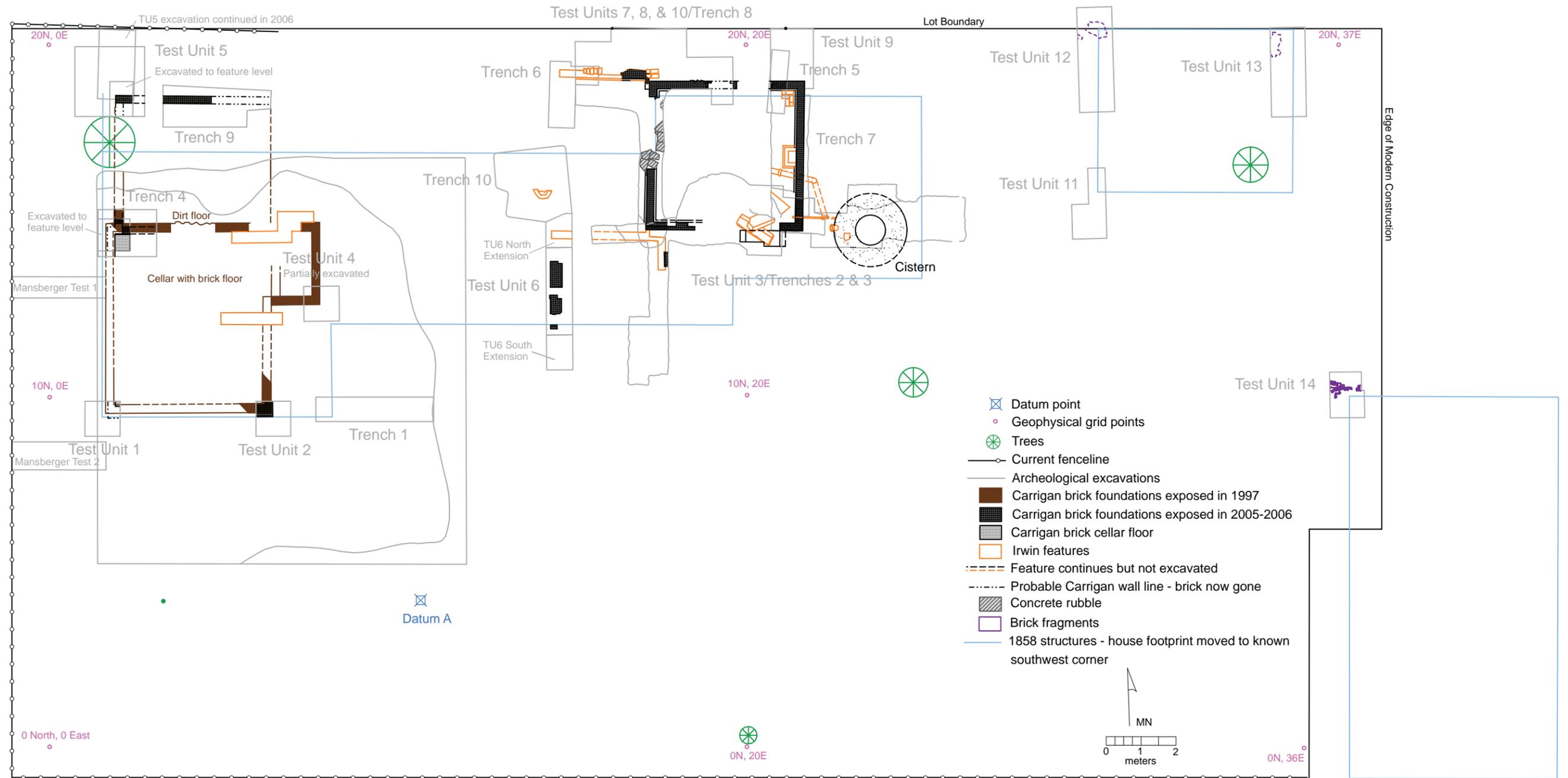
FIGURES



Carrigan House Lot, Lincoln Home National Historic Site

Figure 6. Plan view of the Carrigan property with references for the 2006 archeological field methodology.

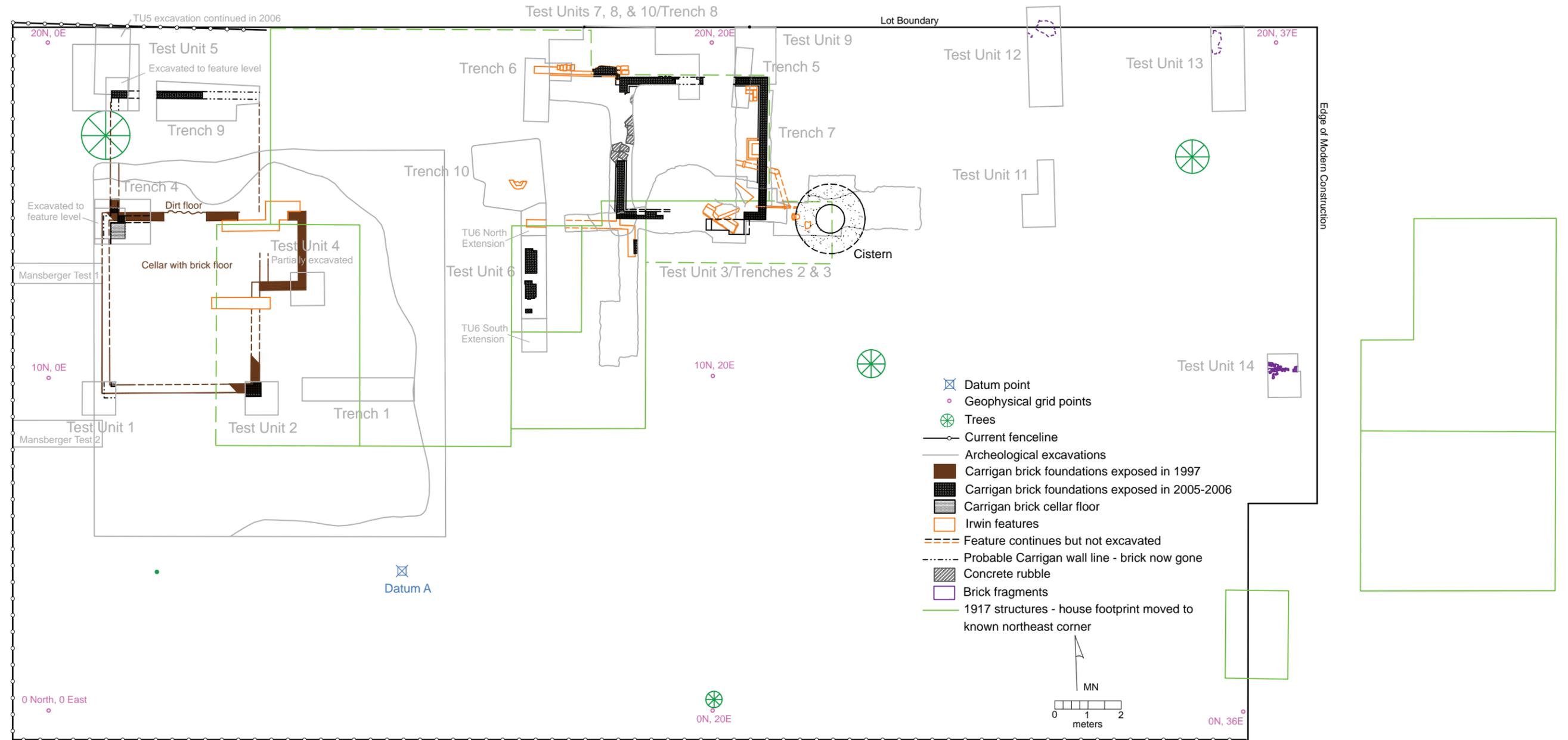
FIGURES



Carrigan House Lot, Lincoln Home National Historic Site

Figure 7. Plan view of the Carrigan property with archeological features identified in 1997, 2005, and 2006 relative to the locations of the Carrigan house and outbuildings as depicted in 1858.

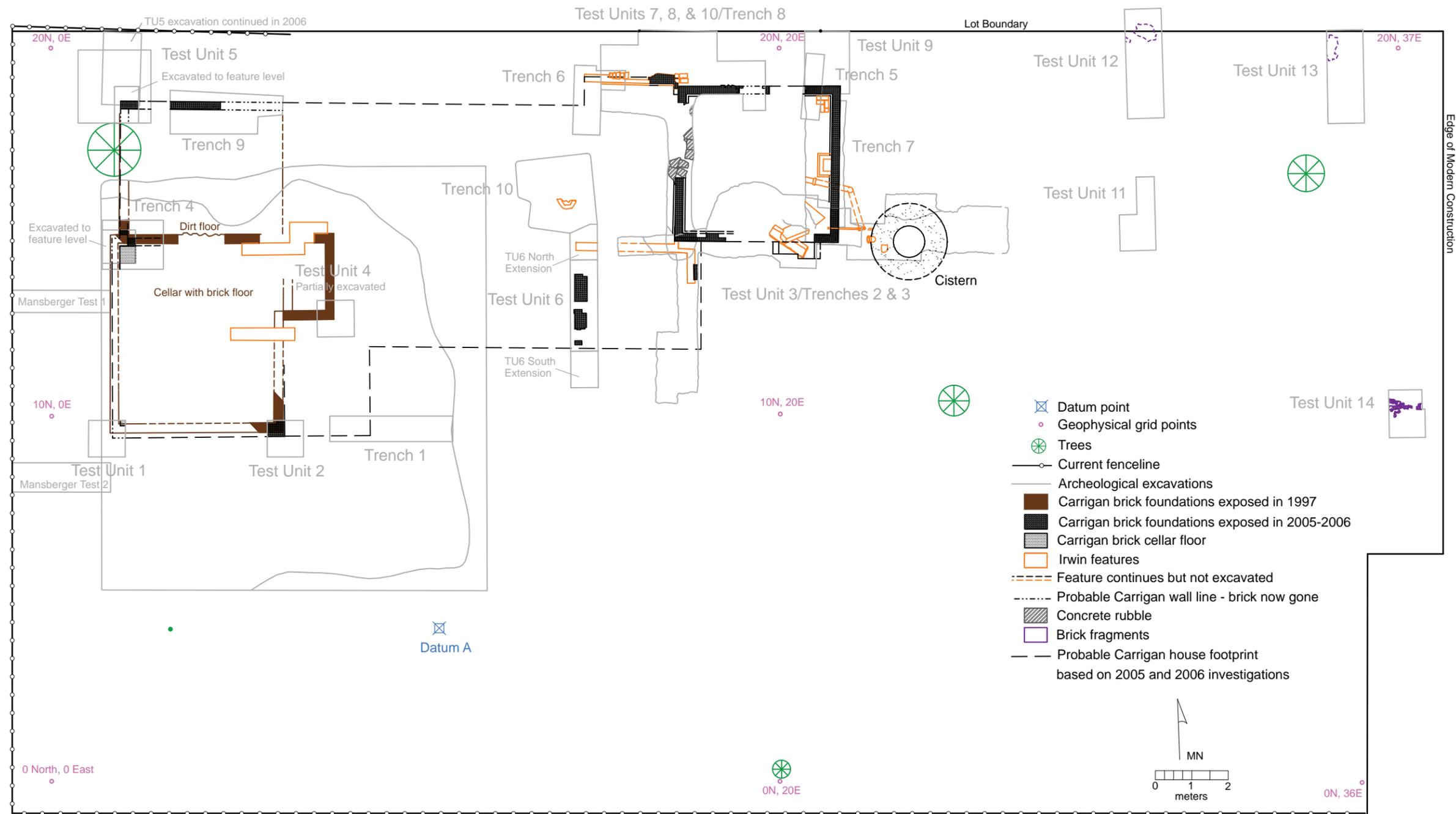
FIGURES



Carrigan House Lot, Lincoln Home National Historic Site

Figure 8. Plan view of the Carrigan property with archeological features identified in 1997, 2005, and 2006 relative to the locations of the Irwin house and outbuildings as depicted in 1917.

FIGURES



Carrigan House Lot, Lincoln Home National Historic Site

Figure 9. Plan view of the Carrigan property with the probable footprint of the Carrigan house based on the archeological features identified in 1997, 2005, and 2006.

FIGURES

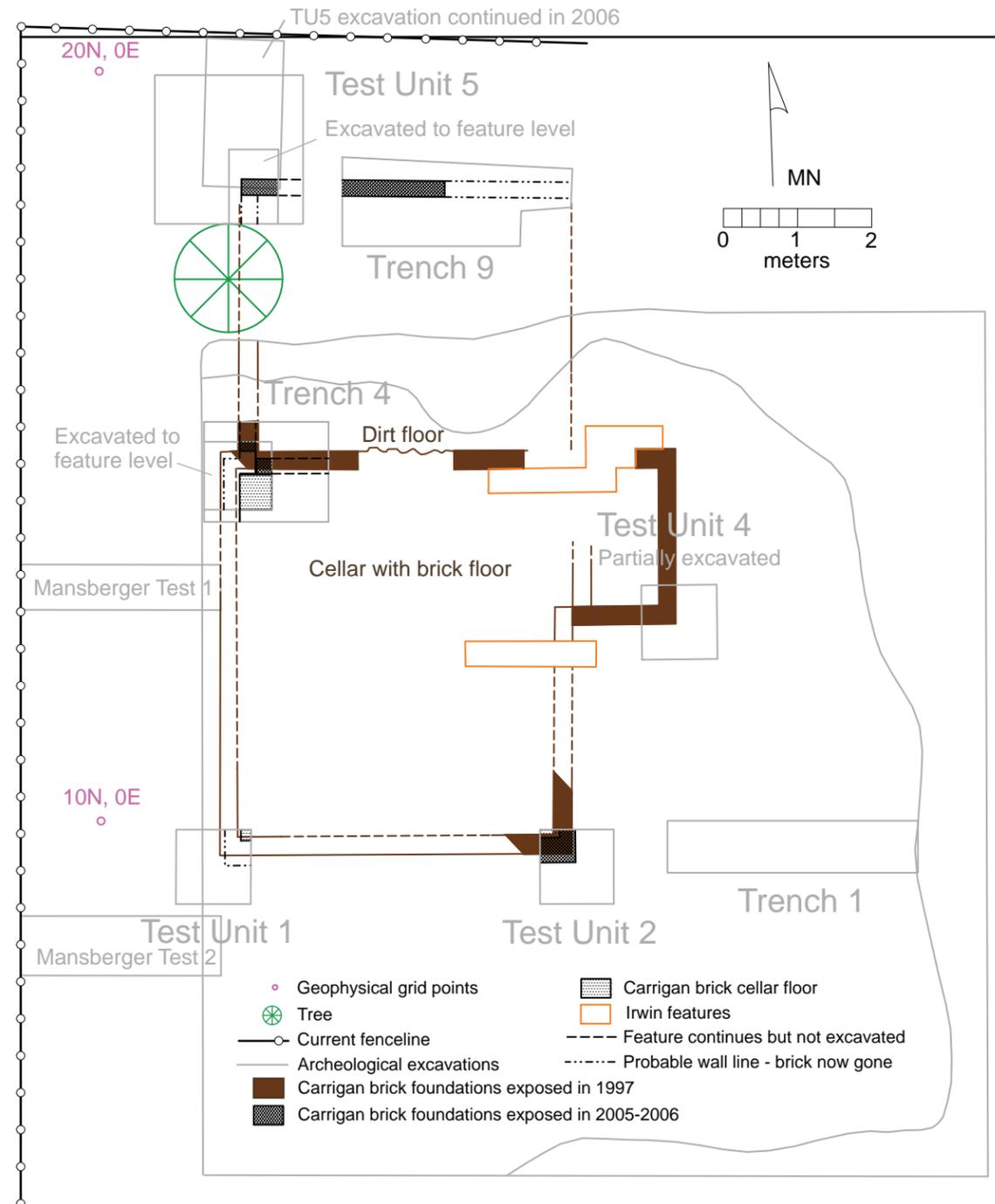


Figure 10. Closeup plan view of archaeological features identified at the front of the Carrigan property.

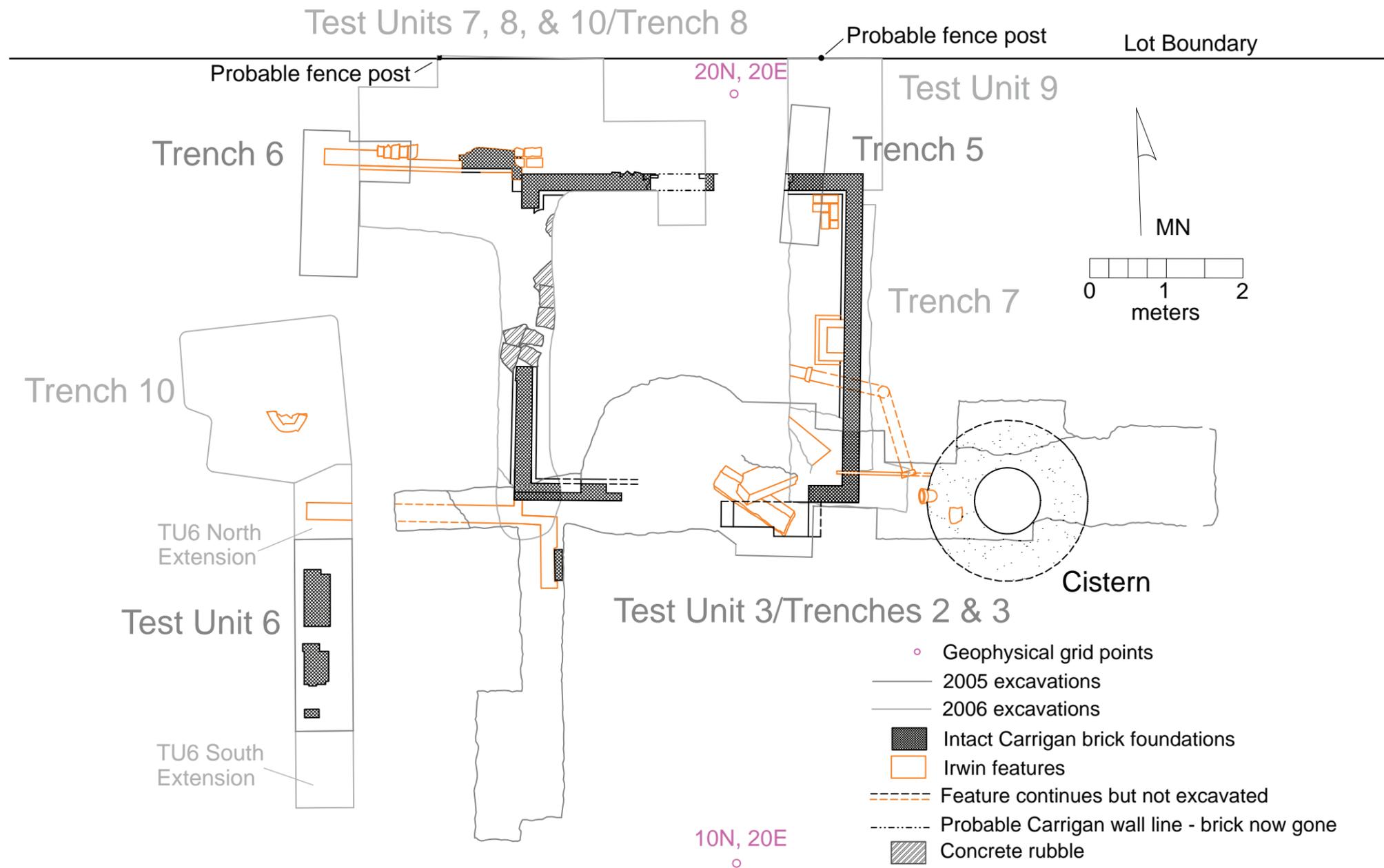


Figure 11. Closeup plan view of archeological features identified in the middle of the Carrigan property that relate to the back sections of the Carrigan and Irwin houses.

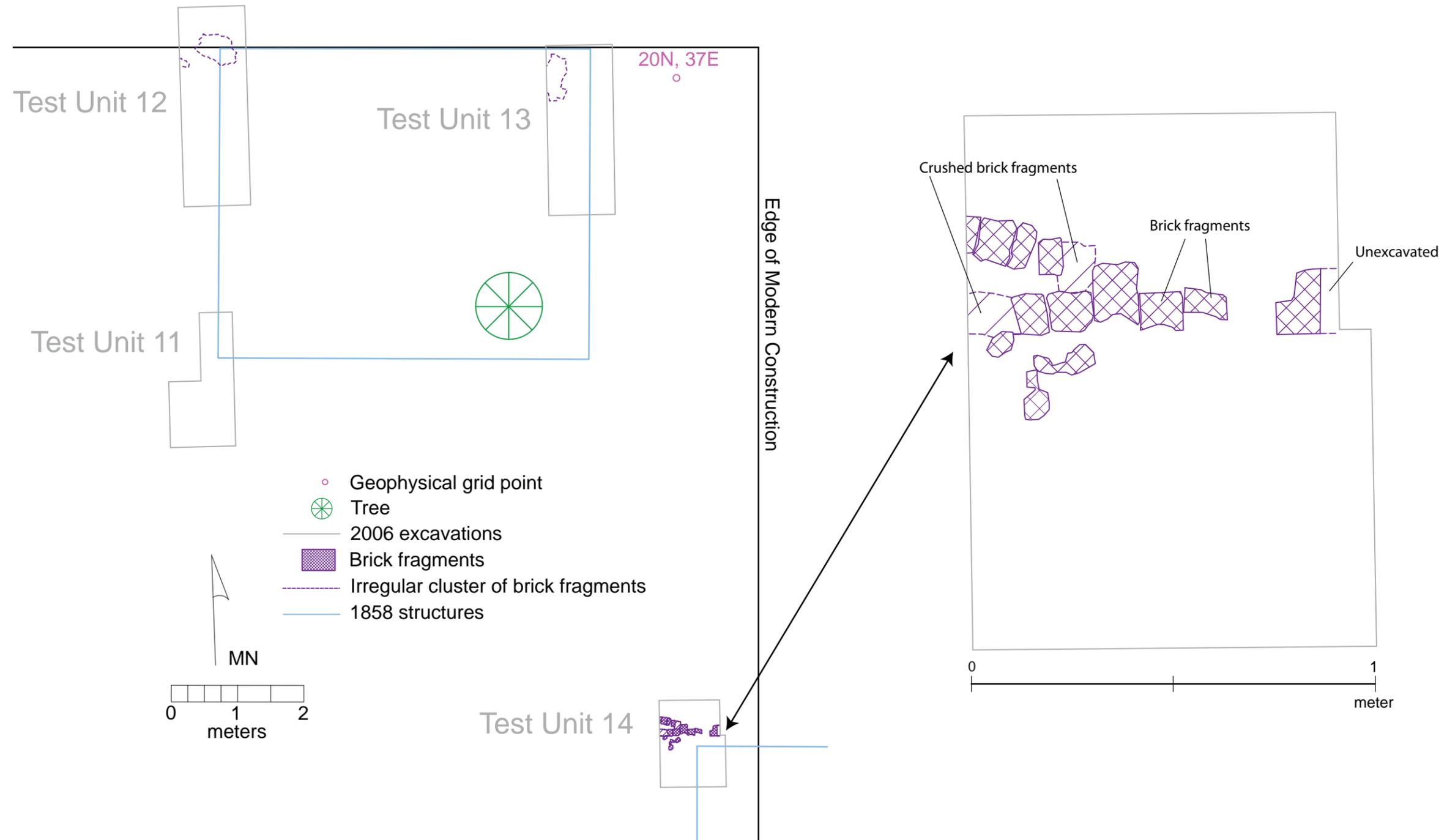


Figure 12. Closeup plan view of archeological features identified toward the back of the Carrigan property.

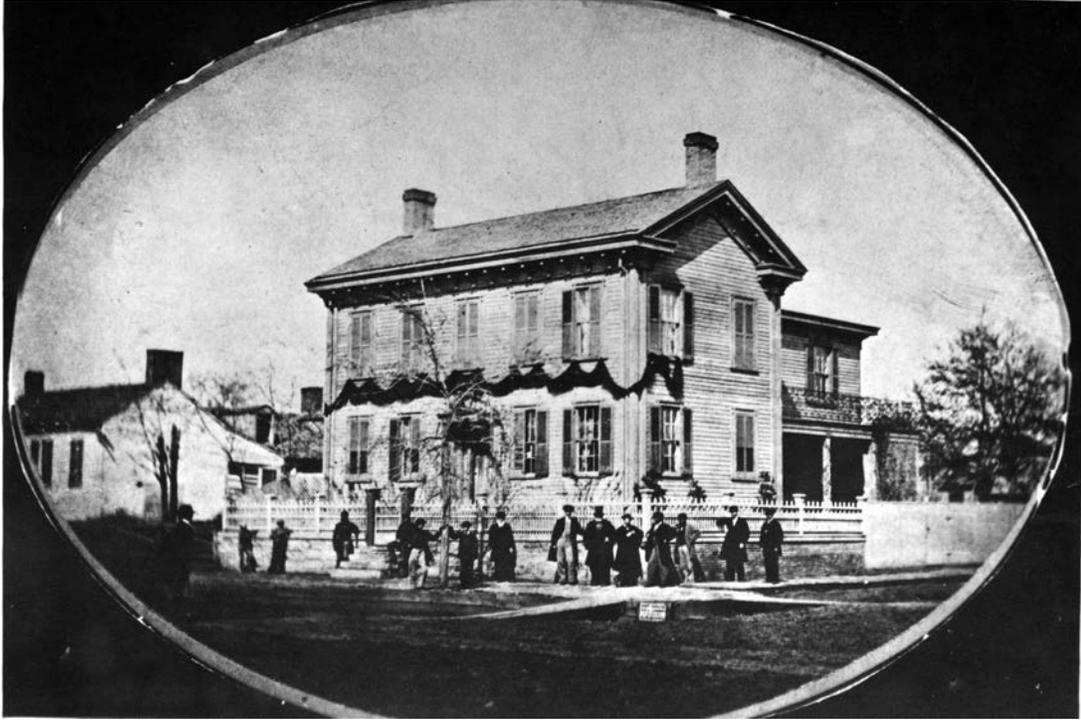


Figure 13. Photograph of the Carrigan house immediately left of the Lincoln Home, taken in the 1860s (Courtesy of the Sangamon Valley Collection at Lincoln Library).

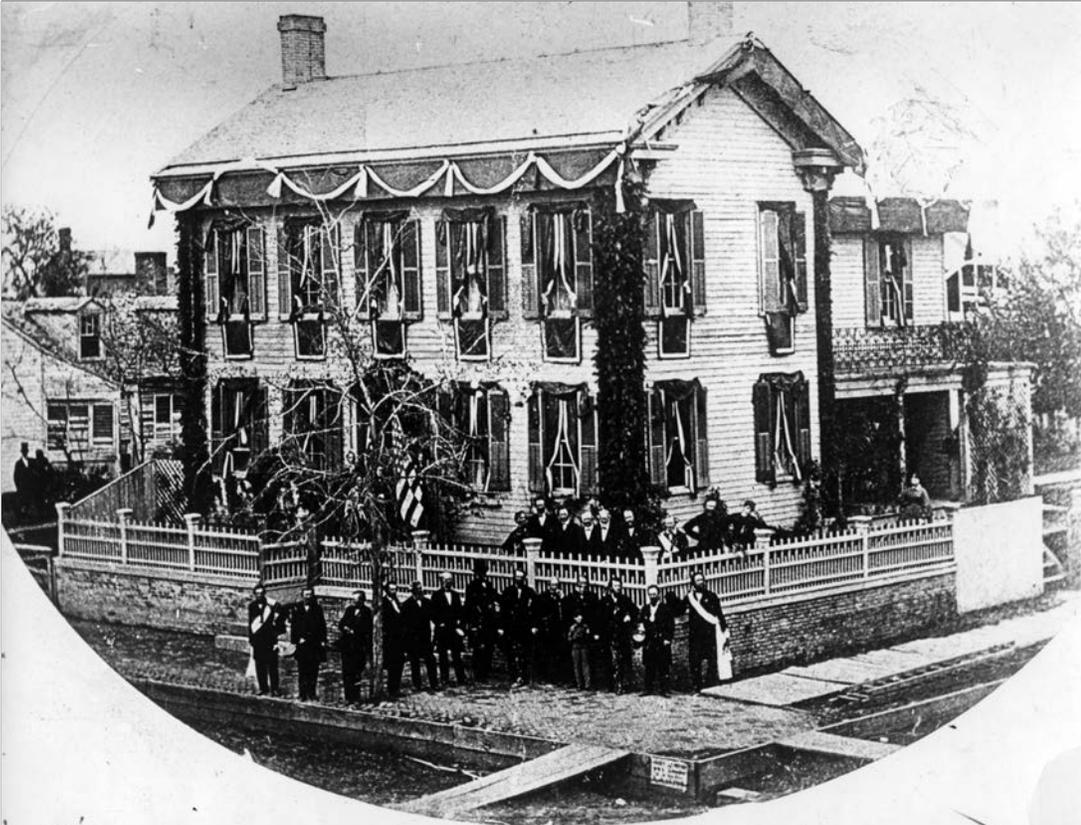


Figure 14. Photograph of the Carrigan house left of the Lincoln Home, taken in 1865 (Courtesy of the Sangamon Valley Collection at Lincoln Library).

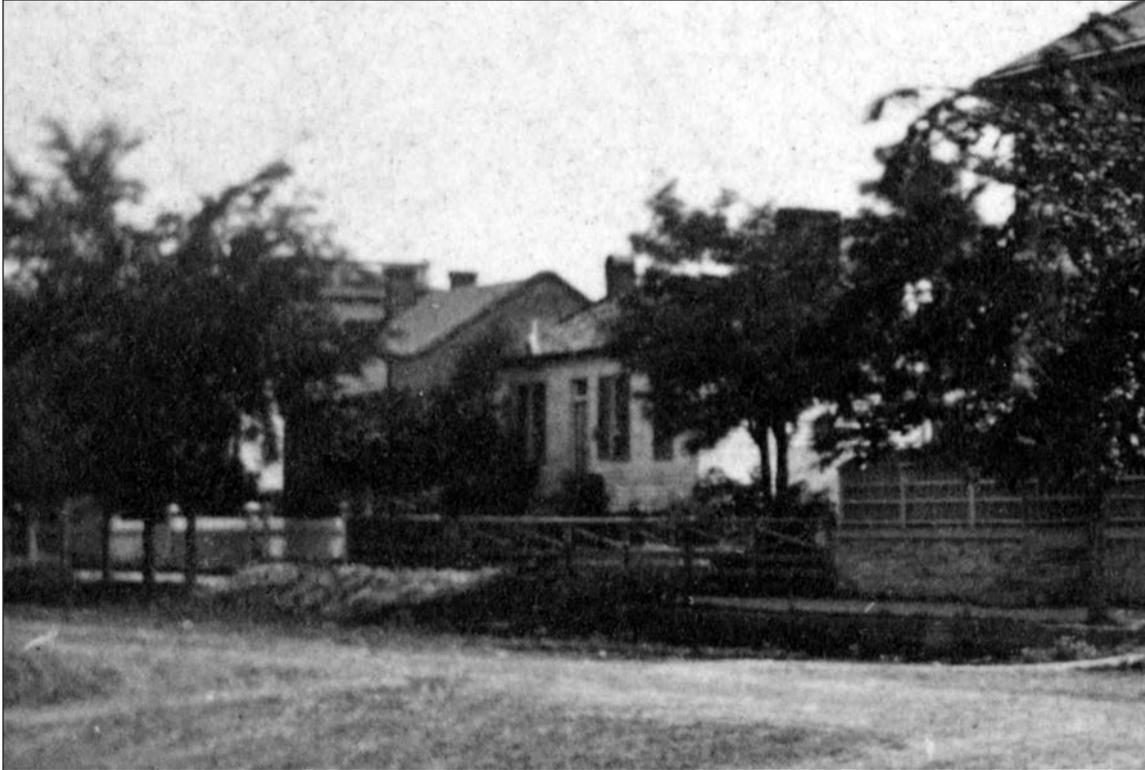


Figure 15. Digitally-enhanced portion of a photograph taken in 1867 showing the front of the Carrigan house (Courtesy of the National Park Service, Lincoln Home National Historic Site; digital enhancement created by the Gerald R. Ford Conservation Center, Omaha, Nebraska).



Figure 16. Photograph of the Carrigan house visible through the trees left of the Lincoln Home, taken in the 1870s (Courtesy of the Sangamon Valley Collection at Lincoln Library).

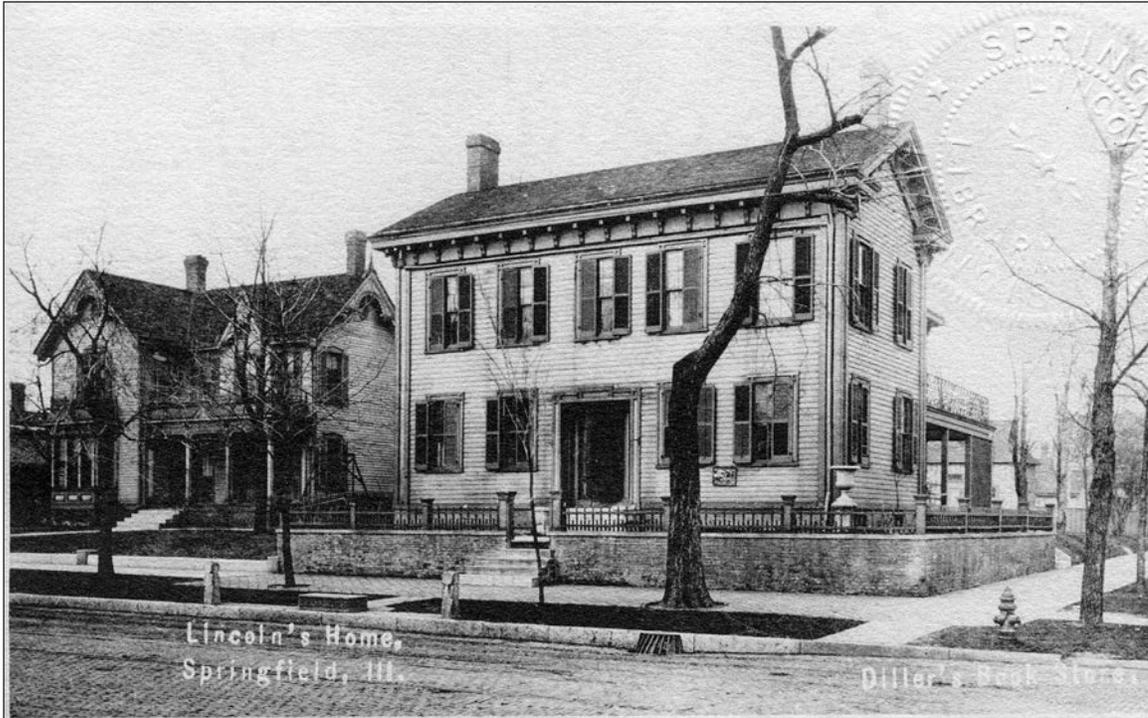


Figure 17. Photograph of the Irwin house left of the Lincoln Home, taken about 1900 (Courtesy of the Sangamon Valley Collection at Lincoln Library).



Figure 18. Photograph showing a rear view of the Lincoln Home (left) and the Irwin house (right) taken around 1890 (Courtesy of the National Park Service, Ford's Theatre National Historic Site).



Figure 19. Photograph of the Corneau house when it was located at the front of the Carrigan property (Courtesy of the National Park Service, Lincoln Home National Historic Site).

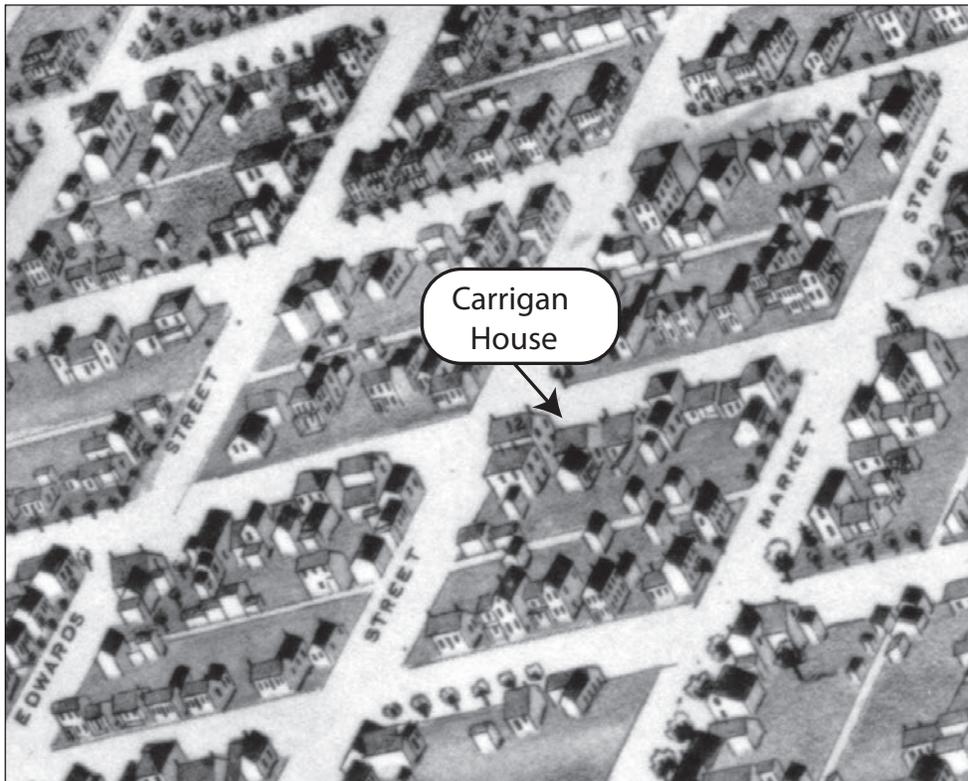


Figure 20. Portion of the 1873 bird's eye view drawing of Springfield by Augustus Koch showing the Carrigan property (Courtesy of the Sangamon Valley Collection at Lincoln Library).

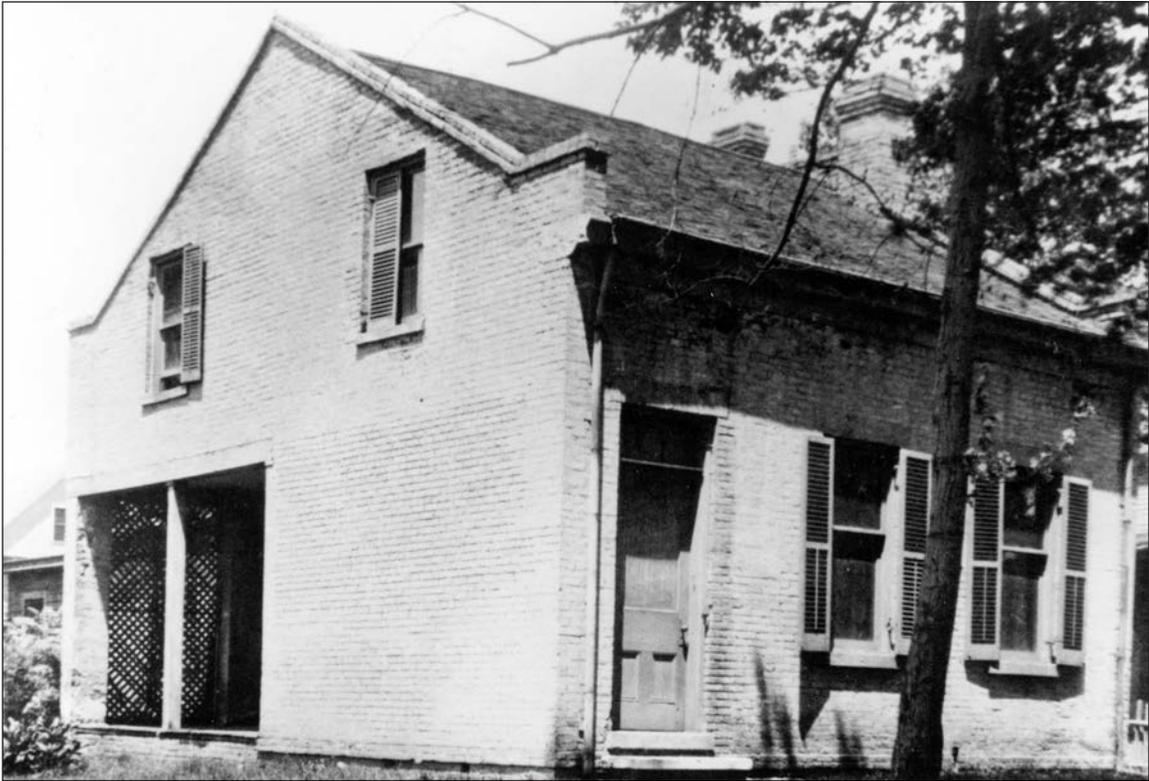
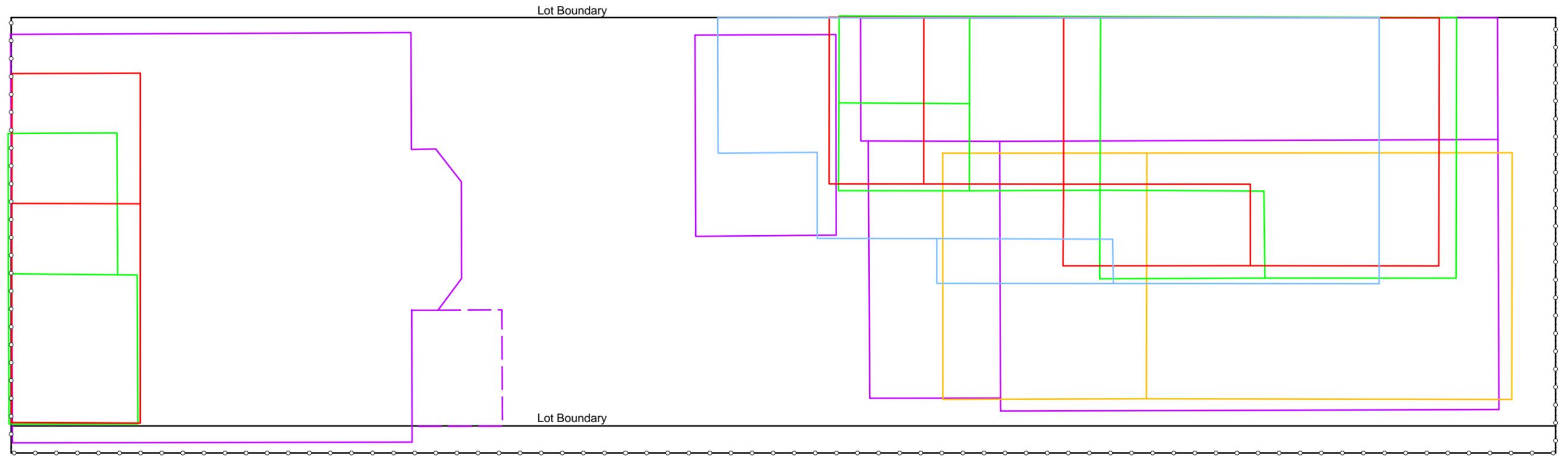


Figure 21. Photograph of the Burch house, taken about 1880 (Courtesy of the National Park Service, Lincoln Home National Historic Site).



Figure 22. Photograph of the Burch lot taken in 1973 with a commercial building on the east end of the property (right in photo) and an apartment building on the west end of the property (center of photo) (Courtesy of the National Park Service, Lincoln Home National Historic Site).

FIGURES



Burch House Lot, Lincoln Home National Historic Site

- Current fenceline
- 1858 structure
- 1890 structures
- 1896 structures
- 1917 structure
- 1941 structures

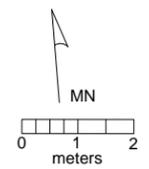
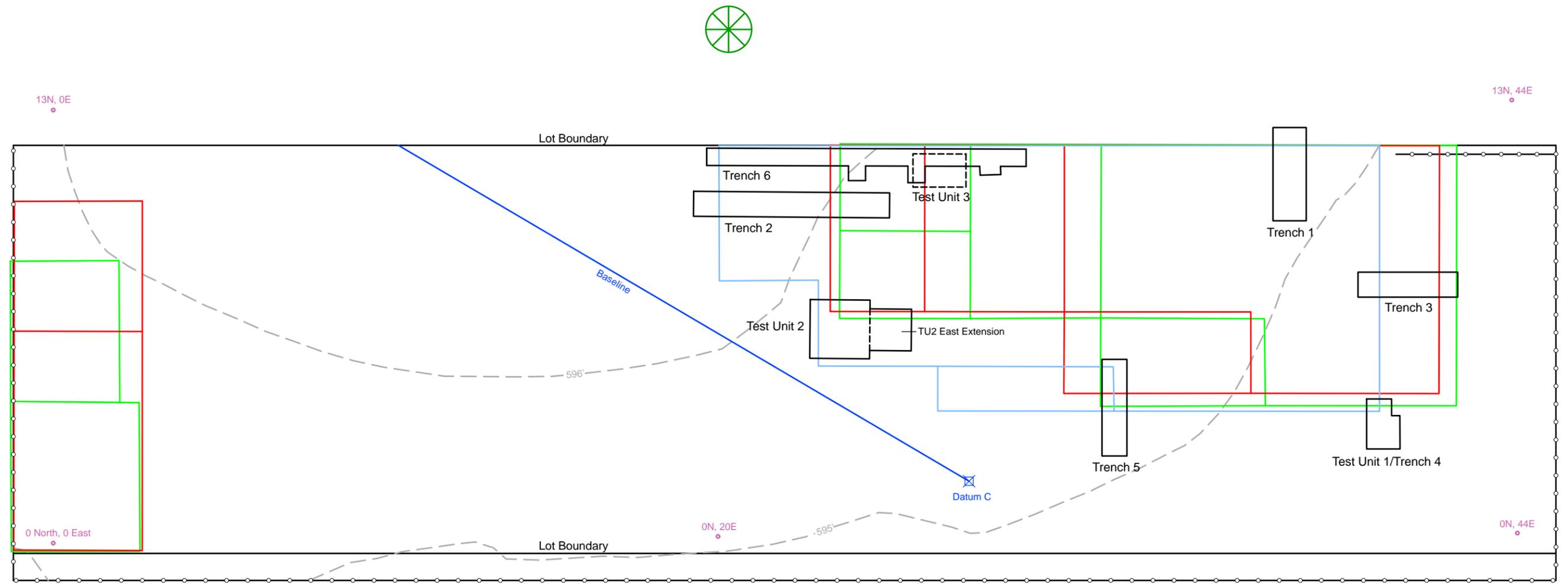


Figure 23. Plan view of the Burch property with the locations of structures that formerly stood on the property as depicted on several historic maps.

FIGURES



Burch House Lot, Lincoln Home National Historic Site

- ⊗ Datum point and baseline
- Geophysical grid points
- 🌳 Tree
- Current fenceline
- - - Elevation (Hanson Professional Services Inc. 2005)
- ▭ 2005 excavations
- 1858 structure
- 1890 structures
- 1896 structures

Figure 24. Plan view of the Burch property with references for the 2005 archeological field methodology.

FIGURES

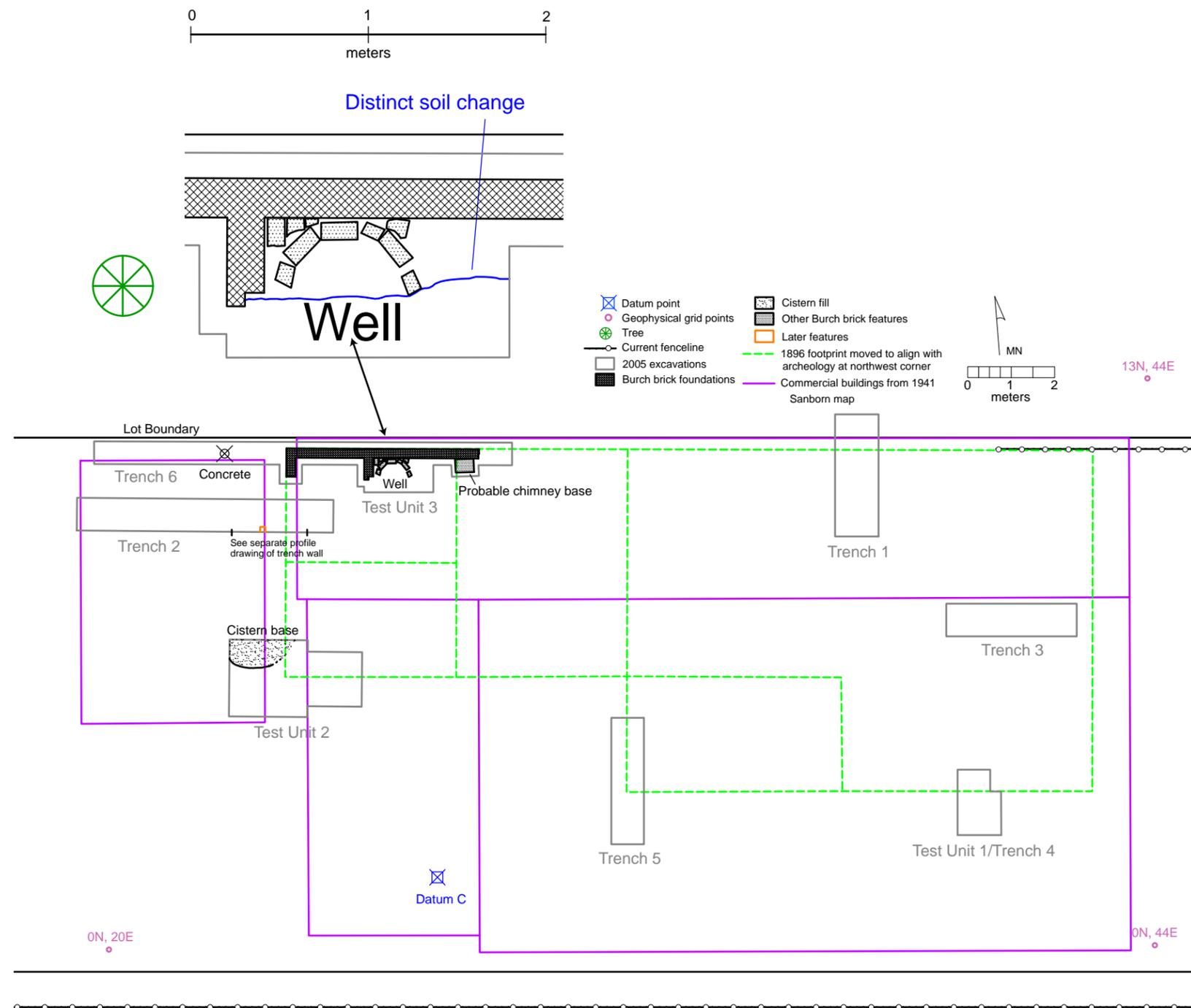
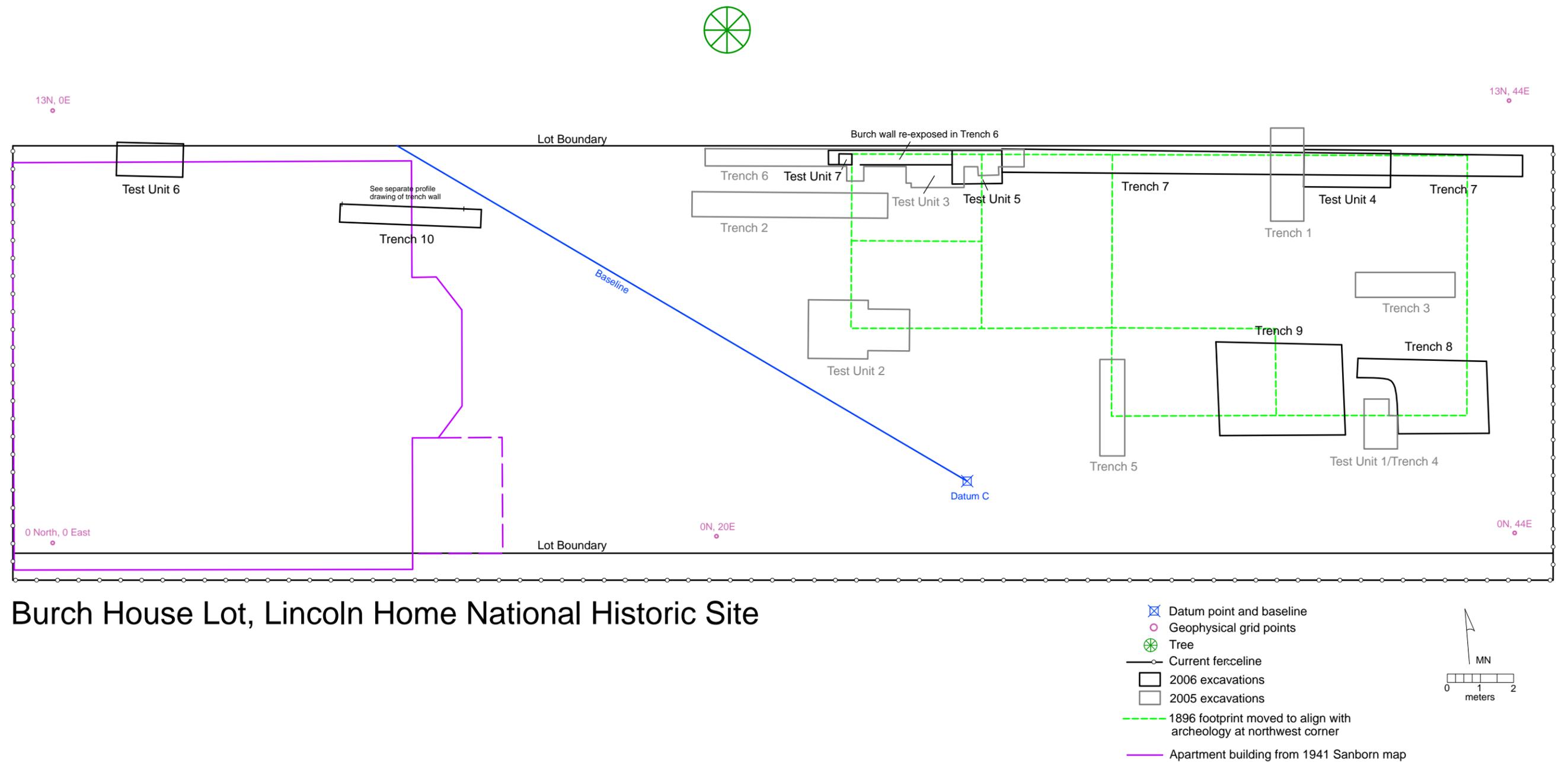


Figure 25. Plan view of the Burch property with archeological features identified in 2005.

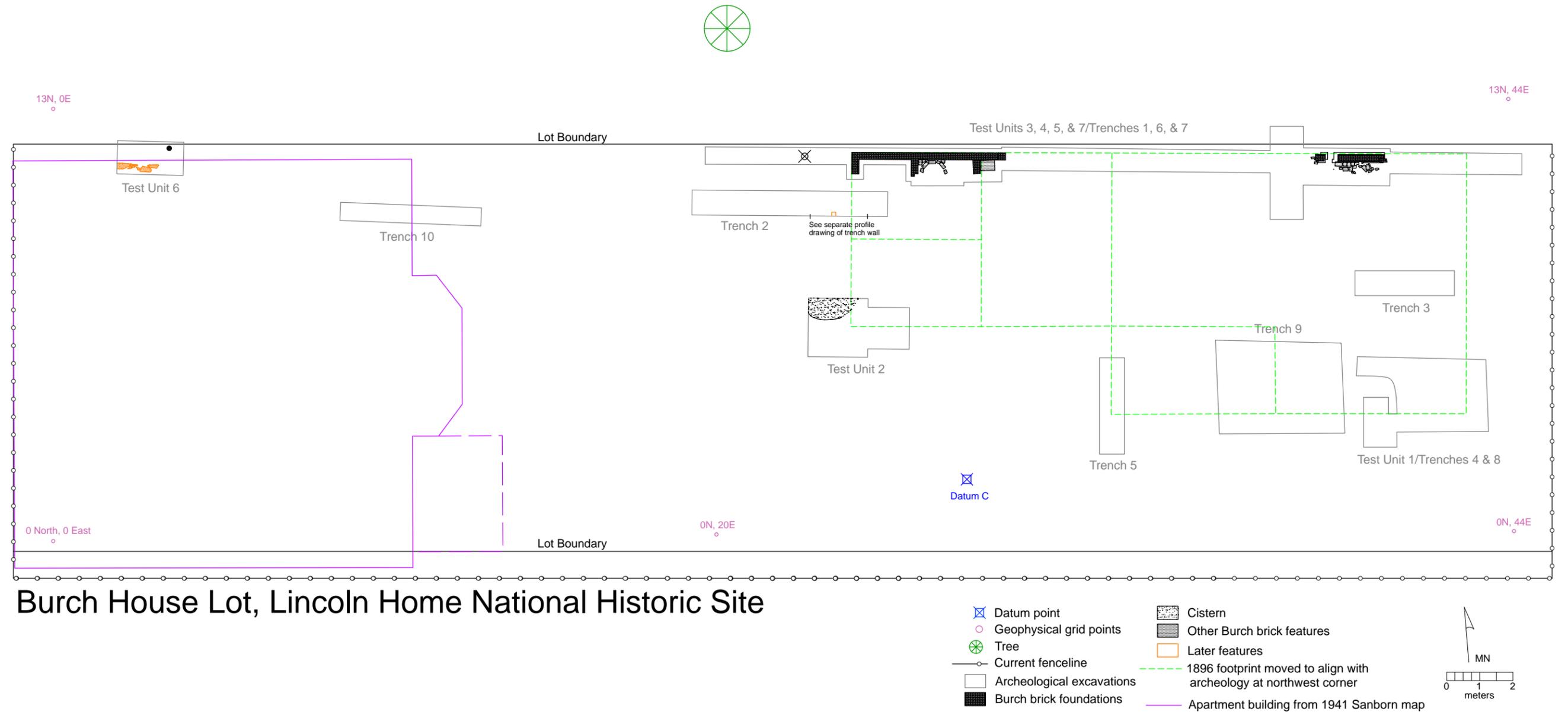
FIGURES



Burch House Lot, Lincoln Home National Historic Site

Figure 26. Plan view of the Burch property with references for the 2006 archeological field methodology.

FIGURES



Burch House Lot, Lincoln Home National Historic Site

Figure 27. Plan view of the Burch property with archeological features identified in 2005 and 2006.

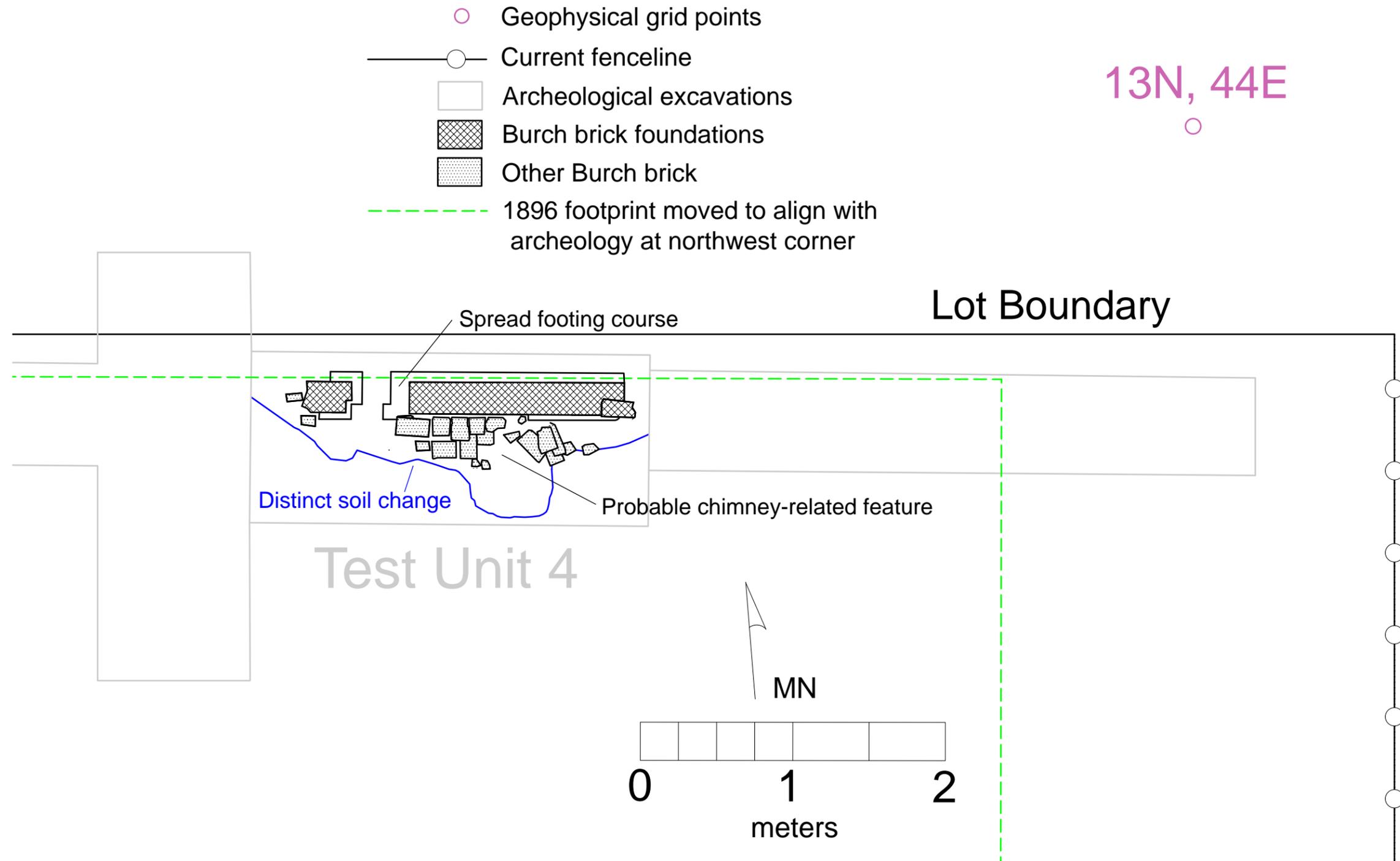


Figure 28. Closeup plan view of archeological features identified at the front of the Burch property.

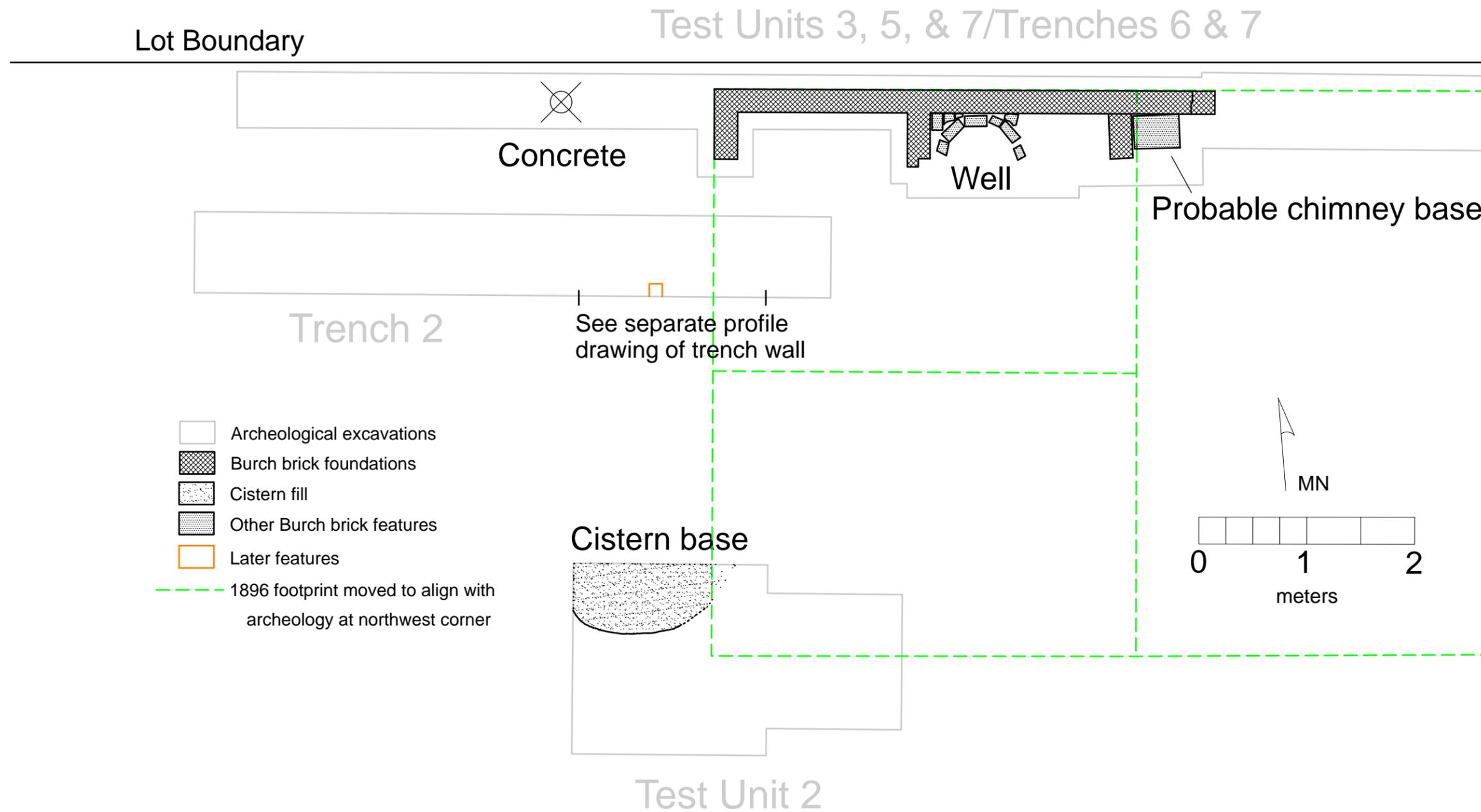


Figure 29. Closeup plan view of archeological features identified in the middle of the Burch property that relate to the back section of the Burch house.

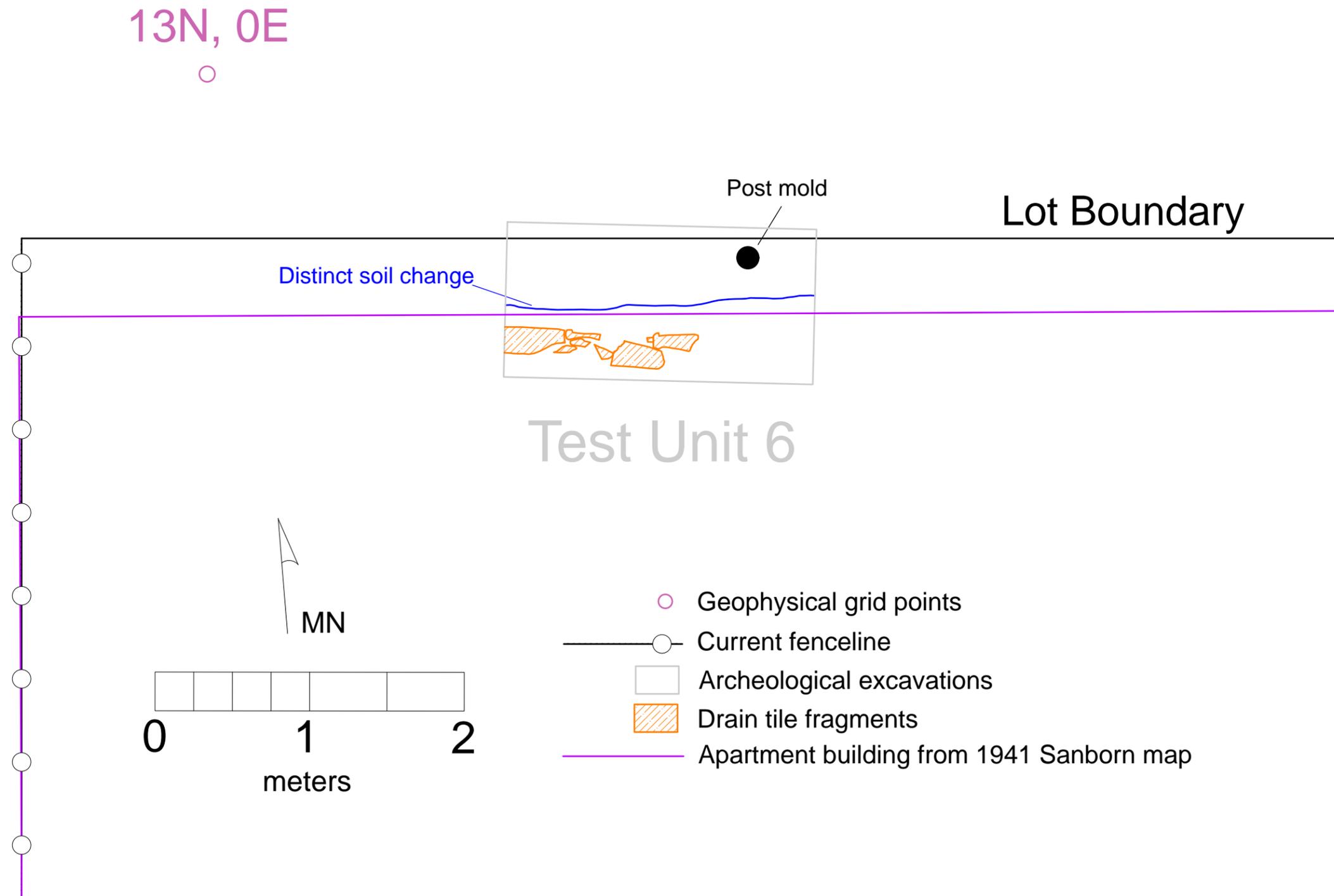


Figure 30. Closeup plan view of archeological features identified at the back of the Burch property.



Figure 31. Carrigan lot, Test Unit 1, north unit wall profile showing the bottom of the builders trench for the Carrigan house foundation, now gone, and the southwest corner of the brick cellar floor.

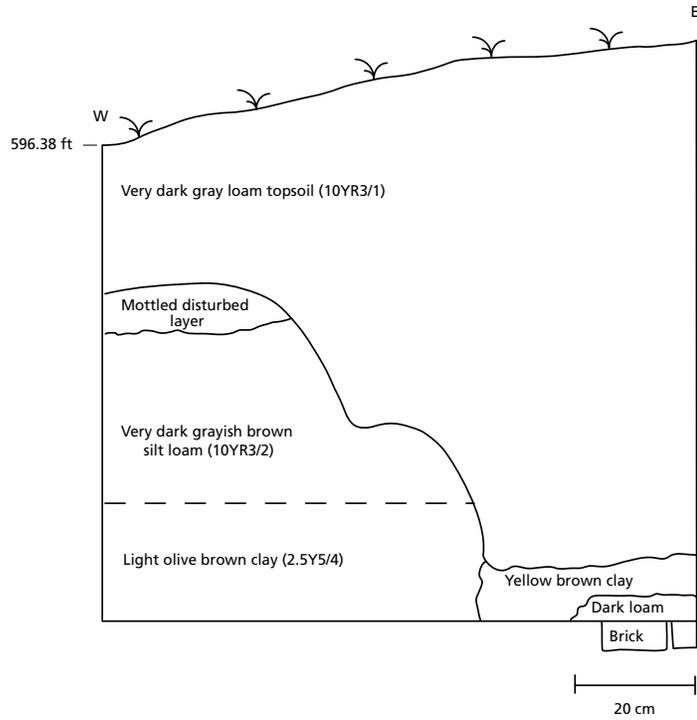


Figure 32. Carrigan lot, Test Unit 1, north unit wall profile drawing.



Figure 33. Carrigan lot, Test Unit 1, east unit wall profile showing the bottom of the builders trench for the Carrigan house foundation, now gone, and the southwest corner of the brick cellar floor.

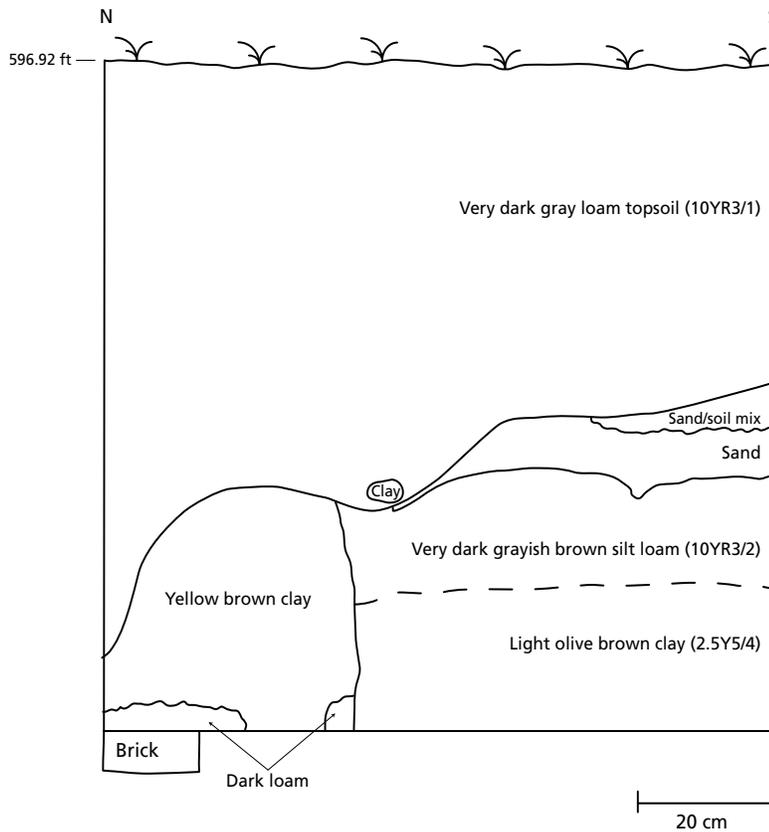


Figure 34. Carrigan lot, Test Unit 1, east unit wall profile drawing.



Figure 35. Carrigan lot, southeast corner of the foundation for the front section of the Carrigan house, seen at the bottom of Test Unit 2.

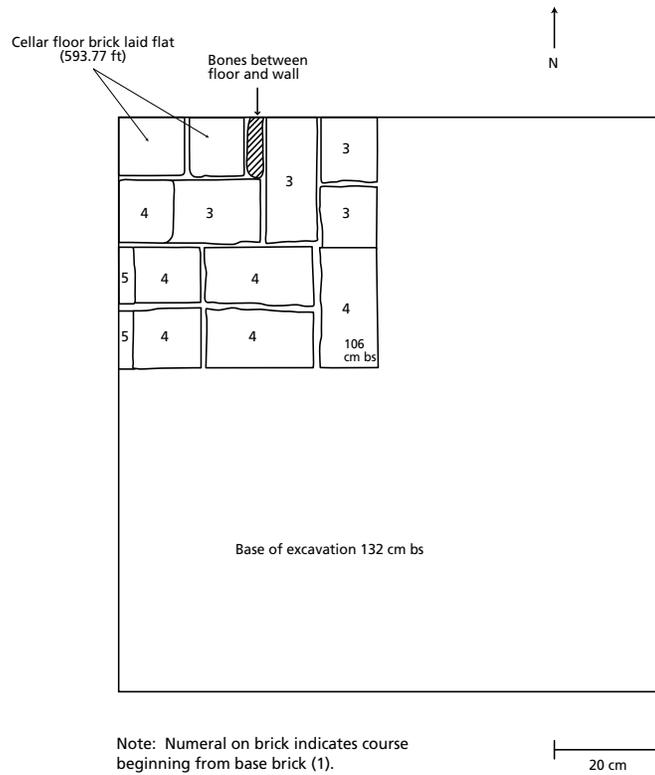


Figure 36. Carrigan lot, Test Unit 2, plan view of the southeast corner of the brick foundation for the front section of the Carrigan house.

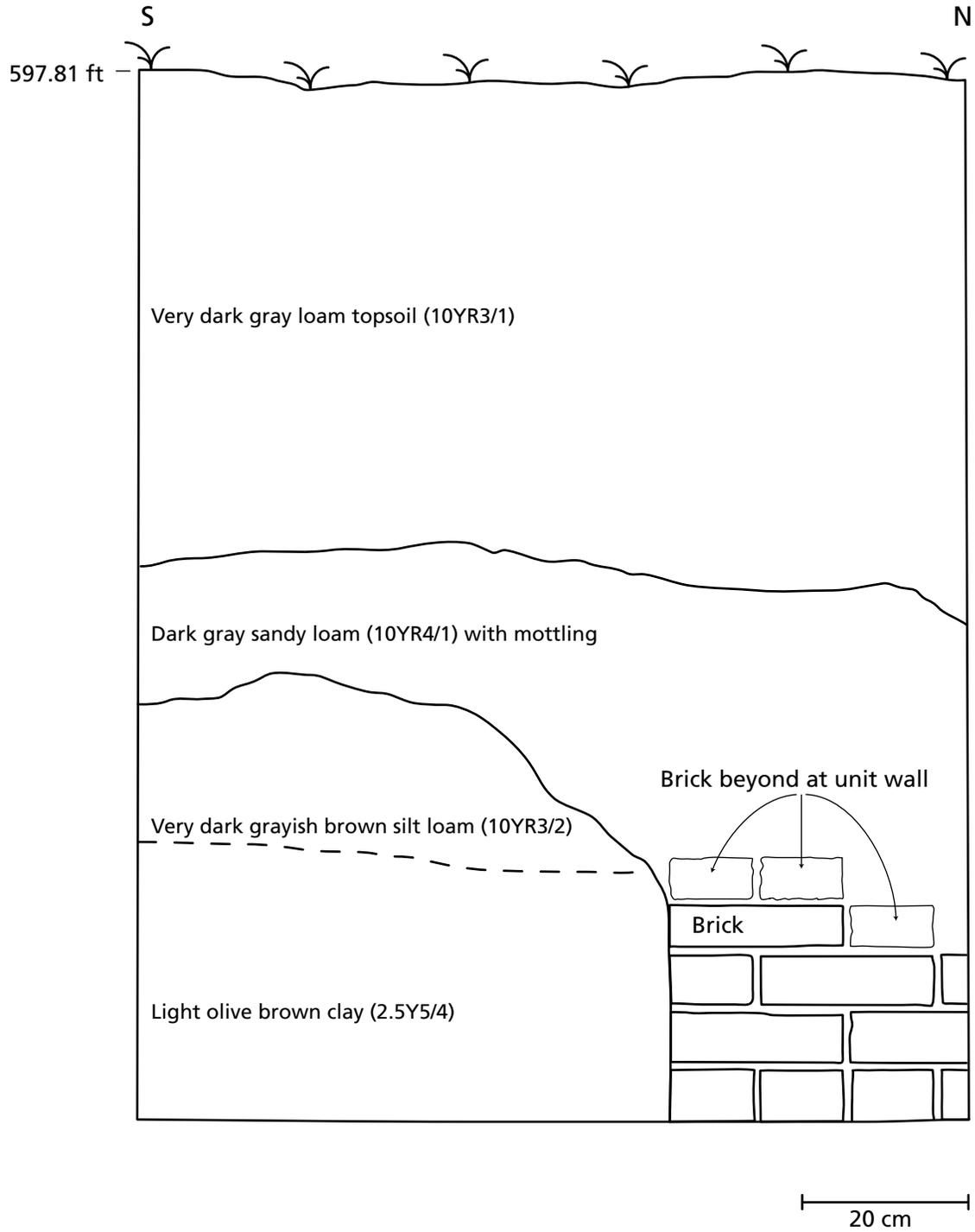


Figure 37. Carrigan lot, Test Unit 2, west unit wall profile drawing.



Figure 38. Carrigan lot, Test Unit 3/Trench 2, view southeast to remains of the southeast corner of the Carrigan/Irwin house (brick foundation at left center in photo), back cellar entry features, and stoneware drain tile and iron pipe extending from the cistern.



Figure 39. Carrigan lot, Test Unit 3/ Trenches 2 and 3, view east to back cellar entry features including the finished east jamb for the cellar entryway (top center), two displaced dressed stones, sloped brick paving (bottom right extending under a stone), and the remnants of brick cheek walls (bottom right and to right of jamb).



Figure 40. Carrigan lot, Trench 3, structural remains including the southwest corner of the Carrigan back addition (top left) and Carrigan foundation, an Irwin house wall (center), and four Carrigan half-bricks (along right side of Irwin wall).



Figure 41. Carrigan lot, Test Unit 3, east unit wall profile showing the east jamb of the back cellar entryway (bottom center) and fill stratigraphy.

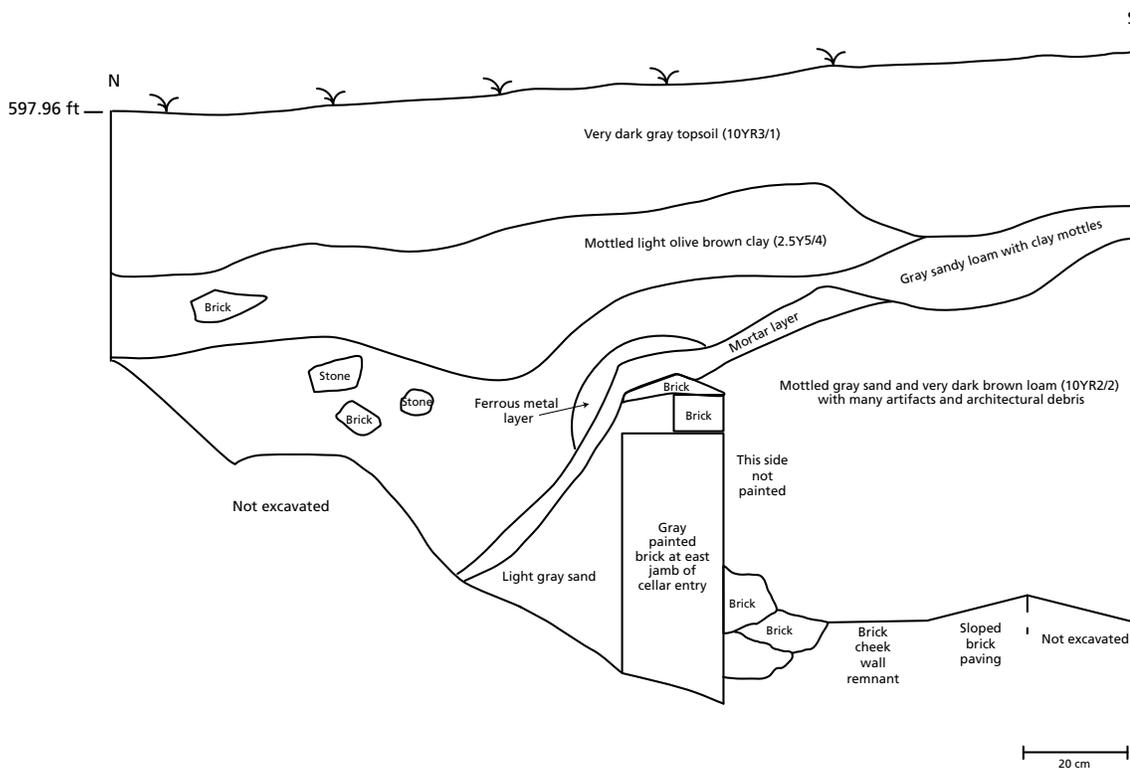


Figure 42. Carrigan lot, Test Unit 3, east unit wall profile drawing.



Figure 43. Carrigan lot, Trench 2, cistern-related features including the cistern cap (right half of photo), stoneware drain tile, iron pipe, and limestone mortared to top of cistern.



Figure 44. Carrigan lot, view southeast across Test Unit 5 excavated in 2005, with the northwest corner of the Carrigan house foundation exposed in the bottom of the unit.



Figure 45. Carrigan lot, Test Unit 5, closeup of bottom two courses of brick at the northwest corner of the Carrigan house.



Figure 46. Carrigan lot, Test Unit 6, brick alignment interpreted as the remains of a porch support.



Figure 47. Carrigan lot, Trench 4, brick cellar floor (left) and brick foundation remains (right) at a jog in the front (west) wall of the Carrigan house.

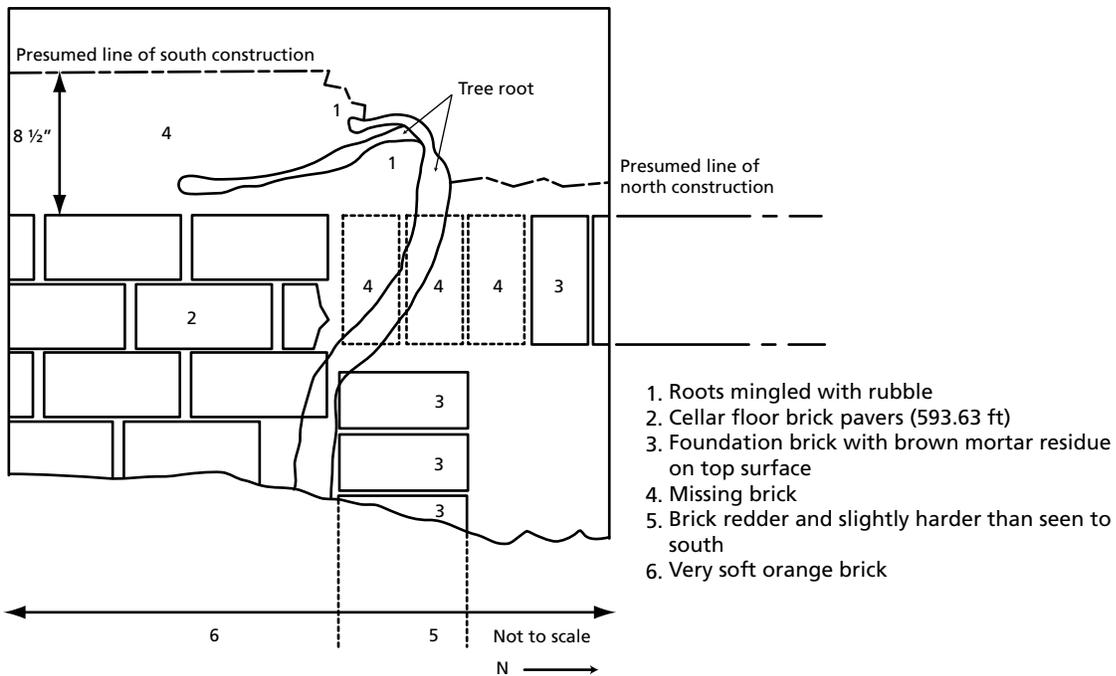


Figure 48. Carrigan lot, Trench 4, schematic drawing of the jog in the front (west) wall of the Carrigan house at approximately 1 meter below the present ground surface.



Figure 49. Carrigan lot, Trench 5, north foundation wall of the Carrigan house.



Figure 50. Carrigan lot, Trench 6, north foundation of the Irwin house.

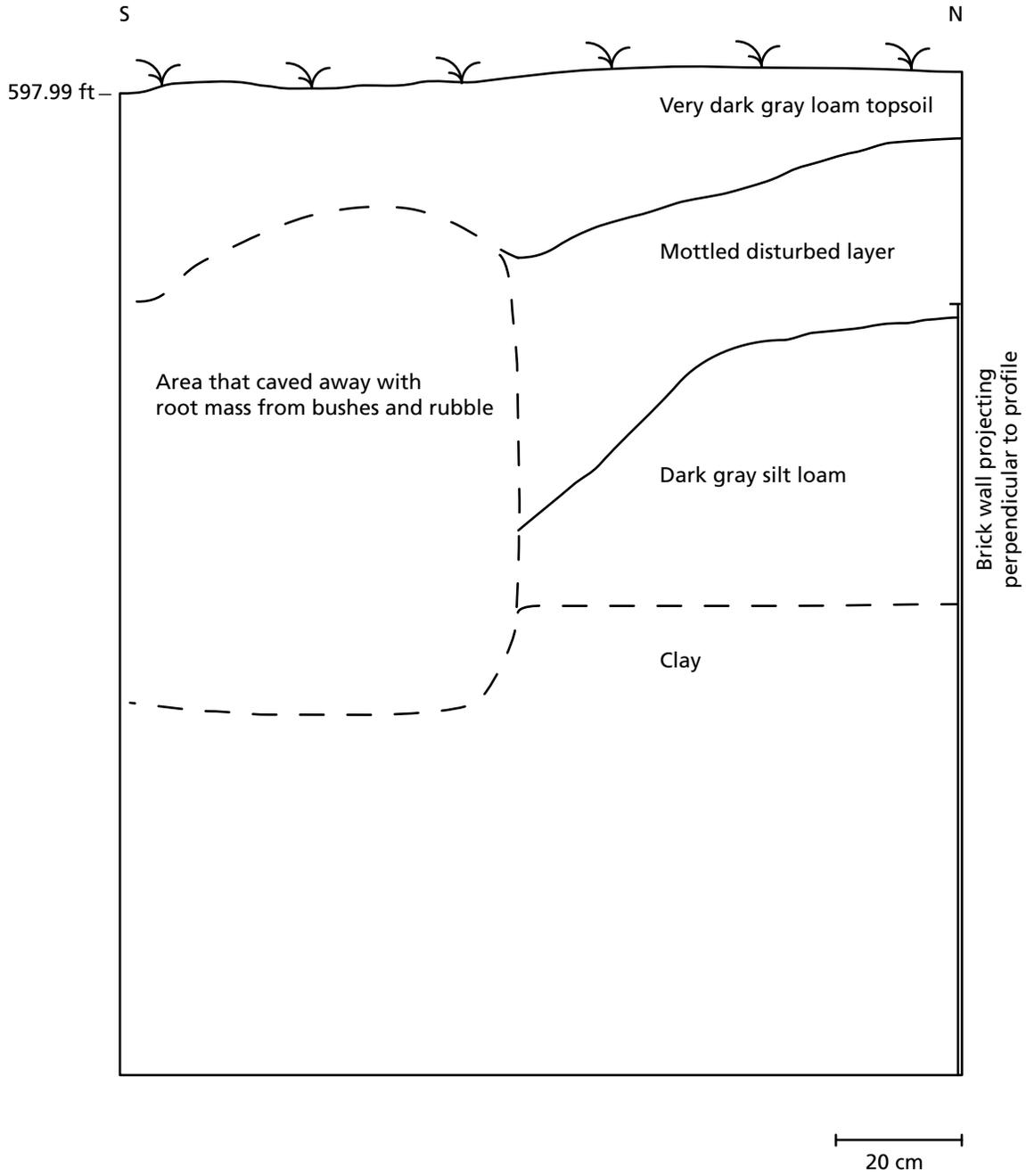


Figure 51. Carrigan lot, Trench 6, west unit wall profile drawing.



Figure 52. Carrigan lot, Trench 6, rough arc of Carrigan brick atop a north Irwin foundation wall.



Figure 53. Carrigan lot, Test Unit 6, North Extension, view south to a section of the Irwin house foundation. An intact brick alignment interpreted as a Carrigan porch support structure is visible at the upper right in photo, partially covered with plastic laid in 2005.

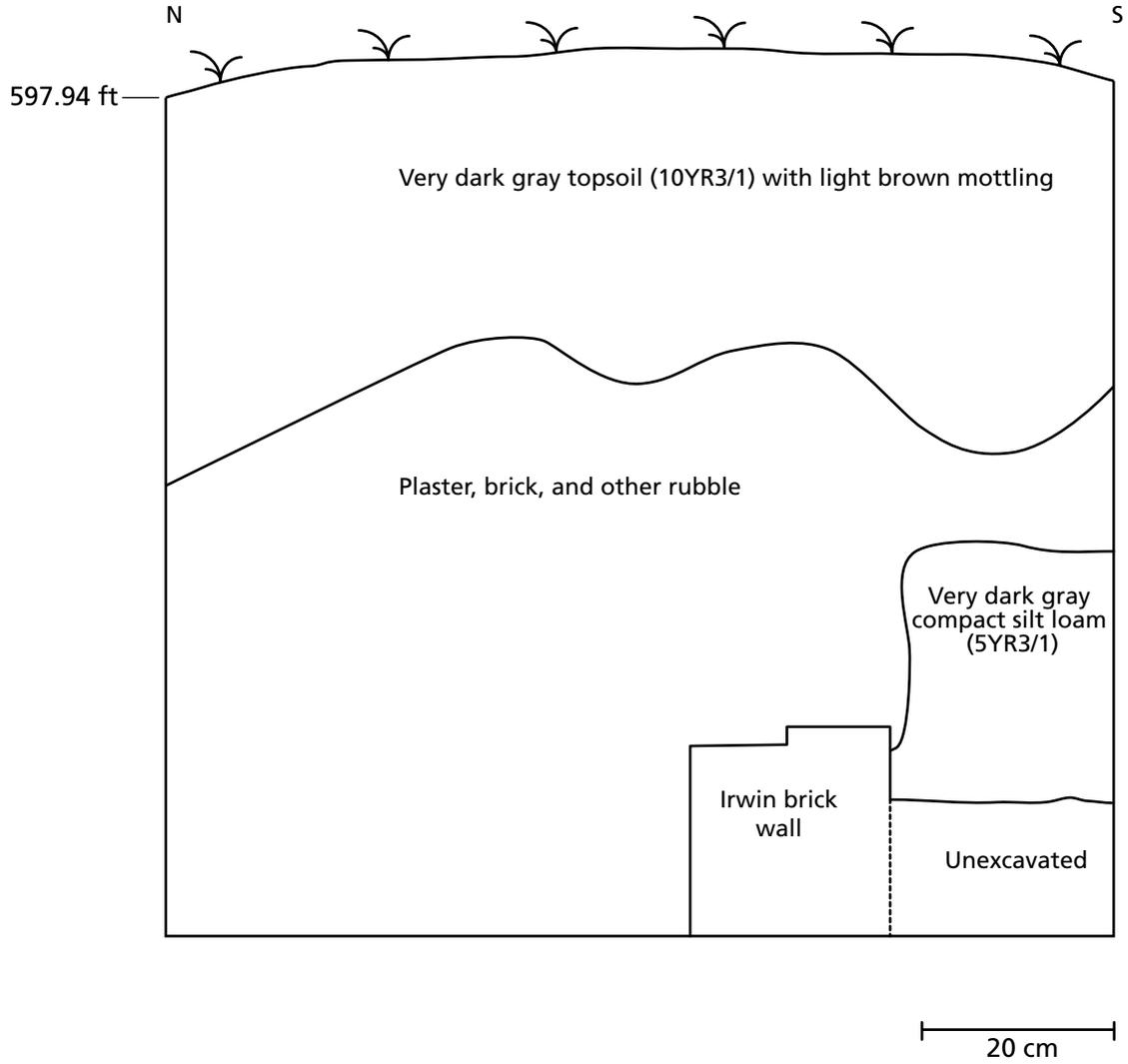


Figure 54. Carrigan lot, Test Unit 6, North Extension, east unit wall profile drawing.



Figure 55. Carrigan lot, Test Units 7, 8, and 10 West Extension (right in photo) and Trench 8 (left), north foundation wall of the Carrigan back addition (bottom) and north foundation wall of the ell with arc of Carrigan brick (top). A possible four-brick pier is located immediately outside (right of) the juncture of the back addition and the ell.



Figure 56. Carrigan lot, Test Unit 7, view south to the arc of Carrigan-era brick mortared to the north Irwin house foundation.



Figure 57. Carrigan lot, Test Unit 8, view south to the juncture of the back addition (top left) and the ell (middle right), and a possible four-brick pier (center) immediately outside the foundation.



Figure 58. Carrigan lot, Test Unit 8, view southwest to the exterior face of the north foundation at the intersection of the back addition (left) and the ell (center and right). The possible brick pier was removed in the process of exposing this face of the wall.



Figure 59. Carrigan lot, Trench 8, view north to the remains of the west foundation wall of the Carrigan back addition including the southwest corner of the back addition (lower center), a possible cellar entryway partially blocked by broken concrete fill, and northwest corner at the juncture with the ell (top center). The remains of Irwin construction are visible at the bottom of the photo.



Figure 60. Carrigan lot, Trench 8, view north to closeup of the interior face of the north foundation at the juncture of the back addition and ell. Of the three vertical brick stacks/wythe in the center of the photo, the right two were part of the west wall of the back addition, and the left one served as a pilaster for the ell foundation wall. The possible brick pier lies above and immediately outside the remains of the north foundation at top center in photo.



Figure 61. Carrigan lot, Trench 8, view northeast to closeup of the interior face of the north foundation at the juncture of the back addition and ell, including the ell wall with pilaster (left), and damaged remains of the west wall of the back addition (right). The possible brick pier lies at upper left.



Figure 62. Carrigan lot, Trench 8 West Extension, view northwest to the interior face of the north foundation wall of the ell. The late Irwin section of the wall begins at the bricks marked with an X and extends to the left. The original Carrigan section is right of the Irwin section.



Figure 63. Carrigan lot, Trench 7, view northeast to the remains of the back (east) wall of the back addition to the Carrigan house, and the base of an early Irwin house chimney stack when first exposed.



Figure 64. Carrigan lot, Trench 7, remains of the back (east) wall of the back addition to the Carrigan house, the base of an early Irwin house chimney stack after three courses were removed (sleeper brick in west wall may have served as cleanout port), stoneware drain tile extending from the cistern (vertical section outside the wall at upper right, and horizontal section set below cellar floor at lower right), and pressed brick atop displaced footing.



Figure 65. Carrigan lot, Trench 7, view north to the remains of the back (east) wall of the back addition to the Carrigan house (northeast corner at top of photo, east cellar entry jamb at bottom center), the base of an early Irwin house chimney stack, stoneware drain tile extending from the cistern, steel pipe from the cistern, partially exposed dressed stone in cellar fill, and brick support pad at northeast corner of cellar floor.



Figure 66. Carrigan lot, Trench 7, brick support pad at the northeast corner of the back cellar floor.



Figure 67. Carrigan lot, Trench 7, view south to the remains of the back (east) wall of the back addition to the Carrigan house (northeast corner at lower left, southeast corner at top center, and east cellar entry jamb at top right), the base of an early Irwin house chimney stack, stoneware drain tile under the cellar floor, steel pipe from the cistern, and partially exposed dressed stone in cellar fill.



Figure 68. Carrigan lot, Test Unit 12, North Extension, view west to an irregular cluster of brick fragments exposed at the projected location of the northwest corner of the small Carrigan outbuilding that stood along the north lot line.



Figure 69. Carrigan lot, Test Unit 13, view west to a jumble of brick fragments identified fairly near the projected location of the northeast corner of the small Carrigan outbuilding that stood along the north lot line. Part of the neck and finish of a glass shoofly flask are visible extending from beneath a brick fragment in the upper right of the photo. The flask likely dates after 1880.



Figure 70. Carrigan lot, Test Unit 14, view south to a partial alignment of brick fragments exposed near the projected location of the northwest corner of the Carrigan era barn. A wooden step outside the modern building at the rear of the property is visible at the left.



Figure 71. Carrigan lot, Trench 9, remains of the north foundation wall for the front section of the Carrigan house.



Figure 72. Carrigan lot, Trench 10, small partial ring of brick standing on a brick pad that is thought to represent a furnace-related feature of the Irwin house.



Figure 73. Burch lot, Test Unit 2, north unit wall profile showing yellow brown clay fill beneath the topsoil and sloping up to the west (left in photo). Remnants of a brick cistern cap are visible at lower left beneath a large tree root, with black cistern fill below. The pile of bricks at the bottom center of photo lie atop more cistern fill.



Figure 74. Burch lot, Test Unit 2, west unit wall profile showing the thin layer of yellow brown clay fill beneath the topsoil with brown silt loam below. Remnants of a brick cistern cap, mortar lining, and black cistern fill are at lower right in photo.



Figure 75. Burch lot, Trench 6, view southwest to remains of the north foundation of the Burch house with the northwest corner of the house at top center in photo.



Figure 76. Burch lot, Test Unit 3, view north to the remains of an interior well along the north wall of the Burch house foundation. An interior wall of the house is immediately west (left) of the well. The small spaces between the walls and the well structure were filled with additional bricks. A marked soil change extended roughly east-west across the unit along the south edge of the well feature.



Figure 77. Burch lot, Test Unit 3, view north to the remains of the interior well along the north wall of the Burch house foundation after partial excavation.



Figure 78. Burch lot, Trench 6 and Test Unit 3, view northwest to remains of the north foundation of the Burch house, an interior wall intersection with the north foundation, and an interior well.



Figure 79. Burch lot, east end of Trench 6, view south to a probable chimney base along the interior face of the north foundation of the Burch house.

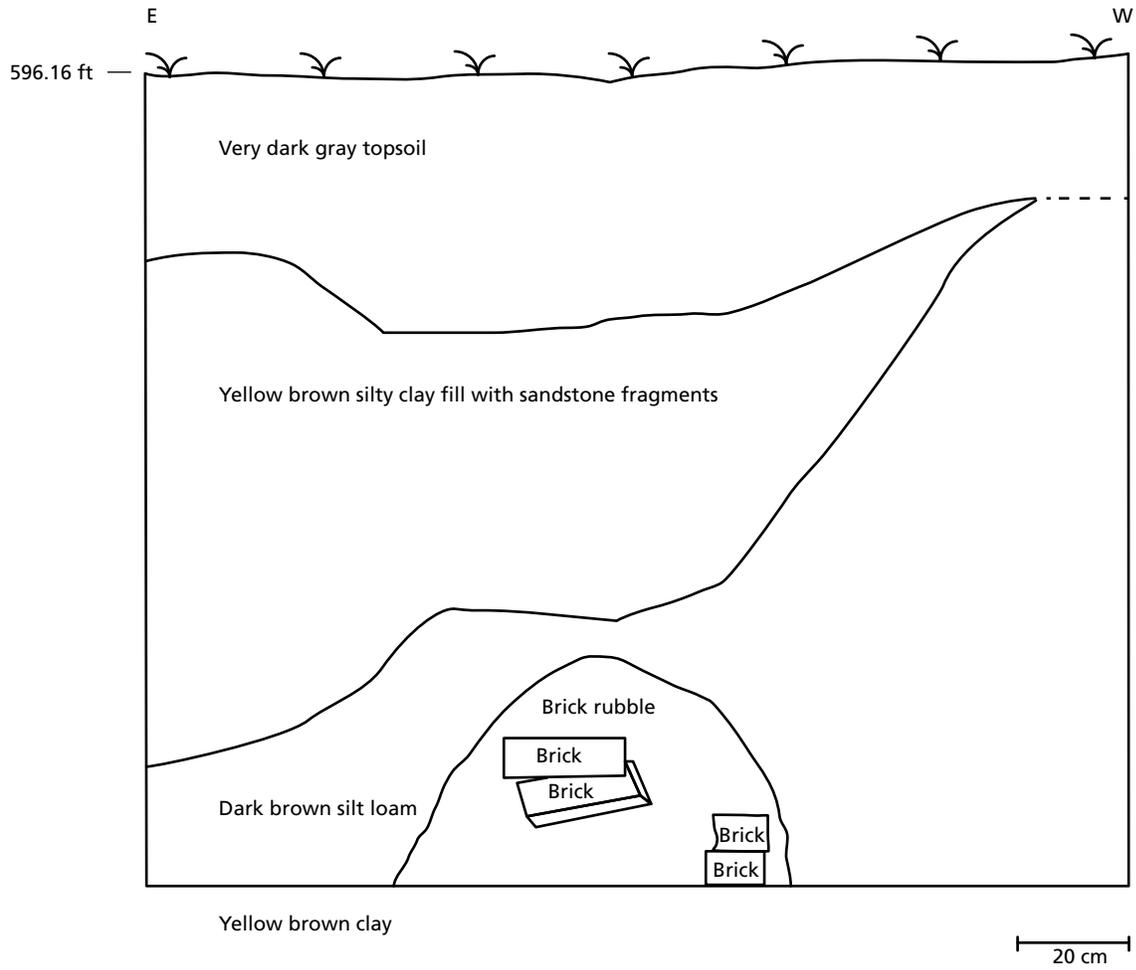


Figure 80. Burch lot, Trench 2, south trench wall profile drawing.



Figure 81. Burch lot, Test Unit 5, view northeast to remains of the north foundation of the Burch house, an interior wall intersection with the north foundation, and a probable chimney base (on east side of interior wall).



Figure 82. Burch lot, Test Unit 4, view northwest to remains of the north foundation near the front of the Burch house and a probable chimney-related feature on the south/interior side of the foundation.



Figure 83. Burch lot, Test Unit 6, east unit wall profile showing yellow and white clay fill in the area where a twentieth century apartment building stood. The base of a post hole stain is also visible in the floor of the unit (lower left in photo).



Figure 84. Burch lot, Test Unit 6, plan view at 90 cm below the present ground surface showing soil differences between the northern and southern halves of the unit, a partial line of broken drain tile, and a post hole stain.

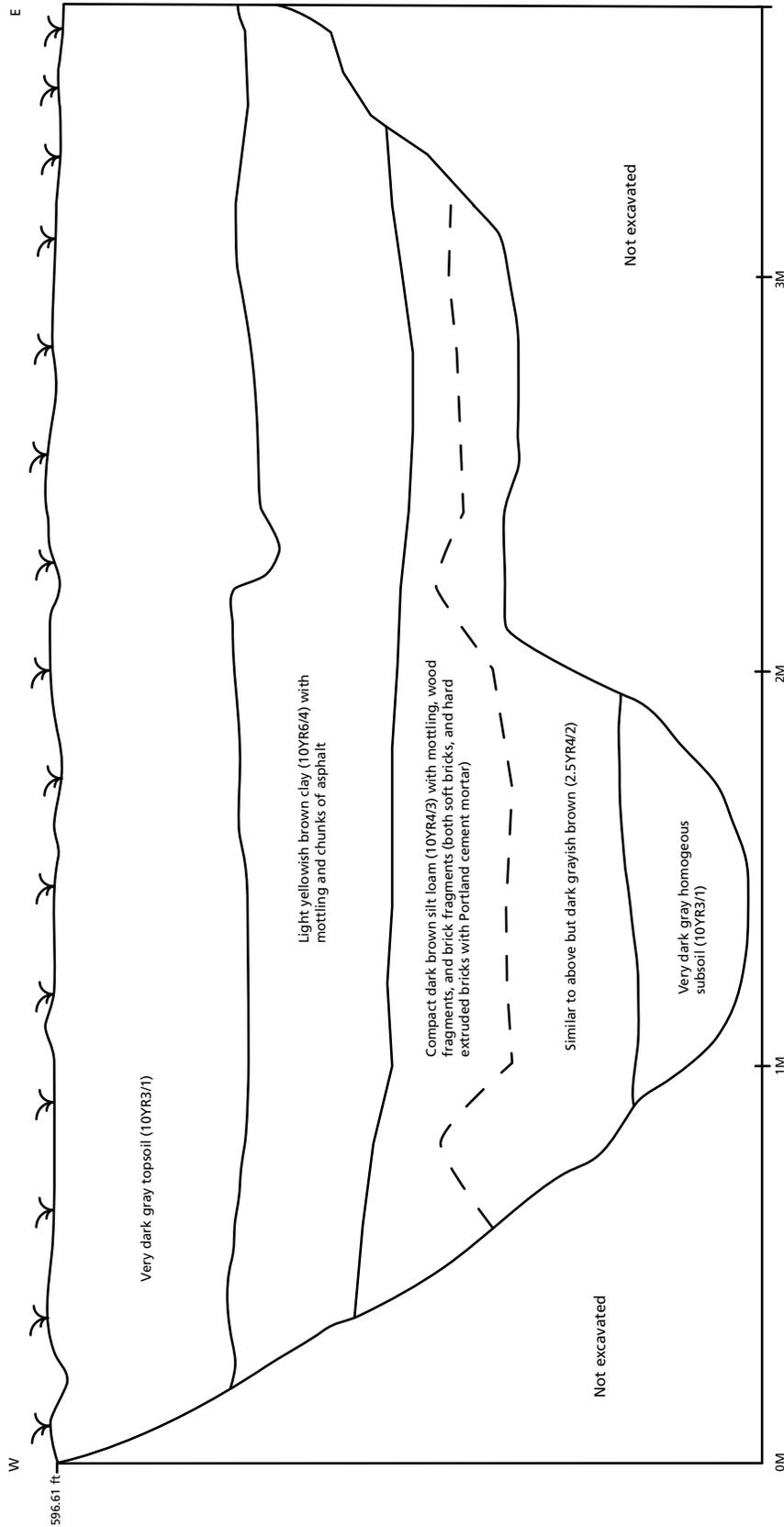


Figure 85. Burch lot, Trench 10, north trench wall profile drawing.

TABLE

Table 1. Elevations of Carrigan property features (in feet above mean sea level).

Carrigan House Elevations

North Front Cellar – T/O Base Course of Foundation

2005	Test Unit 5	593.99
2006	Trench 9	593.95
Mean		593.97

South Front Cellar – T/O Base Course of Foundation

2005	Test Unit 2	593.77
------	-------------	--------

South Front Cellar – T/O Brick Cellar Floor

2005	Test Unit 1	593.79
2005	Test Unit 2	593.77
2005	Trench 4	593.63
Mean		593.73

Ell Cellar – T/O Base Course of Foundation

2006	Trench 8	593.56
------	----------	--------

Ell Cellar – T/O Brick Base for Irwin Furnace Feature

2006	Trench 10	593.59
------	-----------	--------

Back Addition Cellar – T/O Base Course of Foundation

2006	Trench 7	593.99
2006	Trench 7	594.02
2006	Trench 8	594.03
2006	Trench 8	594.09
Mean		594.03

South Porch along Ell – T/O Spread Footing

2005	Test Unit 6	596.68
2005	Test Unit 6	596.74
Mean		596.71

Features at/near Outbuilding Locations

Small Outbuilding – T/O Brick Cluster

2006	Test Unit 12	597.74
2006	Test Unit 13	597.09

Barn – T/O Brick Alignment

2006	Test Unit 14	597.57
------	--------------	--------

REFERENCES CITED

Beck and Pauli

1870 *Map of Springfield*. A.C. Gieseler and Company, Milwaukee. On file, Abraham Lincoln Presidential Library, Springfield.

Birks, Steve

2007 Stoke-on-Trent. Electronic document, <http://www.thepotteries.org/allpotters/720.htm>, accessed February 28, 2007.

Briggs, Benjamin

1867 Benjamin Briggs Manuscript Collection, Abraham Lincoln Presidential Library. In *Carrigan House (HS-25), Lincoln Home National Historic Site, Springfield, Illinois, Historic Structure Report*, by RATIO Architects, Inc., pp. 8-9.

Cannon, Kenneth P.

2006 Faunal Remains from Lincoln Home: 2005-2006 Field Investigations. Manuscript on file as part of museum accession LIHO-384/MWAC-1086, National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

Coleman, Dorothy S., Elizabeth A. Coleman, and Evelyn J. Coleman

1968 *The Collector's Encyclopedia of Dolls*. Crown Publishers, New York.

DeVore, Steven L.

2005 Geophysical Investigations of the Burch and Carrigan Lots at Lincoln Home National Historic Site, Sangamon County, Springfield, Illinois. September 2005. In *Carrigan House (HS-25), Lincoln Home National Historic Site, Springfield, Illinois, Historic Structure Report*, by RATIO Architects, Inc., Appendix H.

Dial-Jones, Janis L.

2005 Memorandum to Manager, Midwest Archeological Center, from Supervisory Archeologist, Midwest Archeological Center, June 9, 2005. Travel to Lincoln Home National Historic Site, Springfield, Illinois, May 16-27, 2005. On file, Midwest Archeological Center, Lincoln, Nebraska.

Fike, Richard E.

1987 *The Bottle Book: A Comprehensive Guide to Historic, Embossed Medicine Bottles*. Gibbs M. Smith, Salt Lake City.

Glastonbury Board of Education

2007 Glastonbury Public Schools. Electronic document, <http://www.glastonburyus.org/BOE%20NEW.htm>, accessed April 13, 2007.

Godden, Geoffrey A.

1964 *Encyclopaedia of British Pottery and Porcelain Marks*. Bonanza Books, New York.

LINCOLN HOME NHS

Hanson Professional Services Inc.

2005 *Topographical and Boundary Survey, Lincoln Home N.H.S., Eighth and Jackson Streets, Springfield, IL 62701*. Hanson Professional Services Inc., Springfield, Illinois.

Herskovitz, Robert M.

1978 *Fort Bowie Material Culture*. Anthropological Papers of the University of Arizona No. 31. University of Arizona Press, Tucson.

Illinois State Journal

1923 Article entitled "State Improves Lincoln's Home by Small Park", 11 November:Part 4, Page 2. Springfield, Illinois.

Jones, Olive, and Catherine Sullivan

1989 *The Parks Canada Glass Glossary for the Description of Containers, Tableware, Flat Glass, and Closures*. Canadian Parks Service, Environment Canada, Ottawa.

Kovel, Ralph, and Terry Kovel

1986 *Kovels' New Dictionary of Marks*. Crown, New York.

LANDSCAPES, Urbana Group, and Myers Schmalenberger Meisner

n.d. Lincoln Home National Historic Site Cultural Landscape Report: History, Existing Conditions, Analysis. Prepared for the National Park Service, Lincoln Home National Historic Site and the Great Lakes System Support Office.

Lehner, Lois

1988 *Lehner's Encyclopedia of U.S. Marks on Pottery, Porcelain & Clay*. Collector Books, Paducah, Kentucky.

Lief, Alfred

1965 *A Close-Up of Closures: History and Progress*. Glass Container Manufacturers Institute, New York.

Liesenbein, William

1973 The Pre-1891 Use of "ENGLAND" on Ceramics. Manuscript on file, Arizona State Museum, Tucson.

Luscomb, Sally C.

1967 *The Collector's Encyclopedia of Buttons*. Bonanza Books, New York.

Mansberger, Floyd

1987 *Archeological Investigations at the Lincoln Home National Historic Site, Springfield, Illinois*. Prepared for the National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

- 1997a Letter report dated December 16, 1997 (revised 4/19/98) to Carl Fischer, FWAI Architects, Inc. re: Carrigan/Irwin House archaeological investigations; Contract No. 1443CX603097002, Delivery Order No. 8. In *Carrigan House (HS-25), Lincoln Home National Historic Site, Springfield, Illinois, Historic Structure Report*, by RATIO Architects, Inc., Appendix B.
- 1997b Field notes and maps, Carrigan/Irwin House archaeological investigations; Contract No. 1443CX603097002, Delivery Order No. 8. In *Carrigan House (HS-25), Lincoln Home National Historic Site, Springfield, Illinois, Historic Structure Report*, by RATIO Architects, Inc., Appendix B.
- 2005 *Results of Phase II Archaeological Mitigation of the Conference Center Site (11SG1292), Lincoln Home National Historic Site, Springfield, Illinois*. Prepared for the National Park Service, Lincoln Home National Historic Site, Springfield, Illinois.
- McManus, M.
1854 *City of Springfield, Sangamon County, Illinois Map*. Hart & Mapother, New York.
- Milholland, Marion, and Evelyn Milholland
1971 *Milholland's Complete Glass Insulator Reference Book*. Sequim Press, Sequim, Washington.
- Noble, Vergil E.
1988 *Further Archeological Investigations at Lincoln Home National Historic Site, Springfield, Illinois: The 1987 Restoration Project*. Occasional Studies in Anthropology No. 22. National Park Service, Midwest Archeological Center, Lincoln.
- Noel Hume, Ivor
1974 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York.
- Osborn, Alan J.
2001 *Archeological Overview and Assessment of Lincoln Home National Historic Site, Sangamon County, Springfield, Illinois*. Midwest Archeological Center Technical Report No. 72. National Park Service, Midwest Archeological Center, Lincoln.
- Petretti, Allan
2005 *Warman's Coca-Cola Field Guide*. KP Books, Iola, Wisconsin.
- Poston, William E.
1985 Interview with William E. Poston, October 5, 1972, Sangamon State University. Electronic document, <http://www.uis.edu/archives/memoirs/POSTONBRICK.pdf>, accessed March 15, 2006.

LINCOLN HOME NHS

Putnam, H. E.

1965 *Bottle Identification*. H. E. Putnam.

Pyne Press (editors)

1972 *Lamps & Other Lighting Devices, 1850-1906*. Wallace-Homestead Book Company, Des Moines, Iowa.

RATIO Architects, Inc.

2006a *Carrigan House (HS-25), Lincoln Home National Historic Site, Springfield, Illinois, Historic Structure Report*. May 19, 2006. Prepared for the National Park Service, Midwest Regional Office, Omaha, Nebraska.

2006b *Burch House (HS-26), Lincoln Home National Historic Site, Springfield, Illinois, Historic Structure Report*. May 19, 2006. Prepared for the National Park Service, Midwest Regional Office, Omaha, Nebraska.

Sanborn Map and Publishing Company

1896 *Springfield, Illinois*. New York.

1917 *Springfield, Illinois*. New York.

1941 *Springfield, Illinois*. New York.

Sanborn-Perris Map and Publishing Company

1890 *Springfield, Illinois*. New York.

Shepard, Steven J.

1981 Nails, Buttons, Tobacco Pipes, and Dolls: Remnants of Historic Occupation. In *A Guide for Historical Archaeology in Illinois*, edited by Charles E. Orser, Jr., pp. 78-99. Mid-American Research Center Research Paper No. 1, Loyola University, Chicago.

Sides, William

1858 *City of Springfield, Sangamon County, Ills.* R.L. Barnes, Philadelphia.

Snodgrass, Ginni D.

2005 Bohemian, Czechoslovakian & Cesky Factory Marks. Electronic document, http://www.collectorscircle.com/bohemian/porcelain/marks_table1.html, accessed January 6, 2006.

Snyder, Jeffrey B.

1997 *Romantic Staffordshire Ceramics*. Schiffer Publishing, Atglen, Pennsylvania.

Society for Historical Archaeology

2009 Mold Air Venting. In *Historic Glass Bottle Identification and Information Website*. Electronic document, <http://www.sha.org/bottle/body.htm#Air%20Venting>, accessed June 25, 2009.

- Toulouse, Julian Harrison
 1969 *Fruit Jars*. Thomas Nelson, Nashville, Tennessee, and Everybodys Press, Hanover, Pennsylvania.
- 1971 *Bottle Makers and Their Marks*. Thomas Nelson, New York.
- U.S. Department of the Interior, Bureau of Land Management
 2007 Finish Styles or Types. In *Historic Glass Bottle Identification and Information Website*. Electronic document, http://www.blm.gov/historic_bottles/finishstyles.htm, accessed March 14, 2007.
- U.S. Department of the Interior, National Park Service
 1970 *Master Plan, Lincoln Home National Historic Site, Illinois*. U.S. Government Printing Office, Washington, D.C.
- U.S. Patent and Trademark Office
 2006a Patent Number 441,882. Electronic document, <http://www.uspto.gov/>, accessed January 20, 2006.
- 2006b Patent Number 747,561. Electronic document, <http://www.uspto.gov/>, accessed January 20, 2006.
- 2006c Patent Number 826,105. Electronic document, <http://www.uspto.gov/>, accessed January 23, 2006.
- 2007a Patent Number 720,129. Electronic document, <http://www.uspto.gov/>, accessed March 16, 2007.
- 2007b Patent Number 496,652. Electronic document, <http://www.uspto.gov/>, accessed March 16, 2007.
- 2007c Patent Number 1,006,420. Electronic document, <http://www.uspto.gov/>, accessed April 13, 2007.
- 2007d Patent Number 1,175,182. Electronic document, <http://www.uspto.gov/>, accessed April 13, 2007.
- 2007e Patent Number 1,257,436. Electronic document, <http://www.uspto.gov/>, accessed April 13, 2007.
- Williams, Petra
 1978 *Staffordshire Romantic Transfer Patterns: Cup Plates and Early Victorian China*. Fountain House East, Jeffersontown, Kentucky.
- Wilson, Rex L.
 1981 *Bottles on the Western Frontier*. University of Arizona Press, Tucson.

LINCOLN HOME NHS

Woodhead, E.I., C. Sullivan, and G. Gusset

1984 *Lighting Devices in the National Reference Collection, Parks Canada*. National Historic Parks and Sites Branch, Parks Canada.

Young, Jonathan

2005 Archeology Wish List attached to 12/02/2005 e-mail to Jan Dial-Jones, National Park Service, from Jonathan Young, RATIO Architects, Inc. On file as part of museum accession LIHO-384/MWAC-1086, National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

Zumwalt, Betty

1980 *Ketchup, Pickles, Sauces: 19th Century Food in Glass*. Mark West, Fulton, California.

APPENDIX A

Collected Archeological Materials by Provenience (Bag Catalog Code)

Note: Identifications of non-artifactual faunal remains are presented in Appendix C.

Carrigan Lot Artifacts, May 2005

10BLOCK67-TU3-1

1 porcelain rim sherd with overglaze hand-painted decoration consisting of one wide band, one narrow irregular line, and small irregular dots. The paint is worn off along the interior rim, which appears to reflect use wear.

Probable bone toothbrush handle fragment inscribed "Kleanwell" in cursive writing, and "56"

10BLOCK67-TU3-2

Finish, neck, and portions of the shoulder of a colorless machine-made glass bottle with a wine or brandy finish

Finish, neck, and upper body of a round colorless machine-made glass milk bottle with common sense finish for a capseat closure. The neck is encircled by a series of raised ribs and the body is embossed on opposite sides with a leaf and flower design.

Short section of the lip and part of the body of a colorless glass jar with external threads. Embossed lettering within a circle on the body reads "WM TE.../M.../FACTO.../...DISTR.../...S". Refits to fragment from 10BLOCK67-T2-3.

Base and part of the body of a small colorless glass bottle. Cross-section is rectangular with flat chamfers.

12 curved colorless glass fragments, some of which refit. Three fragments have embossed lettering. One fragment is embossed "ONE PI.../FULL MEA...". Another fragment is embossed "...ART", and a third fragment is embossed "...T". One of the other fragments is from the base of a glass container with footing that was decorated with a possible starburst/sunburst pattern on the interior surface.

1 colorless glass fragment that refits to a fragment from 10BLOCK67-TU3-3 to form the base and lower body of a plain round glass container

1 flat glass fragment (mean thickness of fragment in mm – 1.9)

8 cut nails and nail fragments (2 complete 1 7/16 in nails, 1 possible finish nail fragment, 5 nail fragments)

5 wire nails and nail fragments

25 ferrous metal objects including metal strap, wire, can fragments, probable nails, and a pintle

1 copper fuse base

Brick sample consisting of 3 soft orange brick fragments and 3 slightly harder red brick fragments

1 bone fragment

1 slag sample

10BLOCK67-TU3-3

1 porcelain fragment with polychrome floral decal decoration. Refits to fragments from 10BLOCK67-TU3-5, all probably from a saucer.

2 porcelain dish fragments that refit. Decal decorated with polychrome overglaze hand painting in an oriental design.

1 porcelain cup fragment with handle and section of the rim. There is gilt on the handle and a small area of polychrome decal decoration on the interior surface.

2 blue sponge-decorated stoneware fragments from a pitcher (one sherd includes the spout). Sponge decoration covers the entire exterior surfaces. May be the same vessel as fragments from 10BLOCK67-T3-2, although none of the fragments refit.

Nearly complete small colorless glass bottle (small piece of lip is missing). Oval cross-section with prescription lip. Blown in a cup bottom mold with tooled finish. Air vent marks are present. Embossed with a scale marked ½ and 1 OZ along one side. Base is embossed "KENWOOD IMPROVED".

2 glass fragments that refit to form the finish, neck, and a portion of the shoulder of a colorless glass bottle with an asymmetrical hand-tooled packer finish. Possible faint mold seam on lower neck.

LINCOLN HOME NHS

- Thick colorless glass bottle base fragment with valve mark and embossed "2...S".
- Thick light green glass bottle base fragment with dome-shaped pushup that is embossed "...M 629"
- Portion of the heel and lower body of a colorless glass bottle embossed "...TLE/...OR SOLD//S...".
- 6 glass fragments that refit to form the base and part of the body of a colorless round glass bottle. The bottle body is straight up-and-down but curves outward toward the bottom to create a slightly larger base. Formed in a turn mold.
- 1 fragment of the lower neck, shoulder, and one flat side of a colorless glass bottle. The lower neck is fluted.
- 1 colorless glass fragment that refits to a fragment from 10BLOCK67-TU3-2 to form the base and lower body of a plain round glass container
- Portion of a colorless glass ring that refits to a fragment from 10BLOCK67-T2-2. The ring is embossed "...S) DEC. 2 90, JUNE 29 86, JULY 30 89.. MANNY'S. PAT. AUG. 25 188. ...//MADE IN U.S.A." It represents part of the base for a one-piece glass lemon-juice extractor that was patented by John P. Manny, Rockford, Ill. (Patent No. 441,882)(U.S. Patent and Trademark Office 2006a).
- 1 fragment of a hand-finished colorless glass lamp chimney top with the edge crimped to form scallops
- 5 incandescent light bulb fragments. Portions of at least 2 light bulbs are represented. They appear very similar in construction to lamps illustrated by Woodhead, Sullivan, and Gusset (1984:79 Figures 76 and 77) that date approximately to the first quarter of the 20th century. Parts include screw base, base contact, central glass tube, and wire filament supports, as well as unidentified insulation materials.
- 2 colorless thin glass fragments that refit to form part of a probable light bulb
- 5 curved colorless glass fragments. One fragment includes a short section of straight smooth rim. Another fragment includes a portion of an embossed circle with lettering (only the number "25" is clearly legible).
- 19 flat glass fragments (mean thickness of fragments in mm – 1.3, 1.4 [4], 1.6, 1.7 [4], 1.8 [4], 1.9 [2], 2.5, 2.6 [2])
- 1 bone toothbrush head fragment
- 1 four-hole shell button with incised decoration, 7/8 in diameter (36 lignes)
- 69 cut nails and nail fragments (9 complete 1 7/16 in nails, 1 complete 4d probable common nail, 5 complete 6d probable common nails, 6 complete 8d probable common nails, 1 complete 10d probable common nail, 1 complete 8d possible finish nail, 1 complete 10d possible finish nail, 45 nail fragments)
- 17 complete zinc cut nails (1 3/8 in length)
- 18 wire nails and nail fragments
- 3 wire nails incidentally corroded to plaster
- Heavily corroded ferrous metal objects including nails and other items, some of which are corroded together en masse (1.1 kg)
- 1 complete oval zinc washer
- 2 small pieces of zinc sheet metal with straight cut edges (refit to each other)
- Brick sample consisting of 1 soft orange brick fragment and 1 slightly harder red brick fragment
- Sample of possible waterproofing material that was applied to a large flattened metal container/chute exposed in Trench 3, North Extension
- Plaster sample
- 4 bone fragments
- 1 shell fragment
- 1 piece of slag

10BLOCK67-TU3-4

Unidentified ceramic building material with hard white mortar

10BLOCK67-TU3-5

- 1 blue edge-decorated whiteware fragment, probably from a platter, with a straight smooth edge
- 2 porcelain fragments with polychrome floral decal decoration. Refit to each other and fragment from 10BLOCK67-TU3-3, all probably from a saucer.
- 1 porcelain rim sherd with polychrome floral decal decoration
- 1 porcelain dish fragment with polychrome floral overglaze hand-painted design and gilt rim. May be from the same vessel as fragment from 10BLOCK67-TU3-7, although they do not refit.

- 2 porcelain fragments with irregular scalloped edge (refit to each other). Decal decorated with red/pink painting and gilt.
- 1 undecorated porcelain fragment
- 1 raised rectangular porcelain base of a decorative object, possibly the base for a figurine. Decorative molded sides with gilt edges.
- Complete small colorless glass bottle blown in a cup bottom mold with tooled prescription finish. Cross-section is ovoid with two relatively flat sides. Air vent marks are present. Embossed with bottle volume (2 oz) on upper side and "M.P. & CO." on the base. Lettering on the base may indicate that the bottle contained a product manufactured by Morrison, Plummer & Company, Chicago (Fike 1987:69).
- Complete glass jar lid liner that is colorless in the center and white toward the edge
- 2 jar lid fragments from a zinc screw cap
- 2 colorless glass fragments that refit to form a section of the rim and body of a tumbler with panel design
- Entire top portion of a colorless glass lamp chimney with pie crust design. A machine for producing this style of edging was patented in 1877 (Pyne Press 1972:111 in Woodhead, Sullivan, and Gusset 1984:62).
- 1 nearly complete colorless rectangular plate glass panel (one corner is chipped) with beveled edges measuring approximately 5 3/16 in x 6 9/16 in. The beveling is 5/8 in wide. 4 mm in thickness.
- 1 curved colorless glass fragment
- 3 flat glass fragments (mean thickness of fragments in mm – 1.8, 2.4 [2])
- 3 bone fragments

10BLOCK67-TU3-6

- Nearly complete round colorless glass bottle (upper neck and finish are missing). Formed in a post bottom mold with evidence of tooled finish. Air vent marks are present. Embossed on the side with lettering on a folded banner within a circle: "CITRATE/OF/MAGNESIA".
- Complete colorless glass ink bottle. Square with rounded corners. Machine-made with valve mark.

10BLOCK67-TU3-7

- 1 porcelain fragment with a small area of polychrome overglaze hand-painted decoration and gilt rim. May be from the same vessel as fragment from 10BLOCK67-TU3-5, although they do not refit.
- 1 undecorated stoneware body sherd with brown slip
- 1 unglazed earthenware flowerpot base with drainage hole
- Complete colorless glass bottle blown in a cup bottom mold with tooled prescription finish. Cross-section is ovoid with one flat side (Philadelphia oval). Air vent marks are present. Embossed with bottle volume (8 oz) on upper shoulder, and ounce and cubic centimeter scales long the sides of the bottle.
- Complete aqua glass bottle blown in a cup bottom mold with tooled prescription finish. Air vent marks are present. The base is rectangular with flat chamfers, but the bottle has one inset panel with embossed lettering that reads "C.E. JOHNSON & Co./CHICAGO".
- 4 flat glass fragments (mean thickness of fragments in mm – 1.7 [2], 1.8, 2.2)
- 16 bones and bone fragments

10BLOCK67-TU3-8

- Complete colorless machine-made glass bottle with continuous external thread. Round in cross-section, tapering slightly from bottom to top. Embossed on the side "E.R. DURKEE & CO./SALAD DRESSING/NEW YORK" (bottle type is illustrated in Zumwalt 1980:128). Base is embossed "BOTTLE PATENTED/APRIL 17,1877" along with an imitation British pottery dating mark, which was in use ca. 1877-1900 (Toulouse 1971: 182-184, 559). As a machine-made bottle, it probably dates no earlier than ca. 1890 (Jones and Sullivan 1989:39).
- Most of a small round colorless glass jar with molded decoration on the interior, including raised ribs around the sides and a recessed grape pattern on the base

LINCOLN HOME NHS

10BLOCK67-T2-1

1 whiteware handle fragment with molded scroll form

10BLOCK67-T2-2

- 2 undecorated whiteware fragments, probably from the same bowl. Nearly half of the bowl is present.
- 2 porcelain fragments from a small bowl (refit to each other). Molded decoration on the interior surface around the rim. Partial green printed maker's mark present on one fragment, made by Charles Field Haviland, Limoges, France, 1870-1882 (Kovel and Kovel 1986:164p).
- Complete colorless machine-made glass bottle with three discontinuous beads of glass or lugs on the exterior surface of the finish that would have functioned as threads for bottle closure. The base is rectangular with rounded corners, but the bottle has one inset panel with embossed lettering that reads "A S Hinds/Portland,Me/U.S.A." and a design of interwoven letters A, S, and H, all in an ornate lettering style. The base is embossed "12". The bottle may have contained skin cream (Fike 1987:64, 92).
- Complete small colorless glass bottle blown in a cup bottom mold with tooled prescription finish. Cross-section is ovoid with one flat side (Philadelphia oval). Air vent marks are present. Embossed with ounce and cubic centimeter scales along the sides of the bottle (1 oz or 30 cc capacity).
- Thick aqua glass bottle base fragment with embossed "...0".
- Portion of a colorless glass ring that refits to a fragment from 10BLOCK67-TU3-3. The ring is embossed "...S) DEC. 2 90, JUNE 29 86, JULY 30 89.. MANNY'S. PAT. AUG. 25 188. ...//MADE IN U.S.A." It represents part of the base for a one-piece glass lemon-juice extractor that was patented by John P. Manny, Rockford, Ill. (Patent No. 441,882)(U.S. Patent and Trademark Office 2006a).
- 1 fragment of colorless curved glass that includes a section of straight smooth rim
- 1 fragment of woven fiber mat
- 1 possible clothes iron base
- 2 axe heads fused together with corrosion
- 1 bone fragment

10BLOCK67-T2-3

- 1 whiteware body sherd with a small area of green transfer print decoration
- 1 whiteware fragment with a very small area of blue underglaze decoration
- 1 whiteware handle with faceted form (octagonal). Exhibits steely gray cast (ironstone).
- 5 undecorated whiteware fragments including one probable cup fragment with handle and section of rim
- 1 undecorated unmarked porcelain base, probably from a cup
- Small complete round vial of thick glass with a gray cast and bubbles (large and small). Patent finish. Valve mark.
- 2 glass fragments that refit to form the finish, neck, and much of the body of a small round amber glass bottle. Blown in a mold with tooled bead finish. Air vent marks are present.
- Section of the lip and upper body of a colorless glass jar with external threads. Refits to fragment from 10BLOCK67-TU3-2.
- Section of the lip and body of a small white glass jar with external thread
- 3 white glass fragments that refit to form most of a jar lid liner embossed in the center with a single unidentified letter/symbol
- 1 incandescent light bulb fragment including a portion of the central glass tube and attached wire filament supports. See entry for incandescent light bulb fragments from 10BLOCK67-TU3-3 for information on similar artifacts.
- 4 thick colorless curved glass fragments
- 1 wire nail
- 1 piece of ferrous metal wire
- Copper strap (two pieces that refit)
- 1 red brick fragment
- 1 fragment of the salt-glazed stoneware drain tile that connected to the cistern
- 2 bone fragments
- 1 shell fragment

10BLOCK67-T2-4

Insulated single-strand copper household electrical wire

10BLOCK67-T3-1

1 blue edge-decorated whiteware fragment, probably from a plate, with a smooth curved edge
 1 whiteware fragment with a steely gray cast (ironstone). Molded decoration on the lip.
 6 undecorated whiteware rim sherds that refit to two large pieces of what was probably a single large open vessel
 3 undecorated whiteware sherds, including one probable chamber pot fragment
 1 undecorated whiteware body sherd with a steely gray cast (ironstone)
 3 stoneware fragments with brown slip. Two rim sherds with a banded rim are probably from the same vessel, although they do not refit. One body sherd with several brush strokes of dark-colored decoration.
 1 handle from a pair of scissors
 1 brass shield-shaped lock plate
 2 bone fragments

10BLOCK67-T3-2

1 whiteware fragment with two bands of gilt decoration
 2 blue sponge-decorated stoneware fragments (one sherd includes handle and section of rim). Sponge decoration covers the entire exterior surfaces. May be from the same pitcher represented in 10BLOCK67-TU3-3, although none of the fragments refit.
 Glass breast pump consisting of a glass bell with a small hole at the top and attached glass ball

10BLOCK67-T3-3

Complete round amber glass mold-blown bottle with tooled bead finish. Air vent marks are present. Embossed "E.L. & CO." on the base.

10BLOCK67-T3-4

1 porcelain fragment with footring. Decorated with thin gilt band around the outside of the footring. Portion of a green printed maker's mark with crown design (made in Austria). Probably manufactured by Bawo & Dotter, 1883-1913 (similar maker's mark illustrated in Snodgrass 2005).
 Complete round aqua glass bottle blown in a key mold with applied patent or packer finish
 Nearly complete jar lid including the zinc screw cap and white glass liner. The liner is embossed "GENUINE PORCELAIN LINED CAP BOYD'S" in reference to patents registered in 1869 by Lewis R. Boyd, New York City (Toulouse 1969:91-92).
 Zinc sheet metal with several straight cut edges
 1 plaster fragment with ferrous metal corrosion

10BLOCK67-T3-5

1 whiteware fragment from the rim of a large basin with a molded fluted design on the lower exterior surface. Interior surface is decorated with brown berry/floral transfer print. Refits to fragments from 10BLOCK67-T8-2.
 Complete small round machine-made cobalt blue glass jar with continuous external thread. Valve mark. Base is embossed with two nested triangles. Contents probably Vicks VA-TRO-NOL introduced in 1931, a product of the Vicks Chemical Company (Fike 1987:184).
 Octagonal aqua glass bottle base with a glass-tipped pontil mark
 Unidentified petroleum-based sheeting with possible adhesive

10BLOCK67-T3-6

1 whiteware cup fragment with blue floral transfer print and a molded pattern on the exterior surface immediately below the rim

LINCOLN HOME NHS

- 3 whiteware fragments probably from the same lid/vessel, although they do not refit. Floral decal decoration with polychrome hand painting and a line of gilt around the rim. Refit to fragment from 10BLOCK67-T8-2.
- 1 undecorated whiteware sherd
- 1 porcelain fragment with footring, probably from a plate. Polychrome floral (rose) decal decoration.

10BLOCK67-T4-1

- 1 flat glass fragment (mean thickness of fragment in mm – 1.2)

Architectural reference samples

- Multiple fragments of downspout, Test Unit 3, collected from cellar area where there were many metal objects
- Brick and mortar sample collected from in situ position mortared into the Carrigan house foundation, Test Unit 2
- Brick and mortar sample collected from in situ position mortared into the Carrigan house foundation near the southeast exterior corner, Trench 2, West Extension
- Brick and mortar sample collected from in situ position mortared into the Carrigan house foundation, Trench 3
- Mortar sample collected from in situ position around bricks in Irwin house rowlock, Trench 3, South Extension
- Brick sample collected from in situ position in the front Carrigan house foundation immediately north of the jog, Trench 4
- Brick and mortar sample collected from in situ position mortared into the Irwin section of the north house foundation, Trench 6, brick is stamped “SPRINGFIEL.../POSTON”

Carrigan Lot Artifacts, May 2006

10BLOCK67-TU8-1

- 1 whiteware rim sherd from a plate with molded decoration on the interior surface. Exhibits a steely gray cast (ironstone).
- 8 undecorated whiteware sherds
- 1 yellow ware body sherd with blue decorated exterior surface
- Portion of the neck and finish of a blue/aqua glass bottle with a tooled bead finish
- Portion of the finish of a colorless glass jar with external thread
- 2 aqua curved glass fragments
- 4 flat glass fragments (mean thickness of fragments in mm – 2.0, 2.2, 2.6, 2.8)

10BLOCK67-TU8-2

- 2 whiteware sherds with blue transfer print decoration
- 3 undecorated whiteware sherds
- 1 applique-decorated soft-paste porcelain rim sherd from a plate. The interior surface is decorated with a molded design and blue painted appliqué grapes and leaves.
- 3 yellow ware sherds from a vessel with outward flaring rim and banded decoration (the sherds refit)
- 1 stoneware body sherd
- 1 redware body sherd with interior and exterior glazing
- 3 curved glass fragments (aqua and colorless), one of which has a partial embossed letter
- 3 flat glass fragments (mean thickness of fragments in mm – 2.2, 2.4, 2.5)
- 1 four-hole attachment button of white porcelain measuring .5 inch in diameter (20 lignes)
- 1 four-hole attachment black ceramic button measuring .64 inch in diameter (28 lignes)

10BLOCK67-TU8-3

- 1 whiteware sherd with green transfer print decoration
- 6 undecorated whiteware sherds

1 aqua curved glass fragment
 10 flat glass fragments (mean thickness of fragments in mm – 1.1 [5], 1.2 [2], 1.3, 1.8, 1.9)

10BLOCK67-TU9-1

1 whiteware sherd with flow blue transfer print decoration
 2 undecorated whiteware rim sherds
 1 undecorated yellow ware body sherd
 1 stoneware body sherd
 1 unidentified ceramic sherd with a slightly porous, dark-colored paste and shiny black glaze, possibly basalt ware. The exterior surface has a molded basket-like texture.
 7 curved glass fragments (aqua and colorless)
 5 flat glass fragments (mean thickness of fragments in mm – 1.2, 1.6 [2], 1.7, 2.0)
 1 four-hole attachment button of white porcelain measuring .48 inch in diameter (18 lignes)
 1 wire nail

10BLOCK-TU9-2

1 whiteware sherd with blue transfer print decoration
 1 whiteware sherd with partial black printed maker's mark that consists of the British Royal Arms with a lion on the left. The lettering immediately beneath the arms is unreadable. However, the lettering at the bottom of the mark reads "...TONE CHI...".
 11 undecorated whiteware sherds
 1 redware body sherd with interior and exterior glazing
 1 complete porcelain doll leg. The doll's shoe is flat soled and painted black over the glaze. A mold seam is present. This style of doll was common from the 1840s through the 1860s (Shepard 1981:94-96).
 3 curved glass fragments (aqua, amber, colorless)
 15 flat glass fragments (mean thickness of fragments in mm – 1.0 [2], 1.2, 1.3 [3], 1.5 [3], 1.6, 1.8 [2], 1.9, 2.3 [2])
 Complete two-prong brass buckle
 2 cut nails (8d probable common)
 6 bone fragments
 1 fragment of crumbly whitish sand/lime mortar
 Fragment of a relatively hard, slightly irregular brick

10BLOCK67-TU9-3

2 decorated whiteware sherds, one with mulberry transfer print and one with a small remnant of blue decoration
 1 undecorated whiteware sherd
 1 flat glass fragment (mean thickness of fragment in mm – 1.0)
 1 cut nail (4 ½ inch spike)

10BLOCK67-TU9-4

1 undecorated whiteware sherd
 2 flat glass fragments (mean thickness of fragments in mm – 1.5, 2.0)

10BLOCK67-TU10-1

5 decorated whiteware sherds from two vessels. One sherd has a band of gilt along the rim. Four sherds refit to form part of a cup with a band of gilt around the rim and polychrome decal decoration on the exterior surface immediately below the rim.
 1 undecorated whiteware sherd with footring, probably from a cup
 Very small complete colorless glass bottle blown in a cup bottom mold with tooled patent finish. Oval cross-section at the base with one inset side panel. Air vent marks are present.
 Complete machine-made colorless glass bottle with elongated vial shape (8-in tall), bead finish, slightly flared base, and Owens scar. Embossed "5202" on the lower body. This bottle appears similar in form and capacity to the Chicago Cylinder Olive bottle illustrated by Putnam (1965:205) and

LINCOLN HOME NHS

categorized as pickle and preserve ware, but without the neck ring (ball neck).
3 white glass fragments that refit to form the base of a small round jar embossed
“MENTHOLATUM/REG/TRADE/MARK”. Mentholatum was a product of the Yucca Company,
Wichita, KS, and later the Mentholatum Company, Buffalo, NY, 1889+ (Fike 1987:83, 239).
Clear glass stemware foot. The base of the broken stem is approximately 1/2 inch in diameter.
5 colorless curved glass fragments, including the partial heel of a bottle that refits to an embossed bottle
panel from 10BLOCK67-TU10-3, a bottle neck fragment with embossing (8 in a circle, and
curlicue), and a fragment embossed “PINT”.
1 nearly complete threaded zinc jar lid slightly less than 2 inches in diameter with remnants of a paper liner
Small bundle of silk fabric with brass dressmaker’s pins
Possible cuprous decorative buckle cover with stylized dragon element
Possible silver-plated decorative jewelry box name plate with the word “Jewels” inscribed in cursive
Nearly complete threaded brass fitting approximately 1 1/8 inches in diameter with wire mesh insert and
rubber gasket
Possible cuprous washer
Aluminum disk 1 3/16 inches in diameter cupped slightly around the rim
1 cut nail fragment
1 wire nail fragment

10BLOCK67-TU10-2

Complete machine-made colorless glass vial with patent finish and Owens scar. Embossed on the base
“WYETH/80”. Embossed “4” on the lower body. This style of embossing was employed by an
unknown glasshouse for drug company Wyeth has been dated by Toulouse (1971:548) to ca. 1880-
1910. The Owens scar suggests a date of manufacture of 1904 or later (Jones and Sullivan 1989:39).
Finish and part of the upper body of a colorless machine-made glass jar with four discontinuous external
threads
1 thin colorless glass fragment probably from a light bulb

10BLOCK67-TU10-3

Most of an inset panel from the side of a colorless glass bottle embossed
“DR.PRICE’S/DELICIOUS/FLAVORING EXTRACTS”. The bottle contents were likely
manufactured by the Price Flavoring Extract Company, Chicago, IL that operated from 1874 into the
early 1900s (Zumwalt 1980:340). This fragment refits to a bottle base fragment from 10BLOCK67-
TU10-1.

10BLOCK67-TU11-1

1 one-hole bone button back measuring .66 inch in diameter

10BLOCK67-TU12-1

2 decorated whiteware fragments, including one sherd with blue transfer print decoration and one
rim sherd with flow blue transfer print decoration
6 undecorated whiteware sherds, including one rim sherd from a plate
1 thick undecorated porcelain rim sherd
1 stoneware bottle neck and finish with crudely tooled rim and rings around the neck
1 thin colorless glass fragment probably from a light bulb
5 colorless curved glass fragments
3 flat glass fragments (mean thickness of fragments in mm – 1.7, 2.1, 2.5)
1 partial lead bullet with convex base and three grooves
1 cut nail fragment
5 bone fragments

10BLOCK67-TU12-2

3 decorated whiteware fragments, including two rim sherds that refit with blue sponge decoration, and one
rim sherd with undulating edge and molded decoration parallel to the edge on the interior surface

1 small chip of undecorated porcelain
 1 undecorated yellow ware body sherd
 Finish, neck, and upper shoulder of a colorless mold-blown glass bottle with tooled patent finish
 Fragment from an unidentified colorless glass object. Refits to a fragment from 10BLOCK67-TU12-3, and together they form a short cylinder of glass that is open and ground on one end, and slightly constricted then flared on the other end. The flared end is broken. Embossing on the two fragments reads "PAT FEB . . . 1868".
 3 colorless curved glass fragments
 9 flat glass fragments (mean thickness of fragments in mm – 1.3 [3], 1.4, 1.5, 1.6, 1.8, 2.0, 2.3)
 22 bones and bone fragments

10BLOCK67-TU12-3

3 whiteware fragments that refit to form a rim sherd with dark blue underglaze coloring on the exterior surface and remnants of gilt along the rim
 6 undecorated whiteware sherds
 1 stoneware body sherd
 3 fragments of thick dark green glass that refit to form a bottle base pushup with large mamelon
 1 white glass fragment from a jar lid liner embossed "...E P..."
 Fragment from an unidentified colorless glass object. Refits to a fragment from 10BLOCK67-TU12-2 (see above).
 11 curved glass fragments (aqua and colorless), including one pressed glass fragment
 25 flat glass fragments (mean thickness of fragments in mm – 1.3 [9], 1.4, 1.6, 1.7, 1.8 [2], 1.9 [2], 2.0 [8], 2.1)
 1 cut nail fragment
 1 wire nail fragment

10BLOCK67-TU12-4

2 decorated whiteware sherds, including one sherd with brown transfer print decoration, and one rim sherd with light blue and black hand-painted underglaze floral decoration and a possible decal remnant or green overglaze hand painting
 4 undecorated whiteware sherds including one fragment from a multisided vessel
 1 yellow ware body sherd with a small area of brown decoration on the exterior surface
 1 unglazed redware body sherd
 1 unglazed earthenware fragment
 15 curved glass fragments in several colors (aqua, opaque light blue, dark blue, amber, white, colorless), including one fragment of pressed glass with a starburst/sunburst pattern
 4 flat glass fragments (mean thickness of fragments in mm – 1.9, 2.1, 2.3, 3.1)
 1 cut nail (20d common)

10BLOCK67-TU12-5

3 undecorated whiteware sherds
 1 stoneware rim sherd with a flattened rolled rim
 1 redware body sherd with interior and exterior glazing
 7 curved glass fragments in several colors (aqua, yellow, white, colorless), including one unidentified decorative yellow glass fragment
 1 flat glass fragment (mean thickness of fragment in mm – 1.0)
 1 four-hole attachment button of white porcelain measuring .66 inch in diameter (30 lignes)
 1 bone fragment

10BLOCK67-TU13-1

1 whiteware fragment with molded decoration on the exterior surface
 1 undecorated whiteware sherd
 1 porcelain sherd with molded decoration on the interior surface and polychrome decal decoration consisting of dancing monkeys in human clothing

LINCOLN HOME NHS

Finish and neck of a mold-blown colorless glass bottle with irregular tooled finish and patent lip
1 flat glass fragment (mean thickness of fragment in mm – 1.9)

10BLOCK67-TU13-2

1 whiteware sherd with black transfer print decoration
1 undecorated whiteware rim sherd
2 redware sherds with interior and exterior glazing

10BLOCK67-TU13-3

1 large cut nail fragment

10BLOCK67-TU13-4

2 decorated whiteware rim sherds, including one with green transfer print and one with a molded scalloped rim
1 whiteware handle fragment with molded decorative form
1 porcelain sherd with molded decoration and gilt on the interior surface
1 fragment of colorless pressed glass
1 flat glass fragment (mean thickness of fragment in mm – 2.4)

10BLOCK67-TU13-5

2 decorated whiteware rim sherds, including one blue edge-decorated fragment with a smooth straight rim, and one sherd from a multisided vessel with flow blue transfer print decoration
Finish and neck of a blue/aqua bottle with applied ring or oil finish. Possible faint mold seam on lower neck.
1 thick white glass fragment (milk glass) with molded stepped form that may have been part of a decorative candlestick or lamp base

10BLOCK67-TU13-6

6 decorated whiteware fragments, including four sherds with brown floral transfer print probably from the same dish (although they do not refit), one sherd from a large vessel with brown transfer print and molded fluted design, and one rim sherd with molded decoration on the interior surface
3 undecorated whiteware sherds, including one with footring probably from a cup
3 colorless glass fragments that refit to form most of the upper portion of a mug. The mug was tumbler in form with a handle.
3 fragments from at least two white glass jar lid liners. One fragment is embossed “...NUINE PORCELAIN LIN...”.
Part of the top portion of a colorless glass lamp chimney with pie crust design. While a machine for producing this style of edging was patented in 1877 (Pyne Press 1972:111 in Woodhead, Sullivan, and Gusset 1984:62), the very good condition of the glass in this case suggests that a later reproduction item may be represented.
5 curved glass fragments in several colors (amber, white, colorless), including two pressed glass fragments probably from the same vessel, although they do not refit.
2 jar lid fragments from a zinc screw cap

10BLOCK67-TU13-7

5 porcelain fragments that refit to form part of a bowl with blue underglaze decoration in an oriental design

10BLOCK67-TU13-8

1 soft orange brick fragment
1 hard machine-made brick fragment with rounded edges

10BLOCK67-TU13-9

11 colorless glass fragments that refit to form most of a glass bottle of shoofly flask configuration. Mold-blown with crudely tooled wine or brandy finish. An air vent mark is present.

10BLOCK67-TU14-1

1 whiteware fragment with blue transfer print decoration
 2 undecorated whiteware rim sherds including one from a small dish/saucer
 1 porcelain fragment with polychrome overglaze hand-painted decoration
 2 stoneware body sherds
 1 redware sherd with glaze on a portion of the exterior surface
 1 complete bisque doll arm with a solid hand. A mold seam is present. This style of doll was common from the 1860s until 1890 (Coleman et al. 1968:74 and Noel Hume 1974:318 in Shepard 1981:94-96).
 3 curved glass fragments (aqua, colorless)
 2 wire nails
 Non-ferrous metal tool bit with threaded attachment for a handle

10BLOCK67-TU14-2

2 brick fragments that refit, possibly heat-altered

10BLOCK67-TU14-3

1 whiteware sherd with partial black printed maker's mark that includes a variation of the British Royal Arms topped with a crown.

10BLOCK67-TU14-4

1 whiteware base fragment with blue transfer print decoration and partial blue printed maker's mark that reads "...CO/...TRENT/...LAND", probably in reference to a pottery at Stoke-on-Trent, England. Use of the word ENGLAND in the mark likely indicates a date of manufacture of 1891 or later (Godden 1964:11), although earlier examples have been documented (Liesenbein 1973 in Herskovitz 1978:97).
 1 whiteware sherd with partial impressed maker's mark that reads "DAV...ORT/52/...CHIN...". The 5 and 2 are located on either side of an anchor. Manufactured by W. Davenport & Company, Longport, Burslem, Stoke-on-Trent in 1852 (Godden 1964:198).
 3 porcelain fragments with polychrome decal decoration. The decal on two sherds appears to be a floral (rose) design. Those two sherds are probably from the same vessel, although they do not refit. The third fragment is a rim sherd with decal leaves, molded edge and interior lip decoration, and gilt.

10BLOCK67-T7-1

1 complete glazed porcelain doll head. While the doll's hair and other features were probably originally painted, no paint remains. A mold seam is present. This style of doll was common from the 1840s through the 1860s (Shepard 1981:94-96).
 1 whiteware sherd with partial green printed maker's mark that reads "DERWOOD/W. S. GEORGE/150B". Manufactured by the W. S. George Pottery Company, Ohio and Pennsylvania. A similar mark is illustrated by Lehner (1988:162-163) dated to the late 1930s and 1940s.
 Complete small machine-made colorless glass bottle with Owens scar. Round in cross-section with a sloping shoulder and tapering slightly to the base (olive bottle shape). The bore has a ledge ¼ inch below the lip that appears similar to that for a capseat closure, although the finish is angular rather than rounded. The bottle mouth measures 1 3/16 inches in diameter. The base is embossed "10".
 Complete small round machine-made colorless glass jar with a single continuous external thread. Embossed on the side "TRADE MARK/VASELINE/CHESEBROUGH/NEW-YORK". The bottle contained Vaseline, a product of the Chesebrough Manufacturing Company Consolidated, New York (Fike 1987:56, 184). The bottle dates to 1908 or later when the company switched to a threaded closure.
 Complete colorless glass jar embossed "PATFEB10 03" on the base. That embossed patent information

LINCOLN HOME NHS

- relates to Patent Number 720,129 issued February 10, 1903 to Carl C. Giles and Granville H. Gray, Upland, IN, assignors to John S. Giles, Chicago. The patent involved an improvement in the closure of vacuum preserving jars (U.S. Patent and Trademark Office 2007a).
- 3 colorless glass fragments that refit to form most of a glass jar (only a small section of the lip is missing). The base is embossed "NO. 65./PAT. IN U.S./DEC. 22. 1903/JULY 17. 1906./M. 6.". A similar but smaller version of this jar was recovered at the Burch lot, 7BLOCK9-TU2-2. The embossed dates relate to two patents (Patent Nos. 747,451 and 826,105) issued for improvements in hermetically-sealed containers (U.S. Patent and Trademark Office 2006b and 2006c). Since the Beech-Nut Packing Company of Canajoharie, NY had an interest in at least one of those patents, it is possible that this particular jar originally contained a product of that company.
- Complete machine-made colorless glass jar. Embossed on the finish "A 12". Embossed on the side "Drey/PERFECT/MASON", indicating that the jar was manufactured by the Schram Automatic Sealer Company/Schram Glass Manufacturing Company, St. Louis, MO, that operated from 1906 to 1925 (Toulouse 1969:24; Toulouse 1971:166-167).
- Most of an aqua glass insulator of a double petticoat side groove style-Consolidated Design (CD) 151 (Milholland 1971:12, 76, 230). Embossed "PETTI.../H. ...CO./PAT...1893". This insulator was probably manufactured by the H.G. Company (Hemingray Glass Company) initially of Covington, KY, and post-ca. 1900 operating from Muncie, IN. The embossed patent information is a reference to Patent Number 496,652 issued May 2, 1893 to Ralph G. Hemingray of Covington, KY and James C. Gill of Muncie, IN. The patent consisted of the addition of a series of lugs around the base of the petticoats on insulators to facilitate removal of rainwater from the exterior surface through dripping (U.S. Patent and Trademark Office 2007b).
- 1 complete colorless oval eyeglass lens
- 1 complete cuprous tablespoon, Tipped pattern, 8 inches long

10BLOCK67-T7-2

- Complete machine-made green glass Coca Cola Trademark Bottle with crown finish (7 13/16 inches tall). The sides of the bottle are embossed "Coca-Cola/TRADE MARK REGISTERED/BOTTLE PAT'D.NOV.16.1915./Coca-Cola/TRADE MARK REGISTERED/MIN.CONTENTS 6-FL. OZS.". The lower body/heel of the bottle is embossed "M1BN ROOT 212". The base is embossed "SPRINGFIELD/ILL.". The bottle may have been manufactured 1916-1924 (Petretti 2005:359). The base embossing indicates that the bottler was local to the Springfield area.

10BLOCK67-T7-3

- Electrical fixture of unknown function with an industrial porcelain base; metal brackets, screws, and nuts; wire; a mica washer; a zinc or brass screw cover; and four carbon (?) rods

10BLOCK67-T7-4

- Complete machine-made colorless glass bottle with a two-part stacked finish and ball neck, and is similar in overall form but shorter than a possible pickle bottle illustrated by Wilson (1981:89 bottle #324). Embossed on the base "1/EJAB".

10BLOCK67-T7-5

- Clay chimney flue tile fragment with soot

10BLOCK67-T7-6

- Sample of soot with soil

10BLOCK67-T7-7

- Metallic soap stick case and part of the threaded cap that would originally have been screwed to a threaded sleeve holder for the soap. The base of the case is inscribed "The J.B. Williams Co./Glastonb. . . Conn. U.S.A./PAT. U.S.A./10-17-11./3-14-16./... 26...18.". The three dates in the inscription relate to three patents (Patent Nos. 1,006,420; 1,175,182; and 1,257,436) issued for shaving soap stick

holder/case combinations (U.S. Patent and Trademark Office 2007c, 2007d, 2007e). The example recovered at the Carrigan site was marketed by the J. B. Williams Company, a soap manufacturing company based in Glastonbury, CT from 1849 to 1957 (Glastonbury Board of Education 2007). The case is 3 1/8 inches long and 1 3/8 inches in diameter.

10BLOCK67-T7-8

Complete machine-made colorless glass bottle with crown finish and Owens scar. Embossed on the base "H.J.HEINZ CO./111/12 0 [0 is enclosed in a square]/PATD.". This bottle likely contained pure cider vinegar produced by the H. J. Heinz Company. The embossed information with the full company name and product #111 was used by the company from 1888 until ca. 1941 (Zumwalt 1980:203, 224). The number "12" and 0 in a square trademark indicates that the bottle itself was manufactured by the Owens Bottle Company at Gas City, IN, between 1911 and 1929 (Toulouse 1971:393-397).

10BLOCK67-T7-9

Complete machine-made aqua glass bottle with a general pickle/preserve bottle form (Putnam 1965:192 – American Metal Cap). It has four discontinuous external threads, a ball neck, and valve mark. Embossed on the base "F".

10BLOCK67-T7-10

Soot sample

10BLOCK67-T7-11

1 brick removed from in situ position mortared into the chimney stack. There is soot on the side that faced toward the stack interior, and grayish white paint or whitewash on the exterior surface.

10BLOCK67-T8-1

2 flat glass fragments (mean thickness of fragments in mm – 2.2 [2])
Plaster sample. The fragments were originally applied to a brick surface, and several have paint or whitewash on the finished surface.

10BLOCK67-T8-2

1 whiteware sherd that refits to a fragment from 10BLOCK67-T3-6 from a lid/vessel with floral decal decoration, polychrome hand painting, and a line of gilt around the rim
3 whiteware fragments that refit from a large basin with a molded fluted design on the lower exterior surface. The interior surface was decorated with brown berry/floral transfer print. These fragments refit to fragments from 10BLOCK67-T3-5.

10BLOCK67-T9-1

Complete mold-blown colorless glass bottle with tooled patent finish and French square shape
2 colorless glass fragments that refit to form the finish, neck, and part of the body of a mold-blown glass bottle with tooled patent finish. Appears to have been square in cross-section with flat chamfered corners (French square).
Large thick round green glass bottle base with dome-shaped pushup

10BLOCK67-T9-2

Brass door handle

LINCOLN HOME NHS

10BLOCK67-T9-3

Complete small round aqua glass bottle that probably originally contained ink. Mold seams continue to the lip, and the lip itself is ground. Embossed on the base "L&W". Probably manufactured by Lorenz & Wightman, Pittsburgh, PA, 1851-1860 (?), 1862-1871 (Toulouse 1971:338-339; Zumwalt 1980:288).

1 fragment of crumbly whitish sand/lime mortar

10BLOCK67-T9-4

Finish, neck, and part of the shoulder of a mold-blown aqua glass bottle with applied double ring finish with a larger angular top ring. This particular variation of the double ring finish has also been called a "citrate of magnesia finish" as it often occurs on bottles that contained that product (U.S. Department of the Interior, Bureau of Land Management 2007).

1 four-hole attachment shell button measuring .69 inch in diameter (30 lignes)

Circular brass disk measuring 1 7/16 inches in diameter perforated with one small hole and stamped "37"

Carrigan Lot, Collected from Back Dirt at Front of Property

Finish, neck, and part of the shoulder and body of a small mold-blown colorless glass bottle with tooled prescription finish

Comparative Mortar Samples

1. Test Unit 6, mortar collected between porch support bricks
2. Test Unit 6, North Extension, mortar from the Irwin house foundation
3. Test Unit 7, mortar removed from brick arc along the north foundation wall, 115 cm above top of footing
4. Trench 8, mortar collected from portion of wall west of Carrigan/Irwin wall interface, 118 cm above top of footing
5. Trench 8, mortar collected from portion of wall east of Carrigan/Irwin wall interface, 32 cm above top of footing
6. Trench 8, mortar collected from the Carrigan foundation, 50 cm above top of footing
7. Trench 8, mortar collected from the Carrigan foundation, 76 cm above top of footing
8. Test Unit 8, mortar removed from top of exposed foundation wall west of north wall jog, 105 cm above top of footing
9. Test Unit 8, mortar removed from top of exposed foundation wall east of north wall jog, 82 cm above top of footing
10. Test Unit 8, mortar removed from top of brick pad outside the north wall jog
11. Mortar collected from Irwin porch (?) wall at south end of Trench 8
12. Trench 7, mortar collected from foundation wall in cellar addition to the back of the house, east wall, 80 cm from southeast exterior corner
13. Trench 7, mortar collected from southwest corner of chimney stack along the east foundation wall, 50 cm above top of footing
14. Trench 7, gray mortar laid on top of chimney footing and wall south of chimney
15. Mortar removed from vertical drain tile joint at Trench 7 (tile is 15 cm outside of east foundation wall)
16. Trench 9, mortar collected from Carrigan house wall
17. Trench 9, mortar collected from Carrigan house wall

Burch Lot Artifacts, May 2005

7BLOCK9-TU2-1

Sample of mortar lining of the cistern

7BLOCK9-TU2-2

1 undecorated whiteware fragment

Most of a colorless glass jar embossed "NO. 71/PAT. IN U.S./DEC 22 1903/JULY 17 1906/21" on the base. These embossed dates relate to two patents (Patent Nos. 747,451 and 826,105) issued for

improvements in hermetically-sealed containers (U.S. Patent and Trademark Office 2006b and 2006c). Since the Beech-Nut Packing Company of Canajoharie, NY had an interest in at least one of those patents, it is possible that the container represented at the Burch lot originally contained a product of that company. A similar but larger version of this jar was recovered at the Carrigan lot, 10BLOCK67-T7-1.

1 flat glass fragment (mean thickness of fragment in mm – 2.5)

7BLOCK9-TU2-4

3 cobalt blue clay marbles (1/2 in diameter)

7BLOCK9-T1-1

1 hard brick fragment with hard white mortar from possible displaced cistern cap

7BLOCK9-T1-2

1 soft orange brick with soft brown mortar found loose in fill

7BLOCK9-T2-1

Brick and mortar sample from intact foundation remnant for a later building
Plaster sample

7BLOCK9-T5-1

Heat-altered brick with soft brown mortar found loose in fill

Architectural reference samples

Old brick collected from general fill in Test Unit 1 at 180 cm below surface
Brick and mortar sample collected from in situ position mortared into the back (west) remnant section of the north Burch house foundation

Burch Lot Artifacts, May 2006

7BLOCK9-TU5-1

2 undecorated whiteware rim sherds

7BLOCK9-TU6-1

1 undecorated whiteware plate fragment with partial indistinct black printed maker's mark

1 undecorated whiteware sherd

1 unglazed stoneware flowerpot base fragment with part of the drainage hole

1 bright green painted redware sherd that refits to a sherd from 7BLOCK9-TU6-6

1 complete white stoneware marble with swirled blue and green coloring (5/8 inches in diameter)

12 curved glass fragments of several colors (aqua, medium blue, green, colorless)

40 flat glass fragments (mean thickness of fragments in mm – 1.3, 1.7 [2], 1.8, 2.1 [3], 2.2 [9], 2.3 [5], 2.4 [8], 2.5, 2.6, 3.5, 3.6 [6], 3.7 [2])

1 complete wire nail

4 ferrous metal objects including a section of metal rod with screw attachment, one complete screw, and two possible nail fragments

Copper wire

Possible tarpaper fragments

Fragments of soft orange and red bricks (1.76 kg)

Mortar fragments including coarse, relatively hard, whitish mortar (220.1 g); and coarse, relatively hard, grayish pink mortar (85.5 g)

LINCOLN HOME NHS

1 bone fragment
6 slag fragments
Cinders (21.3 g)
Wood fragments (0.4 g)

7BLOCK9-TU6-2

1 whiteware fragment with black glazed interior and exterior surfaces
5 undecorated whiteware sherds
1 stoneware body sherd
2 colorless glass fragments that refit to form part of the base of a small bottle that was ovoid in cross-section with one flat side (Philadelphia oval). Embossed base reads "M. B. W./MILLVILLE", indicating manufacture by the Millville Bottle Works, Millville, NJ, 1903-1930, a company that made prescription and proprietary medicine bottles (Toulouse 1971:349-350).
22 curved glass fragments of several colors (aqua, dark green, amber, colorless), two of which have embossed lettering
24 flat glass fragments (mean thickness of fragments in mm – 1.2, 1.4, 1.6 [4], 1.7 [2], 1.9, 2.2 [2], 2.3 [4], 3.4, 3.6 [2], 3.7 [6])
1 cut nail fragment
3 ferrous metal objects including wire and possible nail fragments
Fragments of soft orange and red bricks, as well as harder machine-made bricks (0.62 kg)
Mortar fragments including fairly coarse, hard, whitish mortar (11.6 g); and coarse, relatively hard, grayish pink mortar (35.8 g)
19 bone fragments
Coal (41.2 g)
13 slag fragments
Cinders (46.0 g)
Wood fragments (0.3 g)
1 charcoal fragment

7BLOCK9-TU6-3

1 blue edge-decorated whiteware sherd with smooth curved rim
15 undecorated whiteware fragments, including 1 plain cup handle. Several sherds have a steely gray cast (ironstone).
1 undecorated porcelain rim sherd
6 redware body sherds, including three glazed fragments and three unglazed fragments
Light green glass bottle neck and crown finish. Mold-blown with tooled finish. The crown finish was patented in 1892 (Lief 1965:17 in Jones and Sullivan 1989:163-164).
30 curved glass fragments of several colors (aqua, light green, dark green, brown, colorless), two of which have embossed lettering
76 flat glass fragments (mean thickness of fragments in mm – 1.1 [2], 1.2, 1.3 [2], 1.4 [8], 1.5 [7], 1.6 [3], 1.7 [5], 1.8 [16], 1.9 [12], 2.0 [5], 2.1 [3], 2.2 [3], 2.3, 2.5, 2.6, 2.7, 2.9, 3.0 [2], 3.6 [2])
1 hard rubber button with broken cuprous shank. Black, round (11/16-inch in diameter), with a molded pattern of concentric circles on the front. The button back is stamped "N.R. CO./GOODYEARS...". The button was likely manufactured by the Novelty Rubber Company of New Brunswick, NJ that operated 1855-1870 (Luscomb 1967:140). The name "Goodyear" was a reference to Nelson Goodyear, who obtained a U.S. patent in 1851 for an improvement in the manufacture of hard rubber (Luscomb 1967:91, 170-171).
2 cut nail fragments
1 wire nail fragment
23 ferrous metal objects including fragments of sheet metal, a number of probable nail fragments, and an unidentified circular item
Fragments of soft orange and red bricks, as well as harder machine-made bricks (1.74 kg)
Mortar fragments including coarse, relatively hard, whitish mortar (141.7 g); soft fine light brown mortar (7.7 g); and coarse, relatively hard, grayish pink mortar (75.4 g)
2 lime fragments
12 bone fragments
Coal (64.1 g)

22 slag fragments
 Cinders (51.5 g)
 Wood fragments (0.5 g)
 3 charcoal fragments

7BLOCK9-TU6-4

3 blue transfer print decorated whiteware sherds, including two fragments undoubtedly from the same cup, although they do not refit. The transfer print pattern on the cup is Garden Scenery by T. J. & J. Mayer (Snyder 1997:119; Williams 1978:268), who operated potteries at Longport, Burslem, Stoke-on-Trent from 1843 to 1855 (Birks 2007).

2 undecorated whiteware fragments

3 redware fragments with interior and exterior glazing (refit to each other)

Portion of the finish and neck of a mold-blown colorless glass bottle with tooled finish of patent or packer form and with ball neck

Two colorless glass fragments that refit to form most of a bottle base with a large embossed "R" and possible Owens scar

24 curved glass fragments of several colors (aqua, light green, dark green, medium blue, colorless), including one fragment from the rim of a plain colorless glass container. Two other fragments have embossed lettering.

11 flat glass fragments (mean thickness of fragments in mm – 1.4 [4], 1.5, 1.6, 1.7, 1.9, 2.0, 2.2, 3.4)

14 ferrous metal objects including sheet metal fragments and several probable nail fragments

1 unidentified cuprous hardware fragment

Fragments of soft orange and red bricks, as well as harder machine-made bricks (0.42 kg)

Mortar fragments including fairly coarse, hard, whitish mortar (33.7 g); soft fine light brown mortar (191.2 g); and coarse hard grayish pink mortar (4.7 g)

2 lime fragments

16 bone fragments

Coal (15.0 g)

17 slag fragments

Cinders (21.3 g)

Wood fragments (0.3 g)

1 charcoal fragment

7BLOCK9-TU6-5

3 undecorated whiteware sherds including one plate fragment

1 undecorated yellow ware rim sherd

3 stoneware fragments

5 redware sherds, including two glazed fragments and three unglazed fragments

Most of the base of a colorless glass bottle with an unusual pattern of mold seams. The seams are similar to the post bottom pattern, except that the post seam extends up on to the heel of the bottle by as much as 3 mm. In addition, the base and side seams are not aligned. The bottle was rectangular in cross-section with rounded corners.

Colorless glass tumbler base with panel design and starburst/sunburst pattern on the exterior surface of the base

15 curved glass fragments of several colors (aqua, medium blue, dark green, milky, colorless), one of which consists of part of the embossed heel of bottle

2 colorless thin glass fragments that refit to form part of a probable light bulb

9 flat glass fragments (mean thickness of fragments in mm – 1.5 [2], 1.6 [2], 1.8, 1.9, 2.0 [2], 2.1)

2 cut nail fragments

1 probable wire nail fragment

5 ferrous metal objects including probable nail fragments and other unidentified ferrous metal

Fragments of soft orange and red bricks, as well as harder machine-made bricks (0.34 kg)

Mortar fragments including fairly coarse, hard, whitish mortar (51.2 g); soft fine light brown mortar (155.2 g); and coarse crumbly grayish pink mortar (228.7)

1 bone fragment

Coal (16.6 g)

25 slag fragments

Cinders (50.8 g)

LINCOLN HOME NHS

7BLOCK9-TU6-6

1 bright green painted redware sherd that refits to a sherd from 7BLOCK9-TU6-1

Comparative Mortar Samples

1. Test Unit 5, mortar collected from the north wall of the Burch house, top of course 4
2. Test Unit 5, mortar collected from chimney feature foundation at the north wall of the Burch house, top of course 10
3. Test Unit 5, mortar collected from north/south partition wall, Burch house, top of course 4

APPENDIX B

Artifact Provenience by Bag Catalog Code

Carrigan Lot Proveniences, May 2005

Bag Catalog Code	Description of Provenience
10BLOCK67-TU3-1	Test Unit 3, 40 cm bs
10BLOCK67-TU3-2	Test Unit 3, North 116 cm, Clay and dark soil, 50-65 cm bs
10BLOCK67-TU3-3	Test Unit 3, South 84 cm, Light sandy area, 50-65 cm bs
10BLOCK67-TU3-4	Test Unit 3, SE corner, 53 cm bs
10BLOCK67-TU3-5	Test Unit 3, SE corner, 65 cm bs, Wall and floor cleanup
10BLOCK67-TU3-6	Test Unit 3, West side, Approximately 85 cm bs, Wall and floor cleanup
10BLOCK67-TU3-7	Test Unit 3, SW corner, Approximately 100 cm bs, Exposure of brick paver slope
10BLOCK67-TU3-8	Test Unit 3
10BLOCK67-T2-1	Trench 2, 30 cm bs
10BLOCK67-T2-2	Trench 2, West Extension, 0-70 cm bs
10BLOCK67-T2-3	Trench 2, West Extension, Fill above east wall foundation
10BLOCK67-T2-4	Trench 2, West Extension, East house foundation wall
10BLOCK67-T3-1	Trench 3, Approximately 64 cm bs
10BLOCK67-T3-2	Trench 3, North Extension
10BLOCK67-T3-3	Trench 3, North Extension, 3 ½ ft bs
10BLOCK67-T3-4	Trench 3, North Extension, 30 cm north of original Trench 3 on west side
10BLOCK67-T3-5	Trench 3, North Extension, On top of large flattened metal container/chute, Approximately 80 cm bs
10BLOCK67-T3-6	Trench 3, South Extension
10BLOCK67-T4-1	Trench 4, Fill in builders trench for front (west) Carrigan House foundation in area not previously excavated by Floyd Mansberger (i.e., beyond plastic sheeting), Approximately 90 cm bs

LINCOLN HOME NHS

Carrigan Lot Proveniences, May 2006

Bag Catalog Code	Description of Provenience
10BLOCK67-TU8-1	Test Unit 8, North Extension, 0-25 cm bs
10BLOCK67-TU8-2	Test Unit 8, North Extension, 25-40 cm bs
10BLOCK67-TU8-3	Test Unit 8, North Extension, NE corner, 40-56 cm bs
10BLOCK67-TU9-1	Test Unit 9, North Extension, 0-30 cm bs
10BLOCK67-TU9-2	Test Unit 9, North Extension, Among the brick fragments at 30-38 cm bs
10BLOCK67-TU9-3	Test Unit 9, North Extension, Among the brick fragments at 38-44 cm bs
10BLOCK67-TU9-4	Test Unit 9, North Extension, Among the brick fragments at 44-52 cm bs
10BLOCK67-TU10-1	Test Unit 10, Fill south of north foundation wall line, 80-120 cm bs
10BLOCK67-TU10-2	Test Unit 10, Below brick wall rubble, 120 cm bs
10BLOCK67-TU10-3	Test Unit 10, Top of north foundation wall footing on south (interior) side
10BLOCK67-TU11-1	Test Unit 11, 55 cm bs
10BLOCK67-TU12-1	Test Unit 12, South 2/3, 0-35 cm bs
10BLOCK67-TU12-2	Test Unit 12, South 2/3, 35-50 cm bs
10BLOCK67-TU12-3	Test Unit 12, North 1/3, 0-40 cm bs
10BLOCK67-TU12-4	Test Unit 12, North 1/3, 40-50 cm bs
10BLOCK67-TU12-5	Test Unit 12, North 1/3, Among the brick fragments at 30-50 cm bs
10BLOCK67-TU13-1	Test Unit 13, South 1/3, 0-35 cm bs
10BLOCK67-TU13-2	Test Unit 13, South 1/3, 50-85 cm bs
10BLOCK67-TU13-3	Test Unit 13, South 1/3, 85 cm bs
10BLOCK67-TU13-4	Test Unit 13, Middle 1/3, 0-25 cm bs
10BLOCK67-TU13-5	Test Unit 13, Middle 1/3, 35-85 cm bs
10BLOCK67-TU13-6	Test Unit 13, North 1/3, 0-50 cm bs
10BLOCK67-TU13-7	Test Unit 13, North 1/3, In north unit wall at 65 cm bs
10BLOCK67-TU13-8	Test Unit 13, North 1/3, Bricks collected from feature, 55-85 cm bs
10BLOCK67-TU13-9	Test Unit 13, North 1/3, Bottle beneath brick in feature

Carrigan Lot Proveniences, May 2006 Continued

Bag Catalog Code	Description of Provenience
10BLOCK67-TU14-1	Test Unit 14, 0-40 cm bs
10BLOCK67-TU14-2	Test Unit 14, Bricks collected from feature, 35 cm bs
10BLOCK67-TU14-3	Test Unit 14, 40-70 cm bs
10BLOCK67-TU14-4	Test Unit 14, North Extension, 0-35 cm bs
10BLOCK67-T7-1	Trench 7, Fill above east foundation wall
10BLOCK67-T7-2	Trench 7, General fill west of foundation and north of chimney, 73 cm bs
10BLOCK67-T7-3	Trench 7, General fill west of foundation and north of chimney, 80-90 cm bs
10BLOCK67-T7-4	Trench 7, General fill west of foundation and south of chimney, 102 cm bs
10BLOCK67-T7-5	Trench 7, General fill west of foundation and south of chimney, 95 cm bs
10BLOCK67-T7-6	Trench 7, Between bricks at top of chimney stack, 65 cm bs
10BLOCK67-T7-7	Trench 7, Fill west of foundation and north of chimney, 120 cm bs at footing level
10BLOCK67-T7-8	Trench 7, Fill west of chimney, 60 cm bs
10BLOCK67-T7-9	Trench 7, Base of north foundation wall on the south (interior) side, 112 cm bs
10BLOCK67-T7-10	Trench 7, Fill in bottom of chimney stack
10BLOCK67-T7-11	Trench 7, Brick from chimney stack
10BLOCK67-T8-1	Trench 8, West Extension, 50-120 cm bs
10BLOCK67-T8-2	Trench 8, South end of trench, South of Irwin house wall at corner, Immediately below level of excavation in May 2005
10BLOCK67-T9-1	Trench 9, General fill
10BLOCK67-T9-2	Trench 9, East end of trench on south side, 35-45 cm bs
10BLOCK67-T9-3	Trench 9, Fill on the south (interior) side of Carrigan house foundation, 105-110 cm bs
10BLOCK67-T9-4	Trench 9, Fill at base course level on the south (interior) side of Carrigan house foundation, 110-120 cm bs

LINCOLN HOME NHS

Burch Lot Proveniences, May 2005

Bag Catalog Code	Description of Provenience
7BLOCK9-TU2-1	Test Unit 2, NW corner, Mortar cistern lining, 105 cm bs
7BLOCK9-TU2-2	Test Unit 2, Cistern fill, 125 cm bs
7BLOCK9-TU2-3	Test Unit 2, East Extension
7BLOCK9-TU2-4	Test Unit 2, Cistern fill, 129 cm bs
7BLOCK9-T1-1	Trench 1, 170 cm bs at interface of yellow brown fill and dark brown clay
7BLOCK9-T1-2	Trench 1, 180 cm bs at top of sterile clay
7BLOCK9-T2-1	Trench 2, 110 cm bs
7BLOCK9-T5-1	Trench 5

Burch Lot Proveniences, May 2006

Bag Catalog Code	Description of Provenience
7BLOCK9-TU5-1	Test Unit 5, Dark soil immediately adjacent to probable chimney base
7BLOCK9-TU6-1	Test Unit 6, 0-25 cm bs
7BLOCK9-TU6-2	Test Unit 6, 25-35 cm bs
7BLOCK9-TU6-3	Test Unit 6, North of clay fill, 35-60 cm bs
7BLOCK9-TU6-4	Test Unit 6, North of clay fill, 60-80 cm bs
7BLOCK9-TU6-5	Test Unit 6, North of clay in light and dark brown soil, 80-90 cm bs
7BLOCK9-TU6-6	Test Unit 6, SE corner in mottled clay, 90 cm bs

APPENDIX C

Collected Faunal Remains by Provenience (Bag Catalog Code)

The identification of faunal remains collected at the Carrigan and Burch properties in 2005 and 2006 was undertaken by Midwest Archeological Center Archeologist Ken Cannon (2006). When several additional bone fragments were found mixed into other artifactual materials from the Burch property, identification of those fragments was undertaken by Center Archeological Technician Brennan Dolan. The identification of faunal remains from each site is presented in the following two tables. The provenience of each specimen is indicated by the associated three-part bag catalog code, a description of which is included in Appendix B. When multiple faunal specimens were recovered from the same recorded field provenience, they were assigned the same official ANCS+ catalog number. During analysis, specimens with the same catalog number were then each assigned unique sequential specimen numbers.

Carrigan Lot Records

Provenience	Catalog #	Specimen	Species	Common Name	Element	Side	Modification	Comments
10BLOCK67-TU3-2	10691		Sheep-sized mammal		Rib	Left		
10BLOCK67-TU3-3	10692	1	Medium-sized bird		Humerus	Unsided	Rodent-gnawing along margin	
10BLOCK67-TU3-3	10692	2	Medium mammal		Long bone		Cut	
10BLOCK67-TU3-3	10692	3	Medium mammal		Indeterminate			
10BLOCK67-TU3-3	10692	4	Medium mammal		Indeterminate			
10BLOCK67-TU3-5	10693	1	Bos taurus	Cattle	Acetabulum (innominate)	Left	Sawn	Immature
10BLOCK67-TU3-5	10693	2	Bos taurus	Cattle	Femur?	Unsided	Sawn	
10BLOCK67-TU3-5	10693	3	Sus scrofa	Domestic pig	Fibula	Left		Immature
10BLOCK67-TU3-7	10694	1	Gallus gallus	Domestic chicken	Humerus	Left	Broken mid-shaft	
10BLOCK67-TU3-7	10694	2	Gallus gallus	Domestic chicken	Tibiotarsus	Right	Cut marks across shaft	
10BLOCK67-TU3-7	10694	3	Gallus gallus	Domestic chicken	Femur	Right		
10BLOCK67-TU3-7	10694	4	Anatidae (Branta/Chen)	Goose	Ulna	Left	Cut mid-shaft	Branta/Chen (goose)
10BLOCK67-TU3-7	10694	5	Ovis aries/Capra hircus	Sheep/goat	Humerus	Left	Cut marks mid-shaft	
10BLOCK67-TU3-7	10694	6	Ovis aries/Capra hircus	Sheep/goat	Radius	Left	Cut mid-shaft	
10BLOCK67-TU3-7	10694	7	Bos taurus	Cattle	Lumbar vertebra		Sawn	Immature
10BLOCK67-TU3-7	10694	8	Bos taurus	Cattle	Axis (2nd cervical vertebra)		Sawn	Immature
10BLOCK67-TU3-7	10694	9	Bos taurus	Cattle	Rib	Unsided		
10BLOCK67-TU3-7	10694	10	Bos taurus	Cattle	Ischium (innominate)	Right	Sawn	
10BLOCK67-TU3-7	10694	11	Ovis aries/Capra hircus	Sheep/goat	Humerus	Left	Canid gnaw marks	
10BLOCK67-TU3-7	10694	12	Ovis aries/Capra hircus	Sheep/goat	Radius	Right	Canid gnawing	
10BLOCK67-TU3-7	10694	13	Bos taurus	Cattle	Scapula	Unsided	Sawn	
10BLOCK67-TU3-7	10694	14	Ovis aries/Capra hircus	Sheep/goat	Indeterminate vertebra		Cut	
10BLOCK67-TU3-7	10694	15	Bos taurus	Cattle	Scapula?	Unsided	Cut marks	Lateral margin
10BLOCK67-TU3-7	10694	16	Bos taurus	Cattle	Femur or humerus	Unsided	Sawn	
10BLOCK67-T2-2	10695		Sus scrofa	Domestic pig	Femur	Left	Cut marks distal near break	Immature

Carrigan Lot Records

Provenience	Catalog #	Specimen	Species	Common Name	Element	Side	Modification	Comments
10BLOCK67-T2-3	10696		Medium-sized bird		Coracoid	Left	Eroded and broken	
10BLOCK67-T3-1	10697	1	Branta canadensis	Canada goose	Carpometacarpus		Possibly cut distal	
10BLOCK67-T3-1	10697	2	Large mammal		Large bone fragment		Cut perpendicular to margin	
10BLOCK67-TU3-3	10698		Indeterminate bivalve					Shell
10BLOCK67-T2-3	10699		Indeterminate bivalve					Shell
10BLOCK67-TU9-2	12974	1	Ovis aries/Capra hircus	Sheep/goat	Lumbar vertebra centrum			
10BLOCK67-TU9-2	12974	2	Ovis aries/Capra hircus	Sheep/goat	Humerus	Left		Distal
10BLOCK67-TU9-2	12974	3	Sheep-sized mammal		Occipital condyle			
10BLOCK67-TU9-2	12974	4	Gallus gallus	Domestic chicken	Vertebra			
10BLOCK67-TU9-2	12974	5	Gallus gallus	Domestic chicken	Femur	Left		Proximal
10BLOCK67-TU9-2	12974	6	Bos taurus	Cattle	Scapula	Left	Sawn	
10BLOCK67-TU12-1	12975	1	Indeterminate large mammal					
10BLOCK67-TU12-1	12975	2	Indeterminate large mammal					
10BLOCK67-TU12-1	12975	3	Indeterminate large mammal		Rib		Sawn	Probably cow
10BLOCK67-TU12-1	12975	4	Indeterminate large mammal		Lumbar vertebra			Probably cow
10BLOCK67-TU12-1	12975	5	Indeterminate large mammal		Vertebra			Probably cow
10BLOCK67-TU12-2	12976	1	Indeterminate mammal bone					
10BLOCK67-TU12-2	12976	2	Indeterminate mammal bone					
10BLOCK67-TU12-2	12976	3	Indeterminate mammal bone					
10BLOCK67-TU12-2	12976	4	Indeterminate mammal bone					
10BLOCK67-TU12-2	12976	5	Indeterminate mammal bone					
10BLOCK67-TU12-2	12976	6	Indeterminate mammal bone					
10BLOCK67-TU12-2	12976	7	Indeterminate mammal bone				Cut	
10BLOCK67-TU12-2	12976	8	Indeterminate mammal bone				Cut	
10BLOCK67-TU12-2	12976	9	Indeterminate mammal bone				Cut	
10BLOCK67-TU12-2	12976	10	Indeterminate mammal bone				Cut	

Carrigan Lot Records

Provenience	Catalog #	Specimen	Species	Common Name	Element	Side	Modification	Comments
10BLOK67-TU12-2	12976	11	Indeterminate mammal bone				Cut	
10BLOK67-TU12-2	12976	12	Indeterminate mammal bone		Vertebra			
10BLOK67-TU12-2	12976	13	Indeterminate large mammal					Probably cow
10BLOK67-TU12-2	12976	14	Indeterminate large mammal		Rib		Sawn	Probably cow
10BLOK67-TU12-2	12976	15	Indeterminate large mammal		Possible radius		Sawn	Probably cow
10BLOK67-TU12-2	12976	16	Ovis aries/Capra hircus	Sheep/goat	Femur	Right	Sawn	
10BLOK67-TU12-2	12976	17	Sheep-sized mammal		Possible radius		Sawn	
10BLOK67-TU12-2	12976	18	Sheep-sized mammal		Long bone diaphysis		Sawn	
10BLOK67-TU12-2	12976	19	Gallus gallus	Domestic chicken	Tibiotarsus	Right		
10BLOK67-TU12-2	12976	20	Gallus gallus	Domestic chicken	Tibiotarsus	Left		Immature, no epiphyses Keel portion
10BLOK67-TU12-2	12976	21	Chicken-sized bird		Sternum			
10BLOK67-TU12-2	12976	22	Chicken-sized bird		Sternum?			
10BLOK67-TU12-5	12977		Indeterminate large mammal					

Burch Lot Records

Provenience	Catalog #	Specimen	Species	Common Name	Element	Side	Modification	Comments
7BLOCK9-TU6-1	12978		Gallus gallus	Domestic chicken	Coracoid	Left		Proximal portion
7BLOCK9-TU6-2	12979	1	Indeterminate mammal bone					
7BLOCK9-TU6-2	12979	2	Indeterminate mammal bone					
7BLOCK9-TU6-2	12979	3	Indeterminate mammal bone					
7BLOCK9-TU6-2	12979	4	Indeterminate medium mammal		Long bone			
7BLOCK9-TU6-2	12979	5	Indeterminate medium mammal				Sawn	
7BLOCK9-TU6-2	12979	6	Indeterminate medium mammal		Long bone		Sawn	
7BLOCK9-TU6-2	12979	7	Indeterminate large mammal		Caudal vertebra			
7BLOCK9-TU6-2	12979	8	Indeterminate large mammal		Vertebra body		Sawn	Immature
7BLOCK9-TU6-2	12979	9	Indeterminate large mammal		Vertebra		Sawn	
7BLOCK9-TU6-2	12979	10	Indeterminate large mammal				Sawn	
7BLOCK9-TU6-2	12979	11	Indeterminate large mammal				Sawn	
7BLOCK9-TU6-2	12979	12	Indeterminate large mammal				Sawn	
7BLOCK9-TU6-2	12979	13	Indeterminate large mammal				Sawn	
7BLOCK9-TU6-2	12979	14	Indeterminate large mammal				Sawn	
7BLOCK9-TU6-2	12979	15	Indeterminate large mammal		Rib		Cut	
7BLOCK9-TU6-2	12979	16	Ovis aries/Capra hircus	Sheep/goat	Radius	Left		Distal anterior
7BLOCK9-TU6-2	12979	17	Indeterminate large mammal		Vertebra		Sawn-3 sides	
7BLOCK9-TU6-2	12979	18	Indeterminate mammal bone				Sawn	
7BLOCK9-TU6-2	12979	19	Indeterminate mammal bone					Immature
7BLOCK9-TU6-3	12980	1	Indeterminate bird bone					
7BLOCK9-TU6-3	12980	2	Indeterminate bird bone					
7BLOCK9-TU6-3	12980	3	Indeterminate bird bone					
7BLOCK9-TU6-3	12980	4	Gallus gallus	Domestic chicken	Tibiotarsus	Right		Distal
7BLOCK9-TU6-3	12980	5	Gallus gallus	Domestic chicken	Tibiotarsus	Left		Distal
7BLOCK9-TU6-3	12980	6	Gallus gallus	Domestic chicken	Tarsometatarsus	Right		Proximal

Burch Lot Records

Provenience	Catalog #	Specimen	Species	Common Name	Element	Side	Modification	Comments
7BLOCK9-TU6-3	12980	7	Indeterminate mammal bone					
7BLOCK9-TU6-3	12980	8	Indeterminate mammal bone					
7BLOCK9-TU6-3	12980	9	Indeterminate mammal bone					
7BLOCK9-TU6-3	12980	10	Indeterminate large mammal		Long bone			Immature
7BLOCK9-TU6-3	12980	11	Indeterminate large mammal		Vertebra			Possible cow
7BLOCK9-TU6-3	12980	12	Sus scrofa	Domestic pig	Radius	Left		Distal; tentative ID
7BLOCK9-TU6-4	12981	1	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	2	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	3	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	4	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	5	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	6	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	7	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	8	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	9	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	10	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	11	Indeterminate mammal bone					
7BLOCK9-TU6-4	12981	12	Indeterminate mammal bone		Vertebra		Sawn	
7BLOCK9-TU6-4	12981	13	Branta canadensis	Canada goose	Tibiotarsus	Right		Proximal; refits to 14
7BLOCK9-TU6-4	12981	14	Branta canadensis	Canada goose	Tibiotarsus	Right		Refits to 13
7BLOCK9-TU6-4	12981	15	Goose-sized bird		Long bone shaft			
7BLOCK9-TU6-4	12981	16	Indeterminate bird bone					
7BLOCK9-TU6-5	12982		Indeterminate mammal bone					Calcined