NMCRIS Activity No. 82468 NMDOT Project No. RS-1331(5), CN 0819

TOTAH

TIME AND THE RIVERS FLOWING ~
Excavations in the La Plata Valley

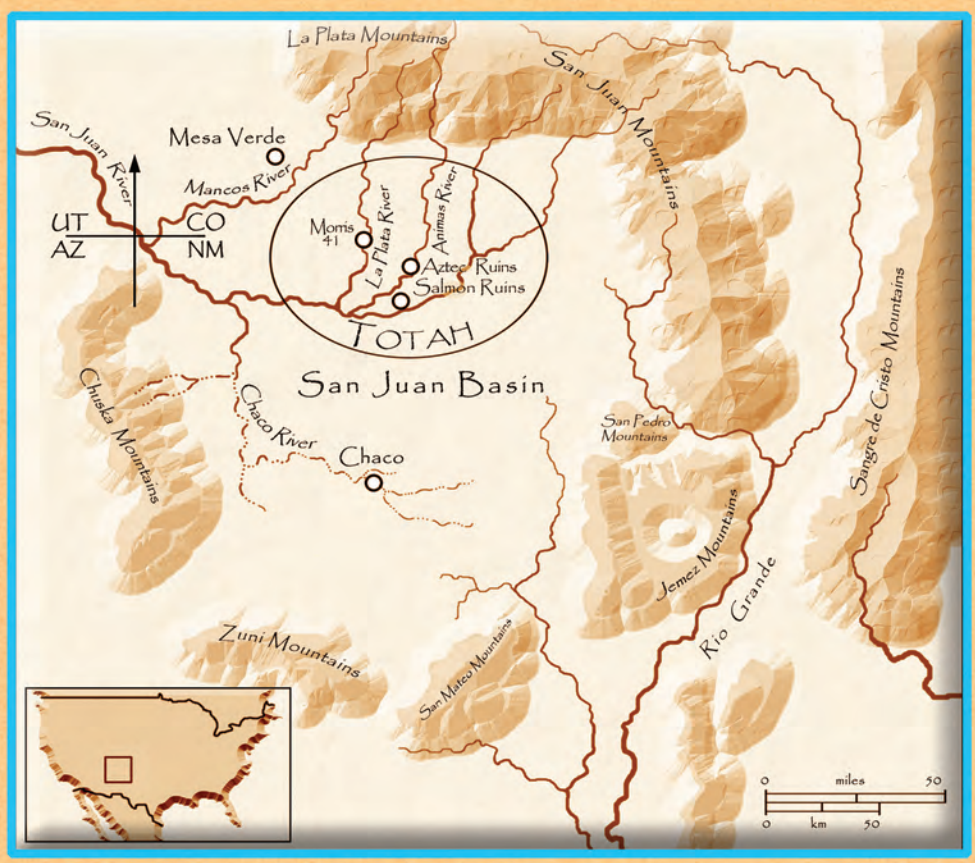
Volume 1

JACKSON LAKE COMMUNITY:
RESULTS FROM 16 ANCESTRAL PUEBLO SITES, FROM
TRANSITIONAL BASKETMAKER III TO LATE PUEBLO III

Book One

The La Plata Highway Archaeological Project: Overview
Smaller Sites
Sites with Basketmaker Components

H. Wolcott Toll



Office of Archaeological Studies Museum of New Mexico
Archaeology Notes 242
2017

NMCRIS Activity No.: 82468

Totah

Time and the Rivers Flowing ~ Excavations in the La Plata Valley

~ 30 Sites Along NM 170 in Six Volumes ~

prepared for:
New Mexico Department of Transportation
Santa Fe, NM 87504
NMDOT Project No. RS-1331(5), CN 0819

Office of Archaeological Studies
Archaeology Notes 242
June 2017

Volume 1

~ Book One ~

Frontispiece: Excavation at LA 37595, a Basketmaker site in the Jackson Lake community.

TOTAH

Time and the Rivers Flowing ~
Excavations in the La Plata Valley

~ 30 SITES ALONG NM 170 IN SIX VOLUMES ~

VOLUME 1
~ BOOK ONE ~
The La Plata Highway Archaeological Project: Overview
Jackson Lake Community:
Introduction and Sites
SMALLER SITES
SITES WITH BASKETMAKER COMPONENTS

VOLUME 1
~ BOOK TWO ~
Jackson Lake Community:
Sites [CONTINUED]
SITES WITH PUEBLO II AND PUEBLO III COMPONENTS

VOLUME 2
Jackson Lake Community:
Analysis, References Cited, and Appendixes
Project-wide Appendixes
(Site Location, etc.)

VOLUME 3
Barker Arroyo Community:
Introduction and Sites

VOLUME 4
Barker Arroyo Community:
Sites, Analysis, References Cited, and Appendixes

VOLUME 5
Harmony and Discord: Bioarchaeology
[2001]

VOLUME 6
Syntheses
Research Questions Addressed and Collected Papers

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.: 82468	2a. Lead (Sponsoring) Agency: Federal Highway Administration (FHWA)	2b. Other Permitting Agency(ies): New Mexico Department of Transportation; New Mexico Game and Fish	3. Lead Agency Report No.:

4. Title of Report: ***Totah: Time and the Rivers Flowing—Excavations in the La Plata Valley,*** **Volumes 1–6; Archaeology Notes 242, Office of Archaeological Studies** [*see field 9. for individual volume titles*]
Author(s): Toll, H. Wolcott

5. Type of Report
☐ **Negative** ☒ **Positive**

6. Investigation Type
☐ Research Design ☐ Survey/Inventory ☒ Test Excavation ☒ Excavation
☒ Collections/Non-Field Study
☐ Overview/Lit Review ☐ Monitoring ☐ Ethnographic study ☐ Site specific visit
☐ Other Field:

7. Description of Undertaking (what does the project entail?):
Undertaken at the behest of the New Mexico Department of Transportation as part of the process of widening and improving NM 170, the project scope reported here comprised two geographical phases, from north to south: (1) Barker Arroyo Community, with 14 excavated sites in a 7.7-mile stretch (Milepost 354+26.06 to 763+40.28); and contiguous to the south, (2) Jackson Lake Community, with 16 excavated sites in a 5-mile stretch (Milepost 132+00 to 354+23). It was a multi-season, multi-year effort involving excavation and material analysis of 30 primarily Ancestral Pueblo sites. *Note:* 5 additional excavated sites--shown in the attached Site Location maps at the most southerly extent of the project area--are referred to jointly as "Cottonwood Arroyo" and were reported separately and completely in Archaeology Notes 220 (pub: 2000).

8. Dates of Investigation:
03/22/1988–11/08/1991

9. Report Dates: AN 242, Vol. 5: 2001; Vols. 1–2: 06/07/2017; Vols. 3–4 & 6: in prep., pub 2020 projected)
Vol. 1 (Books One & Two):
The La Plata Highway Archaeological Project: Overview
Jackson Lake Community: Introduction and Sites
Vol. 2: *Jackson Lake Community:* Analysis, References Cited, and Appendixes
Vol. 3: *Barker Arroyo Community:* Introduction and Sites [part 1 of 2]
Vol. 4: *Barker Arroyo Community:* Sites [part 2 of 2], Analysis, References Cited, and Appendixes
Vol. 5: *Harmony and Discord: Bioarchaeology*
Vol. 6: Syntheses: *Research Questions Addressed and Collected Papers*

10. Performing Agency/Consultant: Museum of New Mexico Office of Archaeological Studies
Principal Investigator: D. Phillips, T. Maxwell, E. Blinman
Field Supervisors: C. Hannaford, H. W. Toll
Field Personnel Names: (*see* Table attached)

11. Performing Agency/Consultant Report No.:
Museum of New Mexico, Office of Archaeological Studies, Archaeology Notes 242

12. Applicable Cultural Resource Permit No.:
State of NM Permit No. SE-46

13. Client/Customer (project proponent):
Contact: Steven A. Lakatos
Address: New Mexico Department of Transportation
P.O. Box 1149
Santa Fe, NM 87504
Phone: 505-827-5513

14. Client/Customer Project No.:
NMDOT RS-1331(5), CN 0819

15. Land Ownership Status *(Must be indicated on project map):* (*see* Table attached)

Land Owner	Acres Surveyed	Acres in APE
NM Dept. of Transportation		
NM Dept. of Game & Fish		
Overall		
TOTALS		

16. Records Search(es):

Date(s) of ARMS File Review	Name of Reviewer(s)	
Date(s) of NR/SR File Review 1987-1989	Name of Reviewer(s)	
Date(s) of Other Agency File Review	Name of Reviewer(s)	Agency

17. Survey Data:

a. Source Graphics

☒ **NAD 27** ☐ **NAD 83** **Note: NAD 83 is the NMCRIS standard**

☒ **USGS 7.5' (1:24,000) topo map** ☐ **Other topo map, Scale:**

☐ **GPS Unit** **Accuracy** ☐ **<1.0m** ☐ **1-10m** ☐ **10-100m** ☐ **>100m**

b. USGS 7.5' Topographic Map Name **USGS Quad Code**

Farmington North	36108-G2

c. County(ies): San Juan

17. Survey Data (continued):

d. Nearest City or Town: Farmington, NM

e. Legal Description:

Township (N/S)	Range (E/W)	Section	¼ ¼ ¼
			, , .
			, , .
			, , .
			, , .
			, , .
			, , .
			, , .
			, , .
			, , .

Projected legal description? ☐ **Yes** ☐ **No** ☐ **Unplatted**

f. Other Description (e.g., well pad footages, mile markers, plats, land grant name, etc.):

18. Survey Field Methods:

Intensity: ☐ 100% coverage ☐ <100% coverage

Configuration: ☐ block survey units ☐ linear survey units (l x w):

☐ other survey units (specify):

Scope: ☐ non-selective (all sites recorded) ☐ selective/thematic (selected sites recorded)

Coverage Method: ☐ systematic pedestrian coverage ☐ other method (describe)

Survey Interval (m): **Crew Size:** **Fieldwork Dates:**

Survey Person Hours: **Recording Person Hours:** **Total Hours:**

Additional Narrative:

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.):

Riparian, agricultural, gravel terraces with grasses. Elevation: 1652m to 1713 m (5420 to 5620').

20. a. Percent Ground Visibility:

b. Condition of Survey Area (grazed, bladed, undisturbed, etc.):

21. CULTURAL RESOURCE FINDINGS ☒ **Yes, see next report section**

☐ **No, Discuss Why:**

22. Required Attachments (check all appropriate boxes): All of the information below is included in the attached report. ☒ USGS 7.5 Topographic Maps (1 through 4) with sites, isolates, and survey area clearly drawn ☐ Copy of NMCRIS Mapserver Map Check ☐ LA Site Forms - new sites (*with sketch map & topographic map)* ☒ LA Site Forms (update) - previously recorded & un-relocated sites (*first 2 pages minimum)* ☐ Historic Cultural Property Inventory Forms ☐ List and Description of isolates, if applicable ☐ List and Description of Collections, if applicable	23. Other Attachments: ☐ Photographs and Log ☒ Other Attachments *(Describe)*: **MAPS:** Site Location (4) Project Vicinity (1) **TABLES:** 1. Land Ownership/ Site Areas (sq. m) [Sec. 15] 2. NMCRIS Activity No. history [App1a*] 3. Publications history [App1b*] 4. Fieldwork Chronology [App2a*] 5. Personnel list [Sec. 10; App 2b*] * note: *Tables also in the Report are cross-ref'd here by Appendix no.* **REPORT:** AN 242, Vol. 1 (Books One & Two) & Vol. 2 [As they are completed, outstanding volumes of the six-volume project report will be submitted. *See* Sec. 9]

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Responsible Archaeologist:

Signature  **Date 5-16-17** **Title (if not PI):**

25. Reviewing Agency: Reviewer's Name/Date Accepted ( ) Rejected ( ) Tribal Consultation (if applicable): ☐ Yes ☐ No	26. SHPO Reviewer's Name/Date: HPD Log #: SHPO File Location: Date sent to ARMS:

CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

1. NMCRIS Activity No.: 82468	2. Lead (Sponsoring) Agency: Federal Highway Administration (FHWA)	3. Lead Agency Report No.:

SURVEY RESULTS:
Sites discovered and registered: 0
Sites discovered and NOT registered: 0
Previously recorded sites revisited (*site update form required*): **30**
Previously recorded sites not relocated *(site update form required):* 0
TOTAL SITES VISITED: 30
Total isolates recorded: 0 Non-selective isolate recording? ☐
HCPI properties discovered and registered: 0
HCPI properties discovered and NOT registered: 0
Previously recorded HCPI properties revisited: 0
Previously recorded HCPI properties not relocated 0
TOTAL HCPI PROPERTIES (visited & recorded, including acequias): 0

MANAGEMENT SUMMARY:

IF REPORT IS NEGATIVE YOU ARE DONE AT THIS POINT.

SURVEY LA NUMBER LOG
Sites Discovered:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

Previously recorded revisited sites:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)	

MONITORING LA NUMBER LOG *(site form required)*

Sites Discovered (*site form required*) **:** **Previously recorded sites *(Site update form required):***

LA No.	Field/Agency No.	LA No.	Field/Agency No.

Areas outside known nearby site boundaries monitored? Yes ☐, No ☐ If no explain why:

TESTING & EXCAVATION LA NUMBER LOG (*site form required)*

Tested LA number(s)	Excavated LA number(s)
1897	1897
37591	37591
37592	37592
37593	37593
37594	37594
37595	37595
37596	37596
37597	37597
37598	37598
37599	37599
37600	37600
37601	37601
37602	37602
37603	37603
37605	37605
37606	37606
37607	37607
60743	60743
60744	60744
60745	60745
60747	60747
60749	60749
60751	60751
60752	60752
60753	60753
65024	65024
65028	65028
65029	65029
65030	65030
65031	65031

Administrative Summary

Over the course of four field seasons starting on March 22, 1988, and ending November 8, 1991, data recovery efforts were completed by the Office of Archaeological Studies (OAS) along NM 170 (La Plata Highway) in San Juan County, New Mexico. These investigations were conducted at the request of the New Mexico Department of Transportation (NMDOT; formerly the New Mexico State Highway and Transportation Department) in preparation for widening and other improvements to NM 170, which runs north–south through the La Plata River Valley from its junction with US 64 just west of Farmington, New Mexico, to the Colorado state line some 20 miles (32 km) to the north. Funding for this endeavor was provided by the Federal Highway Administration (FHWA), who also acted as the lead agency.

Referred to as the La Plata Highway Archaeological Project (or the La Plata Highway project), sites determined eligible were excavated in sequentially numbered segments: the Jackson Lake community (Segment 2; Milepost 132+00 to 354+23; 16 archaeological sites) and, to its north, the Barker Arroyo community (Segment 3; Milepost 354+26.06 to 773+40.28; 14 archaeological sites); these 30 sites are reported in the current volumes. [NOTE: excavation at the southern extent of the La Plata Highway project, referred to as Segment 1, or Cottonwood Arroyo, was reported separately, in Archaeology Notes 220 (2000); that publication details five additional sites excavated in 1988; for clarity on the entire project extent, those sites are shown on the Site Location maps for the current volumes as well. No excavation resulted from the fourth, and northernmost, final segment (Dawson Arroyo) of the project.]

It is important to note that, while NAD 83 is the current datum standard, the La Plata Highway project sites were recorded using NAD 27—the standard at the time the project sites were initially recorded; OAS retained the NAD 27 standard across all subsequent fieldwork, reports, ARMS forms, and other associated records, including all material herein. No excavations were performed prior to construction of the existing highway; this work therefore included accessible sites within the old right-of-way and beneath the existing pavement, as well as site portions in the proposed new right-of-way. Sites were found on NMDOT land, land acquired by NMDOT from private sources, and land owned by the New Mexico Department of Game and Fish.

Work locating and evaluating these sites included survey and testing conducted in 1981 and 1982 by the Research Section (now OAS) of the Museum of New Mexico (Lancaster 1982a, 1982b, 1983), and resurvey in 1987 and further testing conducted in 1988 and 1989 (Toll, Lent, and Hannaford 1990; Toll and Hannaford 1997). The current report reflects research design and data recovery plans by Toll and Hannaford (1987, 1994, 1997) and approved by NMDOT. Data recovery fieldwork took place from March through December 1988, March through December 1989, March through June 1990, and February through November 1991, and was supervised by H. Wolcott Toll and Charles A. Hannaford.

Archaeological remains at these sites covered a large range of complexity, volume, and date of deposition. Almost all remains encountered were Anasazi or prehistoric Pueblo, ranging in age from the mid AD 500s to the early 1300s, from Basketmaker III to Pueblo III; one homesteading site was also extensively examined. Site collection sizes range from just a few artifacts to tens of thousands. Work ranged from examination of small numbers of features at some sites to substantial excavation of complex structures at others.

Significant cultural remains were encountered: of the 30 Jackson Lake and Barker Arroyo community sites examined here, 17 contained large artifact samples and substantial architectural features. Post-excavation and analysis, 22 of these 30 sites remain "eligible" for inclusion on the *National Register of Historic Places* (NRHP) under Criterion 'd' and three were deemed "not eligible"; the balance (five sites) could not be definitively recommended and are submitted as "not sure." "Not eligible" [*] and "not sure" [**] sites are asterisked below.

Totah: Time and the Rivers Flowing—Excavations in the La Plata Valley

Vols. 1–2: La Plata Highway Archaeological Project overview; Jackson Lake community sites (16): descriptions, artifact analysis, references, and appendixes. Vol. 2 also includes: Site Location information and other project-wide appendixes.
LA 37591, LA 37592, LA 37593, LA 37594, LA 37595, LA 37596, LA 37597, LA 37598, LA 60743**, LA 60744**, LA 60745, LA 60747**, LA 60749**, LA 60751, LA 60752, LA 60753**

Vols. 3–4: Barker Arroyo community sites (14): descriptions, artifact analysis, references, and appendixes.
LA 1897, LA 37599, LA 37600, LA 37601, LA 37602*, LA 37603, LA 37605, LA 37606, LA 37607, LA 65024*, LA 65028*, LA 65029, LA 65030, LA 65031

Vol. 5 (2001): Human biology of remains, Jackson Lake and Barker Arroyo segments.

Vol. 6: Response to the project research questions, synthetic studies on the project's material culture, a geomorphology study, and collected papers.

La Plata Highway Archaeological Project:
NMCRIS Activity No. 82468
NMDOT Project No. RS-1331(5), CN 0819
MNM Project Nos. 41.407, 41.419, 41.447, 41.454, 41.476, 41.493
State of NM Permit No. SE-46

NMCRIS Activity No.: 82468

MUSEUM OF NEW MEXICO
~
OFFICE OF ARCHAEOLOGICAL STUDIES

Totah
Time and the Rivers Flowing ~
Excavations in the La Plata Valley

~ 30 Sites Along NM 170 in Six Volumes ~

H. Wolcott Toll

Volume 1
[books one & two]
Volume 2

The La Plata Highway Archaeological Project: An Overview

Jackson Lake Community
Results from 16 Ancestral Pueblo Sites
from Transitional Basketmaker III to Late Pueblo III

with contributions by:
Nancy J. Akins
Peter Y. Bullock
Charles A. Hannaford
Stephen C. Lentz
Pamela J. McBride
Mollie S. Toll
Laurel Wallace
C. Dean Wilson
Dorothy A. Zamora

David A. Phillips, Ph.D.; Timothy D. Maxwell, Ph.D.;
Eric Blinman, Ph.D.; and H. Wolcott Toll, Ph.D.
Principal Investigators

prepared for:
New Mexico Department of Transportation
Santa Fe, NM 87504
NMDOT Project No. RS-1331(5), CN 0819 | State of NM Permit No. SE-46

ARCHAEOLOGY NOTES 242

SANTA FE 2017 NEW MEXICO

Acknowledgments

La Plata Highway Archaeological Project

~ Analysis & Processing ~

Jackson Lake

Ceramics: C. Dean Wilson, Leslie Barnhart, Linda Freedman
Chipped Stone: David Cushman, Peter Bullock, Adisa Willmer
Ground Stone: Peter Bullock, Karen Wening
Fauna: Linda Mick O'Hara, Susan M. Moga

Barker Arroyo

Ceramics: Dean Wilson, Eric Blinman
Chipped Stone: Peter Bullock, Signa Larralde, Laurel Wallace
Ground Stone: Sarah Schlanger, Signa Larralde
Fauna: Linda Mick O'Hara, Susan M. Moga, Nancy J. Akins

Jackson Lake and Barker Arroyo

Photography: Nancy Warren, Scott Jaquith
Computer and Artifact Processing: Sarah Schlanger, Eric Blinman, Raul Troxler, Nancy Warren, Laurel Wallace
Flotation: Deborah Johnson, Sheila Doucette, Laurel Wallace, Erin Tyler, Wu Chien Lem

~ Jackson Lake Community, Volumes 1 and 2 ~

The site descriptions were prepared by seven authors, the artifact sections by five authors. H. Wolcott Toll assembled the report and acted as managing editor. Certain sections of the report were reviewed by Robert Dello-Russo. Initial editing was performed by Tom Ireland and completed by Lynne Arany, who also designed and composed the report; Rob Turner produced the figures; and Sheila Martin, assisted by Melissa Martinez in the final phase, prepared and formatted the tables.

Contents

~ Volumes 1–2 ~

Administrative Summary ix
Acknowledgments xii
Figures List xv
Tables List xxvii

Volume 1 [Book One]

Preface **The La Plata Highway Archaeological Project: An Overview** ..... **xlv**
Introduction xlv
Environmental Setting xlviii
Human History lvii
The La Plata Highway Archaeological Project: Background lxii
Field Methods lxv
Data Recovery Plan lxvii
How This Report Is Organized lxxii

1 Introduction: Jackson Lake Community 1
H. Wolcott Toll

PART I: SMALLER SITES

2 LA 60743 7
Charles A. Hannaford

3 LA 60744 (Gas Valve Site) 15
Charles A. Hannaford

4 LA 60745 31
Nancy J. Akins and Charles A. Hannaford

5 LA 60747 39
Dorothy A. Zamora and H. Wolcott Toll

6 LA 37596 (Gypsy Joe Site) 51
Charles A. Hannaford

7 LA 60752 (Far Site) 63
Charles A. Hannaford

8 LA 37597 75
Peter Y. Bullock

9 LA 60753 85
Peter Y. Bullock

PART II: SITES WITH BASKETMAKER COMPONENTS

10 LA 37594 97
Laurel Wallace and H. Wolcott Toll

11 LA 60751 (Casa Quemada) 175
Stephen C. Lentz and H. Wolcott Toll

12 LA 37595 (La Casa Cortada) 231
H. Wolcott Toll

Volume 1 [Book Two]

PART III: SITES WITH PUEBLO II AND PUEBLO III COMPONENTS

13 LA 37592 (Kin Sin Fin) 345
H. Wolcott Toll

14 LA 37593 (Thunder Maker Site) 575
Charles A. Hannaford

15 LA 60749 703
Peter Y. Bullock, with contributions by H. Wolcott Toll

16 LA 37598 (Three Fingers Up, Three Toes Down Site) 731
Peter Y. Bullock and H. Wolcott Toll

17 LA 37591 (Runoff Ditch Pueblo) 841
Charles A. Hannaford

Volume 2

PART IV: ARTIFACT ANALYSIS

18 Ceramic Trends in the Jackson Lake Community 887
C. Dean Wilson

19 Chipped Stone from the Jackson Lake Community 943
H. Wolcott Toll

20 Ground Stone, Large Hafted Tools, Other Ground Stone, and Ornaments 1023
H. Wolcott Toll and Laurel Wallace

21 Faunal Remains 1065
H. Wolcott Toll

22 Archaeobotanical Remains 1081
Pamela J. McBride and Mollie S. Toll

23 Concluding Observations 1101
H. Wolcott Toll

References Cited 1109

APPENDIXES

Appendix 1a. Summary: La Plata Valley Sites, All Known Recorders, by NMCRIS Activity No. 1127
Appendix 1b. OAS publications history for the La Plata Highway Archaeological Project, with excavated sites listed for each report. 1128
Appendix 2a. Summary: La Plata Highway Archaeological Project/OAS fieldwork chronology by segment and site, including excavation start/end dates. 1129
Appendix 2b. La Plata Highway Archaeological Project excavation personnel 1130
Appendix 3. Summary: La Plata Highway Project, OAS Excavation, Sites/Period Components—Features and Structures, Counts by Type 1131
Appendix 4. Radiocarbon Dating Analysis (Beta Analytic Data) 1133
Appendix 5. La Plata Highway Project Operating Procedures 1141
Appendix 6. Site Location Information 1169
UTM coordinates: Jackson Lake and Barker Arroyo community sites 1169
Site Location maps (4): La Plata Highway Archaeological Project 1173

Figures List

Volume 1 [Book One]

Frontispiece: Excavation at LA 37595, a Basketmaker site in the Jackson Lake community. ..... *i*

Preface. The La Plata Highway Archaeological Project: An Overview

pf.1. Project vicinity map encompassing the Jackson Lake community and Barker Arroyo community segments for data recovery fieldwork completed by the Office of Archaeological Studies (1988–1991). ..... *xlvi*
pf.2. Map of the greater Southwest showing political and geographic features and locations of major archaeological areas relative to the Totah and La Plata. ..... *xlvii*
pf.3. Topographic context of the Totah showing major rivers and mountain ranges. ..... *xlviii*
pf.4. The high peaks in the La Plata Mountains, source of the water in the Mancos and La Plata Rivers. ..... *l*
pf.5. La Plata River headwaters above May Canyon. ..... *l*
pf.6. The La Plata Valley in the vicinity of Morris 23, view southeast; note the cobble terrace in the foreground and the irrigated fields. ..... *li*
pf.7. Environment of the La Plata Valley in the vicinity of Morris 41, looking north up the La Plata River toward the La Plata Mountains. ..... *li*
pf.8. The La Plata Valley looking southwest from the Holmes Group. ..... *lii*
pf.9. The agricultural lands of the La Plata Valley at the confluence of Barker Arroyo, looking south down the valley from Morris 39 toward LA 37601. ..... *lii*
pf.10. Winter view of a portion of the Jackson Lake site concentration from LA 60746, the kiva overlooking the community. ..... *liii*
pf.11. The southern portion of the Jackson Lake community area in the vicinity of excavated sites reported on in these volumes. ..... *liii*
pf.12. The La Plata River near Morris 41 in September of a dry year (1989) showing its permanent flow. ..... *liv*
pf.13. Major sites within the Totah in relation to Chaco Canyon, Mesa Verde, modern state lines, etc. ..... *lv*
pf.14. Community areas in the La Plata Valley. ..... *lvi*
pf.15. Piñon Mesa, west of Jackson Lake, showing nearby resource zone. ..... *lvii*
pf.16. Piñon Mesa, west of Jackson Lake, showing badlands. ..... *lviii*
pf.17. Piñon Mesa, west of Jackson Lake, showing environmental diversity. ..... *lviii*
pf.18a. Environment west of the La Plata River, looking west from above the Jackson Lake community. ..... *lix*
pf.18b. View to the north of the irrigated terrace on the west side of the La Plata Valley with irrigation water from the La Plata River and La Plata Mountains in the distance. ..... *lix*
pf.19. Fan erosion in the Jackson Lake area; note feature remains on arroyo fingers. ..... *lxiv*

1. Introduction: Jackson Lake Community

1.1. Sites reported in the Jackson Lake segment of the La Plata Highway project. *3*
1.2. Periods of use for the Jackson Lake community sites that had well-dated components. *4*

2. LA 60743

2.1. LA 60743, site area map (adapted from OAS survey map, Toll and Hannaford 1997). *8*
2.2. LA 60743, site overview, view northwest, pre-excavation. *9*
2.3. LA 60743, site plan. *11*

3. LA 60744 (Gas Valve Site)

3.1. LA 60744, site area map (adapted from OAS survey map, Toll and Hannaford 1997). *16*
3.2. LA 60744, site overview, view north, pre-excavation. *17*
3.3. LA 60744, site plan. *19*
3.4a. LA 60744, surface collection area, distribution and density, lithics. *21*
3.4b. LA 60744, surface collection area, distribution and density, ceramics. *22*
3.5. LA 60744, cobble wall alignment, view west. *25*

4. LA 60745

4.1. LA 60745, site overview, view southeast, pre-excavation. *32*
4.2. LA 60745, site overview detail, view north, pre-excavation; at center, LA 60747 is visible to the north. *32*
4.3. LA 60745, site area map (adapted from OAS survey map, Toll and Hannaford 1997). *33*
4.4. LA 60745, site plan. *35*
4.5. LA 60745, surface collection area, distribution and density, ceramics and lithics. *36*

5. LA 60747
5.1. LA 60747, site area map (adapted from OAS survey map, Toll and Hannaford 1997).....40
5.2. LA 60747, site overview, view southeast, pre-excavation. 41
5.3. LA 60747, site plan.....42
5.4a. LA 60747, surface collection area, distribution and density, ceramics. 43
5.4b. LA 60747, surface collection area, distribution and density, lithics. 44
5.5. LA 60747, south wall profile, 61N/51E.....49
5.6. LA 60747, grid 61N/51E, silicified wood projectile point (Pueblo II–III).....49

6. LA 37596 (Gypsy Joe Site)
6.1. LA 37596, site area map (adapted from OAS survey map, Toll and Hannaford 1997).....52
6.2. LA 37596, site overview, view northeast, pre-excavation. 53
6.3. LA 37596, site plan.....55
6.4. LA 37596, surface collection area, distribution and density, ceramics and lithics. 56

7. LA 60752 (Far Site)
7.1. LA 60752, site area map (adapted from OAS survey map, Toll and Hannaford 1997).....64
7.2. LA 60752, site overview, view east, pre-excavation. 65
7.3. LA 60752, site area, post-excavation development overview, view northeast.....66
7.4. LA 60752, site plan.....68
7.5. LA 60752, surface collection area, distribution and density, ceramics and lithics. 70
7.6. LA 60752, (top) Backhoe Trench 3, Feature 1, profile, view west; (bottom) hand trench, view east. 71

8. LA 375975
8.1. LA 37597, site area map (adapted from OAS survey map, Toll and Hannaford 1997).....76
8.2. LA 37597, site overview, view southwest, pre-excavation. 77
8.3. LA 37597, site plan.....78
8.4. LA 37597, surface collection area, distribution and density, ceramics and lithics. 79

9. LA 60753
9.1. LA 60753, site area map (adapted from OAS survey map, Toll and Hannaford 1997). 86
9.2. LA 60753, site overview, view north, pre-excavation.....87
9.3. LA 60753, site plan. 88
9.4. LA 60753, surface collection area, distribution and density, ceramics and lithics. 89
9.5. LA 60753, Backhoe Trench 3, view northwest, profile cut showing stratigraphy.....91
9.6. LA 60753, surface-scraping procedure.....92

10. LA 37594
10.1a. LA 37594, site area map (adapted from OAS survey map, Toll and Hannaford 1997).....98
10.1b. LA 37594, site overview, pre-excavation.....99
10.2. LA 37594, site setting, view north, along backhoe trench adjacent to existing right-of-way fence.....99
10.3 [OMITTED]
10.4. LA 37594, site plan.....100
10.5. LA 37594, Extramural Areas 1–4, surface collection area, distribution and density, ceramics and lithics. 102
10.6. LA 37594, Extramural Area 1, Pit Structure 1, plan and profiles. 104
10.7. LA 37594, Extramural Area 1, Pit Structure 1 (mealing room), view west.....105
10.8. LA 37594, Extramural Area 2, Roomblock 1 and adjacent features. 111
10.9a. LA 37594, Roomblock 1, Room 101, Floor 2, plan. 113
10.9b. LA 37594, Roomblock 1, Room 101, Floor 2, Features 1–3, view southeast.....114
10.9c. LA 37594, Roomblock 1, Room 101, Floor 2, Features 1–3, and Extramural Area 2, Features 1 and 7 (mealing bins); bipod shot, view north.....114
10.10a. LA 37594, Roomblock 1, Room 101, Floor 2, Feature 3 (vessel-lined pit) detail, view southeast.....116
10.10b. LA 37594, Roomblock 1, Room 101, Floor 2, Feature 3 (vessel-lined pit), profile.....116
10.11. LA 37594, Roomblock 1, Room 101, Floor 2, Feature 3, corrugated jar body sherd (FS 252).....117
10.12. LA 37594, Roomblock 1, Room 102, Floor 2, plan.....120
10.13a. LA 37594, Roomblock 1, Room 102, Floor 3, view northwest.....121
10.13b. LA 37594, Roomblock 1, Rooms 102 and 104; bipod shot, view north. 124
10.14. LA 37594, Extramural Area 2, Feature 2 (probable cist), plan and profile.....124
10.15. LA 37594, Extramural Area 2, Feature 2 (probable cist), view south. 125
10.16. LA 37594, Extramural Area 2, Features 1 and 7 (mealing bins), detail, view south. 126

10.17. LA 37594, Roomblock 1 and Extramural Area 2, view south; extramural Features 1, 7 (mealing bins; lower left), and 2 (probable cist; middle left). 129
10.18. LA 37594, Extramural Area 2, combined surface and excavated distribution and density, ceramics. 130
10.19. LA 37594, Extramural Area 2, Level 3, Mancos Black-on-white olla (Pueblo II). 131
10.20. LA 37594, Extramural Areas 3 and 4, Roomblock 2, and Pit Structure 5, plan; extramural features near Roomblock 2 and Pit Structure 5. 132
10.21. LA 37594, Extramural Area 3, Cist 2, plan and profile. 134
10.22. LA 37594, Extramural Area 3, Cist 2, view northeast. 134
10.23 [OMITTED]*]*
10.24. LA 37594, Extramural Area 3 and Roomblock 2; comparative fill depths from deep cists (extramural Cists 2, 3, and Room 201, Feature 7). 135
10.25a. LA 37594, Extramural Areas 3 and 4, backhoe trench, profile 80N/57E–107N/57E (along existing right-of-way fence), west wall. 138
10.25b. LA 37594, Extramural Area 3, Cist 3, plan and profiles. 139
10.26. LA 37594, Extramural Area 3, Cist 3, detail, view west. 140
10.27. LA 37594, Extramural Areas 3 and 4; Pit Structure 5, Floor 1, detail plan and profiles, and Roomblock 2, plan. 142
10.28 [OMITTED]
10.29. LA 37594, Pit Structure 5 and surrounding modern ground surface, view north. 143
10.30. LA 37594, Pit Structure 5, Floor 1, view south; northwest quad unexcavated. 143
10.31. LA 37594, Pit Structure 5, Floor 1, Feature 2 (metate rest), view northwest. 146
10.32. LA 37594, Pit Structure 5, Floor 1, Feature 3 (metate rest), view northeast. 146
10.33. LA 37594, Pit Structure 5, Floor 1, Feature 6 (hearth, right), Feature 17 (pot rest, left top), Features 18 and 19 (sand-filled pits, left center and bottom); view northeast. 146
10.34. LA 37594, Pit Structure 5, Floor 1, ground stone pipe. 147
10.35. LA 37594, Extramural Areas 1 and 2, side-notched projectile points (yellow-brown silicified wood). 159
10.36. LA 37594, Room 102, red shale pendant (top); gray siltstone bead (bottom). 161
10.37. LA 37594, components by era, plan: Basketmaker III Sambrito phase (500 AD), Pueblo II (1000–1100 AD). 174

11. LA 60751 (Casa Quemada)
11.1. LA 60751, site area map (adapted from OAS survey map, Toll and Hannaford 1997). 176
11.2 [OMITTED]
11.3. LA 60751, site overview, view east, pre-excavation. 177
11.4. LA 60751, site plan. 178
11.5. LA 60751, surface collection area, distribution and density, ceramics and lithics. 180
11.6. LA 60751, Backhoe Trench, north–south, between NM 170 and existing right-of-way fence. 183
11.7. LA 60751, Pit Structure 1, plan and profile (B–B'). 184
11.8. LA 60751, Pit Structure 1, Backhoe Trench, west wall profile (A–A'). 185
11.9. LA 60751, Pit Structure 1, during excavation. 185
11.10 [OMITTED]
11.11. LA 60751, Pit Structure 1, Floor 2, Feature 8 (hearth; center), Feature 6 (bin; left), and bench; view southeast to antechamber. 186
11.12 [OMITTED]
11.13. LA 60751, Pit Structure 1, tree-ring dates arranged by year, with color indicating stratigraphic location; histogram, only v, r, and rb dates shown. 189
11.14. LA 60751, Pit Structure 1, tree-ring dates grouped by stratigraphic location, with color indicating date; histogram, only v, r, and rb dates shown. 189
11.15a. LA 60751, Pit Structure 1, Layer 3, Feature 2 (slab-lined posthole). 192
11.15b. LA 60751, Pit Structure 1, Floors 2 and 3, Features 3, 6 (bin), 8 (hearth), and 13–17; view east. 192
11.16 [a–c]. LA 60751, Pit Structure 1, Chapin Black-on-white bowl sherds: a. anthropomorphic form, from roofing layer (Layer 4), northwest quadrant; b. iconic figure, possibly a shaman, on Vessel 3; and c. Vessel 2, from bench, northeast quadrant. 197
11.17. LA 60751, Pit Structure 1, Floor 2, during excavation, view north. 199
11.18. LA 60751, Pit Structure 1, Floor 2, southeast wing wall and Feature 6 (bin), with Feature 4 (post). 199
11.19. LA 60751, Pit Structure 1, Floor 2, Feature 11 (west wing wall) and Feature 10 (southwest post). 200
11.20. LA 60751, Pit Structure 1, Floor 2, Feature 8 (hearth), cross-section. 202
11.21 [a–f]. LA 60751, Pit Structure 1, projectile points: a., e., f. are late Basketmaker III (point f. probably served as a drill); b. Jay (5500–4800 BC); c. and d. are probably En Medio points (ca. 800 BC–AD 400). 213

12. LA 37595 (La Casa Cortada)

12.1. LA 37595, site area map (adapted from OAS survey map, Toll and Hannaford 1997).....232
12.2. LA 37595, site overview, view northeast from LA 60746 (outside the project right-of-way), pre-excavation. 233
12.3. LA 37595, early excavation, view northeast.....233
12.4. LA 37595, early excavation, view west. 234
12.5. LA 37595, dissected alluvial fans, showing silty unvegetated ground and surface erosion. 234
12.6. LA 37595, site plan.....236
12.7 [OMITTED]
12.8a. LA 37595, surface collection area, distribution and density, ceramics. 238
12.8b. LA 37595, surface collection area, distribution and density, lithics. 239
12.8c. LA 37595, comparative surface-density maps, 50E–60E: ceramics, chipped stone, and ground stone. 240
12.9. LA 37595, Backhoe Trench 2, natural fan deposit section (south of Pit Structure 1), west wall, profile. 241
12.10a. LA 37595, Pit Structure 1, Floor 1, plan.....251
12.10b. LA 37595, Pit Structure 1, Backhoe Trench 2, east wall, profile. 252
12.10c. LA 37595, Pit Structure 1, architectural profile.....253
12.11 [a–b].LA 37595, Pit Structure 1, Layer 1: a. Deadmans Black-on-red canteen fragments; b. gray ware seed jar....254
12.12a. LA 37595, Pit Structure 1, Layer 4, burned roofing material, west wall.....256
12.12b. LA 37595, Pit Structure 1, Layer 4, burned roofing material, south wall. 256
12.13. LA 37595, Pit Structure 1, Floor 1; bipod shot (in snowstorm), view northwest.....262
12.14. LA 37595, Pit Structure 1, Floor 1, features excavated, view southeast.....262
12.15. LA 37595, Pit Structure 1, Floor 1, detail at southwest wall (phone cable bisects the structure and is visible above the floor), view southwest.....263
12.16. LA 37595, Pit Structure 1, Floor 1, Feature 10 (deflector) and Feature 12 (hearth), view southwest. 266
12.17a. LA 37595, Pit Structure 1, Floor 1, Feature 12 (hearth), profile. 266
12.17b. Hearth complex comparison, plan: LA 37595 (Pit Structure 1, Floor 1; far right), LA 37592 (Pit Structure 1; Floor 3, left, and Floor 1, center).....267
12.18 [OMITTED]
12.19a. LA 37595, Pit Structure 1, Floor 1, Feature 7 (ventilator shaft), detail. Shows larger excavated hole reduced with lintels and earth wall; shaft to right, tunnel below.....270
12.19b. LA 37595, Pit Structure 1, Floor 1, Feature 7 (ventilator shaft), profile. 271
12.20. LA 37595, Pit Structure 1, Floor 1,Feature 7 (ventilator shaft), detail showing lintels in place. 271
12.21. LA 37595, Pit Structure 1, Floor 1, Feature 14 (ventilator tunnel) opening, Layer 4 (roof fall) in situ.....271
12.22 [OMITTED]
12.23. LA 37595, Pit Structure 1, Floor 1, opening to Feature 2 (off-chamber cist); shows collapsed lintel and disturbed area to left (Feature 5). 276
12.24a. LA 37595, Pit Structure 1, Floor 1, southwest corner. 276
12.24b. LA 37595, Pit Structure 1, Floor 1, Feature 2 (large off-chamber cist), plan and profiles.....277
12.25. LA 37595, Pit Structure 1, Floor 1, Feature 13 (storage cist). 279
12.26. LA 37595, Pit Structure 1, Floor 1, Feature 4 (wall/subfloor niche) with cobble patch. 279
12.27. LA 37595, Pit Structure 1, Floor 1, Feature 4; Red Mesa jar-handle sherd is intentional fill. 279
12.28. LA 37595, Pit Structure 1, Floor 2, plan. 281
12.29. LA 37595, Pit Structure 1, sipapu comparison, Floor 1 (Feature 1) and Floor 2 (Feature 11). 282
12.30. LA 37595, projectile points (Pit Structures 1 and 3). 282
12.31a. LA 37595, Pit Structure 2, plan, and profile of Features 1, 2, 3, 5, 21 (mealing bins). 292
12.31b. LA 37595, Pit Structure 2, view north; Backhoe Trench 3 cuts through the eastern half.. 293
12.32. LA 37595, Pit Structure 2, view northwest showing north wall collapse; note large metate in fill. 293
12.33. LA 37595, Pit Structure 2, Floor 1, during snowfall; bipod shot, view south. 294
12.34. LA 37595, Pit Structure 2, view west; in foreground, note mealing bins (Features 1, 2, 3, 5, 21) truncated by Backhoe Trench 3.....294
12.35. LA 37595, Pit Structure 2, fill profiles. 296
12.36 [OMITTED]
12.37. LA 37595, Pit Structure 2, Features 1, 2, 3, 5, 21 (mealing bins) cut by backhoe trench. 297
12.38 [OMITTED]
12.39a. LA 37595, Pit Structure 2, hammerstone histogram, counts by weight. 303
12.39b. LA 37595, site-wide, hammerstone histogram, counts by weight. 303
12.40a. LA 37595, Pit Structure 4, Floor 1, plan.....309
12.40b. LA 37595, Pit Structures 3 (right) and 4 (left); bipod shot, view northwest. 310
12.40c. LA 37595, Pit Structure 3, Floor 1, Feature 1 (hearth). 310
12.41. LA 37595, Pit Structure 4 in relation to Pit Structure 3 floor, profiles: E–W (top), N–S (bottom). 311

12.42. LA 37595, Pit Structure 4 (Pueblo II) and Pit Structure 3 (Basketmaker III), schematic profile showing key features and overlaying floors and roof fall; view west. 312
12.43. LA 37595, Pit Structure 4, fill profile, from pavement surface to Floor 1. 312
12.44 [OMITTED]
12.45 [OMITTED]
12.46. LA 37595, Pit Structure 4, Floor 1, view southeast; note Feature 4 (large off-chamber cist). 313
12.47. LA 37595, Pit Structure 4, Floor 1, Feature 4 (large off-chamber cist) opening, detail. 315
12.48. LA 37595, overview, Backhoe Trench 3 through Pit Structures 2 and 3, just east of nb NM 170. 319
12.49. LA 37595, overview, Pit Structures 2, 3, and 4; northbound NM 170 pavement removal in progress. 320
12.50. LA 37595, Pit Structures 3 and 4, view south. 321
12.51 [OMITTED]
12.52a. LA 37595, Pit Structure 3, Floor 1, plan. 322
12.52b. LA 37595, Pit Structure 3, Backhoe Trench 3, profile, view west. 323
12.53. LA 37595, Pit Structure 3, Floor 1, view southeast; shows Pit Structure 4 intrusion in the western portion of structure. 326
12.54. LA 37595, Pit Structure 3, Floor 1; view southwest to bisected Feature 1 (hearth) and Pit Structure 4. 326
12.55 [OMITTED]
12.56. LA 37595, lithic material types, site-wide, pie chart. 336
12.57a. LA 37595, Pit Structure 1, chipped stone material types, pie chart. 337
12.57c. LA 37595, Pit Structure 4, chipped stone material types, pie chart. 337
12.57b. LA 37595, Pit Structure 2, chipped stone material types, pie chart. 337
12.57d. LA 37595, Pit Structure 3, chipped stone material types, pie chart. 337
12.58 [a–c]. LA 37595, ground stone: a. maul; b. axe; and c. tchamahia. 340

VOLUME 1 [BOOK TWO]

13. LA 37592 (Kin Sin Fin)

13.1. LA 37592, at start of excavation, Roomblock 1 rubble in foreground, view west. 345
13.2a. LA 37592, at start of excavation (note minimal surface indication), view west. 346
13.2b. LA 37592, site area map (adapted from OAS survey map, Toll and Hannaford 1997). 347
13.3a. LA 37592, plan. 348
13.3b. LA 37592, Roomblock 2 and Pit Structure 1 detail, plan. 349
13.4. LA 37592, site overview from LA 60746 toward habitation on east side of NM 170. 350
13.5. LA 37592, fan between LA 37592 and LA 60751, showing erosion, view northeast. 350
13.6. LA 37592, drainage across the site, view southwest. 351
13.7. LA 37592, site setting among fields near the La Plata River; LA 37592 is at lower left, view southeast. 353
13.8 [OMITTED]
13.9. LA 37592, surface collection area, distribution and density, ceramics. 356
13.10a. LA 37592, surface collection area, distribution and density, lithics. 357
13.10b. LA 37592, Extramural Areas 1–4 and Roomblock 2, features, plan. 365
13.10c. LA 37592, BHT 1, continuation north from LA 60749, profile, view west. 369
13.11. LA 37592, Extramural Areas 2 and 3, Segments 1–5, subroom area, plan. 370
13.12–13.14 [OMITTED]
13.15. LA 37592, Extramural Area 2, Segments 2 and 3, subroom area (Room 202), features, plan. 371
13.16a. LA 37592, Extramural Area 2, Segment 2, Surface 8/subroom area (Room 202). 373
13.16b. LA 37592, Extramural Area 2, Segment 3, subroom area (Room 202), profile. 374
13.17. LA 37592, Extramural Area 3, Feature 1 (butting south wall of Room 203), view east. 379
13.18. LA 37592, Extramural Area 3, Features 1 and 5, with approximate locations of basket load layers, plan and profile. 380
13.19 [OMITTED]
13.20. LA 37592, Extramural Area 3, Feature 5 (major storage cist). 383
13.21a. LA 37592, Extramural Area 3, Feature 2 (fire pit), plan and profile. 384
13.21b. LA 37592, Extramural Area 3, Feature 2 (fire pit; bottom right). 384
13.22. LA 37592, Extramural Area 4, Feature 1 (roasting pit), fill. 385
13.23. LA 37592, Extramural Area 4, Feature 1 (roasting pit). 385
13.24. LA 37592, Roomblock 2, Rooms 201–203, Floor 1, plan. 395
13.25. LA 37592, Roomblock 2, Room 201, Floor 1, view southeast. 396
13.26a. LA 37592, Roomblock 2, Room 201, Floor 1, pit features, plan and profile. 396

13.26b. LA 37592, Roomblock 2, overview Rooms 201–203, view southwest; Room 201, Features 2, 4, 5, 6, and 7 in foreground. 397
13.27. LA 37592, Roomblock 2, Room 201, Floor 1, Feature 7 (Burial 2), two McElmo Black-on-white bowls. 401
13.28a. LA 37592, Roomblock 2, Room 201, Floor 1, Feature 3 (vessel-lined cist). 402
13.28b. LA 37592, Roomblock 2, Room 201, Floor 1, Feature 3 (vessel-lined cist), profile. 402
13.28c. LA 37592, Roomblock 2, Rooms 201 and 202, Floor 2, plan. 407
13.29. LA 37592, Roomblock 2, Rooms 201 and 202, Floor 3, plan 409
13.30. LA 37592, Roomblock 2, Room 201, Floor 3, view southeast 410
13.31 [OMITTED]
13.32a. LA 37592, Roomblock 2, Room 202, Floor 1; showing walls and nature of floor 412
13.32b. LA 37592, Roomblock 2, Room 202, Floor 1, Feature 1 (hearth), view southwest. 413
13.32c. LA 37592, Roomblock 2, Room 202, Floor 1, Feature 1 (hearth), view northeast. 413
13.32d. LA 37592, Roomblock 2, Room 202, Features 1, 3, and 4; plan and profile 413
13.33. LA 37592, Room 202, Floor 2, western edge; showing phone line cutting through Feature 1. 416
13.34. LA 37592, Room 202, Floor 2; showing east wall and Features 3–7 (postholes). 416
13.35a. LA 37592, Roomblock 2, Room 203, Floor 1, plan. 418
13.35b. LA 37592, Roomblock 2, Room 203, south wall, view north 419
13.36. LA 37592, Roomblock 2, Rooms 202–203, joining wall section. 419
13.37. LA 37592, Roomblock 2, Room 203, Floor 1, masonry walls detail, view east. 420
13.38. LA 37592, Roomblock 2, Room 203, east wall 420
13.39. LA 37592, Roomblock 2, Room 203 walls, view south. 421
13.40 [OMITTED]
13.41. LA 37592, Roomblock 2, Room 203, view north; Extramural Feature 1 (fire pit) in foreground 422
13.42–13.44 [OMITTED]
13.45a. LA 37592, Pit Structure 1, Floor 1, plan 423
13.45b. LA 37592, Pit Structure 1, Floor 1; bipod shot showing point-provenienced artifact tags and extramural Feature 2, view northwest. 424
13.46a. LA 37592, Pit Structure 1, midden base. 425
13.46b. LA 37592, Pit Structure 1, excavation overview. 425
13.46c. LA 37592, Pit Structure 1, excavation detail. 426
13.46d. LA 37592, Pit Structure 1, hand trenches, plan. 427
13.46e. LA 37592, Pit Structure 1, B–B′ (N–S, 147E line) profile, view west; rectified. 429
13.47 [OMITTED]
13.48. LA 37592, Pit Structure 1, C–C′ (E–W, 162N line) profile; composite, rectified. 436
13.49 [OMITTED]
13.50. LA 37592, Pit Structure 1, Layer 29, top, view southeast. 438
13.51. LA 37592, Pit Structure 1, Layer 29, bottom, view southeast; shows Layer 35 rock. 440
13.52. LA 37592, Pit Structure 1, Layer 6, awls in situ, view southeast. 443
13.53 [OMITTED]
13.54a. LA 37592, Pit Structure 1, deer scapulae (scoops) from Layers 23, 25, and 26. 444
13.54b. LA 37592, Pit Structure 1, deer scapulae (scoops) from Layers 23, 25, and 26. 445
13.55. LA 37592, Pit Structure 1, gray wolf humerus spatulate (or scraper) from Layer 21. 446
13.56 [OMITTED]
13.57. LA 37592, Pit Structure 1, near Burial 4, Cortez Black-on-white pitcher. 447
13.58. LA 37592, Pit Structure 1, bowls, rim radius (counts by stratigraphic unit), box plot. 453
13.59. LA 37592, Pit Structure 1, jars, rim radius (counts by stratigraphic unit), box plot. 453
13.60. LA 37592, Pit Structure 1, Trash Pit layer, human remains (disarticulated) distribution, plan. 463
13.61. LA 37592, Pit Structure 1, human remains (disarticulated); counts by quad and layer, histogram. 466
13.62. LA 37592, Pit Structure 1, human remains (disarticulated and altered); counts by layer and alteration type, histogram. 466
13.63 [OMITTED]
13.64a. LA 37592, Pit Structure 1, Group 2, human remains, parietal. 468
13.64b. LA 37592, Pit Structure 1, Group 2, human occipital. 468
13.64c. LA 37592, Pit Structure 1, Midden Layer 1, Group 2, human remains, long-bone fragments. 469
13.65. LA 37592, Pit Structure 1, Group 1, human remains in situ, view east. 469
13.66. LA 37592, Pit Structure 1, human remains (disarticulated; counts by age and stratigraphic unit), histogram. 472
13.67a. LA 37592, Pit Structure 1, A–A′ (N–S, 146.5E line), architectural profile. 481
13.67b. LA 37592, Pit Structure 1, Layer 23; thick plaster with sherd chinking, detail. 482
13.67c. LA 37592, Pit Structure 1, Layer 23; thick plaster with sherd chinking, southwest quad. 482

13.68 [OMITTED]
13.69. LA 37592, Pit Structure 1, Floor 1, features and point-provenienced artifacts, plan....486
13.70. LA 37592, Pit Structure 1, Floor 1, view southeast.....487
13.71. LA 37592, Pit Structure 1, Floor 1, view north.....488
13.72a. LA 37592, Pit Structure 1, Floor 1, articulated turkey near Feature 1 (hearth) and Feature 4 (deflector)..... 489
13.72b. LA 37592, Pit Structure 1, Floor 1, Feature 1 (hearth), plan and profile.....490
13.73. LA 37592, Pit Structure 1, Floor 1, Feature 4 (deflector; foreground), view south to Feature 2 (vent tunnel) and Feature 3 (vent shaft).....492
13.74. LA 37592, Pit Structure 1, Floor 1, Feature 4 (deflector), detail, view south to Feature 2(vent tunnel).....493
13.75a. LA 37592, Pit Structure 1, Feature 4 (deflector), vertical cross-section detail.....493
13.75b. LA 37592, Pit Structure 1, Feature 2 (vent tunnel), metate in situ.....493
13.76. LA 37592, Pit Structure 1, Floor 1, Feature 6 (subfloor cist), plan and profiles.....495
13.77. LA 37592, Pit Structure 1, Floor 1, Feature 9 (major off-chamber cist), profile.....497
13.78. LA 37592, Pit Structure 1, Floor 1, Feature 9 (major off-chamber cist), detail.....499
13.79. LA 37592, Pit Structure 1, Feature 9 (major off-chamber cist; center background), relative to ventilation system (on right), view east.....499
13.80a. LA 37592, Pit Structure 1, Floor 1, Feature 8 (floor-level niche), deer spatulate in situ.....501
13.80b. LA 37592, Pit Structure 1, Feature 8, deer spatulate (two views).....502
13.81. LA 37592, Pit Structure 1, Floor 2, plan.....503
13.82. LA 37592, Pit Structure 1, Floor 2, Feature 2 (hearth) as modified, and deflector.....504
13.83 [OMITTED]
13.84. LA 37592, Pit Structure 1, Feature 2, vent tunnel opening, metate removed.....504
13.85. LA 37592, Pit Structure 1, Floor 2, sandstone slabs (potlids) set in floor near Features 3 through 7......506
13.86. LA 37592, Pit Structure 1, Floor 3, plan.....507
13.87. LA 37592, Pit Structure 1, Floor 3, overview, view southeast.....508
13.88. LA 37592, Pit Structure 1, Floor 3, sipapu complex.....509
13.89. Hearth complex comparison, plan: LA 37595 (Pit Structure 1, Floor 1; far right), LA 37592 (Pit Structure 1; Floor 3, left, and Floor 1, center).....510
13.90 [OMITTED]
13.91a. LA 37592, two vessels from east of Pit Structure 1. Top: McElmo Black-on-white bowl (PIII) with organic paint, from Room 203 fill; bottom: mended McElmo Black-on-white bowl (PIII) from Burial 6, in same vicinity as top bowl.....514
13.91b. LA 37592, two vessels from east of Pit Structure 1. Left: gray ware pitcher (PII), from Extramural Area 2, Burial 7; right: Dolores Corrugated jar (PIII), from Burial 6.....515
13.92. LA 37592, Pit Structure 1, midden, Layer 7, McElmo Black-on-white bird effigy (early PIII).....521
13.93a [a–y; left] and 13.93b [z, aa–ii; right]. LA 37592, projectile point styles and types of retouch and materials: Yellow-brown silicified wood (c, d, e, k, m, n, w, aa, ee); Narbona Pass chert (g); drill tip (d, k, n, x, y, aa, ff); expedient (d, e, f, k, n, t, v, x, aa); early Pueblo III (hh); late Pueblo III (d, g, i, k, l, m, n, q, v, w, gg); heirloom En Medio (p); obsidian (a, o, y).....532–533
13.93c. LA 37592, larger bifaces from the Pit Structure 1 midden....533
13.94 [OMITTED]
13.95. LA 37592, site-wide, two-hand manos, count by length, histogram.....535
13.96a. LA 35792, two-notch granitic axes from Room 201 fill, showing different degrees of shaping and use.....536
13.96b. LA 37592, heavily used and broken axes. Clockwise from top left: siltstone axe (poll end), from Extramural Area 2, Layer 20; two-notch granitic axe, from Extramural Area 2, Layer 20; siltstone two-notch axe from Pit Structure 1 midden, Layer 3; siltstone axe (poll end), from Pit Structure 1 midden, Layer 5.....537
13.97a. LA 37592, shale pendants and manufacturing debris (all photographed in black-and-white) in stratigraphic groups, primarily from Pit Structure 1: (a, b) pit structure levels from the surface and initial levels through (c–f) midden Layer 1, to (g–i) lower midden to (j, k) sub midden layers; also shown are shale artifacts from (l, m) rooms and (n) extramural proveniences.....539
13.97b. LA 37592, burned shale pendant.....540
13.97c. LA 37592, top: sandstone, ground and shaped on all surfaces, from Pit Structure 1 fill; bottom: possible concretion with shaping and use wear.....540
13.97d. LA 37592,jet objects.....540
13.98a [a–i]. LA 37592, bone awls. a.–e.: Pit Structure 1, midden; f., g.: Pit Structure 1, sub-midden; h.: Pit Structure 1, Floor 1, Feature 9 (off-chamber cist); i.: Roomblock 2, Room 201, Floor 4.....544
13.98b. LA 37592, faunal beads. Top two: Pit Structure 1, midden Layer 5; third from top: Roomblock 2, subroom 202; bottom: Extramural Area 4, Level 5.....545
13.98c. LA 37592, Pit Structure 1, deer spatulate[s], two views; right: shows perforation.....545

13.99a. LA 37592, fuel type, weights in exterior and interior heating features; bar graph. 568
13.99b. LA 37592, weights of identified fuel wood (dominated by juniper from large fire features) by species; pie chart. 569
13.100. LA 37592, Pueblo III interior fire pits, fuel wood types, pie chart. 569
13.101. LA 37592, site-wide, pit size (counts by volume) for all pits, histogram. 573
13.102. LA 37592, site-wide, pit size (counts by volume) for pits less than 5 liters, histogram 573
13.103. LA 37592, site-wide, ceramics, mineral and organic paint counts by grouped proveniences, bar chart. 574

14. LA 37593 (Thunder Maker Site)
14.1a. LA 37593, site overview, view east, pre-excavation. 576
14.1b. LA 37593, water line trench and drainage area, pre- excavation. 576
14.2. LA 37593, site area map (adapted from OAS survey map, Toll and Hannaford 1997) 577
14.3. LA 37593, plan. 580
14.4. LA 37593, Backhoe Trench 1, profile, view west. 582
14.5. LA 37593, Roomblock 1, excavation. 583
14.6a. LA 37593, surface collection area, distribution and density, lithics 593
14.6b. LA 37593, surface collection area, distribution and density, ceramics. 594
14.6c. LA 37593, surface collection area, distribution and density, human remains (bone). 595
14.7. LA 37593, Extramural Area 1, Feature 1 (overlying Feature 4), view southeast. 603
14.8. LA 37593, Extramural Area 1, Features 1 and 4, plan and profile. 604
14.9. LA 37593, Extramural Area 1, Feature 2 (major storage cist), plan and profile. 605
14.10. LA 37593, Extramural Area 1, Feature 2, Mummy Lake Gray jar (Vessel 7) in situ. 608
14.11. LA 37593, Extramural Area 1, Feature 2, Mummy Lake Gray jar (Vessel 7); right: selenite contents. 608
14.12a. LA 37593, Extramural Area 1, Feature 2, basket in situ; two views (left and right) and detail (center). 609
14.12b. LA 37593, Extramural Area 1, Feature 2, basket impression, detail. 609
14.13. LA 37593, Extramural Area 1, Feature 5, Burial 3, with Backhoe Trench 5, plan and profile. 611
14.14a. LA 37593, Extramural Area 1, Feature 7, Burials 1 and 2, with Backhoe Trench 1, plans and profile 614
14.14b. LA 37593, Extramural Area 1, Feature 7, Burial 1, Mancos Black-on-white ladle (Vessel 8). 615
14.14c. LA 37593, Extramural Area 1, Feature 7, Burial 2, Dolores Corrugated jar (Vessel 5). 615
14.15. LA 37593, Roomblock 1, Rooms 101–103, Floor 1, plan 618
14.16a. LA 37593, Roomblock 1, Rooms 101–103, Floor 2, plan. 623
14.16b. LA 37593, Roomblock 1, Rooms 101–103, Floor 3, plan. 625
14.17. LA 37593, Room 101, Floor 3, walls; view north. 626
14.18. LA 37593, Room 102, view to west wall. 632
14.19 [OMITTED]
14.20a. LA 37593, Room 103, Floor 1, axe 635
14.20b. LA 37593, Room 103, Layer 8, Floor 2, Features 3 and 4, view west. 636
14.21. LA 37593, Room 103, Floor 2, Feature 6, McElmo Black-on-white effigy vessel (early PIII). 636
14.22. LA 37593, Room 103, Floor 2, Feature 3, Dogoszhi Black-on-white bowl (Vessel 11) 637
14.23. LA 37593, Room 103, Floor 2 [or/?] 3, Feature 2; bipod shot, view south. 639
14.24. LA 37593, Room 103, Floor 3, Feature 2, view to east wall. 640
14.25. LA 37593, Room 103, south wall. 641
14.26. LA 37593, Room 103, north wall. 642
14.27. LA 37593, Roomblock 2, plan. 645
14.28a. LA 37593, Pit Structure 1, plan. 647
14.28b. LA 37593, Pit Structure 1, Backhoe Trench 4, profile, view northeast. 648
14.29. LA 37593, Pit Structure 1, Layer 13, Levels 7 and 8, human remains, plan. 653
14.30. LA 37593, Pit Structure 1, Layer 13, Level 8, human remains (semiarticulated), view west. 654
14.31. LA 37593, Pit Structure 1, Layer 13, Level 7, human remains (disarticulated), view southwest 654
14.32. LA 37593, Pit Structure 1, Floor 1, plan. 669
14.33. LA 37593, Pit Structure 1, Floor 1, Mancos Black-on-white olla (reconstructed) with corrugated neck. 674
14.34. LA 37593, Pit Structure 1, Floor 1, Feature 9 (major off-chamber cist). 675
14.35. LA 37593, Pit Structure 1, Floor 1, Feature 9 (major off-chamber cist), axe. 676
14.36. LA 37593, Pit Structure 1, Floor 2, plan. 678
14.37. LA 37593, Pit Structure 1, Floor 2; bipod shot, view northwest. 679
14.38. LA 37593, Pit Structure 1, Floor 2, Feature 17 (pits within sipapu complex). 680
14.39. LA 37593, Pit Structure 1, Floor 1, Feature 10, wall patch showing sherds. 681
14.40 [a–i]. LA 37593, formal tools: a. large side-notched silicified wood point, possibly early, from Room 102; b. side-notched chalcedony point, also likely early, from Room 102 upper fill; c. Narbona Pass chert point fragment, from Roomblock 1; d. side-notched Narbona Pass chert point with convex base, also from

Roomblock 1; e. side-notched silicified wood point with convex base, from Pit Structure 1 fill; f. quartzite knife, from Room 103, Floor 2; g. basally notched (Coal Creek?) point, from Floor 2, Room 103; h. side-notched heat-treated yellow-brown silicified wood point with straight base; i. highly crafted, unnotched Narbona Pass chert point, from Extramural 3, Layer 9. 693

15. LA 60749

15.1. LA 60749, site area map (adapted from OAS survey map, Toll and Hannaford 1997)....704
15.2. LA 60749, plan. 706
15.3. LA 60749, surface collection area, distribution and density, ceramics and lithics. 707
15.4. LA 60749, Extramural Area 1, early clearing near Pit Structure 1, view east to La Plata River. 708
15.5. LA 60749, Extramural Area 1, Feature 1, view south. 709
15.6a. LA 60749, Pit Structure 1, early excavation, view northeast.. 711
15.6b. LA 60749, Pit Structure 1, Test Trenches 1 and 2 and stripped area, plan. 711
15.7. LA 60749, Pit Structure 1, Floor 1, plan. 712
15.8. LA 60749, Pit Structure 1, stratigraphy, showing burn layer and native substrate. 713
15.9. LA 60749, Pit Structure 1, Floor 1, beams and jacal, detail, view east 714
15.10. LA 60749, Pit Structure 1, Floor 1, beam radii from jacal casts (counts by radius), bar chart. 714
15.11. LA 60749, Extramural Area 3, hand trenches, profiles; A-A' (view south) and B-B' (view east) 718
15.12. LA 60749, Extramural Area 3, Feature 1 (cist), profile showing surrounding soil 720
15.13. LA 60749, Extramural Area 3, Feature 2 (deposit), showing irregular shape; view west. 721
15.14. LA 60749, Pit Structure 1 and Extramural Area 2, projectile points 726

16. LA 37598 (Three Fingers Up, Three Toes Down Site)

16.1a. LA 37598, site area map (adapted from OAS survey map, Toll and Hannaford 1997). 733
16.1b. LA 37598, site overview, view southeast, pre-excavation. 734
16.2. LA 37598, plan. 735
16.3. LA 37598, surface collection area, distribution and density, ceramics and lithics. 737
16.4. LA 37598, Extramural Areas 1 and 3 (west of NM 170), detail: Roomblock 1 and Pit Structures 1 and 3, plan. 741
16.5. LA 37598, Extramural Areas 1 and 3, Roomblock 1, plan 744
16.6. LA 37598, Roomblock 1, Room 101, view southwest. 745
16.7. LA 37598, Roomblock 1, Rooms 101, 103, 104; view north. 746
16.8. LA 37598, Roomblock 1, profiles; top: view west (Room 101, 104), bottom: view north (Room 101, 103, 105). 747
16.9. LA 37598, Room 101, Floor 1, plan 748
16.10 [a–d]. LA 37598, Roomblock 1, unusual ground stone tools: a. Brushy Basin tchamahia (MIAC Catalogue 53240/11), from Room 101, Floor 1; b. black siltstone tchamahia, from Room 102, surface stripping; c. possible pestle, from the surface above Room 102. Its shape and location found suggest that this tool could have been used for grinding pigment on "d."; d. two sides of a "sandal last" with concavities and pigment (not visible in this black-and-white photograph) on both faces, from Room 101, Floor 1. 751
16.11. LA 37598, Room 101, Floor 2, Features 1 (cist) and 2 (posthole). 752
16.12. LA 37598, Room 102, Floor 1, plan 754
16.13. LA 37598, Room 102, Floor 2, plan 758
16.14. LA 37598, Room 103, Floor 1, plan 759
16.15. LA 37598, Room 103, Floor 2, plan 763
16.16. LA 37598, Room 104, Floor 1, plan 764
16.17. LA 37598, Room 105, Floor 1, plan 766
16.18. LA 37598, Roomblock 1, specialized short manos. 770
16.19. LA 37598, Pit Structure 1, plan, and Feature 1 (cist tunnel) and Feature 2 (major storage cist), profile. 774
16.20. LA 37598, Pit Structure 1, profile, view west. 775
16.21. LA 37598, projectile points (left to right): side-notched, convex-base chalcedony point from surface stripping of Room 102; side-notched, straight-base quartzite point from Extramural Area 1 surface; corner-notched quartzite point from Pit Structure 2, Floor 1; unusual bone point from upper fill of Pit Structure 1 775
16.22. LA 37598, Pit Structure 1, Features 3, 4, and 5 (hearth, ash pit, vent shaft); view southeast. 780
16.23. LA 37598, Extramural Area 2 (east of NM 170), detail: Roomblock 2 and Pit Structure 2, with extramural Features 1 and 4 (cist with entry); plan. 787
16.24a. LA 37598, Extramural Area 2, Features 1 and 4 (cist with entry), plan and profile, view east. 789
16.24b. LA 37598, Extramural Area 2, Features 1 and 4 (cist with entry), view east. 790
16.25. LA 37598, Roomblock 2, plan. 795
16.26. LA 37598, Pit Structure 2, Floor 1, plan. 800
16.27. LA 37598, Pit Structure 2, view west. 801

16.28. LA 37598, Pit Structure 2, profile, view east. 802
16.29 [a–j]. LA 37598, Pit Structure 2, worked bone from the northern portion of the bench. Northwest quadrant: a.–b. awls (point provenience 32); c. awl (point provenience 33); i. awl (point provenience 34); j. partial deer mandible (point provenience 49, bench surface). Northeast quadrant: d.–e. awls (point proveniences 36 and 39, bench surface); f. awl, deer metapodial; g. fine-point awl (point provenience 38); h. awl, deer metatarsal (point provenience 37)....805
16.30 [a–e]. LA 37598, Pit Structure 2, worked bone: a. perforated split metapodial awl (northeast quadrant, Floor 1); b. splinter awl (northwest quadrant, Floor 1); c.–d. jackrabbit tinklers ([d. 145 mm]; point proveniences 59 and 61, northeast and southeast quadrants, Floor 1); e. deer radius with longitudinal grooves and cuts (point provenience 60, northeast quadrant, Floor 1). 806
16.31. LA 37598, Pit Structure 2, Feature 23 (bench posthole)....811
16.32. LA 37598, Pit Structure 2, Floor 1, Feature 5 (posthole) at the floor-wall juncture, showing how the post would have been slightly set into the wall....813
16.33. LA 37598, Pit Structure 2, Feature 2 (wall murals), Panel 1 (west), view west.....814
16.34. LA 37598, Pit Structure 2, Feature 2 (wall murals), Panel 1 (west) and Panel 2 (east); field drawing. 815
16.35. LA 37598, Pit Structure 2, Feature 2 (wall murals), Panel 1, southern extent. 816
16.36. LA 37598, Pit Structure 2, Feature 2 (wall murals), Panel 1; field drawing, southern extent detail. 816
16.37. LA 37598, Pit Structure 2, Feature 2 (wall murals), Panel 1; field drawing, midpoint detail.....817
16.38. LA 37598, Pit Structure 2, Feature 2 (wall murals), Panel 1, northern extent. 817
16.39. LA 37598, Pit Structure 2, Feature 2 (wall murals), Panel 2....818
16.40. LA 37598, Pit Structure 2, Feature 2 (wall murals), Panel 2; field drawing, southern extent figure detail.....818

17. LA 37591 (Runoff Ditch Pueblo)
17.1. LA 37591, site area map (adapted from OAS survey map, Toll and Hannaford 1997)....842
17.2. LA 37591, site overview (foreground), view northeast, pre-excavation. LA 37591 features are located between the edge of the highway pavement and the drainage ditch berm next to the fence....843
17.3. LA 37591, view south, pre-excavation (site area runs from the fence to the highway)....843
17.4. LA 37591, plan. 845
17.5. LA 37591, surface collection area, distribution and density, ceramics and lithics. 850
17.6. LA 37591, Pit Structure 1, Floor 1, plan and architectural profile (view west).....857
17.7. LA 37591, Pit Structure 1, profile (view west).....858
17.8. LA 37591, Pit Structure 1, Floor 1, Features 1 (hearth), 2 (sipapu), 3 (pit), 6 (deflector), and 8 (vent). 859
17.9. LA 37591, Pit Structure 1, Floor 1, Feature 8 (vent) opening, view southeast.....865
17.10. LA 37591, projectile points. Left to right, Pit Structure 1: yellow-brown silicified wood (midden deposit); white chalcedony; quartzite; far right, Extramural Area 1, Feature 3: gray chert.....873

VOLUME 2

18. Ceramic Trends in the Jackson Lake Community
18.1. Chapin Black-on-white bowl sherd, Basketmaker III, LA 60751.....893
18.2. Chapin Black-on-white bowl sherds, Basketmaker III, LA 60751. 893
18.3. Red Mesa–style black-on-white sherds, Early Pueblo II; LA 37591 (2, top), LA 37595 (3, bottom).....897
18.4a. Mancos Black-on-white sherds, Pueblo II, LA 37592 (5, top), LA 37593 (7, bottom).....898
18.4b. Mancos Black-on-white sherds, Pueblo II, LA 37595 (6, top), LA 37598 (7, bottom).....899
*18.4c. Top: McElmo Black-on-white ladles (left and right) and effigy (center) Early Pueblo III, LA 37593; Bottom: local Payan-like corrugated jar (bottom left), Mummy Lake gray ware jar (bottom right), Pueblo II, LA 37593...*902
18.4d. Doghoszi Black-on-white bowl, two views, Late Pueblo II, LA 37593.....905
18.5a. McElmo Black-on-white sherds, Early Pueblo III, LA 37591 (3, top), LA 37592 (8, bottom), LA 37598 (2, bottom right). 906
18.5b.McElmo Black-on-white bowls (two), Early Pueblo III, LA 37592.....907
18.5c. McElmo Black-on-white ceramic bird effigy, Early Pueblo III, LA 37592.....908
18.6. Transitional Black-on-white sherds, Pueblo III, LA 37591 (left), LA 37592 (right). 913
18.7. Mesa Verde Black-on-white sherds, Late Pueblo III, LA 37591 (top left); LA 37592 (4, center), LA 37598 (bottom right).....914
18.8. Jackson Lake community (all sites), gray ware jars, rim radii (counts) by period; bar chart.....934
18.9. Jackson Lake community (all sites), white ware bowls, rim radii (counts) by period, bar chart.....935
18.10. Jackson Lake community (all sites), white ware ladles, rim radii (counts) by period, bar chart.....936

19. Chipped Stone from the Jackson Lake Community

19.1. Locations of sources and sites mentioned (partially adapted from Cameron 1997:540). 944
19.2. View of the terrace slopes just west of sites LA 37591, LA 37592, LA 37593, LA 37594, and LA 37595, illustrating the huge numbers of cobbles on the terraces and talus. 947
19.3. Formations in and surrounding the La Plata Valley. Note the large expanses of Quaternary gravel terrace along the main rivers to the north. 948
19.4. Box plot showing size distributions of whole flakes by material (flakes over 100 g not shown) for all Jackson Lake community sites; bar within box represents median weight within a material category. 959
19.5. Weight distribution of whole flakes by material (only flakes weighing less than 30 g are shown) for all Jackson Lake community sites. "Other" includes all igneous materials and sandstone; 51.3 percent of items shown are less than or equal to 3 g. 959
19.6 [a]. Chert flakes, bar chart: a. weight distribution of all whole chert flakes, with all cases greater than 25 g in far-right bar; 960
19.6 [b]. Chert flakes, bar chart: b. breakdown of weights of flakes weighing more than 25 g. 960
19.6 [c]. Chert flakes, bar chart: c. whole chert whole flake weights showing temporal distribution; the distribution is very similar to a., but only artifacts from well-dated proveniences are shown. 961
19.7. Chalcedony flakes, bar chart: temporal distribution of weights of whole chalcedony flakes. 967
19.8 [a]. Silicified wood flakes, bar chart: a. weight distribution of all whole silicified wood flakes. 969
19.8 [b]. Silicified wood flakes, bar chart: b. temporal distribution of weights of whole silicified wood flakes. 969
19.9 [a–g]. Expedient points from LA 37592, Pit Structure 1, midden: a. Layer 1; b. Layer 2; c. Layer 3; d. Layer 4; e. Layer 5; f. Layer 6; g. Layer 28. Eight of these points are made of yellow-brown silicified wood; f. is heat-treated. 970
19.10 [a–d]. Four well-made bifaces from LA 37393 and LA 37592: a., b.: quartzite; c., d.: yellow-brown silicified wood. While c. is classified as a denticulate, the others are knives. 970
19.11. Tools made of yellow-brown silicified wood: LA 37591 (1, top left); LA 37592, (5, top right; 3, bottom left; 356-1 is heat treated; 677-11 and 728-40 are from non-midden locations); and tiny points from LA 37594 (bottom, 2nd from right, "hummingbird point") and LA 37595 (far right). 971
19.12 [a]. Whole siltstone flakes: a. weight distribution of all whole siltstone flakes, with all cases greater than 25 g in far-right bar. 975
19.12 [b]. Whole siltstone flakes: b. Breakdown of weights of flakes weighing more than 25 g. 975
19.12 [c]. Whole siltstone flakes: c. weights showing temporal distribution; the distribution is very similar to a., but only artifacts from well-dated proveniences are shown. 976
19.13 [a–b]. Points from exotic material: a. obsidian, LA 37592 (3); b. Narbona Pass chert, LA 37592 (1, left), LA 37593 (3, center), LA 37593 (1, right; drill). 979
19.14. Four major lithic materials, percent by artifact-type category (total n = 26,990); all small tools are grouped as "formal," and quartzitic sandstone and quartzite are combined. (Example: 51% of debitage is chert.) 980
19.15. Percentages of grouped tool types by largest material-type groups (total n = 26,990); quartzitic sandstone and quartzite are combined. (Example: 87% of chert is debitage.) 980
19.16 [a–d]. Other tool types: a., b. notches, LA 37592 (2; top left and center), LA 37595 (2; top right and middle row left); b. denticulates, LA 37595 (2; middle row center and right); c. bifacial use, LA 37598 (1; third row left); d. "blades," LA 37592 (3; third row right), LA 60749 (2; bottom right). 986
19.17. Counts of grouped tool types by major material type; logarithmic shows distributions in small formal tool and hammerstone samples. (Example: there are 11,941 chert flakes and 6 silicified wood hammerstones.) 987
19.18. Percents of flake portions in major material groups (total n = 21,663); counts available in Table 19.12. 988
19.19 [a]. Breakdowns of whole flake weights of all materials: a. all flakes. 988
19.19 [b]. Breakdowns of whole flake weights of all materials: b. flakes 45 grams or less. 989
19.19 [c].Breakdowns of whole flake weights of all materials: c. flakes 15 grams or less. 989
19.20a [a–c]. Drills: a. retouched drill shafts, LA 37593 (2; top left), LA 37595 (1; top center); b. utilized flake with drill point, LA37592 (1; top right); c. projectile points with drill tips, LA 37591 (1; bottom far left), LA 37592 (3; bottom center), LA 37598 (1; bottom right). 991
19.20b [a–g]. Heirloom points and the entire LA 60751 point assemblage, which contains several points from earlier periods.. 992
19.21. Core weights for cores between 2 and 1000 grams; histogram. 994
19.22. Core weights by major material groups (includes all hammerstones coded as cores); box plot. 997
19.23 [a–c]. Hammerstones made from cores, from LA 37592, Pit Structure 1; note presence of cortex and negative flake scars: a. quartzite (189 g); b. chert (148 g); c. siltstone (274 g). 997
19.24 [a]. Hammerstone weights: a. all hammerstones except for those coded as flakes. 1000
19.24 [b].Hammerstone weights: b. detail of hammerstone weight distribution of hammerstones less than 700 g. 1000
19.25a. Whole flakes, weight by time period (shows only flakes 75 g or less); box plot. 1005

19.25b. Whole flakes, weight by time period; line chart. 1005
19.26a. Whole chert flakes, mean weight by time period. 1006
19.26b. Whole silicified wood flakes, mean weight by time period. 1006
19.26c. Whole quartzite flakes, mean weight by time period. 1007
19.26d. Whole siltstone flakes, mean weight by time period. 1007
19.27. Major lithic material types by component age; correspondence analysis. 1008
19.28 [a–e]. Points with identifiable forms from dated proveniences (heirloom points not included): a. Basketmaker III–Pueblo I (LA 60751); b. mid Pueblo II (LA 37598); c. late Pueblo II (LA 37593); d. early Pueblo III (LA 37592, LA 60749); and, e. late Pueblo III (LA 37591, LA 37592). 1016
19.29 [a–k]. Corner-notched points, by material and location found. 1017
19.30 [a–e]. Side-notched points. Convex and concave bases by site and material. 1018
19.31 [a–e]. Side-notched points with straight bases, by material and location found. 1019
19.32. Side- and corner-notched points, length by width and indicating different point styles (n = 34); plot. 1020
19.33. Side-notched points, distance between notches by base shape; box plot. 1020

20. Ground Stone, Large Hafted Tools, Other Ground Stone, and Ornaments
20.1. Box plot, manos, counts by type and length, whole dimensions only. 1028
20.2. Scatter plot, manos, lengths by widths of whole manos, with mano type keyed. 1028
20.3 [a–b]. Two-hand manos from LA 37595, Pit Structure 2, mealing room, Floor 1: a. slab, sandstone, 220 mm length; b. trough, sandstone, 170 mm length (note its curved ends). 1033
20.4. Histogram of two-hand mano lengths of all types (slab, trough, loaf, and general). 1034
20.5. Box plot, whole two-hand manos, lengths by site; the small outliers at sites LA 37593 and LA 37598 are the "specialized manos" shown in Fig. 20.10. 1034
20.6. Box plot, two-hand manos, lengths by period, all mano types with complete lengths only. 1035
20.7. Box plot, manos, volume (length by width by thickness, in mm) by mano type. 1035
20.8 [a–b]. Manos from LA 37595, Pit Structure 2; b. shows very thin, somewhat irregular trailing edge of exhausted mano. 1037
20.9 [a–g]. Two-hand slab manos: a. igneous and sandstone, 228 mm length (LA 37592, Extramural Area 1, BHT 5); b.–c. igneous and sandstone, lengths 198 mm (b) and 215 mm (c) (LA 37593, Room 101, Floor 3); d.–g. sandstone, lengths 175–209 mm (LA 37593, Roomblock 2). 1038
20.10 [a–d]. Small, specialized manos that were found in pairs: a.–b. LA 37598, Roomblock 1; c.–d. LA 37593, Extramural Area 1, Feature 2 (major storage cist). 1039
20.11. Trough metate from LA 37598, Pit Structure 1, Floor 1, top and side views. Break shows thinness of the base; top view shows the closed-at-one-end configuration of the trough. 1041
20.12. Slab metate from LA 37593, Extramural Area 1, Feature 1 (cist). The metate is made from conglomeratic sandstone containing sizable chert pebbles (visible on side and face); the sandstone likely came from the Ojo Alamo formation, which outcrops on Piñon Mesa to the west. 1044
20.13. Small concave ground stone or "miniature metate" from LA 37593, Room 101, Floor 3. 1044
20.14 [a–c]. Axe production techniques: a. axe shows combined chipping and grooving of notches; b. two-notch axe with minimal shaping of a cobble; (c, two views) is a large, full-grooved axe. Axes "a." and "b." are from LA 37592, Room 201; axe "c." is from LA37593, Extramural Area 1, Feature 2 (major off-chamber cist). 1047
20.15 [a–e]. Axe breakage examples (note transverse breaks distal to notches): a. ground and chipped axe poll with heavily worn bit, possibly broken and further used (LA37592, Extramural Area 2); b. and c. axes (LA 37593 Extramural Area 1 and Roomblock 2 surface); d. axe (LA 37595, Pit Structure 4 fill); e. axe (LA 37598, Extramural Area 1). 1048
20.16. Fully shaped and ground diorite or granite maul from LA 37595, Pit Structure 3, a classic Basketmaker III pit house. 1052
20.17 [a–d]. Varieties of tchamahias found at Jackson Lake [note the similarity of the worn curve, especially in a.–c.]: a. black siltstone tchamahia (LA 37598, Room 102, surface stripping); b. siltstone, tanged tchamahia (LA 37593, Roomblock 1); c. Brushy Basin (shale) tchamahia (MIAC Catalogue 53240/11; LA 37598, Room 101, Floor 1); d. unusual siltstone example (LA 37595, Pit Structure 1, upper fill). 1053
20.18. LA 37598, Roomblock 1: possible pestle (top; from surface above Room 102), and bottom, both faces of a "sandal last" (from Room 101, Floor 1). Traces of pigment are present in three of the sandal last's depressions, with pink overlying yellow, white and green on top of red, and the last showing some red alone (note: the last was photographed with black-and-white film; pigment is not visible in these photos).* 1057
20.19 [a–d]. Ornaments: a. jet pendant blank with incipient drill hole in one face from LA 60752, Extramural Area 1, surface; b. burned ("red dog") shale pendant from LA37595, Pit Structure 1, upper fill; c. selenite bead from LA 60751, Pit Structure 1, Floor 3, Feature 17; d. partially drilled piece of selenite from LA 37595, Pit Structure 2, upper fill. 1058

21. Faunal Remains
21.1 [a–f]. Bone awls and awl fragments [a–e], bead [f], from LA 37591, Pit Structure 1, Layer 2. 1075
21.2 [a–c]. a. Coarse-point awl, deer metatarsal, from LA 37592, Room 201, Floor 3, Feature 2 (pit); b. medium awl, mammal bone, from the southwest quadrant fill of LA 37592, Pit Structure 1; c. fine-point awl from LA 37591, Pit Structure 1, Floor 1. 1075
21.3 [a–c]. Bone awls. LA 37592, Pit Structure 1: a. Turkey tarsometatarsus coarse-point awl (89 mm); b. Layer 16, jackrabbit tibia, indeterminate point (75 mm); c. Midden Layer 4, split turkey tibiotarsus, fine-point awl (115 mm). 1076
21.4 [a, b]. Bone awls. LA 37592, Pit Structure 1: a. Layer 23, highly polished deer metapodial, medium-point awl; b. Midden Layer 3, turkey tibiotarsus, fine-point awl. 1076
21.5 [a, b]. [was 21.5a] a. LA 37592, Pit Structure 1, Layer 26, wolf humerus spatulate (184mm; the olecranon has been enlarged, possibly for suspension); b. LA 37595, Pit Structure 1, Layer 1, deer metapodial, coarse-point awl (115 mm). 1077
21.6 [a, b]. LA 37592, Pit Structure 1, Floor 1: top [a]. deer humerus spatulate, two views; from a younger deer (it has healthier joints) than other examples from the same floor (see Fig. 21.7); bottom [b]. deer metacarpal, preform (shows grooving in preparation for splitting). 1077
21.7. Two views of same deer humerus spatulate (note pathology around humeral head) from LA 37592, Pit Structure 1, Floor 1, Feature 8 (niche). 1078
21.8 [a–c]. Bone beads. LA 37592: a. Pit Structure 1, Midden Layer 5, highly polished bead with scoring at one end, probably for breaking the bone section (60 mm); b. Subroom 202. LA 37591: c. Pit Structure 1 floor, note nicely polished and finished ends (74 mm). 1079

22. Archaeobotanical Remains
22.1. Wood taxa derived from flotation samples taken at Jackson Lake sites, interior vs exterior thermal features. 1086
22.2. Cultural plant taxa derived from flotation samples taken at Jackson Lake sites, interior vs exterio....1087
22.3. Construction wood from Jackson Lake sites, graph of type by occurrence by cultural period....1090
22.4. Plant categories derived from flotation samples taken at Jackson Lake sites, graph of type by occurrence by cultural period. 1100
22.5. Wood taxa derived from flotation samples taken at Jackson Lake sites, graph of type by occurrence by cultural period. 1100

23. Concluding Observations
23.1. LA 60746, a probable Jackson Lake community site or Great Kiva, overlooks sites LA 60749, LA 37592, and LA 111902 and the current agricultural land of the Jackson Lake Wildlife Area. The La Plata River and the East Side Rincon are visible in the mid- and backgrounds. 1105

Appendix 6: Site Location Information
Site Location map 1 (of 4): Segment 1; beginning of project (excavated Cottonwood Arroyo sites; see AN 220)....1173
Site Location map 2 (of 4): Segment 2; excavated Jackson Lake community sites. 1174
Site Location map 3 (of 4): Segment 3; excavated Barker Arroyo community sites. 1175
Site Location map 4 (of 4): Segment 4; end of project. 1176

Tables List

Volume 1 [Book One]

Preface. The La Plata Highway Archaeological Project: An Overview
pf.1. La Plata Valley Archaeological Project summary: segments, fieldwork, and excavated sites (with related reports). xlix
pf.2. Ceramic chronology (based on the Pecos classification), for the Jackson Lake and Barker Arroyo sites. lx

1. Introduction: Jackson Lake Community
1.1. Jackson Lake sites, counts of late (PIII) ceramic types. 5

2. LA 60743
2.1. LA 60743, 60744, and LA 60745, ceramic type, vessel form, and paint type; counts and percents....13
2.2. LA 60743, LA 60744, and LA 60745, lithic artifact and material type; counts and percents....14

3. LA 60744 (Gas Valve Site)
3.1. LA 60744, ceramic and paint type by provenience; counts and percents.....23
3.2. LA 60744, ceramic form by provenience and ware; counts and percents.....23
3.3. LA 60744, chipped stone artifact and material type by provenience; counts and percents.....24
3.4. LA 60744, ceramic type by deposit type and cobble area; counts and percents.....26
3.5. LA 60744, chipped stone material and artifact type by deposit type and cobble scatter; counts and percents. 26
3.6. LA 60744, vessel form by type; counts and percents.....27
3.7. LA 60744, tool type by material type; counts and percents. 28
3.8. LA 60744, counts of faunal taxa by element. 29
3.9. LA 60744, Layer 2, flotation full-sort plant remains (frequency per liter). 30

5. LA 60747
5.1. LA 60747, ceramic type, vessel form, and paint type by extramural area; counts and percents. 46
5.2. LA 60747, lithic artifact and material type by extramural area; counts and percents.....47
5.3. LA 60747, site stratigraphy by grid unit. 48

6. LA 37596 (Gypsy Joe Site)
6.1. LA 37596 and LA 60752, ceramic types by stratigraphic context; counts and percents. 58
6.2. LA 37596 and LA 60752, chipped stone artifact type by stratigraphic context; counts and percents. 58
6.3. LA 37596 and LA 60752, ceramic type, vessel form, and paint type; counts and percents.....59
6.4. LA 37596 and LA 60752, vessel forms, counts by ceramic type. 60
6.5. LA 37596 and LA 60752, chipped stone artifact and material type; counts and percents.....61
6.6. LA 37596 and LA 60752, chipped stone material type, counts by artifact type. 61
6.7. LA 37596 and LA 60752, ground stone, material and artifact type, size, and weight, by provenience. 61

7. LA 60752
[*see* Chapter 6]

8. LA 375975
8.1. LA 37597, Test Trenches 6, 7, and 8, excavation and auger depths with cultural materials found.....80
8.2. LA 37597, Extramural Areas 1 and 2, Test Trenches 1–8, cultural material counts by trench level. 81
8.3. LA 37597, ceramic attributes, counts by stratigraphic context within Extramural Areas 1 and 2. 82
8.4. LA 37597, lithic material and artifact type by extramural area; counts and percents.....83
8.5. LA 37597, faunal elements, counts by species, surface. 84

9. LA 60753
9.1. LA 60753, ceramics and lithics from test trenches and blading; counts by level. 90
9.2. LA 60753, auger tests. 90
9.3. LA 60753, ceramic and paint type by stratigraphic context; counts and percents. 93
9.4. LA 60753, ceramic type by extramural area; counts and percents.....93
9.5. LA 60753, lithic artifacts, counts by stratigraphic context and extramural area. 94
9.6. LA 60753, lithic material and artifact type by extramural area; counts and percents.....94

10. LA 37594
10.1 [OMITTED]
10.2. LA 37594, Pit Structure 1, floor features. 106
10.3. LA 37594, Pit Structure 1, pottery type by stratigraphic context; counts and percents. 107
10.4. LA 37594, Pit Structure 1, chipped stone artifacts by stratigraphic context; counts and percents. 107
10.5. LA 37594, Pit Structure 1, ground stone artifacts, counts by stratigraphic context. 107
10.6. LA 37594, Pit Structure 1, faunal remains by stratigraphic context; counts and percents. 107
10.7. LA 37594, Pit Structure 1, pollen, counts by provenience. 108
10.8. LA 37594, Extramural Areas 1 and 2, features.....109
10.9. LA 37594, Room 101, wall dimensions. 112
10.10. LA 37594, Room 101, Floor 2, features. 115
10.11. LA 37594, Room 102, Floors 2 and 4, features. 118
10.12. LA 37594, Roomblocks 1 and 2, pottery types from rooms, counts by fill and floor. 119
10.13. LA 37594, Roomblocks 1 and 2, chipped stone material types from rooms, counts by floor and fill. 122
10.14. LA 37594, Roomblocks 1 and 2, chipped stone artifact type from rooms, counts by floor and fill.....123
10.15. LA 37594, Extramural Area 2, Feature 2 (probable cist), interior features; summary table. 125

10.16. LA 37594, pottery types by extramural area; counts and percents. *127*
10.17. LA 37594, pottery pigment type by extramural area; counts and percents. *127*
10.18. LA 37594, ceramic vessel forms by extramural area; counts and percents. *128*
10.19. LA 37594, chipped stone material and artifact type by extramural area; counts and percents. *128*
10.20. LA 37594, Extramural Area 3, features; summary table. *133*
10.21. LA 37594, Roomblocks 1 and 2, pollen counts by provenience and type. *136*
10.22. LA 37594, faunal remains in cists, counts by extramural area and Room 201. ..... *137*
10.23. LA 37594, Extramural Area 3, Cist 3, faunal remains, counts from east and west sides of backhoe trench. *141*
10.24. LA 37594, Pit Structure 5, features; Floors 1 and 2, and exterior; summary table. *144*
10.25. LA 37594, Pit Structure 5, botanical remains by feature type; seed count and weight. *145*
10.26. LA 37594, Pit Structure 5, pottery type and vessel form by provenience; counts and percents. *148*
10.27. LA 37594, Pit Structure 5, chipped stone material and artifact type by provenience; counts and percents. *149*
10.28. LA 37594, Pit Structure 5, ground stone artifact and material type by provenience; counts and percents *149*
10.29. LA 37594, Pit Structure 5, pollen, counts by provenience. *150*
10.30. LA 37594, pottery type by major provenience; counts and percents. *152*
10.31. LA 37594, pottery types; counts, weights, and percents. *154*
10.32. LA 37594, ceramic vessel form and pigment type by major provenience; counts and percents. *155*
10.33. LA 37594, reconstructible ceramic vessels, by provenience and pottery type, with temper type and sherd counts. *156*
10.34. LA 37594, ceramic temper by major provenience; counts and percents. *157*
10.35. LA 37594, chipped stone material and artifact types by major provenience; counts and percents. *158*
10.36. LA 37594, ground stone artifact and material types by major provenience; counts and percents.. ..... *160*
10.37. LA 37594, faunal remains by major provenience; counts and percents. *162*
10.38. LA 37594, bone and shell tools and ornaments, counts by major provenience. *162*
10.39. LA 37594, Pit Structure 5, flotation full-sort and scan plant remains (frequency and abundance per liter). *163*
10.40. LA 37594, Pit Structure 5, wood charcoal from flotation samples (weight in grams) *164*
10.41. LA 37594, Pit Structure 5, macrobotanical wood taxa, features (weight in grams) *164*
10.42. LA 37594, Pit Structure 5 fill, macrobotanical wood taxa (weight in grams). *165*
10.43. LA 37594, botanical remains by major provenience *166*
10.44. LA 37594, Pit Structure 1, full-sort flotation plant remains (frequency and abundance per liter) *167*
10.45. LA 37594, Pit Structure 1, wood charcoal from flotation and macrobotanical samples (weight in grams). *167*
10.46. LA 37594, Roomblocks 1 and 2, flotation scan and full-sort plant remains (frequency and abundance per liter). *168*
10.47. LA 37594, Roomblocks 1 and 2, flotation wood charcoal (weight in grams). *168*
10.48. LA 37594, Rooms 101, 102, and 201, macrobotanical sample taxa. *169*
10.49. LA 37594, Extramural Area 2, Feature 2 (probable cist), macrobotanical wood charcoal by weight. *170*
10.50. LA 37594, Extramural Areas 2 and 3, flotation full-sort plant remains (frequency and abundance per liter). *170*
10.51. LA 37594, Extramural Areas 1 and 3, flotation scan plant remains (abundance per liter). *171*
10.52. LA 37594, Extramural Areas 1–4, macrobotanical plant remains. *172*
10.53. LA 37594, Extramural Areas 2 and 3, flotation wood charcoal (weight in grams). *172*
10.54. LA 37594, pollen, counts by provenience. *173*

11. LA 60751 (Casa Quemada)
11.1. LA 60751, materials from surface collection by extramural area; counts and percents. *181*
11.2. LA 60751, randomly selected 1 by 1 m excavations. *182*
11.3. LA 60751, intentionally placed 1 by 3 m excavations. *183*
11.4. LA 60751, Pit Structure 1, artifacts associated with the major occupation. *188*
11.5. LA 60751, Pit Structure 1, tree-ring dates sorted by date and provenience. *190*
11.6. LA 60751, Pit Structure 1, tree-ring dates by quadrant, roof fall, and floor contact *191*
11.7. LA 60751, Pit Structure 1, Floor 2, ground stone, chipped stone, and ceramic artifact counts by quadrant. *195*
11.8. LA 60751, Pit Structure 1, Floors 2 and 3, chipped stone artifact type by material type; counts and weights. *195*
11.9. LA 60751, Pit Structure 1, Floors 2, 3, and 4, feature details. *198*
11.10 [OMITTED]
11.11. LA 60751, Pit Structure 1, pottery types by stratigraphic unit and extramural area; counts and percents *206*
11.12. LA 60751, Pit Structure 1, pottery types by fill and surface types; counts and percents. *207*
11.13. LA 60751, Pit Structure 1, pottery types, counts by layer and floor *207*
11.14. LA 60751, Pit Structure 1, diagnostic pottery types in provenienced contexts, with associated tree-ring dates. *207*
11.15. LA 60751, ceramic paint types, counts and percents by Pit Structure 1 and extramural areas. *208*
11.16. LA 60751, pottery types by extramural areas; counts and percents. *208*
11.17. LA 60751, ceramic temper types, in Pit Structure 1 contexts and extramural areas; counts and percents. *209*
11.18. LA 60751, ceramic temper by ware type, site-wide and by Basketmaker III only; counts and percents. *209*

11.19. LA 60751, ceramic vessel forms, counts and percents by Pit Structure 1 contexts and extramural areas. 210
11.20. LA 60751, chipped stone artifacts, counts and percents by cultural component and material type.....212
11.21. LA 60751, chipped stone artifacts, weights and percents by cultural component and material type. 214
11.22. LA 60751, chipped stone artifact types by cultural component; mean weights and counts. 215
11.23. LA 60751, Pit Structure 1, projectile points, summary table. 216
11.24. LA 60751, Pit Structure 1, ground stone and ornament types, counts by layer and floor. 216
11.25. LA 60751, ground stone tool types, counts by material type. 217
11.26. LA 60751, faunal remains, element counts by species. 218
11.27. LA 60751, faunal remains, species counts by major provenience unit. 218
11.28. LA 60751, Pit Structure 1, faunal remains, species counts by layer and floor. 218
11.29. LA 60751, Pit Structure 1, botanical taxa, counts by layer. 219
11.30. LA 60751, Pit Structure 1, Floors 2, 3, and 4, botanical remains, flotation full-sort. 220
11.31a. LA 60751, Pit Structure 1, botanical remains FS 16–109, 147, 193, flotation scan, species type by structure unit. 221
11.31b. LA 60751, Pit Structure 1, botanical remains FS 112–170, flotation scan, species type by structure unit. 222
11.32 [OMITTED]
11.33a–f. LA 60751, Pit Structure 1, macrobotanical samples, species type by structure unit; wood by weight (g), other plant parts by count and weight (g). See also Tables 11.33b–11.33f for continuation and totals.....223–225
11.34. LA 60751, Pit Structure 1, Floors 2, 3, and 4, wood charcoal flotation; weights (g) by species type and cultural context. 226

12. LA 37595 (La Casa Cortada)
12.1. LA 37595, provenience units, definitions and age; summary table. 243
12.2. LA 37595, pottery type and paint type by Pit Structures 1–4 and fill contexts; counts and percent. 244
12.3. LA 37595, extramural features and features in structure fill; summary table. 246
12.4. LA 37595, pottery types, counts by paint type; surface concentration, east edge of site. 247
12.5. LA 37595, lithic tool types, counts and percents by material types; deflated surface material concentration.....248
12.6. LA 37595, chipped stone tool types, weights and materials, by extramural areas and pit structures. 249
12.7. LA 37595, chipped stone tool types, counts and percents, by extramural areas and pit structures. 249
12.8. LA 37595, Pit Structure 1, stratigraphy. 253
12.9. LA 37595, Pit Structure 1, human remains (disarticulated), bone type count by quadrant and layer/level. 255
12.10. LA 37595, Pit Structure 1, plant remains from roofing material, floor, and features, flotation full-sort results by taxon. 257
12.11. LA 37595, Pit Structure 1, plant remains from roofing material and other fill, by taxon; wood by weight (g), other plant parts by count and weight (g). 258
12.12. LA 37595, Pit Structure 1, wood charcoal from roofing material and Feature 12 (fire pit), flotation results by taxon; counts and weights (g). 259
12.13. LA 37595, Pit Structure 1, Floors 1 and 2, features; summary table. 260–261
12.14. LA 37595, Pit Structure 1, Floor 1, ceramics, chipped stone, ground stone, and faunal remains; counts by type and material. 264
12.15. LA 37595, Pit Structure 1 and 4, eggshell distribution; counts and percents by layer and fauna type. 265
12.16. LA 37595, Pit Structure 1, Floor 1 and bench, point-provenienced artifacts. 265
12.17. LA 37595, Pit Structures 1–4, Pueblo II features with artifact counts by type 268
12.18. LA 37595, Pit Structure 1, plant remains, features and proveniences by taxon; wood by weight (g), other plant parts by count and weight (g). 269
12.19. LA 37595, Pit Structure 1, turkey and deer bone type, counts by stratigraphic unit and vent feature. 272
12.20. LA 37595, Pit Structure 1, primary faunal groups, counts and percents by stratigraphic unit and vent feature...273
12.21. LA 37595, Pit Structures 1–4, faunal classes, counts and percents by structure. 274
12.22. LA 37595, Pit Structures 1–4, faunal taxa, counts and percents by structure. 274
12.23. LA 37595, Pit Structures 1–4, primary faunal groups, counts and percents by structure. 275
12.24. LA 37595, other lithic material, by weight and provenience. 278
12.25. LA 37595, pottery and temper types by Pit Structures 1–4 and extramural contexts; counts and percents...283–284
12.26. LA 37595, Pit Structure 1, ceramic types and vessel forms by stratigraphic unit and vent feature; counts and percents. 285
12.27. LA 37595, chipped stone artifact and material types by Pit Structures 1–4 and extramural contexts; counts and percents. 286
12.28. LA 37595, Pit Structure 1, chipped stone material and artifact type by stratigraphic unit and vent feature; counts and percents. 287
12.29. LA 37595, Pit Structure 1, ground stone material and tool type by stratigraphic unit; counts and percents. 288

12.30. LA 37595, ground stone artifacts by Pit Structures 1–4 and extramural contexts; counts and percents.....289
12.31 [OMITTED]
12.32. LA 37595, Pit Structure 1, plant remains from floor quadrants and Feature 9 (bench), flotation scan results by taxon; abundance per liter.....290
12.33. LA 37595, Pit Structure 1 features, plant remains by taxon and floor contexts; wood by weight (g), other plant parts by count and weight (g).....291
12.34. LA 37595, Pit Structure 2, stratigraphy; summary table.....297
12.35. LA 37595, Pit Structure 2, Floor 1 and fill, features; summary table.....298
12.36. LA 37595, Pit Structure 2, pottery type and vessel form by stratigraphic unit; counts and percents.....300
12.37. LA 37595, Pit Structure 2, chipped stone tool and material type by stratigraphic unit; counts and percents.....301
12.38. LA 37595, Pit Structure 2, chipped stone tool type by material type; counts and percents.....302
12.39. LA 37595, Pit Structure 2 and site-wide, hammerstone materials; counts, percents, and mean weight (g).....304
12.40. LA 37595, Pit Structures 1–4, chipped stone tool types from structure floors and floor fill; counts and percents..304
12.41. LA 37595, Pit Structures 1–4, faunal taxa; counts and percents.....305
12.42. LA 37595, Pit Structure 2, major faunal taxa by stratigraphic unit; counts and percents.....305
12.43. LA 37595, Pit Structures 1–4, bone tools and other modified faunal material, counts by structure.....306
12.44. LA 37595, Pit Structure 2, plant remains, flotation scan and full-sort results; taxon by feature and floor.....307
12.45. LA 37595, Pit Structures 2, 3, and 4, wood charcoal flotation results by time period and feature; counts and weights (g).....308
12.46. LA 37595, Pit Structure 4, stratigraphy; summary table.....313
12.47. LA 37595, Pit Structure 4, features; summary table.....314
12.48. LA 37595, Pit Structure 4, pottery type and vessel form by stratigraphic unit; counts and percents.....316
12.49. LA 37595, mean sherd weights (g) by Pit Structures 1–4 and extramural contexts.....316
12.50. LA 37595, Pit Structure 4, chipped stone material and tool type by stratigraphic unit; counts and percents.....317
12.51. LA 37595, Pit Structure 4, ground stone tool types, counts by stratigraphic unit.....317
12.52. LA 37595, Pit Structure 4, faunal taxa by stratigraphic unit; counts and percents.....318
12.53 [OMITTED]
12.54. LA 37595, Pit Structure 4, plant remains, flotation full-sort (Feature 1 [hearth]) and scan (Floor 1) results by taxon.....318
12.55. LA 37595, Pit Structures 2, 3, and 4, macrobotanical sample taxa by time period and feature; wood by weight (g), other plant parts by count and weight (g).....319
12.56. LA 37595, Pit Structure 3, features; summary table.....324–325
12.57. LA 37595, Pit Structure 3, ceramics, chipped stone, and ground stone artifacts and faunal remains; type counts by feature.....327
12.58. LA 37595, Pit Structures 1, 2, and 4, ornaments; summary table.....329
12.59. LA 37595, Pit Structures 1–4, manos and metates; summary table.....330–331
12.60. LA 37595, Pit Structure 3, plant remains, flotation full-sort (Floor 1; Features 1, 14, 19) and scan (Floor 1) results by taxon.....331
12.61. LA 37595, Pit Structures 2, 3, and 4, plant remains, taxon by time period and feature; wood by weight (g), other plant parts by count and weight (g).....332
12.62. LA 37595, carbon-painted sherds by pottery type and temper; counts and percents.....333
12.63. LA 37595, pottery types by vessel form and ware group; counts and percents.....334
12.64. LA 37595, Pit Structure 1, reconstructible ceramic vessels by pottery type and form; summary table.....335
12.65. LA 37595, Pit Structures 1–4, floors, chipped stone tool types by structure; counts and percents.....338
12.66. LA 37595, ground stone tool type by material type; counts and percents.....339
12.67. LA 37595, Pit Structures 1, 3, and 4, axes and mauls; summary table.....341
12.68. LA 37595, features by Pit Structures 1–4 and extramural contexts; counts and percents.....341

VOLUME 1 [BOOK TWO]

13. LA 37592 (Kin Sin Fin)

13.1. LA 37592, Extramural Areas 1–4, proveniences by area.....354
13.2. LA 37592, all significant proveniences, with relevant codes and stratigraphic and time period associations.....358
13.3. LA 37592, occupational event with stratigraphic and time period associations.....362
13.4. LA 37592, Extramural Areas 1–4 features by site context at initial observation.....363
13.5. LA 37592, Extramural Areas 1–4 features; summary table.....366
13.6. LA 37592, Extramural Area 2, 161N–166N, stratigraphy.....372

13.7. LA 37592, Extramural Areas 1–4 features, artifact counts by pottery ware group and lithic and bone tool type. *377–378*
13.8. LA 37592, Extramural Area 3, pollen, counts by type and provenience. *382*
13.9. LA 37592, Extramural Areas 3 and 4, proximate to the south end of Pit Structure 1, plant remains, flotation full-sort results; taxon by feature, frequency and abundance per liter. *386*
13.10. LA 37592, Extramural Areas 3 and 4, proximate to the south end of Pit Structure 1, wood charcoal, flotation and macrobotanical results; taxon by feature, counts and weights (g). *387*
13.11. LA 37592, Extramural Areas 1–4, pottery types, paint types, and vessel forms by area and time period; counts and percents. *388–389*
13.12. LA 37592, Extramural Areas 1–4, chipped stone tool and material types by area and time period; counts and percents. *390*
13.13. LA 37592, Extramural Areas 1–4, ground stone tool and material types by area and time period; counts and percents. *391*
13.14. LA 37592, Extramural Areas 1–4, faunal remains and bone tools by area and time period; counts and percents. *392*
13.15. LA 37592, Roomblock 2, ground stone artifact and material types by room; counts and percents. *393*
13.16. LA 37592, ground stone tools by major provenience; counts and percents. *394*
13.17. LA 37592, Roomblock 2, Room 201, stratigraphy. *398*
13.18. LA 37592, Roomblock 2, Room 201, features; summary table. *399*
13.19. LA 37592, Roomblock 2, Rooms 201–203, pottery types by room; counts and percents. *400*
13.20. LA 37592, Roomblock 2, Rooms 201–203, chipped stone tool and material types by room; counts and percents. *402*
13.21. LA 37592, Pit Structure 1 and Roomblock 2, Rooms 201–203, chipped stone tool types by floor/floor fill context; counts and percents. *403*
13.22. LA 37592, Roomblock 2, Rooms 201–203, pottery types and vessel forms by floor/floor fill context; counts and percents. *404–405*
13.23. LA 37592, Room 201, Floor 1, point-provenienced artifacts; summary table. *406*
13.24. LA 37592, Room 201, Floor 2, point-provenienced artifacts (FS 189); summary table. *408*
13.25. LA 37592, Roomblock 2, Rooms 201–203, artifacts in room features; counts by feature, floor, and type. *411*
13.26. LA 37592, Room 202, Floor 1, point-provenienced artifacts (FS 504–505). *413*
13.27. LA 37592, Room 202, Floors 1–3, features; summary table. *415*
13.28. LA 37592, Room 203, standing wall measurements. *417*
13.29. LA 37592, Rooms 201–203, correlation of room floors. *421*
13.30. LA 37592, Pit Structure 1, excavated units; summary table. *428*
13.31. LA 37592, Pit Structure 1, layer and level designations, initial and revised. *431*
13.32. LA 37592, Rooms 201–203 and Pit Structure 1 lower midden, pottery paint type by floor or layer context; counts and percents. *432*
13.33. LA 37592, Pit Structure 1, stratigraphy. *433–435*
13.34. LA 37592, Pit Structure 1, midden (upper fill) plant remains, flotation full-sort results by layer and taxon; frequency and abundance per liter. *437*
13.35. LA 37592, Pit Structure 1, Floor 1, plant remains, flotation scan results by floor or feature context and taxon; abundance per liter. *440*
13.36. LA 37592, Pit Structure 1, pollen, counts by type and provenience. *441–442*
13.37. LA 37592, Pit Structure 1, cultural material type by stratigraphic unit; count totals and column percentages. *448*
13.38. LA 37592, Pit Structure 1, pottery and paint type by stratigraphic unit; count totals and column percentages. *449*
13.39. LA 37592, Pit Structure 1, pottery ware group by stratigraphic unit; counts and percents. *450*
13.40. LA 37592, Pit Structure 1, vessel forms and ware groups, counts by stratigraphic context. *451*
13.41. LA 37592, Pit Structure 1, vessel forms and ware groups, percents by stratigraphic context. *452*
13.42. LA 37592, Pit Structure 1, chipped stone tool and material types by stratigraphic context; count totals and column percentages. *454*
13.43. LA 37592, Pit Structure 1, ground stone tool and material types, counts by stratigraphic context. *455*
13.44. LA 37592, faunal remains, taxon by major provenience; counts and percents. *456–457*
13.45. LA 37592, Pit Structure 1, faunal classes by stratigraphic unit; counts and percents. *458*
13.46. LA 37592, Pit Structure 1, faunal element completeness by stratigraphic unit and class; counts and percents. *458*
13.47. LA 37592, Pit Structure 1, major faunal classes by stratigraphic unit; counts and percents. *459*
13.48. LA 37592, Pit Structure 1, turkey and bird elements by stratigraphic unit; counts and percents. *459*
13.49. LA 37592, Pit Structure 1, bone tools, counts by type and stratigraphic unit. *461*
13.50. LA 37592, Pit Structure 1, bone awls, counts by type and stratigraphic unit. *462*
13.51. LA 37592, Pit Structure 1, human remains (disarticulated), counts by bone type and stratigraphic unit. *464–465*
13.52. LA 37592, Pit Structure 1, distribution of ceramics, lithics, faunal and human remains, by layer and quadrant; counts and percents. *467*

13.53. LA 37592, Pit Structure 1, human remains (disarticulated), age and condition of mandibles. 468
13.54. LA 37592, Pit Structure 1, Layer 1, human remains (disarticulated) groups 1–3, by bone type and age; counts and percents. 470–471
13.55. LA 37592, Pit Structure 1, human remains (disarticulated), by stratigraphic unit and age; counts and percents. 472
13.56. LA 37592, Pit Structure 1, human remains (disarticulated), counts by bone alteration type and stratigraphic unit. 473
13.57. LA 37592, Pit Structure 1, human remains (disarticulated), counts by cut mark and thermal alteration type. 473
13.58. LA 37592, Pit Structure 1, human remains (disarticulated), matched bone/fragment elements by location. 474
13.59 [OMITTED]
13.60. LA 37592, Pit Structure 1, cultural material counts by type and stratigraphic unit, with ratios of sherds to other cultural materials. 476
13.61. LA 37592, Pit Structure 1, human remains (disarticulated) below Layer 4; itemized counts by layer and bone type. 477
13.62. LA 37592, Pit Structure 1, Floors 1–3, features; summary table. 483–485
13.63. LA 37592, Pit Structure 1, Floors 1–3, artifact counts by feature and cultural material category. 500
13.64. LA 37592, major pottery types by major provenience; counts and percents. 516
13.65. LA 37592, red and brown ware pottery types by major provenience; counts and percents. 517
13.66. LA 37592, pottery types (all) and ware groups; counts, weights, and percents of each. 518–519
13.67. LA 37592, major vessel forms/ware by major provenience; counts and percents. 519
13.68. LA 37592, vessel forms (all) by ware group; counts and percents. 520
13.69. LA 37592, vessel forms (all) by major provenience; counts and percents. 521
13.70. LA 37592, sherd modification by ware group; counts and percents. 522
13.71 [OMITTED]
13.72. LA 37592, temper type by vessel form and ware group; counts and percents. 523
13.73. LA 37592, sherds, mean weights (g) by major provenience group. 523
13.74. LA 37592, Pit Structure 1, mean weight (g) and counts of sherd lots by layer. 524
13.75. LA 37592, Pit Structure 1, mean weight (g) and counts of sherd lots by layer and ware group. 525
13.76. LA 37592, reconstructible ceramic vessels by pottery type and provenience, with sherd count and temper type. ..526
13.77. LA 37592, chipped stone material type by major provenience; counts and percents. 526
13.78. LA 37592, debitage, mean weight (g) and counts by major provenience. 526
13.79. LA 37592, chipped stone tool types by major provenience; counts and percents. 527
13.80. LA 37592, chipped stone artifacts (all) by major provenience; tool and material type, weights (g), and stratigraphic context. 528–530
13.81. LA 37592, grouped chipped stone tool types by grouped material types. 534
13.82. LA 37592, flakes, mean weight (g) and counts by material type. 535
13.83. LA 37592, projectile points, material type counts by major provenience. 535
13.84. LA 37592, Pit Structure 1, ground stone tool types by material type; counts and percents. 536
13.85. LA 37592, Pit Structure 1, ornaments, type counts by stratigraphic context. 538
13.86. LA 37592, ornaments, types and material, counts by major provenience. 538
13.87. LA 37592, faunal remains, class by major provenience; counts and percents. 541
13.88. LA 37592, Pit Structure 1, cultural material types, counts by layer. 542
13.89. LA 37592, bone tool types by major provenience; counts and percents. 543
13.90. LA 37592, bone tools (all) with faunal class, element, and completeness, by layer/level and provenience. 546–549
13.91. LA 37592, Room 201, pollen counts by type and provenience. 550
13.92. LA 37592, Extramural Area 3, pollen counts by type and provenience. 551
13.93. LA 37592, burials, pollen counts by type and provenience. 552
13.94. LA 37592, pollen, counts by type. 553
13.95. LA 37592, Extramural Area 3, plant remains, flotation full-sort and scan results by taxon and feature; weights (g) and frequency and abundance per liter. 553
13.96. LA 37592, Extramural Area 3, wood charcoal, flotation results by taxon and feature; count/weight (g). 554
13.97. LA 37592, Extramural Area 3, macrobotanical wood charcoal, weights (g) by taxon and feature. 554
13.98. LA 37592, Pit Structure 1, Floors 1–3, plant remains, flotation full-sort results by taxon and feature; frequency and abundance per liter. 555
13.99. LA 37592, Pit Structure 1, Floor 1, plant remains, flotation scan results by taxon and feature; abundance per liter. 556
13.100. LA 37592, Pit Structure 1, Floors 1–3, wood charcoal, flotation results by taxon and feature; count/weight (g). 556
13.101. LA 37592, Pit Structure 1, Floors 1–3, macrobotanical wood charcoal, weights (g) by taxon and feature. 557
13.102. LA 37592, Pit Structure 1, lower fill, macrobotanical wood charcoal, weights (g) by taxon and stratigraphic context. 558

13.103. LA 37592, Extramural Areas 3 and 4 proximate to south end of Pit Structure 1, plant remains from features, flotation full-sort results by taxon; frequency and abundance per liter. 558
13.104. LA 37592, Pit Structure 1, midden in upper fill, plant remains, flotation full-sort results by taxon and layer; frequency and abundance per liter. 560
13.105. LA 37592, Pit Structure 1, midden in upper fill, wood charcoal, flotation results by taxon and layer; count/weight (g). 561
13.106. LA 37592, Room 201, plant remains, flotation scan results by taxon and floors/features; frequency and abundance per liter. 562
13.107. LA 37592, Rooms 201, 202, and 203, macrobotanical wood charcoal, weights (g) by taxon and floors/features..563
13.108. LA 37592, Rooms 201 and 202, plant remains, flotation full-sort results by feature/layer; frequency and abundance per liter. 564
13.109. LA 37592, Rooms 201 and 202, wood charcoal, flotation results by taxon and feature/layer; count/weight (g). .565
13.110. LA 37592, Extramural Area 2, plant remains from features, flotation full-sort and scan results by taxon and floor context; frequency and abundance per liter. 566
13.111. LA 37592, Extramural Area 2, wood charcoal, flotation results by taxon and feature/floor context; count/weight (g). 567
13.112. LA 37592, Extramural Area 2, macrobotanical wood charcoal, weights (g) by taxon and features 567
13.113. LA 37592, human skeletal remains (all), by burial provenience or stratigraphic context; summary table. 570
13.114. LA 37592, Room 201, plant remains, flotation full-sort and scan results by taxon and feature/floor context; frequency and abundance per liter. 571
13.115. LA 37592, feature types, counts by major provenience. 572
13.116. LA 37592, feature types and counts with mean volumes (liters) of measured features. 572

14. LA 37593 (Thunder Maker Site)
14.1. LA 37593, backhoe trenches and miscellaneous hand trenches; summary table. 581
14.2. LA 37593, Extramural Areas 1 and 2, features and fill by time period. 584
14.3. LA 37593, Extramural Areas 1 and 2, cultural materials from ground surface, counts by type. 585
14.4. LA 37593, pottery types by major provenience; counts and percents. 586–587
14.5. LA 37593, vessel form and paint type by major provenience; counts and percents. 588
14.6. LA 37593, chipped stone tool and material type by major provenience; counts and percents. 589
14.7. LA 37593, ground stone tool type by major provenience; counts and percents. 590
14.8. LA 37593, faunal assemblage, taxon by major provenience; counts and percents. 591
14.9. LA 37593, human remains, age and sex by major provenience; counts and percents. 592
14.10. LA 37593, Extramural Areas 1 and 2, features; summary table 596
14.11. LA 37593, Extramural Areas 1 and 2, pottery types by feature; counts and percents. 597
14.12. LA 37593, Extramural Areas 1 and 2, vessel forms by feature and ware group; counts and percents. 598
14.13. LA 37593, Extramural Areas 1 and 2, chipped stone tool types by feature; counts and percents. 599
14.14. LA 37593, Extramural Area 1, ground stone tool types by feature; counts and percents. 600
14.15. LA 37593, Extramural Area 1, faunal remains by feature; counts and percents 600
14.16. LA 37593, Burials 1–4, pottery types by burial; sherd counts and percents. 601
14.17. LA 37593, Burials 1–4, vessel forms by burial and ware group; sherd counts and percents 601
14.18. LA 37593, Burials 2–4, chipped stone material and tool type by burial; counts and percents. 602
14.19. LA 37593, ground stone tools associated with primary burials; summary table. 602
14.20. LA 37593, Burials 1–4, faunal remains, taxon by burial; counts and percents. 603
14.21. LA 37593, whole vessels by sherd group and stratigraphic context; summary table 606–607
14.22. LA 37593, Roomblock 1, Room 101, pottery types, forms, and paint, counts by floors, features, and fill 619
14.23. LA 37593, Roomblock 1, Room 101, chipped stone tool and material types by floors and fill; counts and percents 620
14.24. LA 37593, Roomblock 1, Room 101, faunal remains, taxon by floor and fill; counts and percents. 620
14.25. LA 37593, Roomblock 1, Rooms 101–103, point-provenienced artifacts by floor; summary table. 622
14.26. LA 37593, Roomblock 1, features; summary table. 624
14.27. LA 37593, Roomblocks 1 and 2, pottery types by roomblock and room; counts and percents. 628
14.28. LA 37593, Roomblocks 1 and 2, vessel forms and paint types by roomblock and room; counts and percents. 629
14.29. LA 37593, Roomblocks 1 and 2, chipped stone material and tool types by roomblock and room; counts and percents 630
14.30. LA 37593, Roomblocks 1 and 2, ground stone tool types by roomblock and room; counts and percents. 631
14.31. LA 37593, Roomblocks 1 and 2, faunal remains, taxon by roomblock and room; counts and percents 632
14.32. LA 37593, Room 103, pottery types, forms, and paint, counts by floors, features, and fill. 633
14.33. LA 37593, Room 103, chipped stone material and tool types, counts by floors, features, and fill. 634

14.34. LA 37593, Room 103, ground stone tool types, counts by floors, features, and fill. 634
14.35. LA 37593, Room 103, faunal remains, taxon by floors, features, and fill; counts and percents. 635
14.36. LA 37593, Pit Structure 1, pottery types by stratigraphic context; counts and percents. 649
14.37. LA 37593, Pit Structure 1, vessel forms and paint types by stratigraphic context; counts and percents. 650
14.38. LA 37593, Pit Structure 1, chipped stone tool and material types by stratigraphic context; counts and percents. 650
14.39. LA 37593, Pit Structure 1, ground stone tool types, counts by stratigraphic context. 651
14.40. LA 37593, Pit Structure 1, faunal remains, taxon by stratigraphic context; counts and percents. 651
14.41. LA 37593, excavation units defining human bone layer; summary table. 652
14.42. LA 37593, Pit Structure 1, human bone layer, counts by skeletal element and age. 658–660
14.43. LA 37593, Pit Structure 1, human bone layer, counts by skeletal element and completeness. 661–663
14.44. LA 37593, Pit Structure 1, human bone, counts by completeness and fill type. 664
14.45. LA 37593, Pit Structure 1, faunal and human remains, counts by presence of weathering. 664
14.46. LA 37593, Pit Structure 1, human bone layer, counts by processing type and thermal alteration. 664
14.47. LA 37593, Pit Structure 1, faunal remains in human bone layer, counts by skeletal element and completeness. 666
14.48. LA 37593, Pit Structure 1, Floor 1, features; summary table. 670
14.49. LA 37593, Pit Structure 1, Floors 1 and 2, pottery types, vessel forms, and paint type, counts by features/fill. 671
14.50. LA 37593, Pit Structure 1, Floor 1, chipped stone tool and material types, counts by features/fill. 672
14.51. LA 37593, Pit Structure 1, Floor 1, ground stone tools, counts by type and features/fill. 672
14.52. LA 37593, Pit Structure 1, Floors 1 and 2, faunal remains, counts by taxon and features/fill. 673
14.53. LA 37593, Pit Structure 1, Floor 2, features; summary table. 673
14.54. LA 37593, pottery types (all); counts, weights (g), and percents of each. 683–684
14.55. LA 37593, pottery types by vessel form; counts and percents 685
14.56. LA 37593, pottery and paint types by time period; counts and percents. 686
14.57. LA 37593, pottery types, counts by temper type. 687
14.58. LA 37593, chipped stone tools by material type; counts and percents. 689
14.59a. LA 37593, projectile point material types, counts by point type and by major provenience. 690
14.59b. LA 37593, chipped stone tools by material type and weight (g) with percents. 691
14.60. LA 37593, chipped stone, tool and material types by time period; counts and percents. 692
14.61. LA 37593, ground stone tools by material type; counts and percents. 694
14.62. LA 37593, ground stone tools by time period; counts and percents 695
14.63. LA 37593, ornaments, counts by type and major provenience. 695
14.64. LA 37593, faunal remains, taxon by time period; counts and percents. 696
14.65. LA 37593, bone tools, types by major provenience; summary table. 697
14.66. LA 37593, plant remains, flotation results by taxon, major provenience, and feature; frequency and abundance per liter. 698
14.67. LA 37593, macrobotanical wood, weights (g) by taxon and major proveniences, floors/features. 699
14.68. LA 37593, Pit Structure 1, Floor 1, plant remain, flotation scan results by taxon and floor quadrants/features; abundance per liter. 700
14.69. LA 37593, wood charcoal, flotation results by taxon and major proveniences, floors/features; count/weight (g) 701
14.70. LA 37593, carbonized Zea mays remains; counts by major provenience and floors/features. 701
14.71. LA 37593, Roomblock 1, Rooms 101 and 103, plant remains, flotation scan results by taxon and floor/surface; abundance per liter. 701
14.72. LA 37593, Extramural Areas 1 and 2, plant remains, flotation scan results by taxon and feature; abundance per liter. 702

15. LA 60749

15.1. LA 60749, Extramural Area 1, 1 by 1 m test pits; units, artifacts, and auger depths. 709
15.2. LA 60749, Pit Structure 1, Floor 1, point-provenienced artifacts; summary table. 716
15.3. LA 60749, Extramural Area 2, 1 by 1 m test pits; units, artifact, and auger depths. 717
15.4. LA 60749, Extramural Area 3, 1 by 1 m test pits; units, artifact, and auger depths. 719
15.5. LA 60749, pottery types (all) by count and weight, with percents. 722
15.6. LA 60749, Extramural Areas 1–3 and Pit Structure 1, pottery and paint types by major provenience; counts and percents 723
15.7. LA 60749, Extramural Areas 1–3, pottery and paint types, counts by presence of disturbance. 724
15.8. LA 60749, Extramural Areas 1–3 and Pit Structure 1, vessel forms by ware group and major provenience; counts and percents. 725
15.9. LA 60749, Extramural Areas 1–3 and Pit Structure 1, chipped stone tool and material types by major provenience; counts and percents 726
15.10. LA 60749, Extramural Areas 2, 3 and Pit Structure 1, ground stone tools, counts by type and major

provenience. *727*
15.11. LA 60749, Extramural Areas 1, 3 and Pit Structure 1, faunal remains, taxa by major provenience; counts and percents. *727*
15.12. LA 60749, faunal elements, counts by taxon. *728*
15.13. LA 60749, Extramural Areas 2, 3 and Pit Structure 1, plant remains, flotation scan results by taxon and floor/feature; abundance per liter. *728*
15.14. LA 60749, Extramural Area 3 and Pit Structure 1, macrobotanical plant remains, taxon by layer/level; weight (g) and abundance. *729*
15.15. LA 60749, Extramural Area 1 and Pit Structure 1, wood charcoal, flotation results by taxon and fill/layer count and weight (g). *729*

16. LA 37598 (Three Fingers Up, Three Toes Down Site)
16.1. LA 37598, proveniences and associated time periods. *736*
16.2. LA 37598, Extramural Areas 1 and 2, backhoe trenches; summary table. *738*
16.3. LA 37598, Extramural Area 1, test units; ceramics, chipped stone, and ground stone counts by unit and artifact type. *739*
16.4. LA 37598, Extramural Area 1, Features 1–7; summary table. *742*
16.5. LA 37598, Extramural Area 3, Feature 1; summary table *743*
16.6. LA 37598, Roomblock 1, Rooms 101–105, wall dimensions. *749*
16.7. LA 37598, Room 101, features; summary table. *753*
16.8. LA 37598, Room 102, Floors 1 and 2, features; summary table. *756*
16.9. LA 37598, Rooms 101–104, plant remains, flotation results by taxon and feature; frequency and abundance per liter. *757*
16.10. LA 37598, Room 103, Floors 1 and 2, features; summary table. *761*
16.11. LA 37598, Room 104, Floor 1, features; summary table. *765*
16.12. LA 37598, Roomblocks 1 and 2, pottery ware groups by room; counts and percents. *768*
16.13. LA 37598, Roomblocks 1 and 2, vessel form by room; counts and percents. *768*
16.14. LA 37598, Rooms 101, 104, and 105, chipped stone tools and material types, counts by fill and floor. *769*
16.15. LA 37598, Rooms 102 and 103, chipped stone tools and material types, counts by fill and floor. *769*
16.16. LA 37598, ground stone by room. *771*
16.17. LA 37598, Rooms 101 and 103, plant remains, flotation scan results by taxon and floors/features; abundance per liter. *771*
16.18. LA 37598, Rooms 101–103, wood charcoal flotation results, weight (g) by taxon and feature. *772*
16.19. LA 37598, Pit Structure 1, Floor 1, features; summary table. *777*
16.20. LA 37598, pollen, counts by taxon, floors/layers/features, and major provenience. *778–779*
16.21 [OMITTED]
16.22. LA 37598, Pit Structure 1, vessel form and paint type, counts by fill type. *781*
16.23. LA 37598, Pit Structure 1, chipped stone tool and material types, counts by fill type *782*
16.24. LA 37598, Pit Structure 1, ground stone tool types, counts by fill type. *782*
16.25. LA 37598, Pit Structure 1, faunal remains, taxa counts by fill type. *783*
16.26. LA 37598, Pit Structure 1, plant remains, flotation results by taxon and feature/layer; frequency and abundance per liter. *784*
16.27. LA 37598, Pit Structure 1, plant remains, flotation scan results by taxon and feature/layer; abundance per liter. *785*
16.28. LA 37598, Pit Structure 1, wood charcoal flotation results, weight (g) by taxon and feature/layer. *785*
16.29. LA 37598, Extramural Area 2, features; summary table. *788*
16.30. LA 37598, Extramural Areas 1–3, plant remains, flotation full sort and scan results by taxon; frequency and abundance per liter. *793*
16.31. LA 37598, Extramural Areas 1–3, wood charcoal flotation results, weight (g) by taxon and feature. *794*
16.32. LA 37598, Roomblock 2, Rooms 201 and 202, wall dimensions. *796*
16.33. LA 37598, Room 202, Floor 1, features; summary table. *798*
16.34. LA 37598, Rooms 201 and 202, plant remains, flotation results by type; frequency and abundance per liter. *799*
16.35. LA 37598, Pit Structure 2, Floor 1, point-provenienced artifacts; summary table. *804*
16.36. LA 37598, Pit Structure 2, point-provenienced artifacts; summary table. *807–808*
16.37. LA 37598, Pit Structure 2, Floor 1, bone tools and tool waste, counts by floor quadrant and bench location. *809*
16.38. LA 37598, Pit Structure 2, modified bone, counts by fill type. *809*
16.39. LA 37598, Pit Structure 2, ground stone tool types, counts by fill type. *809*
16.40. LA 37598, Pit Structure 2, Floor 1, features; summary table. *810*
16.41. LA 37598, Pit Structure 2, faunal taxa, counts by fill type. *811*
16.42. LA 37598, Pit Structure 2, chipped stone tool and material types, counts by fill type *820*

16.43. LA 37598, Pit Structure 2, plant remains, flotation scan results by taxon and floor/feature; abundance per liter.821
16.44. LA 37598, Pit Structure 2, Features 1 and 16, plant remains, flotation results by taxon; frequency and abundance per liter.....822
16.45. LA 37598, Pit Structure 2, Features 1 and 16, wood charcoal flotation results, weight (g) by taxon.....822
16.46. LA 37598, pottery types (all); count, weight (g), and percent. 824
16.47. LA 37598, pottery types by major provenience type; counts and percents. 825
16.48. LA 37598, pottery types by major provenience group; counts and percents. 826
16.49. LA 37598, temper type by major provenience; counts and percents. 827
16.50. LA 37598, pottery paint type and ware group by major provenience; counts and percents.....827
16.51. LA 37598, vessel form by ware group and major provenience; counts and percents.....828
16.52. LA 37598, chipped stone material and tool types; counts, weight (g), and percents. 829
16.53. LA 37598, chipped stone tool types, counts by material type. 829
16.54. LA 37598, chipped stone material and tool type by major provenience. 830
16.55. LA 37598, ground stone tool and primary ornament types; counts, weight (g), and percents. 831
16.56. LA 37598, ground stone tool and primary ornament types by major provenience; counts and percents.....832
16.57. LA 37598, ground stone tool and primary ornament types, counts by material type 833
16.58. LA 37598, ornament types, counts by major provenience. 833
16.59. LA 37598, faunal taxa by major provenience; counts and percents. 834
16.60. LA 37598, major faunal groups by major provenience; counts and percents. 834
16.61. LA 37598, faunal remains (modified) by major provenience; counts and percents. 835
16.62. LA 37598, human remains (disarticulated), counts by provenience and stratigraphic group. 835
16.63. LA 37598, faunal elements, counts by major provenience. 836–837
16.64. LA 37598, Extramural Areas 1 and 2 and Room 102, macrobotanical plant remains, weight (g) by taxon, time period, and feature.....837

17. LA 37591 (Runoff Ditch Pueblo)
17.1. LA 37591, ceramic assemblages, primary proveniences by time period; presence/absence. 848
17.2. LA 37591, pottery types, counts from Lancaster (1983) testing program. 849
17.3. LA 37591, ceramics and lithics, counts by surface collection grid. 850
17.4. LA 37591, pottery and paint types by extramural provenience (including surface collection); counts and percents.....851
17.5. LA 37591, chipped stone tool and material types by extramural provenience (including surface collection); counts and percents. 852
17.6. LA 37591, ground stone tool types, counts by provenience group. 852
17.7. LA 37591, faunal remains, counts by taxon and provenience group. 853
17.8. LA 37591, Extramural Area 1 (Features 1–4) and Pit Structure 1 (Feature 5), pottery, chipped stone, ground stone, and faunal remains, type counts by feature. 854
17.9. LA 37591, Extramural Area 1, Features 1, 3, and 4, pottery type counts by vessel form. 855
17.10. LA 37591, Extramural Features 1, 3, and 4, chipped stone tool type counts by material type. 856
17.11. LA 37591, Pit Structure 1, pottery and paint types by midden layers; counts and percents. 860
17.12. LA 37591, Pit Structure 1, chipped stone tool and material types by midden layers; counts and percents. 861
17.13. LA 37591, Pit Structure 1, pottery and paint types by lower fill proveniences; counts and percents. 862
17.14. LA 37591, Pit Structure 1, chipped stone tool and material types by lower fill proveniences; counts and percents.....862
17.15. LA 37591, Pit Structure 1, Floor 1, features; summary table. 864
17.16. LA 37591, pottery types (all), by count, weight (g), and percent. 867
17.17. LA 37591, pottery and paint types, counts by vessel form.....868
17.18. LA 37591, pottery types, counts by temper type. 869
17.19. LA 37591, vessel form by ware group, sherds with definitive time-period association compared to complete assemblage; counts and percents. 870
17.20. LA 37591, chipped stone material and tool types; counts, weight (g), and percents. 871
17.21. LA 37591, chipped stone tool types by material type; counts and percents. 872
17.22. LA 37591, chipped stone tool and material types by definitive time-period association compared to complete assemblage; counts and percents. 873
17.23. LA 37591, ground stone tool types by material type; counts and percents.....874
17.24. LA 37591, faunal remains, element types counts by taxon and major provenience. 875–879
17.25. LA 37591, faunal remains, counts by taxon and age. 879
17.26. LA 37591, faunal remains, burning extent counts by taxon, major provenience and stratigraphic context. 881
17.27. LA 37591, faunal remains (modified), modification type, counts by taxon, major provenience and

stratigraphic context. 882
17.28. LA 37591, plant remains, flotation results by taxon and time period, major provenience and features. 883
17.29. LA 37591, plant remains, flotation scan results by taxon and major provenience/stratigraphic context. 884
17.30. LA 37591, Pit Structure 1, wood charcoal, flotation results by taxon and time period and feature/fill layer; counts and weight (g)....884
17.31. LA 37591, Pit Structure 1, carbonized Zea mays remains, counts by midden layer....884
17.32. LA 37591, Pit Structure 1, Zea mays cob morphometrics (mm) by stratigraphic context.....885

VOLUME 2

18. Ceramic Trends in the Jackson Lake Community

18.1. Ceramics by site; sherd counts, weight (g), and percents.....887
18.2. Ceramics at sites with more than 500 sherds, sherd counts by dating subgroups and site. 888
18.3. Ceramics at sites with more than 500 sherds, by time period; sherd counts and percents.....888
18.4. Painted and unpainted white ware by time period and paint type; counts and percents....889
18.5. Pottery types at Basketmaker III sites (LA 37594, LA 37595, LA 60751), including proveniences with PII presence; counts and percents. 891
18.6. Vessel forms at Basketmaker III sites (LA 37594, LA 37595, LA 60751), including proveniences with PII presence; counts and percents. 892
18.7 [OMITTED]
18.8. Pottery types at Mid Pueblo II sites; counts and percents. 900
18.9. Paint types on white ware at Mid Pueblo II sites; counts and percents....901
18.10. Vessel forms by ware group, Mid Pueblo II sites; counts and percents. 903
18.11. Pottery types at Late Pueblo II sites; counts and percents. 904
18.12. Paint types on white ware at Late Pueblo II sites; counts and percents....904
18.13. Vessel forms by ware group, Late Pueblo II sites; counts and percents. 905
18.14. Pottery types at Early Pueblo III sites; counts and percents.....909
18.15. Paint types on white ware at Early Pueblo III sites; counts and percents. 909
18.16. Vessel forms by ware group, Early Pueblo III; counts and percents. 910
18.17. Pottery types at Late Pueblo III sites; counts and percents.....911
18.18. Paint types of white wares from Late Pueblo III sites; counts and percents. 911
18.19. Vessel forms by ware group, Late Pueblo III sites; counts and percents.....912
18.20. White ware pottery type by rim thickness; counts and percents.....916
18.21. White ware rim thickness by time period; counts and percents. 916
18.22. White ware pottery type by slip type; counts and percents.....916
18.23. White ware pottery type/time period by rim form; counts and percents.....917
18.24. White ware rim form by time period; counts and percents....917
18.25. White ware pottery type/time period by rim decoration; counts and percents.....918
18.26. White ware rim decoration by time period; counts and percents. 918
18.27. White ware rim decoration: line elements, by time period; counts and percents. 919
18.28. White ware rim decoration: line elements, by pottery type; counts and percents.....919
18.29. Munsell color designations for refired corrugated gray ware by time period; counts and percents. 921
18.30. Munsell color designations for refired white ware sherds by time period; counts and percents. 921
18.31. Ceramic tradition by ware group and time period; counts and percents. 923
18.32. Whalley sites, ceramic traditions by site numberand date range; counts and percents.....924
18.33. Temper type by ware group and time period; counts and percents.....925–926
18.34. Rock vs. sherd temper in white ware by time period; counts and percents. 926
18.35. Sherd-to-debitage weight (g) by time period....929
18.36. Ware groups by time period; counts and percents....929
18.37. Plain gray and corrugated gray wares by time period; counts and percents. 929
18.38. Grouped vessel forms by ware group, entire Jackson Lake community sample; counts and percents. 929
18.39. Vessel form by ware group, entire Jackson Lake community sample; counts and percents.....930
18.40. Vessel form by ware group and time period, entire Jackson Lake community sample; counts and percents.....931–932
18.41. Vessel forms with selected rim types, by ware group for for late time periods; counts and percents.....933
18.42. White ware surface polish by pottery type; counts and percents....937
18.43. White ware surface polish by time period; counts and percents.....937
18.44. Reconstructible vessels from Basketmaker III contexts by site, with attribute details.....937
18.45. Reconstructible vessels from Mid Pueblo II contexts by site, with attribute details.....938

18.46. Reconstructible vessels from Late Pueblo II contexts by site, with attribute details. *939*
18.47. Reconstructible vessels from Early Pueblo III contexts by site, with attribute details. *940*
18.48. Reconstructible vessels from Late Pueblo III contexts by site, with attribute details. *940*
18.49. Reconstructible vessels by site/provenience and time period, with pottery type, vessel form, and sherd count. *941*
18.50. Reconstructible vessels without definitive time period association, by site/provenience and pottery type, with attribute details and dimensions. *942*

19. Chipped Stone from the Jackson Lake Community
19.1. Chipped stone, totals by site; counts and weight (g), with percents. *944*
19.2. Chipped stone, totals by material type; counts and weight (g), with percents. *945*
19.3. Chipped stone, totals by artifact type; counts and weight (g), with percents. *946*
19.4. Chipped stone, counts by material subtype (with associated Warren code) and major artifact type. *950–955*
19.5. Chipped stone tool types and material types, totals by time period and major tool group; counts and percents. Includes ranked material occurrence. *957–958*
19.6. Whole flake mean weight (g) by material type and utilization. *961*
19.7. Chipped stone tool groups by material type; counts and percents. *962*
19.8. Chipped stone tool type by material type; counts and percents. *963*
19.9a. Chipped stone tool types by material, subtotals for chert, chalcedony, and silicified wood; counts and percents. *964*
19.9b. Chipped stone tool types by material, subtotals for quartzite, quartzitic sandstone, sandstone, and siltstone; counts and percents. *964*
19.10. Whole flakes, presence of cortex by material type; counts and percents. *965*
19.11. Debitage flake platform type by material type; counts and percents. *966*
19.12. Debitage flake portion by material type; counts and percents. *967*
19.13. Reduction morphology by material (all debitage); counts and percents. *968*
19.14. Projectile points and formal tools, counts by material type *972*
19.15 [OMITTED]
19.16. Chipped stone material type by utilization (all flakes); counts and percents. *973*
19.17. Large hafted tools, ground and chipped stone combined; counts by tool and material type *973*
19.18. Utilized and unutilized whole flakes by material type; mean weight (g) and counts *973*
19.19. Chipped stone tool type by igneous material types; counts and percents. *974*
19.20. Exotic chipped stone material types, counts by site *977*
19.21. Exotic chipped stone material types, counts by reduction morphology. *978*
19.22. Chipped stone damage and percent of damaged edges by primary material type. *981*
19.23. Use and retouch on utilized flakes by material type, first edge only; counts and percents. *982*
19.24. Breakdown of functions assigned by original analysis within utilized cores and flakes; counts and percents. *983*
19.25. Reduction morphology of whole flakes by platform type; counts and percents. *984*
19.26. Use of cores (including hammerstones) with reduction morphology coded as core; counts and percents. *985*
19.27. Chipped stone tool types (all), average weights (g) and counts by type. *987*
19.28. Edge retouch, counts by flake type and number of edges utilized. *990*
19.29. Chipped stone tool types, counts by major provenience and floor/floor fill contexts. *993*
19.30. Cores, weight (g) by material type and morphology. *994*
19.31. Core material by reduction morphology; counts and percents. *995*
19.32. Edge damage on utilized cores, counts by reduction morphology. *995*
19.33. Items with core morphology (all), material type by artifact type; counts and percents. *996*
19.34. Cortex on cores by material type; counts and percents. *996*
19.35. Core reduction morphology by material type; counts and percents. *998*
19.36. Cores (all) by material and core type, including items coded as hammerstones; counts and percents. *998*
19.37. Hammerstones, mean weights (g) by reduction morphology. *999*
19.38. Cortex on hammerstones by morphology; counts and percents. *1001*
19.39. Chipped stone by time period, showing identified imported materials; counts and percents. *1001*
19.40. Major chipped stone material types by tool groups and time period; counts and percents. *1002*
19.41. Whole flake size (mm) by time period and major material type *1003*
19.42. Silicified wood by site and time period; counts and percents. *1004*
19.43. Silicified wood by tool type and time period; counts and percents. *1004*
19.44. Projectile points and hafted tools, counts by time period. *1009*
19.45. Projectile point dimensions (mm) and weights (g), whole dimensions only. *1010–1011*
19.46. Projectile points, correlations among metric variables, whole corner- and side-notched points only. *1012*
19.47. Subjective point workmanship categories, counts by material type. *1012*
19.48. Chipped stone formal and large hafted tools, counts by major provenience. *1013*

19.49. Formal tools, counts and percents by stratigraphic context and major provenience. 1013
19.50. Chipped stone formal and large hafted tools, counts by type and stratigraphic context. 1014
19.51. Chipped stone formal tools, counts by type and site. 1015

20. Ground Stone, Large Hafted Tools, Other Ground Stone, and Ornaments
20.1. Ground stone, by site; counts, weight (g), and percents. 1023
20.2. Ground stone, material types; counts, weight (g), and percents.percents. 1023
20.3. Ground stone, tool types; counts, weight (g), and percents. 1024
20.4. Ground stone tool types, counts by site. 1025
20.5. Grinding tools, mano and metate types by completeness; counts and percents. 1026
20.6. Manos (whole only), mean dimensions (mm), counts, and weights (g) by type. 1027
20.7. Manos (all), production and material attributes by mano type, counts and percents. 1029–1030
20.8. Manos (whole only), plan-view outline (based on length and width of complete manos) by mano type; counts and percents. 1031
20.9. Manos (with complete widths only), cross-section shape by mano type; counts and percents. 1031
20.10. Two-hand manos (whole), correlations by dimensions (mm), weight (g), and volume (liters) 1032
20.11. Ground stone tool types by material type; counts and percents. 1036
20.12. Manos, tool type counts by re-use function 1040
20.13. Two-hand manos, cross-section shape by plan-view outline; counts and percents. 1040
20.14. Metates (whole only), mean dimensions (mm), counts, and weights (g) by type. 1042
20.15. Metates (all), production and material attributes, counts by metate type. 1043
20.16. Grinding tools (manos and metates), stratigraphic context by completeness; counts and percents. 1045
20.17. Grinding tools (manos and metates), type by time-period identified provenience groups; counts and percents. 1045
20.18. Large hafted tools (including some flaked stone tools), counts by tool and material types. 1049
20.19. Large hafted tools, type counts by shaping method. 1049
20.20. Axes, type counts by site 1049
20.21. Axes, type counts by degree of shaping. 1050
20.22. Axes (whole only), mean dimensions (mm), counts, and weights (g) by type. 1051
20.23. Axes, comparison of broken and whole tools by dimensions. 1052
20.24. Tchamahias, stratigraphic context counts by completeness. 1054
20.25. Large hafted tools, type counts by time period 1054
20.26. Jar covers, shape counts from five sites (LA 37592, LA 37593, LA 37598, LA 60749, LA 60751) 1055
20.27. Jar covers, stratigraphic context counts by material type. 1055
20.28. Rare ground stone artifact types from five sites (LA 37592, LA 37593, LA 37594, LA 37595, LA 37598); summary table. 1056
20.29. Ornaments and specialized ground stone, material type counts by artifact type. 1058
20.30. Ornaments, type counts by site. 1058
20.31. Ornaments, artifact material types, counts by site and material groups. 1059
20.32. Ornaments, by site and time period; counts and percents. 1059
20.33. Ornaments, morphology and material, provenience contexts for three Mid Pueblo II sites (LA 37594, LA 37595, LA 37598). 1060
20.34. Ornaments, morphology and material, provenience contexts for two Late Pueblo III sites (LA 37591, LA 37592). 1061
20.35. Grinding tools (manos and metates), type counts by time period. 1062

21. Faunal Remains
21.1. Faunal remains, taxa counts by site. 1066
21.2. Faunal remains, major faunal group by site; counts and percents 1067
21.3 [OMITTED]
21.4. Faunal remains, bone elements counts by major faunal group. 1068–1069
21.5. Deer and turkey bone, elements counts by bone tool type. 1069
21.6. Deer bone, elements counts by site. 1070
21.7. Faunal assemblage, counts by site and time period. 1070
21.8. Major faunal groups, counts by time period 1070
21.9. Turkey bone, elements counts by site. 1071
21.10. Eggshell, study units/stratigraphic contexts by site; counts and percents. 1072
21.11. Bone tools, type counts by site 1073
21.12. Bone ornaments, type counts by site. 1073
21.13. Bone awls, type counts by major faunal group 1073

21.14. Bone awls, mean bone awl lengths (mm) and counts by awl type. 1074
21.15. Modified bone, manufacturing debris type, counts by site. 1078
21.16. Thermal alteration to bone, type by major faunal group; counts and percents. 1079
21.17. Deer and rabbit bone, by stratigraphic contexts; counts and percents. 1079

22. Archaeobotanical Remains
22.1. Flotation and macrobotanical samples, counts by site, provenience, and time period. 1082
22.2. Plant remains, percent occurrence of taxa by thermal feature type. 1085
22.3. Plant remains, percent occurrence of taxa in features from pit structures and antechambers compared to features in surface rooms. 1088
22.4. Wood taxa, percent occurrence of conifers and nonconifers in features from pit structures and antechambers compared to features in surface rooms. 1089
22.5. Presence of pipes and tobacco by feature types, site, and time period. 1091
22.6. Zea mays (cob) remains, specimen counts by time period, site, and feature/stratigraphic context 1092
22.7. Zea mays cob morphometrics (mm) for Mid Pueblo II sites (LA 37593, LA 37594, LA 37595), by kernel rows count and type. 1093
22.8. Zea mays cob morphometrics (mm) for Pueblo II–III sites (LA 37592, LA 37593, LA 37598), by kernel rows count and type. 1094
22.9. Zea mays cob morphometrics(mm) for Pueblo III sites (LA 37591, LA 37592, LA 37593), by kernel rows count and type. 1095–1096
22.10. Zea mays cob morphometrics(mm), compared by site and by time period. 1097
22.11. Partially charred Zea mays kernel morphometrics (mm), Mid Pueblo II (LA 37594, Room 201 fill/feature). 1098
22.12. Flotation results by time period and site. 1099

23. Concluding Observations
23.1. Temporal component by site; counts of well-defined, relatively unmixed proveniences. 1102
23.2. Grouped lithic material type by Pueblo II site, with chi-square test results. 1106

Appendixes
Appendix 1a. Summary: La Plata Valley Sites, All Known Recorders, by NMCRIS Activity Number. 1127
Appendix 1b. OAS publications history for the La Plata Highway Archaeological Project, with excavated sites listed for each report. 1128
Appendix 2a. Summary: La Plata Highway Archaeological Project/OAS fieldwork chronology by segment and site, including excavation start/end dates. 1129
Appendix 2b. La Plata Highway Archaeological Project excavation personnel. 1130
Appendix 3. Summary: La Plata Highway project, OAS excavation, sites/period components – features and structures, counts by type. 1131–1132

Totah
Time and the Rivers Flowing ~
Excavations in the La Plata Valley

Volume 1

~ Book One ~

The La Plata Highway Archaeological Project: An Overview

Jackson Lake Community:
Introduction and Sites (Parts I and II)

PREFACE The La Plata Highway Archaeological Project: An Overview

H. Wolcott Toll

INTRODUCTION

A spot more suited to the needs of the early agriculturalists could scarcely be imagined.
—EARL MORRIS (1939:85)

Mesa Verde. Chaco Canyon. Aztec Ruins. The Galisteo Basin pueblos. Pecos Pueblo. The Mimbres Valley. Hohokam. Casa Grande. Paquimé, or Casas Grandes, in Mexico. North-central Mexico and the American Southwest have a long history of archaeological study of its truly remarkable pueblos, which were present long before the arrival of European colonizers. Pueblo descendants continue to live in, and revere their ancestors, in the same landscapes. Much of that study has taken place in the Four Corners region of the United States, where Utah, Colorado, Arizona, and New Mexico meet (Figs. pf.1, pf.2). The literature and knowledge among archaeologists is voluminous (see, e.g., Lekson 2009). The Museum of New Mexico has been part of that research for over a century, and since the 1980s, its Office of Archaeological Studies (OAS) has had the opportunity to contribute significantly to that body of work.

The lands between Mesa Verde and Chaco Canyon are rich archaeologically, yet have not received the same attention as those well-known sites. This has been, at least in part, due to the favorable aspects of the area's setting and environment: before archaeological remains attracted scientific attention and preservation efforts, the ongoing activity of a steady population in modern times obscured much evidence of the earlier inhabitants.

As a part of the continued modern development of the region, the NM Department of Transportation (NMDOT) pursued a multiphase project of highway improvement in the La Plata Valley (Fig. pf.1). This endeavor—along the La Plata Highway, or NM 170—intersected many pueblo sites from many centuries. From survey through excavation, OAS fieldwork, deemed the La Plata Highway Archaeological Project (or the La Plata Highway project) took place across multiple seasons from 1981–1991 (see Appendix 2a). This six-volume series, *Totah—Time and the Rivers Flowing: Excavations in the La Plata Valley*, presents the large quantity of architectural, artifactual, and cultural information recovered in the project's final data recovery phases (1988–1991), which comprised investigations at 30 sites.

The La Plata Valley is part of an area that, commercially and archaeologically, is often called the Totah, a Navajo word signifying that three rivers—the Animas, the La Plata, and the San Juan—come together there (Figs. pf.2, pf.3; see McKenna and Toll 1992; Toll 2008). The confluence is a feature of enormous significance in a landscape characterized by dramatic topography but, above all, by aridity. Thousands of prehistoric pueblo sites surround this spot. Within the La Plata Valley, well-known major settlements with public architecture include Morris 23, Morris 39 (LA 1897), the Holmes Group (LA 1898), and Morris 41 (LA 5631). The sites bearing his name were investigated by Earl Morris in the first half of the twentieth century and reported in Morris (1939), which for many decades was much of what was known of "the La Plata District," as he referred to it. Within the Totah, but in different valleys, are the now publicly displayed sites of Aztec Ruins National Monument (also a location of extensive work by Morris, in 1919) by the Animas River, and Salmon Ruins, to the southeast by the San Juan River.

People were living in the Totah throughout the time when Chaco and Mesa Verde were in full swing. This study of 30 sites within the La Plata Valley provides a fuller view of all aspects of life in the region from the sixth through the fourteenth century AD.

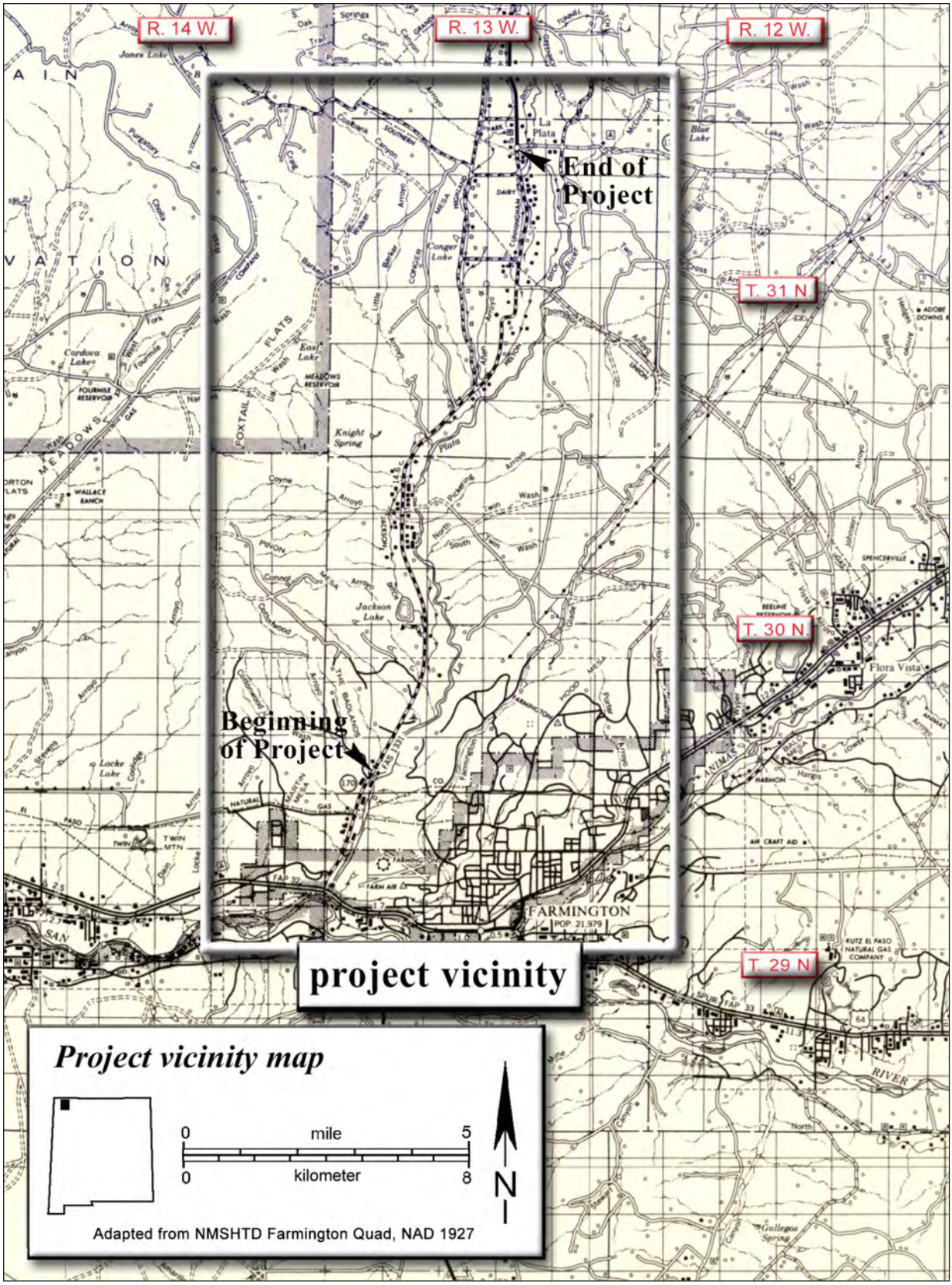


Figure pf.1. Project vicinity map encompassing the Jackson Lake community and Barker Arroyo community segments for data recovery fieldwork completed by the Office of Archaeological Studies (1988–1991).

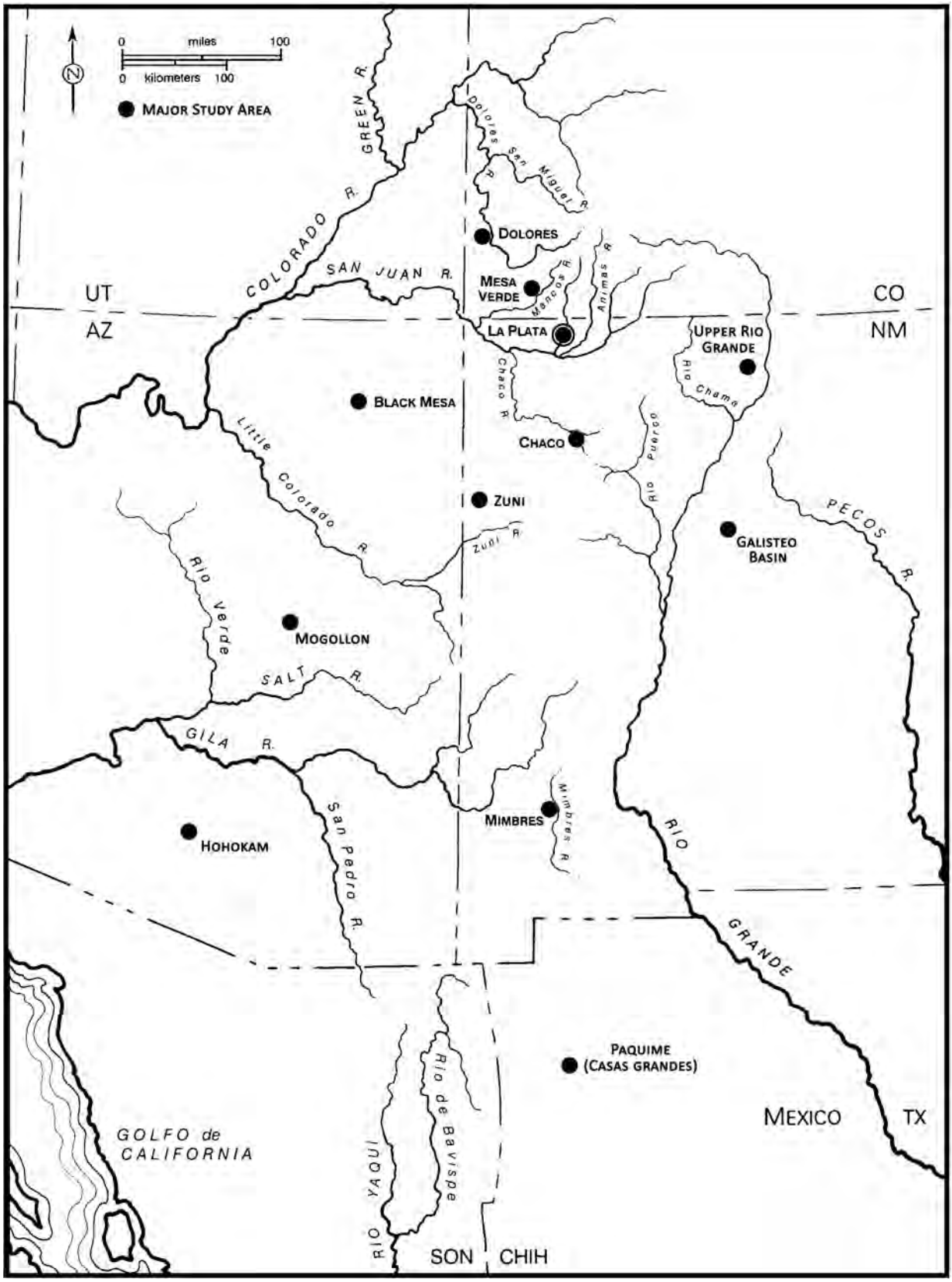


Figure pf.2. Map of the greater Southwest showing political and geographic features and locations of major archaeological areas relative to the Totah and La Plata.

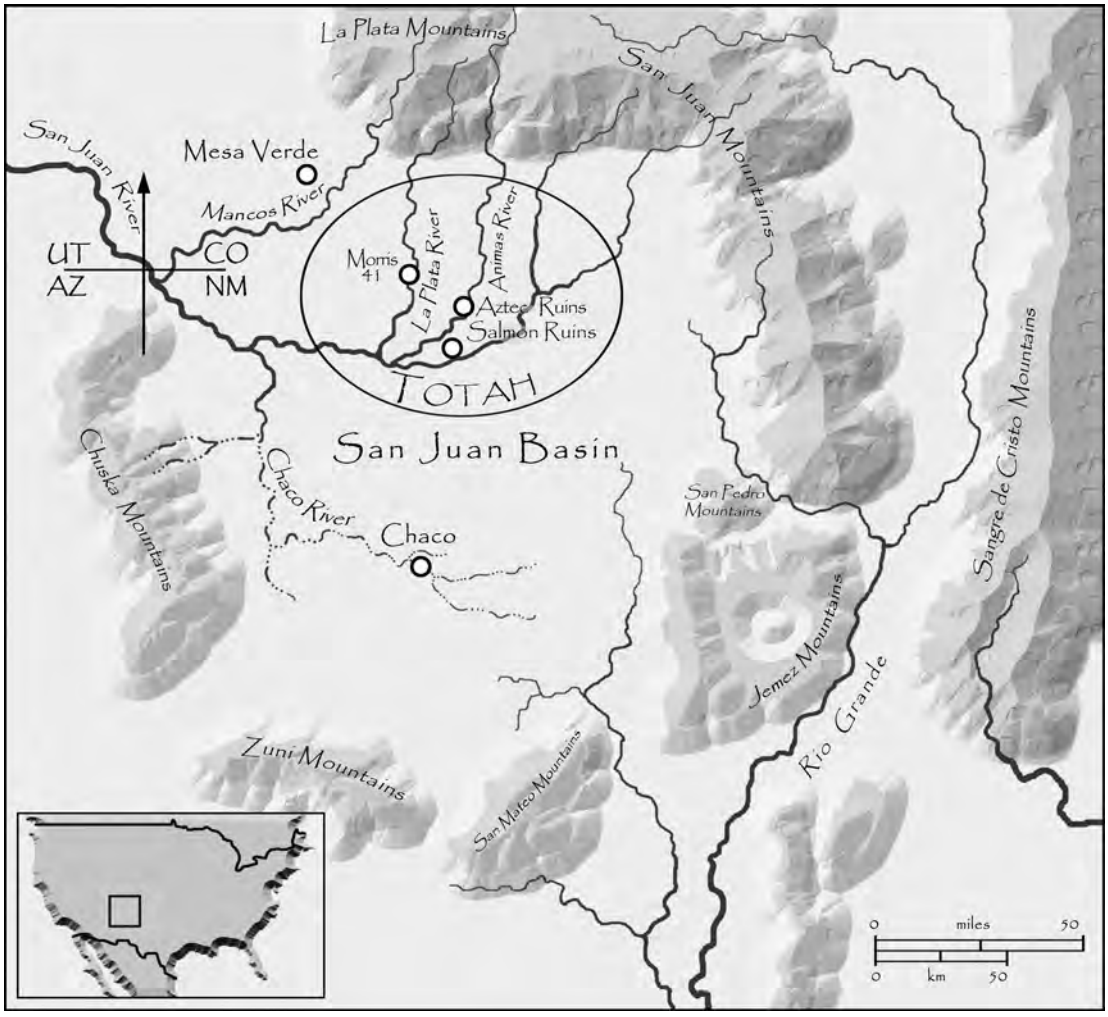


Figure pf.3. Topographic context of the Totah showing major rivers and mountain ranges.

NOTE: Due to the projected length of the project and the vicissitudes of contracting and funding, the La Plata Highway project fieldwork was divided into sequentially numbered segments (from south to north) and named for major drainage entrants to the valley; Table pf.1 summarizes those segments and dependent archaeological work by OAS.

In addition to this project-wide overview, Volumes 1 and 2 of this current report covers the 16 excavated sites in the project's Jackson Lake community segment; Volumes 3 and 4 (in prep.) detail the Barker Arroyo community segment (14 sites). Volume 5 (2001) discusses the bioarchaeology of both the Jackson Lake and Barker Arroyo segments, and Volume 6 (in prep.) provides a comprehensive set of synthetic studies on the project's material culture.

Further, Volume 2 appendixes address certain project-wide data, and include Site Location specifics (Appendix 6) for all excavated sites in this report. Additional appendix descriptions may be found on the contents pages of the current volume.

ENVIRONMENTAL SETTING

Water is the most salient feature of the Totah, and the La Plata River is the most salient feature of the La Plata Valley. The La Plata River rises in southwestern Colorado in the La Plata Mountains (Figs. pf.4, pf.5), which boast peaks over 13,000 ft (4,000 m) above sea-level. After leaving its mountain headwaters and a scenic mountain canyon there, the river courses south, passes Hesperus, Colorado, and crosses into the state of New Mexico south of Redmesa, Colorado. In contrast to its canyon origins, much of its 25 mi (40.2 km) passage through

Table pf.1. La Plata Highway Archaeological Project summary: segments, fieldwork, and excavated sites (with related reports). [See Vol. 2, Appendix 1b for a complete project publications list and Appendix 2a for a comprehensive fieldwork chronology]

La Plata Highway Archaeological Project					
Segment Number (south to north)	**Segment Name**	**OAS fieldwork: Survey/Re-Survey; Testing**	**OAS fieldwork: Data Recovery**	**Sites Excavated by OAS/LA Nos.**	**OAS Reports * (Final, at Data Recovery)**
[none; this was a prior, but associated, investigation near the southern end of the project area; work was completed prior to the project]		1981, 1985	1985	LA 50337	AN 49
1	Cottonwood Arroyo	1981, 1987; 1982, 1987	1988	5: LA 37588–37590, 37626, 60741	**AN 220**
2	**Jackson Lake**	**1981, 1987; 1982**	**1988**	**16: LA 37591–37598; 60743–60745, 60747, 60749, 60751–60753**	**AN 242 [Vols. 1 & 2]**
3	**Barker Arroyo**	**1981, 1987; 1982, 1988, 1989**	**1916, 1989, 1990, 1991**	**14: LA 1897, 37599–37603, 37605–37607, 65024, 65028–65031**	**AN 242 [Vols. 3 & 4]**
4	Dawson Arroyo	1981, 1989	–	–	AN 67 [final, at resurvey]

* A complete publication history for the project is provided in Appendix 1b of this report (AN 242, Vol. 2)

New Mexico is through broad valleys with bottomlands suitable for farming—in the past as well as the present (Figs. pf.6, pf.7, pf.8, pf.9, pf.10, pf.11). Although the river is sometimes subject to spring runoff floods or floods from downpours, as well as occasional drought, it is usually permanent and manageable (Figs. pf.7, pf.12).

Detailed drainage contexts of the Morris sites (Morris 23, 39, and 41) and other major settlements that inform this study, along with their proximity to the segments of NM 170 that comprised the OAS field focus for this project, are shown in Figures pf.13 and pf.14.

Along the La Plata River

After leaving Colorado, the La Plata River is fed by a number of large drainage basins including Dawson, Barker, McDermott, and Cottonwood Arroyos, which we have used as natural markers along the valley (Fig. pf.14; Table pf.1). Within New Mexico, only the river itself is a perennial watercourse. The surrounding area is relatively arid, receiving between 8 and 12 inches (20–30 cm) of precipitation per year, and the La Plata River does occasionally go dry (Roybal et al. 1983:12–13, 26–27, 31; A. Knight, personal communication, 1987), but the presence of the high peak snow fields (Figs. pf.4, pf.5) do much to buffer the low precipitation amounts of the valley. The presence of the river makes the valley distinctive in the broader region (Figs. pf.6–pf.12). Much of the New Mexico portion of the valley is now agricultural and increasingly residential. Extensive irrigated fields are on the first terrace and closer to the river. The principal crop is now hay, although corn and fruit trees were more common until recently. Outside the irrigated and riparian areas, vegetation is primarily piñon-juniper woodland (Fig. pf.6). Montane resources are found around 50 km (31.1 mi) to the north, in Colorado (Figs. pf.4, pf.5).

Barker Arroyo Community

Barker Arroyo, a focus of major Pueblo activity and the northernmost concentration of sites within the scope of this project, was central to our second and third seasons of excavation. Barker Arroyo is a huge drainage extending into Colorado (Fig. pf.9). In

Figure pf.4. The high peaks in the La Plata Mountains, source of the water in the Mancos and La Plata Rivers.

addition to being a major marker in the valley and the location of the Morris 39 greathouse community, Barker Arroyo is the location of numerous large pueblos that are set away from the river. It provides access to a large area west of the river. The sites in this portion of the valley are the subject of extensive documentation in Volumes 3 and 4 of this report.

Jackson Lake Community

Within the Jackson Lake project area—the focus of Volumes 1 and 2 of this report, and to the south of Barker Arroyo—the valley is between 0.5 and 0.75 miles (0.8–1.25 km) wide with a broad floodplain and a low first terrace, mostly on the west side of the river (Figs. pf.10, pf.11). While the east side of the river is characterized by shorter drainages and rincons, the west side has several major drainages: Coyne and Connor Arroyos enter the valley within the Jackson Lake segment, and Cottonwood Arroyo enters in the next segment south (Toll and Hannaford 2000). Sandstone cliffs are present along parts of the east side of the river, while high gravel terraces bounded by badlands are more prevalent on the west side (Figs. pf.15, pf.16, pf.17, pf.18a).

Figure pf.5. La Plata River headwaters above May Canyon.

Figure pf.6. The La Plata Valley in the vicinity of Morris 23, view southeast; note the cobble terrace in the foreground and the irrigated fields. Morris 23 is a large settlement dating to the 700s.

Figure pf.7. Environment of the La Plata Valley in the vicinity of Morris 41, looking north up the La Plata River toward the La Plata Mountains. Morris 41 is a long and intensively occupied site that includes many domestic structures and great houses; as Earl Morris (1939:85) himself observed it, "a spot more suited to the needs of the early agriculturalists could scarcely be imagined."

Figure pf.8. The La Plata Valley looking southwest from the Holmes Group, a very large architectural and residential complex at the north end of the Barker Arroyo community area.

Figure pf.9. The agricultural lands of the La Plata Valley at the confluence of Barker Arroyo, looking south down the valley from Morris 39 toward LA 37601, as partially excavated adjacent to the highway. This is the heart of the Barker Arroyo community. The arroyo bed is in the mid ground and the La Plata River is to the left. Once again, extensive cultivation is visible as are the upper gravel terraces.

Figure pf.10. Winter view of a portion of the Jackson Lake site concentration from LA 60746, the kiva overlooking the community.

Figure pf.11. The southern portion of the Jackson Lake community area in the vicinity of excavated sites reported on in these volumes; note the sandstone cliffs east of the river and the irrigated fields of the Jackson Lake Wildlife Area.

Figure pf.12. The La Plata River near Morris 41 in September of a dry year (1989) showing its permanent flow.

Bedrock exposures through the Pleistocene gravels on the west side are of the late Cretaceous Kirtland and Fruitland Formations (Dane and Bachman 1965). They consist of friable sandstones, clays, and shales; these formations are present in much of the northern San Juan Basin, and frequently form badlands.

While no previously known great houses are present in this part of the valley, this group of sites has all the attributes of a community. There is a high concentration of structures from the entire Ancestral Pueblo range, Transitional Basketmaker to early Pueblo III. The sites are arrayed beneath a very large—conceivably great—kiva (LA 60746) which overlooks the habitations and extensive good agricultural land (Figs. pf.10, pf.11). The majority of the habitation sites are Pueblo II, which accords with the scant pottery at the kiva. In perhaps Pueblo III, but also possibly Pueblo II, there was a very large structure that could also have served as public architecture for the community (LA 111902).

Much of the floodplain is currently irrigated and cultivated; besides alfalfa hay, wheat and corn are also grown (Fig. pf.18b). Near the river, willow, large cottonwoods, tamarisk, and tall sage are abundant. The lower terrace is characterized by sage, saltbush, greasewood, and grasses (Figs. pf.6–pf.12). The upper slopes and terraces have stands of piñon and juniper interspersed with low sage and grasses. Piñon-juniper replaces grasses in the higher portions of the valley slopes within this project segment (see also Roybal et al. 1983:14–15). By the time the La Plata reaches the San Juan, surrounding areas are grassland (Roybal et al. 1983:14–15).

The Jackson Lake Wildlife Area has a large deer population as well as introduced pheasants, and the annual fall dove hunt on the refuge is well attended. The roadkill sample includes skunks, deer, raccoons, and ground squirrels. More complete faunal and floral listings for the region may be found in Schmitt (1976), J. Cully (1985), Reith (1986), and A. Cully (1985). Inventories of recovered fauna and plant remains are presented for each site, and community overviews include summaries of overall faunal occurrence.

South to the Confluence with the San Juan: Prior Investigations

Cottonwood Arroyo is another very large drainage that enters the La Plata Valley from the west, two miles from the confluence of the La Plata with the San Juan River. It is the name of the first segment of the NM 170 archaeology work and was reported in Toll and Hannaford (2000; *see* Table pf.1). OAS examined four pueblo sites, including a fieldhouse, and a non-ceramic, probable Archaic site. The vegetation in this part of the valley is open, largely grasses.

The part of the valley closest to the confluence was subject to extensive modern development extending from the city of Farmington, which essentially covered the antecedent occupations of the valley. In an earlier phase of this project, OAS excavated LA 50337, a large pueblo there that had been completely obscured by an auto parts operation (Fig. pf.14; Vierra 1993a). This site contained components from a long time span beginning with Transitional Basketmaker and extending to Pueblo III. By the time the La Plata reaches the San Juan, surrounding areas are grassland (Roybal et al. 1983:14–15) although orchards and cultivation were present in the past.

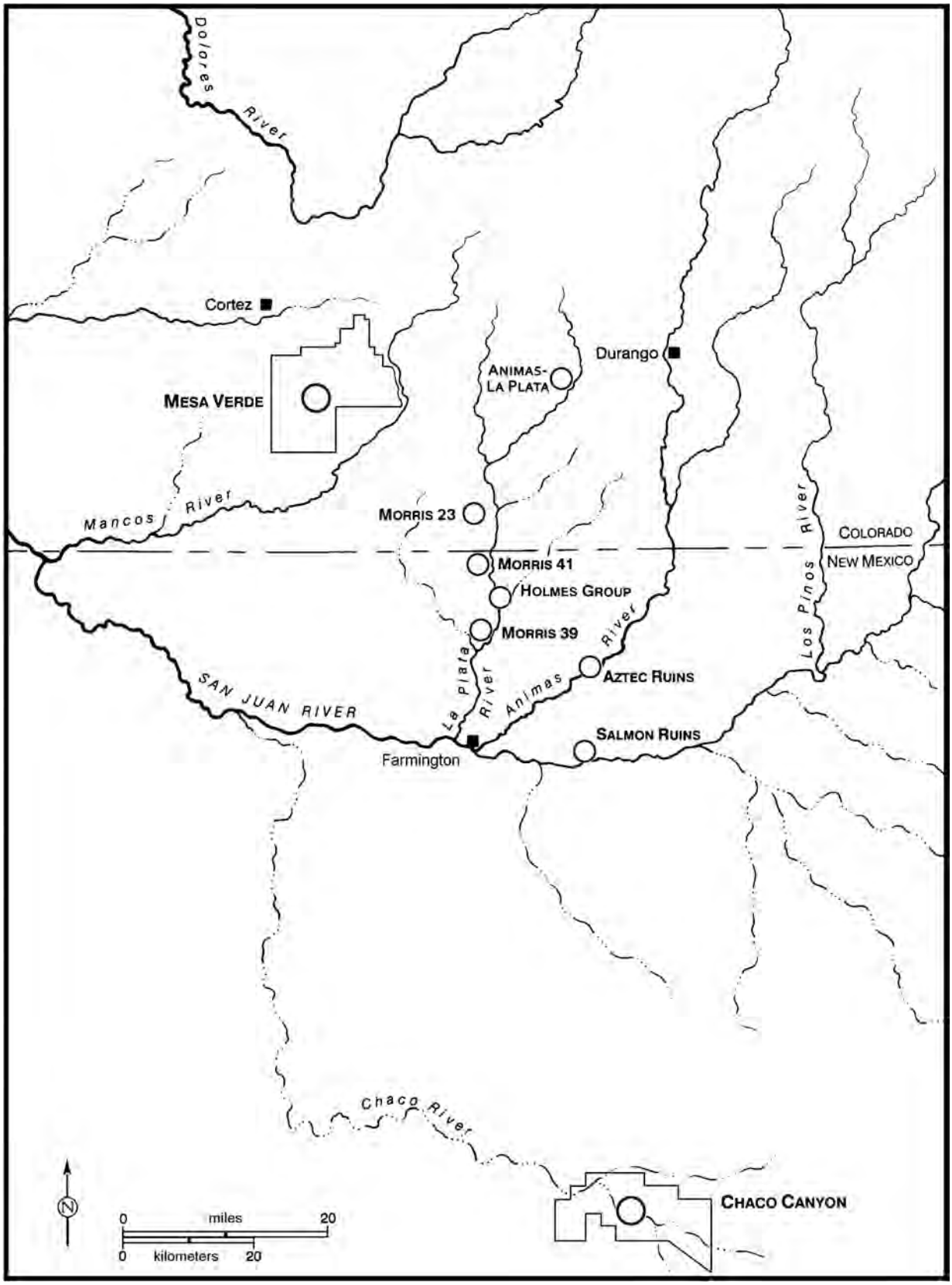


Figure pf.13. Major sites within the Totah in relation to Chaco Canyon, Mesa Verde, modern state lines, and other political landmarks.

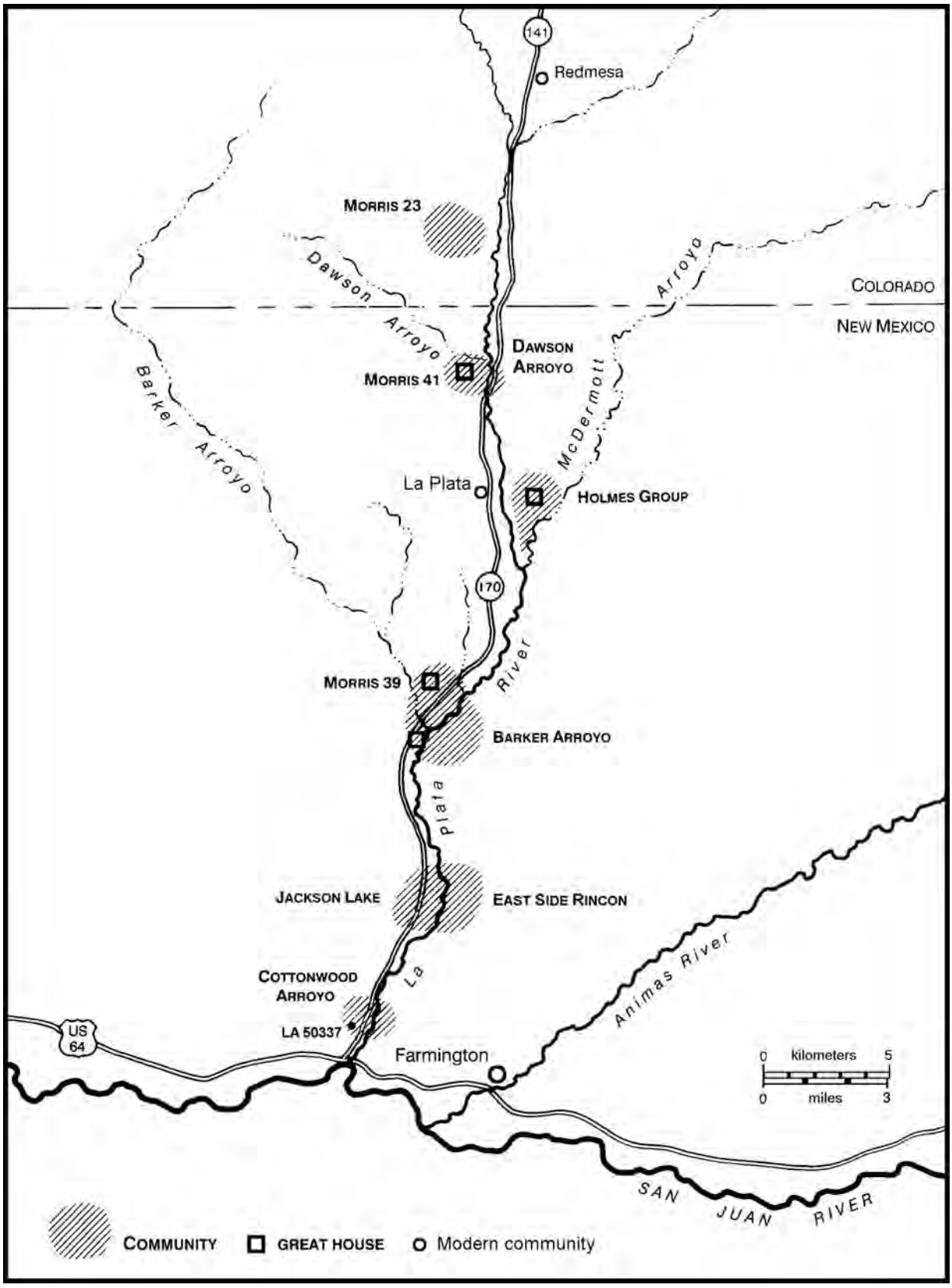


Figure pf.14. Community areas in the La Plata Valley. Data from sites in the Jackson Lake and Barker Arroyo communities are reported on in these volumes.

Human History

The vast majority of known archaeological remains in the valley are "Anasazi," or Ancestral Pueblo. There is no doubt that Archaic peoples used the valley, as did perhaps Paleoindians, but the intensity of Anasazi and historic use militate against survival of earlier remains and especially their identification from surface remains. There is a great number and variety of Anasazi remains in the valley, including large settlements with large public structures apparently related to the Chaco Phenomenon (Morris 39 and 41 and the Holmes Group [Figs. pf.7, pf.8, pf.9]; and, to the west, the Squaw Springs community) and a great many smaller structures that date from Basketmaker III through Pueblo III.

Two forms which resulted from consideration of their implications need discussion:

Ancestral Pueblo and Anasazi. For many decades anthropologists, archaeologists, and the general American culture referred to the native populations in southwestern North America by the Navajo word Anasazi, variously translated as Ancient Ones or Ancient Enemies. There are many opinions about the use of these terms. For many, the established use and understanding of "Anasazi" makes it a convenient shorthand and they use it knowing that others do not approve of it because of its negative translations or because it misleadingly gives priority to Navajo (Diné) affiliation. Some prefer the alternative "Ancestral Pueblo." Recognizing that almost any term will be problematic for some segments of readers, we mostly use Ancestral Pueblo.

Pueblo and pueblo. Capitalization of the word pueblo has multiple connotations. We capitalize the word when referring to cultural groups of people or in the Pecos periods such as Pueblo II or proper names of sites (Pueblo Alto). We use the lowercase form when talking about a building or a settlement (there are hundreds of pueblos in the Totah).

Evidence for human use of northwestern New Mexico includes occasional Paleoindian projectile points, suggesting occupation up to 10,000 years

Figure pf.15. Piñon Mesa, west of Jackson Lake, showing nearby resource zone.

Figure pf.16. Piñon Mesa, west of Jackson Lake, showing badlands.

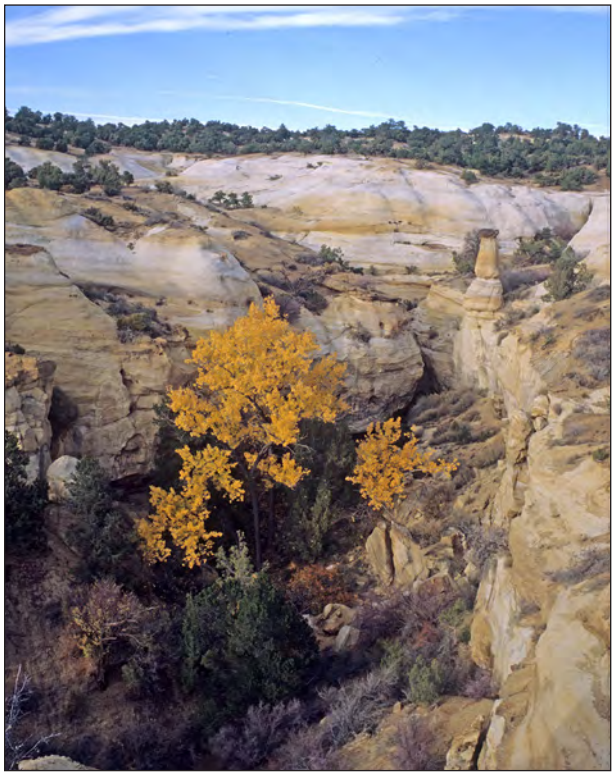


Figure pf.17. Piñon Mesa, west of Jackson Lake, showing environmental diversity.

ago. Far more abundant in the area, however, are remains from a period termed the Archaic, during which inhabitants are thought to have depended on a mobile strategy of hunting and collecting wild plant products. This period is lasted from around 6000 BC to early in the Christian era. There has been increasing evidence in the region for the use of maize in the latter Archaic, perhaps by around 2500 BC (Kohler et al. 2008; Hall 2010). From AD 1 to AD 700, reliance on cultigens, sedentism, use of more permanent structures, and settlement size all increased, and pottery came into use. This period is the first part of the Pueblo sequence, termed Basketmaker II–III in the Pecos classification (see Table pf.2). Basketmaker II sites are subtle and hard to distinguish from Archaic sites, but they are present, especially in the upper reaches of the valley. Basketmaker III sites are well represented in the La Plata and surrounding valleys. At around AD 700, with increased use of surface structures in addition to deepening the subterranean structures established in Basketmaker III time, the Pueblo phases of the Anasazi sequence begin.

From AD 700 through the early 1300s, a series

Figure pf.18a. Environment west of the La Plata River, looking west from above the Jackson Lake community and showing extensive gravel terraces, badlands, and part of Jackson Lake. Note the myriad cobbles, the sandstone exposures through the clay beds of the badlands, and the minimal tree cover.

Figure pf.18b. View to the north of the irrigated terrace on the west side of the La Plata Valley with irrigation water from the La Plata River and La Plata Mountains in the distance. This area has mostly historic homesteads, but few Pueblo sites; it probably requires modern irrigation techniques but clearly has further agricultural potential.

Table pf.2. Ceramic chronology (based on the Pecos classification), for the Jackson Lake and Barker Arroyo sites.

Period	Dates	Jackson Sites	Barker Sites	Pottery
Archaic	pre–CE	LA 60741, LA 37592, LA 60752	–	absent
Basketmaker II	1000 BC–AD 450	–	–	absent
Transitional Basketmaker III	AD 450–600	LA 37594	–	Sambrito Brown
Classic Basketmaker III	AD 600–700	LA 37595, LA 60751	–	La Plata Black-on-white, Chapin Gray
Basketmaker–Early Pueblo I	AD 700–800	–	LA 37605	Rosa Black-on-white, Chapin Gray
Late Pueblo I	AD 800–900	–	–	Piedra Black-on-white, Moccasin Gray
Early Pueblo II	AD 900–1000	–	LA 37603	Cortez Black-on-white, Mancos Gray
Mid Pueblo II	AD 1000–1075	LA 37592, LA 37594, LA 37595, LA 37598	LA 37599, LA 37600, LA 37601, LA 37605, LA 37606, LA 37607, LA 65030	Mancos Black-on-white, Mancos Corrugated
Pueblo II–III transitional	AD 1075–1150	LA 37592, LA 37593, LA 37598	LA 37599, LA 37600, LA 37601, LA 37605, LA 65030	Mancos-McElmo Black-on-white, Mancos and Dolores Corrugated
Early Pueblo III	AD 1150–1200	LA 37592, LA 37598, LA 60749	LA 37600, LA 65029	McElmo Black-on-white, Dolores Corrugated
Late Pueblo III	AD 1200–1250	LA 37591	LA 37603, LA 37606, LA 65030	Mesa Verde Black-on-white, Mesa Verde Corrugated
Historic Native American	AD 1500–1850	–	–	Dinetah Gray, Gobernador Polychrome, Jemez Black-on-white
Historic European	AD 1800–1900	–	LA 37607	crockery, brick

of developments take place, including changes in architectural forms and ceramics, increases in structure size, differentiation of structures within settlements, and differentiation in size and complexity among settlements within the region. A regional system centering on Chaco Canyon developed between AD 800 and 1150. Sites relating to this system are present in the La Plata, San Juan, and Animas Valleys. Late in this period, as activity in the Chaco area diminished, the focus of the system appears to have shifted to the Totah. Especially in older treatments, the Totah is considered to be part of the Mesa Verde region, though much of the basis for the inclusion was artificial (and prehistorically meaningless) boundaries such as modern state lines. Different areas have received different classification and research by the archaeological profession. The inclusion of the Totah in the Mesa Verde region is based, I believe, primarily on the location of the San Juan River and use of similar igneous temper in pottery. Using other criteria, such as the presence of great houses, the Totah more logically fits within the Chaco area. The important point is that during the long occupation of this desirable locality within the dynamic landscape of the Pueblo world, relationships and important locations changed regularly. The area around Mesa Verde and the Montezuma Valley was also populous and widely settled, and well known to residents of the La Plata Valley (Wilshusen 2002; Lipe 2006; Varien 1999).

Sites dating to AD 700–1300 are present in large numbers in the valleys of the Totah, though large numbers of them have been destroyed during the historic period. By around AD 1300 permanent habitation in the area seems to have ceased, and it appears that until Navajo movement into the region

in the 1500s or somewhat before (Brown and Gish 1991:731), the main use of the area was occasional visits from surrounding areas.

Occupation was not continuous at all locations. The lower valley in the vicinity of Jackson Lake was sparsely populated in the AD 700s and early 800s, and probably again after 1200, but people were in the valley throughout these centuries. Our project encountered surprisingly little from Archaic occupations prior to 500, but there is little doubt that people were there then, too, since surrounding areas were well used in those periods, and we found heirloom Archaic projectile points in Pueblo contexts.

Navajo occupation of the area has continued until today except for interruptions caused by relocations at the hands of the US government. Historic use of the area includes passage through by several Spanish expeditions, and occupation of some areas by refugee Pueblos after the revolt of 1680. Intensive American use of the area began in the latter 1800s. The primary use of the river valleys was agricultural, though mining of coal and other minerals occurred in surrounding areas. As noted, continued development and use of irrigable lands has had a serious impact on survival of archaeological sites. Developments associated with cyclical energy booms have accelerated this process. A portion of the Ute Mountain reservation is directly west of the La Plata Valley, and there is no doubt that Utes made use of the valley. Identification of Ute sites is, however, tenuous, and to my knowledge no Ute sites in the area have been reported. Lacking diagnostic points or pottery, earlier Ute sites would be similar to Archaic sites or Anasazi lithic sites; later Ute sites would probably be hard to distinguish from Navajo sites.

There are many exhaustive accounts of the culture history of the Colorado Plateau and the area more immediately surrounding the La Plata Valley. Morris (1939:8–44) introduces his iconic volume with an account of his view of pueblo development in "the San Juan region." Though hewing quite closely to their assigned boundary of the Colorado–New Mexico state line, syntheses by Nickens and Hull (1982:131–308) and Lipe et al. (1999) present detailed accounts of cultural development, especially Puebloan, in southwestern Colorado. Earls et al. (1991:72–88) and Brown and Gish (1991) give a more La Plata–specific overview. Anschuetz (in Vierra 1993a:9–47) gives a theoretical overview, again with a La Plata Valley site as a starting point.

Earl Morris conducted excavations in the valley and its vicinity from 1915 through 1930, including a prolonged period at Aztec Ruins. His time of digging in the area was actually even longer (Lister and Lister 1968; Morris 1939). Morris (1939) remains the most extensive treatment of sites and material from the valley, including sites in New Mexico and Colorado, the Barker Dome area to the west, and some sites in the Mancos River drainage. His report contains information from Basketmaker III through Pueblo III sites, and a detailed technological study of La Plata ceramics by Anna O. Shepard. While Morris reported no work within the current project area, he did conduct extensive excavations at the entrance of Barker Arroyo, which is only a short distance up the valley from Jackson Lake and the focus of the OAS excavations subsequent to those in the Jackson Lake area.

Morris's extensive work did not extend as far south in the La Plata Valley as the Jackson Lake area, but Morris 39 at Barker Arroyo was focal to his first season of work in the valley (Fig. pf.14). Homesteading and other historic-period use took place in the valley, but the remains are few in these project segments. The abundant archaeological remains in La Plata Valley have been formally reported sporadically since the nineteenth century (e.g., Holmes 1878; Morris 1919, 1939). Nickens (1978), Ware (1986), and Dykeman and Langenfeld (1987) give more thorough accountings of archaeological work in the La Plata area including the East Side Rincon directly across the river from Jackson Lake and at Morris 39 in the midst of the Barker Arroyo community. Powers and Watson also provided a narrative summary of human use of the valley (see Dykeman and Langenfeld 1987:iv–v). San Juan College maintained long-term interest in the East Side Rincon including field schools and field mapping (Rohwer 2006).

With encouragement from Earl Morris through their connections to the Carnegie Institute, Deric Nusbaum conducted an impressive survey of the La Plata Valley in 1935, recording 992 sites (Dykeman and Langenfeld 1987:159), 59 of which are in the section of the valley we call Jackson Lake. The quality of the maps he had was such that we cannot positively identify the sites he recorded, but his survey of the whole valley has been useful. It is the only full valley survey that has been done, and it predated many earth-moving and -covering activ-

ities that make the archaeological record more difficult to see today. The materials he collected on the survey are kept at many institutions, including the Museum of New Mexico's Archaeological Research Collection (ARC). Hannaford (1993) and Wilson (Wilson and Toll 2009) used them to gauge occupation of the valley through time.

Two large mine-related projects have been conducted in the vicinity of the La Plata Valley. One, the La Plata Mine project, is considerably north of the Jackson Lake and Barker Arroyo segments, adjacent to the New Mexico–Colorado state line (Brown 1991; Hancock et al. 1987; Reed and Horn 1987). Somewhat closer to the Jackson Lake area is the San Juan Coal Lease, on the Shumway Arroyo drainage to the west of the valley (Beal et al. 1984; Kemrer et al. 1980). While he concludes that the seasonal occupation of the San Juan Lease is most likely to have been connected to the community centered on Squaw Springs (Marshall and Stein 1978), Beal notes that Morris 39 could also have contributed to the use of the lease area. The large number of Pueblo II–III sites about 15 km (9.3 mi) west of the La Plata Valley between Squaw Springs and Navajo Springs, including a great house at the Squaw Springs community (Marshall and Stein 1978; Beal et al. 1984:430, 433; Ganas 1980; Whitten 1980), would also have been within the interaction sphere of sites in the project area. All of these projects provide comparative materials for work along NM 170.

Filling the chronological gap in our highway sample discussed above—in which very early Ancestral Pueblo sites (Basketmaker II) and the period in the AD 700s and 800s bridge Basketmaker III and Pueblo II (Pueblo I)—is the major archaeological study carried out in connection with the reservoir for the Animas-La Plata water diversion project (see Potter 2010). Ridges Basin is crossed by Basin Creek, a tributary of the La Plata River and there are numerous sites within that area from our "missing" periods.

Another gap considering the location are Navajo—Diné—sites. None were present in NM 170 project area, but their presence in the La Plata Valley is clearly shown by work on the La Plata Mine project (Brown and Gish 1991) and nearby by the extensive work on the Navajo Indian Irrigation Project (Kirkpatrick 1980).

Within the Jackson Lake and Barker Arroyo segments discussed in this report, the only European homestead site found was LA 37607 (Vols. 3–4, this report), the homestead of Edward Smith, which was placed directly on top of a Pueblo II roomblock and pit structure. However, homestead archaeology is abundant in the area, as shown by a reconnaissance performed west of NM 170 by OAS as well as from a survey of the final proposed section of the highway improvement plan—the segment we call Dawson Arroyo (Toll 1993), and where further pueblo sites as well as historic sites were recorded.

The La Plata Highway Archaeological Project: Background

In 1984 Dykeman and Langenfeld (1987) conducted the La Plata Overview Project. In addition to surveying five locations, including the East Side Rincon site group, directly across the river from the Jackson Lake site complex, they evaluated and tabulated previous work in the valley and formulated research questions and management plans for the valley. Their report contains a great deal of detailed background information. Their study uses the concept of the community as a research foundation, both as an indication of trends in Southwestern archaeology and as an indication of the nature of the La Plata database. We also concluded that questions of community were especially apropos to the segments of the La Plata Highway (NM 170), within the scope of this current report.

The names of our study areas—the Jackson Lake community and the Barker Arroyo community—indicate that we have followed this trend (Fig. pf.14). To the extent to which we can determine contemporaneity, Jackson Lake and Barker Arroyo were residential communities (see Hegmon 2002; Wills and Leonard 1994). Our interests extend to the relationships between them and with others in the region. To the extent possible, we are of course interested in other aspects of community: Can we see if the spatially defined residential communities expressed identity through style or material use? Is there evidence of concerted action among communities such as construction of public architecture?

Some form of road going up the La Plata Valley has been more or less in the location of today's La Plata Highway since the nineteenth century. The road was paved in the 1940s, and that version of the road carried into the 1980s. OAS excavations clearly

demonstrated that in the earliest eras of highway-improvement activities, the approach to archaeological sites and features was to go right through and over them. With increased traffic, including mining trucks, the road was no longer safe or adequate by the 1980s, and the NM State Highway and Transportation Department (now the NM Department of Transportation, or NMDOT) recognized the need to upgrade and widen it.

The highway improvement project was planned in four phases, beginning at the south end, where NM 170 joined US 64 and the La Plata River joined the San Juan. Work for the La Plata Highway Archaeological Project (La Plata Highway project) was performed by OAS in conjunction with each of the construction phases. Each sequentially numbered segment was named with the name of a major drainage entrant within the segment (Table pf.1; Appendixes 2a and 3). The present volumes report the data recovery work in the second and third segments of the project: Jackson Lake and Barker Arroyo, respectively. A prior publication detailed OAS excavation in Segment 1 (Cottonwood Arroyo; Toll and Hannaford 2000), which was immediately south of the Jackson Lake segment. [LA 50337, near the project area's most southern extent, is associated, but was excavated earlier, in 1985, and is not formally part of this project; see Vierra 1993a.] Survey and testing in the fourth and final segment, Dawson Arroyo (Fig. pf.14; Toll 1993), which was at the farthest northern extent of the project, found no sites eligible for data recovery.

Several surveys were undertaken with each of the two segments reported here: the initial survey (Lancaster 1982a), the Jackson Lake survey (Toll and Hannaford 1997), and supplemental survey and testing in the Barker Arroyo segment (Toll et al. 1990). [*See* Appendix 1b for OAS publication history for the project.]

The Totah and the La Plata Valley were part of a rich cultural landscape. The Jackson Lake and Barker Arroyo sites were within manageable distances from many significant settlements. Within the La Plata Valley, well-known major settlements with public architecture include Morris 39 (part of the Barker Arroyo community), 5 km (3.1 mi) up the valley from Jackson Lake; the Holmes Group, at the confluence of McDermott Arroyo with the La Plata Valley, 13.4 km (8.3 mi) north of Jackson Lake; and Morris 41, within the Dawson Arroyo segment, and almost 20 km (12.4 mi) north of the sites at Jackson Lake (Fig. pf.14). These sites were investigated by Earl Morris (1939) in the first half of the twentieth century. Not generally recognized as great houses, but previously recorded candidates within our study areas are LA 111902, at Jackson Lake, and the structure on the east edge of LA 37601, a Barker Arroyo site. Within clear view of Morris 39, these structures, especially the latter, are likely to have been one (LA 37601) or more (LA 111902) "McElmo units" from the AD 1100s (Van Dyke 2004), or, in the case of LA 111902, even later great houses, such as the latest components of Aztec Ruins and Morris 41.

Within the Totah, but in different valleys, are the now publicly displayed sites of Aztec Ruins, by the Animas River, 20 km (12.4 mi) east of Jackson Lake; and Salmon Ruins, by the San Juan River, 22 km (13.7 mi) to the southeast (Fig. pf.13; Reed 2006a, Toll 2008). Jackson Lake is 85 km (52.8 mi) from Pueblo Bonito at the center of "downtown Chaco." Narbona Pass, at the edge of the Chuska Valley and a well-known chipped stone source, is 73 km (45.4 mi) from Jackson Lake. Cliff Palace, at Mesa Verde, is about 40 km (24.9 mi) away in a straight line. People were living in the valley and at Jackson Lake during most of the times these surrounding areas were in use, with documented occupations from the 500s into the 1300s. All of these distances were eminently traversable by peoples of the time.

Chronological Terms

Placement in time is fundamental to all of our discussions of the occupation of the La Plata Valley. We are very free with the argot of Pecos Classification periods such as Basketmaker III and Pueblo II. Although we have precious few "real" dates, we have a great deal of confidence in the ceramic chronology accumulated and refined over many decades. Table pf.2 lists our date assignments to the Pecos periods we use. These dates are slightly adjusted for our assemblages but are generally in line with those used in other archaeological texts (e.g., Lipe et al. 1999; Hayes et al. 1981:18) and see C. Dean Wilson's ceramic analysis in this report (Chapter 18, Vol. 2, this report). We use the usual round decadal dates, which implies their approximate and estimated nature. Assignment to a period is based on ceramic and other artifact types, and architectural traits.

Geomorphic Events

In addition to being a preferred location for the highway, throughout the valley the alluvial fans at the bottom of the terrace slopes offered advantages to their inhabitants. These included access to the river, proximity to farmlands without loss of acreage to dwellings, elevation above cold-air drainage, and access to the building and tool materials of the terraces. The majority of the excavations performed by the highway project were in exactly this location, and years of highway construction seriously impacted the sites. Stratigraphy at various sites shows that there were also some liabilities prior to highway construction. In several locations there is evidence that serious runoff events occurred that impacted the sites. At Jackson Lake site LA 37592, a portion of a room was removed by flooding, and there are gravel lenses in several features at LA 37594, strongly suggesting that fast-moving, load-bearing water passed across the site. Architectural remnants among the drainages on the fans that were popular building locations attest to other feature losses (Fig. pf.19). It is unclear whether occupation continued at LA 37592 after the room was damaged; the room has a late date, and the flood could have been one of the last events there. The pit structure at this site, not far from the damaged room, does not have evidence of flood fill. At LA 37594, a little to the north of LA 37592 and in a similar geomorphic location, several subterranean features contained cobble and gravel lenses, most notably Pit Structure 1. It is quite clear that occupation of this site area continued—or resumed—during Pueblo II, since activities are clear on top of the gravel lenses. Though LA 37592 and LA 37594 are within a few hundred meters of one another, the flood fills must have been from different runoff events, one before AD 1100, and one well after. Another dramatic flood fill is evident in Pit Structure 2 at LA 37605, in the Barker Arroyo group. This event probably took place during the site occupation hiatus between late Basketmaker III and Pueblo II. Flooding events at sites, then, look to be from side drainages rather than the river. Sites were high enough above the river to avoid river flooding.

Figure pf.19. Fan erosion in the Jackson Lake area; note feature remains on arroyo fingers.

Though probably not an obstacle to occupation when people were living there, the fans are subject to severe long-term erosion. Between LA 37592 and LA 37593, in the area west of LA 60751, the remains of a number of Anasazi features are visible on top of erosion remnants, showing clearly that ground surface has been lost to erosion (Figs. pf.10, pf.19). Thus, this area, already containing many sites and features, contained even more before loss to cutting.

Archaeology in an Agricultural Area

As is true of much of the Totah and *not* true of places like Chaco Canyon and much of the San Juan Basin, habitations and other vestiges of human activity hundreds of years old have been heavily modified and largely obscured because more recent populations have found them to be salubrious locations. They have thus been extensively farmed, in addition to the construction impacts noted. Except for really large sites such as the great houses listed above, most sites are cobble and artifact scatters or smaller, susceptible to substantial removal by modern field preparation and tending. Most of the sites dug for the Jackson Lake segment were within the Jackson Lake Wildlife Area. The NM Department of Game and Fish now uses much of the area for growing hay, showing both its ability to be irrigated and its productive potential. The Barker Arroyo sites are variously within the right-of-way and affected by highway construction or on adjacent private property and subject to farming and livestock activities. Adding to that, for the length of the project highway and utility construction have compromised features within the right-of-way. This is especially true in the right-of-way east of the highway. Also present at various locations are current or abandoned irrigation ditches.

Another factor in site survival that is especially apparent in the Jackson Lake sites is fan erosion. Both pueblo site selection and highway placement favor the base of the first terrace, away from the main river floodplain and above the maximum cold-air drainage. In the area of Jackson Lake, this location is characterized by alluvial fans formed primarily by runoff from the terraces. Although the soil can be very hard, the continued process of drainage from the terraces causes erosion, which affects cultural features built on the fans (Fig. pf.19). While this process does not seem to have affected the site areas OAS excavated, certainly features immediately adjacent to this project's have been lost.

Site Visibility: Relating the Surface to the Subsurface

Sites within the Totah are consistently harder to detect from the surface than in some other areas. At the base of the terrace slopes, pit structures are usually completely filled and invisible from the surface. Combined with shallower structures, smaller amounts of material, and longer periods in which to become obscured, Basketmaker sites are particularly difficult to see and especially likely to be undercounted in surface assessments. Our early sites illustrate this well, since none of the pre–Pueblo II structures were suspected from surface artifacts or indications. In looking at ceramic counts for the Jackson Lake sites, we can see elevated plain gray sherds at LA 60751, where our strongest Basketmaker occupation was located; the Pueblo occupation was less, but even at that site, the later material masked the earlier.

Field Methods: Conformance with the Data Recovery Plan and Other Standards

Work on La Plata Highway project sites was guided by several documents: the Jackson Lake *Data Recovery Plan and Research Design* (Toll and Hannaford 1987), the Barker Arroyo *Data Recovery Plan and Research Design* (Toll and Hannaford 1989), the La Plata "Operating Procedures" manual (Appendix 5; Toll and Blinman 1990), and various OAS analysis handbooks. [Note: this Preface concludes with an edited amalgamation of the Jackson Lake and Barker Arroyo data recovery plans/research designs referenced above.]

With the number of sites, workers, and people in charge of them there was some variability in details of field method. Therefore, each site description includes its own summary of field techniques. Again, however, field methods were fundamentally directed by the procedures established for this project (Appendix 5; Toll and Blinman 1990); critical terms and supporting methodology that applied to all La Plata Highway project sites are detailed below:

Stratigraphy

"Layers" signifies fill units that have been defined as natural units, while "levels" are arbitrary units (most often 10 cm, but other thicknesses as well). Arbitrary levels can occur within natural layers to give greater provenience control, especially where layers are very thick. Layers with decimal values following an integer (3.02 for example) indicate levels within a layer (Level 2 of Layer 3).

We did not designate project-wide strata. Thus, each major feature has its own layer sequence, which the site excavator then classified as to deposit type, which was coded into the provenience file. The provenience file was then merged by field specimen number with each artifact analysis file. All proveniences were evaluated for temporal reliability based on the degree of mixture. Proveniences that were sufficiently unmixed and contained datable material were then assigned a component age, which was used in finer chronological analysis discussions.

Grid values

A metric grid was established for each site. Grid locations are in terms of meters north and east of the beginning datum point, usually 50 north and 50 east (50N/50E in the text), but not always, as in cases where the grid was continued from an adjacent area. The label for a grid unit is the point at the southwest corner of the square.

Blading

The data recovery plans placed considerable emphasis on the blading as a follow-up procedure in site excavation. Blading was used in a number of instances, but it was used considerably less than anticipated in the planning document. The reasons for this are mainly practical:

We were sternly warned by the utility companies that use of a blade posed a considerable risk of line damage. By the time we were finished excavating, we generally knew where the lines were, at least as well as either the telephone or water companies, but costly disruption of utilities, which were abundant in our work areas, were a deterrent to blading. While water lines were generally deep enough to be safe from blading, telephone lines were close enough to the surface to be at risk.

In areas where we did blade, the procedure produced a lot of fill quickly. Given the confined available work area within the right-of-way, the presence of drainages, and, in many cases, the proximity of other sites, extensive blading was not possible due to the limited area we had to deposit the resulting backdirt.

Most of the sites we excavated did have extensive backhoe trenches, and, while they do not provide the same kind of areal coverage as blading, we generally felt that they precluded the possibility that major features such as structures had been missed. Smaller features such as fire pits are more likely to have been omitted from the sample.

After excavation, especially when several pit structures were present, navigation of a grader within the site limits had often become impossible.

Numbering sequences

Each site, structure, floor, and feature was given its own sequence of numbers. For example, a site with several pit structures each having multiple floors with multiple features could have more than one Feature 2 Layer 3, but the whole series of identifiers means that each provenience has a unique value. Thus "LA 37592 Pit Structure 1 Floor 2 Feature 5 Layer 3" is distinct from "LA 37591 Pit Structure 1 Floor 2 Feature 5 Layer 3"—changing any one value makes the provenience unique. Numbers of all proveniences were assigned as the phenomena were encountered. Layers and feature numbering do not carry over between sites.

Bipod use

We made regular use of the bipod for photographing large excavated features. The bipod has long aluminum tubular legs and a cradle for a camera with a cable for releasing the camera shutter (remember, this is 1980s technology). It allows for a vertical view around three meters above the subject. Each photograph has a 1 m scale; a line level is used to assure the feet are level. The resulting photograph is therefore scalable at the level of the feet and the scale. This allows for increased accuracy of shapes and feature placement. The photos are also a useful perspective on architectural features.

Mapping and GIS locations

Although the current standard for establishing GIS locations is NAD 83, the La Plata Highway project work began when the NAD 27 standard was still in effect; that standard was retained through the life of the project.

Analysis

Given our interest in temporal change, we paid considerable attention to chronological placement. Absolute dates, particularly tree-rings, were scarce in our excavations, necessitating backup strategies for dating. Proveniences fall into several levels of reliability, from unmixed contexts, which are very likely to represent a short, well-defined time span, to contexts that are sufficiently mixed as to have little temporal meaning beyond the broadest parameters of the site's dates. All La Plata proveniences have been reviewed in terms of their ceramic content and the excavators' assessment of the integrity of any particular context. Those judged reliable have been assigned "component age" codes; only those contexts that have been assigned this code are used for analyses examining temporal questions. Out of 8,926 proveniences coded, 47.3 percent were assigned component ages. Ceramic characterization codes were also assigned to 88.1 percent of the proveniences, but these codes were minimally used in analyses.

Artifacts and samples collected during excavation were processed through the multiple channels typical of OAS projects. Ceramics, lithics, faunal and human remains, and botanical samples were examined by the various specialists on the staff. Those analytical reports follow the site reports. Pollen samples and dendrochronology samples were sent to outside labs, and those results are incorporated into the site reports.

Data Recovery Plan

Combined Jackson Lake and Barker Arroyo Research Designs

Relationship to the 1983 Research Design

Lancaster and Snow developed a research design and field strategy for the La Plata Highway work (Lancaster 1983:84–88); their design's "primary goal is to identify and describe variability in the La Plata Valley settlement pattern(s) through time and space" (Lancaster 1983:84). This goal is to be attained by particular attention to the following domains:

1. inter- and intra-site chronology, stressing absolute dating techniques;
2. subsistence and technological strategies, stressing tool kits and food remains;
3. functional differences among sites, focusing on duration of use and location.

These topics are fundamental to any number of further investigations, including two additional foci: the question of the structure of communities in the La Plata Valley, and the relationship of valley communities to the region through time. The 1983 research design for the entire highway project includes excavation of four of the nine sites tested in 1982 (LA 37591 through LA 37598 in Jackson Lake, and LA 37599 through 37601, LA 37603, and LA 37605 through 37607 in Barker Arroyo; see Table pf.1 and Appendix 2a). Based on our reassessment and on conference with project engineers, we recommended testing and excavation beyond Lancaster's plan as well as blading, which he did not recommend.

Research Questions and Approaches

The excavations undertaken in the Jackson Lake and Barker Arroyo segments of the highway are complementary, and excavations in both are relevant to many of the larger questions posed. Within the great archaeological potential of the La Plata Valley, these segments of the La Plata Highway offer several research opportunities. Prime among them is the fact that the road passes through an area of truly extraordinary site density. The "sample" of the area provided by the right-of-way includes only a portion of the features and variability present, but it can be used to address a number of questions. It is this area that is especially appropriate to the question of community structure (see also Dykeman and Langenfeld 1987).

The concept of community is hardly a new one in Anasazi archaeology. T. M. Prudden (1918) long ago recognized that Anasazi structures were often found in clusters, and that these clusters often contained a larger structure situated in a commanding location. His cogent discussion (Prudden 1918:49) argues the likelihood of contemporaneity of differing structure types, but at the same time recognizes that it cannot be assumed. Subsequent studies (Marshall et al. 1982; Dykeman and Langenfeld 1987) stress the concept of integrated segments of a population functioning to adapt to natural and

social environments on both the local and regional levels. Archaeologically, communities are defined by spatially confined groups of contemporaneous features of several types including field houses, habitation units of varying sizes, great kivas, community structures ("great houses"), and special function sites. Our use of the concept is in accord with these latter definitions.

Of relevance to the study of community are the following questions:

1. To what extent is this dense site area the result of a great many contemporaneous buildings and to what extent is it the result of repeated replacement of buildings?

2. What is the size variability of structures within this area?

3. Are there any discernible temporal trends in location preference or structure size?

4. Is there any evidence for particular activities being concentrated at particular structures? That is, does this area of concentrated archaeological remains represent a number of essentially repetitive structures or can functionally unique structures or areas be defined?

5. Using published sources (especially Morris 1939) do there seem to be differences between this concentration of structures and those in other locations in the valley, most notably Morris 39 (LA 1903, LA 1926), 4–5 km to the north, or the East Side Rincon Group directly across the river (Dykeman and Langenfeld 1987)? Other sources of comparative materials are the sites in this segment in areas of lower concentration (LA 37626, LA 37589, LA 37590).

The fact that the La Plata Valley does have a long and intensive occupation sequence increases the difficulty of studying communities there. Nonetheless, surface ceramics from the sites in the Jackson Lake and Barker Arroyo areas suggest that the majority of those features were in use in the AD 1000s and 1100s, though there certainly are later uses of the area. The chronological concerns expressed by Lancaster and Snow are of course critical to the study of communities (see Breternitz 1982) and remain fundamental to all studies of community (Wills and leonard; Varian and Willshusen 2002).

Archaeological definition of communities necessarily involves several assumptions. Primary among these are that proximity in time and space equals community membership (see, for example, the Dykeman and Langenfeld 1987:29–33 discussion of the community concept). Ideally, of course, additional indicators of community affiliation should be used; potential indicators might be ceramic assemblage, ceramic design, artifact style, or architectural elements. Realistically, however, none of these classes of information is likely to provide conclusive evidence: broad-based similarities in the styles of all of these categories and the demonstrated movement of portable artifacts render such indices of community affiliation useless given current resolution of material sourcing. Complementarity of site function is an intriguing possibility for defining communities and should be pursued (see #4 above). Spatial and temporal assumptions remain necessary assumptions in the definition of communities; what remains for the archaeologist is analysis of variability across space with awareness that it may be possible to define community effects in additional ways. Beal and others (1984:431–433) have also wrestled with means of discerning community structure in the area, and note the difficulties thereof.

In several ways the La Plata Valley forms a counterpoint to many locations in the San Juan Basin, including the Bis sa'ani community on the Escavada Wash, just north of Chaco Canyon (Breternitz 1982; Breternitz and Doyel 1982). The La Plata Valley has reliable water and good soils for crops; in empirical substantiation of this it exhibits long-term agricultural use by the Anasazi as well as in the historic period. The Bis sa'ani area, on the other hand, is a marginal location even for the San Juan Basin (Cully et al. 1982), and saw only a brief Anasazi occupation and sporadic agricultural use by Navajos. What the two have in common, however, is evidence for involvement with the Chacoan system. While Bis sa'ani is an excellent example of what Marshall, Doyel, and Breternitz (1982:1231–1233) would term a scion community, one established by participants in the Chaco system, the Chaco presence in the La Plata Valley was clearly the result of the affiliation of a long-used area with the system after its establishment—an "ancestral community." Questions relevant to ancestral communities include the timing of the affiliation with the system, the development of the connection and whether any changes in fundamental life style were involved, and the extent of involvement of the population. The La Plata Valley sites in the present segment of the highway appear

to be mostly from the time period when the Chaco system appears to have been developing connections with the San Juan area (ca. AD 1050–1150; see Toll 1985, 2008) so that there is potential for examining portions of this development in these sites.

A question of major regional significance is the population and use of the San Juan and Animas River valleys. Because of their high desirability for Anglo settlement and agriculture, much of the archaeological record in these permanently watered valleys has been destroyed or obscured. Sites such as those at Aztec, Salmon, and Jacquez give tantalizing suggestions as to the probable magnitude of the Anasazi settlement there. The La Plata Valley has experienced some of the pressures of "civilization" that the larger river valleys have, but on the whole less. In-depth examination of sites now threatened by development will provide a window on sites now lost in the larger valleys. At the same time, however, the fact that water in the La Plata River is less reliable than it is in the Animas and the San Juan Rivers may mean that Anasazi use of the valley was somehow different from that of the permanent river valleys. Finally, the La Plata Valley is of regional interest in that it is located between the San Juan River and the Mesa Verde district populations, forming a logical geographic link between the two. It is possible, then, that sites in the La Plata Valley may contribute information to studies of material movement and regional definition. Because of sites such as Morris 39 and Morris 41, it is generally assumed that Chaco was the prime regional influence in the La Plata Valley, but it is quite possible that developments to the north were as important. Moreover, the Totah is spatially between Chaco Canyon and Mesa Verde, and with its more abundant water it is an important and at times more heavily populated nexus for the whole region (Toll 2008).

Questions of interaction are, of course, difficult to answer, and, once again, depend on well-established contemporaneity. Material sourcing is the most concrete means of showing at least some interaction, and the two materials of most utility here will be chipped stone and ceramics. To a lesser degree, more exotic materials can also be informative. Compounding the difficulty of defining communities is the fact that it is almost certain that the sample provided by the right-of-way does not intersect representatives of the several types of structures likely to have been present in a community. Lacking the full range of architectural components, community affiliation must be approximated through similarity in assemblage and time. Because it is likely that the sample at hand will include only smaller structures, the work done here must be designed to provide data on variability among structures within this class with the best chronological control possible under the circumstances. The more aesthetic goal of fully understanding community structure and operation is likely to remain elusive. The articulation of sites in communities, and communities into regions, seems at first glance to be a question of hierarchy, but there are several conceivable arrangements among sites. If, for example, community affiliation was variable, the community would have been a more important interface with the region at some sites than at others.

The La Plata Valley, then, has the potential for these constructive regional comparisons:

1. Does the greater abundance of local resources and the presumably greater carrying capacity reduce the need for regional exchange?

2. How does the subsistence mix as seen in food remains compare to areas with less available moisture?

3. With the addition of a more formal relationship with the Chaco system in the valley (as at Morris 41, 20 km from Jackson Lake and possibly the Holmes Group, 13 km from Jackson Lake) are any changes visible in the postulated community? The ceramic dates for this area are contemporary with the fullest operation of the Chaco system in Chaco Canyon itself (e.g., Toll 1985).

4. Is it possible that high-density areas such as the Jackson Lake group were involved to a lesser degree with the regional system than those sites located immediately adjacent to sites now thought to be outliers, or was their participation equal even lacking immediately adjacent "public architecture"? Sites near the state line in the final segment of the highway project will provide materials from sites closer to a recognized Chaco outlier. Data from these areas in combination may contribute to definition of community size and structure. That is, does it appear that all sites of a given time period participate in community activities, or are some structures more independent? Does proximity to public architecture result in greater community participation (Dykeman and Langenfeld 1987:34) or are the differences in distance insufficient to have an affect on participation?

Data Collection Priorities

It has been noted that while the community is a relevant and appropriate organizing concept for sites along the La Plata Highway, it has considerable practical problems. It is therefore necessary to determine in advance what categories of data will be most useful in addressing the more inferential areas of interest. The following topics are listed in order of importance, and sampling categories are indicated.

Chronological Placement

Though fixation with dating is often belittled as cultural-historical backsliding, the accurate placement of features is critical to studying any type of interaction. Without chronological control, elaborate analyses of communities and regional interaction are essentially specious. Chronological placement comes from several sources, all of which will be emphasized.

Absolute dates

1. Dendrochronology is the dating technique of choice because of its potential accuracy. Context and reuse must be carefully monitored; unfortunately it is likely that samples will be infrequent in these sites.

2. Archaeomagnetic dating can provide fairly narrow time spans for feature use. Samples should be encountered with some frequency, though the suitability of hearths for dating in this area is not known.

3. C^{14} dating is more expensive and often less precise than the two techniques above, and its use will be based on the unavailability of those sorts of samples.

Relative dates

1. Ceramic types and especially groups of types are quite well dated for the area. Ceramic dates will be the most available of all dating techniques. Particularly in the presence of absolute dates, ceramic group dates may be refined by materials from these sites.

2. Stratigraphic placement may help date some features, but, again, deep deposits may be few within the right-of-way.

3. Other stylistic information, such as projectile point form, structure form, and ground stone type may be used to make broad temporal placements.

Duration of use

The above means of dating deposits and quantities of material can be used to estimate the length of use of structures. Length of use is extremely important in estimating population, function, and contemporaneity.

All of this information would of course also be collected under other data priorities; emphasizing chronology merely means that special attention will be paid to collecting possible samples and that analytical resources will be apportioned to processing those samples.

Site and Feature Function

Functional determinations may take place at several levels: individual features (firepits, mealing bins), structural units (rooms, pit structures), and complexes of structural units and features (pueblos, "sites"). These levels are obviously hierarchical; the most important level is the structural unit, since sites are best compared on the basis of relative and absolute quantities of functional units. In determining function of such units, however, it is necessary to be working with primary deposits resulting from use rather than secondary trash fill. Trash fill is extremely useful, but the information it contains relates to the function of the whole feature complex rather than to the individual structural unit in which it is found.

Artifact assemblages

1. Vessel form distributions and metric variation within form categories supply the basis for inferences on types and quantities of activity. Some functional inferences are also possible from deposits on ceramic vessel surfaces.

2. The forms and used edges of chipped stone implements are also indicators of feature use.

3. The presence and type of ground stone implements are important indicators of classes of activity normally associated with habitation.

Subsistence activity

1. Floral remains are indicative of cultivated-wild plant mixes and thus season of use and emphasis on agriculture.

2. Faunal remains also indicate areas of exploitation and season of use.

Architectural forms

1. While often equated with particular functions, the assumptions involved must be carefully monitored and continually evaluated using the other functional indicators listed.

Exchange Relationships

It is desirable to examine intracommunity exchange relationships, but, as discussed above, movement of goods and analytical resolution make it difficult to study exchange on the community scale. Regional and interregional movement of goods are, however, more amenable to study. The distribution of goods from outside the immediate area is of relevance to interrelationships of community sites as well as to economics of the community as a whole and the region (this is the focus of Whalley's 1980 study).

1. The location of manufacture of some ceramics may be determined through study of tempers and other technological attributes. Stylistic attributes may also be used for certain classes of ceramics.

2. Sources of a number of lithic materials are known and volumes and areas of lithic movement can be ascertained. Sources of obsidian may be determined chemically; surface materials contain little obsidian, but some such sourcing may be possible.

3. Floral and faunal resources are amenable to a lesser degree to identification of nonlocal species; such identifications are also generally low in frequency, especially in shallow open sites.

4. Exotic materials such as shell and turquoise are usually found in small quantities. The types of sites in which they are found has inferential bearing on social and community relationships.

The major source of comparative information for the valley remains Morris's *Archaeological Studies in the La Plata District* (1939), which describes excavations of a large number of sites in the valley and the area to the west. Whalley (1980) has performed site seriations based on "local" ceramics from a number of sites in the La Plata Valley and the San Juan Basin; some of the sites in her study are at least very near the Jackson Lake cluster, if not inclusive of it. Discovered and partially excavated since 1983, LA 50337, a large pueblo site near the mouth of the valley (Vierra 1993), provides significant comparative materials, site structure information, and a graphic warning as to archaeological materials that may go undiscovered by surface survey. As noted earlier, work on mine leases in the area also provide comparative data (Kemrer et al. 1980; Beal et al. 1984; Hancock et al. 1988) and earlier sites up the valley in the Animas La Plata project (Potter 2010). Other available comparative materials include materials from testing along the highway, as well as subsequent excavations on the work planned all the way to the state line. Given the central positions of community and regional interaction to this research design, the long, heavily populated transects provided by the highway will be very apropos.

The Nature and Needs of the Resource

Review of the results of the initial survey, the resurvey, and the other work done in the La Plata Valley (Morris 1939; Whalley 1980; Nickens 1978; Dykeman and Langenfeld 1987) makes it abundantly clear that there is a nearly overwhelming amount of archaeology in the valley. In addition to the march of progress, unfortunate amounts of the valley's archaeological potential have been lost to pothunting activities that continue; these losses are compounded by their acceleration of natural degradation of the resource.

Even in this one highway segment there are a great many archaeological features. The archaeological needs of this highway widening project are increased by the fact that there was no provision for archaeological preservation or recording in the initial construction or in subsequent parallel utility placements. These facts imply several things. Most importantly, all parties must be prepared to expend considerable effort both to take full advantage of the important resources remaining and to make up for past omissions. The current time estimates appear to call for a large time expenditure, but it must be remembered that it is quite possible that even more time will be necessary, as a substantial portion of the work recommended is exploratory in nature. While the largest excavation jobs were probably identified in 1982, it is very likely that some other excavation will be shown to be necessary by the blading and testing. Economically this is perhaps unfortunate, but the very density of use here is a good index of the archaeological importance of the area. Finally, all unexcavated portions of sites immediately adjacent to upcoming construction should be fenced prior to construction.

How this Report Is Organized

A Note on Site Sequencing

For both the Jackson Lake and Barker Arroyo project segments, site descriptions were divided into two categories. In each segment work was done on sites with smaller artifact and feature assemblages that were difficult to place temporally and merited reduced reporting. Complementing those smaller sites in each segment were sites with complex architecture and large material assemblages requiring extensive treatment. The smaller site reports have been ordered geographically, south to north. Large sites with distinct components that could be clearly placed chronologically have been ordered from earliest to latest according to the earliest component. This is in essence a stratigraphic ordering, with the earliest layer at the base. Just as is true of site stratigraphy, some juxtapositions are not perfectly ordered, but the ordering has a more real-world basis than site numbers do on their own.

Volumes 1–4: Volumes 1 and 2 (Jackson Lake) and Volumes 3 and 4 (Barker Arroyo) provide detailed site descriptions and artifact analysis. Separate analyses of major artifact categories—ceramics, chipped stone, ground stone, and botanical and faunal remains—are presented for each community in Volumes 2 and 4 respectively. Less abundant materials, such as ornaments, bone tools, and "other" materials are discussed with the major categories and/or with overall project assemblages.

- **Vol. 1 (Book One and Two):** La Plata Highway Archaeological Project overview; Jackson Lake community site descriptions (16: LA 37591, LA 37592, LA 37593, LA 37594, LA 37595, LA 37596, LA 37597, LA 37598, LA 60743, LA 60744 , LA 60745, LA 60747, LA 60749, LA 60751, LA 60752, LA 60753).
- **Vol. 2:** Jackson Lake artifact analysis; project-wide appendixes (including site location information).
- **Vols. 3–4:** Barker Arroyo community site descriptions (14) and artifact analysis. (LA 1897, LA 37599, LA 37600, LA 37601, LA 37602, LA 37603, LA 37605, LA 37606, LA 37607, LA 65024, LA 65028, LA 65029, LA 65030, LA 65031).

Volume 5 (2001): Covers the human biology of remains from both the Jackson Lake and Barker Arroyo segments.

Volume 6: Provides a comprehensive response to the Research Questions, a set of synthetic studies on the project's material culture covering individual artifact types and architecture, a geomorphology study, and a selection of collected papers.

1 Introduction: Jackson Lake Community

H. Wolcott Toll

Jackson Lake: The Historic Settlement

Half a millennium after Ancestral Puebloans had ceased permanent residence in the valley early Euroamerican settlers realized its attractions. Jackson was a small Mormon settlement established in the La Plata Valley in 1883 (Dykeman and Langenfeld 1987:128, 130, 137). Little is left of Jackson today other than the name, some unmarked graves, and, most visibly, Jackson Lake. Jackson Lake is an artificial reservoir fed by the Jackson Ditch, which carries water from the La Plata River. The lake is bigger now than it was in early Jackson days, having been enlarged in the 1940s (A. Knight, personal communication, 1989). Conversations with Alan and Pat Knight, caretakers of the Jackson Lake Wildlife Area during our work in the area and lifelong residents of the valley, and Margaret Powers' treatments of the history of the valley (Dykeman and Langenfeld 1987:124–140) provided this summary of the valley's history:

> After having first settled in the valley farther upstream, Mr. Knight's family came to this part of the valley near the beginning of the twentieth century (Knight Spring is about three miles north of Jackson Lake). Around Jackson Lake practically all of the historic features relate to agriculture. Most evident, and having the greatest impact on sites near the highway, are a series of ditches. A large ditch was constructed ca. 1910 with its head gate in the vicinity of the present Pickering Ditch. The timing and construction of this ditch were apparently ill-advised; it saw very little use due to lack of water and suffered engineering and financial failures, but not until it had impacted many prehistoric sites including several excavated by this project. Jackson Lake is a man-made feature filled by a ditch from the La Plata River [Fig. pf.18b]. It was first built in 1892, and the dam was later enlarged in 1948. It supplies a covered delivery system, now mainly used for the irrigation of the wildlife area. The town of Jackson was east of the present highway and west of the river. It was a Mormon settlement of up to 15 families, with a meeting house constructed in 1885; the town was mostly abandoned by 1899.

From casual conversation with the Knights, we gathered it was probably in Section 21, but the Dykeman and Langenfeld study places it farther north, east of the lake. A small cemetery relating to the town is above the highway, but there is presently remarkably little visible evidence for this settlement, and we observed no trace of it within the new right-of-way.

Previous Archaeological Work

Far more evident today than the town of Jackson are remains of activities of much earlier occupants of this part of the valley: scores of prehistoric pueblo ruins in this wide and still-farmed part of the valley. They are not visible in the way that buildings in Chaco Canyon or Mesa Verde are, but their remains are abundant. A significant fraction of these sites were intersected first by the wagon road up the valley, then by the paved road and its attendant utilities in the 1950s, and then, the occasion for this study, by the widened and improved version of NM 170. Jackson Lake, then, is neither a natural feature

nor one of significance to the Pueblo occupants of the area, but the name aptly refers to this part of the La Plata Valley and its settlements.

Cynthia Irwin-Williams's San Juan Valley Archaeological Project conducted collection survey and testing of sites along the terrace edge in the Jackson Lake area in 1977–1978, testing at Morris 39 in 1974, and some survey in 1972 (McKenna 1976; Whalley 1980). Whalley (1980) used this material in her thesis to seriate sites on the basis of "local" ceramics, as determined typologically. The primary thrust of her analysis was to determine if nonlocal ceramics are more common at Chaco outliers, which, she found, seems to be the case. Other than site cards at the Salmon Ruins Museum, this work is reported only in Whalley (1980). Whalley's thesis gives only general site locations, but the following Eastern New Mexico University site numbers are at least near the current project: 5074, 5075, 5076, 7400, 7672, 7677, 7678, 7681, 7684, and 7688. Of 14 components from the sites in Whalley's analysis, three were dated to before AD 1050, seven from 1050 to 1130, and four from AD 1130 to 1200.

Two surveys were conducted in the Jackson Lake portion of the valley in anticipation of widening and improving NM 170. The first, conducted by the New Mexico State Highway and Transportation Department in 1982, was recorded and tested by the Museum of New Mexico (Lancaster 1982a, 1982b, 1983). The initial survey recorded eight sites within the area we define as the Jackson Lake community. Based on the experience of encountering unrecorded sites during the first phase of construction at the south end of the valley (Vierra 1985), the highway department contracted OAS to do a second survey before construction began. The second survey assessed the first eight sites and found an additional eleven within the community area (Toll and Hannaford 1997). Some of the "new" sites are adjacent to the right-of-way, but are clearly part of the spatially defined community.

In the Jackson Lake segment, there are 16 sites within and next to less than 2 mi (3.2 km) of the right-of-way (Fig. 1.1). The archaeological remains are nearly continuous, but there are definable areas of increased density of material and architecture. The Jackson Lake sites range from a few scattered surface artifacts to groups of multiple structures with complex occupation histories and large artifact inventories. As is the nature of right-of-way archaeology, our excavations in a number of cases dealt with only parts of sites, considering a site to be a concentration of evidence for occupation in the past, optimally, but rarely a complete unit of habitation. Although European settlement of the valley dates to the nineteenth century, Navajos and Utes occupied the valley for several centuries before that, and the area contains Archaic occupations dating well before the Christian era, almost all of the material excavated during our work in the Jackson Lake area is Ancestral Puebloan, or Anasazi.

Our view of the occupation of the Jackson Lake area is skewed not only by our corridor sample but also by what has been lost to modern activities, especially highway construction. Both LA 37591 and LA 37592 have pit structures containing Pueblo III trash, which is later than any other features on either site. The room floors that we were able to investigate at any place on the project were uniformly close to the surface and thus extremely susceptible to removal by road building and maintenance. These sites are close to one another (120 m [394 ft] from center to center), and it seems possible that a substantial pueblo of this era may have been removed, perhaps during construction of the highway. Such a structure would have been likely to have overlapped temporally with LA 111902 (which is not a project site). Likewise, other surface features, from surface pits to rooms, are often partial or absent in this setting, as at LA 37594 and LA 37595. Water line, gas line, and telephone line trenching within and beside the highway right-of-way have also had negative impacts on the archaeological remains, but less than massive grading and earth moving. Modern settlement and development has occurred apace in the valley, with obvious impacts on the archaeology. Just to the north of the main Jackson Lake group of sites, the terrace went from an unoccupied, unmodified area with a series of sites around the edge to a graded, developed trailer court. We observed sites in this area during the second survey but did not record them. Some had been pothunted, and some were probably tested during the San Juan Valley project (Whalley 1980), but they were not recorded in recent times, though Nusbaum probably did record some of them

The East Side Rincon area was selected because it was thought to conform to a locational pattern found for major communities in the valley (Dykeman and Langenfeld 1987:35). We would

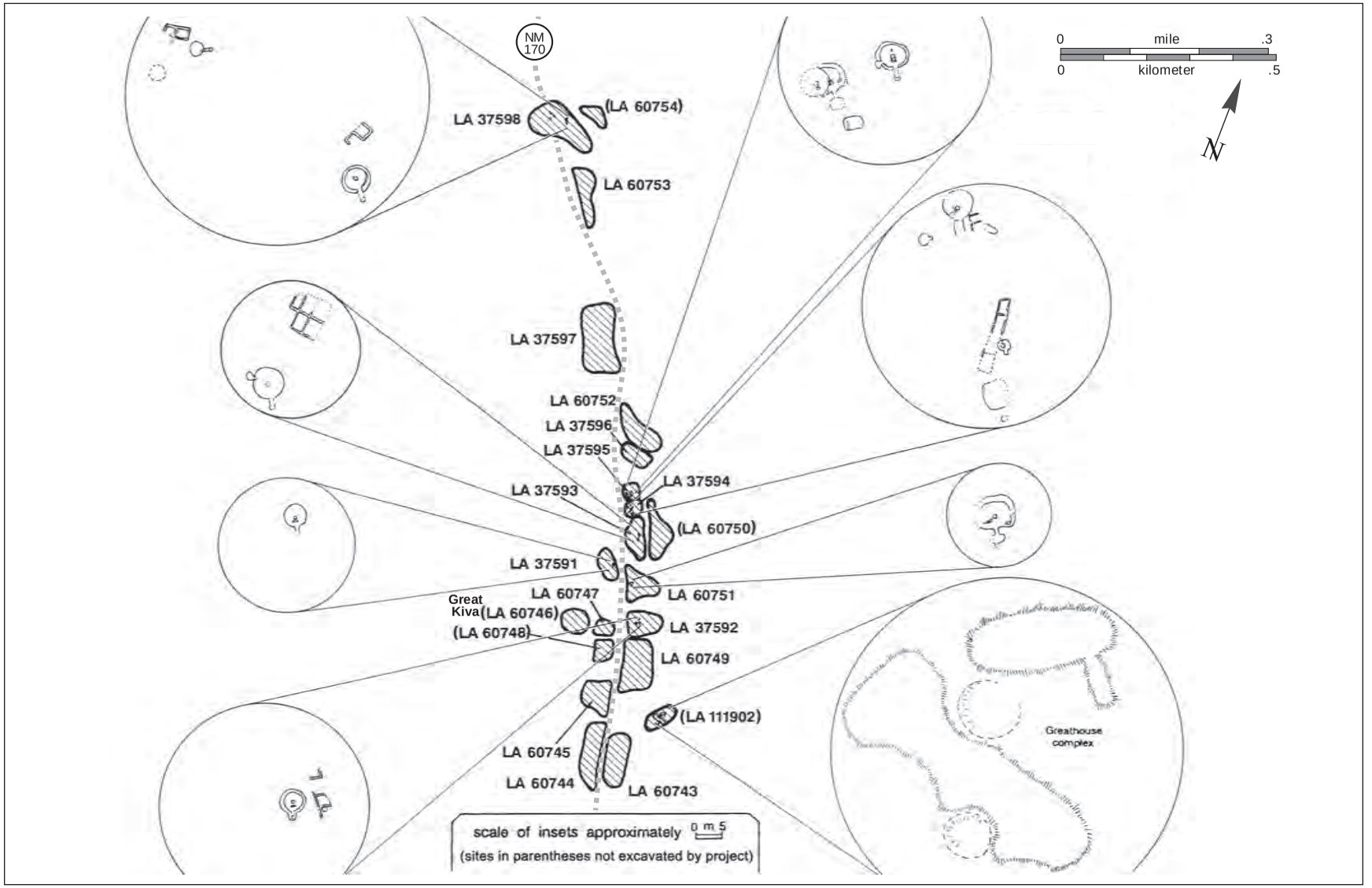


Figure 1.1. Sites reported in the Jackson Lake segment of the La Plata Highway project. Site boundaries show the extent of surface material at these sites; excavation and collection took place only within the proposed and then developed right-of-way. NOTE: *Sites that were recorded but not excavated by this project are in parentheses.*

argue with this assessment. The entrance of the "high energy drainage," Connor Arroyo, is around 1 km (0.6 mi) away and across the river; the requisite wide floodplain is, now at any rate, also across the river. The three large community sites (Morris 39 and 41 and the Holmes Group) used as a basis for the locational pattern are all directly above the entrance of their respective major drainages, with substantial arable land on the same side of the river. While the river is easily crossed for much of the year, at critical planting times it probably was not. Side of the river is likely to have been an important variable in site location, but the presence of major drainages seems to have been more important. Barker Arroyo, the location of Morris 39, is the largest entrant south of Cherry Creek (Morris 1939:50), and McDermott Arroyo drains a huge, open area east of the La Plata. The pattern is perhaps less clear at Morris 41, though it is between two named arroyos, and Morris (1939:85) pointed out the many desirable attributes of the location, including a reliable water source. The East Side Rincon includes an Archaic occupation, a substantial Basketmaker–Pueblo I component, and some smaller Pueblo II–III sites. The smaller, later sites may well be comparable to subsets of the Jackson Lake site complex, but the larger, earlier settlement is unusual. Rather than being similar to the locations of later major community center sites, then, the East Side Rincon location may have been a preferred location for late Basketmaker settlements.

The Jackson Lake Community Sites in Brief

Within the Jackson Lake segment eight sites with little or no architecture and small artifact assemblages have Puebloan artifact assemblages signified primarily by pottery, and confident temporal placement is not possible. These eight small sites, ordered geographically from south (LA 60743) to north (LA 60753), comprise the first group. The other eight sites have more substantial artifactual and architectural data, and are amenable to better chronological placement of components (Fig. 1.2). These sites are ordered by earliest component.

Three sites have clear Basketmaker III components. LA 37594, which contained a sixth-century early Basketmaker III pit structure overlain by eleventh-century rooms, is first, followed by LA 60751, which included a well-dated seventh-century Classic Basketmaker III pit structure and only dispersed tenth- and eleventh-century artifacts. (Figs. 1.1, 1.2). At LA 37595, a classic Basketmaker III structure, preceded a Pueblo II occupation with two

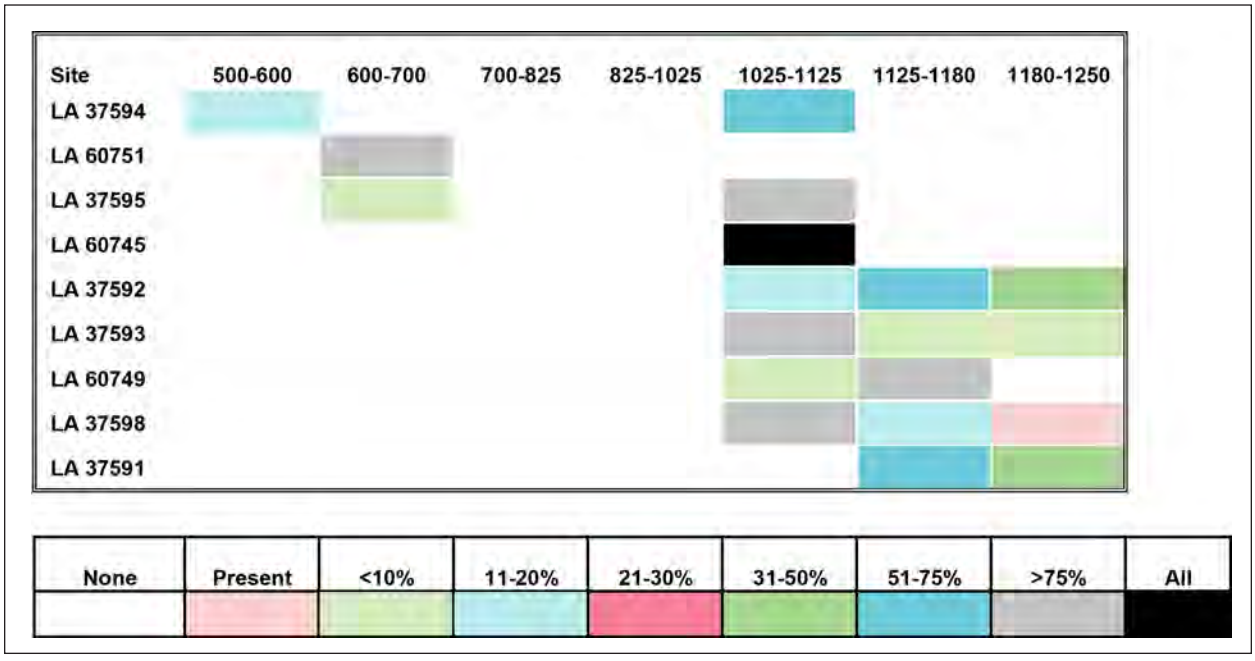


Figure 1.2. Periods of use for the Jackson Lake community sites that had well-dated components.

regular pit structures and a mealing room. Next is a series of sites that span from the early AD 1000s to the late 1100s or early 1200s—the Pueblo II and III periods. Those sites, as well, have been placed in approximate chronological order of their earliest components, though absolute dates are sadly lacking. Once again, these sites have multiple periods of use. Thus, LA 37592, which has components in the Pueblo II, II–III, and III periods, is placed at the beginning of these sites. LA 37593, LA 60749, and LA 37598 all have components late in Pueblo II merging into Pueblo III. The impressive painted pit structure at LA 37598 might argue for its being placed earlier than LA 37593, but it does have clear evidence of a later component as well. By ceramic dating, the site with the latest assemblage and last report position is LA 37591, adjacent to LA 37592 (Tables pf.2, 1.1).

The time spans for the sites within our sample are a good reflection of the occupational history that has emerged for the lower valley. Thus, early occupation in the AD 500s is evident, and a considerably increased presence is dated as "Classic Basketmaker" in the AD 600s. The virtual absence of occupation in Pueblo I and early Pueblo II (AD 700s and 800s) is clear in the timeline figure (Fig. 1.2), and the heavy occupation from AD 1000 to the later 1100s is visible. This figure shows occupation extending into the 1200s based on ceramic chronology. Ceramic type frequencies suggest that post-AD 1200 occupation of the Jackson Lake sites was much reduced. By that time occupation was concentrated in larger sites, which are not present in the highway project sample, but which probably includes nearby LA 111902.

Table 1.1. Jackson Lake sites, counts of late (PIII) ceramic types.

	Mesa Verde Corrugated	McElmo Black-on-white	Mesa Verde Black-on-white	Nava Black-on-white	Total
LA 37591	31	24	53	2	**110**
LA 37592	6	185	76	1	**268**
LA 37593	11	7	–	–	**18**
LA 37594	–	4	–	–	**4**
LA 37598	9	16	4	–	**29**
LA 60749	2	2	–	1	**5**
LA 60751	–	1	1	–	**2**
Total	**59**	**239**	**134**	**4**	**436**

2 LA 60743

Charles A. Hannaford

LA 60743 is a low-density sherd and lithic artifact scatter associated with a small cobble scatter representing the remains of an ephemeral fieldhouse. The site is a component of the prehistoric Jackson Lake community, and the portion of the site within the construction zone is limited to widely scattered surface artifacts. Limited collected sherds suggest a Mid to Late Pueblo II occupation (AD 1000 to 1125), but the small assemblage of recovered artifacts is marginal to the primary architectural element preserved outside of the construction zone.

The site area outside of the project area is on land managed by the NM Department of Game and Fish. The site was recorded by Toll and Hannaford (1997) during the resurvey of the proposed construction zone (Figs. pf.1, 1.1, 2.1).

Archaeological investigations were conducted on March 23 and April 16, 1988, with a labor expenditure of five person days. OAS personnel included Chuck Hannaford (crew chief) assisted by Peter Bullock, Jimmy Fine, Rod North, and Adisa Wilmer.

Environmental Setting

LA 60743 is on the west side of the La Plata Valley bottom (Fig. 1.11). The terrace surface it is situated on is essentially level with a slight east gradient, and the site elevation is 5,428 ft (1,654.5 m). The floodplain of the La Plata River is about 30 m (98 ft) east of the construction zone, and it is currently under cultivation. The base of the Jackson Lake terrace is about 30 m (98 ft) west of the highway. Contemporary vegetation is dominated by saltbush, sage, and greasewood (Fig. 2.2). Cottonwood and Russian olive trees currently line the irrigation ditch along the east edge of the site. Local soils are compact sand and silty clays typical of the water-laid deposits of the terrace geomorphology.

The site occupants benefited from the close proximity of dependable water and arable land still under cultivation today. Riparian resources were concentrated along the nearby floodplain, and lithic material for building and tools was plentiful along the nearby Jackson Lake terrace.

Archaeological Setting

Toll and Hannaford (1997) recorded LA 60743 during resurvey of the proposed highway right-of-way (Fig. 2.1). Site elements included a low-frequency dispersed sherd and lithic artifact scatter associated with a cobble scatter interpreted as the remains of a small masonry structure. The discrete cobble scatter was utilized as the central architectural element for defining the site. However, the north–south extent of the site corresponded with LA 60744 (Chapter 3, Vol. 1-Book 1, this report), to the west, suggesting that these sites were closely related. The full extent of LA 60743 measured 100 by 40 m (328 by 131 ft), an area of 4,000 sq m (43,056 sq ft).

LA 60743 is a spatial component within the concentration of sites forming the prehistoric Jackson Lake community (Fig. 1.20). The site is at the south end of a continuous 1.5 km (0.9 mi) stretch of sites at this locality. LA 60743 and LA 60744, to the west, are the first sites encountered in the community as the highway advances up the valley. Structural sites with Pueblo II–III components are plentiful in the surrounding heavily utilized residential area.

LA 60744, consisting of a poorly preserved

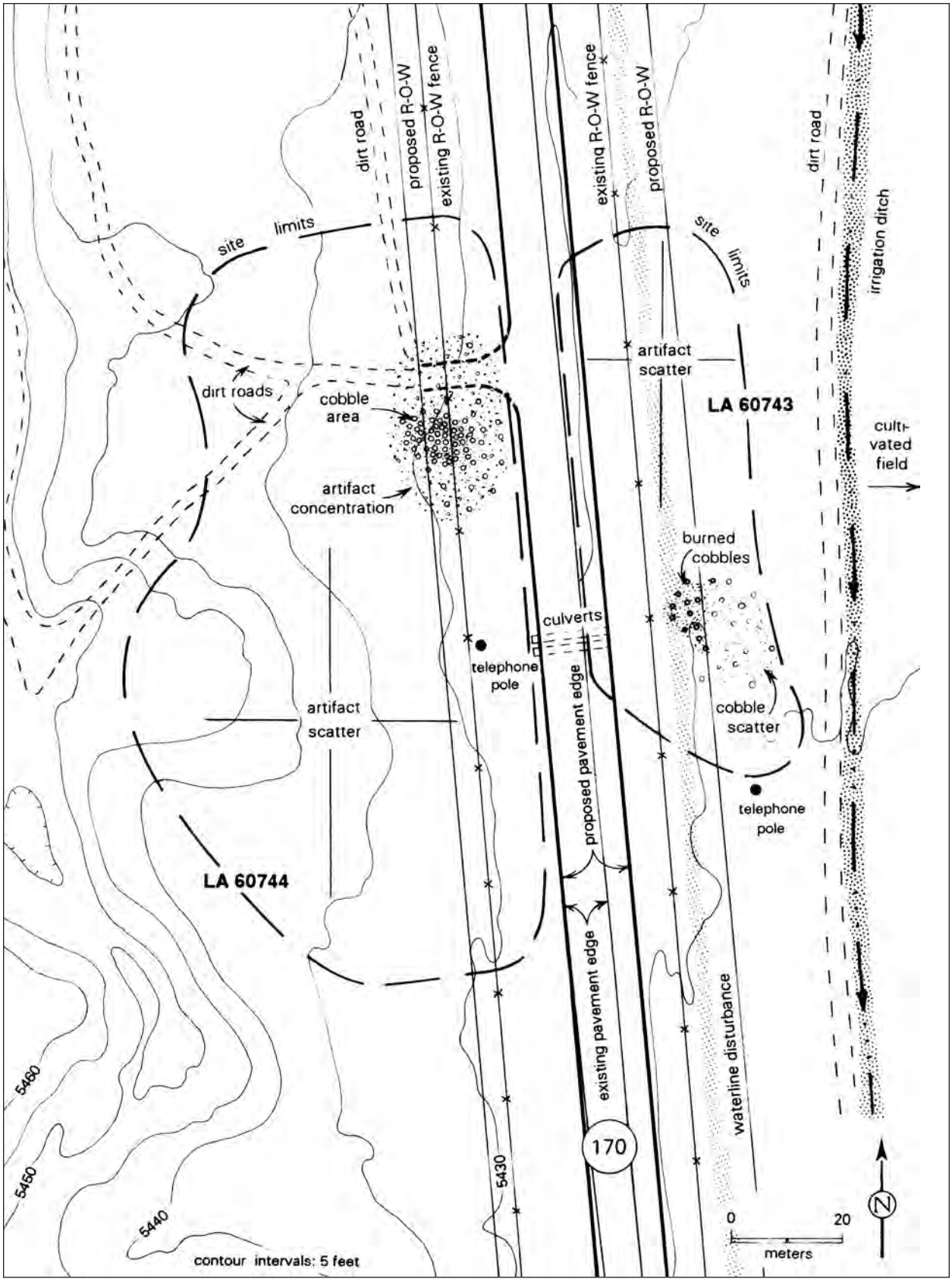


Figure 2.1. LA 60743, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

Figure 2.2. LA 60743, site overview, view northwest, pre-excavation.

cobble fieldhouse with a similar Pueblo II ceramic component, is directly west of NM 170. LA 60743 may be spatial component of this site, which is arbitrarily separated from it by the highway.

LA 60745 (Chapter 4, Vol. 1-Book 1, this report), a structure containing 5 to 10 rooms with an associated pit structure, is west of the highway at the north end of the site. This habitation site exhibits possible Basketmaker III and Pueblo II–III ceramic components.

LA 60749 (Chapter 15, Vol. 1-Book 2, this report), with Pueblo II–III ceramic components, is about 60 m (197 ft) north of LA 60743. Surface indications of four cobble surface structures are adjacent to the highway, and a Pueblo III ephemeral fieldhouse was excavated in the construction zone.

LA 111902 (outside the project right-of-way), one of the largest cobble structures in the Jackson Lake community, is about 60 m (197 ft) northeast of the site. This site has two-story roomblocks, a possible plaza, and several pit structures. The site has at least a Pueblo III ceramic component and was obviously important to surrounding social and ritual activities. Deric Nusbaum (1935) recorded additional sites in the area surrounding LA 111902, but none of his sites could be precisely matched with LA 60743.

Site Condition

The integrity of the low-density sherd and lithic artifact scatter characterizing the portion of LA 60743 within the construction zone had been impacted by the mechanical installation of gas, telephone, and water lines traversing the length of the site (Fig. 2.3). The cobble scatter is preserved outside of the construction zone, and the immediate area surrounding the structure is intact. A dirt maintenance road and an active irrigation ditch transverse the east edge of the site. The area east

of the irrigation ditch is currently cultivated, and the field was not investigated for the presence of cultural material.

Field Methods

Initially, the surface extent of the site was defined by walking transects at 2 m intervals parallel to the right-of-way fence. Artifacts were marked with pinflags, allowing for the delineation of site boundaries and discrete artifact concentrations. All artifacts within the project limits were collected and point-provenienced using a transit and 30 m tape.

A 1 by 3 m trench was judgmentally established along the edge of the construction zone adjacent to the cobble scatter (Fig. 2.3). The purpose of this excavation unit was to examine the subsurface fill near the structure. The trench was excavated by hand in 15 cm arbitrary levels, and all soil was screened through 1/4-inch mesh.

The final search for cultural manifestations entailed the mechanical blading of a 100 by 8 m (328 by 26 ft) area. Mechanical blading was used to surface-strip the construction zone in 10 cm levels to a depth of 30 cm below the surface.

Surface Collection

Nearly 100 artifacts were pinflagged across the entire site surface, and all 25 artifacts within the construction zone were collected (Fig. 2.3). The 19 sherds and 6 lithic artifacts were collected over an area of 100 by 20 m (328 by 65 ft), an area of 2,000 sq m (21,528 sq ft). This represents about half of the total site area, but the spatial integrity of these artifact proveniences is considered very poor because of their consistent location along utility ditches. Artifacts were widely dispersed, and no artifact concentrations were delineated. The collected artifact sample is considered representative of artifacts observed on the site as a whole.

Cobble Scatter

The only visible architectural element consisted of the cobble scatter preserved about 4 m (13 ft) east of the right-of-way (Fig. 2.3). Construction-size cobbles averaging 10 by 10 cm were scattered over a 5 by 5 m area. The small quantity of cobbles suggests the remains of a one-room structure, but wall alignments were not visible. There was no mounding, and the directional orientation of the structure was not evident. Surrounding refuse was sparse, suggesting a short use-life, and oxidized cobbles showed that the structure had burned.

EXCAVATION RESULTS

Extramural Area 1

The site area within the construction zone, designated Extramural Area 1, was defined as a marginal low-density artifact scatter mechanically disturbed by utility installation (Fig. 2.3).

Only a narrow strip of undisturbed subsurface fill extended along the east edge of the right-of-way. The nature of the fill near the cobble scatter was investigated by excavating a 1 by 3 m trench. The edge of the cobble scatter was 4 m (13 ft) to the east. The trench was excavated to a depth of 60 cm below the present surface, and subsurface fill consisted of a single layer of compact fine-grained sandy clay. The natural alluvial sediment contained no evidence of cultural disturbance, and no artifacts were encountered. Several small west–east trending sand lenses exemplified runoff episodes from the Jackson Lake terrace. An auger test in the center of the trench extended to a total depth of 1.60 m below the surface. Sediments changed with depth to fine-grained sand, but no cultural material was noted. The trench demonstrates that subsurface cultural material associated with the cobble structure does not extend into the construction zone.

Mechanical surface stripping to a depth of 30 cm below the surface encountered no subsurface features, cultural staining, or artifacts. The bladed site area was culturally sterile, with only infrequent charcoal flecks noted, and these charcoal flecks were consistently confined to rodent burrows. The blading exposed numerous west-east trending runoff washes filled with fine- to coarse-grained sand. The numerous washes exemplified frequent runoff from the Jackson Lake terrace, but high-energy transport of gravel and cobbles was not encountered.

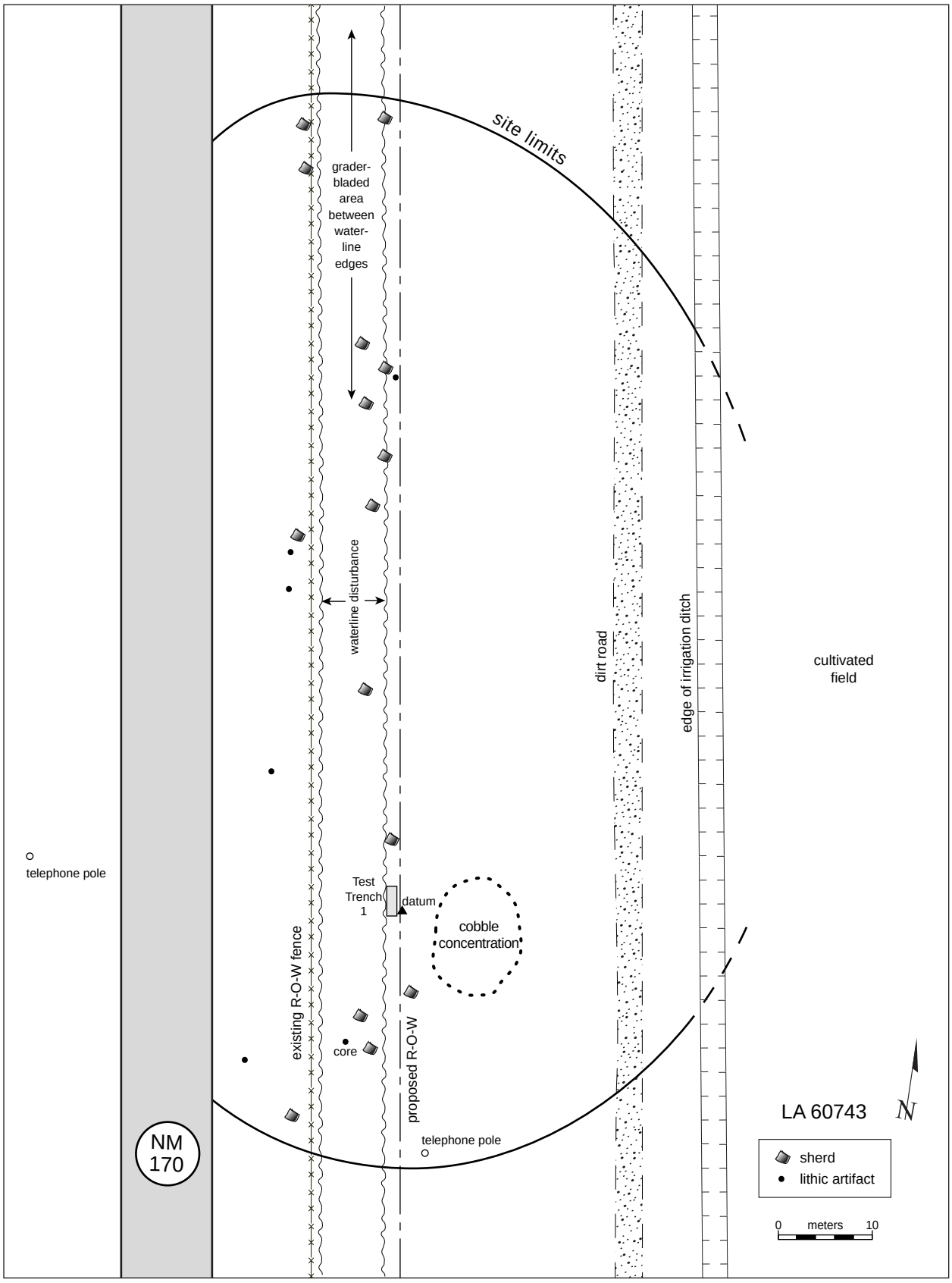


Figure 2.3. LA 60743, site plan.

LA 60743: Material Culture

The assemblage from the portion of this site within the project area is very small. The materials from three contiguous sites—LA 60743, LA 60744, and LA 60745—is presented in Tables 2.1 and 2.2. The material culture of LA 60744, with its far larger assemblage, is further broken down in chapter 3 of this report. Ground stone and faunal material were not recovered from LA 60743.

Ceramic Artifacts

The small assemblage of 19 widely dispersed sherds suggest a mixed Mid to Late Pueblo II ceramic component with a date between AD 1000 and 1150 (Table 2.1). Corrugated gray is the most numerous sherd type, and three Pueblo II corrugated rim sherds were identified. Diagnostic white wares are infrequent; one mineral- and two organic-painted sherds were recorded. The assemblage is composed of jar sherds and a single bowl rim.

Chipped Stone Artifacts

Six chipped stone artifacts were recorded. They were manufactured from siltstone and chert, evenly split between the two materials (Table 2.2). These material types are readily available on the Jackson Lake terrace slopes and the nearby floodplain of the La Plata River. The expedient assemblage is limited to flakes and a single chert core. There is no evidence of formal tool manufacture or use, and none of the debitage exhibits retouched or utilized edges.

LA 60743: Summary

The portion of LA 60743 within the project area is a low-density extramural sherd and lithic artifact scatter marginal to the architectural remains of an estimated one-room fieldhouse. Surface ceramics depict a general Pueblo II (AD 1000 to 1150) ceramic component, and no subsurface cultural material was encountered in the construction zone. The artifact assemblage indicates a restricted range of activities characteristic of a seasonal occupation, and the scanty refuse accumulation supports an occupation of short duration. However, I expect a wider range of site activities would be revealed through investigation of the primary site area.

LA 60743 is arbitrarily separated by the highway from LA 60744, and the sites may be closely related. Architectural remains at both sites are interpreted as seasonally occupied fieldhouses, and ceramics show similar general Pueblo II occupations. The main distinction between the sites is their duration of occupation manifested by refuse accumulation. The moderately sized artifact accumulation at LA 60744 expresses repeated seasonal occupations, while LA 60743 has little surface trash, suggesting an occupation of short duration.

The cobble scatter is an example of the smallest class of structural remains within the site concentration forming the community. Such structures may in part relate to some intrahousehold or intracommunity social division maintaining visible symbols of ownership over valuable agricultural land within the context of the potentially competitive social setting (see site summary for LA 60744). The cultural material preserved at LA 60743 should contribute important information toward understanding site content related to a relatively discrete short-term occupation, and the role of this class of structures within the settlement system.

Table 2.1. LA 60743, 60744, and LA 60745, ceramic type, vessel form, and paint type; counts and percents.

	LA 60743		LA 60744		LA 60745		Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
Ceramic Type								
Pueblo II corrugated	3	15.8%	36	4.4%	–	–	**39**	**4.1%**
Pueblo II–III corrugated	–	–	1	0.1%	2	1.9%	**3**	**0.3%**
Plain gray	1	5.3%	103	12.5%	11	10.5%	**115**	**12.1%**
Corrugated gray	12	63.2%	440	53.2%	47	44.8%	**499**	**52.5%**
Kana'a-style black-on-white	–	–	1	0.1%	–	–	**1**	**0.1%**
Red Mesa–style black-on-white	–	–	4	0.5%	–	–	**4**	**0.4%**
Pueblo II black-on-white	–	–	48	5.8%	2	1.9%	**50**	**5.3%**
Dogoszhi-style black-on-white	1	5.3%	6	0.7%	1	1.0%	**8**	**0.8%**
Early Pueblo III black-on-white	–	–	4	0.5%	–	–	**4**	**0.4%**
Pueblo I–II black-on-white	–	–	1	0.1%	–	–	**1**	**0.1%**
Pueblo II–III black-on-white	2	10.5%	16	1.9%	16	15.2%	**34**	**3.6%**
Painted black-on-white	–	–	1	0.1%	–	–	**1**	**0.1%**
Polished white	–	–	107	12.9%	18	17.1%	**125**	**13.1%**
Polished black-on-white	–	–	57	6.9%	8	7.6%	**65**	**6.8%**
Squiggle hatchure black-on-white	–	–	1	0.1%	–	–	**1**	**0.1%**
Mesa Verde plain red	–	–	1	0.1%	–	–	**1**	**0.1%**
Total	**19**	**100.0%**	**827**	**100.0%**	**105**	**100.0%**	**951**	**100.0%**
Vessel Form								
Indeterminate	–	–	3	0.4%	1	1.0%	**4**	**0.4%**
Bowl rim	1	5.3%	18	2.2%	2	1.9%	**21**	**2.2%**
Bowl body	–	–	82	9.9%	18	17.1%	**100**	**10.5%**
Olla rim	–	–	3	0.4%	–	–	**3**	**0.3%**
Cooking, storage rim	3	15.8%	41	5.0%	2	1.9%	**46**	**4.8%**
Pitcher	–	–	1	0.1%	–	–	**1**	**0.1%**
Necked jar body	4	21.1%	85	10.3%	9	8.6%	**98**	**10.3%**
Canteen	–	–	1	0.1%	–	–	**1**	**0.1%**
Jar body	11	57.9%	591	71.5%	73	69.5%	**675**	**71.0%**
Ladle handle	–	–	2	0.2%	–	–	**2**	**0.2%**
Total	**19**	**100.0%**	**827**	**100.0%**	**105**	**100.0%**	**951**	**100.0%**
Paint Type								
None	0	0.0%	109	44.7%	18	40.9%	**127**	**43.6%**
Organic	2	66.7%	39	16.0%	2	4.5%	**43**	**14.8%**
Mineral	1	33.3%	96	39.3%	24	54.5%	**121**	**41.6%**
Total	**3**	**100.0%**	**244**	**100.0%**	**44**	**100.0%**	**291**	**100.0%**

Table 2.2. LA 60743, LA 60744, and LA 60745, lithic artifact and material type; counts and percents.

	LA 60743		LA 60744		LA 60745		Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
Artifact Type								
Debitage	5	83.3%	374	74.5%	34	82.9%	**413**	**75.2%**
Core	1	16.7%	4	0.8%	2	4.9%	**7**	**1.3%**
Uniface	–	–	1	0.2%	–	–	**1**	**0.2%**
Retouched/utilized debitage	–	–	105	20.9%	5	12.2%	**110**	**20.0%**
Retouched/utilized debitage	–	–	7	1.4%	–	–	**7**	**1.3%**
Graver	–	–	1	0.2%	–	–	**1**	**0.2%**
Notch	–	–	7	1.4%	–	–	**7**	**1.3%**
Hammerstone	–	–	3	0.6%	–	–	**3**	**0.5%**
Total	**6**	**100.0%**	**502**	**100.0%**	**41**	**100.0%**	**549**	**100.0%**
Material Type								
Chert	3	50.0%	196	39.0%	18	43.9%	**217**	**39.5%**
Chalcedony	–	–	6	1.2%	1	2.4%	**7**	**1.3%**
Silicified wood	–	–	19	3.8%	1	2.4%	**20**	**3.6%**
Quartzite	–	–	25	5.0%	2	4.9%	**27**	**4.9%**
Quartzitic sandstone	–	–	30	6.0%	1	2.4%	**31**	**5.6%**
Igneous	–	–	1	0.2%	–	–	**1**	**0.2%**
Rhyolite	–	–	3	0.6%	–	–	**3**	**0.5%**
Sandstone	–	–	1	0.2%	–	–	**1**	**0.2%**
Siltstone	3	50.0%	202	40.2%	18	43.9%	**223**	**40.6%**
Other	–	–	19	3.8%	–	–	**19**	**3.5%**
Total	**6**	**100.0%**	**502**	**100.0%**	**41**	**100.0%**	**549**	**100.0%**

3 LA 60744 (Gas Valve Site)

Charles A. Hannaford

LA 60744, the Gas Valve Site, is a component of the concentration of sites forming the prehistoric Jackson Lake community. The site is on the west side of the highway and at the south end of the prehistoric community (Figs. pf.1, 1.1, 3.1). The portion of the site within the construction zone was a sherd and lithic artifact scatter of moderate density associated with a poorly preserved cobble surface structure. Archaeological investigations delineated a single wall remnant of the surface structure and an extramural heating pit. The site is interpreted as the poorly preserved remains of a seasonally occupied field house. The integrity of the investigated portion of the site was acutely altered by the previous installation of a high-pressure gas valve [NOTE: intentionally omitted from site-plan renderings]. Recovered ceramics suggest a mixed Pueblo II ceramic component dating from AD 1000 to 1150.

The site area outside of the right-of-way is on land managed by the NM Department of Game and Fish. Excavations were conducted from March 22 to April 6, 1988, with a labor expenditure of 40 person days. OAS archaeologists included C. Hannaford (crew chief) assisted at various times by Peter Bullock, Jimmy Fine, Susan Moga, Rod North, and Adisa Wilmer.

Environmental Setting

The site is on the west side of the valley bottom, 100 m (328 ft) east of the steep Jackson Lake terrace. Abundant river cobbles cover the terrace slope, and both cobbles and gravel have been transported by runoff east to the highway. The immediate site area is nearly level, with a southeast gradient, and the site elevation is 15,430 to 5,450 ft (1,655 to 1,661 m). The local alluvial soils consist of clay loams and sands with a fairly high gravel and cobble content. Contemporary vegetation includes cottonwood, elm, tamarisk, sage, greasewood, saltbush, and various grasses (Fig. 3.2). The floodplain of the La Plata Valley is about 30 m (98 ft) east and currently under cultivation. The prehistoric inhabitants benefited from the close proximity of water and arable land, along with lithic, faunal, and floral resources concentrated in the valley bottom and nearby terraces.

Archaeological Setting

Toll and Hannaford (1997) recorded the site during resurvey of the proposed highway right-of-way (Fig. 3.1). The surface appearance consisted of a sherd and lithic artifact scatter covering a 135 by 75 m (443 by 246 ft) area and associated with two cobble scatters. A small 6 m diameter cobble scatter in the construction zone was recorded as a possible architectural element. The other diffuse cobble scatter along the western terrace slope contained burned cobbles, but a definite function was not determined. Slightly increased artifact frequencies were noted around the smaller cobble scatter in the right-of-way, but no other artifact concentrations were noted. Surface ceramics suggested a Pueblo II–III ceramic component.

LA 60744 is located within the prehistoric Jackson Lake community (Fig. 1.20). The community is conspicuous for high residential use, and the site is bordered on both the north and east by adjoining sites containing architectural elements. To the north, the site merges with LA 60745 (chapter 4, this report), which contains a five- to 10-room surface structure with an associated pit structure,

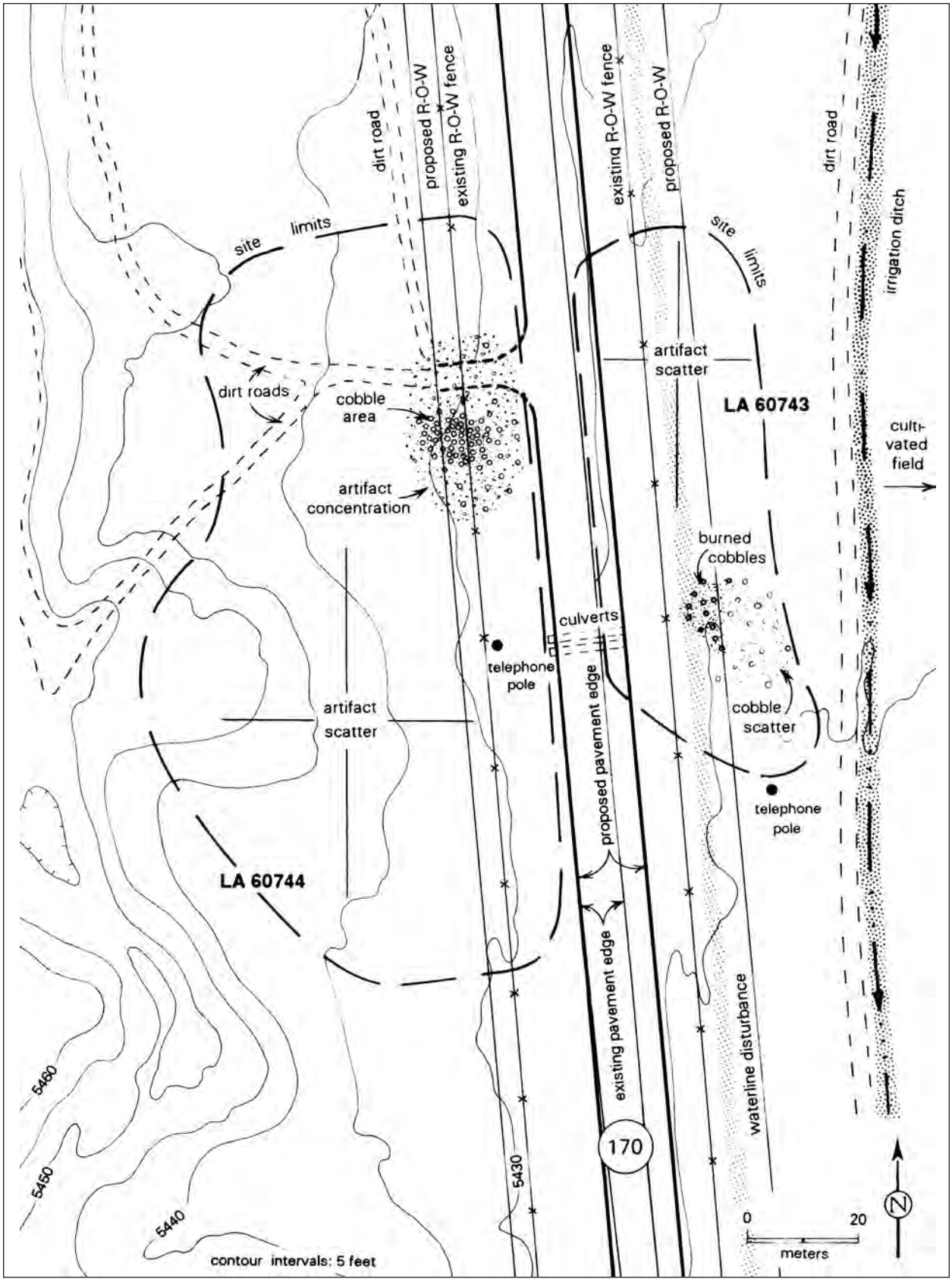


Figure 3.1. LA 60744, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

Figure 3.2. LA 60744, site overview, view north, pre-excavation.

and possible Basketmaker III and Pueblo II–III ceramic components. LA 60743 (chapter 2, this report), containing a one-room cobble structure and a similar Pueblo II–III ceramic component, is directly downslope to the east. These sites are arbitrarily partitioned by the highway and may represent related spatial components of the same site.

Scattered artifacts from the site extend west to the base of the Jackson Lake terrace, but no sites were observed on the terrace top. About 2 km (1.2 mi) separates LA 60744 from LA 37590, the next site south along the highway. LA 37590 has been included in the Cottonwood Arroyo Community (Toll and Hannaford 2000). In addition to other nearby sites bordering the highway in the prehistoric community, LA 60744 is within 200 m (656 ft) of both LA 60746 and LA 111902, the largest cobble structure in the Jackson Lake community, neither of which are within the right-of-way for this project. Deric Nusbaum recorded numerous cobble structures around this large site, but no site matched the location of LA 60744. However, additional unrecorded cultural manifestations are expected east in the nearby floodplain. Today much of this floodplain is obscured by the cultivated fields of the Jackson Lake Wildlife Area.

Site Condition

The integrity of the portion of the site within the construction zone was modified by several mechanical sources, including the close proximity of the highway and resulting long-term maintenance activities. Most severely affecting the site however, was the installation of a high-pressure gas line, gas valve, and maintenance road. Our investigations revealed that the integrity of the small cobble scatter and surrounding site area in the construction zone had been completely altered by this installation. Only a single wall remnant was intact, and surrounding fill was thoroughly mixed. Glass shards and tar specks were found throughout the subsurface cultural fill. The main site area appears to have been primarily churned rather than scraped

away, so that cultural material should be somewhat representative of the original site content. Rodent burrows were abundant in the investigated portion of the site. The extreme site disturbance had probably made the soil attractive to rodents.

The site area extending west to the terrace base is intact but has suffered from sheet runoff. An irrigation ditch paralleling the terrace base has curbed much of this runoff, but high-energy runoff episodes with gravels and cobbles are apparent across the site. The irrigation ditch is commonly cleaned in the spring by burning vegetation. This annual procedure is a potential source of burned cobbles and charcoal, and a significant source of postabandonment contamination. Researchers should be aware of this practice, which has probably been performed seasonally along the numerous irrigation ditches in the La Plata Valley for over a century.

Field Methods

The site datum was established at 57N/77E with an arbitrary elevation of 0.00 m (Fig. 3.3). The north–south baseline was aligned with the old easement fence and does not designate magnetic or true north. The project right-of-way was originally established incorrectly along the 65E grid line and was subsequently moved east to the 69E grid line. Artifacts collected from units west of the 69E line were actually outside the bounds of the construction zone. Surface artifacts were collected using 3 by 3 m grids provenienced from the southwest corner, and nine isolated artifacts west of the gas valve were assigned point-provenience numbers.

The cobble scatter was the focus of archaeological investigations in the construction zone. Subsurface investigations began with the excavation of two grid-oriented 1 by 3 m hand trenches (42/74E and 45/74E) positioned through the center of the cobble scatter. These linked trenches were excavated to sterile. The trenches revealed that both the cobble scatter and subsurface cultural fill were shallow and very mixed. A series of 27 grid north–oriented, 1 by 3 m hand-excavated units were surface-stripped to define the structure (Fig. 3.3). A single wall remnant was delineated, along with an extramural feature (Fig. 3.3). However, the surface-stripping strategy verified that the structure was not intact and surrounding fill was mixed. Three miscellaneous exploratory hand units (29/76E, 30/76E, and 54/77E) judgmentally positioned apart from the structure area encountered no buried features. All units were excavated manually, and the fill was screened through 1/4-inch wire-mesh screens.

The search for subsurface cultural material continued with the excavation of two backhoe trenches. Backhoe Trench 1 was judgmentally placed at the south end of the site, along the 30E grid line. The east–west-oriented trench was 8 m (26 ft) long and dug to a depth of 1 m below the surface. Backhoe Trench 2 was judgmentally placed at the north end of the site along the 75N grid line. The east–west trench was 10 m (33 ft) long and dug to a depth of 1 m below the surface. No buried features were encountered in the trenches.

Archaeological investigations concluded with the mechanical blading of the site area east of the easement fence between the 30N to 51N grid lines, between the fence and the existing pavement edge. This area was bladed in 10 cm levels to sterile alluvial sand, and no buried features were exposed.

Stratigraphy

The miscellaneous hand units augmented by the two backhoe trenches revealed two primary stratigraphic units across the site. These stratigraphic units are characterized by an initial shallow cultural layer associated with the disturbed Anasazi occupation, followed by a thick layer of natural alluvial sand.

Layer 1 is a loose brown (10YR 5/3) alluvial sandy clay with abundant gravel content extending from the surface to a depth of 15 to 25 cm. Layer 1 provides a soil matrix for cultural material in the form of sherds, flaked lithic materials, construction cobbles, charcoal flecks, and some ash staining. The presence of glass and numerous tiny tar globules throughout the layer in all excavation units confirmed extreme postabandonment mixing.

Layer 2 is a massive homogenous layer of natural alluvial fine- to medium-grained compact sand (10YR 6/3) underlying the cultural layer. The layer extended to a depth of at least 1.2 m below the surface and had almost no gravel or cobble content. Cultural material was limited to charcoal flecks and infrequent artifacts confined to rodent burrows. The boundary of the units is sharply defined by both texture and the absence of cultural material.

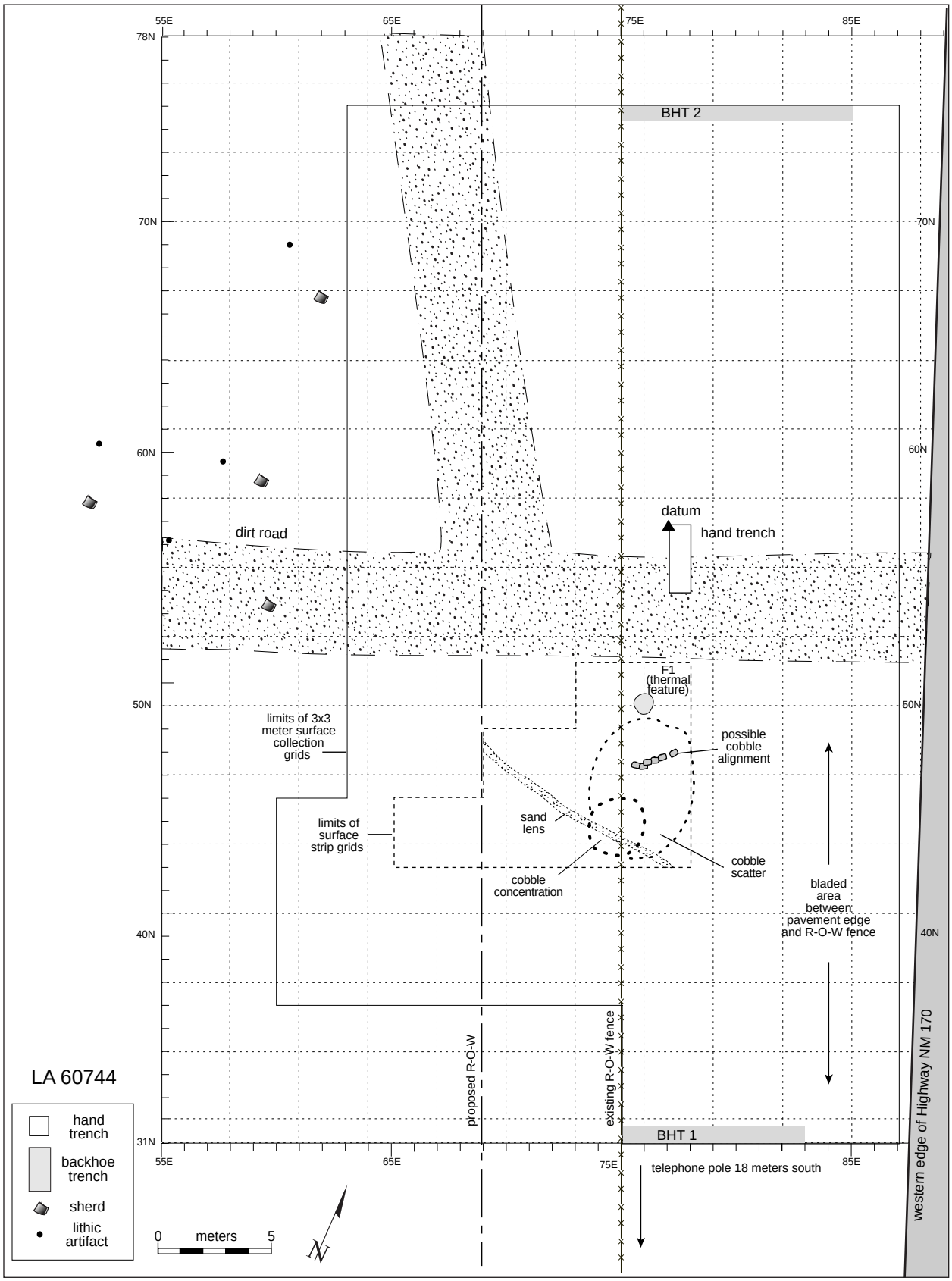


Figure 3.3. LA 60744, site plan.

EXCAVATION RESULTS

Extramural Area 1

LA 60744 as a whole measured 135 by 75 m (443 by 246 ft), an area of 10,125 sq m (108,985 sq ft). The portion of the site within the construction zone was arbitrarily designated Extramural Area 1. This was a linear strip along the eastern edge of the site, and archaeological investigations focused on the small cobble scatter, which was the only visible surface feature.

Surface Collection

The surface collection covered a 45 by 27 m (148 by 89 ft) area. Four rows of 3 by 3 m grids were intensively collected on each side of the existing right-of-way fence, and a 1,035 sq m (11,141 sq ft) area was investigated. A total of 115 grids were examined, but only 49 contained artifacts. Artifact frequencies ranged from 1 to 18 in these grids, and 90 percent (44) of the grids contained five or fewer artifacts (Figs. 3.4a, 3.4b). The collected assemblage totaled 145 artifacts, including 97 sherds and 48 chipped stone artifacts. An additional four sherds and five chipped stone artifacts west of the gas valve were collected and arbitrarily assigned point proveniences. These nine artifacts and the 145 specimens from the grid units comprise the 154 artifact surface collection (Tables 3.1–3.3).

Surface artifacts were diffusely scattered across the site. Grid 42/69E contained the highest number of artifacts (18), but no subsurface depth was encountered in this location. Artifacts collected from the six grids directly overlying the cobble scatter and nearby extramural feature totaled 13 sherds and 9 chipped stone artifacts. This small assemblage demonstrates the dispersed surface appearance of artifacts directly associated with the cobble scatter. The surface collection is considered mixed and not indicative of intact distributions.

Disturbed Fill

The bulk of the artifact assemblage was collected during the exploratory surface stripping of 21 contiguous hand units, covering an 81 sq m (872 sq ft) area (Fig. 3.3). Artifacts from three additional miscellaneous exploratory units are included with this assemblage. The fill is equivalent to Layer 1, associated with the Anasazi occupation, but designated disturbed fill because of the extreme mixing. Excavation units were commonly dug to a depth of 15 to 20 cm below the surface. Every unit encountered extensive mechanical disturbance, and glass and other recent materials were thoroughly mixed with the prehistoric artifacts. The collected assemblage totaled 1,047 artifacts, including 633 sherds, 414 chipped stone artifacts, and 6 animal bones. Since finer-grained proveniences are not considered intact, the interpretative value of the assemblage must be evaluated on the site level.

Cultural Layer

Slightly increased ash and charcoal staining was noted during the surface stripping of six units (45N/75–77E and 48N/75–77E), encompassing the surviving wall remnant and extramural feature. This fill was designated the cultural layer to isolate artifacts possibly associated with the structure remnant and extramural feature. The discrete assemblage included 93 sherds and 35 lithic artifacts (Tables 3.1–3.3). However, with the exception of the somewhat increased charcoal staining, the units are identical with the other disturbed surface-stripped units. The assemblage exemplifies distributions similar to those of both the surface and disturbed fill contexts, but the fine-grained cultural layer is not considered intact.

Cobble Scatter

The cobble scatter was the only visible surface feature in the construction zone. Construction-sized cobbles measuring 10 by 10 cm and 10 by 15 cm were concentrated in a 6 by 6 m area bounded by the 42N to 48N lines, and the 72E to 78E lines. The surface cobble scatter was composed of about 75 cobbles, and two cobbles were oxidized. There were no visible wall alignments, and the cobbles were not mounded.

An additional 25 jumbled subsurface cobbles were encountered during surface stripping, along with a wall foundation remnant. The construction cobbles from the upper walls did not extend below 10 to 15 cm below the surface and were thoroughly mixed with recent debris.

A small section of wall foundation is all that survives of the structure. The remaining 2 m long section consists of an alignment of six cobbles, each measuring about 30 by 20 by 15 cm; the segment in-

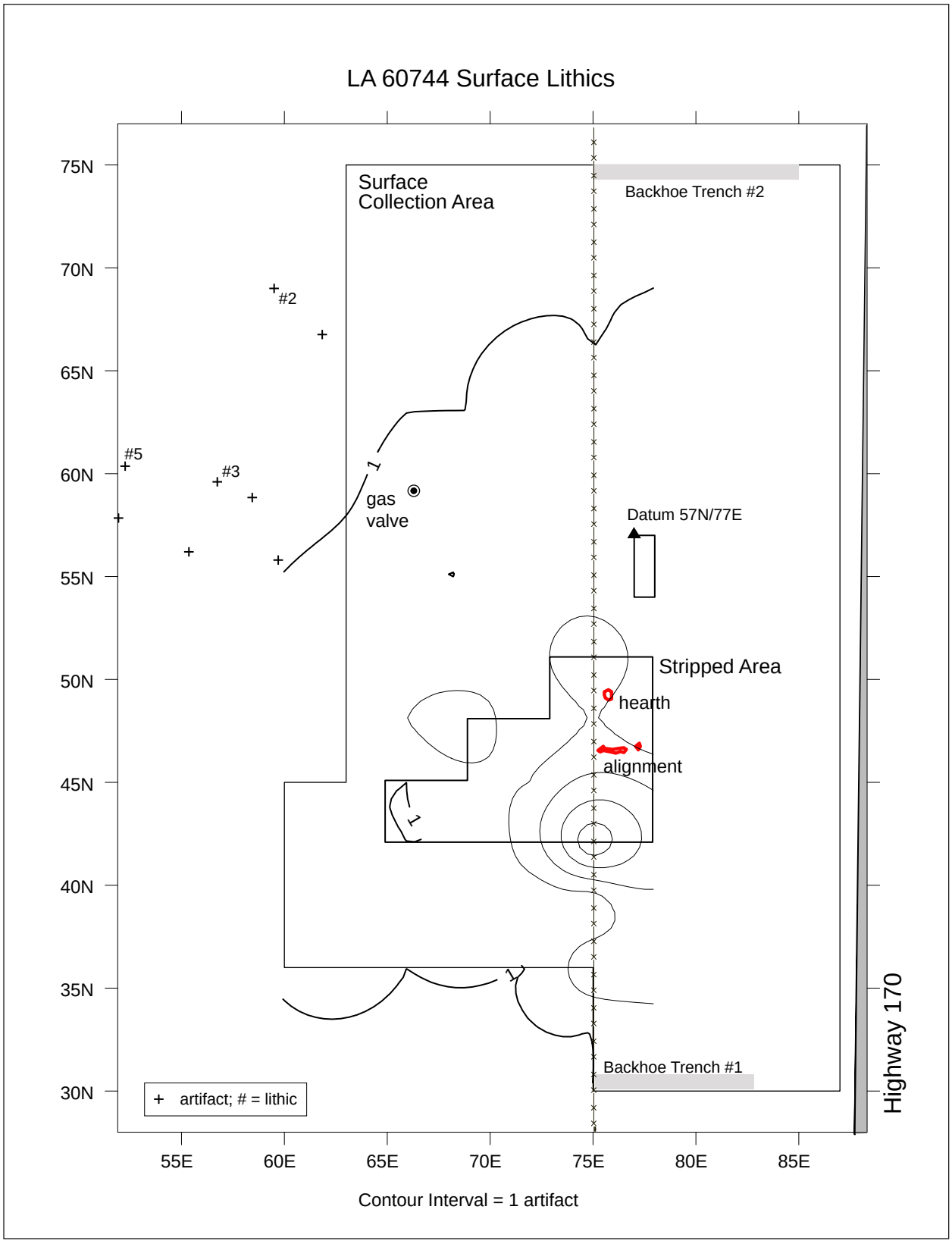


Figure 3.4a. LA 60744, surface collection area, distribution and density, lithics.

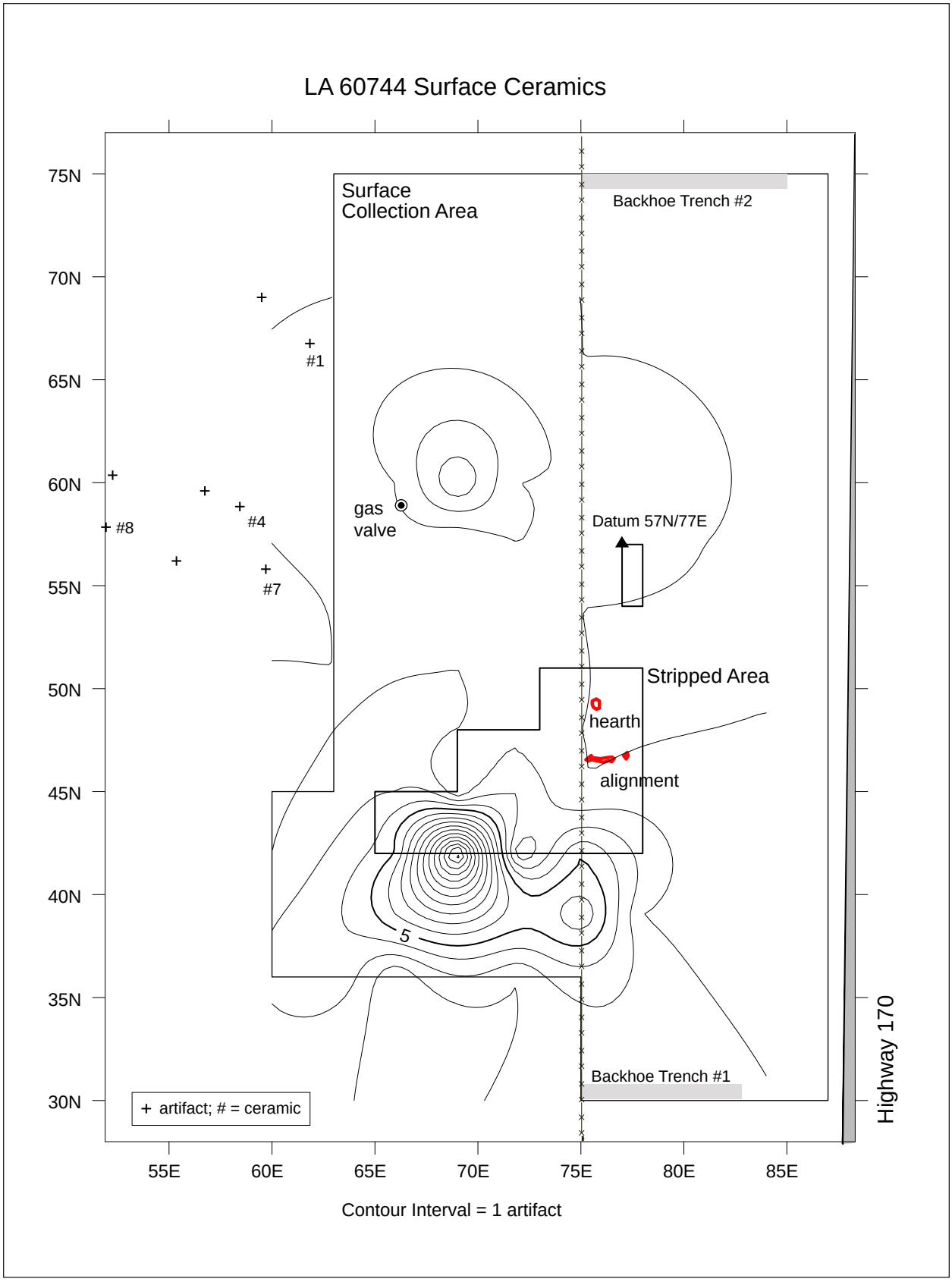


Figure 3.4b. LA 60744, surface collection area, distribution and density, ceramics.

Table 3.1. LA 60744, ceramic and paint type by provenience; counts and percents.

	Surface		Surface Stripping		Disturbed Fill		Cultural Layer		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Ceramic Type										
Pueblo II corrugated	4	4.0%	27	5.8%	4	2.3%	1	1.1%	**36**	**4.4%**
Pueblo II–III corrugated	–	–	1	0.2%	–	–	–	–	**1**	**0.1%**
Plain gray	10	9.9%	51	11.0%	29	17.0%	13	14.0%	**103**	**12.5%**
Corrugated gray	42	41.6%	242	52.4%	97	56.7%	59	63.4%	**440**	**53.2%**
Kana'a-style black-on-white	–	–	1	0.2%	–	–	–	–	**1**	**0.1%**
Red Mesa–style black-on-white	–	–	4	0.9%	–	–	–	–	**4**	**0.5%**
Pueblo II black-on-white	9	8.9%	22	4.8%	17	9.9%	–	–	**48**	**5.8%**
Dogoszhi-style black-on-white	–	–	4	0.9%	1	0.6%	1	1.1%	**6**	**0.7%**
Early Pueblo III black-on-white	–	–	3	0.6%	–	–	1	1.1%	**4**	**0.5%**
Pueblo I–II black-on-white	1	1.0%	–	–	–	–	–	–	**1**	**0.1%**
Pueblo II–III black-on-white	5	5.0%	6	1.3%	1	0.6%	4	4.3%	**16**	**1.9%**
Painted black-on-white	1	1.0%	–	–	–	–	–	–	**1**	**0.1%**
Polished white	20	19.8%	61	13.2%	17	9.9%	9	9.7%	**107**	**12.9%**
Polished black-on-white	9	8.9%	39	8.4%	4	2.3%	5	5.4%	**57**	**6.9%**
Squiggle hatchure black-on-white	–	–	–	–	1	0.6%	–	–	**1**	**0.1%**
Mesa Verde plain red	–	–	1	0.2%	–	–	–	–	**1**	**0.1%**
Total	**101**	**100.0%**	**462**	**100.0%**	**171**	**100.0%**	**93**	**100.0%**	**827**	**100.0%**
Paint Type										
None	21	46.7%	62	44.9%	16	39.0%	10	50.0%	**109**	**44.7%**
Organic	6	13.3%	23	16.7%	3	7.3%	7	35.0%	**39**	**16.0%**
Mineral	18	40.0%	53	38.4%	22	53.7%	3	15.0%	**96**	**39.3%**
Total	**45**	**100.0%**	**138**	**100.0%**	**41**	**100.0%**	**20**	**100.0%**	**244**	**100.0%**

Table 3.2. LA 60744, ceramic form by provenience and ware; counts and percents.

	Surface		Surface Stripping		Disturbed Fill		Cultural Level		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Gray Ware										
Indeterminate	–	–	–	–	–	–	1	1.4%	**1**	**0.2%**
Olla rim	–	–	1	0.3%	–	–	–	–	**1**	**0.2%**
Cooking, storage rim	7	12.5%	15	4.7%	12	9.2%	3	4.1%	**37**	**6.4%**
Necked jar body	3	5.4%	40	12.5%	12	9.2%	14	19.2%	**69**	**11.9%**
Canteen	–	–	–	–	1	0.8%	–	–	**1**	**0.2%**
Jar body	46	82.1%	265	82.6%	105	80.8%	55	75.3%	**471**	**81.2%**
Gray ware total	**56**	**100.0%**	**321**	**100.0%**	**130**	**100.0%**	**73**	**100.0%**	**580**	**100.0%**
White Ware										
Indeterminate	–	–	2	1.4%	–	–	–	–	**2**	**0.8%**
Bowl rim	2	4.4%	10	7.1%	2	4.9%	4	20.0%	**18**	**7.3%**
Bowl body	12	26.7%	50	35.7%	17	41.5%	2	10.0%	**81**	**32.9%**
Olla rim	–	–	2	1.4%	–	–	–	–	**2**	**0.8%**
Cooking, storage rim	1	2.2%	3	2.1%	–	–	–	–	**4**	**1.6%**
Pitcher	–	–	1	0.7%	–	–	–	–	**1**	**0.4%**
Necked jar body	4	8.9%	9	6.4%	1	2.4%	2	10.0%	**16**	**6.5%**
Jar body	26	57.8%	62	44.3%	21	51.2%	11	55.0%	**120**	**48.8%**
Ladle handle	–	–	1	0.7%	–	–	1	5.0%	**2**	**0.8%**
White ware total	**45**	**100.0%**	**140**	**100.0%**	**41**	**100.0%**	**20**	**100.0%**	**246**	**100.0%**
Red ware bowl body	–	–	1	100.0%	–	–	–	–	**1**	**100.0%**
Total	101	**100.0%**	**462**	**100.0%**	**171**	**100.0%**	**93**	**100.0%**	**827**	**100.0%**

Table 3.3. LA 60744, chipped stone artifact and material type by provenience; counts and percents.

	Surface		Surface Stripping		Disturbed Fill		Cultural Layer		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Artifact Type										
Debitage	40	75.5%	226	74.8%	81	72.3%	27	77.1%	**374**	**74.5%**
Core	1	1.9%	1	0.3%	2	1.8%	–	–	**4**	**0.8%**
Uniface	–	–	–	–	1	0.9%	–	–	**1**	**0.2%**
Retouched, utilized debitage	10	18.9%	69	22.8%	19	17.0%	7	20.0%	**105**	**20.9%**
Retouched, utilized core	–	–	4	1.3%	2	1.8%	1	2.9%	**7**	**1.4%**
Graver	–	–	–	–	1	0.9%	–	–	**1**	**0.2%**
Notch	–	–	2	0.7%	5	4.5%	–	–	**7**	**1.4%**
Hammerstone flake	2	3.8%	–	–	1	0.9%	–	–	**3**	**0.6%**
Artifact type total	**53**	**100.0%**	**302**	**100.0%**	**112**	**100.0%**	**35**	**100.0%**	**502**	**100.0%**
Material Type										
Chert	17	32.1%	114	37.7%	51	45.5%	14	40.0%	**196**	**39.0%**
Chalcedony	–	–	3	1.0%	2	1.8%	1	2.9%	**6**	**1.2%**
Silicified wood	1	1.9%	12	4.0%	6	5.4%	–	–	**19**	**3.8%**
Quartzite	6	11.3%	14	4.6%	5	4.5%	–	–	**25**	**5.0%**
Quartzitic sandstone	1	1.9%	25	8.3%	3	2.7%	1	2.9%	**30**	**6.0%**
Igneous	–	–	1	0.3%	–	–	–	–	**1**	**0.2%**
Rhyolite	1	1.9%	2	0.7%	–	–	–	–	**3**	**0.6%**
Sandstone	–	–	–	–	–	–	1	2.9%	**1**	**0.2%**
Siltstone	27	50.9%	131	43.4%	26	23.2%	18	51.4%	**202**	**40.2%**
Other	–	–	–	–	19	17.0%	–	–	**19**	**3.8%**
Material type total	**53**	**100.0%**	**302**	**100.0%**	**112**	**100.0%**	**35**	**100.0%**	**502**	**100.0%**

cludes a 45 cm gap (Figs. 3.3, 3.5). These large cobbles represent the bottom foundation coursing, but none of the upper wall courses has survived. The top of the foundation cobbles was at a depth of 15 to 19 cm below the present ground surface, and the bases were set in the sandy alluvial sediment layer 30 cm below the surface. The cobbles had apparently been dug about 10 cm into the natural sandy sediment, but an associated foundation trench was not discerned. No evidence of a floor was detected, and no other architectural elements have survived. The low frequency of about 100 remaining construction cobbles argues for a small-sized architectural element, probably a one- or two-room structure. A botanical sample from charcoal-stained soil in the vicinity of the wall segment contained three carbonized goosefoot seeds, greasewood charcoal, and hedgehog cactus (see "Botanical Remains"). A second botanical sample from the south edge of the site contained no economic plant remains.

Over 90 percent of all the artifacts from the cobble area were recovered from the top 10 cm of fill. The majority of sherds and lithics was in the mixed upper layer or on the surface, and less than 10 percent of either category was recovered from somewhat less disturbed contexts (Tables 3.4, 3.5).

Heating Pit (Feature 1)

An oxidized heating pit was uncovered during surface stripping of grid 48N/76E (Fig. 3.3). The heating pit, 2.25 m (7.4 ft) north of the wall alignment, was exposed at a depth of 18 cm below the surface. The feature is level with the tops of the nearby wall foundation cobbles, but there was no evidence that the feature was associated with a room interior. The heating pit is interpreted as an associated extramural feature located north of the structure. The prehistoric use-surface was probably the Layer 1 contact with stratigraphic Layer 2 at an average depth of 15 cm below the present ground surface. The heating pit is oval, measuring 50 cm by 32 by 2 cm deep. The feature was dug slightly into the sandy alluvial sediment characterizing Layer 2. The thin layer of lightly stained sandy fill was essentially undifferentiated from the surrounding surface-stripped soil and was probably not related

Figure 3.5. LA 60744, cobble wall alignment, view west.

with feature use. No artifacts were associated with the feature. The unlined pit had a 2 cm thick oxidized rind, demonstrating heating, but the feature lacked the formal characteristics of a carefully constructed hearth or fire pit. The informal heating pit had the appearance of a secondary heating facility, but a primary hearth was not detected. An archaeomagnetic sample collected from the oxidized rind was too weak for measurement.

LA 60744: Material Culture

The recovered artifact assemblage includes 827 sherds, 502 flaked lithic artifacts, and 6 faunal elements (Tables 3.1, 3.2, 3.3, 3.4, 3.5, 3.6). This site is the area of greatest artifact concentration in the contiguous cluster of sites (LA 60743, LA 60744, and LA 60745; see Tables 2.1 and 2.2). A single large mammal long-bone fragment exhibited modification in the form of light polish. The artifact assemblage is considered representative of the Anasazi occupation, but because of the extreme mechanical disturbance the artifacts must be viewed on the site level.

Ceramic Artifacts

The ceramic assemblage of 827 sherds consists of 16 types and sorting categories (Tables 3.1, 3.2, 3.6). The 16 types are represented by three general ceramic wares: gray, white, and red. The ratio of gray wares to white wares is 2.4:1; a single San Juan Red Ware bowl sherd is present. Corrugated gray is the most common sherd type, comprising over 50 percent of the recovered sherds, and most corrugated rim sherds are Pueblo II corrugated.

Pueblo II black-on-white is the dominant diagnostic white ware type. Other decorated types include low frequencies of Red Mesa–style black-on-white, Dogoszhi-style black-on-white, Pueblo II–III black-on-white, and early Pueblo III Black-on-white. The larger number (96) of white

Table 3.4. LA 60744, ceramic type by deposit type and cobble area; counts and percents.

	Present Ground Surface		Mixed Cultural and Natural		Mixed Cultural Only		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Pueblo II corrugated	4	5.3%	17	6.5%	1	2.8%	**22**	**5.9%**
Pueblo II–III corrugated	–	–	1	0.4%	–	–	**1**	**0.3%**
Plain gray	8	10.7%	41	15.6%	9	25.0%	**58**	**15.5%**
Corrugated gray	25	33.3%	63	24.0%	10	27.8%	**98**	**26.2%**
Kana'a-style black-on-white	–	–	1	0.4%	–	–	**1**	**0.3%**
Red Mesa–style black-on-white	–	–	4	1.5%	–	–	**4**	**1.1%**
Pueblo II black-on-white	9	12.0%	31	11.8%	–	–	**40**	**10.7%**
Dogoszhi-style black-on-white	–	–	5	1.9%	1	2.8%	**6**	**1.6%**
Early Pueblo III black-on-white	–	–	3	1.1%	1	2.8%	**4**	**1.1%**
Pueblo I–II black-on-white	1	1.3%	–	–	–	–	**1**	**0.3%**
Pueblo II–III black-on-white	5	6.7%	7	2.7%	4	11.1%	**16**	**4.3%**
Painted black-on-white	1	1.3%	–	–	–	–	**1**	**0.3%**
Polished white	13	17.3%	47	17.9%	5	13.9%	**65**	**17.4%**
Polished black-on-white	9	12.0%	41	15.6%	5	13.9%	**55**	**14.7%**
Squiggle hatchure black-on-white	–	–	1	0.4%	–	–	**1**	**0.3%**
Mesa Verde plain red	–	–	1	0.4%	–	–	**1**	**0.3%**
Total	**75**	**100.0%**	**263**	**100.0%**	**36**	**100.0%**	**374**	**100.0%**

Table 3.5. LA 60744, chipped stone material and artifact type by deposit type and cobble scatter; counts and percents.

	Present Ground Surface		Mixed Cultural and Natural		Mixed Cultural Only		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Material Type								
Chert	4	50.0%	64	36.2%	11	52.4%	**79**	**38.3%**
Chalcedony	–	–	2	1.1%	1	4.8%	**3**	**1.5%**
Silicified wood	–	–	8	4.5%	–	–	**8**	**3.9%**
Quartzite	2	25.0%	6	3.4%	–	–	**8**	**3.9%**
Quartzitic sandstone	–	–	15	8.5%	1	4.8%	**16**	**7.8%**
Igneous	–	–	1	0.6%	–	–	**1**	**0.5%**
Rhyolite	–	–	1	0.6%	–	–	**1**	**0.5%**
Siltstone	2	25.0%	80	45.2%	8	38.1%	**90**	**43.7%**
Total	**8**	**100.0%**	**177**	**100.0%**	**21**	**100.0%**	**206**	**100.0%**
Artifact Type								
Debitage	4	50.0%	140	79.1%	16	76.2%	**160**	**77.7%**
Core	–	–	1	0.6%	–	–	**1**	**0.5%**
Retouched, utilized	3	37.5%	34	19.2%	5	23.8%	**42**	**20.4%**
Retouched, utilized core	–	–	1	0.6%	–	–	**1**	**0.5%**
Notch	–	–	1	0.6%	–	–	**1**	**0.5%**
Hammerstone flake	1	12.5%	–	–	–	–	**1**	**0.5%**
Total	**8**	**100.0%**	**177**	**100.0%**	**21**	**100.0%**	**206**	**100.0%**

Table 3.6. LA 60744, vessel form by type; counts and percents.

	Bowl		Jar		Special*		Ladle		Indeterminate		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Pueblo II corrugated	–	–	36	5.0%	–	–	–	–	–	–	**36**	**4.4%**
Pueblo II–III corrugated	–	–	1	0.1%	–	–	–	–	–	–	**1**	**0.1%**
Plain gray	–	–	101	14.0%	1	50.0%	–	–	1	33.3%	**103**	**12.5%**
Corrugated gray	–	–	440	61.1%	–	–	–	–	–	–	**440**	**53.2%**
Kana'a-style black-on-white	1	1.0%	–	–	–	–	–	–	–	–	**1**	**0.1%**
Red Mesa–style black-on-white	3	3.0%	1	0.1%	–	–	–	–	–	–	**4**	**0.5%**
Pueblo II black-on-white	26	26.0%	21	2.9%	–	–	–	–	1	33.3%	**48**	**5.8%**
Dogoszhi-style black-on-white	4	4.0%	2	0.3%	–	–	–	–	–	–	**6**	**0.7%**
Early Pueblo III black-on-white	4	4.0%	–	–	–	–	–	–	–	–	**4**	**0.5%**
Pueblo I–II black-on-white	–	–	1	0.1%	–	–	–	–	–	–	**1**	**0.1%**
Pueblo II–III black-on-white	13	13.0%	3	0.4%	–	–	–	–	–	–	**16**	**1.9%**
Painted black-on-white	–	–	1	0.1%	–	–	–	–	–	–	**1**	**0.1%**
Polished white	22	22.0%	82	11.4%	1	50.0%	1	50.0%	1	33.3%	**107**	**12.9%**
Polished black-on-white	25	25.0%	31	4.3%	–	–	1	50.0%	–	–	**57**	**6.9%**
Squiggle hatchure black-on-white	1	1.0%	–	–	–	–	–	–	–	–	**1**	**0.1%**
Mesa Verde plain red	1	1.0%	–	–	–	–	–	–	–	–	**1**	**0.1%**
Total	**100**	**100.0%**	**720**	**100.0%**	**2**	**100.0%**	**2**	**100.0%**	**3**	**100.0%**	**827**	**100.0%**

* One canteen, one pitcher

ware sherds are decorated with mineral paint, but a fairly high frequency (39) of decorated sherds have organic-painted designs (although of white ware sherds, the largest number have no paint; Table 3.1). In general, the ceramic assemblage portrays a Mid Pueblo II ceramic component with a date between AD 1000 and 1075. However, organic-painted sherds were scattered throughout surface and subsurface contexts, suggesting a temporal extension into the Late Pueblo II. Unfortunately, the extreme postdepositional mechanical mixing precludes designation of a distinct later component. The assemblage, therefore, is considered most representative of a general Pueblo II ceramic component dating between AD 1000 to 1150.Jar sherds make up 87 percent of the vessel forms and account for the largest portion of sherds in both the gray and white ware categories (Tables 3.2, 3.4). The high frequency of white ware jar sherds accounts in part for the large number of white ware sherds with no paint: more than three-fourths of the white ware sherds with no paint are jar sherds. Bowl sherds constitute an additional 12 percent of the vessel forms, and the remaining 1 percent of the sherds are composed of a variety of forms, including ollas, ladles, and single fragments of a pitcher and a canteen. Cooking jars are represented by both large (10 cm rim radius) and small (5 cm rim radius) vessels, and bowls also reflect the presence of both large (13.5 cm rim radius) and small (8 cm rim radius) vessels. This suggests that food preparation was geared toward varying group sizes. Occupation was of sufficient duration and intensity to generate a rather substantial ceramic accumulation, although a formal refuse dump was not detected. The jar-dominated ceramic assemblage suggests a seasonal occupation conforming with the probable fieldhouse function of the architectural remains. Nevertheless, the accumulation of varied ceramic types, forms, and sizes indicates a range of domestic cooking, storing, and serving activities commensurate with household use over many seasonal occupations.

Chipped Stone Artifacts

The moderately sized chipped stone assemblage totals 502 artifacts (Tables 3.3, 3.5) weighing 5,367 g. The entire lithic assemblage consists of chipped stone; no ground stone was recovered from the site. The assemblage includes 10 material types, all of

which are locally available from the surrounding terrace slopes. Chert (1,479 g, 27.6 percent of weight, 39.0 percent of count) and siltstone (2,712 g, 50.5 percent of weight, 40.2 percent of count) are the dominant material types, followed by lower amounts of chalcedony (27 g), silicified wood (170 g), quartzite (293 g), quartzitic sandstone (319 g), igneous (27 g), rhyolite (26 g), sandstone (14 g), and other (298 g) (Table 3.3). The assemblage is composed of debitage (74.5 percent), cores (0.8 percent), and tools (24.7 percent). The tool category includes 105 pieces of retouched and utilized debitage, 1 uniface, 7 utilized cores, 1 graver, 7 notches, and 3 hammerstones (Table 3.7). Seventy pieces of retouched debitage and cores have single utilized edges, and 35 are multiple-function artifacts with two to four utilized edges.

The assemblage is characteristic of core-reduction artifacts. Cores are minimally represented (11) considering the close proximity of sources of the various material types. Processing of local raw material was not a primary lithic activity. Cores are represented by three material types: seven siltstone (854 g), three chert (113 g), and one silicified wood (46 g). Seven cores have also been utilized as scrapers or hammerstones. The most common material types—chert and siltstone—have nearly identical frequency distributions across the various artifact types showing similar material usage. By weight, however, chert artifacts weigh 1,479 g, while siltstone artifacts weigh 2,712 g. This weight difference reflects the larger size of the siltstone cobbles and larger manufacturing debris. Minimal energy investment went into the production of the expedient flake tool assemblage, and formal bifacial tool manufacture and maintenance were not important activities. Notches may indicate a specialized tool form connected with the processing of perishable materials. In general, however, the use of utilized debitage and cores as expedient tools indicates general cutting, scraping, and pounding activities, supporting a limited seasonal fieldhouse occupation.

Faunal Remains

The small faunal assemblage is composed of six elements, including small mammal, large mammal, black-tailed jackrabbit, and deer (Table 3.8). The interpretive value of the material is reduced

Table 3.7. LA 60744, tool type by material type; counts and percents.

	Chert		Chalcedony		Silicified Wood		Quartzite		Siltstone		Other		Total	
	Count	Col.%	Count	Col.%	Count	Col.%	Count	Col.%	Count	Col.%	Count	Col.%	Count	Col.%
Debitage	149	76.0%	4	66.7%	12	63.2%	42	76.4%	152	75.2%	15	62.5%	374	74.5%
Core	1	0.5%	–	–	1	5.3%	–	–	2	1.0%	–	–	4	0.8%
Uniface	1	0.5%	–	–	–	–	–	–	–	–	–	–	1	0.2%
Retouched, utilized	39	19.9%	2	33.3%	5	26.3%	12	21.8%	42	20.8%	5	20.8%	105	20.9%
Retouched, utilized core	2	1.0%	–	–	–	–	–	–	5	2.5%	–	–	7	1.4%
Graver	–	–	–	–	–	–	–	–	–	–	1	4.2%	1	0.2%
Notch	4	2.0%	–	–	1	5.3%	–	–	–	–	2	8.3%	7	1.4%
Hammerstone flake	–	–	–	–	–	–	1	1.8%	1	0.5%	1	4.2%	3	0.6%
Total	196	100.0%	6	100.0%	19	100.0%	55	100.0%	202	100.0%	24	100.0%	502	100.0%

Quartzite and quartzitic sandstone combined; "other" includes sandstone, rhyolite, and igneous.

because of two sources of potential postdepositional contamination. This contamination includes the possible introduction of road-kill material associated with the long-term proximity of the highway, compounded by extremely high rodent activity at the site. A single large mammal long-bone fragment with modification in the form of a groove and polish is the only unambiguous faunal artifact attributed to the prehistoric occupation. The artifact shows bone working as a site activity, possibly associated with the chipped stone gravers. The small assemblage suggests that faunal processing and consumption was not significant, again supporting a seasonal fieldhouse occupation.

Botanical Remains

Mollie S. Toll

This site lacks intact structures, or even clearly defined features, so it was difficult to select sample proveniences or frame sensible subsistence questions. Ceramics (suggesting a Pueblo II–III occupation) and lithic debris scattered on a natural surface just 10–20 cm below the present ground surface provided the impetus to call this locus a site and investigate the spatial dimensions of human activity. Charcoal was observed in association with the artifacts, but unfortunately was far too small and infrequent to allow identification of the wood species. Both flotation samples were taken from charcoal-laden and rodent-disturbed Layer 2.

In grid 45N/75E a total of three carbonized seeds encompassed common weedy annuals (goosefoot), a local shrub used occasionally for fuel but not for food (greasewood), and a low-frequency perennial food source valued for its high sugar content (hedgehog cactus) (Table 3.9). No plant remains that could be linked with prehistoric activity were recovered from grid 29N/76E.

LA 60744: Summary

The investigated portion of LA 60744 revealed the poorly preserved architectural remains of a cobble surface structure and an associated extramural heating pit. The integrity of the site had been affected by heavy equipment, but the limited surviving architectural remains are interpreted as a small one- or two-room structure functioning as a fieldhouse. Ceramics indicate a general Pueblo II ceramic component dating between AD 1000 and 1150. The recovered artifact assemblage is severely mixed, but it reflects the general occupation dynamics. The ceramic, chipped stone, and faunal assemblages consistently characterize a restricted range of activities corresponding with a short-term seasonal occupation, but the moderate artifact accumulation argues for an occupation duration extending over repeated short-term occupations. The site most likely functioned as a seasonally utilized fieldhouse occupied by a portion of a household who spent the rest of the year at more permanent habitation sites. The site is an example of an interesting spatial component within the local settlement—a fieldhouse in the midst of a community setting. Given the likelihood of changing occupation patterns, such a fieldhouse may have been in use when nearby habitations were not. The determination of precise contemporaneity is, of course, impossible given the current condition of this site.

Kohler (1992:617–634) recognizes that fieldhouses probably had multiple systematic uses but

Table 3.8. LA 60744, counts of faunal taxa by element.

	Long-bone Fragment	Lower Permanent Molar	Femur	Tibia	Total
Jackrabbit	–	–	–	1	**1**
Deer	–	1	1	–	**2**
Small mammal	1	–	–	–	**1**
Large mammal*	2	–	–	–	**2**
Total	**3**	**1**	**1**	**1**	**6**

All specimens except one deer element are from the cultural layer.

* One shows grooving and polishing.

Table 3.9. LA 60744, counts of faunal taxa by element.

Plant Remains	Layer 2	
	45N/75E FS 141	29N/76E FS 162
Cultural		
Annuals:		
Chenopodium	1.0	–
Perennials:		
Echinocereus	1.0	–
Sarcobatus	1.0	–
Noncultural		
Annuals:		
Portulaca	–	1.0

advances a scenario in which one type of fieldhouse was constructed to make a statement about land ownership or control. In this scenario, fieldhouses are situated in a way that makes a visible claim on lands that are valuable precisely because agriculture is locally sustainable (Kohler 1992:621). The location of these fieldhouses near habitation sites would serve to broaden the scope of land-use ownership, and the structures would receive rather intensive use during the seasonal agricultural cycle. The use life of the structures would match the expected use-life of the local fields. Kohler (1992:622) contends that this type of fieldhouse would be most common in periods with relatively high populations in which there may be competition (within or between villages) for agricultural land.

I feel that Kohler's scenario for the relationship of fieldhouses to land ownership applies well to LA 60744. The site is adjacent to quality arable floodplain land possibly enhanced by irrigation ditches. The land is farmed today and was undoubtedly considered by the prehistoric inhabitants as prime agricultural land in terms of highly sustainable, low-risk, high-return farming (Kohler 1992:631). The value and long use-life of the fields is demonstrated by the associated dense site concentration containing residential and public architecture. The locality experienced intensive residential use, especially in the 1000s and 1100s, and public architecture suggests that households were also integrated on a higher community level.

The social context portrayed by the dense site concentration suggests the necessity for a system of household-level and community-level control over the long-used agricultural land. The site concentration is characterized in part by the repeated replacement of structures, but how this is related to land-tenure passage across generations is poorly understood. The concept of fieldhouse as symbol of land ownership and resource restriction explains several aspects of the site, including the presence of a fieldhouse as an architectural element within the dense site setting, the seasonal nature of the occupation, and the extended site duration. Although the poor preservation of the site obstructs precise conclusions, Kohler's ownership model provides an instructive interpretive perspective for viewing both intracommunity and intercommunity settlement in the valley.

4 LA 60745

Nancy J. Akins and Charles A. Hannaford

LA 60745 is a habitation site consisting of a five- to ten-room L-shaped cobble structure and pit structure depression. The site is on a promontory at the south end of the prehistoric Jackson Lake community (Figs. pf.1, 1.1). The portion of the site in the right-of-way is a low-density sherd and lithic artifact scatter associated primarily with downslope wash from the main site area. Archaeological investigations encountered a single extramural pit, possibly associated with the generalized use of the area by community residents. The small recovered ceramic assemblage from the project area suggests a Mid Pueblo II ceramic component dating from AD 1000 to 1075.

The site area outside of the right-of-way is on land administered by the NM Department of Game and Fish. The site was surface-collected on March 23, 1988, and the feature was excavated on August 16, 1988. Labor expenditure totaled five person days. OAS personnel included Charles Hannaford (crew chief) assisted by Peter Bullock, Susan Moga, Adisa Wilmer, and Cindy Bunker.

Environmental Setting

LA 60745 is at the base of the Jackson Lake terrace on the west side of the La Plata Valley (Figs. 4.1, 4.2). The house mound is on top of a prominence extending out from the Jackson Lake terrace. The prominence is formed by the entrance of the side drainage currently containing Jackson Lake. The house mound is at an elevation of 1,663 m (5,455 ft), and cultural material extends downslope to an elevation of 5,430 ft (1,655 m). Local alluvial soils in the right-of-way are mainly sandy clay with less cobble content than the nearby Jackson Lake terrace slope. Four cottonwood trees line an irrigation ditch running along the north end of the site, and other contemporary ground cover consists of mixed grasses with sage and saltbush. The surrounding terrace and floodplain environment supplied the site inhabitants with a wide range of floral, faunal, and natural resources along with prime valley-bottom agricultural land still farmed today.

Archaeological Setting

LA 60745 closely matches the location and description of Chaco 4-102, recorded during Nusbaum's 1935 survey, but an exact correspondence between the sites remains problematic. His survey form records a three- or four-room unit pueblo and a pithouse depression on a barren hill in front of the higher benches, and sherds were noted on the slope of the hill. Nusbaum's ceramic collection from the site consisted of 28 sherds, including Mancos Corrugated (1), corrugated gray (15), Mancos Black-on-white (7), and Pueblo II–III black-on-white (5).

Toll and Hannaford (1997) officially recorded the site during the resurvey of the proposed highway construction zone (Fig. 4.3). The site was recorded with the house mound and pit structure as the central architectural elements, and further archaeological investigation was advised to determine the nature of cultural material on the lower slope. The site measures 60 by 70 m (197 by 229 ft) overall, a total area of 4,200 sq m (45,208 sq ft).

LA 60745 is part of the prehistoric Jackson Lake community, and it is literally surrounded by cultural manifestations. The site merges with LA 60744 (chapter 3, this report), to the south, consisting of a poorly preserved Pueblo II fieldhouse. Across the highway are LA 60743 (chapter 2, this report), another Mid to Late Pueblo II fieldhouse with a thin scatter of artifacts; and LA 60749 (chapter 15, this report), a large artifact scatter with a Mid Pueblo II

Figure 4.1. LA 60745, site overview, view southeast, pre-excavation.

Figure 4.2. LA 60745, site overview detail, view north, pre-excavation; at center, LA 60747 is visible to the north.

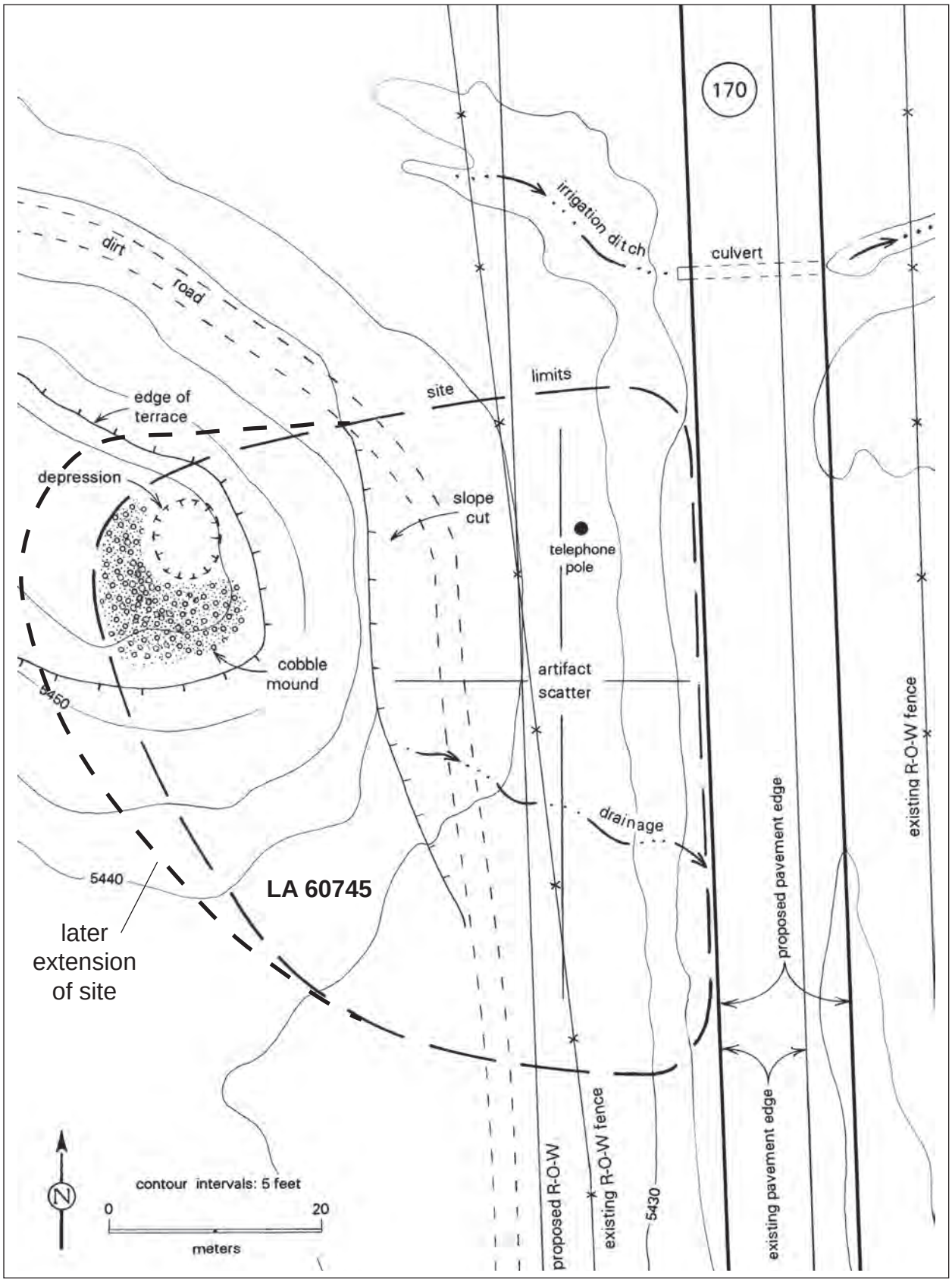


Figure 4.3. LA 60745, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

jacal structure and several surface indications of cobble structures. To the north and across the Jackson Lake parking lot is LA 60746, a probable Pueblo II–III great kiva on the terrace top. At the base of the terrace below LA 60746 are LA 60747 (chapter 5, this report), consisting of a Pueblo II–III artifact scatter, and LA 60748, consisting of three Pueblo II–III cobble structures. No cultural material was observed on the higher Jackson Lake terrace, immediately west of the site. LA 60745 is in a complex community setting containing contemporaneous fieldhouses, habitation structures, and examples of public architecture. Earlier and later ceramic components manifest at nearby sites.

Site Condition

The primary house mound and pit structure are intact and preserved on the hilltop outside of the right-of-way (Fig. 4.2). Cultural material on the slope has been affected by sheet-wash erosion, and the site area at the base of the slope has been modified by a high-pressure gas line trench and maintenance road running the north–south length of the site. The project area west of the right-of-way fence was completely altered by this trench and road. The east edge of the site had been modified by long-term highway maintenance activities, and a steep shoulder cut extends nearly the length of the site. The north end of the site is bounded by the Jackson Lake parking lot, also the location of an east–west trending irrigation ditch, and a telephone pole.

Field Methods

Since there was no indication of features within the right-of-way, investigations at LA 60745 began by surface-collecting the area. All artifacts within the project limits were collected using 3 by 3 m grids provenienced from the southwest corner. The site datum was established at the north end of the site at 75N/75E. The grid system was aligned with the right-of-way fence and does not designate magnetic or true north (Fig. 4.4).

Following the surface collection, the intact 9 m (30 ft) wide strip adjacent to the east side of the right-of-way fence from 24N to 63N was mechanically bladed. Archaeological investigation at LA 60744, to the south, indicated that cultural material was confined to within about 20 cm of the surface. About 40 cm of fill was removed from LA 60745 in levels roughly 5 cm thick. This procedure resulted in the discovery of one feature at the south end of the site. The feature was defined by stripping four surrounding 1 by 1 m grids with a shovel. No additional cultural material was recovered. The feature was excavated by hand, and fill from the grids and feature was screened through 1/4-inch mesh screen.

Finally, a 12 m (39 ft) long backhoe trench was placed 3 m (10 ft) north of the feature at 30N from 75E to 87E. The trench was dug to a depth of about 1 m below the surface. There was no indication of subsurface cultural material in the trench.

Surface Collection

The surface collection covered about a 54 by 24 m (177 by 79 ft) area, and the surface of 140 grids was examined (Fig. 4.5). Four rows of grids on each side of the right-of-way fence were collected, and the surface collection covered 1,308 sq m (14,079 sq ft). Only a narrow 9 to 12 m (30 by 39 ft) wide by 54 m (177 ft) long strip east of the right-of-way fence was relatively intact. The collected artifact assemblage consisted of 104 sherds and 41 chipped stone artifacts (see Tables 2.1, 2.2). Artifact densities ranged from no material in 76 grids (54 percent), to a high of 8 artifacts. The maximum sherd density was six, or less than one sherd per 1 sq m (11 sq ft). Forty-nine of the 52 grids with sherds had a density of two items or less. The maximum chipped stone density was three artifacts, and 28 grids contained chipped stone artifacts. Only 46 sherds and 14 chipped stone artifacts were recovered from the relatively intact site area east of the right-of-way fence, but no differences in artifact types were observed between the areas.

Surface Strip

A single artifact was recovered from a subsurface context. A plain gray jar sherd was uncovered during the stripping of four 1 by 1 m grids around the extramural feature. The sherd was in Layer 2, 40 cm below the surface, but it could easily have been introduced by rodents, as indicated by the profusion of burrows in the nearby backhoe trench profile.

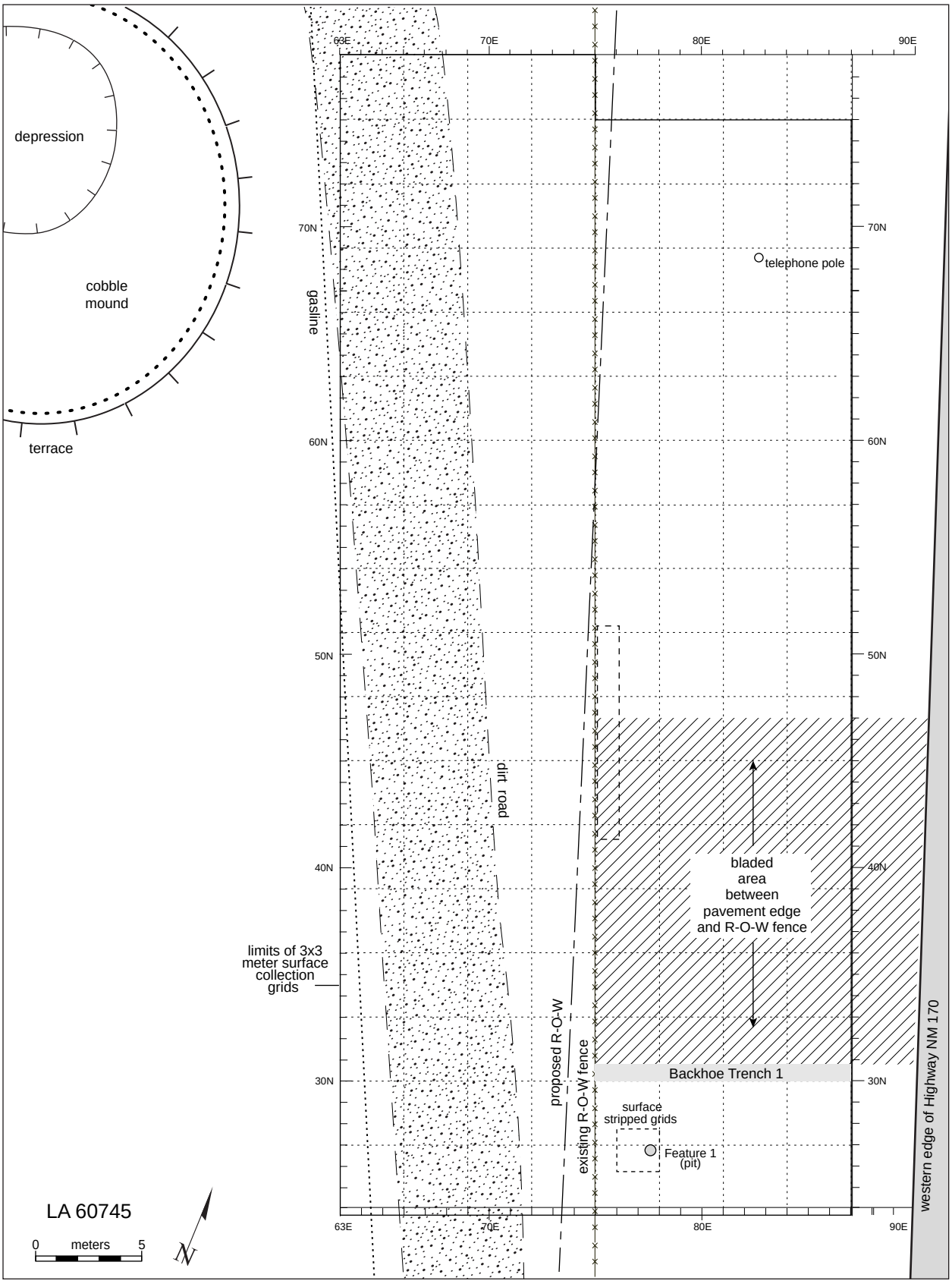


Figure 4.4. LA 60745, site plan.

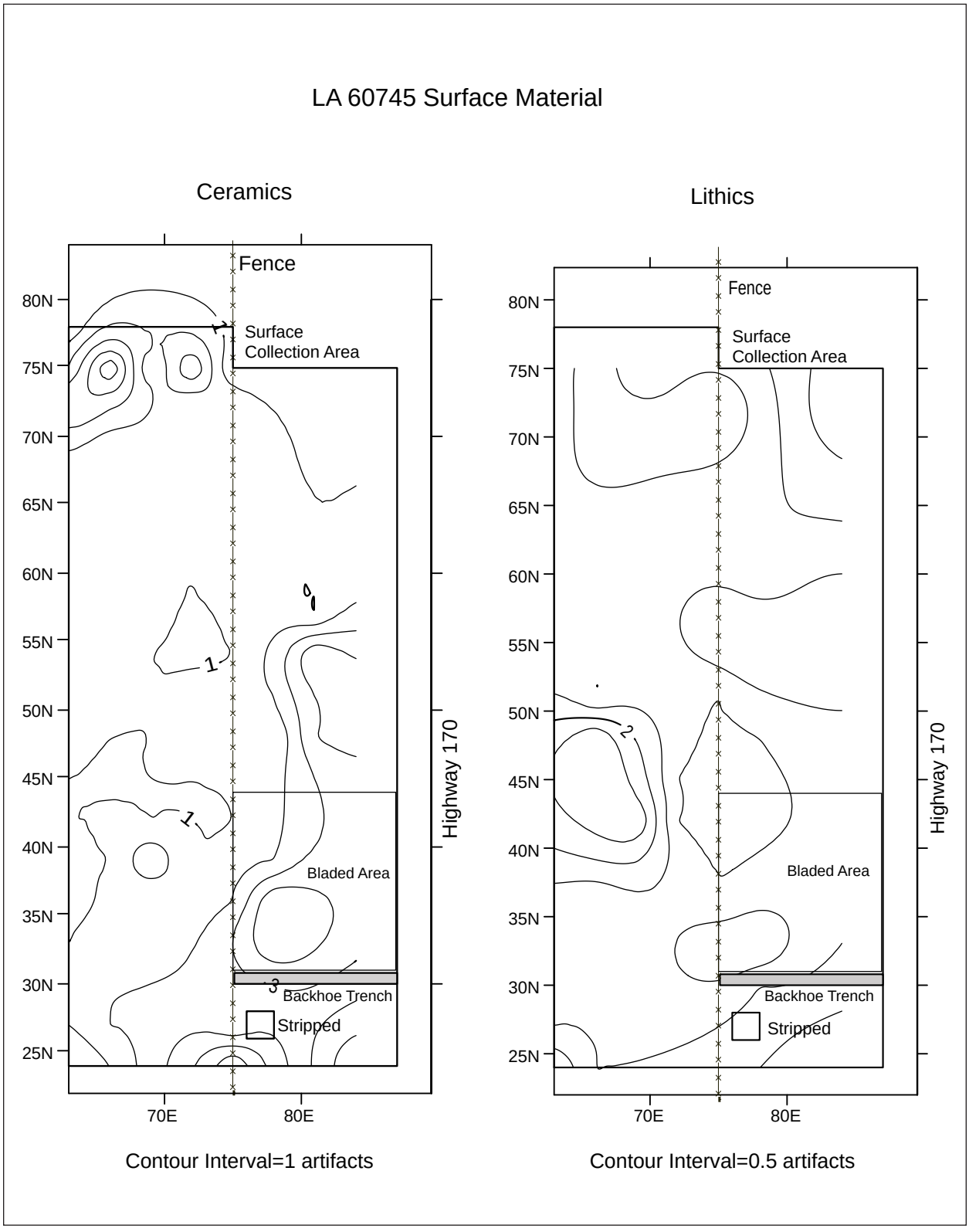


Figure 4.5. LA 60745, surface collection area, distribution and density, ceramics and lithics.

Stratigraphy

The backhoe trench revealed two primary stratigraphic layers. Layer 1 was an initial loose brown (10 YR 5/4) sandy clay overburden ranging from 10 to 45 cm thick. Layer 2 was beneath this initial loose sandy clay, and consisted of a 10 to at least 70 cm thick layer of compact brown (10 YR 5/3) fine sand. Both layers are natural alluvium with no indications of cultural material, although both layers contained irregular pockets containing brown clay and charcoal flecks. These pockets were commonly encountered during archaeological excavations at LA 60744, just to the south, and were typical of intensive rodent activity at the site. Other pockets lacked charcoal flecking and were filled with coarse sand.

EXCAVATION RESULTS

Extramural Area 1

The house mound and pit structure depression at LA 60745 are outside of the right-of-way, and no investigations were carried out in this area. The long dimensions of the L-shaped cobble mound were about 10 by 10 m (33 by 33 ft), and each wing was about 5 m (16 ft) wide (Figs. 4.2, 4.3, 4.4). The cobble mound elevation was less than 50 cm, and no room alignments were evident. The pit structure depression, immediately east of the cobble mound, had a diameter of about 8 m (26 ft) (Figs. 4.3, 4.4). The depression is a rare instance in the vicinity of LA 60745 of a pit structure that is visible from the surface; pit structures at the base of the terrace slope (as opposed to this elevated location) have been subject to far greater alluviation and are generally under a level surface. The architectural elements have an apparent west-east alignment, but the terrace edge was immediately east of the pit structure, and a trash midden was not observed. The downslope site area within the right-of-way marginal to these architectural elements was arbitrarily designated Extramural Area 1.

Pit (Feature 1)

The only cultural feature encountered in the construction zone was an undifferentiated extramural pit discovered by mechanical blading at a depth of 40 cm below the present surface (Fig. 4.4). The pit overlapped 1 by 1 m grids 26N/77E and 27N/77E. The unlined pit was circular, with a shallow hemispherical profile, and there was no evidence of oxidation. The feature had a diameter of 58 cm and a maximum depth of 6 cm. Fill was brown (10 YR 3/2) sand with a little ash and charcoal flecks, a few pieces of oxidized soil, and a large chunk of compact clay with small charcoal flecks. A single flotation sample (FS 63) documents the only extramural feature inside the right-of-way. This shallow pit contained charred corn cupules and a variety of unburned seeds of common roadside annuals: purslane seeds (most abundant), one goosefoot seed, and one groundcherry seed. The fill is apparently associated with thermal activities, but the feature lacks evidence of thermal use. This suggests redeposited fill from another feature. Flotation, pollen, and radiocarbon samples were collected from the fill. No artifacts were associated with the fill, but a single plain gray sherd was found 3 cm northeast of the pit. The pit was dug into the compact brown alluvial sand characterizing Layer 2.

Six surface sherds were collected from the 3 by 3 m grid (24N/75E) containing the feature: Pueblo II black-on-white (1), polished black-on-white (2), polished white (2), and corrugated gray (1). The surrounding two rows of undisturbed 3 by 3 m grids east of the right-of-way fence contained no sherds and only one piece of chert debitage. The feature is 50 m (164 ft) south of the house mound and 60 m (197 ft) north of the small fieldhouse at LA 60744. The undifferentiated pit could derive from the generalized long-time use of the area by community residents. However, its function and temporal affiliation are unclear.

LA 60745: Material Culture

The small artifact assemblage does not lend itself to detailed distributional studies. The assemblage is best viewed at the site level, but it is not considered representative of the entire range of artifact types at the site as a whole. No faunal remains were recovered from this site.

Ceramic Artifacts

The small assemblage of 105 sherds consists of nine types and sorting categories (see Table 2.1). The nine types are represented by two general ceramic wares, and the ratio of gray wares to white wares is 4:3. Corrugated gray is the most numerous sherd type, comprising 44 percent of the assemblage. The small frequency of diagnostic sherds, including Pueblo II black-on-white, Pueblo II–III black-on-white, and Pueblo II–III corrugated, suggests a Mid Pueblo II ceramic component dating from AD 1000 to 1075. The majority (24) of the decorated sherds were painted with mineral paint, and only two sherds have organic pigment. Vessel forms are limited to jar and bowl forms with a jar to bowl ratio of 4.2:1. The proposed Mid Pueblo II ceramic component may also be supported by the Mancos Black-on-white in the Nusbaum sherd collection.

Chipped Stone Artifacts

The small chipped stone assemblage consists of 41 artifacts totaling 828 g of materials (see Table 2.2). The assemblage is composed of six locally available material types. Chert and siltstone, the most common raw materials, were recovered in equal numbers. The weight of chert material is 191 g; that of siltstone is 525 g. Artifact types are limited to debitage, cores, and retouched/utilized debitage. Debitage accounts for 82 percent of the artifacts, and no formal tools were recovered. The assemblage typifies expedient and opportunistic use of readily available lithic resources by the Anasazi farmers.

LA 60745: Summary

Archaeological investigation of the site area within the right-of-way established that cultural material was essentially surficial and modified by erosional and mechanical means. The cultural material was associated primarily with downslope wash from the main site area, but the solitary undated feature, located some 50 m (164 ft) south of the house mound, suggests additional generalized use of interstructural space by community residents. The recovered ceramic assemblage suggests a prominent Mid Pueblo II period of use for the upslope architectural elements.

The rather substantial five- to ten-room L-shaped house mound and associated pit structure indicate that this was a habitation site, but the actual length and intensity of occupation is difficult to ascertain from the surface manifestations. A trash midden was not observed, and only low-density surface artifacts were scattered around the architectural elements. The observation of occasional Basketmaker III and Pueblo III sherds suggests possible multiple components, but the sherds may also originate from general fallout associated with the substantial long-term residential use of the community setting.

The site is probably associated with agricultural activities in the valley bottom, but the promontory location may imply additional settlement functions. The isolated promontory characterizes a unique topographic venue positioned below the Jackson Lake terrace containing LA 60746, but overlooking the level terrace below it, which contains the bulk of the residential settlement. The elevated position gives the structure a more isolated and bounded space than the concentrated and overlapping structures on that level terrace below. The promontory was formed at the entrance of a side drainage, and this setting, combined with the elevational peculiarity, may have imparted special community significance analogous to the placement of LA 60746 on the higher Jackson Lake terrace. The observed artifact assemblage does not appear unconventional, but the range of surface artifact types may have been affected by escalated collecting activities connected with the proximity of the Jackson Lake parking lot. In any event, the architectural elements and surrounding level site area are intact and preserved outside of the construction zone. The main site area contains important information regarding settlement in the community context, including possible differential use of the topography.

5 LA 60747

Dorothy A. Zamora and H. Wolcott Toll

LA 60747 is a small ceramic and lithic artifact scatter measuring 30 m (98 ft) north–south by 40 m (131 ft) east–west; the total area is 1,200 sq m (12,916 sq ft). It is near the center of the group of sites excavated in the Jackson Lake community (Figs. pf.1, 1.1). Half of the site lies within the highway right-of-way (Fig. 5.1). Archaeological investigations at LA 60747 occurred during the summer of 1988. Excavations were conducted from May 18 to 26 and were supervised by Dorothy A. Zamora and Charles A. Hannaford; Kalay Melloy and Susan Moga comprised the crew. Labor expended at the site totaled 181 man hours.

Environmental and Archaeological Setting

LA 60747 is directly west of LA 60749 on a gently rising slope at the base of a steep hill. Not excavated by the project, but adjacent were LA 60746, likely a great kiva, on top of the hill, and LA 60748, a small habitation, on a bench on the side of the same terrace slope. LA 60747 is 300 m (984 ft) east of Jackson Lake, and sits at an elevation of 5,536 ft (1,687 m). The site is bisected by a steep drainage ditch running along the right-of-way fence. The ditch is part of the gas-line construction that has affected both LA 60747 and LA 60748.

The site was recorded by Toll and Hannaford (1997:22–24) during the resurvey of NM 170 (Fig. 5.1). The survey recorded the site as a fairly abundant artifact scatter at the base of the slope with much material exposed by a drainage ditch. The presence of the materials appears to be the result of wash from LA 60746 and LA 60748. No pit structure depressions were detected, and no surface artifacts were collected at the time of the survey. The temporal affiliation of the site was inferred to be Pueblo II–III. LA 60747 had been bladed prior to archaeological testing and excavation. Vegetation immediately west of the right-of-way fence has not been disturbed and consists principally of a dense cover of large sage, suggesting its previous presence on the site proper. Construction of a gravel parking area immediately south of the site may have cut into a portion of it (Fig. 5.2).

LA 60747 is one of several sites investigated during the project that are remnants of prehistoric use of the area at the base of the terrace slope. LA 60743, LA 60744, LA 60745, and LA 60747 all contain mostly disturbed materials that relate to features outside the right-of-way and probable features were impacted by gas line, utility, and highway construction. As is true of most of the material from this vicinity, the majority of materials are Pueblo II–III in age. Intact features outside the right-of-way are present at each of these sites but rare within the project area. LA 60745 (Chapter 4, Vol. 1-Book1, this report) and LA 60748 overlook either side of LA 60747, and each contains clear evidence of prehistoric structures. LA 60746, a probable kiva, is on the hilltop at the end of a narrow prominence from the highest terrace, approximately 150 m (492 ft) from LA 60748. LA 60748 contains three cobble mounds in a small area on the top and sides of a relatively flat shoulder just below LA 60746; neither was excavated for this project. Two of the structures have five or more rooms. The structure closest to the tip of the prominence was partially destroyed by construction of a high-pressure gas line. To the east, LA 60749 (Chapter 15, Vol. 1-Book 2, this report) contains three cobble areas, scattered artifacts, and a shallow, burned jacal structure dating to Early Pueblo III. Ceramics indicate that at least part of this site may relate to the late, large pueblo that is within 30 m (12 ft) of the southeast corner of the LA 60749 site area.

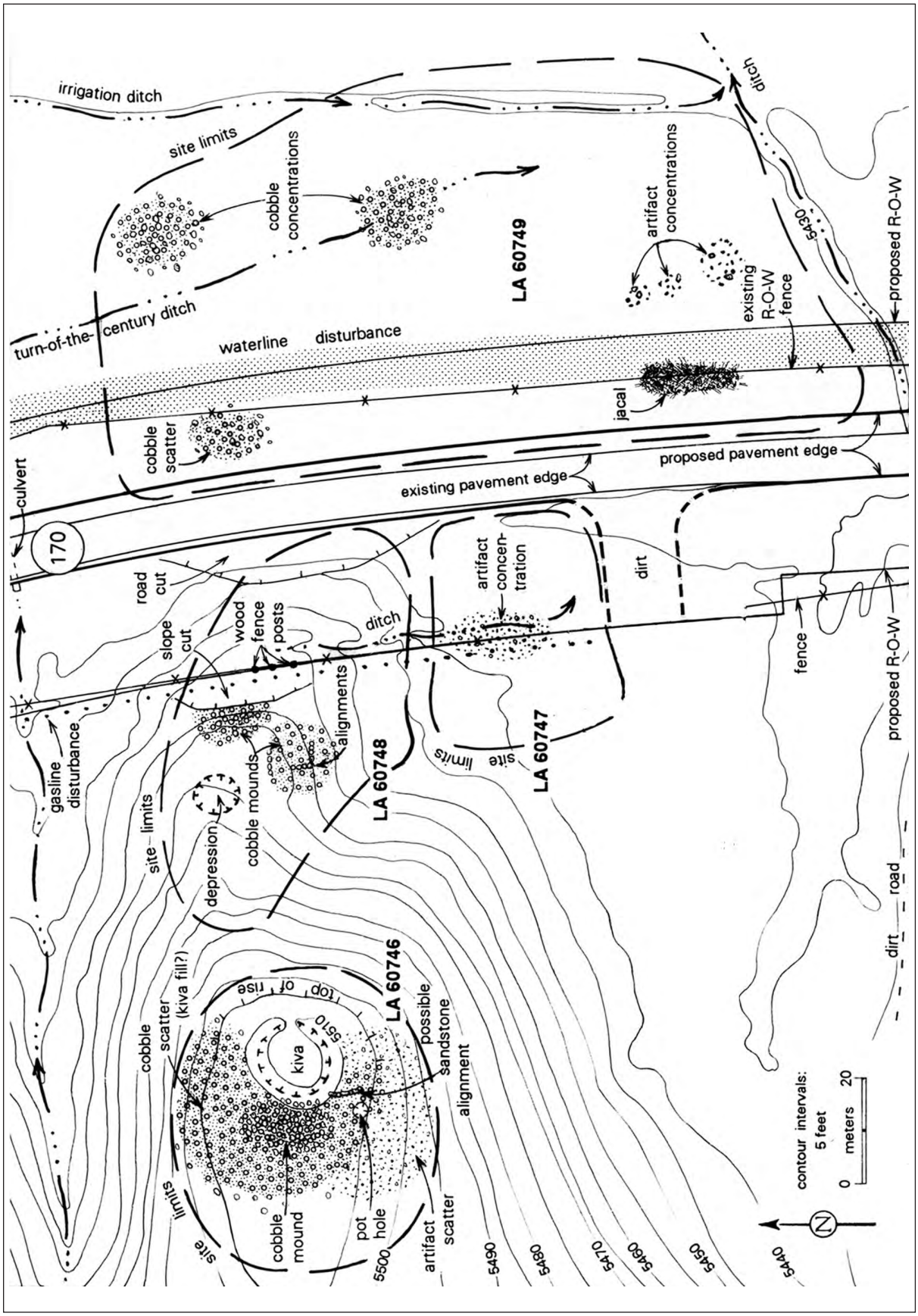


Figure 5.1. LA 60747, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

Figure 5.2. LA 60747, site overview, view southeast, pre-excavation.

Just outside the project right-of-way, LA 111902 is a large pueblo with at least two roomblocks and two pit structures. A plaza may have been present, and the mounds have sufficient relief to suggest a second story. LA 37592 (Chapter 13, Vol. 1-Book2, this report) is a multicomponent pueblo separated from LA 60747 by the highway. It contains at least two roomblocks with several rooms, extramural features, and a Pueblo II pit structure containing a Pueblo III midden.

Field Methods

Baselines were placed north–south along the right-of-way fence (50E), east–west along the 50N line, and along the 80N line (Fig. 5.3). The base lines were staked at 3 m intervals. Each grid was identified by the coordinates of its southwest corner. A main datum was placed at 80N/59E.

The site was surface-collected in 3 by 3 m grids (Fig. 5.3). Surface material was collected from 46 of the 77 grids, and 161 artifacts were recovered. Higher concentrations of artifacts were present along the edge of the right-of-way and at the north edge of the site. These two locations are next to the drainage ditch and toward LA 60748, respectively. Although areas with surface ceramics and lithics are similar, concentrations of the two are not the same (Figs. 5.4a, 5.4b). The maximum count of sherds in a 3 by 3 m unit is 7, and of lithic artifacts 6. A total of 95 surface ceramics were recorded, and 65 surface lithic artifacts. Following surface collection, an east–west backhoe trench was placed along the south edge of LA 60747 near the Jackson Lake parking area. The trench was 21 m (69 ft) long by 0.83 m (2.7 ft) wide and 0.60 to 1.40 m deep. A small charcoal area was found in the profile.

Selection of units for excavation was done randomly at LA 60747, with the exception of 50N/59E to 50N/60E, which were next to the backhoe trench over a charcoal area. The site was partitioned into 77 3 by 3 m units. The units were further subdivided into 1 by 1 m grids, and of these, seven were randomly selected for excavation—a 1-percent sample

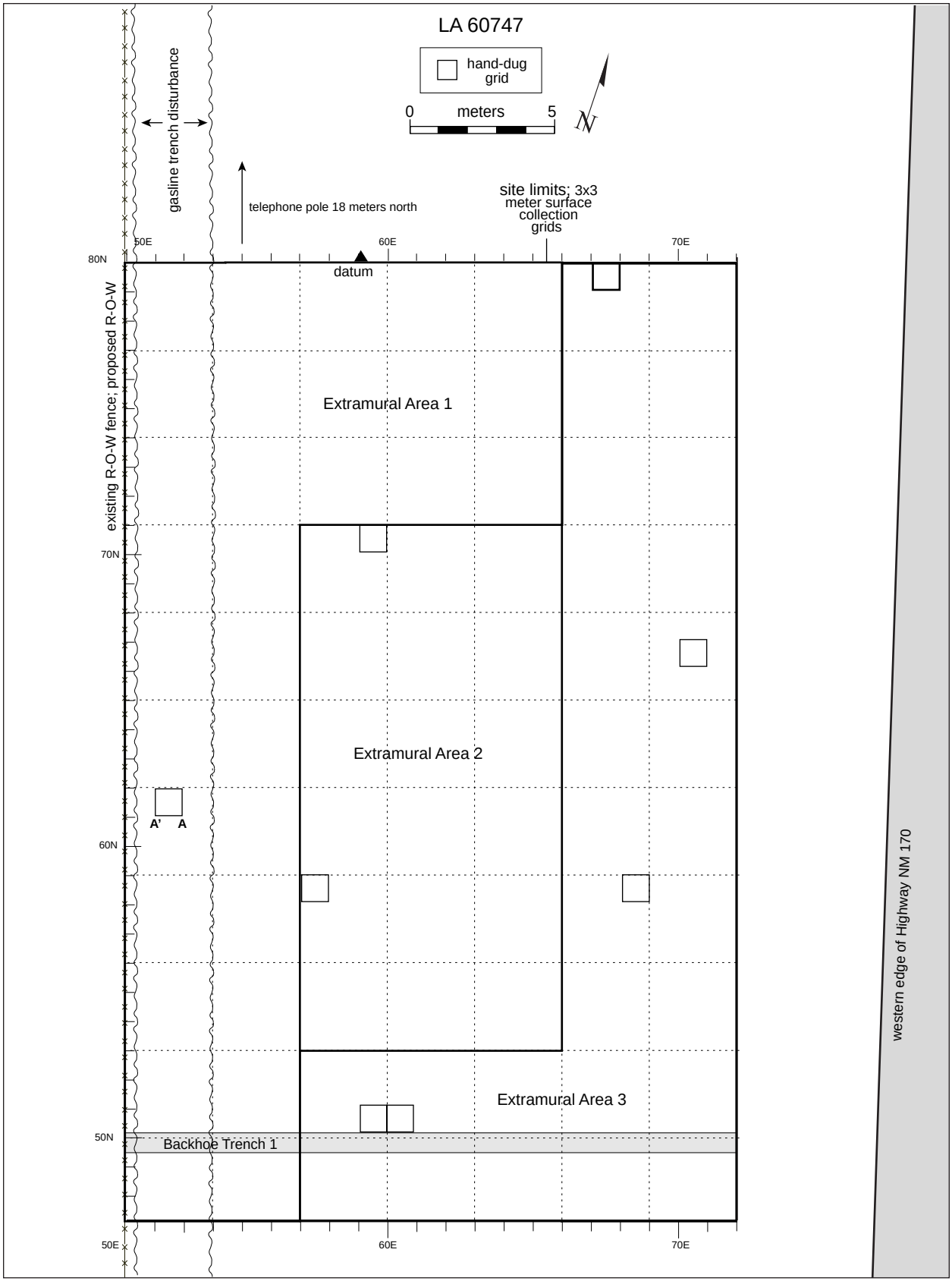


Figure 5.3. LA 60747, site plan.

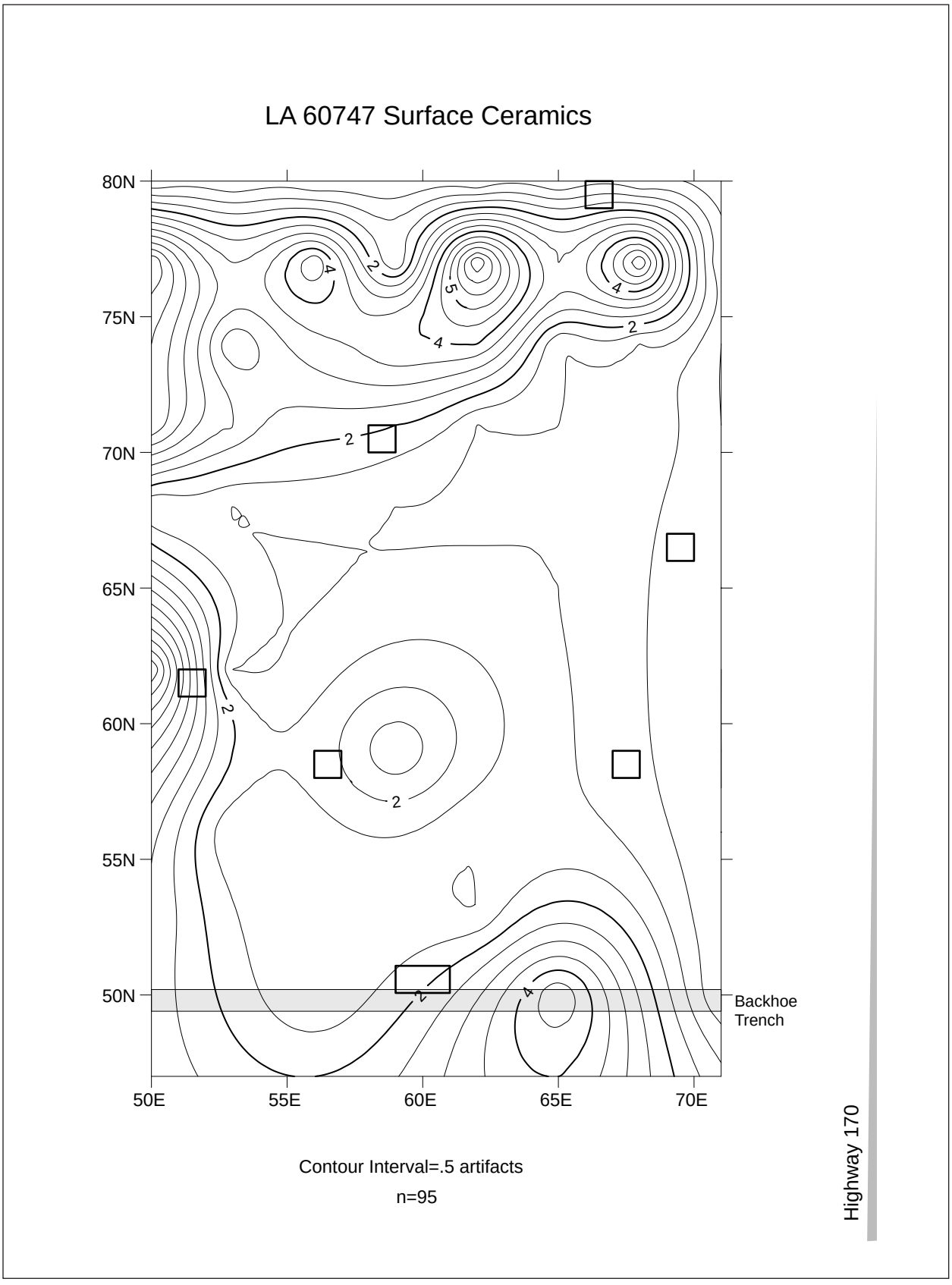


Figure 5.4a. LA 60747, surface collection area, distribution and density, ceramics.

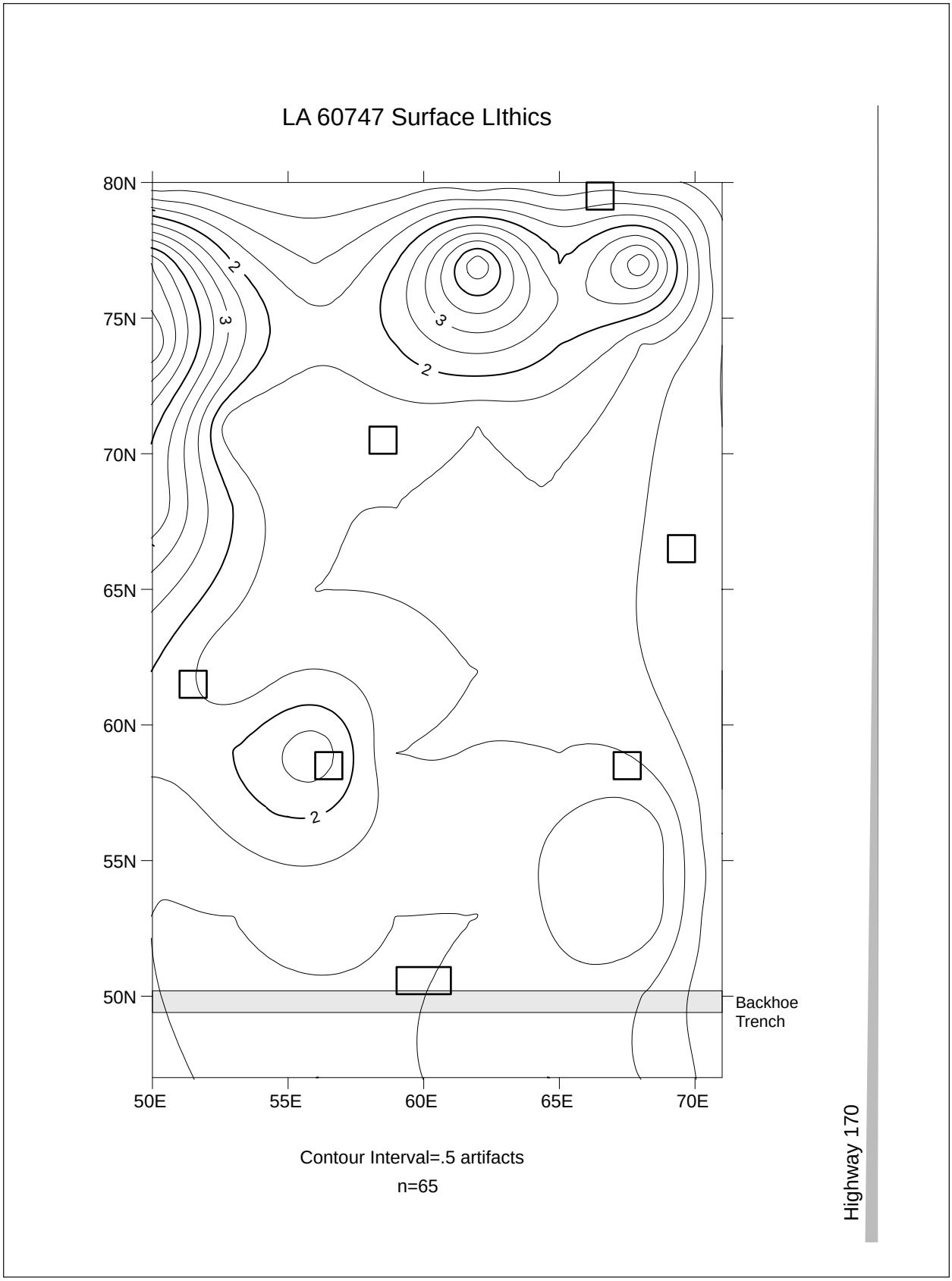


Figure 5.4b. LA 60747, surface collection area, distribution and density, lithics.

(Fig. 5.3). Each selected grid was excavated down to sterile, and a profile was drawn. Whenever appropriate, a photograph was taken, and flotation, pollen, and C-14 samples were collected. Each grid had its own excavation-unit form for each stratigraphic *layer*, or each *level* excavated in arbitrary 10 cm levels. Each layer or level was screened through 1/4-inch wire mesh. All artifacts were bagged by material types and counted. Each bag contained the LA number, project number, provenience information, date, and excavator's initials. After grid unit excavation was completed, the right-of-way area was bladed to ensure that no other features were present.

The site area within the right-of-way was divided into three extramural areas (Fig. 5.3):

Extramural Area 1 is a 6 m (20 ft) wide strip running along the fence and drainage ditch along the west side of the site, and a 9 m (30 ft) wide strip along the north edge of the site. This area includes the areas of highest surface artifact density and probably relates most directly to the two sites uphill from LA 60747.

Extramural Area 2 is a 12 by 18 m (39 by 59 ft) rectangular area in the center of the site, extending from 53N to 71N and from 56E to 65E.

Extramural Area 3 is a 6 m (20 ft) wide strip running along the south and east sides of the site area, bordering the highway and the parking lot.

Provenience File and Components

The provenience file for LA 60747 was created well after the initial descriptive report was first written. The structure of the file is based on three salient facts about the site: (1) Most or all of the material is washed in, primarily from LA 60748, but also perhaps from LA 60746, neither of which we know much about. (2) LA 60747 is bounded on one side by the highway and on the other by the Jackson Lake parking lot. (3) LA 60747 experienced some disturbance from the gas line that passes through LA 60748.

It may well be that the processes of slope washing and modern earth moving are so extensive here that these divisions have little meaning, but the rationale is to provide the potential for separating the portions of the site that relate most directly to the upslope sites. The three extramural areas have been placed into site components with the same numbers.

This structuring of the site materials does show some patterning, but the overall complexion of the ceramic artifacts from the site indicates that the severe mixing noted in most of the excavation units extends across the whole site area (Tables 5.1, 5.2). The area along the east and south boundaries of the site area does contain higher percentages of organic paint and later ceramic types, but there are also conflicting trends, such as the fact that Extramural Area 3 also contains the highest percentage of mineral-painted ceramics. Because of these mixture problems and the small sample (n = 297), all proveniences at this site were assigned a ceramic date code of Pueblo II or III.

Stratigraphy

Stratigraphic profiles of LA 60747 show sediments following the slope of the surface overlying a natural gravel bed at a depth of 50 to 90 cm.

Grid 50N/59E was placed over the charcoal area found in the backhoe trench. Grid 50N/60E is an extension of 50N/59E. The charcoal flecking is a result of charcoal and artifacts being trapped in a small natural depression or pocket. The charcoal flecking is minute, with a depth of 90 cm, indicating filtration into the soils from the depression. A very small amount of charcoal is present in the gravel.

Most of the artifacts were found in rodent burrows or near roots in the grid. Table 5.3 shows the types of soils found in the grids. Layer 1 (10YR 5/3 brown), the top modern soil, contains modern trash and prehistoric artifacts. Layer 2, a lighter sand (10YR 6/3 pale brown), begins at the root zone. It is a clayey sand with a few charcoal flecks. Layer 3 is a clayey sand, lighter in color (10YR 5/3 brown) than Layer 2; it also has charcoal. Toward the base of the test the sandy soil becomes more compact (Layer 7); the compact sand rests on a gravel unit (Layer 8).

The soils of 58N/56E and 66N/69E are the same, with the exception of a color change in 58N/56E, where there is abundant root material. Most artifacts are from upper Layer 1, decreasing in number as the layers become lighter in color.

Grid 61N/51E was placed in the middle of the gas line drainage ditch. The soil is sandy fill in the upper 62 cm, which becomes compacted at 74 cm (Fig. 5.5). The compactness changes again after Layer 3 to a hard, compact sand that was difficult to excavate. At the bottom of the grid the soil becomes

Table 5.1. LA 60747, ceramic type, vessel form, and paint type by extramural area; counts and percents.

	EA 1		EA 2		EA 3		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Ceramic Type								
Pueblo II corrugated	2	1.4%	–	–	1	1.3%	**3**	**1.0%**
Pueblo II–III corrugated	3	2.1%	–	–	–	–	**3**	**1.0%**
Plain gray	29	19.9%	6	8.3%	22	27.8%	**57**	**19.2%**
Corrugated gray	74	50.7%	34	47.2%	34	43.0%	**142**	**47.8%**
Pueblo II black-on-white	–	–	2	2.8%	2	2.5%	**4**	**1.3%**
Dogoszhi-style black-on-white	–	–	–	–	1	1.3%	**1**	**0.3%**
Early Pueblo III black-on-white	3	2.1%	1	1.4%	3	3.8%	**7**	**2.4%**
Pueblo I–II black-on-white	–	–	1	1.4%	–	–	**1**	**0.3%**
Pueblo II–III black-on-white	2	1.4%	1	1.4%	3	3.8%	**6**	**2.0%**
Pueblo III black-on-white	1	0.7%	4	5.6%	2	2.5%	**7**	**2.4%**
Painted black-on-white	3	2.1%	–	–	–	–	**3**	**1.0%**
Polished white	19	13.0%	15	20.8%	6	7.6%	**40**	**13.5%**
Polished black-on-white	10	6.8%	8	11.1%	5	6.3%	**23**	**7.7%**
Total	**146**	**100.0%**	**72**	**100.0%**	**79**	**100.0%**	**297**	**100.0%**
Vessel Form								
Indeterminate	–	–	–	–	2	2.5%	**2**	**0.7%**
Bowl rim	2	1.4%	2	2.8%	4	5.1%	**8**	**2.7%**
Bowl body	15	10.3%	18	25.0%	8	10.1%	**41**	**13.8%**
Cooking, storage rim	6	4.1%	–	–	4	5.1%	**10**	**3.4%**
Necked jar body	5	3.4%	–	–	1	1.3%	**6**	**2.0%**
Jar body	118	80.8%	52	72.2%	59	74.7%	**229**	**77.1%**
Ladle bowl	–	–	–	–	1	1.3%	**1**	**0.3%**
Total	**146**	**100.0%**	**72**	**100.0%**	**79**	**100.0%**	**297**	**100.0%**
Paint Type								
None	19	50.0%	15	46.9%	6	27.3%	**40**	**43.5%**
Organic	5	13.2%	4	12.5%	5	22.7%	**14**	**15.2%**
Mineral	14	36.8%	13	40.6%	11	50.0%	**38**	**41.3%**
Total	**38**	**100.0%**	**32**	**100.0%**	**22**	**100.0%**	**92**	**100.0%**

a clayey sand. More artifacts, especially chipped stone, were recovered from this grid than any other grid on the site, probably because when the trench was backfilled there were artifacts in the backdirt from the surface. Also, the trench extends up the hill closer to LA 60746 and LA 60748. Among the artifacts from this grid is a well-shaped, side-notched, silicified wood projectile point with a straight base from Level 3 (Fig. 5.6). The other formal tool from the site, a scraper, also comes from this test, Level 5, lower than the projectile point.

Grid 70N/58E consists of a single undifferentiated soil unit. The soil is a fine silty sand suggestive of arroyo fill. Artifacts were found to a depth of 60 cm.

Grid 79N/66E is at the highest point of the site. Only in this grid are rocks present throughout each layer. The modern soils (Layer 1) are a pale brown clay (10YR 6/3) with 13 sherds. No artifacts were found in Layer 3, and the soils changed to yellowish brown (10YR 5/4). This grid had not been disturbed.

The natural gravel bed was reached in each of the grids, if not by excavation, then by auger tests. The gravel depth throughout the site is 50 to 90 cm below the present ground surface.

Table 5.2. LA 60747, lithic artifact and material type by extramural area; counts and percents.

	EA 1		EA 2		EA 3		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Artifact Type								
Debitage	69	86.3%	19	100.0%	9	52.9%	**97**	**83.6%**
Core	5	6.3%	–	–	2	11.8%	**7**	**6.0%**
Retouched/utilized debitage	4	5.0%	–	–	5	29.4%	**9**	**7.8%**
Notch	–	–	–	–	1	5.9%	**1**	**0.9%**
Biface knife/scraper	1	1.3%	–	–	–	–	**1**	**0.9%**
Projectile point	1	1.3%	–	–	–	–	**1**	**0.9%**
Total	**80**	**100.0%**	**19**	**100.0%**	**17**	**100.0%**	**116**	**100.0%**
Material Type								
Chert	39	48.8%	7	36.8%	12	70.6%	**58**	**50.0%**
Chalcedony	2	2.5%	1	5.3%	–	–	**3**	**2.6%**
Silicified wood	12	15.0%	–	–	1	5.9%	**13**	**11.2%**
Quartzite	1	1.3%	–	–	–	–	**1**	**0.9%**
Quartzitic sandstone	2	2.5%	2	10.5%	–	–	**4**	**3.4%**
Igneous	–	–	1	5.3%	–	–	**1**	**0.9%**
Siltstone	24	30.0%	8	42.1%	4	23.5%	**36**	**31.0%**
Total	**80**	**100.0%**	**19**	**100.0%**	**17**	**100.0%**	**116**	**100.0%**

LA 60747: Summary

LA 60747 is probably the result of wash from LA 60746 and LA 60748. The excavations did not reveal any subsurface living surfaces or features. The backhoe trench placed across the lowest edge of the site revealed stratigraphy composed of coarse, medium, and fine sands. The last 44 cm of the profile shows the lamination of water deposits, suggesting flooding in a major drainage. Indeed, a portion of Roomblock 2 at LA 37592, immediately to the east, appears to have been destroyed by flooding. The placement of LA 60748 on the bench above would have avoided these problems.

It is difficult to know if any features were present on the site before the gas line, the highway, and the parking lot were constructed. Although no features are visible from the surface, the unexcavated area outside the right-of-way could contain subsurface features.

Since no features were found it is difficult to estimate the age of the site. Because the materials are washing down from the other two sites on the hill (LA 60746 and LA 60748), we believe that LA 60747 dates to the Pueblo II–III period (ca. AD 950 to 1100 and AD 1100 to 1350). The relative scarcity of organic paint on the pottery suggests that the date is weighted earlier (perhaps pre-1100), but a few sherds of Pueblo III types indicate later use of the area (Table 5.1). In addition to the indications of a later component, a broad temporal range is further suggested by substantial amounts of plain gray pottery and a single, earlier white ware sherd.

The single side-notched projectile point is a later (Pueblo II–III) form (Fig. 5.6). For the most part the lithic assemblage is comparable to that of other sites in the valley. Debitage is heavily dominant in most of the assemblage, though there is an unusual quantity of utilized debitage in Extramural Area 3 (Table 5.2). As is common in the Jackson Lake sites, chert is the most abundant material, followed by siltstone and silicified wood. In keeping with the larger number of utilized flakes in Extramural Area 3, there is also an unusual abundance of chert.

Table 5.3. LA 60747, site stratigraphy by grid unit.

Grid	Layer	Level	Thickness (cm)	Texture	Artifacts	Munsell Color
50N/59E	1	–	8–12	sandy soil	modern trash, 1 flake	10YR 5/3
	2	–	15–16	compact, clean sandy soil	none	10YR 6/3
	3	–	20–22	clayey sand with charcoal	2 sherds	10YR 5/3
	4	–	5–9	clayey sand with charcoal	6 sherds	10YR 6/3
	5	–	10–16	sandy clay with more charcoal	2 sherds	10YR 5/4
	6	–	10–16	sandy clay with charcoal; looser and sandier than Layer 5	7 sherds	10YR 6/4
	7	–	–	sandy clay with charcoal	7 sherds	10YR 6/4
50N/60E	1	–	4–8	modern sand	none	10YR 5/3
	2	–	16–20	loose sand	modern trash	10YR 6/3
	3	–	4–8	sandy clay with charcoal	7 sherds	10YR 5/3
	4	–	14–16	clayey sand	none	10YR 5/3
	5	–	10–16	mottled sand	2 sherds	10YR 5/4
	6	–	4–8	compacted sandy clay with charcoal	1 sherd	10YR 5/3
	7	–	22–26	sand	2 sherds	10YR 6/3
58N/56E	–	1	10–13	modern soil	17 sherds, 3 lithics	10YR 5/4
	–	2	19–20	sand with granular sand	6 sherds, 1 lithic	10YR 5/4
	–	3	15–20	sand with clay	14 sherds, 3 lithics	10YR 5/4
	–	4	5–10	gray silty sand	4 sherds	10YR 7/2
	–	5	5–10	clayey sand with large cobbles	1 sherd	10YR 6/4
58N/67E	–	1	2–4	compact sand	4 sherds	10YR 5/4
	–	2	8–10	sandy clay	none	10YR 6/4
	–	3	9–14	clayey sand with charcoal	none	10YR 6/3
	–	4	6–8	clayey sand	none	10YR 6/4
	–	5	8–14	sandy clay	none	10YR 6/3
	–	6	2–8	clayey sand	none	10YR 6/3
	–	7	4–8	clayey sand	none	2.5Y 6/4
61N/51E	–	1	10–20	sandy soil	29 sherds, 2 lithics	10YR 5/4
	–	2	10–42	sandy fill slightly compacted	11 sherds	10YR 5/4
	–	3	6–12	compact sand	8 sherds, 9 lithics	10YR 5/4
	–	4	8	very compact sand	3 sherds	10YR 5/4
	–	5	12	hard compact sand	11 sherds, 13 lithics	10YR 5/4
	–	6	10–16	clayey sand	10 sherds, 4 lithics	10YR 6/2
	–	7	2–4	sandy clay	2 sherds, 8 lithics	10YR 6/3
	–	8	2–4	sandy clay	1 sherd	10YR 7/2
66N/69E	–	1	5–10	modern soil	1 sherd	10YR 5/4
	–	2	10–15	coarse sand	3 sherds	10YR 6/4
	–	3	15–20	compact sand	1 lithic	10YR 6/3
	–	4	8	fine sandy clay	1 sherd	10YR 6/4
70N/58E	–	1–6	96	fine silty clay	23 sherds	10YR 6/3
79N/66E	–	1	18–20	clay	2 sherds, 2 lithics	10YR 6/3
	–	2	26–32	sticky clay	14 sherds	10YR 4/4
	–	3	4–11	sandy clay	none	10YR 5/4

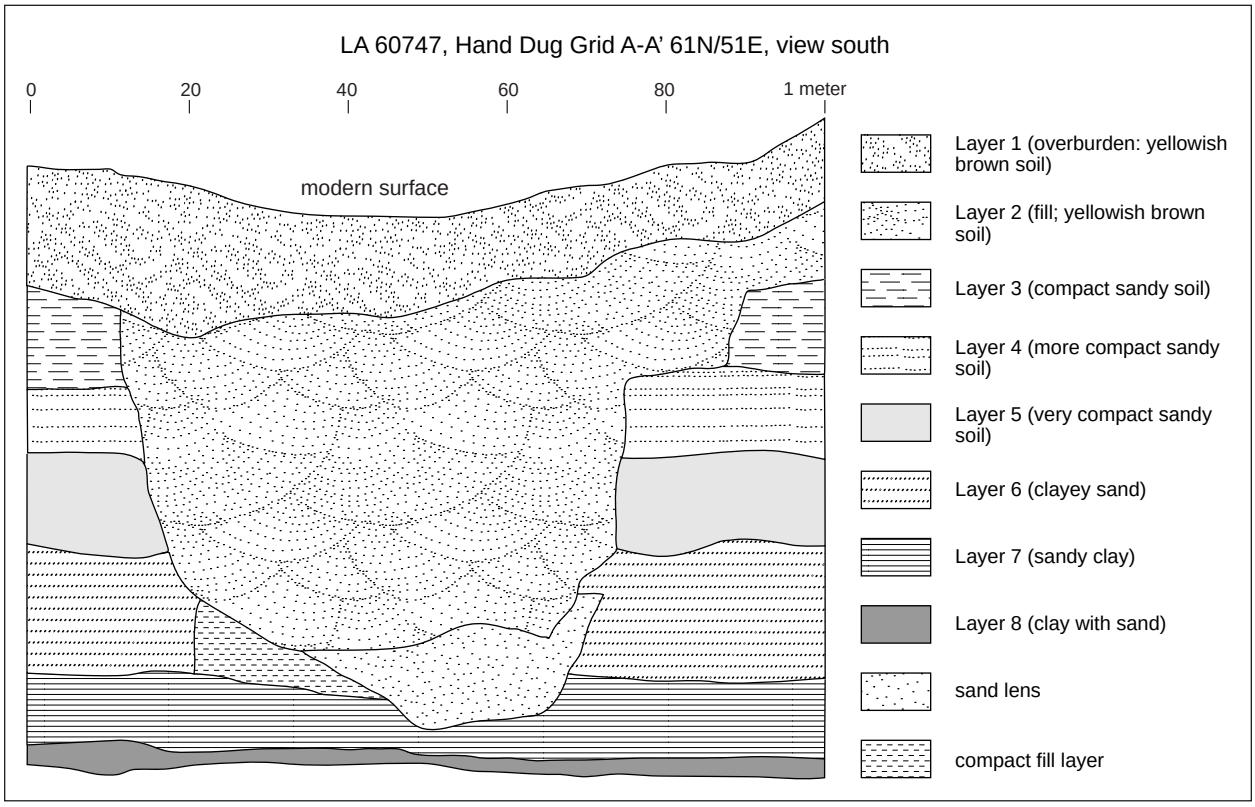


Figure 5.5. LA 60747, south wall profile, 61N/51E.

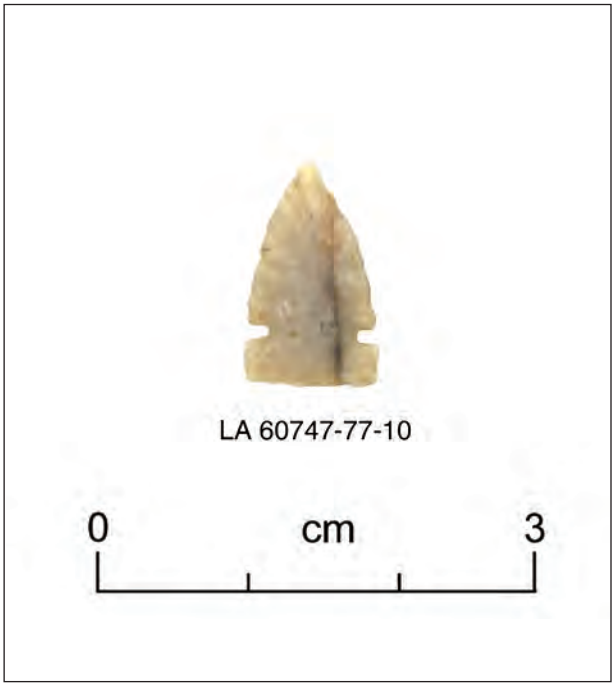


Figure 5.6. LA 60747, Grid 61N/51E, silicified wood projectile point (Pueblo II–III).

6 LA 37596 (Gypsy Joe Site)

Charles A. Hannaford

LA 37596, the Gypsy Joe Site, is part of the prehistoric Jackson Lake community (Figs. pf.1, 1.1). The defined site area for LA 37596 measures about 70 by 67 m (229 by 220 ft), an area of 4,690 sq m (50,488 sq ft). The portion of the site extending into the construction zone is a low-density extramural artifact scatter peripheral to several architectural elements and extramural features within the settlement (Fig. 6.1). The only feature in the right-of-way was the dispersed remnant of a small cobble surface structure. The limited artifact assemblage shows a mixed Pueblo II ceramic component (AD 1000 to 1100) for this probable one-room fieldhouse remnant. The name Gypsy Joe Site was derived from a California license plate found along the road shoulder bearing the letters GYPCJO.

Excavations were conducted intermittently between November 17 and 29, 1988, with a labor expenditure of eight person days. Charles Hannaford served as crew chief, and was assisted by Fred Alfred and Pat Alfred of San Juan College.

Environmental Setting

Terraces associated with the current floodplain and the active channel of the La Plata River, are just over 30 m (98 ft) east of the construction zone. These terraces are currently covered by a dense growth of big sagebrush, with cottonwoods and other riparian vegetation adjacent to the active channel. An old meander scar in the floodplain may have provided an immediate expanse of prime arable land, and the east edge of the site overlooks this lower floodplain.

Cultural manifestations are scattered over another terrace, an alluvial fan skirting the base of the higher Jackson Lake terrace to the west. The elevation of the site is 5,430 ft (1,655 m). This terrace surface is dissected by washes originating in runoff from the steep Jackson Lake terrace (Figs. 6.1, 6.2). The local alluvial soils range from thick clays to laminated fine sand, and large surface areas are characterized by hardpan soils void of vegetation. Contemporary vegetation is dominated by salt bush and cheatgrass. The site inhabitants had the advantage of a variety of nearby resources, including dependable water, arable land, and abundant cobbles for construction and tools.

Archaeological Setting

Lancaster (1982a) recorded LA 37596 during the initial highway survey. His site description is limited to cultural material within the linear highway right-of-way, including a low-density artifact scatter and a cobble scatter possibly representing a one-room structure. Lancaster doubted that the cultural manifestations were intact because of severe erosion and heavy-machinery disturbance. Upon reassessment Toll and Hannaford (1997:46) recommended testing of the cobble concentration and blading to look for features not visible from the surface (Figs. 6.1, 6.2).

LA 37596 is within the prehistoric Jackson Lake community (Fig. 1.20). It is on the east side of the highway and at the north end of the concentration of cultural manifestations comprising the settlement. The site is surrounded by structures and extramural features attesting to the long-term use of the area.

The edge of the cultural terrace, about 35 m (115 ft) east of the right-of-way, served as the east site boundary. This area encompassed the core of the site and contains at least two cobble surface structures

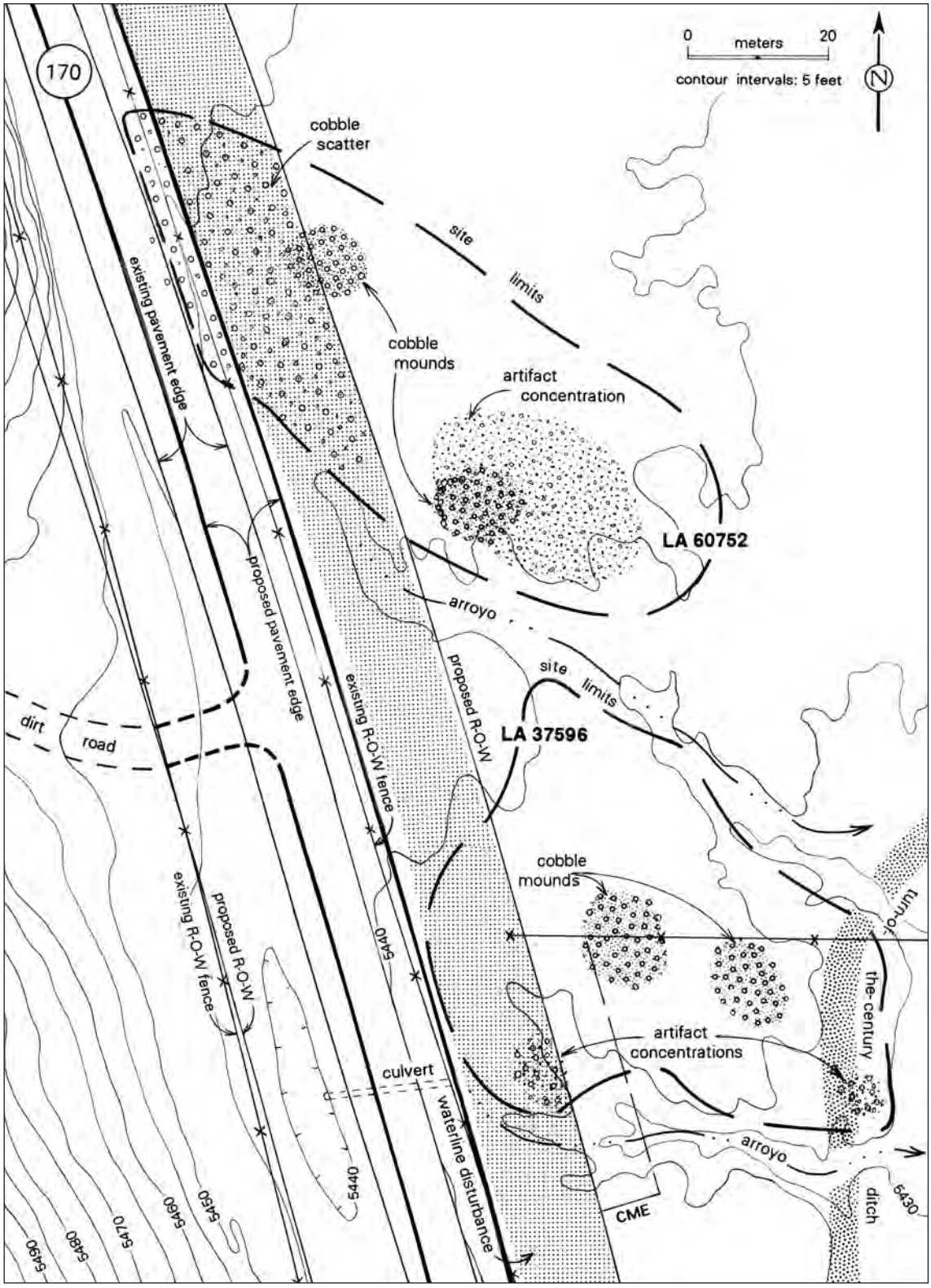


Figure 6.1. LA 37596, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

Figure 6.2. LA 37596, site overview, view northeast, pre-excavation.

and abundant indications of extramural features. These features are discernible as areas of stained-soil artifact scatters and small cobble scatters. This main site area was not systematically surveyed.

The site merges with LA 37595 on the south, and a substantial arroyo marks the site boundary. Four pit structures were excavated at LA 37595, and additional unexcavated cobble and artifact scatters extended east to the terrace edge (LA 60750). Three pit structures have Mid Pueblo II ceramic components, and the fourth pit structure has a Basketmaker III affiliation.

LA 37596 merges with LA 60752 on the north, with an arroyo marking the boundary between the sites. LA 60752 consists of two small unexcavated surface structures with Mid Pueblo II ceramic components, and a similar range of unrecorded cultural manifestations extending east to the terrace edge. The proximity and similarity of LA 37596 and LA 60752 leads to the presentation of materials recovered on common tables and surface material figures. The highway was the arbitrary west boundary. No cultural material was noted west of the highway or on the higher Jackson Lake terrace.

Site Condition

The western portion of LA 37596 has been altered by the close proximity of the highway and associated long-term shoulder and road maintenance. Subsurface utility lines traverse the length of the site, and installation of water lines with heavy machinery in the 1980s impacted nearly half of the site area within the proposed construction zone. A turn-of-the-century irrigation ditch parallels the eastern edge of the terrace, and cultural material was evident in several areas along the ditch. The entire site area is extremely washed and dissected by runoff from the Jackson Lake terrace. Eroded cultural material was observed along the deeply dissected washes, and severe alluvial activity had completely dispersed the only architectural remnant in the right-of-way.

As a postscript, the surface of the privately

owned site area north of the NM Department of Game and Fish boundary was mechanically leveled during a postproject trailer park development (see also Chapter 7, Vol. 1-Book One). All surface manifestations were lost, but deeper subsurface pit structures and features may remain intact.

Field Methods

The primary site datum for LA 37596 was established at 83N/71E with an arbitrary elevation of 0.00 m (Fig. 6.3). The datum was marked with rebar and placed on the east edge of the right-of-way. The north–south baseline was aligned with the highway right-of-way and does not designate magnetic or true north. Grids were provenienced from the southwest corner. The entire site area within the construction zone was surface collected in 12 m by 12 m grids, since we had little confidence in the significance of surface artifact distributions (Fig. 6.4). Artifacts were heavily concentrated in the grid containing the cobble scatter (50N/62E), which contained half of the site surface sherds and more than half of the lithic artifacts.

Subsurface investigations proceeded with the excavation of a 1 by 3 m unit located over the single cobble scatter in the construction zone, the area with the highest concentration of surface artifacts. The trench was dug by hand, and all fill was screened through 1/4-inch mesh screen. This excavation unit confirmed that the cobble scatter was surficial and completely dispersed by erosion.

The search for subsurface cultural manifestations continued with the excavation of four backhoe trenches across the site (Fig. 6.3). No cultural features were encountered by this trenching. With the exception of the feature found at LA 60752, the natural stratigraphy of LA 37596 is similar to that profiled at LA 60752 (see Chapter 7, Fig. 7.6).

Backhoe Trench 1 paralleled the right-of-way fence along the 55E line. This trench was placed in an undisturbed area between the telephone lines on the west and water lines on the east. The 82 m (269 ft) long trench was excavated to a depth of 1.70 m and was culturally sterile.

Backhoe Trench 2 was placed along the 67E grid line to investigate subsurface soil in the proximity of the surface cobble scatter. The 15 m (49 ft) long trench was dug to a depth of 1.30 m and was culturally sterile.

Backhoe Trenches 3 and 4 were established to investigate subsurface fill in the vicinity of the north cobble scatter, about 10 m (33 ft) east of the construction zone (Fig. 6.3). The trenches were established along the 69E grid line. Backhoe Trench 3 was 12 m (39 ft) long, and Backhoe Trench 4 was 7 m (23 ft) long. Both trenches were dug to a depth of 1.50 m below the surface. Neither trench encountered subsurface cultural material.

Stratigraphy

The four backhoe trenches at LA 37596 revealed similar subsurface soil profiles consisting essentially of undisturbed alluvial sediments of sandy clay, or thick brown clay. The sediments are identical with soil profiles encountered at LA 60752 to the north (see Chapter 7, Fig. 7.6). Cultural material in the form of charcoal flecks and infrequent artifacts was confined to Layer 1, extending from the surface to a maximum depth of 50 cm below the surface. The Anasazi occupation was confined to this compact sandy clay layer and was essentially sterile in these backhoe profiles. Layer 1 was followed by natural sterile sediments of laminated fine-grained sandy clay, or thick brown clay. The thick brown clay layer was confined to Backhoe Trench 3 and was encountered from 20 to 50 cm below the surface to the termination of excavation at a depth of 1.30 m.

South Cobble Mound

The south cobble mound was tested by Lancaster (1983), and is on the NM Department of Game and Fish boundary fence and about 14 m (46 ft) east of the construction zone (Fig. 6.3). This cobble mound is 15 m (49 ft) north of the structure remnant in the right-of-way. The rectangular cobble mound measures 10 m (33 ft) north–south by 15 m (49 ft) east–west, with an elevation of about 0.25 m (0.8 ft). Exposed wall alignments indicate an east–west oriented roomblock, and oxidized cobbles show that the structure had burned. The south cobble mound was probably a small structure containing a double row of about six rooms. There was no indication of an associated pit structure or refuse mound to the south, but this area is now heavily eroded. Several areas of stained soil and small cobble clusters surrounded the structure, showing the presence of extramural features. Mineral-painted sherds in the

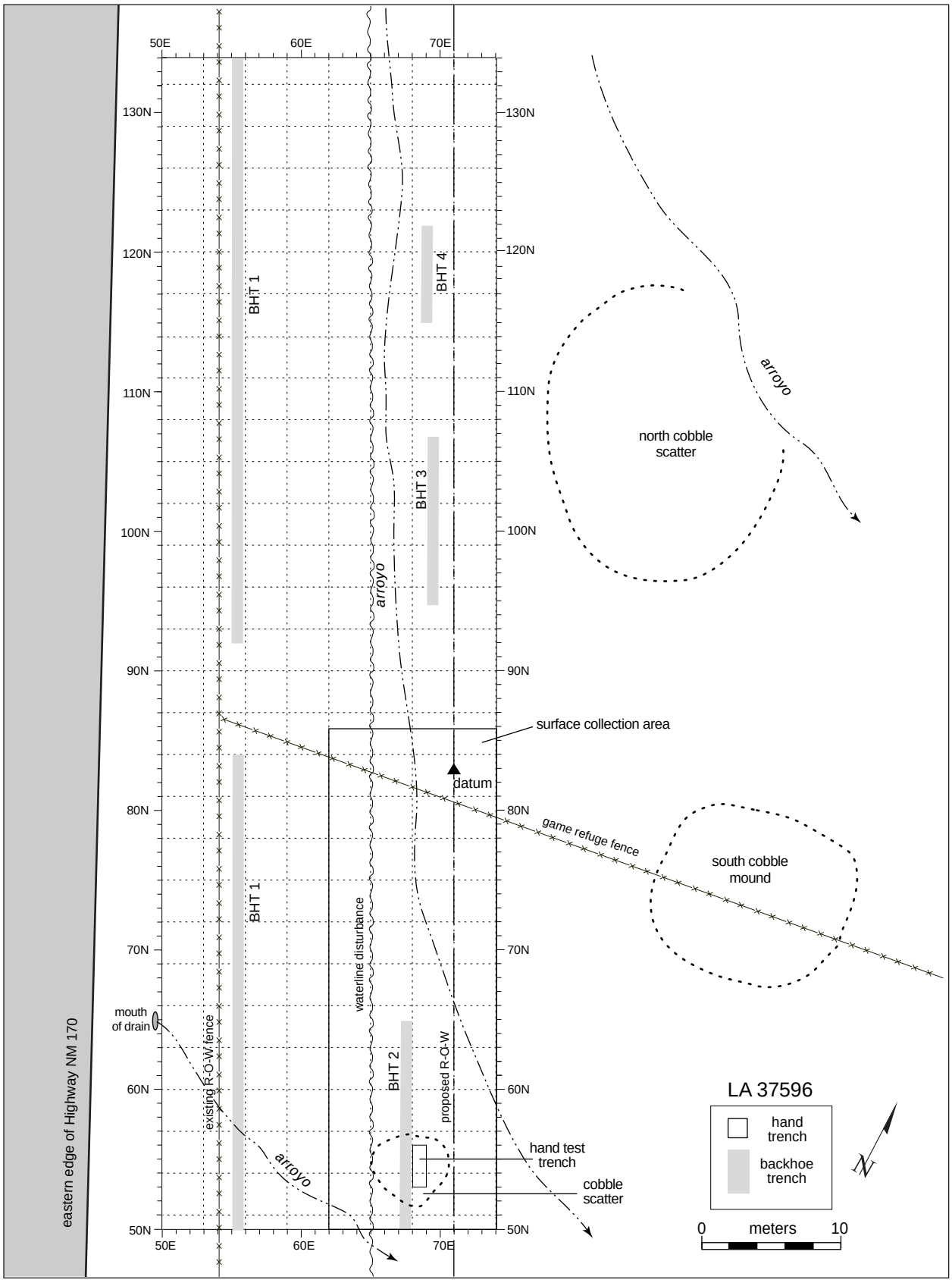


Figure 6.3. LA 37596, site plan.

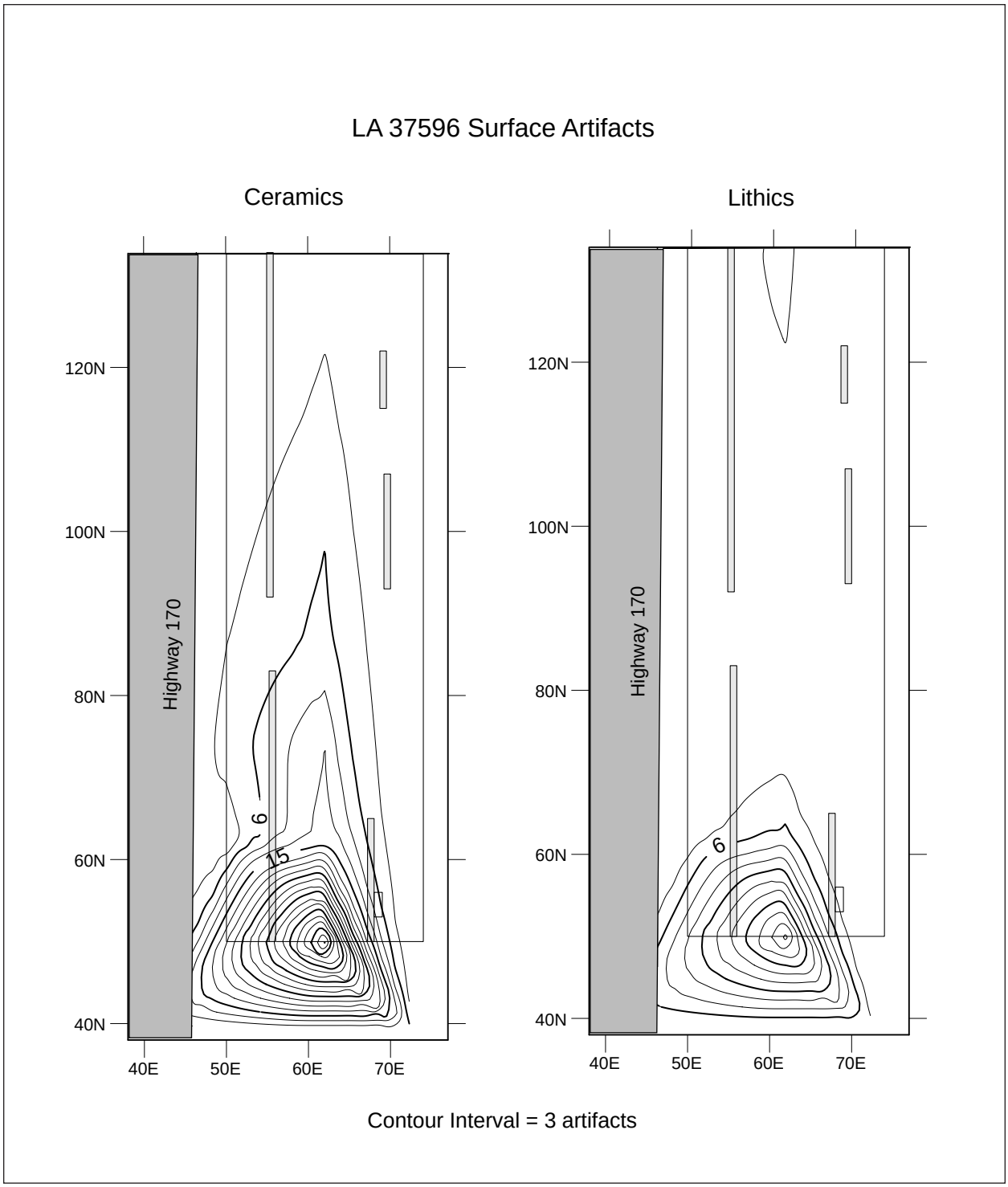


Figure 6.4. LA 37596, surface collection area, distribution and density, ceramics and lithics.

immediate vicinity suggest a Mid Pueblo II age. The portion of the structure extending north of the NM Department of Game and Fish fence was lost during the subsequent trailer park development.

North Cobble Scatter

The north cobble scatter, also tested by Lancaster (1983) and outside the construction zone, was about 17 m (56 ft) north of the south cobble mound and 7 m (23 ft) east of the right-of-way (Fig. 6.3). In turn, this cobble scatter was 10 m (33 ft) south of the south cobble mound recorded at LA 60752. Cobbles were widely scattered over a 20 m (8 ft) north–south by 15 m (49 ft) east–west area. There was no mounding, and neither the rooms nor the orientation of the roomblock was discernible.

This was probably a small surface structure of fewer than five rooms. Cobbles had possibly been scavenged from the cobble scatter for surrounding structure construction, and the cobble scatter was severely eroded. Many cobbles were oxidized, showing that the structure had burned. No extramural features were evident, and surrounding refuse was sparse. Mineral-painted ceramics suggested a Mid Pueblo II occupation. This structure was completely lost during the trailer park development.

EXCAVATION RESULTS

Extramural Area 1

The portion of the site within the construction zone is designated Extramural Area 1 (Fig. 6.3).

Surface Collection

The site area within the construction zone was completely surface collected (Fig. 6.4). Fourteen grids were collected, covering an area of 84 by 24 m (276 by 79 ft), or 2,016 sq m (21,700 sq ft). The surface assemblage consisted of 163 artifacts, including 115 sherds and 48 chipped stone artifacts (Tables 6.1, 6.2). Nearly 80 percent (129) of the artifacts were collected from three contiguous grids along the southeast edge of the collection area. In this area 50N/62E accounted for the highest frequency (95 artifacts), and this grid also contained the dispersed structure remnant. The remaining 11 grids contained 34 artifacts, with densities ranging from 1 to 8 artifacts per 144 sq m (1,550 sq ft) grid.

The three grids containing the highest artifact frequencies are heavily eroded by small north–south trending washes draining directly into the area of the cobble scatter. Artifact distributions are considered mixed, although the collection from 50N/62E contributes the only assemblage possibly associated with the eroded structure. Only 20 sherds were present north of the 86N grid line. As a whole, the small surface assemblage is not considered representative of the primary site area east of the construction zone.

Cobble Scatter

Within the right-of-way and designated site area, a single cobble scatter measuring 6 by 6 m was recorded on an erosional knoll created by the junction of two runoff washes (Fig. 6.3). The cobble scatter was bounded on the north, east, and south by washes, and some 30 construction-sized cobbles averaging 10 by 10 cm were eroding down the south slope. The remaining remnant of the cobble scatter evidenced no mounding or wall alignments, and none of the cobbles were oxidized.

A 1 by 3 m grid-aligned excavation unit was placed in the center of the cobble scatter and excavated to a depth of 80 cm below the surface. The excavation unit confirmed that the cobble scatter was confined to the surface. No subsurface cobbles, cultural staining, or artifacts were encountered. Subsurface soil consisted of natural alluvial sandy clay.

The cobble scatter represents the remains of an estimated one-room surface structure, but the poorly preserved remnant precludes conclusions regarding size and function. Ceramics from the immediate area suggest a Mid Pueblo II occupation.

Table 6.1. LA 37596 and LA 60752, ceramic types by stratigraphic context; counts and percents.

	Extramural Fill		Present Surface		Surface Strip		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Plain rim	–	–	1	0.6%	–	–	**1**	**0.4%**
Pueblo II corrugated	–	–	2	1.1%	1	2.4%	**3**	**1.3%**
Plain gray	–	–	8	4.6%	4	9.5%	**12**	**5.0%**
Corrugated gray	11	50.0%	101	58.0%	33	78.6%	**145**	**60.9%**
Kana'a-style black-on-white	1	4.5%	–	–	–	–	**1**	**0.4%**
Pueblo II black-on-white	3	13.6%	3	1.7%	–	–	**6**	**2.5%**
Chaco-style black-on-white	1	4.5%	–	–	–	–	**1**	**0.4%**
Late Pueblo III black-on-white	–	–	3	1.7%	–	–	**3**	**1.3%**
Pueblo II–III black-on-white	–	–	13	7.5%	–	–	**13**	**5.5%**
Polished white	5	22.7%	35	20.1%	3	7.1%	**43**	**18.1%**
Polished black-on-white	1	4.5%	6	3.4%	1	2.4%	**8**	**3.4%**
Squiggle hachure black-on-white	–	–	1	0.6%	–	–	**1**	**0.4%**
Kayenta red (indeterminate)	–	–	1	0.6%	–	–	**1**	**0.4%**
Total	**22**	**100.0%**	**174**	**100.0%**	**42**	**100.0%**	**238**	**100.0%**
Total, LA 60752	**20**	**90.9%**	**59**	**33.9%**	**42**	**100.0%**	**121**	**50.8%**
Total, LA 37596	**2**	**9.1%**	**115**	**66.1%**	**–**	**–**	**117**	**49.2%**
Total, LA 60752 and LA 37596	**22**	**100.0%**	**174**	**100.0%**	**42**	**100.0%**	**238**	**100.0%**

Table 6.2. LA 37596 and LA 60752, chipped stone artifact type by stratigraphic context; counts and percents.

	Extramural Fill		Present Surface		Surface Strip		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Debitage	11	78.6%	64	74.4%	24	77.4%	**99**	**75.6%**
Core	2	14.3%	11	12.8%	5	16.1%	**18**	**13.7%**
Retouched, utilized debitage	1	7.1%	10	11.6%	2	6.5%	**13**	**9.9%**
Retouched, utilized core	–	–	1	1.2%	–	–	**1**	**0.8%**
Total	14	100.0%	86	100.0%	31	100.0%	**131**	**100.0%**
Total, LA 37596	**3**	**21.4%**	**48**	**55.8%**	**–**	**–**	**51**	**38.9%**
Total, LA 60752	**11**	**78.6%**	**38**	**44.2%**	**31**	**100.0%**	**80**	**61.1%**
Total, LA 60752 and LA 37596	**14**	**100.0%**	**86**	**100.0%**	**31**	**100.0%**	**131**	**100.0%**

LA 37596: Material Culture

The 169 artifacts collected from LA 37596 within the construction zone included 117 sherds (Table 6.1), 51 chipped stone artifacts (Table 6.2), and one ground stone artifact. The majority of the artifacts were collected from surface grids, and four artifacts were collected from Layer 1 during the monitoring of Backhoe Trench 1.

Ceramics Artifacts

The small sherd assemblage at LA 37596 indicates a Mid Pueblo II ceramic component dating between AD 1000 and 1075. Corrugated gray is the most numerous sherd type, and diagnostic white wares are infrequent (Tables 6.1, 6.3, 6.4). The ratio of gray wares to white wares is 2.78:1, and the assemblage

is confined to jar and bowl sherds (Tables 6.3, 6.4). A single Late Pueblo III bowl sherd is decorated with organic paint, but the remaining 15 decorated white ware sherds are painted with mineral paint.

Two subsurface sherds were recovered from Layer 1 of Backhoe Trench 1 during monitoring, but the remaining 115 sherds were collected from the surface grids (Table 6.1). The spatial distribution of these surface artifacts is considered mixed. However, the 61 sherds from the 50N/62E surface—the grid containing the structure remnant—provide the only assemblage for appraising the temporal association of the feature. These 61 sherds are essentially a diminished cross section of ceramic types recovered from the assemblage as a whole. Corrugated gray accounted for 45 of the sherds, and diagnostic white wares are poorly represented. The five decorated sherds are painted with mineral pigments. The small assemblage from the grid supports a Mid Pueblo II occupation for the eroded cobble structure, but confidence in this inference must be tempered by the poor surface context.

Chipped Stone Artifacts

The chipped stone assemblage totals 51 specimens. The majority of the artifacts were collected from the surface grids and 50N/62E (Table 6.2). The eroded cobble structure again contained over half of the artifacts (Figs. 6.3, 6.4). Three additional subsurface artifacts were collected from Layer 1 of Backhoe

Table 6.3. LA 37596 and LA 60752, ceramic type, vessel form, and paint type; counts and percents.

	LA 37596		LA 60752		Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
Ceramic Type						
Plain rim	–	–	1	0.8%	**1**	**0.4%**
Pueblo II corrugated	1	0.9%	2	1.7%	**3**	**1.3%**
Plain gray	3	2.6%	9	7.4%	**12**	**5.0%**
Corrugated gray	82	70.1%	63	52.1%	**145**	**60.9%**
Kana'a-style black-on-white	–	–	1	0.8%	**1**	**0.4%**
Pueblo II black-on-white	2	1.7%	4	3.3%	**6**	**2.5%**
Chaco-style black-on-white	–	–	1	0.8%	**1**	**0.4%**
Late Pueblo III black-on-white	1	0.9%	2	1.7%	**3**	**1.3%**
Pueblo II–III black-on-white	9	7.7%	4	3.3%	**13**	**5.5%**
Polished white	15	12.8%	28	23.1%	**43**	**18.1%**
Polished black-on-white	3	2.6%	5	4.1%	**8**	**3.4%**
Squiggle hachure black-on-white	1	0.9%	–	–	**1**	**0.4%**
Kayenta red (indeterminate)	–	–	1	0.8%	**1**	**0.4%**
Total	**117**	**100.0%**	**121**	**100.0%**	**238**	**100.0%**
Vessel Form						
Bowl rim	5	4.3%	4	3.3%	**9**	**3.8%**
Bowl body	14	12.0%	33	27.3%	**47**	**19.7%**
Cooking, storage rim	2	1.7%	3	2.5%	**5**	**2.1%**
Necked jar body	30	25.6%	18	14.9%	**48**	**20.2%**
Jar body	66	56.4%	63	52.1%	**129**	**54.2%**
Total	**117**	**100.0%**	**121**	**100.0%**	**238**	**100.0%**
Paint Type						
None	14	46.7%	28	62.2%	**42**	**56.0%**
Organic	1	3.3%	5	11.1%	**6**	**8.0%**
Mineral	15	50.0%	12	26.7%	**27**	**36.0%**
Total	**30**	**100.0%**	**45**	**100.0%**	**75**	**100.0%**

Table 6.4. LA 37596 and LA 60752, vessel forms, counts by ceramic type.

	Bowl Rim	Bowl Body	Jar Rim	Jar, Necked	Jar Body	Total
LA 37596						
Pueblo II corrugated	–	–	1	–	–	**1**
Plain gray	–	–	–	–	3	**3**
Corrugated gray	–	–	1	29	52	**82**
Pueblo II black-on-whilte	1	1	–	–	–	**2**
Late Pueblo III black-on-white	1	–	–	–	–	**1**
Pueblo II–III black-on-white	1	3	–	–	5	**9**
Polished white	1	7	–	1	6	**15**
Polished black-on-white	–	3	–	–	–	**3**
Squiggle hachure black-on-white	1	–	–	–	–	**1**
Total	**5**	**14**	**2**	**30**	**66**	**117**
LA 60752						
Plain rim	1	–	–	–	–	**1**
Pueblo II corrugated	–	–	2	–	–	**2**
Plain gray	–	–	1	3	5	**9**
Corrugated gray	–	–	–	14	49	**63**
Kana'a-style black-on-white	–	–	–	–	1	**1**
Pueblo II black-on-whilte	2	2	–	–	–	**4**
Chaco-style black-on-white	1	–	–	–	–	**1**
Late Pueblo III black-on-white	–	2	–	–	–	**2**
Pueblo II–III black-on-white	–	2	–	–	2	**4**
Polished white	–	23	–	1	4	**28**
Polished black-on-white	–	3	–	–	2	**5**
Kayenta red (indeterminate)	–	1	–	–	–	**1**
Total	**4**	**33**	**3**	**18**	**63**	**121**
Table Total	**9**	**47**	**5**	**48**	**129**	**238**

Trench 1 during monitoring. These included a piece of utilized siltstone debitage, chert debitage, and a siltstone core.

The stone tool assemblage is manufactured from five locally available material types (Tables 6.5, 6.6). Chert and siltstone have the highest frequencies and account for the broadest range of tool types, including cores, debitage, and utilized debitage. The small assemblage is composed mainly of debitage derived from core-reduction. Actual visible tool production and use is limited to three pieces of debitage with utilized edges and a core utilized as a hammerstone. A single chert flake has two utilized edges exemplified by a notch and a marginally retouched edge. The small recovered assemblage is composed of mixed surface artifacts marginal to several architectural elements and is not considered representative of the full range of activities associated with the structures.

Ground Stone Artifacts

A single fine-grained sandstone mano fragment was collected from Layer 1 of Backhoe Trench 2 during monitoring at LA 37596 (Table 6.7). Although ground stone artifacts are poorly represented in the portion of the site within the construction zone, several mano fragments were observed in the main site area to the east.

LA 37596: Summary

The portion of LA 37596 within the construction zone is a low-density extramural artifact scatter marginal to at least three small-sized cobble surface structures. Backhoe trenches established that essentially no subsurface cultural material extended west of the structures, and that the primary site area is outside of the construction zone. The cobble

Table 6.5. LA 37596 and LA 60752, chipped stone artifact and material type; counts and percents.

	LA 60752		LA 37596		Total	
	Count	Col. %	Count	Col. %	Count	Col. %
Artifact Type						
Debitage	58	72.5%	41	80.4%	**99**	**75.6%**
Core	12	15.0%	6	11.8%	**18**	**13.7%**
Retouched/utilized debitage	10	12.5%	3	5.9%	**13**	**9.9%**
Retouched/utilized core	–	–	1	2.0%	**1**	**0.8%**
Total	**80**	**100.0%**	**51**	**100.0%**	**131**	**100.0%**
Material Type						
Chert	36	45.0%	21	41.2%	**57**	**43.5%**
Chalcedony	2	2.5%	1	2.0%	**3**	**2.3%**
Silicified wood	12	15.0%	2	3.9%	**14**	**10.7%**
Quartzitic sandstone	7	8.8%	7	13.7%	**14**	**10.7%**
Sandstone	1	1.3%	–	–	**1**	**0.8%**
Siltstone	22	27.5%	20	39.2%	**42**	**32.1%**
Total	**80**	**100.0%**	**51**	**100.0%**	**131**	**100.0%**

Table 6.6. LA 37596 and LA 60752, chipped stone material type, counts by artifact type.

	Chert	Chalcedony	Silicified Wood	Quartzitic Sandstone	Siltstone	Total
LA 37596						
Debitage	17	1	2	6	15	**41**
Core	2	–	–	1	3	**6**
Utilized debitage	1	–	–	–	2	**3**
Utilized core	1	–	–	–	–	**1**
Total	**21**	**1**	**2**	**7**	**20**	**51**
LA 60752						
Debitage	28	2	7	6	15	**58**
Core	3	–	2	1	6	**12**
Utilized debitage	5	–	3	1	1	**10**
Total	**36**	**2**	**12**	**8**	**22**	**80**
Table Total	**57**	**3**	**14**	**15**	**42**	**131**

LA 60752 quartzitic sandstone includes one piece of sandstone debitage.

Table 6.7. LA 37596 and LA 60752, ground stone, material and artifact type, size, and weight, by provenience.

FS	Provenience	Material	Artifact	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)
LA 60752*							
1-1	Backhoe Trench 1	sandstone	abrading stone	53	39	17	48
1-2	Backhoe Trench 1	siltstone	mano	64	75	45	309
16-1	169N/71E Level 1	jet	ornament	34	21	9	6
LA 37596**							
2-1	Backhoe Trench 2	sandstone	mano	100	88	51	650

*All dimensions are complete except mano length.
**Length and width are incomplete dimensions.

scatter in the right-of-way is interpreted as the poorly preserved remains of an estimated one-room surface structure functioning as a fieldhouse. The small artifact assemblage collected in the immediate vicinity suggests a Mid Pueblo II ceramic component. The other two structures are probably habitation structures with more substantial occupations, and ceramics show contemporary Mid Pueblo II occupations. The small artifact assemblage from the linear right-of-way does not embody the range of activities associated with the architectural elements and extramural features comprising the main site area. However, both collected ceramics and observed surface ceramics suggest a primary Mid Pueblo II ceramic component for the structures.

Currently, only the site area administered by the NM Department of Game and Fish remains intact and protected. The surviving architecture and other site elements are important for understanding settlement within the community context. The predominantly Mid Pueblo II features may additionally mask buried Basketmaker components comparable to those discovered at LA 37595, immediately south of the site. These earlier components are important for understanding the long-term development of the community. Archaeological material preserved in the main site area should be regarded with even greater significance, considering the unfortunate loss of so much of the northern prehistoric community during the trailer park development.

7 LA 60752 (Far Site)

Charles A. Hannaford

LA 60752, the Far Site, is part of the high concentration of cultural manifestations forming the prehistoric Jackson Lake community (Figs. pf.1, 1.1). The site is on the east side of NM 170 about 8 km (5.0 mi) north of the confluence of the La Plata River with the San Juan River. The two cobble mounds constituting the primary site elements are surface structures with fewer than five rooms outside of the construction zone. The portion of the site within the highway right-of-way is characterized by a peripheral extramural scatter of largely mixed artifacts. Our excavations encountered one extramural roasting feature and a low-density subsurface refuse area associated with the north cobble mound. Recovered ceramics are indicative of a Mid Pueblo II occupation (AD 1000 to 1100) for both cobble mounds.

An additional manifestation consisted of an irregular charcoal lens exposed in a backhoe profile at a depth of 1.60 m below the present ground surface. A radiocarbon sample of the charcoal produced a calibrated age of 1261 BC (Beta-41361; Appendix 4), but no surrounding cultural material was found associated with the lens. The apparent landscape burn demonstrates the depth at which possible Archaic manifestations might occur in contrast to the overlying Anasazi materials.

While excavations continued at various sites at the south end of the community, the location of LA 60752 at the far north end of the Jackson Lake community was the initial impetus for naming it the Far Site—this, and the play on words with Gary Larson's *Far Side* cartoons. The site was initially recorded during Toll and Hannaford's (1997) resurvey of the proposed highway construction zone (Fig. 7.1).

Excavations were conducted intermittently between November 17 and December 5, 1988, with a labor expenditure of eight person days. Charles Hannaford served as crew chief, and was assisted by Fred Alfred and Pat Alfred of San Juan College.

Environmental Setting

The current floodplain of the La Plata River, with its rich assortment of riparian plant species, is about 0.5 km (0.3 mi) east of the site, and the steep, cobble-mantled slope of the Jackson Lake terrace begins immediately west of NM 170. This higher Jackson Lake terrace rises to an elevation of about 5,500 ft (1,676 m), providing a panoramic view of the community below. LA 60752 sits on a lower terrace, at an elevation of 5,444 ft (1,659 m). The terrace surface is level and currently covered by various shrubs and grasses (Fig. 7.2). Local soils are alluvial.

Resources immediately available to the site inhabitants included the nearby reliable water source of the La Plata River, riparian zone plants and animals, arable land, and abundant cobbles for building and stone-tool production. Fuelwood and game are readily accessible in the hinterland of Piñon Mesa, across open terrain about 1 km (0.6 mi) northwest of the site.

Archaeological Setting

Toll and Hannaford (1997) recorded LA 60752 during resurvey of the proposed highway construction zone (Fig. 7.1). The site was visible as two small-sized cobble mounds, and cultural material within the proposed construction zone was sparse. Of interest was the discovery of a bottle on the eastern margin of the site containing the

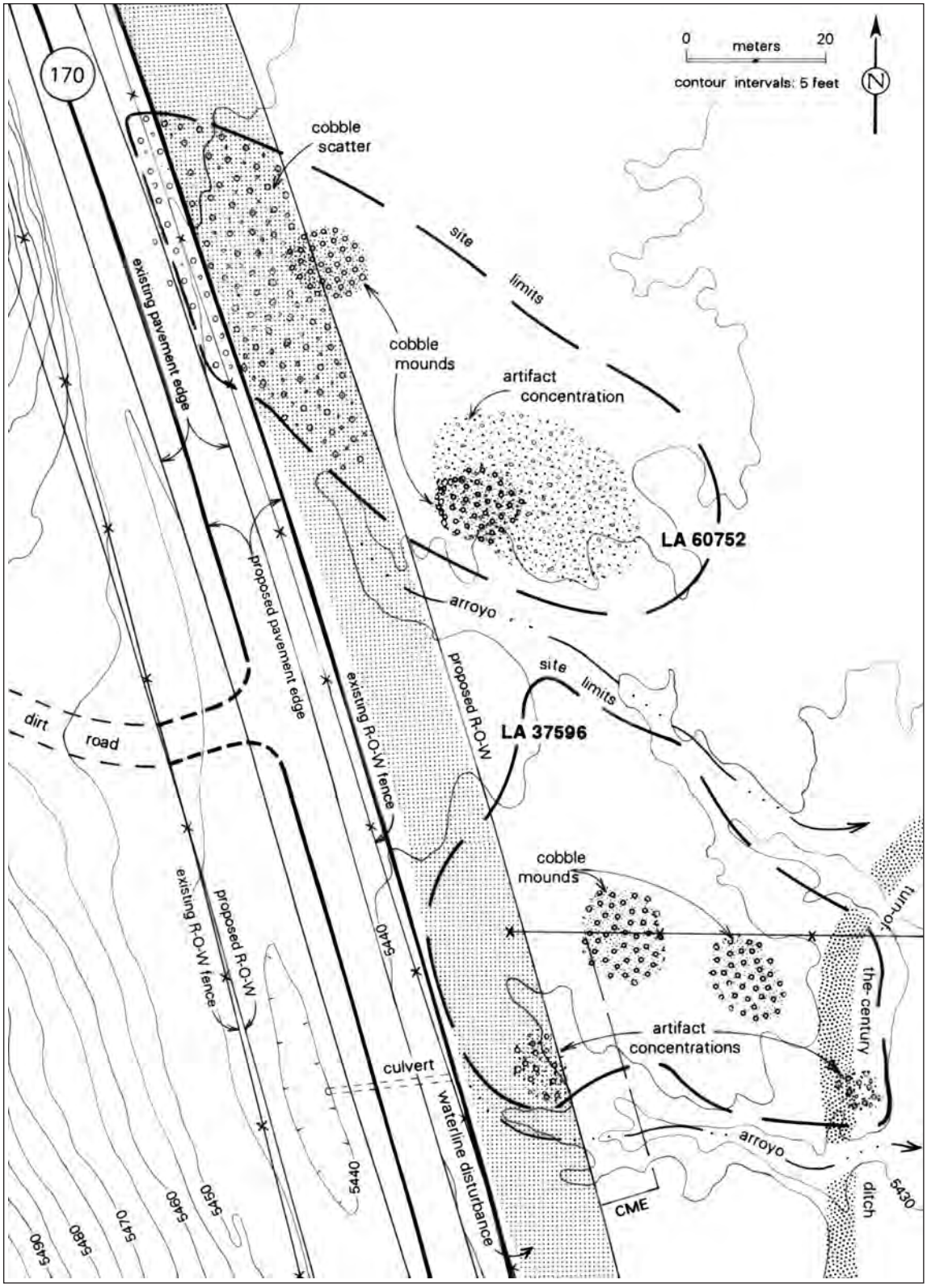


Figure 7.1. LA 60752, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

Figure 7.2. LA 60752, site overview, view east, pre-excavation.

message "O'Brien 78 survey." This note may refer to archaeological survey and testing carried out in the area by the San Juan Valley Archaeological Project. The project recorded some 150 sites in the valley, but information on these sites is poorly represented in the NMCRIS files at ARMS.

LA 60752 is one of the concentration of sites defining the Jackson Lake community (Fig. 1.20). It is at the northern extremity of a continuous 1.5 km (0.9 mi) stretch of sites adjacent to the highway as it transects the western edge of this prehistoric community. Numerous closely spaced cobble mounds cover the terrace surface for about 1 km (0.6 mi) north, northeast, and east of the site. The Jackson Lake locality shows long-term Anasazi residential use from Basketmaker III to the Pueblo III abandonment.

Sites were initially recorded by their proximity to and overlap with the linear construction zone, but defining site boundaries within this concentration of cultural manifestations was necessarily a subjective exercise. Two closely spaced cobble mounds served as the nucleus of LA 60752, but site boundaries were arbitrary designations. A small arroyo on the south was used to separate the site from LA 37596, which is characterized by a similar layout of Mid Pueblo II cobble structures outside of the construction zone. The eastern edge of LA 60752 was indistinct and merged with the high concentration of unrecorded cultural manifestations extending across the terrace.

Lower artifact frequencies defined the north boundary, and a spatial artifact hiatus of about 90 m (295 ft) isolated the site from the next group of cobble mounds at LA 37597. LA 37597 contained three similar Mid Pueblo II residential cobble mounds outside of the construction zone, and a surrounding artifact scatter on both sides of the highway. The highway separated the western edge of LA 60752 from the base of the Jackson Lake terrace. No cultural manifestations were observed west of the highway or on top of the higher terrace.

Site Condition

The LA 60752 south cobble mound was severely eroded by the convergence of two small arroyos. Weathering had dislodged numerous cobbles and exposed wall alignments. In contrast, vegetation has made the north cobble mound more stable.

The portion of the site within the construction zone was also severely washed by runoff from the west terrace slope. In addition, the integrity of this area had been affected by over 100 years of road and shoulder maintenance, and the placement of water and telephone lines along the length of the site.

Although both cobble mounds were originally preserved outside of the construction zone, subsequent land development severely impacted both the site and the surrounding prehistoric community. The private land encompassing the northern segment of the prehistoric Jackson Lake community was developed into a trailer park in the early 1990s (Fig. 7.3). The terrace surface was bladed flat to accommodate the development, removing all traces of surface cultural manifestations. Both cobble mounds at LA 60752 were lost, along with numerous unrecorded cultural manifestations extending east across the prehistoric community to the terrace edge. This action dramatically continues into the present century and compromises the long-term history of settlement succession distinguishing the Jackson Lake community. Future researchers should be conscious that although the blading removed numerous surface structures and associated extramural features, subsurface pit structures and deeper features are probably still intact. I expect numerous pit structures and other subsurface features ranging from Basketmaker III to Pueblo III are undisturbed beneath the trailer park.

Field Methods

The primary site datum for LA 60752 was established at 174N/70E with an arbitrary elevation of 0.00 m (Fig. 7.4). The datum, marked with rebar, was positioned about 3 m (10 ft) outside of the

Figure 7.3. LA 60752, site area, post-excavation development overview, view northeast.

construction zone. Base lines extended 36 m (118 ft) north, 24 m (79 ft) west, and 36 m (118 ft) south from the datum. The edge of the right-of-way extended along the 71E line. The north–south base line, aligned with the edge of the highway right-of-way, designates neither magnetic nor true north. Grids were identified by their southwest corners.

The portion of the site within the construction zone lacked surface evidence of features or artifact concentrations (Fig. 7.5). The low frequency scatter of artifacts was spatially modified by erosional sheet wash and mechanical activities associated with utility installations in the 1980s. Due to the high degree of surface disturbance, surface collection employed 12 by 12 m grids.

Subsurface investigations proceeded with the excavation of three backhoe trenches:

Backhoe Trench 1 was located along the 56E line, within a narrow undisturbed strip between the right-of-way fence and water lines (Fig. 7.4). The 72 m (236 ft) long trench extended the length of the site and was excavated to an average depth of 2 m below the surface.

Backhoe Trench 2 was established to investigate subsurface fill adjacent to the south cobble mound. The 11 m (36 ft) long trench extended grid north from 141N/70E and was dug to a depth of 1.10 m.

Backhoe Trench 3 was positioned to investigate subsurface fill in the vicinity of the northern cobble mound. The 21 m (69 ft) long trench extended grid north from 167N/69E and had an average depth of 1.20 m. A single extramural feature (Feature 1, a roasting pit) and light subsurface refuse was encountered in Layer 1 of this trench (Fig. 7.6). Two grid-oriented excavation units were positioned to investigate the area around the feature. These units were excavated by hand, along with the remaining portion of the feature. Fill was screened through 1/4-inch screen.

Stratigraphy

The backhoe trenches revealed similar stratigraphic profiles, characterized by alluvial sands and clays (Fig. 7.6). The Anasazi occupation is confined to Layer 1, but the portion of the site within the construction zone contains only light charcoal flecking and infrequent artifacts.

Layer 1 is a brown (10YR 5/3), very compact fine-grained sandy clay extending from the surface to a depth of 20 to 50 cm. The layer has a blocky structure and a fairly high carbonate content. The layer is associated with alluvial fan deposition originating from the nearby Jackson Lake terrace. The compact nature of the layer is probably attributable to clay content derived from clay deposits exposed on the terrace slope. Cultural material in the form of charcoal flecking and artifacts is limited to this layer, and this material is from the Anasazi occupation.

Layer 2 extends from about 50 cm below the surface to a depth of 1.60 m and is characterized by laminated medium-grained sand (10YR 6/3). The boundary between Layers 1 and 2 is indistinct, and Layer 2 is only slightly less compact. Layer 2 is associated mainly with low-energy deposition with few gravel or cobble lenses. A thin charcoal lens was noted at one locality in Backhoe Trench 1, but no cultural material was encountered in this layer.

Layer 2.1 was encountered only in Backhoe Trench 3. The layer, directly beneath Layer 1 in this trench, is a thick brown (10YR 5/3) very compact clay. This clay layer averages about 60 cm thick and was encountered from between 30 and 50 cm down to a depth of 1.0 m below the surface. This clay is so compact that the backhoe had difficulty penetrating the layer. Similar clay beds were exposed on the Jackson Lake terrace slope to the west. No cultural material was encountered in the layer.

Layer 3 is a fine- to medium-grained unlaminated sandy clay (10 YR 6/3), similar to Layer 1 but not as compact. The layer was culturally sterile. In Backhoe Trench 1 the layer was beneath Layer 2 from 1.6 m to the termination of excavation at a depth of 2.0 m. Layer 3 underlies the thick brown clay layer in Backhoe Trench 3 from a depth of about 1.0 m to the end of excavation at 1.2 m below the surface. Layer 3 was not encountered in Backhoe Trench 2.

North and South Cobble Mounds

The primary architectural site elements, represented by the north and south cobble mounds, are preserved outside of the construction zone. (Lancaster 1982a) These cobble mounds are located on private land, and no collections or excavations were carried out on these features. Archaeological investigations were restricted to the low-density peripheral artifact scatters extending along the western margins of these structures. Descriptions of the cobble mounds

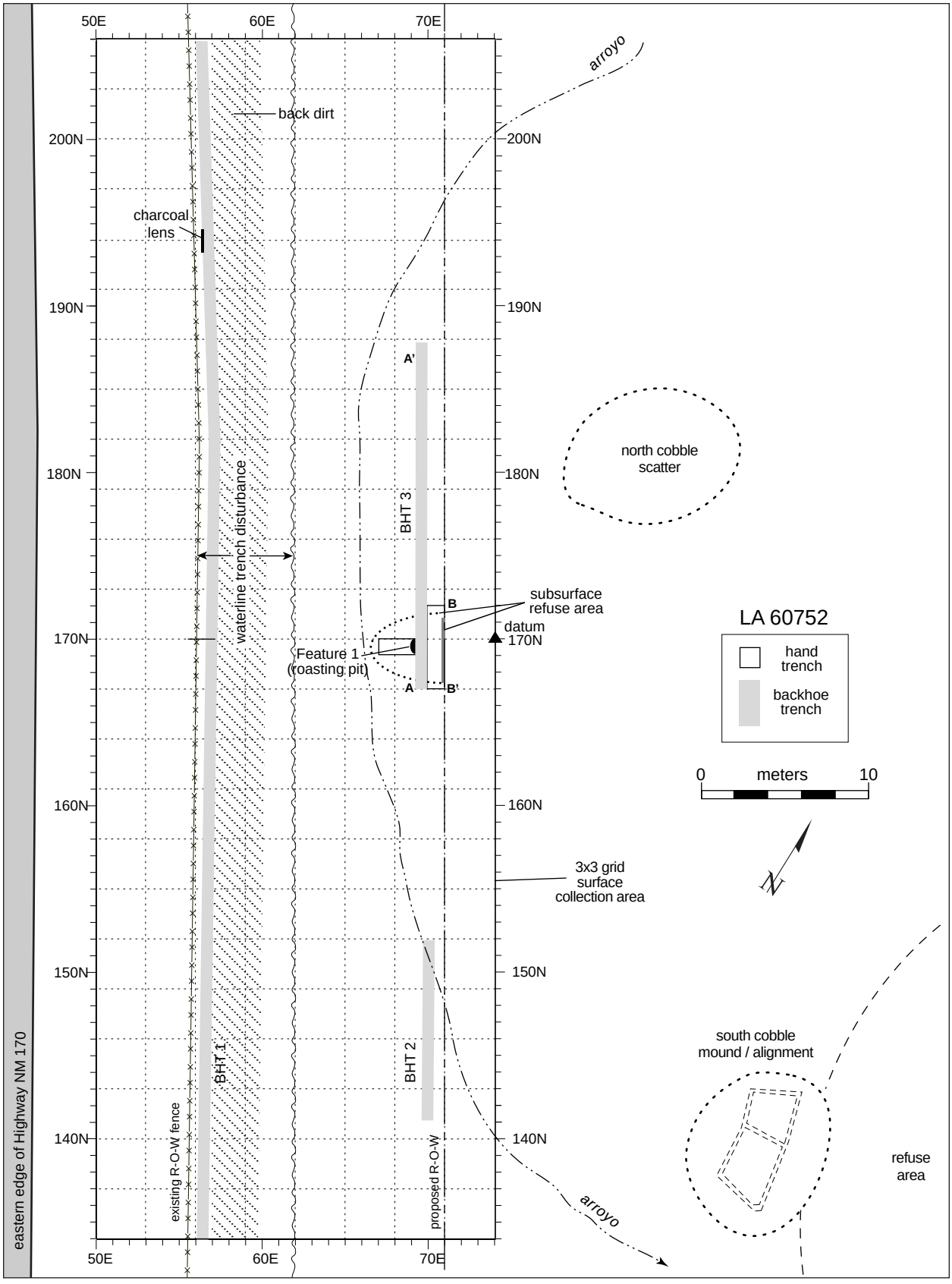


Figure 7.4. LA 60752, site plan.

are provided to place in context the meager cultural material encountered in the construction zone.

North Cobble Mound

The north cobble mound is about 7 m (23 ft) outside of the project limits. This rectangular cobble mound measures 11 m (36 ft) east–west by 8 m (26 ft) north–south by 0.25 m (0.8 ft) tall. The cobble mound represents the remains of a roomblock estimated to have had two to five one-story rooms. The long axis of the rooms was probably oriented east–west, but no wall alignments were observed. The cobble mound was well preserved and covered with shrubs. Exposed cobbles showed no oxidation or other indications that the structure had burned. There was no surface evidence of an associated pit structure or refuse area south of the cobble mound. Very little surface trash surrounds the structure, and no extramural features were observed.

South Cobble Mound

The south cobble mound is 15 m (49 ft) outside of the project limits, about 33 m (108 ft) south of the north cobble mound. The rectangular cobble mound measures 10 m (33 ft) north–south by 8 m (26 ft) east–west and is 0.25 m (0.8 ft) high. The cobble mound is heavily weathered, and exposed wall alignments define a two-room structure. The long dimension of the rooms is north–south. The southern room measures 2.5 by 3.5 m (8.2 by 9.8 ft) with a floor area of 8.75 sq m (94.2 sq ft). The northern room measures 2.5 by 3.0 m (8.2 by 9.8 ft) with a floor area of 7.5 sq m (80.7 sq ft). Exposed walls were constructed of single cobbles averaging 15 by 10 cm set end to end. Oxidation on many cobbles suggested that the structure had burned.

Extensive refuse including construction cobbles is scattered over a 35 by 35 m (115 by 115 ft) area east of the structure. There is no surface indication of an associated pit structure or extramural features, but the abundant refuse suggests a unit dwelling aligned toward the east. The abundant refuse indicates an intensive occupation, considering the apparently small size of the surface structure, compared to the meager surface refuse at the northern cobble mound. The trash scatter was eroded by the convergence of three small arroyos in this area. The bottle with the note alluding to the 1978 San Juan Valley Archaeology Survey was found along the east edge of the trash scatter.

EXCAVATION RESULTS

Extramural Area 1

LA 60752 as defined measured about 100 by 65 m (328 by 213 ft), with an area of 6,500 sq m (69,966 sq ft) (Fig. 7.4). The site area within the construction zone was a peripheral strip along the western edge of the cobble mounds. This portion of the site was arbitrarily designated Extramural Area 1.

Surface Collection

The site area within the construction zone was completely surface collected. Twelve grids were collected over an area of 72 by 24 m (236 by 79 ft), or 1,728 sq m (18,600 sq ft). The surface assemblage consists of 97 artifacts, including 59 sherds and 38 chipped stone artifacts. Artifact density ranges from 1 to 26 artifacts per grid (Fig. 7.5; Tables 6.1, 6.2). Eight grids have a density of six or fewer artifacts, and the remaining three grids each contain an average of 25 artifacts. The three grids with the higher artifact densities are contiguous with the north cobble mound from 158N/62E to 182N/62E. The majority (84) of the surface artifacts were collected north of the 158N line and are most likely associated with the north cobble mound. However, the surface assemblage is considered very mixed.

Roasting Pit (Feature 1)

The only cultural feature encountered in the construction zone was a cobble-lined roasting facility exposed in the west profile of Backhoe Trench 3 (Figs. 7.4, 7.6). The feature was located within 169N/69E. Unfortunately, the larger portion of the feature had been removed by the backhoe. The surviving portion was from the western margin of the feature and consisted of a stack of highly oxidized cobbles. Soil behind the cobbles was unoxidized. Cobbles measuring 10 by 5 cm were stacked in two remaining courses, and the surviving segment was 30 cm tall and 20 cm wide. The bottom of the feature was 55 cm below the surface and had been dug about 5 cm into the thick brown clay characterizing Layer 2.1. The complete shape and size of the feature was not discernible from the surviving segment. No artifacts were recovered from the roasting feature. A flotation sample of remnant charcoal contained greasewood and a small amount of cottonwood or

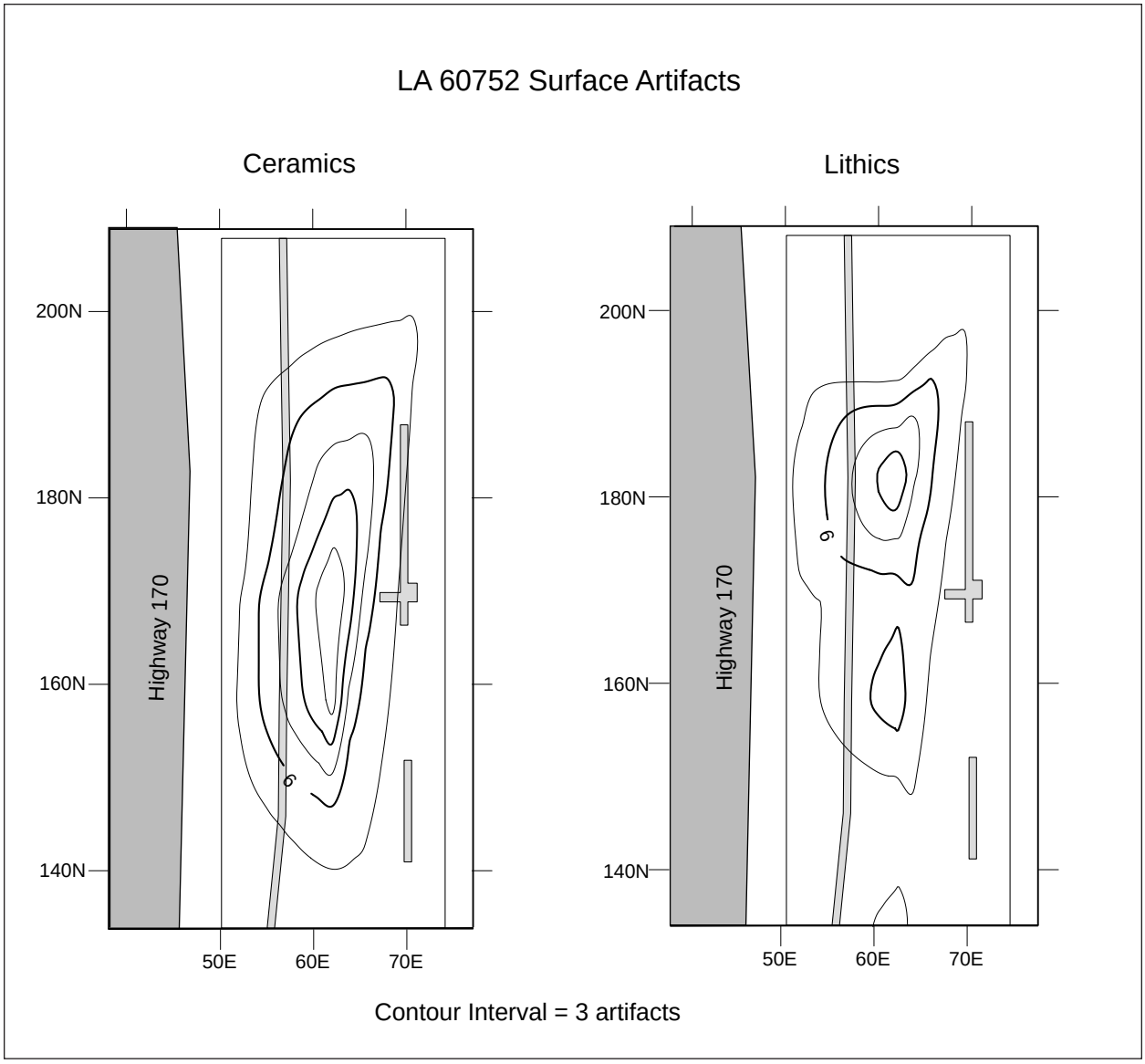


Figure 7.5. LA 60752, surface collection area, distribution and density, ceramics and lithics.

willow (see Botanical Remains, later in this chapter). The extramural roasting feature was about 13 m (43 ft) south of the northern cobble mound and was probably associated with this residential structure.

Subsurface Refuse

A 3 m area of sparse subsurface refuse was observed in the east and west profiles of Backhoe Trench 3 in the area around the roasting feature (Figs. 7.4, 7.5). Increased charcoal flecking and artifact content were evident from about 168N to 171N, but the remaining 19 m (62 ft) of the backhoe trench were essentially sterile. The homogenous layer of light refuse was confined to Layer 1, the designated cultural layer associated with the Anasazi occupation. The subsurface refuse was sampled by the excavation of two 1 by 2 m excavation units. Layer 1, containing the refuse, was excavated as a full-cut unit from both trenches. The assemblage from both trenches consisted of 102 artifacts including 62 sherds, 39 chipped stone artifacts, and a jet pendant.

As with the roasting pit, the subsurface refuse

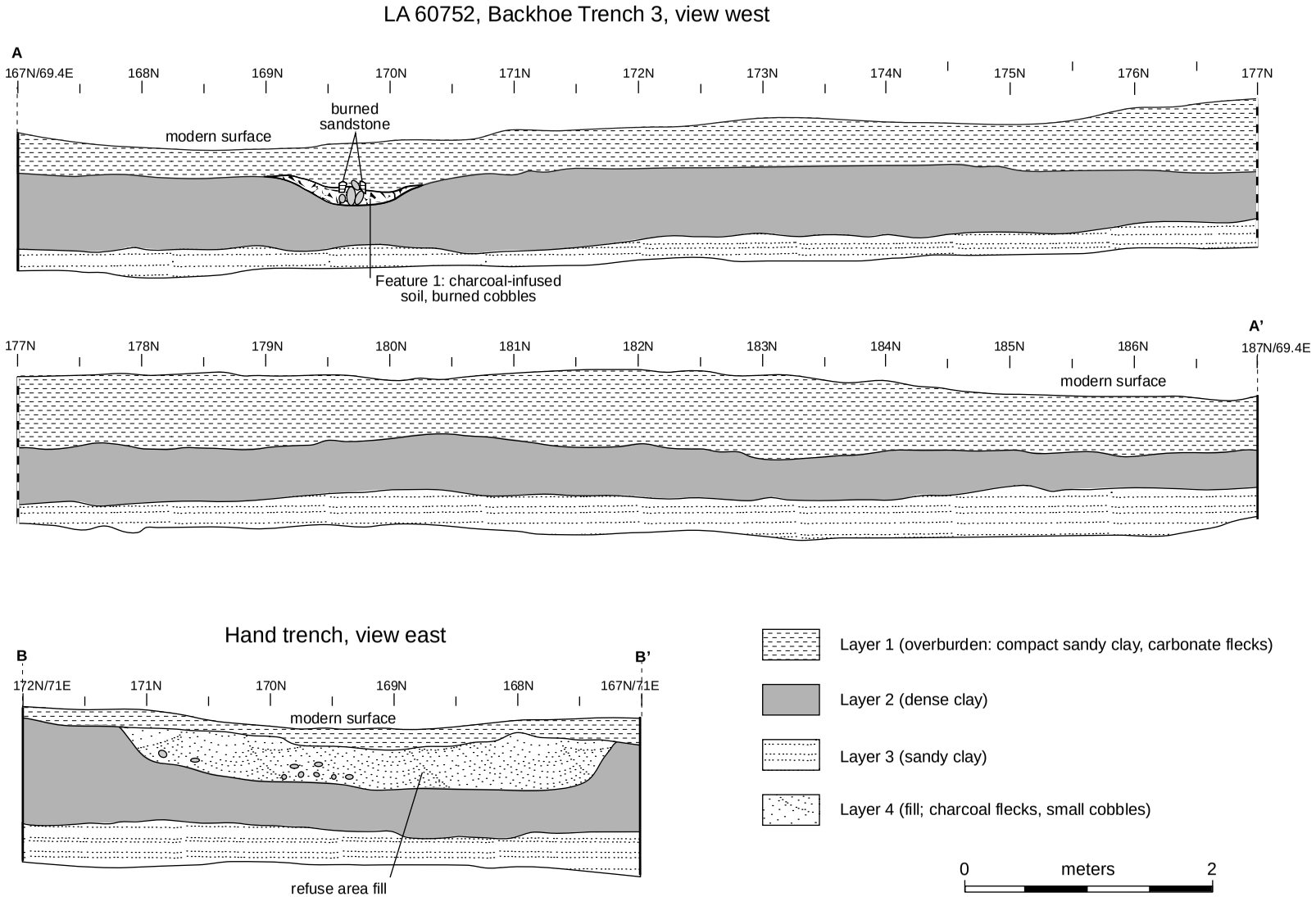


Figure 7.6. LA 60752, (top) Backhoe Trench 3, Feature 1, profile, view west; (bottom) hand trench, view east.

was probably associated with the north cobble mound. The apparent east–west alignment of the cobble mound suggests that refuse and extramural activity areas should occur south of the structure. The small area in the construction exemplified by the roasting pit and light refuse may represent the western edge of this proposed site orientation.

Charcoal Lens

A charcoal lens was exposed in the west profile of Backhoe Trench 1 from 193N/56E to 194N/56E. This lens was characterized by flecks of charcoal and infrequent specks of oxidation forming an irregular lens 82 cm long and from 1 to 4 cm thick. The lens was situated in Layer 2 at a depth of 1.60 m below the surface and was not evident on the east profile face. Layer 2 was characterized by laminated alluvial sandy sediments regarded as culturally sterile. No other charcoal flecking or artifacts were observed from Layer 2 over the entire length of the 72 m (236 ft) trench. The Anasazi occupation identified with Layer 1 extended to a depth of about 50 cm below the surface at this locality, but this cultural layer was essentially sterile throughout Backhoe Trench 1. The charcoal lens was positioned about 1.10 m below the lowest extent of the Anasazi cultural layer.There was no evidence of cultural origin for the charcoal lens. The lens was attributed to a landscape burn buried within the floodplain deposits, and a sample of charcoal was collected for obtaining a geomorphic date for floodplain development. The sample weighed less than 1 g and consisted of greasewood (*Sarcobatus*) and grass (monocot-Gramineae) charcoal. The sample was submitted for radiocarbon dating using the accelerator mass spectrometry (AMS) technique and returned a date of 2990 ± 60 (Beta-41361). Calibrated, this date has a 95-percent probability of falling between 1400 and 1020 BC (BetaAnalytic plot; Appendix 4), long before the establishment of the Anasazi lifeway.

The Archaic period radiocarbon date supports the designation of Layer 2 as a pre-Anasazi soil horizon. The sample helps establish the position of potential Archaic-period material within the local floodplain stratigraphy. Furthermore, the charcoal lens demonstrates the depth at which Archaic-period material might be expected in relation to the predominant, overlying, and obscuring Anasazi horizon.

LA 60752: Material Culture

The 204 artifacts collected from LA 60752 consisted of 121 sherds, 80 chipped stone artifacts, and 3 ground stone artifacts. The interpretive value of the artifact assemblage is limited in terms of temporal and functional conclusions because of the peripheral location of the proveniences with the cobble mounds. Tables 6.1 through 6.7 itemize material from both LA 37596 (Chapter 6, Vol. 1-Book 1, this report) and LA 60752, which are adjacent as similar sites. The bulk of the collected artifacts are more closely affiliated with the north cobble mound.

Ceramic Artifacts

The small assemblage of 121 sherds is most closely affiliated with a Mid Pueblo II (AD 1000–1075) ceramic component (Tables 6.1, 6.3, 6.4). Corrugated gray is the most numerous sherd type, and diagnostic white wares are sparsely represented. The ratio of gray wares to white wares is 1.7:1, and a single red ware bowl sherd was collected from the surface. The recovered assemblage is confined to bowl and jar sherds (Tables 6.3, 6.4).

The ceramic assemblage is almost equally divided between sherds recovered from the surface collection, and from the subsurface refuse area. The main difference between the surface and subsurface proveniences is the increased Pueblo III mixing noted in the surface collection. This mixing is characterized by two Late Pueblo III sherds, and organic paint on five of the ten painted sherds. White ware sherds from the subsurface refuse area are represented by Pueblo II black-on-white, and all white ware designs are executed in mineral paints. A single Pueblo II corrugated rim sherd was also recovered from the refuse area. The small ceramic assemblage supports a Mid Pueblo II occupation for the northern cobble mound, but this inference is based on small ceramic frequencies from very peripheral proveniences.

The southern cobble mound is considered contemporary, but this observation is based on the

presence of unquantified mineral decorated white wares observed in the refuse area east of the cobble mound. The small frequency of sherds collected from the construction zone nearby are inconsequential for interpreting the south cobble mound occupation.

Chipped Stone Artifacts

The small chipped stone assemblage at LA 60752 totals 80 specimens (Tables 6.2, 6.5). Artifacts were recovered in almost equal frequencies from the surface collection and the subsurface refuse area (Table 6.2). No appreciable distributional differences were noted between these primary proveniences. Three artifacts were collected from Layer 1 of Backhoe Trench 1 during the trench monitoring.

The chipped stone artifacts were manufactured from six locally available materials (Tables 6.5, 6.6). In decreasing order of frequency, chert, siltstone, and silicified wood were the most common material types. Siltstone (5) and chert (3) were the most abundant material types among cores, but cores were present for each material type, excluding chalcedony and fine-grained sandstone. The bulk of the assemblage was composed of debitage derived from core-reduction activities, and final tool manufacture was not represented in the small sample. Ten pieces of debitage exhibited single utilized edges, and five of these artifacts were of chert. Eight pieces of utilized debitage were recovered from the surface collection. The small assemblage exemplifies expedient reduction of local materials but provides little foundation for elucidating activities associated with the primary architectural elements.

Ground Stone Artifacts

Three ground stone artifacts at LA 60752 included a fine-grained sandstone abrading stone, a coarse-grained siltstone mano, and a jet ornament (Table 6.7). The abrading stone and mano were collected from Layer 1 of Backhoe Trench 1 during the backhoe monitoring, but this limited context precludes meaningful interpretation. Of interest was a jet ornament recovered from the initial 10 cm of the subsurface refuse area. The rectangular ornament weighs 1 g and was incised around the top edge for attachment. Jet ornaments were infrequently encountered during the project, and considering the ephemeral nature of this extramural refuse area, its recovery was unusual.

Botanical Remains

Mollie S. Toll

The primary elements of LA 60752, consisting of two cobble mounds that are probably the remains of roomblocks, were located outside the right-of-way and were subsequently lost during the creation of a trailer park. The investigated portion of the site consisted of two cultural layers: a cobble-lined roasting pit (Feature 1) and a charcoal lens in Extramural Area 1. A macrobotanical wood sample was collected from abundant charcoal in a remnant of the cobble-lined roasting pit at the south end of Backhoe Trench 3. Shrubby wood dominated the assemblage (2.32 g) of saltbush). A small amount of cottonwood or willow (0.46 g) represented the riparian zone, but in contrast to most La Plata proveniences, no conifers were identified.

LA 60752: Summary

LA 60752 comprises two small cobble mounds among the concentration of similar cobble mounds defining the prehistoric Jackson Lake community. The location of the main site area, including the primary architectural elements, outside of the construction zone precludes definitive temporal and functional conclusions. The portion of the site extending into the construction zone was marginal to the structures and contained limited cultural material. The single roasting feature and ephemeral subsurface refuse area encountered in our investigations are probably the western edge of an outside activity area associated with the northern cobble mound. The small ceramic assemblage argues for a Mid Pueblo II occupation of this structure.

The south cobble mound was even further removed from the construction zone, and cultural material from the project area has little direct bearing on this structure. Ceramics from the associated refuse area depict a similar Mid Pueblo II occupation, showing that the two cobble mounds were essentially contemporary.

The cobble mounds were basically the same size and may both have contained two-room structures judging from exposed walls at the south cobble mound. They were probably residential structures

for a few people. The northern cobble mound was oriented east–west and probably had a north–south unit-type alignment. The south cobble mound was oriented north–south with a probable west–east unit-type alignment. The north cobble mound had very little surface trash, suggesting a short-term occupation. The south cobble mound had a large, well-developed refuse area, indicating a longer-term, more intense occupation.

The contrasting cobble mounds would have provided a prime case study for future investigations centered around the temporal overlap of structures, and structure replacement within the Jackson Lake community. Unfortunately, both structures were lost during the subsequent trailer park development. I would not doubt that a pit structure was associated with the southern cobble mound. Such a pit structure would have survived the surface blading and might be discovered east of the south cobble mound.

8 LA 37597

Peter Y. Bullock

North of the main cluster of Jackson Lake sites excavated during the project, LA 37597 contains three small cobble mounds in an open area at the base of the terrace slope (Figs. pf.1, 1.1). Lancaster (1982a) first recorded LA 37597 in 1981 as a thinly dispersed artifact scatter measuring 150 by 20 m (492 by 66 ft). Three cobble mounds representing structures were recorded within the site area (Lancaster 1982a:39–40).

During the testing program that followed, Lancaster hand-excavated three 1 by 2 m test trenches (Lancaster 1983:38–40). Test Trench 1 was excavated to a depth of 50 cm and then augered an additional 1 m. Cultural material was only present within the upper 15 cm of the trench. Test Trench 2 was placed on one of the cobble mounds. A corner of a wall was revealed within this test trench, with a possible portion of floor surface. Lancaster believed this cobble mound represented the masonry base of a jacal-walled fieldhouse structure. He estimated this structure measured 2 by 3 m in plan. Test Trench 3 was culturally sterile (Lancaster 1983:38–40).

Reevaluation of the site in 1987 by Toll and Hannaford (Fig. 8.1; 1997:47–49) recorded its size as 180 by 100 m (591 by 328 ft)—an area of 18,000 sq m (193,750 sq ft)—extending it north and east across NM 170 to include two additional artifact concentrations.

Excavations at LA 37597 took place from August 9 through 23, 1988, with some variation in crew size, for a total of 45 person-days. Yvonne Oakes served as field supervisor, and the crew included Susan Moga, Rodney North, Janet Johnson, and Eric Dailey.

Environmental Setting

LA 37597 is on the first terrace on the western side of the La Plata River. The site sits back from the terrace edge at the base of the slope to the second terrace, which is associated with Jackson Lake. A small drainage, running west to east, divides the site. The elevation of the site ranges from 5,360 to 5,432 ft (1,624 to 1,656 m). The soils of the site are fine to medium sandy silt, with occasional cobbles. These soils also contain some clay and gravel lenses. Although most of the site is in front of the actual terrace slope, runoff from the slope appears to have had an effect on soil deposition and artifact distribution. Prior to excavation, LA 37597 was covered with mixed grasses, and some greasewood and snakeweed were also present (Fig. 8.2).

LA 37597 is primarily to the west of NM 170. Realignment of the proposed project area after Lancaster's (1983:38–40) testing resulted in only a portion of one of the three recorded cobble mounds remaining within the right-of-way. The other two cobble mounds are now just outside the right-of-way to the west. A diffuse sherd and lithic scatter extends nearly 200 m (656 ft) along the highway, incorporating the two areas of cobble mounds. The width of this scatter is 40 m (131 ft) west of the highway and 35 m (115 ft) at the southeast end, east of the highway. The main artifact concentrations are west of the highway. After consultation with the NMDOT, the western edge of the construction zone was moved east to preserve the one cobble mound partially remaining within the right-of-way and any features that might be associated with it. Recorded sites in the immediate vicinity of LA 37597 include LA 37596 and LA 60752 to the southeast (Hannaford), LA 60753 to the north (Bullock), and the multicomponent LA 37598 to the northwest (Bullock). Additional, unrecorded cobble mounds east of the site, toward the La Plata River, are between LA 37597 and the terrace edge to the east, in

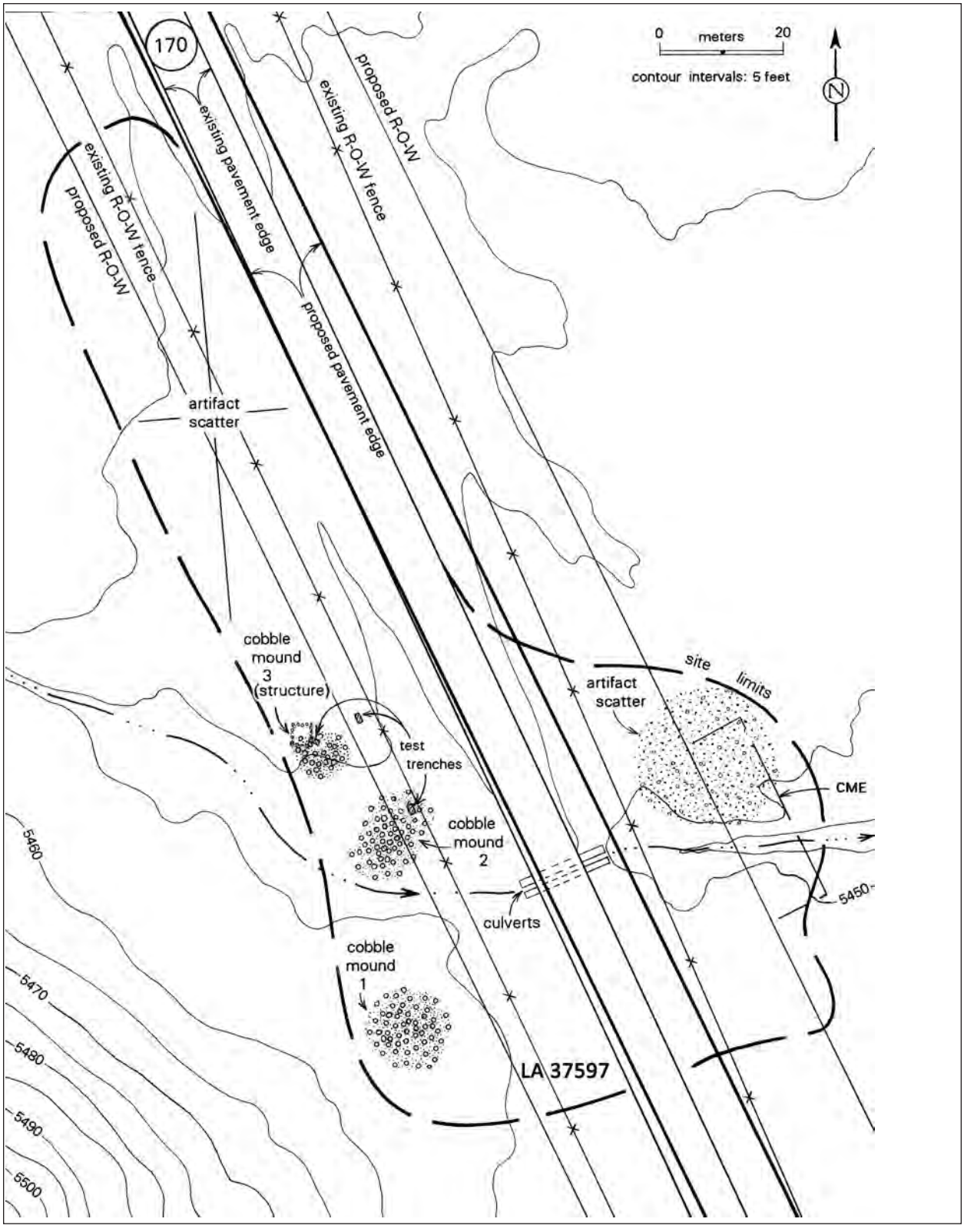


Figure 8.1. LA 37597, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

Figure 8.2. LA 37597, site overview, view southwest, pre-excavation.

the extensive settlement that lined the edge of the terrace prior to trailer park development.

Field Methods

NM 170 divided the site into two parts, providing a convenient method for subdividing the site. Provenience units at LA 37597 were designated as Extramural Area 1 (east of the highway) and Extramural Area 2 (west of the highway). Surface artifacts were recorded on both sides of the highway in 3 by 3 m grids (Fig. 8.3). The presence of the highway in the middle of the site limited collection of surface artifacts to approximately 400 grids (Fig. 8.4). The southwestern corner of the grid was designated 50N/50E. Baselines were established along both the east and west right-of-way lines. A site datum was established at 159N/48E, 2 m (7 ft) west of the proposed right-of-way line. The site datum was given an arbitrary elevation of 0.00 m. Subdatums were established as needed.

Five 1 by 3 m test trenches (Fig. 8.3) were hand-excavated in arbitrary 10 cm levels within areas of high surface-artifact concentration or in areas adjacent to cobble mounds outside of the right-of-way. Three randomly selected 1 by 1 m test trenches (Fig. 8.3) were also excavated using the same procedures. The trenches were excavated in 10 cm arbitrary levels. Fill was screened through 1/4-inch hardware cloth. Each trench was profiled.

Finally, five areas of the site were bladed in an effort to locate intact subsurface features. This scraping was done in 4 m (13 ft) wide strips (Fig. 8.3). A 5–10 cm thick level of soil was removed at a time, to a total depth of 35 cm.

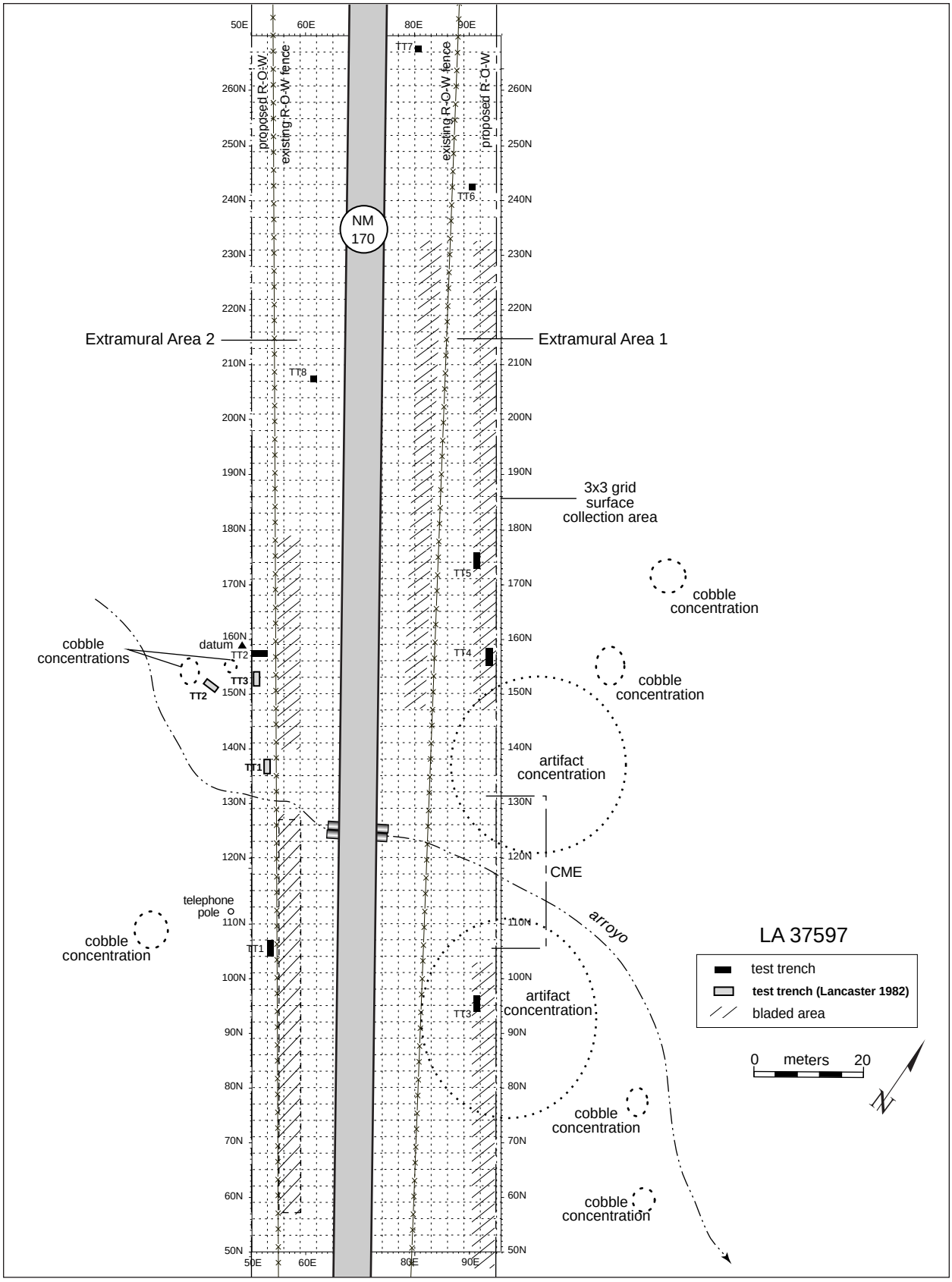


Figure 8.3. LA 37597, site plan.

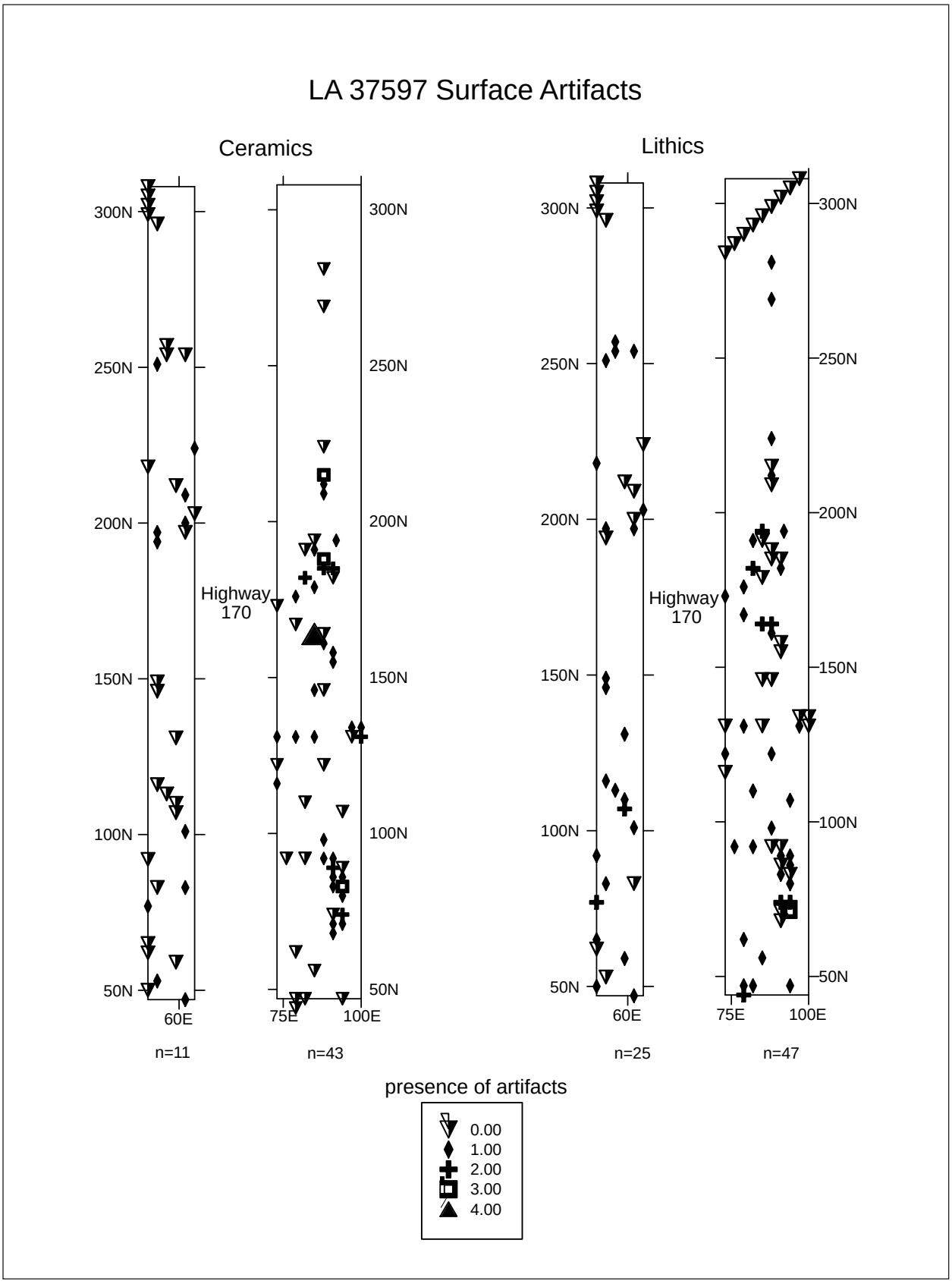


Figure 8.4. LA 37597, surface collection area, distribution and density, ceramics and lithics.

EXCAVATION RESULTS

Test Trenches

Test Trench 1 (1 by 3 m):
104N/53E, Extramural Area 2

Test Trench 1 was placed in the southwestern area of the site, close to the largest of the cobble mounds outside of the right-of-way. This trench was dug to a depth of 30 cm and proved to be culturally sterile. Three auger holes were placed in the bottom of the trench to depths of 1.63, 1.66, and 1.68 m. These auger holes revealed sterile sand to the bottom.

Test Trench 2 (1 by 3 m):
157N/50E, Extramural Area 2

Test Trench 2, on the west side of the site, was placed on a small rise that was potentially cultural in origin. This rise was believed to be associated with an adjacent cobble mound outside of the right-of-way. Test Trench 2 was excavated in six arbitrary 10 cm levels to a total depth of 60 cm. Artifacts occurred in the upper four levels. This trench was found to have intersected the upper portion of a gas pipeline trench. The pipeline trench fill explains the difference in artifact occurrence in this trench from the others dug at LA 37597. Ten sherds were found, including early and Mid Pueblo II gray and white wares. Three auger holes placed in the bottom of this trench were dug to additional depths of 1.55, 1.48, and 1.44 m. None of the auger holes revealed cultural materials.

Test Trench 3 (1 by 3 m):
94N/91E, Extramural Area 1

Test Trench 3 was excavated in the only artifact concentration both east of the highway and south of the drainage. This trench was dug to total depth of 30 cm, with cultural material consisting of two black-on-white sherds and one corrugated sherd limited to the top 10 cm. Charcoal was present but limited to the upper 4 cm of soil. Charcoal staining was recent, probably connected with ditch clearing and weed burning. One auger hole was dug into the bottom of the trench an additional 33 cm. This revealed culturally sterile sand to the bottom. A second auger hole was dug to a depth of 47 cm.

Test Trench 4 (1 by 3 m):
155N/93E, Extramural Area 1

Test Trench 4 was placed on the eastern edge of LA 37597, adjacent to a low rise just outside of the right-of-way. The trench was excavated to a total depth of 50 cm; the center third (1 by 1 m) of the trench was only excavated to a depth of 40 cm. Artifact occurrence, limited to the top 30 cm of soil, included 14 sherds, 13 of which are gray ware. Three auger holes dug into the bottom of the trench to additional depths of 50, 70, and 130 cm, revealed culturally sterile sand to the bottom.

Test Trench 5 (1 by 3 m):
173N/91E, Extramural Area 1

Test Trench 5 was placed in the east portion of the site within an area of surface artifacts and adjacent to a small rise outside of the right-of-way that contained a cobble mound and artifact scatter. The trench was dug to a depth of 30 cm. A single corrugated gray sherd was recovered from the top 10 cm of soil. Two auger holes in the base of the trench were dug to additional depths of 75 and 90 cm. Soil within both was found to be culturally sterile.

Table 8.1. LA 37597, Test Trenches 6, 7, and 8, excavation and auger depths with cultural materials found.

Trench	Grid Location	Excavated Depth (cm)	Augered Depth (cm)	Total Cultural Material
6	242N/90E	60	82	2 white ware sherds, lithics, ground stone through Level 4
7	267N/80E	50	110	1 corrugated sherd, 1 lithic, historic trash in Level 3 (road disturbance)
8	207N/61E	60	160	white ware sherd Level 2, lithic Level 3

Test Trenches 6 (242N/90E) and 7 (267N/80E), Extramural Area 1, and 8 (207N/61E), Extramural Area 2; all 1 by 1 m

Three randomly placed 1 by 1 m test trenches were dug to locate intact subsurface features or cultural deposits (Tables 8.1, 8.2). Sparse cultural material was found in the upper levels of each trench. In at least one of these trenches, road-associated soil disturbance contributed to the presence of artifacts below the ground surface. An auger hole was placed in the bottom of each trench. All of the soil within the auger holes proved to be culturally sterile.

Surface Scraping

Five areas of the site were mechanically surface scraped (bladed) to locate intact subsurface features (Fig. 8.3). No subsurface features were found as a result of the scraping. Any cultural material, observed or recovered, was found to be part of the churned surface soil. Two burnt areas were uncovered through surface scraping on the east side of the highway at 65N/90E and 83N/88E. However, both were found to be recent, probably associated with weed burning. No artifacts were found associated with either area. The following areas were scraped:

Grid 146N–232N/93E–97E, Extramural Area 1 (86 m [282 ft] long). This area was just inside the eastern proposed right-of-way line, north of the drainage.

Grid 146N–232N/80E–85E, Extramural Area 1 (86 m [282 ft] long). This area was 1 m west of the eastern, original right-of-way fenceline within the proposed right-of-way, north of the drainage.

Grid 47N–113N, Extramural Area 1 (66 m [217 ft] long). This area was just inside the eastern proposed right-of-way, south of the drainage.

Grid 57N–128N, Extramural Area 2 (71 m [233 ft] long). This area was inside the western fenceline, south of the drainage.

Grid 140N–179N, Extramural Area 2 (39 m [128 ft] long). This area was inside the western fenceline, north of the drainage.

Table 8.2. LA 37597, Extramural Areas 1 and 2, Test Trenches 1–8, cultural material counts by trench level.

Trench	Dimensions (m)	Grid	Level 1	Level 2	Level 3	Level 4	Total
Extramural Area 1 (east)							
3	1 x 3	94N/091E	3 sherds	–	–	–	**3 sherds**
4	1 x 3	155N/093E	2 sherds	2 sherds	1 sherd	–	**5 sherds**
			–	1 lithic	1 lithic	–	**2 lithics**
5	1 x 3	173N/091E	1 sherd	–	–	–	**1 sherd**
6	1 x 1	242N/090E	–	–	1 sherd	1 ground*	**1 sherd**
			–	–	2 lithics	–	**2 lithics**
			–	–	–	–	**1 ground**
7	1 x 1	267N/080E	–	–	1 sherd	–	**1 sherd**
			–	–	1 lithic	–	**1 lithic**
Extramural Area 2 (west)							
1	1 x 3	104N/053E	–	–	–	–	**no material**
2	1 x 3	157N/050E	2 sherds	2 sherds	1 sherd	2 sherds	**7 sherds**
			2 lithics	–	–	1 lithic	**3 lithics**
8	1 x 2	207N/061E	1 sherd	1 sherd	–	–	**2 sherds**
			2 lithics	–	1 lithic	–	**3 lithics**
Total			**9 sherds**	**5 sherds**	**4 sherds**	**2 sherds**	**20 sherds**
			4 lithics	**1 lithic**	**5 lithics**	**1 lithic**	**11 lithics**
			–	**–**	**–**	**1 ground**	**1 ground**

* Complete quartzite anvil or polisher 96 mm long, 56 mm wide, 29 mm thick, weight 300 g

LA 37597: Material Culture

Eighty percent of the material recovered from LA 37597 was from the present ground surface (Fig. 8.4), indicating how little subsurface material was encountered in the test trenches (Table 8.2). Substantial differences are apparent between extramural areas of the site, based on the ceramic artifact assemblage (Table 8.3). These indicate that the western portion of the site dates to the Pueblo II period, while the eastern portion of the site dates to the Early Pueblo III period. Although diagnostic types are scarce in both areas, there is a clear division in those that are present; Red Mesa and other Pueblo II designs are in Extramural Area 2, and later designs and a greater occurrence of carbon paint in Extramural Area 1. Both areas are heavily dominated by gray ware jars.

Lithic artifacts recovered from LA 37597 totaled 83 (Table 8.4). Fifty-two lithic artifacts were collected from Extramural Area 1. This total included 45 pieces of debitage, 4 cores, and 3 pieces of retouched/utilized debitage. Extramural Area 2 contained 31 lithic artifacts. This total included 27 pieces of debitage, 1 core, 1 hammerstone, and 2 pieces of retouched/utilized debitage, one exhibiting two use edges. The same range of materials occurs in both ex-

Table 8.3. LA 37597, ceramic attributes, counts by stratigraphic context within Extramural Areas 1 and 2.

	Extramural Area 1			Extramural Area 2			Site Total		
	Extramural Fill	Ground Surface	EA 1 Total	Extramural Fill	Ground Surface	EA 2 Total	Extramural Fill	Ground Surface	Total
Pottery Type									
Indeterminate Gray	–	1	1	–	–	–	–	1	**1**
Pueblo II Corrugated	–	–	–	–	1	1	–	1	**1**
Plain Gray	3	9	12	5	–	5	8	9	**17**
Corrugated Gray	13	21	34	2	6	8	15	27	**42**
Red Mesa Style B/w	–	–	–	1	–	1	1	–	**1**
Pueblo II B/w	–	–	–	1	1	2	1	1	**2**
Dogoszhi Style B/w	–	1	1	1	–	1	1	1	**2**
Early Pueblo III B/w	–	1	1	–	–	–	–	1	**1**
Pueblo I-II B/w	1	–	1	–	–	–	1	–	**1**
Pueblo II-III B/w	1	1	2	–	1	1	1	2	**3**
Pueblo III B/w	–	2	2	–	–	–	–	2	**2**
Polished White	3	12	15	–	–	–	4	14	**18**
Polished B/w	–	3	3	1	2	3	–	3	**3**
Total	**21**	**51**	**72**	**11**	**11**	**22**	**32**	**62**	**94**
Vessel Form									
	Extramural Fill	**Ground Surface**	**Total**	**Extramural Fill**	**Present Ground Surface**	**Ground Surface**	**Extramural Fill**	**Present Ground Surface**	**Total**
Indeterminate	–	–	–	1	–	1	1	–	**1**
Bowl rim	1	2	3	–	–	–	1	2	**3**
Bowl body	2	5	7	2	–	2	4	5	**9**
Cooking, storage rim	–	–	–	–	1	1	–	1	**1**
Necked jar body	–	2	2	–	2	2	–	4	**4**
Jar body	18	41	59	8	8	16	26	49	**75**
Bowl or jar body	–	1	1	–	–	–	–	1	**1**
Total	**21**	**51**	**72**	**11**	**11**	**22**	**32**	**62**	**94**
Paint Type									
Indeterminate	–	1	–	–	–	–	–	1	**1**
None	3	12	15	1	2	3	4	14	**18**
Organic	–	6	6	3	2	5	–	6	**6**
Mineral	1	1	2	–	–	–	4	3	**7**
Total	**4**	**20**	**24**	**4**	**4**	**8**	**8**	**24**	**32**

tramural areas. The more common materials—chert and siltstone—are present in both extramural areas in similar ratios. The less abundant materials—chalcedony and quartzitic sandstone—occur in varying degrees, probably reflecting the small samples. The assemblage is unusual in that chipped stone items outnumber the ceramics.Artifacts collected from LA 37597 included a single piece of ground stone. This was a small (9.6 by 5.6 by 2.9 cm) quartzite anvil or polishing stone recovered from Level 4 of Test 6 in Extramural Area 1, east of the highway. This pebble is ground flat to slightly concave on both faces and appears to have been burned.

The faunal artifact assemblage was limited to surface material; 31 faunal specimens were collected at LA 37597 (Table 8.5). The bone is mostly from large mammals, though jackrabbit and turkey are also present. The condition of the bone is unusual in that all but two large mammal fragments and the turkey breast bone are calcined, and most of the bone is weathered. These two conditions account for only 1 and 12 percent of the total faunal collection, respectively. It is likely that this material was redeposited to the surface from a subsurface location fairly recently. The calcining of the bone and the presence of turkey make it more likely that the bone is prehistoric rather than being recent road kill.

LA 37597: Summary

The various modern activities at LA 37597 have confused but not obscured the archaeological record. Despite the presence of surface artifacts in substantial numbers, no intact cultural features or deposits are within the right-of-way at LA 37597. Sheet wash on the site has affected artifact distribution, with additional disturbance caused by highway construction and maintenance. Additional site modification has resulted from plowing, water line construction, and construction of a dirt road, which cuts the site to the west.

The earliest cultural material present on the site dates to the Pueblo II period. This Pueblo II material is principally present in the western portion of LA 37597 but also occurs east of the highway in smaller quantities. This cultural material is redeposited, having originated in the area of the cobble mounds further upslope to the west. Sheetwash or colluvial erosion appears to have been the mechanism of deposition, a conclusion confirmed by the superficial nature of the cultural material and its lack of depositional depth. The Pueblo II material east of the highway is part of the same redepositing sequence from the same original source.

Pueblo III–period material is present in the

Table 8.4. LA 37597, lithic material and artifact type by extramural area; counts and percents.

	Extramural Area 1 (East)		Extramural Area 2 (West)		Total	
	Count	Col. %	Count	Col. %	Count	Col. %
Material Type						
Chert	32	61.5%	18	58.1%	**50**	**60.2%**
Chalcedony	1	1.9%	2	6.5%	**3**	**3.6%**
Silicified wood	8	15.4%	2	6.5%	**10**	**12.0%**
Quartzitic sandstone	3	5.8%	3	9.7%	**6**	**7.2%**
Siltstone	8	15.4%	6	19.4%	**14**	**16.9%**
Total	**52**	**100.0%**	**31**	**100.0%**	**83**	**100.0%**
Artifact Type						
Debitage	45	86.5%	27	87.1%	**72**	**86.7%**
Core	4	7.7%	1	3.2%	**5**	**6.0%**
Retouched/utilized debitage	3	5.8%	2	6.5%	**5**	**6.0%**
Hammerstone	–	–	1	3.2%	**1**	**1.2%**
Total	**52**	**100.0%**	**31**	**100.0%**	**83**	**100.0%**

Table 8.5. LA 37597, faunal elements, counts by species, surface.

	Jackrabbit	Deer	Mammal	Large Mammal	Turkey	Total
Indeterminate fragment	–	–	13	3	–	**16**
Long-bone fragment	–	–	–	5	–	**5**
Tooth fragment	–	–	–	1	–	**1**
Sternebra, sternum	–	–	–	–	1	**1**
Ilium	–	1	–	–	–	**1**
Ischium	1	–	–	–	–	**1**
Acetabulum, ischium	–	1	–	–	–	**1**
Radius	–	2	–	–	–	**2**
Femur	1	1	–	–	–	**2**
Tibia	–	1	–	–	–	**1**
Total	**2**	**6**	**13**	**9**	**1**	**31**

eastern part of the site. This indicates its point of origin is at a lower elevation than the Pueblo II–period material. This material probably originated in the occupations associated with the cobble mounds east of the right-of-way. LA 37597 thus occupies an area of depositional overlap within the right-of-way. From the west, Pueblo II–period material was redeposited downslope into the site area. Through time, this has become interspersed with Pueblo III–period material associated with sites outside of the right-of-way to the east. The house mounds outside the right-of-way to the west (but still part of the site) thus probably date to Pueblo II. As shown by Lancaster's (1983:38–40) tests, intact Pueblo II rooms are present outside the project area. The lack of cultural features or deposits indicates the site area within the right-of-way was outside the sphere of direct Pueblo II–period occupation and served as a peripheral site area during the Pueblo III period.

9 LA 60753

Peter Y. Bullock

LA 60753 was recorded by Hannaford and Toll in 1987 as a large linear scatter of sherd and lithic artifacts along the east side of NM 170 (Fig. 9.1; Toll and Hannaford 1987:30–33). Measuring 195 by 25 m (640 by 82 ft), the total surface area is large (4,875 sq m, or 52,474 sq ft), with localized material densities.

Testing at LA 60753 took place from August 27 through September 1, 1988, for a total of 16 person-days. Peter Bullock served as crew chief and was assisted by Charles Hannaford.

Environmental and Archaeological Setting

LA 60753 is on a large alluvial fan 0.75 km (0.5 mi) north of the entrance to Jackson Lake (Figs. pf.1, 1.1). The fan is set back from the first terrace edge west of the La Plata River. The second cobble terrace, common to the La Plata Valley, does not occur in the area of LA 60753. The predominately fine-textured material forming this fan suggests it is composed of erosional deposition originating in the Piñon Mesa badlands, to the west. This, combined with the resulting lack of large numbers of naturally occurring cobbles, makes cultural features apparent in this area. Prior to testing, LA 60753 was partially covered with greasewood and mixed grasses with areas of bare soil across the site. There was evidence of recent dumping of asphalt within the site area.

The area of the scatter is nearly flat with a slight slope toward the southeast (Fig. 9.2). A small rise is present in the southeastern portion of the site. Site elevation ranges from 5,464 to 5,472 ft (1,655.75 to 1,659 m). A majority of the surface material occurs along the highway shoulder. The presence of artifacts in close proximity to the highway suggests at least some artifact distribution is the result of highway construction or maintenance. Several utility trenches parallel the highway, including telephone lines and water lines. Recorded sites in the immediate area of LA 60753 include LA 37597 (Chapter 8, Vol. 1-Book 1, this report), a site with several small structures south of LA 60753. It was tested during the project, but no intact structures were found within the right-of-way. LA 37598 (Chapter 16, Vol. 1-Book 2, this report), an extensively excavated multicomponent site with roomblocks and pit structures is just north of LA 60753. The surface material from LA 37598 and LA 60753 is contiguous or overlapping, but the density of artifacts is low at the northern edge of the LA 60753 collection area. LA 60754 (not excavated by the project; Fig. 1.20), a small house mound outside the right-of-way northeast of the site, is likely to be contemporaneous with LA 60753. A number of unrecorded sites occur to the east between LA 60753 and the La Plata River.

Field Methods

A 12 by 196 m (40 by 643 ft, or 2,352 sq m [25,317 sq ft]) area was collected in 3 by 3 m grids or portions that fit within the area (Fig. 9.3). The grid north–south lines were placed parallel to the existing fenceline east of the highway. Initially, the northeastern corner of this grid was designated 0N/0W. A point 5 m (16 ft) east and outside of the proposed right-of-way was designated the site datum. Subdatums were added as necessary during testing. Surface artifacts were collected through the use of this grid; initially, the grids were numbered consecutively. A total of 315 grids were examined, of which 157 contained cultural material. To make this grid system correspond to others in the project, it was later converted to a north and east system, identifying grids by their southwest corners. Surface

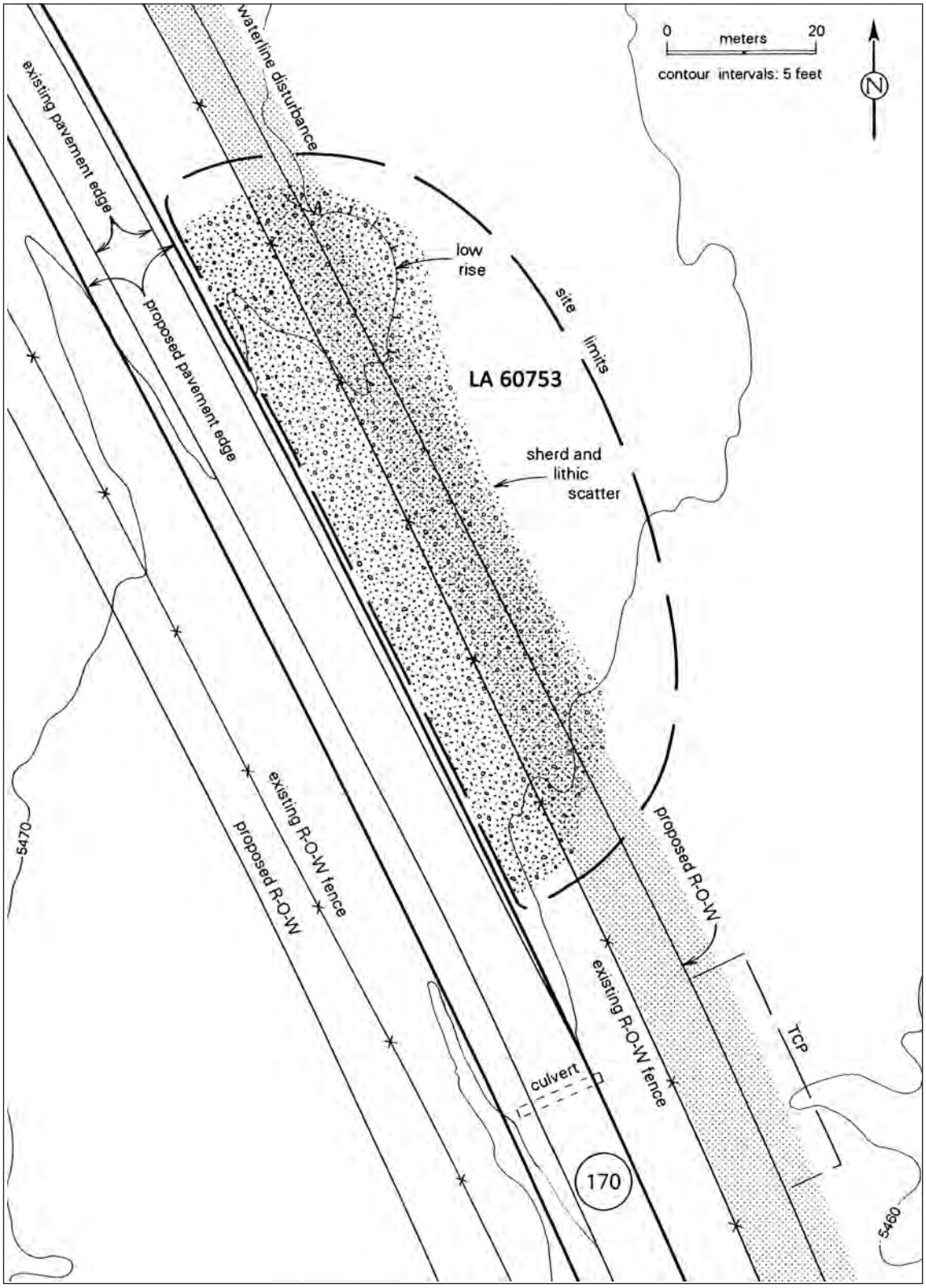


Figure 9.1. LA 60753, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

Figure 9.2. LA 60753, site overview, view north, pre-excavation.

materials and tests are referred to in the converted, north and east system, and the provenience data file is in this format. For purposes of presenting material and looking for spatial variation in material, the site was divided into three extramural areas during analysis (Fig. 9.3). Extramural Area 1, at the north end of the site, is characterized by relatively sparse surface material; it extends from the north edge at 195N to 99N (0S to 96S, or grids 1–160 in the original numbering system). Extramural Area 2 is the middle portion of the site, where more surface material is present; two backhoe trenches and the two hand-dug units were placed here. It extends from 99N to 45N (96S to 150S, or grids 161–250 in the original system). The third area, Extramural Area 3, extends from 45N to 0N at the south edge of the site (150S to 195S, or grids 251–315 in the original system).

Two nonrandomly selected exploratory test trenches were hand-excavated in areas of heavy surface artifact concentrations (Figs. 9.3, 9.4). Three backhoe trenches were dug in the southern portion of the site (Fig. 9.3). Portions of the site were then scraped with a road maintainer in an effort to locate intact subsurface cultural features or structures. Last, sets of auger tests, dug in pairs, were made on the 15N, 30N, 45N, 75N, 120N, and 195N lines; the sets were placed 8 to 9 m (26 to 30 ft) apart. Auger tests were also made in Test Trenches 1 and 2.

EXCAVATION RESULTS

Test Trenches

Test Trench 1 (1 by 2 m):
95N/18E (original system: 99S/1W),
Extramural Area 2

Test Trench 1 was placed in an area of the site containing a surface artifact concentration and a slight mound or rise at the north edge of Extramural Area 2 (Fig. 9.3, 9.4). The combination of artifacts and terrain suggests the presence of an area of

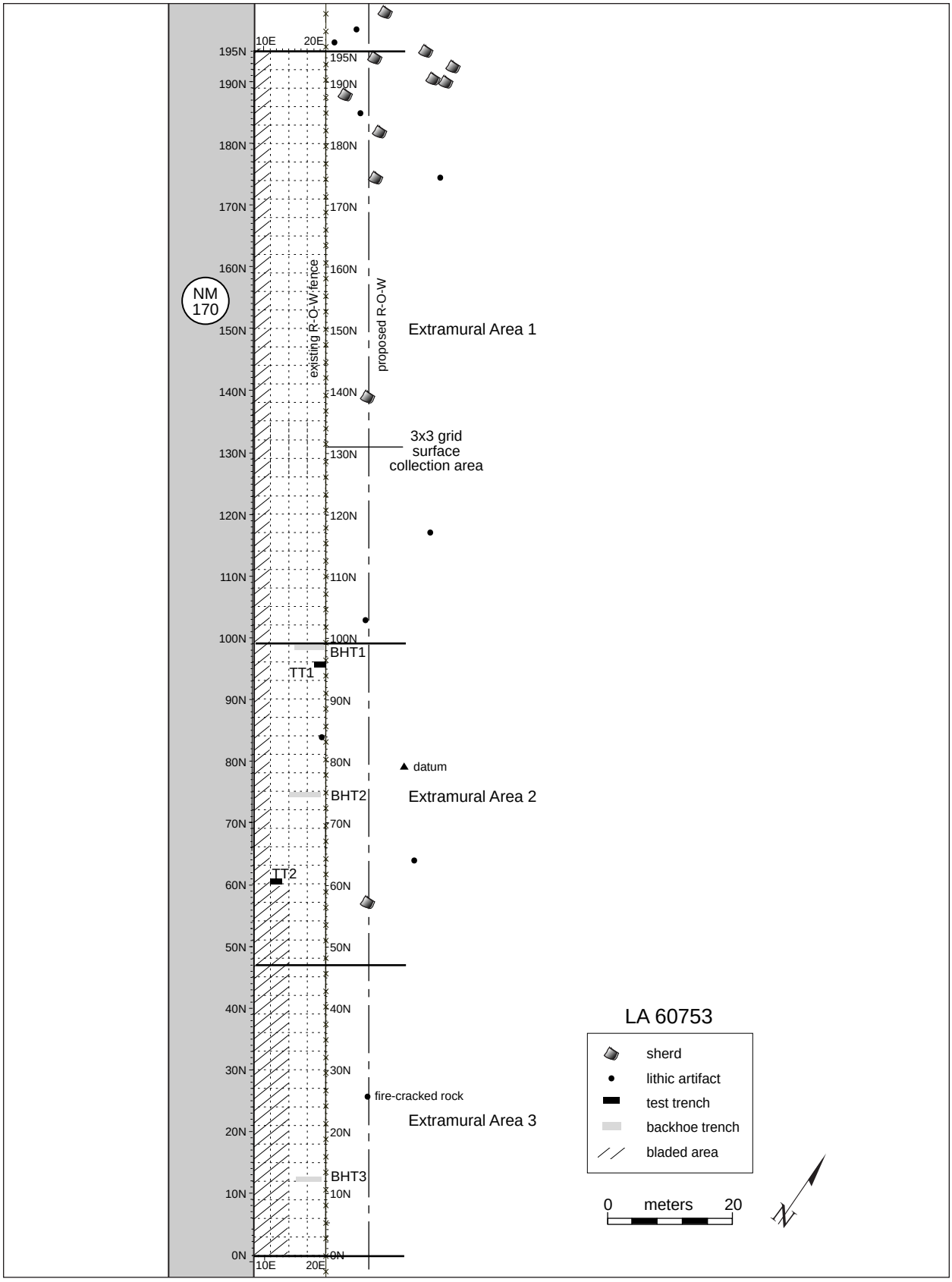


Figure 9.3. LA 60753, site plan.

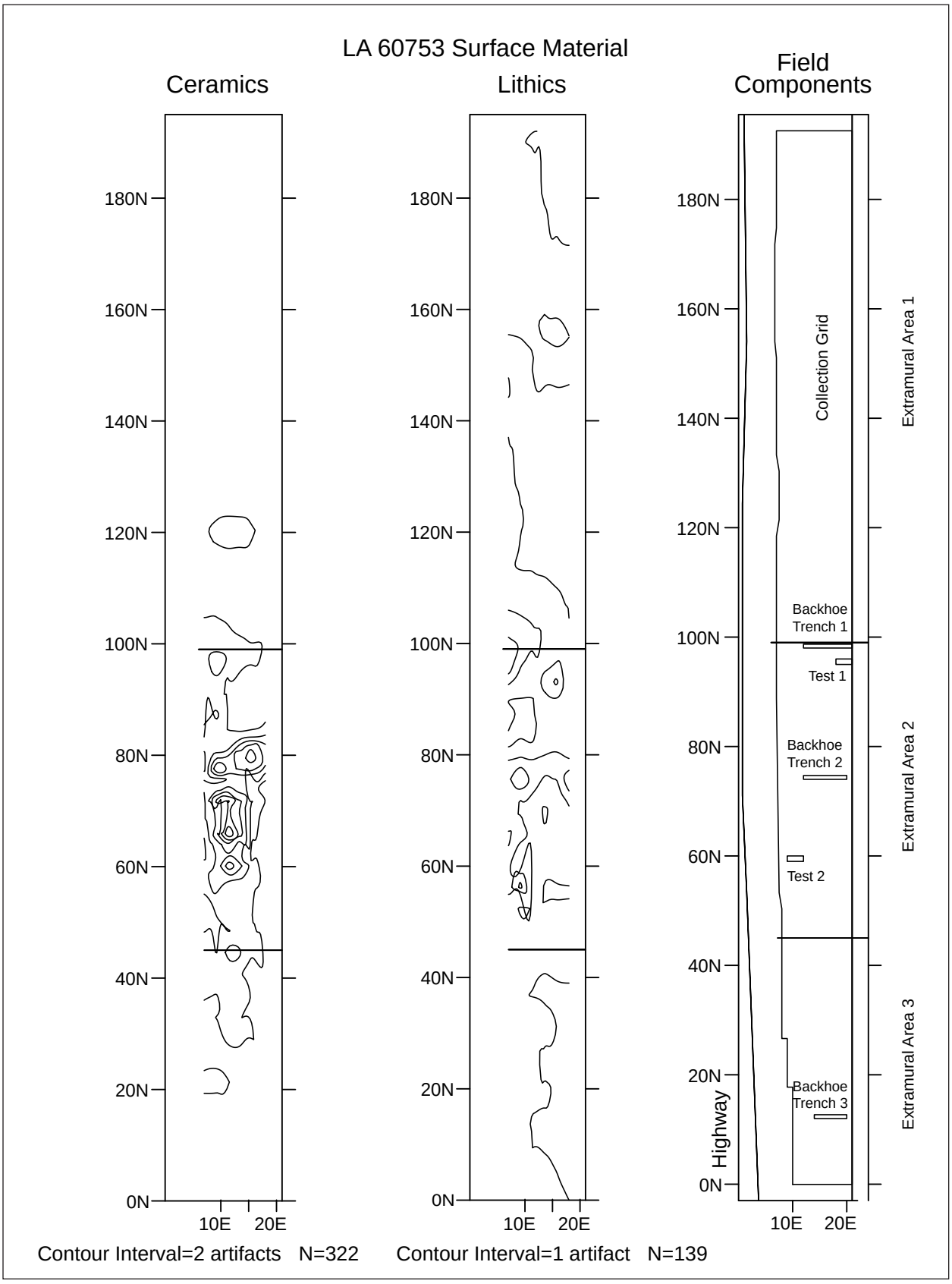


Figure 9.4. LA 60753, surface collection area, distribution and density, ceramics and lithics.

cultural activity. The trench was dug to a total depth of 50 cm. Trench fill comprised mixed prehistoric and modern cultural material. Artifacts, charcoal, and modern trash were present within the trench. Artifact occurrence diminished with depth (Table 9.1). Test Trench 1 also intersected a utility line trench first thought to be the origin of the modern trash found within Test Trench 1, but the existence of this material both within and outside of the utility trench fill showed this was not the case. The utility trench contributed to further churning of an already disturbed deposit. An auger hole was dug an additional 90 cm past the bottom of this test trench in culturally sterile sand (Table 9.2).

Test Trench 2 (1 by 2 m): 59N/9E (original system: 135S/9W), Extramural Area 2

Test Trench 2 was placed in a surface artifact concentration 2.8 m (9.2 ft) from to the highway pavement, also within Extramural Area 2 (Figs. 9.3, 9.4). This trench was dug to a depth of 40 cm. The majority of the artifacts found were in the loose, churned surface soil (Table 9.1). Artifacts and charcoal mixed with modern refuse extended to a depth of 20 cm in a deposit similar to that encountered in Test Trench 1. This layer rested on a culturally sterile alluvial sand layer. In the western half of Test Trench 2, where it cut through the road fill of the highway shoulder, the trench profile revealed gravel and sandy clay. An auger hole placed in the bottom of Test Trench 2 was dug an additional 156 cm in culturally sterile sand (Table 9.2).

Table 9.1. LA 60753, ceramics and lithics from test trenches and blading; counts by level.

Test Trench	Provenience	Dimensions (m)	Level 1	Level 2	Level 3	Total
1	98N/18E	1 x 3	4 lithics	3 lithics	1 lithic	**8 lithics**
2	74N/12E	1 x 3	20 sherds	9 sherds	–	**29 sherds**
			12 lithics	11 lithics	1 lithic	**24 lithics**
Blading	–	–	29 sherds	–	–	**29 sherds**
	–	–	16 lithics	–	–	**16 lithics**
Total			**49 sherds**	**9 sherds**	**–**	**58 sherds**
			32 lithics	**14 lithics**	**2 lithics**	**48 lithics**

Table 9.2. LA 60753, auger tests.

Test	Auger Test (old system)	N/E Coordinates Revised	Depth (cm bgs)	Results
1	135S/0W	60N/21E	42	sand
2	150S/0W	45N/21E	135	sand
3	150S/9W	45N/12E	106	sand
4	165S/0W	30N/21E	110	sand
5	165S/9W	30N/12E	97	highway fill to 20 cm, sand
6	180S/0W	15N/21E	100	sand
7	180S/9W	15N/12E	42	sand
8	120S/1W	75N/20E	133	sand
9	120S/9W	75N/12E	115	sand
10	75S/0W	120N/21E	118	sand
11	75S/9W	120N/12E	130	plastic at 30 cm, sand
12	0S/0W	195N/21E	140	sand
13	0S/9W	195N/12E	120	sand

Auger Tests

A series of auger holes, placed in pairs, were dug across the site (Table 9.2). Most of these holes revealed homogenous sand for their entire depths, with little variation in texture or color. Highway fill was present in the upper 20 cm of Auger Test 5, followed by 76 cm of culturally sterile sand. In Auger Test 11, plastic was found at a depth of 30 cm above 1 m of culturally sterile sand.

Backhoe Trenches 1, 2, and 3

Three backhoe trenches were dug across the southern half of the site, south of the slight rise (Fig. 9.3). All three trenches were placed perpendicular to the highway, and were located as follows: Backhoe Trench 1, Extramural Area 2, at 98–99N (original system: 96–97S) Backhoe Trench 2, Extramural Area 2, at 74–75N (original system: 120–121S), and Backhoe Trench 3, Extramural Area 3, at 12–13N (original system: 182–183S); Fig. 9.5. They averaged 80 cm (31.5 in) in width and were 8 m (26 ft) (Backhoe Trenches 2 and 3) and 9 m (29 ft) long (Backhoe Trench 1). Trench depth averaged 60 cm. Small quantities of charcoal were visible in the upper layer of Backhoe Trenches 1 and 2, the result of recent weed burning. Backhoe Trench 3, at the southern end of the site, was culturally sterile. The stratigraphy visible within the profiles of all three of the backhoe trenches was similar alluvial deposition, a single layer of fine homogenous silty sand with some lensing of coarser sand. None of the backhoe trenches revealed intact cultural features or deposits.

Surface Scraping

Given the size of the artifact scatter and the absence of intact features in the preliminary testing, we concluded that mechanical removal of overburden posed little risk to archaeological deposits and afforded insurance against overlooking features. Two areas of the site were bladed in an effort to locate possible subsurface cultural features and deposits (Fig. 9.6). This scraping occurred in two stages. First, an area adjacent to the highway pavement, 3 m (10 ft) wide and 195 m (640 ft) long, was scraped

Figure 9.5. LA 60753, Backhoe Trench 3, view northwest, profile cut showing stratigraphy.

Figure 9.6. LA 60753, surface-scraping procedure.

in 5 cm levels to a depth of 20 cm for the entire length of the collection grid. Artifacts associated with modern trash were found throughout the fill. A second area, restricted to the south end of the site, was also bladed between Backhoe Trench 2 and the south edge of the site (0N) in Extramural Areas 2 and 3. This strip, 6.5 m (21.3) wide and 70 m (230 ft) long, was scraped in 5 cm levels to a depth of 40 cm. Some artifacts were recorded, but these were mixed with modern trash. None of the scraping reached a depth below the upper, recently disturbed soil layer. No cultural features or intact deposits were found through the use of scraping.

LA 60753: Material Culture

Since no intact features or deposits were found during testing, materials recovered from LA 60753 were limited to surface artifacts and artifacts from the churned upper soil layer. A total of 585 artifacts were recovered from LA 60753 (Tables 9.3, 9.4, 9.5, 9.6). Of this total, 480 were collected from the site surface, and 105 were recovered from the test trenches and backhoe trenches. A majority of the artifacts collected are ceramic, although substantial numbers of lithic artifacts are also present. No ground stone artifacts were verified by the analysis, although some possible specimens were collected. No faunal material was recovered, and no botanical analyses were performed.

Table 9.3. LA 60753, ceramic and paint type by stratigraphic context; counts and percents.

	Present Surface		Subsurface		Total	
	Count	Col. %	Count	Col. %	Count	Col. %
Ceramic Type						
Pueblo II–III corrugated	1	0.3%	1	1.8%	**2**	**0.5%**
Pueblo III corrugated	1	0.3%	–	–	**1**	**0.3%**
Plain gray	137	41.3%	10	17.5%	**147**	**37.8%**
Corrugated gray	105	31.6%	25	43.9%	**130**	**33.4%**
Red Mesa–style black-on-white	1	0.3%	–	–	**1**	**0.3%**
Pueblo II black-on-white	58	17.5%	17	29.8%	**75**	**19.3%**
Dogoszhi-style black-on-white	1	0.3%	–	–	**1**	**0.3%**
Early Pueblo III black-on-white	2	0.6%	–	–	**2**	**0.5%**
Late Pueblo III black-on-white	1	0.3%	–	–	**1**	**0.3%**
Pueblo II–III black-on-white	4	1.2%	2	3.5%	**6**	**1.5%**
Polished white	18	5.4%	2	3.5%	**20**	**5.1%**
San Juan Red Ware	1	0.3%	–	–	**1**	**0.3%**
White Mountain Red Ware	1	0.3%	–	–	**1**	**0.3%**
Wingate Black-on-red	1	0.3%	–	–	**1**	**0.3%**
Total	**332**	**100.0%**	**57**	**100.0%**	**389**	**100.0%**
Paint Type						
None	19	22.4%	2	9.5%	**21**	**19.8%**
Organic	7	8.2%	2	9.5%	**9**	**8.5%**
Mineral	59	69.4%	17	81.0%	**76**	**71.7%**
Total	**85**	**100.0%**	**21**	**100.0%**	**106**	**100.0%**

Table 9.4. LA 60753, ceramic type by extramural area; counts and percents.

	Extramural Area 1		Extramural Area 2		Extramural Area 3		General		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Pueblo II–III corrugated	–	–	2	0.7%	–	–	–	–	**2**	**0.5%**
Pueblo III corrugated	–	–	–	–	1	3.0%	–	–	**1**	**0.3%**
Plain gray	7	35.0%	120	40.1%	13	39.4%	7	18.9%	**147**	**37.8%**
Corrugated gray	2	10.0%	104	34.8%	11	33.3%	13	35.1%	**130**	**33.4%**
Red Mesa–style black-on-white	1	5.0%	–	–	–	–	–	–	**1**	**0.3%**
Pueblo II black-on-white	5	25.0%	50	16.7%	7	21.2%	13	35.1%	**75**	**19.3%**
Dogoszhi-style black-on-white	–	–	1	0.3%	–	–	–	–	**1**	**0.3%**
Early Pueblo III black-on-white	–	–	2	0.7%	–	–	–	–	**2**	**0.5%**
Late Pueblo III black-on-white	–	–	1	0.3%	–	–	–	–	**1**	**0.3%**
Pueblo II–III black-on-white	–	–	5	1.7%	–	–	1	2.7%	**6**	**1.5%**
Polished white	4	20.0%	13	4.3%	–	–	3	8.1%	**20**	**5.1%**
Mesa Verde red (indeterminate)	1	5.0%	–	–	–	–	–	–	**1**	**0.3%**
Cibolan red ware (indeterminate)	–	–	1	0.3%	–	–	–	–	**1**	**0.3%**
Cibolan Wingate Black-on-red	–	–	–	–	1	3.0%	–	–	**1**	**0.3%**
Total	**20**	**100.0%**	**299**	**100.0%**	**33**	**100.0%**	**37**	**100.0%**	**389**	**100.0%**

Surface artifacts included 332 ceramic artifacts and 148 lithic artifacts (Fig. 9.4). A total of 57 ceramic artifacts and 48 lithic artifacts were collected from subsurface proveniences. The ceramic artifacts (Tables 9.3, 9.4) date primarily to the Mid Pueblo II period (AD 1000–1100). This date is compatible with that of the prehistoric component at LA 37598, directly to the north. The earliest component at LA 37598, including a painted pit structure, is the portion of that site closest to LA 60753. There are just a few sherds falling into Pueblo III type categories and some occurrence of organic paint, indicating a somewhat later component. A later component is also present at LA 37598, west of the highway, which could account for the presence of these later sherds at LA 60753. Based on the mixed nature of the site, no proveniences were assigned to tight date groups; all proveniences at the site were assigned a ceramic date, indicating that the site is primarily Pueblo II with some Pueblo III material mixed in.

The combined total, surface and subsurface, of lithic artifacts recovered from LA 60753 was 196; the subsurface count includes lithics recovered from blading, though even subsurface deposits consist of mixed overburden (Tables 9.5, 9.6). Especially in Extramural Area 1, but also in the assemblage as a whole, the occurrence of utilized debitage is relatively high. Second-use edges were recorded on

Table 9.5. LA 60753, lithic artifacts, counts by stratigraphic context and extramural area.

	Extramural Area 1	Extramural Area 2	Extramural Area 3	General	Total
Extramural fill	–	32	–	–	**32**
Present ground surface	43	89	16	–	**148**
Blading	–	–	2	14	**16**
Total	**43**	**121**	**18**	**14**	**196**

Table 9.6. LA 60753, lithic material and artifact type by extramural area; counts and percents.

	Extramural Area 1		Extramural Area 2		Extramural Area 3		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Tool Type								
Debitage	41	69.5%	95	78.5%	11	68.8%	**147**	**75.0%**
Core	2	3.4%	5	4.1%	1	6.3%	**8**	**4.1%**
Retouched, utilized debitage	14	23.7%	14	11.6%	2	12.5%	**30**	**15.3%**
Retouched, utilized core	1	1.7%	1	0.8%	2	12.5%	**4**	**2.0%**
Graver	–	–	1	0.8%	–	–	**1**	**0.5%**
Notch	–	–	3	2.5%	–	–	**3**	**1.5%**
Hammerstone	1	1.7%	1	0.8%	–	–	**2**	**1.0%**
Chopper, plane	–	–	1	0.8%	–	–	1	**0.5%**
Total	**59**	**100.0%**	**121**	**100.0%**	**16**	**100.0%**	**196**	**100.0%**
Material Type								
Chert	32	54.2%	65	54.2%	9	56.3%	**106**	**54.4%**
Chalcedony	2	3.4%	4	3.3%	–	–	**6**	**3.1%**
Silicified wood	6	10.2%	9	7.5%	3	18.8%	**18**	**9.2%**
Quartzite	6	10.2%	14	11.7%	2	12.5%	**22**	**11.3%**
Quartzitic sandstone	4	6.8%	6	5.0%	1	6.3%	**11**	**5.6%**
Igneous	–	–	1	0.8%	–	–	**1**	**0.5%**
Rhyolite	2	3.4%	1	0.8%	–	–	**3**	**1.5%**
Siltstone	7	11.9%	20	16.7%	1	6.3%	**28**	**14.4%**
Total	**59**	**100.0%**	**120**	**100.0%**	**16**	**100.0%**	**195**	**100.0%**

eight pieces, third-use edges were recorded on two pieces, and fourth-use edges were recorded on two pieces. Conceivably, the higher frequency of utilized edges at the north end of the site relates to the proximity of Pit Structure 2 at LA 37598, where there is also a higher frequency of utilized stone, but sample sizes and disturbance preclude a definite linkage between the sites.

As elsewhere in the Jackson Lake area, chert is by far the most abundant raw material (Table 9.6). Quartzite and quartzitic sandstone combined (as is logical for the geologic and textural nature of the materials) creates the second largest raw material class, and siltstone is third. As usual, a higher percentage of silicified wood is utilized than in the other material classes. There is nothing remarkable in the distribution of tool classes across the site. Formal tools are absent, though items classified as notches (3) and gravers (1) are present.

LA 60753: Summary

Subsurface work at LA 60753 revealed no intact features or deposits within the proposed project area. The majority of the cultural material present was in the portion of the site adjacent to the highway pavement. This, combined with the churned nature of the soil (indicated by the presence of modern trash at 40 cm below the modern ground surface), suggests that this material was probably mixed during highway construction or possibly even imported as road fill.

The proximity of LA 60753 to LA 37598, the corresponding dates for the sites' ceramic assemblages, the shallowness of material at LA 60753, and its lack of associated features suggest that the artifacts at LA 60753 are part of the diffuse artifact scatter connected with a more substantial site, LA 37598, directly to the north. LA 60754, a small house mound east of LA 60753, may also have contributed artifactual material to LA 60753. LA 60754 appears to date to Pueblo II and would therefore be contemporary with some material from LA 60753. Based on the ceramic artifacts from this site, the features at LA 37598 (especially Pit Structure 2) and LA 60754 occupations in the eastern part of this area, east of the highway, are earlier than the roomblock and its associated Pit Structure 1 west of the highway at LA 37598. The cultural material at LA 60753 could also relate to unknown features beneath the highway or to the east of the proposed right-of-way, and given the level of other prehistoric activity in the vicinity, at least minor features are likely to have been present.

10 LA 37594

Laurel Wallace and H. Wolcott Toll

LA 37594 was originally found by the NMDOT and recorded by the Museum of New Mexico (Lancaster 1982a:38–39; Figs. pf.1, 1.1). Surface indications consisted of a large area of scattered cobbles and artifacts. A single 2 sq m test in 1982 did not reveal any subsurface features, and the artifact depth was 0.4 m below the surface. Based on this test no further work was recommended at this site (Lancaster 1983:34–36). The site was relocated and reassessed by OAS in 1987 (Figs. 10.1a, 10.1b; Toll and Hannaford 1997:42, 45), and limited further work was recommended. Subsequent OAS excavation revealed two roomblocks; two pit structures, including the earliest one excavated during the project; three large storage cists; and numerous exterior features (Figs. 10.2, 10.4). The full site extent was established then as 27 m (89 ft) by 40 m (131 ft), or 1,080 sq m (11,625 sq ft).

LA 37594 is in the midst of contiguous sites (Fig. 1.20): LA 37595 to the north (Chapter 12, Vol. 1-Book 1, this report), LA 37593 to the south (Chapter 14, Vol. 1-Book 2, this report), and LA 60750 (not excavated by the project) to the east. Site boundaries were established by changes in artifact density and post-Anasazi modifications of the landscape. A large irrigation ditch built at the turn of the twentieth century defined the eastern edge of LA 37594 and several other sites along the highway. The highway forms the west edge of the site (Fig. 10.2).

Excavation took place from August 25 through December 15, 1988. Dorothy Zamora served as excavation crew chief and was aided for brief periods by Yvonne Oakes and Steve Post. The excavation staff included Kalay Melloy, Janet Johnson, Leonard Yazzie, Rich Walle, Rosemarie Havel, Lillian King, and Kate Fuller, as well as Fred Alfred, Pat Alfred, Roberta Bradley, Guadalupe Martinez, Susan Moga, and Rodney North.

Environmental Setting

LA 37594 lies east of the base of gravel terraces that form the western side of the La Plata Valley, a location shared with most of the project sites both in Jackson Lake and Barker Arroyo (Fig. 1.20). Gently sloping fans spread east from these gravel terraces toward the La Plata River. At this locality the fan is around 164 ft (50 m) wide. The fan substrate is colluvial, consisting mostly of fine-grained sand, silt, and clay lenses. Gravel lenses attest to periodic episodes of increased flow across the site area. The substrate is mostly compact and hard, forming a good medium for earthen architecture. Present-day farms on the fans and the floodplain below were occupied by prehistoric inhabitants of the La Plata Valley. At the time of excavation, the surface of the area was nearly level, ranging from 5,438 to 5,440 ft (1,657.5 to 1,658.1 m) above sea level.

Archaeological Setting

There were two prehistoric occupations at LA 37594, separated by several hundred years. The first occupation was during early Basketmaker III, dating to before AD 600, variously called the Transitional Basketmaker or Sambrito phase (Toll and Wilson 2000). This component is the earliest habitation excavated during the highway project. Most of the site, however, dates to the Mid Pueblo II (AD 1000–1100), a period of heavy prehistoric

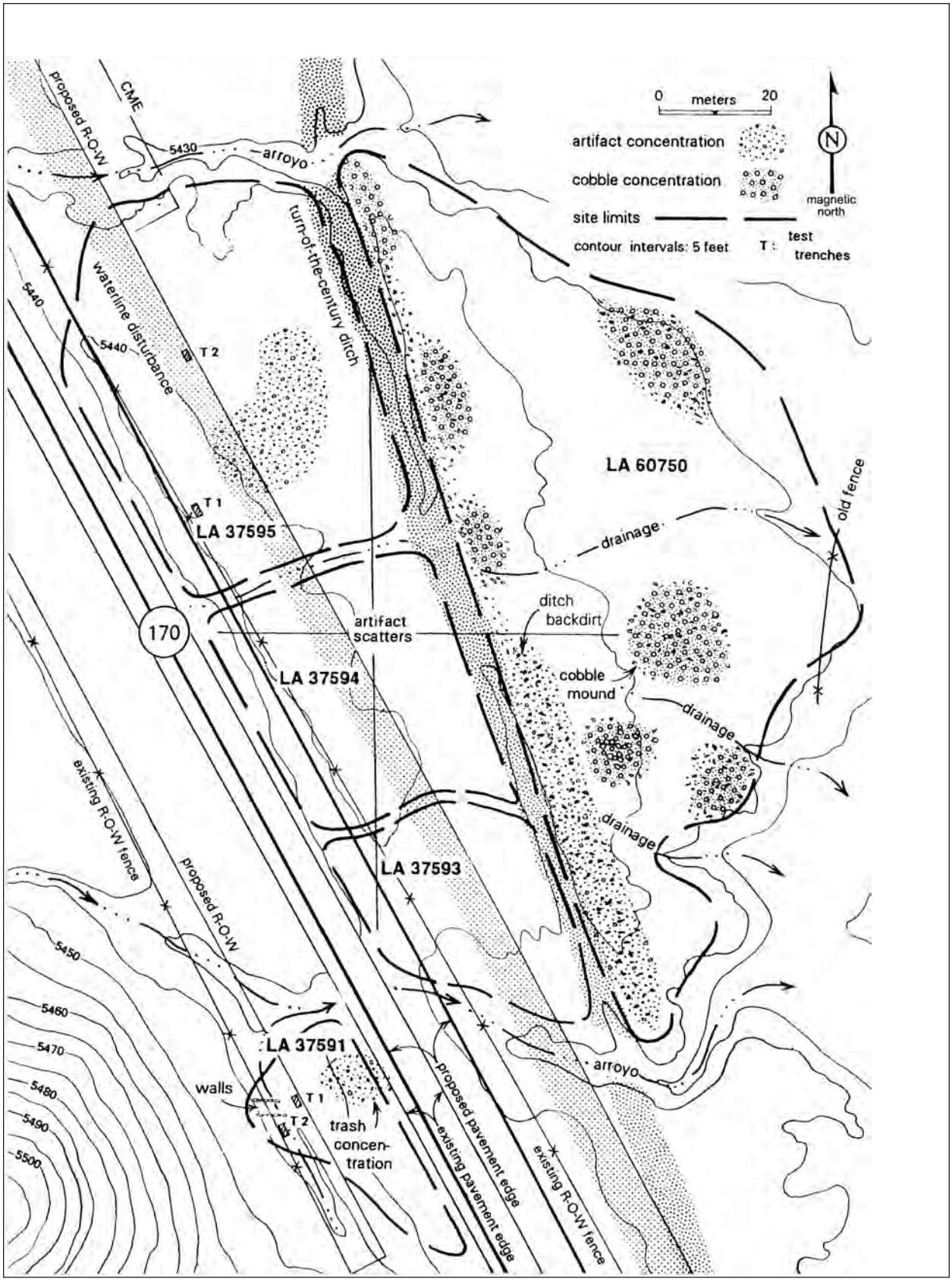


Figure 10.1a. LA 37594, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

Figure 10.1b. LA 37594, site overview, pre-excavation.

Figure 10.2. LA 37594, site setting, view north, along backhoe trench adjacent to existing right-of-way fence.

occupation in the valley and well represented in the project sample.

Field Methods

Site distinctions established during the original survey were maintained throughout excavation. The project collection and excavation area measured 57 m (187 ft) north-south by 21 m (169 ft) east-west (Fig. 10.4). A baseline was placed parallel to the highway at a grid bearing of 327.5 degrees magnetic north and staked at 3 m intervals. Two east–west baselines were staked at the northernmost and southernmost ends off the main north–south baseline. The grid system established from these baselines used the southwest corner for grid designations. The main datum was placed outside of the site limits at 88N/75.5E. The site was surface-collected in 3 by 3 m grids. Hand-dug units of 1 by 3 m were placed in areas with cobbles and dense artifact concentrations. Roomblock 1 and Pit Structure 1 were discovered by this method. Subsequent work proceeded by expanding these units to expose architecture. Several mechanically excavated trenches were also placed to help

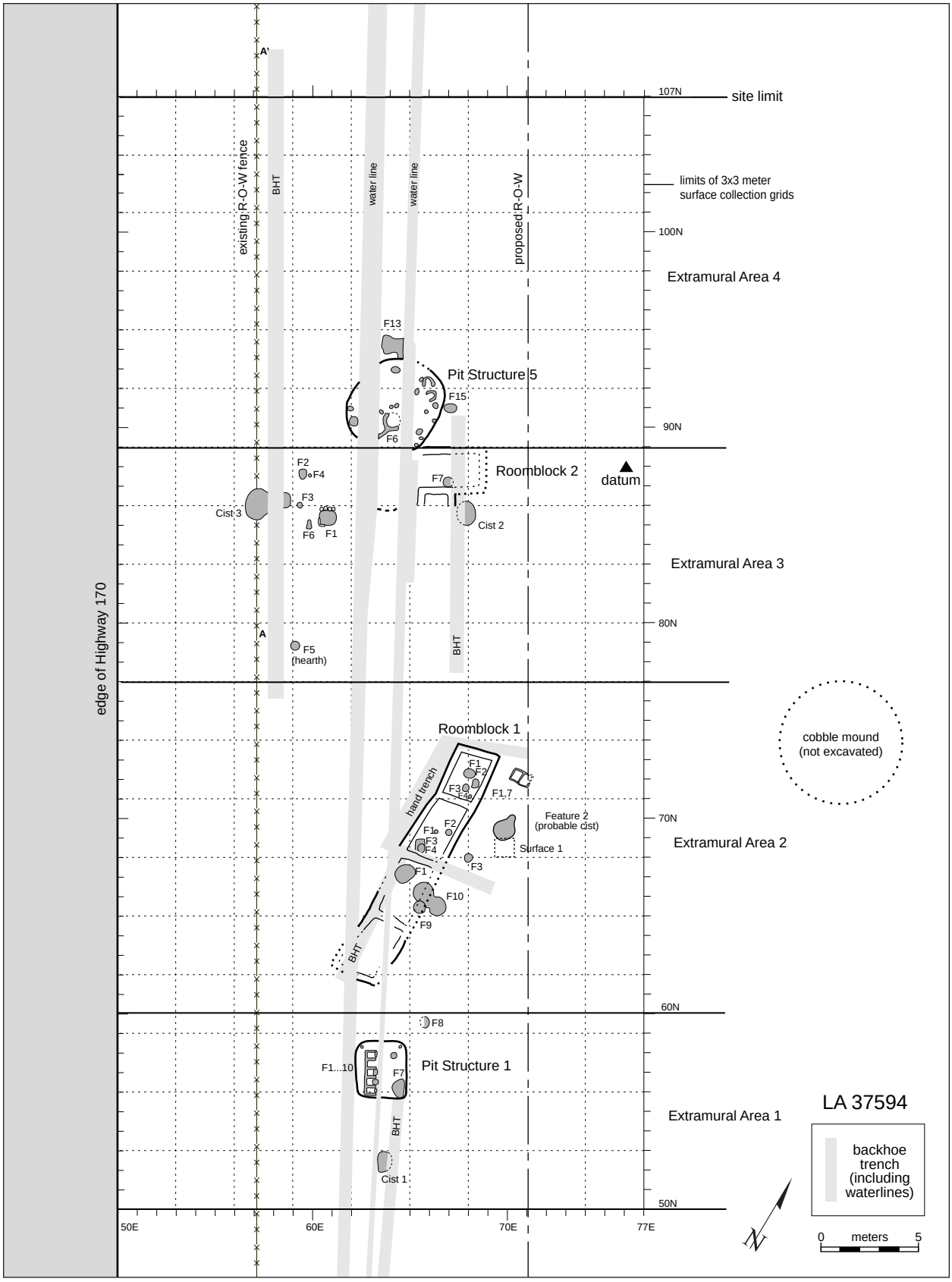


Figure 10.4. LA 37594, site plan.

find buried features. Features discovered in this manner included Roomblock 2 and Cists 1, 2, and 3. Mechanical equipment was also used to remove overburden and modern disturbance from the site, revealing a number of features at the north end.

Initial hand-dug units were excavated using arbitrary levels, followed by excavation in stratigraphic layers when possible. All excavated soil was screened through 1/4-inch mesh. All hand-dug units and backhoe trenches were profiled. Elevations were tracked in the field using line levels from subdatum points tied to the site datum elevation. Discussion of vertical relationships in this report stems primarily from field notes. Some deficiencies in transit record keeping make inter-area elevation relationships more difficult, though relative depths are present in the records.

Artifacts were assigned field specimen numbers that corresponded to specific locations. Grid units served as preliminary spatial locators. Once a structure was defined, however, all artifacts from the structure interior were separated from exterior areas. Integral portions within a larger structure, such as a room within a roomblock, were treated as separate analytical units. Whenever possible, architecturally meaningful proveniencing was assigned.

Distribution of Surface Material

Surface material distributions for LA 37594 were plotted for ceramic and lithic concentrations (Fig. 10.5). These distributions are affected by removal with mechanical equipment and the mixing of surface and subsurface remains. The area was used to mix asphalt, and asphalt was found several centimeters below the modern ground surface. Water lines cut through the site parallel to the grid and the fence (Fig. 10.4), further mixing surface with subsurface materials. The large, abandoned irrigation ditch east of the site (Fig. 10.1a) also turned deposits, leading to higher surface densities of artifacts along the eastern edge of the site. Thus, surface artifact density information is primarily a record of the site as it was examined in 1988, though some areas of high artifact density do correspond to features, most notably in the grid above Cist 2 and adjacent to Roomblock 2, in the northern part of the site (around 86 N). There is also increased surface material southeast of Roomblock 1 (around 65N/65E), where a midden would be expected.

Site Areas

For analytical purposes, LA 37594 was divided into four extramural areas corresponding to structures and potentially associated features (Fig. 10.4). These site divisions were made according to grid lines. Extramural Area 1, the southernmost area (50N to 60N), contains the mealing room (Pit Structure 1), an extramural cist (Cist 1), and a fire pit. Extramural Area 2 contains the largest number of artifacts and features, including Roomblock 1, a large probable cist initially called a "jacal structure," and some mealing bins; it extends from 60N to 77N. Extramural surface collection grids with south boundaries on 59N were put with Extramural Area 2 since two-thirds of these grids are in that area. Extramural Area 3 contains Roomblock 2 and several large extramural features including two major cists (Cists 2 and 3); it extends from 77N to 89N. Extramural Area 4, the northernmost section, contains an early pit structure (Pit Structure 5); the area extends from 89N to the site limit at 107N. The surface material ceramic assemblages indicate a solid Mid Pueblo II component for the entire area. There is a slight indication of the early component in Extramural Area 4 in the form of slightly elevated plain gray sherds. The area designations work well as spatial groupings of structures and features into potential activity areas. Three large extramural storage cists (Cists 1–3), assigned pit structure numbers in the field, have been relabeled as extramural features, accounting for the jump in pit structure numbers from one to five.

For purposes of material culture presentation, proveniences have been grouped into structure-based sets. This grouping treats the two pit structures, each of the roomblocks, and the large cist in front of Roomblock 2 separately and places all extramural artifacts into one class. This scheme results in the extramural group being much larger than the others in most material categories. Where samples are large enough to be meaningfully subdivided, smaller groups are examined during the discussion of proveniences. Ceramic comparisons do not reveal differences within the Pueblo II component. The stratigraphic complexity of this component, however, does suggest a moderate duration of occupation during Pueblo II.

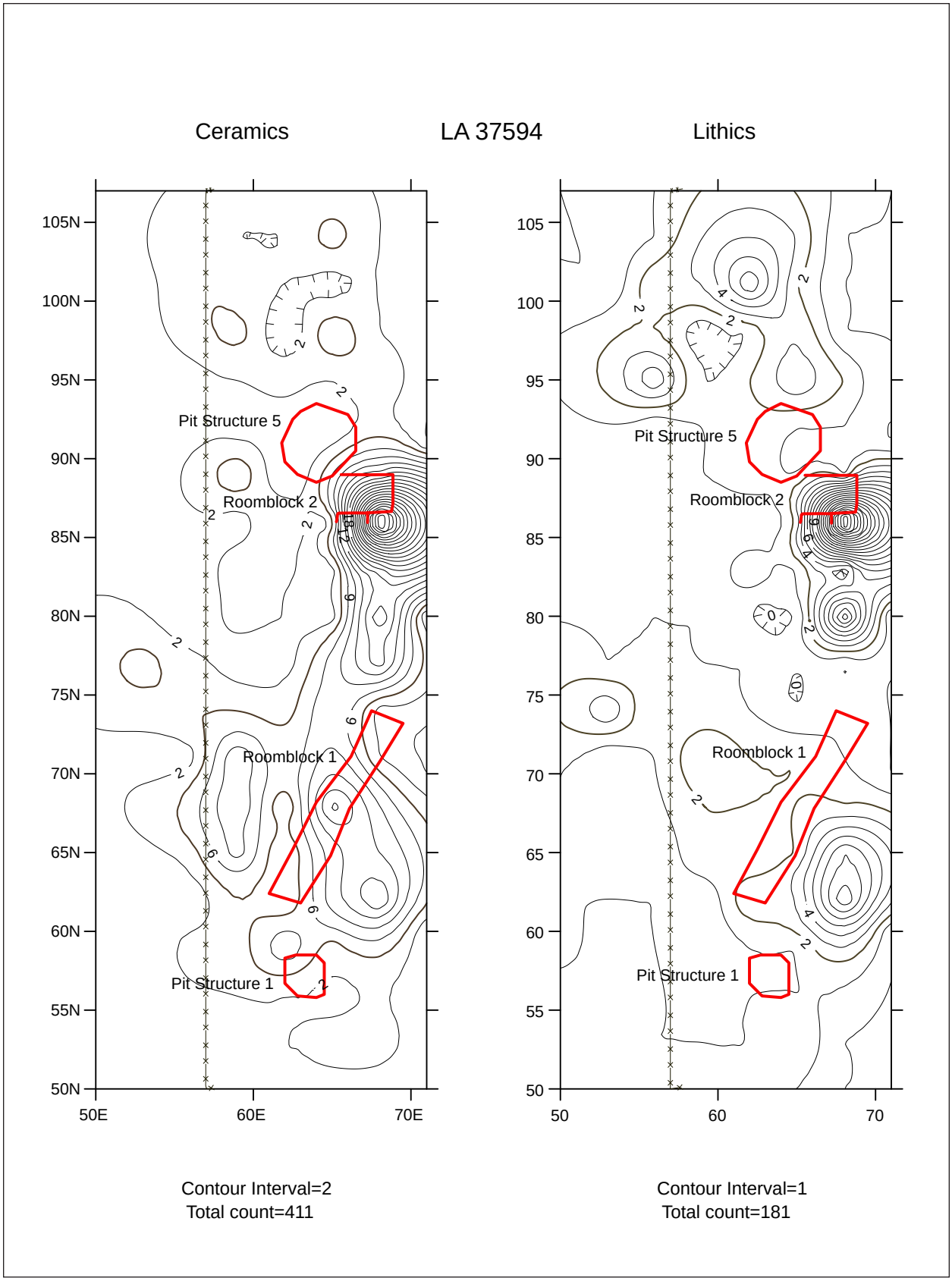


Figure 10.5. LA 37594, Extramural Areas 1–4, surface collection area, distribution and density, ceramics and lithics.

EXCAVATION RESULTS

EXTRAMURAL AREA 1

Extramural Area 1, the area farthest to the south at LA 37594, included a subterranean mealing room (Pit Structure 1) and a large storage cist (Cist 1) 2.5 m (8.2 ft) south of the mealing room (Fig. 10.4). Both of these features have associated ceramics dating to Mid Pueblo II (AD 1000–1100).

Pit Structure 1 (Mealing Room)

Pit Structure 1 is a nearly square subterranean mealing room measuring 2.9 m (9.5 ft) north–south by 2.5 m (9.5 ft) east–west, an area of 7.5 sq m (80.7 sq ft) (Figs. 10.6, 10.7). Its maximum height is 1.05 m (3.4 ft). A row of mealing bins extends across the north–south axis of the structure, dividing it approximately in half. The remains of five bins were defined, but there is considerable likelihood that only four bins were active during the last use, since the middle bin is small and incomplete. It is difficult to be sure, however, since the metates were removed, as is often the case in these structures. The grinders' feet would have been against the west wall. The floor, partially destroyed by rodent activity, remained as a mud-plastered surface overlying gravels. The structure was dug into a sterile gravel lens, and the walls are exposed gravels. No wall plaster was detected, probably due to the unstable nature of the walls. Manos were found in several of the bins.

The excavation of the structure had to circumvent one of the two water line pipes that ran the length of the site, dividing the structure into the west third and the east two-thirds. The water line trench mixed surface and subsurface remains 20 cm below the ground surface but passed above the structure floor and missed Burial 1 by another 20 cm.

The floor of this structure was around 2 m below the modern ground surface. Excavation of the structure was complicated by the passage of two water lines through the fill at the west edge of the structure and through the middle of the structure. Although the lines did not reach the floor, they did disturb fill and probably removed some portions of the structure. The northwest corner of the floor was found by means of a hand-excavated 1 by 1.5 m test excavated in arbitrary levels. A series of four hand-excavated trenches proceeded from west to east to clear the structure. These units were excavated in natural layers beginning about 1 m below modern ground surface, at the top of fill of the structure.

Stratigraphy

Five stratigraphic layers were defined in the fill of the structure. Layer 1 was a compact, sandy clay with large cobbles, containing historic (probably from the water lines) and prehistoric artifacts with a depth of 0–20 cm below the defined edges of the structure. Only prehistoric artifacts were collected. Layer 2 was composed of fine sand and silt and contained charcoal flecks, medium-sized cobbles, and a few prehistoric artifacts (the artifacts are not present in the analyses). The layer extends 9 to 27 cm below the top of the structure fill. Layer 3 contained sets of sandy clay laminae with large charcoal fragments to a depth of 23–60 cm. These sets of laminae were separated by silty charcoal layers. Layers 4 and 5 both rested on the floor, which was at depths of 102 to 104 cm, though portions of the base of Layer 4 are reported as high as 93 cm below surface. Layer 4 consisted of feature fill described as a gray sand with flecks of charcoal. Layer 5 was loose sandy clay floor fill. The floor was compact sandy clay.

Burial 1

A juvenile aged three to five years arranged in a semiflexed position was found in Layer 4, approximately 40 cm down into the pit structure fill, with the base around 40 cm above the structure floor, indicating that the structure was abandoned well before placement of the burial. Due to natural erosion, very little of the skeleton was preserved, leaving the cranium, arms, and some ribs (Martin et al. 2001). The cranium was crushed by a cobble, thought by the excavators to have come from the water line construction. A partial Mancos Black-on-white bowl was placed over the cranium. No prepared burial pit was detected.

Floor features

Metate rests and associated catch basins (Features 1 and 3, 4 and 6, 10, 8, and 5, from south to north) constituted the majority of the structure's eleven floor

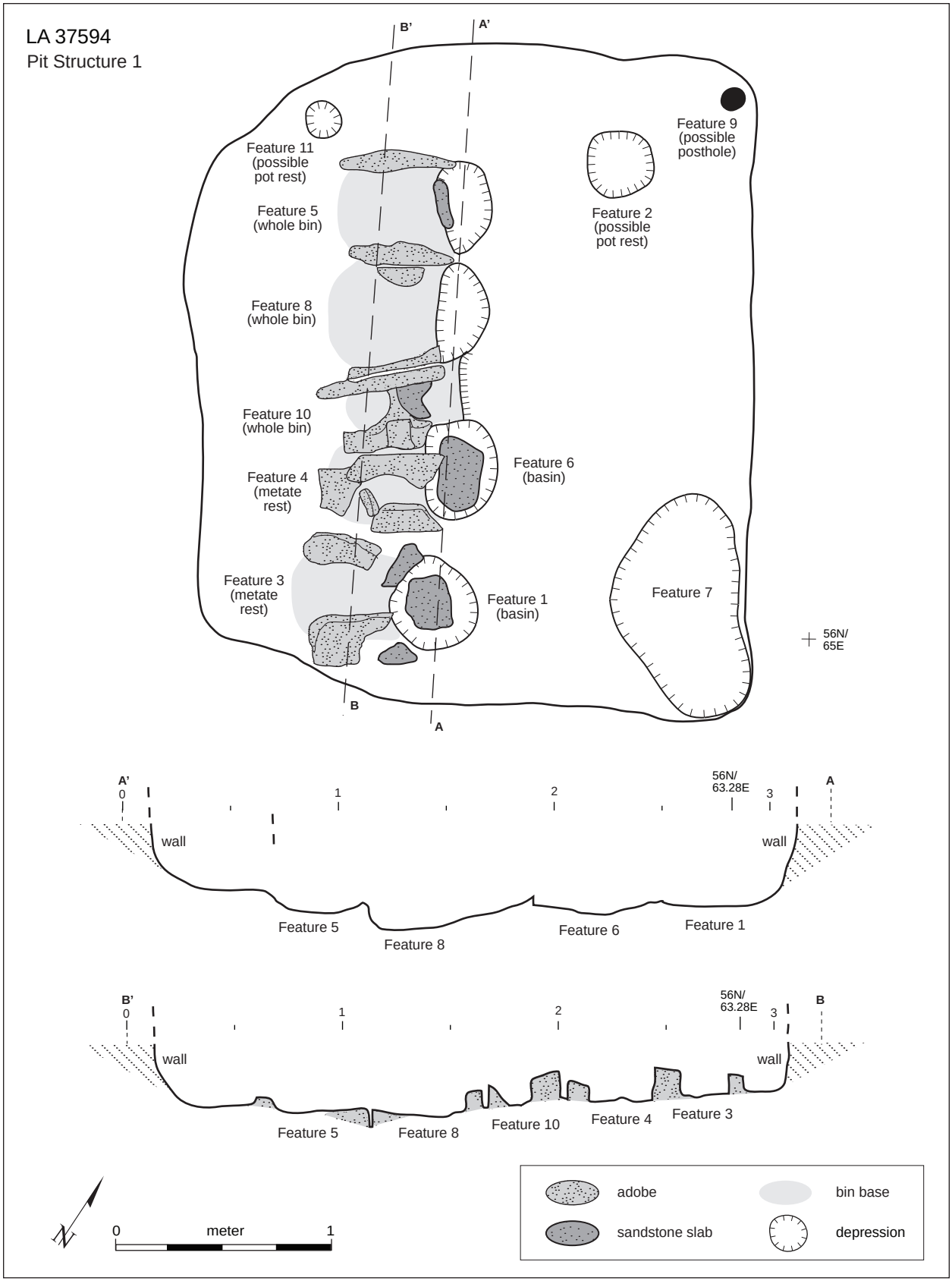


Figure 10.6. LA 37594, Extramural Area 1, Pit Structure 1, plan and profiles.

Figure 10.7. LA 37594, Extramural Area 1, Pit Structure 1 (mealing room), view west.

features (Figs. 10.6, 10.7; Table 10.2). The mealing features were aligned near the west wall of the structure, presumably so that the users could anchor their feet against the west wall. The backs of the metate rests are mostly 50 to 55 cm from the west wall, though the bulge in the northwest corner means that Feature 8 is about 80 cm from the wall. All of these bins were connected and formed a four- or five-part food-processing area (Figs. 10.6, 10.7).

Mealing Station 1 consists of a round bin/basin with a prepared mud surface and a sandstone slab in the middle (Feature 1) attached to a subrectangular metate rest of slightly oxidized adobe (Feature 3) to the west. A horizontal sandstone slab was placed as a separating device between this basin and the metate rest.

Mealing Station 2 is made up of an adobe metate rest (Feature 4) associated with a catch basin directly to the east (Feature 6). Feature 6 was a round basin with plastered sides and a fragmented sandstone slab at its base. Mealing Station 3, the middle bin (Feature 10), is constricted, and it is likely that it represents an earlier bin that was not in use with the other four. The remaining portions of the feature show quite clearly that it was a metate rest with a round basin, though the basin is partially superimposed by the edge of Mealing Station 4. The sandstone slab that formed the bottom of the basin is broken.

Mealing Station 4 is a rectangular metate rest with the north and south sides formed by upright sandstone slabs now indicated by slots in the adobe and a semicircular catch basin (Feature 8). The basin is plastered, with the edges raised by slabs. Though the edge was disturbed, the basin was semicircular and around 14 cm deep.

Mealing Station 5 is a rectangular adobe metate rest with a semicircular bin (Feature 5). An upright sandstone slab on the west side of the basin separated it from the metate rest. The basin is slab-lined and plastered.

All of the adobe metate rests were concave on the top surface to fit the convex back side of the metates. Several manos were found in the bins of Features 1, 5, 8, and 10. All of the basins were combinations of slabs and plaster. The southern three basins (including the probably disused central one) had slab bases and plastered sides, while the northern basins have plastered bases and incorporate slabs in the

Table 10.2. LA 37594, Pit Structure 1, floor features.

Feature	Type	Shape	Length (cm)	Width (cm)	Depth (cm)	Volume (l)	Fill Description
Mealing Features							
1	pit catch basin	hemispherical, paired with Feature 3	40	39	10	12.3	sandy clay, 1 mano in fill
3	metate rest	subrectangular, paired with Feature 1	55	34	10	–	sandy clay, charcoal flecked, slab-lined base
4	metate rest	irregular, paired with Feature 6	50	34	10	–	sandy clay, charcoal flecked
6	pit catch basin	hemispherical, paired with Feature 4	35	31	8	6.8	sandy clay, charcoal flecked, slab-lined base
10	metate rest and bin	rectangular	60	30	10	–	sandy clay, charcoal flecked, 1 mano in fill
8	metate rest and bin	rectangular	75	40	14	8.8 (basin)	sandy clay, charcoal flecked, 2 manos in fill, 2 bone awls, lithics, ceramics
5	metate rest and bin	rectangular	52	48	10	–	sandy clay, 3 manos in fill
Other Features							
2	pot rest?	hemispherical	24	21	7	2.8	sandy, charcoal flecked
7	pit	irregular	94	68	6	38.4	sandy clay, lithics, ceramics, eggshell
9	posthole?	cylindrical	10	11	14	1.2	loose sands, no artifacts
11	pot rest?	hemispherical	12	12	3	0.3	sandy clay, fine charcoal flecks

Features 1 + 3 and 4 + 6 form mealing stations, as do Features 10, 8, and 5.

sides. The catchment basins ranged in volume from around 7 to a little over 12 liters.

Other features

Two possible pot rests were recorded. Feature 2 was a small, round, plastered depression in the floor. Charcoal was embedded in the bottom and sides of the feature. Feature 11 was a round depression with an oxidized surface and minute charcoal flecking. A shallow, irregular, and elongated pit in the southeast corner of the structure (Feature 7) with reportedly prepared walls of compacted sand could be analogous to worn areas in other mealing structures, which could represent the area where users stepped down into the structure and left. A number of artifacts were found in the fill. A single cylindrical pit was in the northeast corner of the room (Feature 9); the excavator compared it to a small posthole, though no post remnants or other clues to its function were present.

Artifacts

The Pit Structure 1 floor assemblage included pot sherds, flaked stone, ground stone, and faunal remains (Tables 10.3–10.6). The sherds consisted of mostly corrugated gray ware cooking and storage vessels; white wares included two bowl body and five jar body sherds. Flaked stone items included debitage, cores, a chopper, and an axe. The ground stone items consisted of two shaped slabs, a one-hand mano, and three two-hand manos used on slab metates.

A pollen wash was performed on a two-hand mano from the floor fill of the structure (Table 10.7). Pollen from domesticates was absent from this sample. The largest pollen counts are arboreal pollens, grasses, cheno-ams, and composites. *Zea* pollen, however, was recovered from one of the mealing bin catch basins, and a bean (*Fabaceae*) pollen grain was in another mealing feature. Because bean pollen is rarely found, the presence of a

Table 10.3. LA 37594, Pit Structure 1, pottery type by stratigraphic context; counts and percents..

	Structure Fill		Floor Fill		Surface or Floor		Total	
	Count	Col.%	Count	Col.%	Count	Col.%	Count	Col.%
Pueblo II corrugated	2	0.8%	–	–	–	–	**2**	**0.6%**
Pueblo II–III corrugated	3	1.2%	–	–	–	–	**3**	**0.8%**
Plain gray	19	7.8%	10	12.0%	1	3.0%	**30**	**8.4%**
Corrugated gray	189	77.8%	58	69.9%	25	75.8%	**272**	**75.8%**
Pueblo II black-on-white	2	0.8%	2	2.4%	1	3.0%	**5**	**1.4%**
Dogoszhi-style black-on-white	–	–	3	3.6%	–	–	**3**	**0.8%**
Pueblo II–III black-on-white	7	2.9%	–	–	3	9.1%	**10**	**2.8%**
Polished white	9	3.7%	7	8.4%	3	9.1%	**19**	**5.3%**
Polished black-on-white	11	4.5%	3	3.6%	–	–	**14**	**3.9%**
Mesa Verde plain red	1	0.4%	–	–	–	–	**1**	**0.3%**
Total	**243**	**100.0%**	**83**	**100.0%**	**33**	**100.0%**	**359**	**100.0%**

Table 10.4. LA 37594, Pit Structure 1, chipped stone artifacts by stratigraphic context; counts and percents.

	Structure Fill		Floor Fill		Surface or Floor		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Debitage	37	64.9%	51	85.0%	39	76.5%	**127**	**75.6%**
Core	14	24.6%	5	8.3%	9	17.6%	**28**	**16.7%**
Retouched, utilized debitage	6	10.5%	–	–	1	2.0%	**7**	**4.2%**
Retouched, utilized core	–	–	1	1.7%	–	–	**1**	**0.6%**
Hammerstone	–	–	3	5.0%	–	–	**3**	**1.8%**
Chopper, plane	–	–	–	–	1	2.0%	**1**	**0.6%**
Axe	–	–	–	–	1	2.0%	**1**	**0.6%**
Total	**57**	**100.0%**	**60**	**100.0%**	**51**	**100.0%**	**168**	**100.0%**

10.5. LA 37594, Pit Structure 1, ground stone artifacts, counts by stratigraphic context.

	General Fill	Floor Fill	Floor	Total
Shaped slab	–	1	2	**3**
One-hand mano	–	–	1	**1**
Two-hand trough mano	3	2	–	**5**
Two-hand slab mano	3	2	3	**8**
Total	**6**	**5**	**6**	**17**

Table 10.6. LA 37594, Pit Structure 1, faunal remains by stratigraphic context; counts and percents.

	General Fill		Floor Fill		Surface or Floor		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Small squirrel	–	–	–	–	1	0.8%	**1**	**0.6%**
Cottontail	–	–	2	66.7%	2	1.5%	**4**	**2.5%**
Dog, coyote, wolf	8	34.8%	–	–	–	–	**8**	**5.1%**
Deer	–	–	1	33.3%	4	3.0%	**5**	**3.2%**
Small mammal	1	4.3%	–	–	7	5.3%	**8**	**5.1%**
Large mammal	1	4.3%	–	–	1	0.8%	**2**	**1.3%**
Birds	13	56.5%	–	–	–	–	**13**	**8.2%**
Turkey-like eggshell	–	–	–	–	116	87.9%	**116**	**73.4%**
Marine shell	–	–	–	–	1	0.8%	**1**	**0.6%**
Total	**23**	**100.0%**	**3**	**100.0%**	**132**	**100.0%**	**158**	**100.0%**

Table 10.7. LA 37594, Pit Structure 1, pollen, counts by provenience.

FS	Provenience	Families	(Full) Sum	Marker	Arboreal	n	Cheno-Am	n	Composite	n	Grasses	Domesticate	n	Shrubs	n	Other	n
808	Burial 1	7	126	85	*Pinus* haploid Pinus	1 3	pollen	13	high-spine low-spine	1 2	4	–	–	–	–	*Ephedra*	1
814	Feature 6, mealing bin	10	126	85	*Pinus* *Juniperus*	10 2	pollen	65	high-spine low-spine	5 3	3	*Zea*	11	*Salix*	3	Apiaceae Solanaceae	1 1
817	Feature 8, mealing bin, Floor 1	10	211	97	*Pinus* *Quercus*	13 1	pollen	156	high-spine low-spine	3 1	12	Fabaceae	1	–	–	Rosaceae *Cylindropuntia* *Sphaeralceae*	1 1 1

grain in a mealing room sample suggests that many types of plants were processed in these structures.

Most of the eggshell from the site is from the floor of this structure; fragmentary turkey remains are present in the fill of the structure, and turkeys are more common in Pit Structure 1 than other structures on the site, though still not abundant. No immature turkey remains were identified; most turkey bones are fragmentary and could be accounted for by only a few individuals.

The structure contained only three hammerstones, but a remarkable number of cores: 27. Both of these tool types were predominantly in the lower fill, and it seems likely that at least some of the cores were part of the tool kit used to recondition grinding stones. Over half of the debitage from the structure weighs 2 g or less, and, again, most of the debitage comes from Layer 4. Though siltstone flakes tend to be larger than other materials, the most abundant small flake material type is siltstone, the material of one of the hammerstones and nine of the cores. Thus, though somewhat indirect, there is evidence for ground stone tool maintenance in the structure's lower fill. Slab and trough manos are both present in the structure, and all but one of the 14 manos are two-handed.

The modified bone assemblage is somewhat unusual from this structure, though the artifacts do not have clear use associations and may just be trash fill. The three most nearly complete bone awls from the site are from Pit Structure 1, as is a *Glycymeris* pendant.

Pit Structure 1, Summary

The subterranean construction and features of this mealing and processing structure are similar to other Pueblo II mealing rooms at other project sites (LA 37595, LA 37599, LA 37600, LA 37601) and in the region (Kuckleman and Morris 1988:162–169, 199–212; Morris 1986:32–42; Hill 1985; Mobley-Tanaka 1997). Kuckleman and Morris (1988:162, 199) describe similar unplastered walls, and the absence of postholes, concluding that the roof was built over the structure at ground surface (Kuckleman and Morris 1988:163). This is also similar to the other examples found on this project, including those with natural earth walls where possible (a retaining wall was necessary in the structure at LA 37595). Atypical in this structure relative to other mealing rooms is that the

mealing features are arranged along the long axis of the room instead of a more common configuration in which they are arranged across the short axis of a room. This is largely because the open area of the structure is smaller than usual, and the structure is nearly square. In this sense it is similar to the smaller (2.2 by 2.2 m) mealing structure at the Yellowjacket site of 5MT3 (Mobley-Tanaka 1997:440–441). Pit Structure 1 falls well within the size range of similar structures reported for southwest Colorado, which are somewhat smaller than most of the structures from the La Plata project.

No roof or wall fall was discernible. The lack of roofing material suggests that these materials were removed and used elsewhere. After abandonment, the structure was exposed for some time to wind and rain, creating the laminated strata just above the metate rests. A flooding episode then filled most of the structure with alluvial sand, cobbles, and a few prehistoric artifacts. The last 20 cm of fill in the structure was a mix of alluvial fill, prehistoric artifacts, and modern trash mixed by water line trench construction and other modern modifications to the area.

There is some reflection of the structure's function in the artifact assemblages. The ceramics are heavily dominated by gray ware jars, and the occurrence of hammerstones and cores greater than in other provenience groups. Although metates are absent, a number of two hand manos were recovered from this context. The size of the debitage, however is somewhat surprising, since the average flake size (10.8 g) is larger than most of the other provenience groups. The flake sizes are dominated by flakes less than 5 grams but there are several very large flakes; excavation of this floor also took place prior to institution of the policy of fine screening mealing room floors, which produced many microflakes when employed in other structures.

Extramural Features, Extramural Area 1

Feature 1 (Cist 1). Mechanical trenching 3 m due south of Pit Structure 1 uncovered a large storage cist, Cist 1 (Fig. 10.4, Table 10.8). This trenching removed about a third of the cist in plan view. Reconstructed dimensions measured 1.21 by 0.60 m, with a depth of 0.53 m. Mechanical equipment also removed 47 cm of fill. The remaining few centimeters of fill were excavated by hand as three layers. The cist floor was redder than the upper layers and appeared to be made of clay. All three layers above the floor were laminated, charcoal-flecked, sandy clay with charcoal chunks. The top layer only contained

Table 10.8. LA 37594, Extramural Areas 1 and 2, features.

Feature	Type	Shape	Length (cm)	Width (cm)	Depth (cm)	Volume (l)	Fill
Extramural Area 1							
1	major storage cist	hemispherical	121	60 est.	53	350 est.	Two layers sand and clay fill with large charcoal pieces; base two laminations or floors.
Extramural Area 2							
1	mealing bin	rectangular	48	35	18	31.9	Light brown clay with charcoal flecks; no artifacts.
3	pit	connected hemispheres	34 36	39 26	15 15	27	Sandy clay with charcoal flecks, lithics, ceramics, and bone.
7	mealing bin	oblong curvilinear	48	33	18	28.5	Light brown sandy clay with charcoal flecks; ceramics, lithics, core, hammerstone.
8	fire pit	hemispherical	68	68	11	39.9	Light gray sandy clay.
9	ash pit	oblong curvilinear	75	60	16	57.3	Below Room 104, light gray ash with charcoal, artifacts.
10	pit	irregular	175	120	25	525	Below Room 104, dark brown sandy clay with large pieces of charcoal, fire-cracked rock, artifacts.

ceramic and lithic artifacts, bone, and ground stone. The charcoal decreased toward the floor. The lower two layers may represent informal surfaces after minor fill episodes. The upper layer may represent the remains of a trashy alluvial fill. Ceramics from this feature date to Mid Pueblo II (AD 1000–1100).

Summary, Extramural Area 1

Both the mealing structure and the large storage cist contained ceramics dating to the Mid Pueblo II occupation. Although finer temporal placement is not possible, the proximity and complementarity of these features suggests that they form a functional unit with Roomblock 1 in Extramural Area 2. Typically, these mealing structures are associated with pit structures, and the grinders faced the pit structure (Mobley-Tanaka 1997:441). They fall into a fairly restricted time span in the eleventh century. An association with Roomblock 1 is likely, and a pit structure for this component may lie outside of the right-of-way.

EXTRAMURAL AREA 2

Roomblock 1, including Rooms 101–104 and 10 exterior features east of the roomblock, falls within Extramural Area 2 (Figs. 10.4, 10.8; Table 10.8).

Roomblock 1

Only two of the four rooms of Roomblock 1 were intact. Rooms 101 and 102, at the north end of the roomblock, were relatively undisturbed, whereas portions of Rooms 103 and 104, to the south, had been removed during water line construction (Fig. 10.8).

The reconstructed interior dimensions of the roomblock as a whole are 14.3 m (46.9 ft) north–south by 2.0 m (6.6 ft) east–west. Initial excavation consisted of 1 by 3 m units dug in 10 cm arbitrary levels until cobbles were encountered. Exposed wall fall remained until the whole structure was uncovered. The definition of the exterior faces of the north wall of Room 101 and the south wall of Room 102 developed through small trenches 20 cm wide. No stratigraphic breaks were noted for interior room fill. Excavation of the room interiors proceeded by 10 cm increments until occupational surfaces were found.

Room 101

The foundations for Room 101 walls were built in a single construction episode. The wall foundations were a single to double cobble width and made of medium to large cobbles (15–20 cm). These cobbles stood two courses high, set into a 10 cm deep wall trench (Table 10.9). Mud mortar was used between each course, and gray ware sherds were used for chinking in the west and north walls. The sherds ranged in size from 2 to 7 cm.

Two occupational surfaces were found in Room 101. Artifact position and density indicated an unprepared upper floor (Floor 1). Artifacts included a Pueblo II corrugated jar rim, 20 corrugated jar body sherds, 2 polished white jar sherds, a notched ground stone hoe, and 6 large mammal long-bone fragments. Flaked stone items consisted of 6 pieces of debitage and a piece of retouched/utilized debitage. No features were associated with this surface.

Floor 2 was 2 cm below Floor 1. It was a prepared mud surface plastered with sandy clay, compact and stained dark with heavy use. Four features were found: a remodeled central hearth (Feature 1), an ash pit directly southeast of the hearth (Feature 2), a storage pit south of the hearth (Feature 3) , and another small pit near the southeast corner of the room (Feature 4) (Figs. 10.9a, 10.9b, 10.9c; Table 10.10).

Feature 1, the hearth, was a large basin with a clay collar that had been plastered several times. Excavation revealed two distinct remodeling phases: an upper hearth with a clay collar and one layer of fill, and a lower hearth with two fill layers left in place at the time of remodeling. The upper and lower hearths were both heavily plastered, oxidized, and basin-shaped. An archaeomagnetic sample from the lower hearth did not date.

Feature 2, an ash pit used for heating, was a shallow, heavily oxidized, basin-shaped pit. Corn was collected from the fill, but few artifacts were associated with this feature.

Feature 3, a storage pit had a plastered collar at the floor level (Figs. 10.10a, 10.10b). This feature was a deep, straight-sided pit with the lower two-thirds "closed" with fill and rocks. Beneath this rock capping were the remnants of two corrugated vessels, distinguished by a difference in paste color

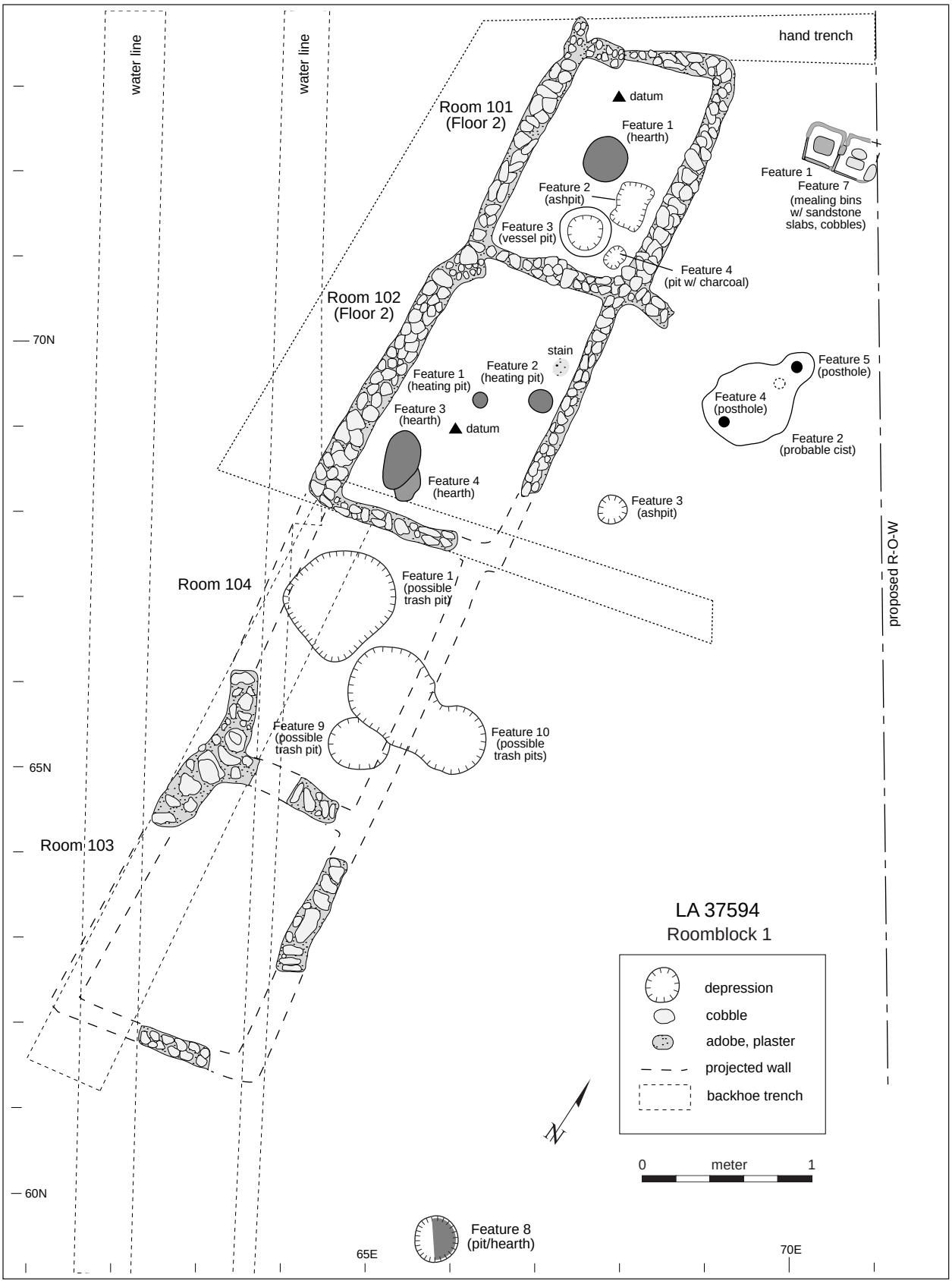


Figure 10.8. LA 37594, Extramural Area 2, Roomblock 1 and adjacent features.

Table 10.9. LA 37594, Room 101, wall dimensions.

Wall	Length (cm)	Width (cm)	Height (cm)	No. of Courses
North	150	25	5–22	2
South	155	25	10–29	1–2
West	275	25	16–32	2
East	250	25	19–31	2

and a continuous pattern of fingernail impressions on Vessel 1. These large sherds were used to line the storage pit. Vessel 1 sherds were found in the fill of the feature, near the bottom, along with two large cobbles. This vessel is represented by 342 sherds, or 91 percent of the sherd count from the floor. Resting on the bottom of the feature was one large corrugated sherd (Vessel 2), representing about 30 percent of the vessel (Fig. 10.11). Vessel 2 was extensively blackened and was placed on two slabs of burned sandstone measuring 23 by 19 by 2 cm and 16 by 10 by 1 cm. Since the feature showed no signs of oxidation, it was assumed that the sandstone and vessel fragments were sooted and heated outside and away from this feature. Three rocks were also found inside this vessel fragment. A small groove ringing the very top of the pit suggests that there was a lid at one time, although no lid was found. Feature 4 was a basin-shaped pit 30 cm in diameter and 10 cm deep in the corner of the room. It contained a layer of solid charcoal sandwiched between two sandy layers, and no artifacts. No oxidation was noted.

Room 102

The foundation of Room 102 abuts the south wall corners of Room 101 (Fig. 10.8). The overall dimensions of Room 102 were equal to those of Room 101. Wall-foundation levels and construction methods were the same as those of Room 101, implying that this room was built at or near the same time. Four occupational surfaces were found. One floor was a prepared surface with features. Of the three unprepared surfaces, only one had associated features (Table 10.11). Floor 1 was defined by six sherds lying on a charcoal-flecked, hard-packed clay (Table 10.12). They included two corrugated necked jar body sherds and four corrugated jar body sherds. This uppermost surface contained no associated features, but two small charcoal stains were present. Historic trash such as glass, rubber, and paper were found on the floor, although these were attributed to rodent activity rather than more extensive disturbance.

Floor 2 was a plastered surface with four features 4 cm below Floor 1 (Figs. 10.8, 10.12). A heating pit near the center of the east wall (Feature 1) was circular and heavily oxidized along its outer rim. Another heating pit (Feature 2) like Feature 1 was in the center of the floor. A remodeled hearth (Features 3 and 4) was near the southwest corner. The earlier hearth, larger than the upper hearth, was cobble-lined and plastered. There was quite a bit of rock in the earlier feature. Three upright slabs were found in the fill of this feature, probably indicating rock lining. The later version of the hearth was superimposed on one edge of the earlier version, leaving around half of the earlier feature intact (Fig. 10.12). Both upper and lower hearth episodes contained numerous lithic and ceramic artifacts in the fill. Six artifacts were piece plotted on the floor, including a stack of three sherds next to Feature 1.

Point-provenienced items from Floor 2 of Room 102 included a polished black-on-white necked jar body sherd (PP 1), a plain gray jar body sherd (PP 3), plain gray jar and necked jar body sherds (PP 4), a polished black-on-white bowl body (PP 5), and a siltstone flake (PP 6).

Floor 3 was an unprepared surface of silty clay 5 cm below Floor 2; it contained no features (Fig. 10.13a). Associated artifacts were somewhat more abundant, including mostly gray ware cooking sherds and three squiggle-hatched white jar body sherds. Also present were three pieces of debitage and a single piece of bird eggshell (Table 10.6).

Floor 4 was below 5 cm of fill from Floor 3. Floor 4 was also an unprepared surface of silty clay, but charcoal flecking, artifacts, and two features were present. Feature 1 was a small basin-shaped pit. Feature 2, a shallow pit with three cobbles at the base, may have been a pot rest. Floor artifacts were corrugated jar body sherds, a white jar body sherd, and four pieces of debitage (Tables 10.13, 10.14). Though not point-provenienced, a tiny gray cylindrical bead was associated with this floor.

Rooms 103 and 104. Water line construction removed wall and interior portions of Rooms 103 and 104 (Fig. 10.8). Since these rooms do appear to line up with Rooms 101 and 102, they are interpreted as part of Roomblock 1, even though the walls connecting these rooms to the northern rooms

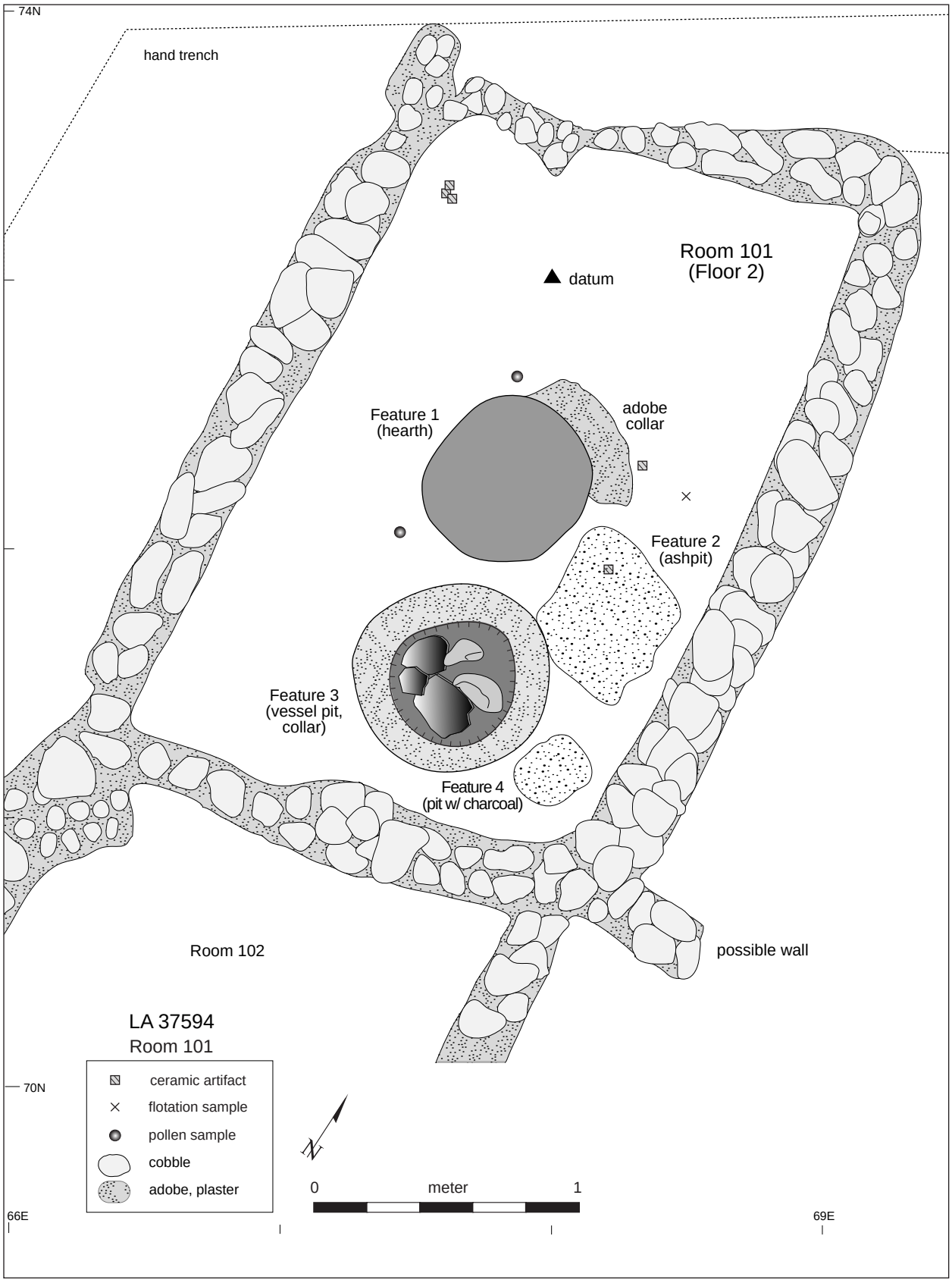


Figure 10.9a. LA 37594, Roomblock 1, Room 101, Floor 2, plan.

Figure 10.9b. LA 37594, Roomblock 1, Room 101, Floor 2, Features 1–3, view southeast.

Figure 10.9c. LA 37594, Roomblock 1, Room 101, Floor 2, Features 1–3, and Extramural Area 2, Features 1 and 7 (mealing bins); bipod shot, view north.

Table 10.10. LA 37594, Room 101, Floor 2, features.

Feature	Type	Shape	Length (cm)	Width (cm)	Depth (cm)	Volume (l)	Fill Description
1	upper hearth	hemispherical	66.0	65.0	22.0	74.1	Layer 1: sandy clay plaster
1	lower hearth	hemispherical	80.0	86.0	16.0	86.6	Layer 2: clay with caliche
							Layer 3: yellow-brown fine sand, sterile
2	heating/ash pit	oblong curvilinear	80.0	48.0	10.0	32.2	Layer 1: sandy clay with ash, few artifacts
							Layer 2: ashy clay, corncobs
3	storage pit	cylindrical	49.0	50.0	52.0	100.1	Layer 1: silty sand, charcoal, ceramics, and corn
							Layer 2: sandy clay, charcoal, corn, fire-cracked rock
							Layer 3: sandy clay, slabs, corrugated sherds lining feature
4	small pit	hemispherical	29.0	30.0	10.0	6.8	Layer 1: fine sand
							Layer 2: charcoal
							Layer 3: fine sand

had been removed (Fig. 10.13b). These two rooms share a bonded corner and must have been built together. At the far south end, Room 103 had sections of the north, south, east, and west walls standing to a maximum height of 40 cm. The west wall is the bonded corner between Room 103 and 104. No floors or features were found in Room 103. Room 104 had only a small portion of the west wall shared with Room 103, which measures 0.24 m at this point. No floors were discovered, but three features were found below what might have been the living surface, as inferred from Room 102 floors.

A large trash pit (Feature 1) in the northwest quadrant of Room 104 was cut by a backhoe trench, leaving the eastern portion. Feature 1 was irregularly shaped and measured 126 by 122 cm by 90 cm deep. Its fill was yellowish brown sandy clay flecked with charcoal. Numerous artifacts and a few corncobs were found in the fill.

Two other features predating the roomblock were in the southeast quadrant of Room 104, extending from the room interior to outside of the roomblock. Because these features extend outside of the roomblock, they follow the consecutive numbering sequence for the extramural area. These features may have been trashy fill dumped to raise the ground level for building the east wall of the room. No constructed edge existed for either feature. While both features were recorded as distinct, their amorphous boundaries suggest preparation for wall construction instead of a trash dump.

One feature was a roughly circular pit (Feature 9, Extramural Area 2) with a north boundary melding into another, oddly shaped figure-eight pit (Feature 10, Extramural Area 2). Both of these features had the same surface elevation, with roughly the same depth. The light gray ash fill of Feature 9 contained charcoal, two pieces of fire-cracked rock, and a few artifacts, while the ashy and sandy fill of Feature 10 contained several artifacts, including pottery, chipped stone and ground stone fragments, hammerstones, and bone. Ceramic artifacts from Feature 10 and Room 104 date to Mid Pueblo II (AD 1000–1100), which supports the association of Feature 10 with wall construction.

Roomblock 1, Summary

Wall-foundation characteristics suggest that construction began with Room 101. Room 102 was built abutting the northwest and southwest corners of Room 101. These two rooms are nearly identical in size and shape. Rooms 103 and 104 cannot be confidently placed in the construction sequence of the roomblock due to their incompleteness. These two rooms were built at the same time, indicated by a bonded corner at the west wall.

The upper floor of Room 101 and the upper

Figure 10.10a.[was 10.10] LA 37594, Roomblock 1, Room 101, Floor 2, Feature 3 (vessel-lined pit) detail, view southeast.

floor of Room 102 had no features, suggesting their use as storage rooms. The second floor of Room 101 was a plastered floor 2 cm below Floor 1. Floor 2 had four features: a central hearth, two storage pits, and a possible posthole (Floor 2), indicating a domestic function. The second floor of Room 102 also was a prepared floor 4 cm below its Floor 1. Floor 2 in Room 102 contained four features: two heating pits and a hearth with two remodeling episodes (Floor 2), also indicating a domestic function. Below this floor below another 5 cm of fill was a surface marked by cobbles and a sandstone slab (Floor 3). Four cm below Floor 3 was another surface marked by artifacts (Floor 4). These two lowest unprepared floors appeared to have had storage functions.

Rooms 101 and 102 indicate a dynamically changing use of room space between storage and domestic function over time, but there is a striking association of gray ware jars with all identified floors in the rooms: sherds from white ware vessels are almost absent from the floor deposits (Table 10.12). Room 104 fill contained considerably more white ware than the other rooms in the roomblock, but clear association of this fill with the function of the room is lacking. In addition to the bead from Room 102, a red shale pendant was recovered from the fill of the room.

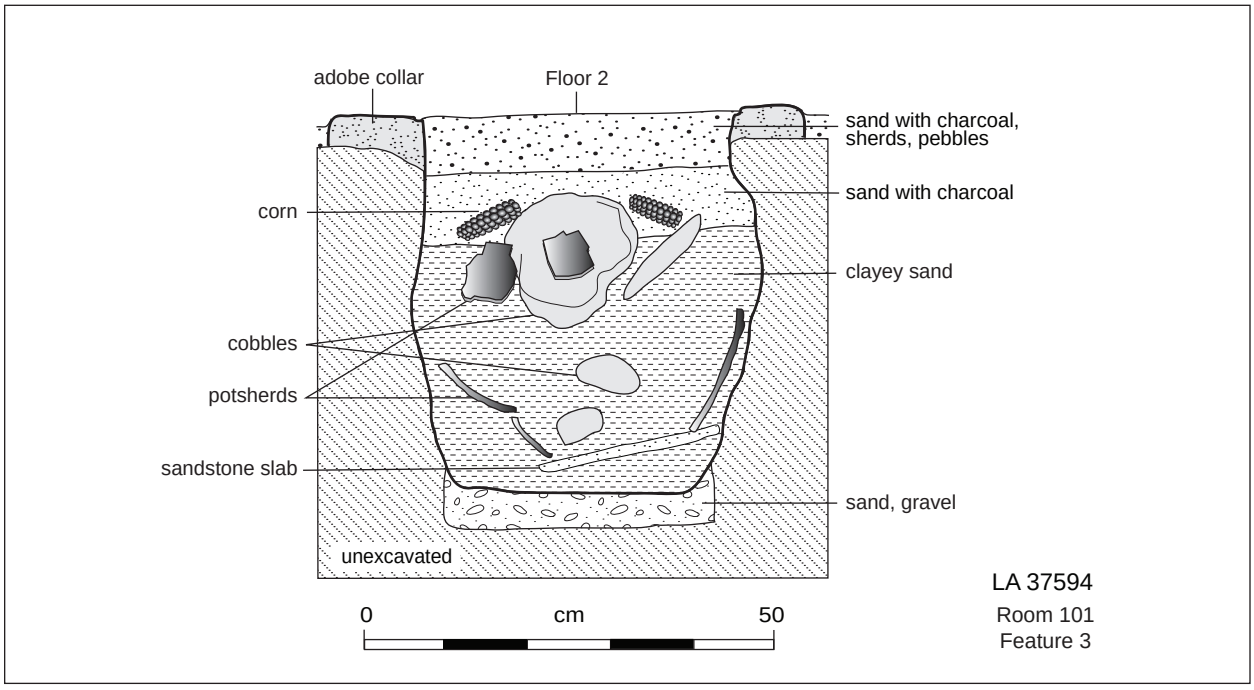


Figure 10.10b. LA 37594, Roomblock 1, Room 101, Floor 2, Feature 3 (vessel-lined pit), profile.

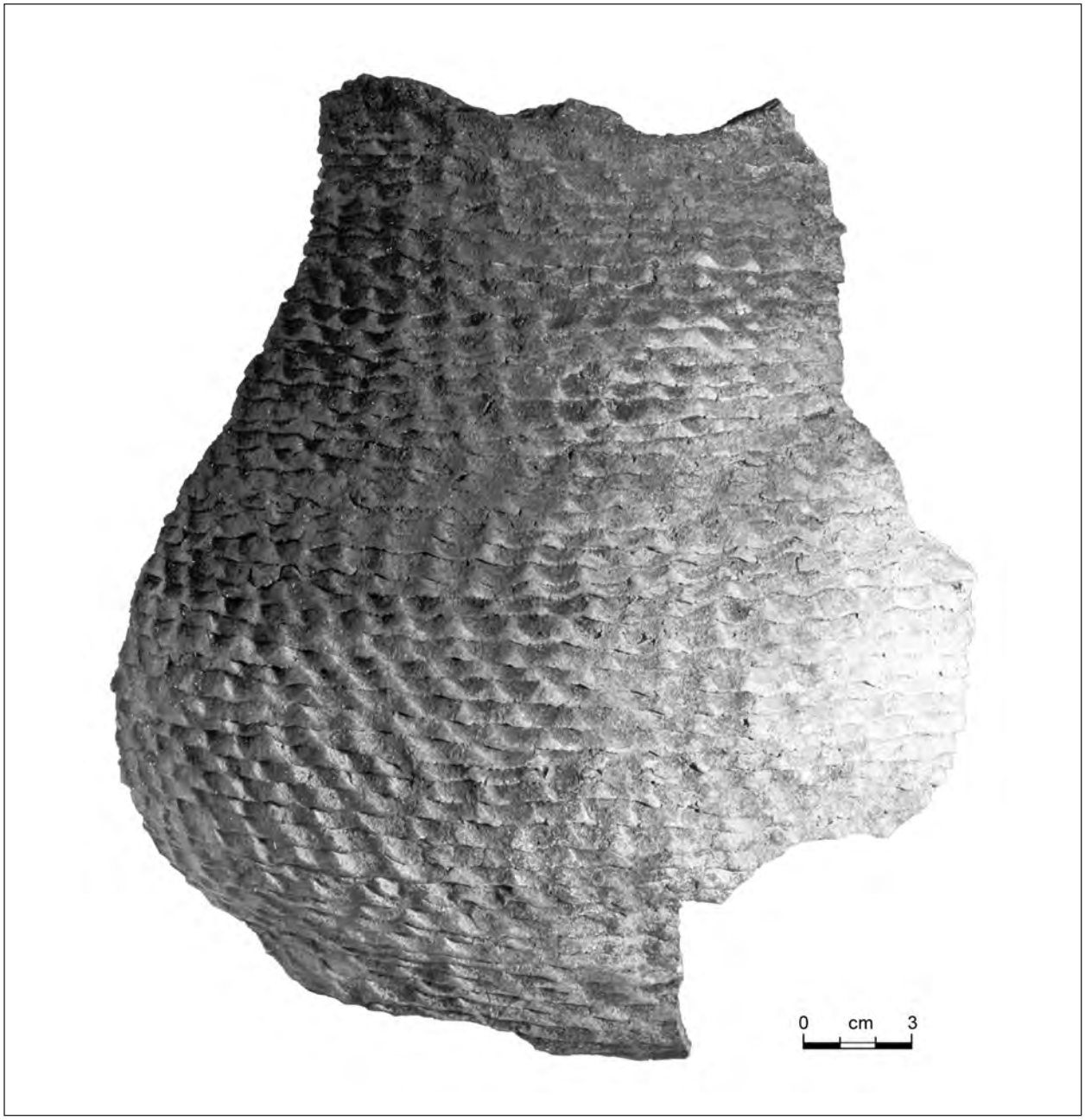


Figure 10.11. LA 37594, Roomblock 1, Room 101, Floor 2, Feature 3, corrugated jar body sherd (FS 252).

Extramural Features, Extramural Area 2

Nine extramural features were found to the east of Roomblock 1. The majority of these features were east of Rooms 101 and 102 at the north end of the roomblock (Fig. 10.8; Table 10.8).

Feature 2 (probable cist). About 1.5 m (4.9 ft) to the east of Roomblock 1, this stained area on the surface is referred to in the provenience file as Other Structure 2. As excavated, this proved to be an irregularly shaped, constricted-orifice feature measuring 1.0 by 1.48 m and 0.66-0.68 m (Figs. 10.14, 10.15). Three similar layers were defined in the fill: Layer 1 is dark loose sand with gray ash, charcoal flecks, jacal fragments, fire-cracked rock, burned sandstone, and artifacts. Layer 2 consists of dark

Table 10.11. LA 37594, Room 102, Floors 2 and 4, features.

Feature	Type	Shape	Length (cm)	Width (cm)	Depth (cm)	Volume (l)	Fill Description
Floor 2							
1	heating pit	hemispherical	25.0	23.0	14.0	6.3	Layer 1: sand, charcoal flecks Layer 2: ashy sand, large charcoal pieces
2	heating pit	hemispherical	20.0	21.0	10.0	3.4	same as Feature 1
3	upper hearth	oblong curvilinear	84.0	74.0	4.0	19.6	Layer 1: light brown silty sand Layer 2: compacted gray ash with charcoal smudges
4	lower hearth	oblong curvilinear	76.0	42.0	8.0	25.5	Light brown gray sandy clay with ash and charcoal flecks
Floor 4							
1	pit	hemispherical	41.0	38.0	8.0	9.8	Layer 1: gray/brown clay Layer 2: yellow-brown clay Layer 3: gray-brown clay Layer 4: yellow-brown clay Layer 5: dark brown sandy clay with gravel
2	pot rest	oblong curvilinear	40.0	22.0	4.0	3.0	compacted grayish brown sandy clay

brown sand with gray ash, jacal fragments, and fire-cracked rock. Layer 3 is dark sand with gray ash, jacal fragments, and artifacts. Three flat cobbles were found on the floor, and three pits were excavated. One was dismissed as rodent disturbance, but two of these pits, Features 4 and 5, were designated postholes (Fig. 10.15; Table 10.15). They contained no wood and are probably not roof supports; rodent disturbance was present and could account for some of the pits. Two of these floor pits had fill different from the general fill, consisting of light gray/brown sand with charcoal flecking and lacking burned jacal. Below one of the postholes (Feature 5) was a slab measuring 13 by 13 by 2 cm. Beneath this slab was another floor that was not prepared. This surface was partially cleared. Floor 1 had 81 sherds associated, all but four of which are gray wares; there were only four gray sherds associated with the lower floor.

Based on the presence of burned jacal in the fill, the excavators concluded that exterior Feature 2 was a semisubterranean jacal structure. This would be a rather unusual feature. It seems likely that it was, instead, a large exterior cist. Its relationship to the roomblock is such that it could have been in a ramada that burned, although no other evidence for a ramada was defined. The unusual shape could have been from partial superimposition of one feature on another.

Other features. The northernmost features were two mealing bins (Features 1 and 7) built side by side with a total measurement of 0.5 by 0.9 m (Figs. 10.9c, 10.16), including only the catchment areas, not the metate rests. The bins were 1 m east of the northeast corner of Room 101. The bins were rectangular with walls of cobbles or sandstone slabs covered with plaster. Feature 1 was constructed with an upright slab for a south wall; the slab was concave and appeared to have been used previously as a metate. An upright slab defined the east wall. A base slab was shaped by flaking the edges to fit into the bin, but otherwise the slab showed only minor signs of grinding. This bottom slab was placed on top of a prepared surface. Feature 7 was constructed with a large cobble for the east wall and two cobbles for the bottom of the basin. A shared sandstone slab defined the west wall of Feature 7 and the east wall of Feature 1, and the south wall is also a slab. All surfaces were plastered, including the surface un-

Table 10.12. LA 37594, Roomblocks 1 and 2, pottery types from rooms, counts by fill and floor.

	Room 101	Room 102	Room 103	Room 104	Room 201	Room 202	Total
Fill							
Pueblo II corrugated	–	–	–	2	2	–	**4**
Pueblo II–III corrugated	–	1	–	4	–	–	**5**
Plain gray	2	9	–	3	29	7	**50**
Corrugated gray	66	86	20	123	61	55	**411**
Red Mesa–style black-on-white	–	–	–	1		–	**1**
Pueblo II black-on-white	2	3	2	10	10	–	**27**
Dogoszhi-style black-on-white	–	5	–	17	5	–	**27**
Early Pueblo III black-on-white	–	–	1	–	–	–	**1**
Pueblo II–III black-on-white	5	2	3	10	9	7	**36**
Polished white	13	30	7	18	24	24	**116**
Polished black-on-white	1	4	2	6	5	3	**21**
Total	**89**	**140**	**35**	**194**	**145**	**96**	**699**
Floor 1							
Pueblo II corrugated	1	–	–	–	–	–	**1**
Corrugated gray	20	6	–	–	–	–	**26**
Polished black-on-white	2	–	–	–	–	–	**2**
Total	**23**	**6**	**–**	**–**	**–**	**–**	**29**
Floor 2							
Pueblo II corrugated	1	–	–	–	–	–	**1**
Pueblo II–III corrugated	7	–	–	–	–	–	**7**
Plain gray	7	3	–	–	–	–	**10**
Corrugated gray	376*	2	–	–	–	–	**378**
Polished white	–	1	–	–	–	–	**1**
Polished black-on-white	–	2	–	–	–	–	**2**
Total	**391**	**8**	**–**	**–**	**–**	**–**	**399**
Floor 3							
Plain gray	–	1	–	–	–	–	**1**
Corrugated gray	–	16	–	–	–	–	**16**
Squiggle hachure black-on-white	–	3	–	–	–	–	**3**
Total	**–**	**20**	**–**	**–**	**–**	**–**	**20**
Floor 4							
Pueblo II corrugated	–	1	–	–	–	–	**1**
Corrugated gray	–	2	–	–	–	–	**2**
Polished white	–	1	–	–	–	–	**1**
Total	**–**	**4**	**–**	**–**	**–**	**–**	**4**

* 342 from Vessel 1 in Feature 3

derneath the bottom cobbles. A hammerstone was found in the northwest corner of the bin.

Manos and metates were removed from these bins at the time of abandonment. The north edge enclosing both bins was missing. Judging from the placement of the two base slabs, the metates were arranged with their long dimension along a north–south axis. The base slabs were probably catch basins, so that the person grinding faced south. The base slab in the Feature 1 bin measured 25 by 15 by 2 cm, and the two cobbles in the Feature 7 bin had a surface measuring 30 by 17 by 3 cm.

Extramural Area 2 accounts for more sherds and lithic artifacts than any other provenience at the site (Tables 10.16–10.19). Most of this material comes from in front of Roomblock 1 (Fig. 10.17), and some from the excavation of Cist 2, but much more from the vicinity of the mealing bins (Figs. 10.16, 10.18).

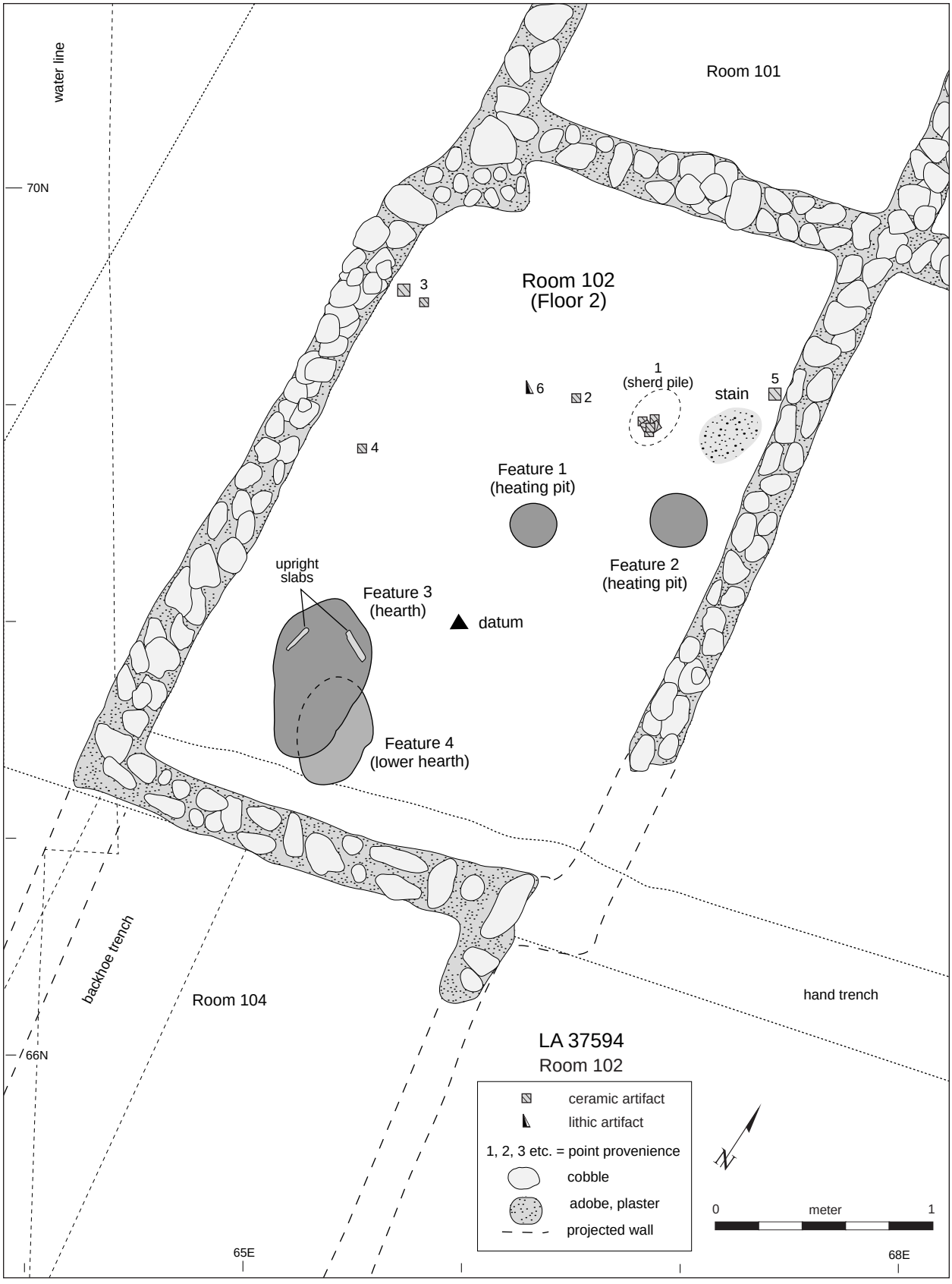


Figure 10.12. LA 37594, Roomblock 1, Room 102, Floor 2, plan.

Figure 10.13a. LA 37594, Roomblock 1, Room 102, Floor 3, view northwest.

This area must have served as a midden at least once during the history of the site. Some of this material probably results from the occupation of Roomblock 1, but, especially since there is also considerable material behind the roomblock, there could also be an earlier episode, perhaps associated with Roomblock 2. Since almost all of the material is Pueblo II in age, it is not associated with nearby Pit Structure 5. The material is relatively shallow: 80 percent of the ceramics were recovered from the first three artificial levels, or 0–30 cm below the modern surface. Granted, it is likely that the modern surface had been lowered somewhat by scraping, but the apparent midden is still close to the surface. If there *is* a pit structure to the east, it may well be full of trash.

The excavators noted six broken vessels in the vicinity of the mealing bins. These vessels include three corrugated jars, two black-on-white jars, and a Mancos Black-on-white bowl. The vessels are represented by 1 to 27 sherds and weigh from 64 to 790 grams. Only one of these vessels was not restored—the neck area of a large Mancos Black-on-white olla (Vessel 3; Fig. 10.19). The largest group of sherds is from about a fourth of a very large Mancos Corrugated jar (orifice diameter around 30 cm). Though all but two of these sherd groups are partial vessels at best, their presence in the vicinity of the mealing bins suggest that the area in front of Rooms 101 and 102 saw a variety of activities. Also from this area is a bone shuttle, suggesting that weaving was yet another activity that took place in the vicinity.

Feature 3 consisted of two small connecting pits, 39 by 34 by 12 cm deep, 1 m from the southeast end of Room 102. Ten meters (33 ft) south of Feature 3 was a small hearth (Feature 8), measuring 68 by 68 by 11 cm deep. The hearth was plastered and oxidized in a small (10 by 10 cm) area. Little fill remained. Features 9 and 10 contained trashy fill probably resulting from leveling prior to construction of the east wall of Room 104.

Summary, Extramural Area 2

Although water line construction has made relationships between rooms and the roomblock and exterior features unclear, it is likely that there was a roomblock-plaza unit here, with a fairly complex use history. The two rooms at the east end

Table 10.13. LA 37594, Roomblocks 1 and 2, chipped stone material types from rooms, counts by floor and fill.

	Room-blk 1	Room 101	Room 102	Room 103	Room 104	Room 201	Room 202	Total
Fill								
Chert	16	7	27	1	36	51	7	**145**
Chalcedony	–	2	3	–	2	1	1	**9**
Silicified wood	8	1	1	2	1	9	3	**25**
Quartzite	–	–	–	–	–	6	–	**6**
Quartzitic sandstone	–	1	6	–	11	8	1	**27**
Igneous	–	–	–	–	2	–	–	**2**
Siltstone	2	–	9	2	9	36	–	**58**
Total	**26**	**11**	**46**	**5**	**61**	**111**	**12**	**272**
Floor 1								
Chert	–	2	–	–	–	–	–	**2**
Quartzitic sandstone	–	1	–	–	–	–	–	**1**
Siltstone	–	4	–	–	–	–	–	**4**
Total	**–**	**7**	**–**	**–**	**–**	**–**	**–**	**7**
Floor 2								
Chert	–	1	3	–	–	–	–	**4**
Silicified wood	–	1	–	–	–	–	–	**1**
Quartzitic sandstone	–	1	–	–	–	–	–	**1**
Siltstone	–	1	3	–	–	–	–	**4**
Total	**–**	**4**	**6**	**–**	**–**	**–**	**–**	**10**
Floor 3								
Chert	–	–	2	–	–	–	–	**2**
Silicified wood	–	–	1	–	–	–	–	**1**
Total	**–**	**–**	**3**	**–**	**–**	**–**	**–**	**3**
Floor 4								
Chert	–	–	3	–	–	–	–	**3**
Chalcedony	–	–	1	–	–	–	–	**1**
Total	**–**	**–**	**4**	**–**	**–**	**–**	**–**	**4**

of the roomblock (Rooms 101 and 102) had floors alternating between unprepared surfaces and plastered floors with domestic features that suggest functional changes through time and different remodeling episodes. Floor 2 in Rooms 101 and 102 both had domestic features, including hearths, heating pits, an ash pit, and a storage pit, indicating habitation. The upper floor in each was featureless, suggesting storage use. In Room 102 there were two further featureless surfaces, again suggesting storage.

It is possible that a parallel row of rooms existed to the south of the defined rooms or, less likely, even a row on the north. The change in room function in Rooms 101 and 102 suggests that other domestic-use rooms may have existed in tandem with their use as storage. The exterior features found southeast of Roomblock 1 might represent a room or rooms to the east of Room 101 and possibly Room 102 as well. If walls were removed by later modification, features from these rooms would appear to be extramural remains. The artifact distribution and the number of features indicate a high level of activity in that area, and the quantities of burned jacal in the probable cist (exterior Feature 2) are suggestive of a ramada construction. Aside from the two problematic postholes found in that cist, however, no other postholes were found in this area, and so there is little other evidence that a ramada was built there. The simplest and perhaps most likely explanation is

Table 10.14. LA 37594, Roomblocks 1 and 2, chipped stone artifact type from rooms, counts by floor and fill.

	Roomblock 1	Room 101	Room 102	Room 103	Room 104	Room 201	Room 202	Total
Fill								
Debitage	22	9	42	2	56	91	4	**226**
Core	–	–	2	2	3	6	–	**13**
Retouched, utilized	3	2	2	–	2	11	7	**27**
Drill	–	–	–	–	–	–	1	**1**
Notch	1	–	–	–	–	–	–	**1**
Hammerstone	–	–	–	1	–	3	–	**4**
Total	**26**	**11**	**46**	**5**	**61**	**111**	**12**	**272**
Floor 1								
Debitage	–	6	–	–	–	–	–	**6**
Retouched, utilized	–	1	–	–	–	–	–	**1**
Total	**–**	**7**	**–**	**–**	**–**	**–**	**–**	**7**
Floor 2								
Debitage	–	4	4	–	–	–	–	**8**
Core	–	–	2	–	–	–	–	**2**
Total	**–**	**4**	**6**	**–**	**–**	**–**	**–**	**10**
Floor 3								
Debitage	–	–	3	–	–	–	–	**3**
Total	**–**	**–**	**3**	**–**	**–**	**–**	**–**	**3**
Floor 4								
Debitage	–	–	4	–	–	–	–	**4**
Total	**–**	**–**	**4**	**–**	**–**	**–**	**–**	**4**

that there was a single row of rooms with the features representing an outdoor work area with no or ephemeral cover.

EXTRAMURAL AREA 3

Extramural Area 3 contained Roomblock 2, two large storage cists (Cists 2 and 3), and seven features (Figs. 10.4, 10.20; Table 10.20). A pit structure dating approximately 500 years earlier than these features lay partially within this area, but it was treated as a separate area due to the difference in its age. Excavation was limited to the proposed highway right-of-way. A possible pit structure associated with Roomblock 2 may still lie to the east, beyond the area of our investigation.

Roomblock 2

Two partial rooms, Rooms 201 and 202, that were probably contiguous define Roomblock 2 (Fig. 10.20). Mechanical trenching removed the east wall of Room 201 and a portion of Room 202, and the east water line passes where the west walls would have been. Room 201 had only the north wall present, which also bordered the edge of Pit Structure 5, a much earlier Transitional Basketmaker II–III structure. This north wall of Room 201 measured 1.5 by 0.25 m and was two courses high. Small to large cobbles and mud mortar were used for construction. The cobbles were not arranged in any particular way: some were placed parallel and others perpendicular to the wall axis. No floor surfaces were found, and the artifact frequency was very low. Room 202 had

Figure 10.13b. LA 37594, Roomblock 1, Rooms 102 and 104; bipod shot, view north.

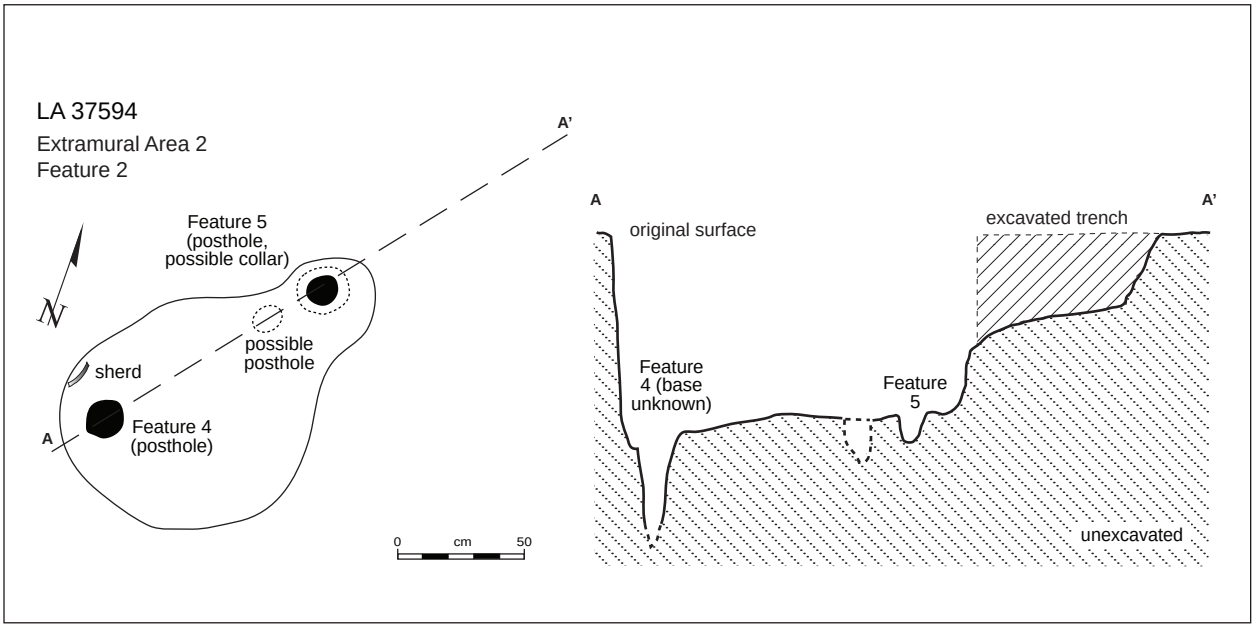


Figure 10.14. LA 37594, Extramural Area 2, Feature 2 (probable cist), plan and profile.

Table 10.15. LA 37594, Extramural Area 2, Feature 2 (probable cist), interior features; summary table.

Feature	Type	Location	Shape	Length (cm)	Width (cm)	Depth (cm)	Volume (l)	Fill Description
4	posthole	in floor of Feature 2	inverted cone	18	18	50	12.7	light gray-brown sand with charcoal flecks
5	posthole	in floor of Feature 2	inverted cone	14	13	6	0.8	light gray-brown sand with charcoal flecks

a complete north wall, three courses high and also 1.5 by 0.25 m. A partial west wall consisting of one course measured 0.70 by 0.25 m. The north and west walls both had mud mortar. A small portion of the east wall was intact; the rest had been removed by mechanical trenching. Except for the presence of the broken vessels in the feature in Room 101, gray ware to white ware sherd ratios in the fill of these rooms are very similar between the roomblocks (Table 10.12). Again, the functional relationship between the fill materials and the rooms' use is conjectural.

Figure 10.15. LA 37594, Extramural Area 2, Feature 2 (probable cist), view south.

Room 201, Room 202, and Extramural Cist 2

A pit outline became visible in Level 4 (30–40 cm) in the southeast quarter of Room 201. To the southeast, another half pit, albeit a much larger and deeper one, was found after mechanical trenching. Initially the excavators suspected that they were encountering a full-sized pit structure. This interpretation connected these two pits. Later examination revealed major differences between the fill layers found from both pit halves, plus considerable horizontal displacement, indicating that two features had been present, one a feature of Room 201 and one an extramural storage cist to the east of Room 202. Both are deep features (Figs. 10.20, 10.21, 10.22, 10.24). The extramural cist (Cist 2) contained four layers; the uppermost contained 30 cm of highly mixed trashy modern and prehistoric fill. A gravel layer of 23 cm overlaid a very deep layer (1.5 m) that was charcoal flecked and contained many artifacts. The lowest layer contained clean sand with ground stone fragments on a rough "floor" (Fig. 10.24).

The feature in the other "half" of Room 201, to the west, was designated Feature 7. A bell-shaped storage cist, Feature 7 contained six layers. The top two layers, excavated as Room 201 fill, had a combined depth of 24 cm deep. The third layer, totaling 86 cm, contained a charcoal-flecked fill with many artifacts. Below this was a layer 23 cm deep consisting of clean sand, which overlaid a 20 cm layer of charcoal and ash with lots of artifacts. The lowest layer, charcoal laden with many artifacts, was 7 cm deep. These two bottom layers are not seen at all in the extramural cist. Missing from Feature 7 is the gravel lens seen in the extramural feature. This feature is very deep (1.6 m), with a volume of 290 liters), especially for its estimated 45 cm diameter aperture.

Several observations argue against the idea that

Figure 10.16. LA 37594, Extramural Area 2, Features 1 and 7 (mealing bins), detail, view south.

these two halves formed a larger, connected feature. The plan view connecting these two half pits creates an awkward figure-eight shape. The layers of fill from both sides do not correspond in elevation or content. Mechanical trenching heavily impacted this roomblock, so that neither edge was clearly defined. The west half of the pit as found in Room 201 could have been a subfloor pit in the southeastern corner of the room. The plan view of this pit during excavation was a bisected circle, suggesting that this west pit was a room feature.

Although artifact densities from the two "halves" displayed no distinct differences, these features appear to be two separate features: a subfloor pit in Room 201 (the west half), now called Feature 7; and a major exterior storage cist east of the roomblock, now called Cist 2, Extramural Area 3. The similarity of the third layer of fill from both features suggests some measure of contemporaneity, at least during postabandonment alluvial filling episodes. It is quite possible that both features predate the roomblock and were intentionally filled at the same time. Were this the case, there may have been three major storage cists—Cists 2 and 3, and Feature 7—in the same area prior to construction of Roomblock 2 (Figs. 10.20, 10.24).

Pollen washes were conducted on two artifacts from Feature 7: a sherd from feature Layer 3, and the grinding surface of a large two-hand mano from Layer 6 (Table 10.21). These washes revealed only wild-plant pollens, very similar to those found in the wash from the mano in Pit Structure 1. Both include *Pinus*, grass, cheno-am, and composite pollens; the mano sample contained more pollen and also included *Ephedra*, and *Sarcobatus* pollen grains. A small (16.4 by 10.75 by 10.4 mm, 0.86 g) coprolite was recovered from Layer 3 of Cist 2. Treatment of this specimen (Bryant 1974:8–10) revealed that it is not a human coprolite; it is probably from a canid of some type. Faunal remains in the Cist 2 fill include a number of small mammal elements, cottontail, large mammal, a few bird elements, and the only three badger elements from the site. Other than the badger, this faunal assemblage is less distinctive than that of nearby Cist 3 with its dog and turkey remains (Table 10.22).

Table 10.16. LA 37594, pottery types by extramural area; counts and percents.

	EA 1		EA 2		EA 3		EA 4		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Plain rim	–	–	2	0.0%	2	0.2%	–	–	**4**	**0.1%**
Narrow banded	–	–	1	0.0%	–	–	–	–	**1**	**0.0%**
Pueblo II corrugated	15	1.5%	45	1.1%	–	–	4	1.6%	**64**	**1.0%**
Pueblo II–III corrugated	3	0.3%	19	0.5%	9	1.0%	1	0.4%	**32**	**0.5%**
Pueblo III corrugated	2	0.2%	6	0.1%	–	–	–	–	**8**	**0.1%**
Plain gray	97	9.7%	385	9.4%	77	8.6%	43	17.1%	**602**	**9.6%**
Corrugated gray	579	58.1%	2322	56.6%	488	54.8%	125	49.6%	**3514**	**56.3%**
Polished gray	–	–	–	–	1	0.1%	12	4.8%	**13**	**0.2%**
Red Mesa–style black-on-white	7	0.7%	23	0.6%	–	–	1	0.4%	**31**	**0.5%**
Pueblo II black-on-white	32	3.2%	109	2.7%	24	2.7%	4	1.6%	**169**	**2.7%**
Sosi-style black-on-white	–	–	12	0.3%	1	0.1%	1	0.4%	**14**	**0.2%**
Dogoszhi-style black-on-white	24	2.4%	50	1.2%	9	1.0%	1	0.4%	**84**	**1.3%**
Chaco-style black-on-white	–	–	5	0.1%	1	0.1%	–	–	**6**	**0.1%**
Early Pueblo III black-on-white	–	–	6	0.1%	–	–	–	–	**6**	**0.1%**
Late Pueblo III black-on-white	2	0.2%	2	0.0%	–	–	–	–	**4**	**0.1%**
Pueblo I–II black-on-white	–	–	2	0.0%	–	–	–	–	**2**	**0.0%**
Pueblo II–III black-on-white	24	2.4%	144	3.5%	42	4.7%	9	3.6%	**219**	**3.5%**
Pueblo III black-on-white	3	0.3%	13	0.3%	1	0.1%	–	–	**17**	**0.3%**
Painted black-on-white	–	–	2	0.0%	–	–	–	–	**2**	**0.0%**
Polished white	173	17.4%	660	16.1%	176	19.8%	35	13.9%	**1044**	**16.7%**
Polished black-on-white	34	3.4%	283	6.9%	58	6.5%	16	6.3%	**391**	**6.3%**
Squiggle hachure black-on-white	1	0.1%	4	0.1%	2	0.2%	–	–	**7**	**0.1%**
Mesa Verde Deadmans Black-on-red	1	0.1%	–	–	–	–	–	–	**1**	**0.0%**
Cibola Wingate Polychrome	–	–	1	0.0%	–	–	–	–	**1**	**0.0%**
Kayenta indeterminate red	–	–	8	0.2%	–	–	–	–	**8**	**0.1%**
Total	**997**	**100.0%**	**4104**	**100.0%**	**891**	**100.0%**	**252**	**100.0%**	**6244**	**100.0%**

Table 10.17, pottery pigment type by extramural area; counts and percents.

	EA 1		EA 2		EA 3		EA 4		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
None	174	57.8%	651	49.9%	169	55.4%	35	52.2%	**1029**	**52.0%**
Organic	44	14.6%	270	20.7%	30	9.8%	15	22.4%	**359**	**18.1%**
Mineral	83	27.6%	384	29.4%	106	34.8%	17	25.4%	**590**	**29.8%**
Total	**301**	**100.0%**	**1305**	**100.0%**	**305**	**100.0%**	**67**	**100.0%**	**1978**	**100.0%**

Table 10.18. LA 37594, ceramic vessel forms by extramural area; counts and percents.

	EA 1		EA 2		EA 3		EA 4		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Indeterminate	1	0.1%	21	0.5%	4	0.4%	–	–	**26**	**0.4%**
Bowl rim	37	3.7%	140	3.4%	43	4.8%	5	2.0%	**225**	**3.6%**
Bowl body	117	11.7%	477	11.6%	85	9.5%	32	12.7%	**711**	**11.4%**
Seed jar rim	1	0.1%	1	0.0%	–	–	–	–	**2**	**0.0%**
Olla rim	3	0.3%	18	0.4%	1	0.1%	–	–	**22**	**0.4%**
Olla neck	–	–	2	0.0%	–	–	–	–	**2**	**0.0%**
Cooking, storage rim	60	6.0%	124	3.0%	64	7.2%	22	8.7%	**270**	**4.3%**
Necked jar body	66	6.6%	341	8.3%	88	9.9%	8	3.2%	**503**	**8.1%**
Canteen	1	0.1%	–	–	–	–	–	–	**1**	**0.0%**
Jar body	696	69.8%	2964	72.2%	601	67.5%	185	73.4%	**4446**	**71.2%**
Ladle	11	1.1%	–	–	2	0.2%	–	–	**13**	**0.2%**
Ladle bowl	–	–	8	0.2%	1	0.1%	–	–	**9**	**0.1%**
Ladle handle	3	0.3%	6	0.1%	2	0.2%	–	–	**11**	**0.2%**
Open gourd dipper	1	0.1%	1	0.0%	–	–	–	–	**2**	**0.0%**
Pipe	–	–	1	0.0%	–	–	–	–	**1**	**0.0%**
Total	**997**	**100.0%**	**4104**	**100.0%**	**891**	**100.0%**	**252**	**100.0%**	**6244**	**100.0%**

Table 10.19. LA 37594, chipped stone material and artifact type by extramural area; counts and percents.

	EA 1		EA 2		EA 3		EA 4		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Material Type										
Chert	185	55.7%	720	50.3%	162	39.2%	52	43.7%	**1119**	**48.7%**
Chalcedony	7	2.1%	11	0.8%	2	0.5%	2	1.7%	**22**	**1.0%**
Silicified wood	53	16.0%	170	11.9%	70	16.9%	12	10.1%	**305**	**13.3%**
Quartzite	5	1.5%	28	2.0%	17	4.1%	2	1.7%	**52**	**2.3%**
Quartzitic sandstone	19	5.7%	83	5.8%	36	8.7%	9	7.6%	**147**	**6.4%**
Igneous	–	–	2	0.1%	–	–	–	–	**2**	**0.1%**
Rhyolite	–	–	2	0.1%	2	0.5%	–	–	**4**	**0.2%**
Sandstone	–	–	3	0.2%	2	0.5%	1	0.8%	**6**	**0.3%**
Siltstone	63	19.0%	413	28.8%	122	29.5%	41	34.5%	**639**	**27.8%**
Total	**332**	**100.0%**	**1432**	**100.0%**	**413**	**100.0%**	**119**	**100.0%**	**2296**	**100.0%**
Artifact Type										
Debitage	285	85.8%	1214	84.8%	325	78.7%	101	84.9%	**1925**	**83.8%**
Core	7	2.1%	39	2.7%	13	3.1%	3	2.5%	**62**	**2.7%**
Uniface	–	–	1	0.1%	–	–	–	–	**1**	**0.0%**
Retouched, utilized debitage	37	11.1%	158	11.0%	58	14.0%	12	10.1%	**265**	**11.5%**
Retouched, utilized core	1	0.3%	5	0.3%	6	1.5%	2	1.7%	**14**	**0.6%**
Drill	–	–	–	–	2	0.5%	–	–	**2**	**0.1%**
Notch	–	–	4	0.3%	2	0.5%	–	–	**6**	**0.3%**
Bifacial knife, scraper	–	–	1	0.1%	–	–	–	–	**1**	**0.0%**
Projectile point	2	0.6%	–	–	–	–	–	–	**2**	**0.1%**
Hammerstone	–	–	10	0.7%	7	1.7%	–	–	**17**	**0.7%**
Chopper, plane	–	–	–	–	–	–	1	0.8%	**1**	**0.0%**
Total	**332**	**100.0%**	**1432**	**100.0%**	**413**	**100.0%**	**119**	**100.0%**	**2296**	**100.0%**
% of total		**14.5%**		**62.4%**		**18.0%**		**5.2%**		**100.0%**

Figure 10.17. LA 37594, Roomblock 1 and Extramural Area 2, view south; extramural Features 1, 7 (mealing bins; lower left), and 2 (probable cist; middle left).

Other Extramural Features, Extramural Area 3

Cist 3. Approximately 9 m (30 ft) west of Roomblock 2 are another large storage cist (Cist 3) and, nearby, several other features (Fig. 10.20). Cist 3 appears to have been composed of two oval parts: a smaller, shallower (80 cm deep) one on the east side of an exploratory backhoe trench and a considerably larger and deeper one (145 cm deep) on the west (Figs. 10.20, 10.24, 10.25a, 10.25b, 10.26; Table 10.23**)**. The trench intersects the cist. The larger part of the feature, west of the trench, is belled in section; the diameter of the floor (1.7–1.8 m) is 30 cm greater than that of its opening. The walls of the portion east of the trench are straight-sided from top to floor. No stratigraphic subdivisions were visible in the backhoe trench. The connection between the two parts, if any existed, was lost in the trench.

The east part of the feature was excavated in four 20 cm levels. Level 4 was the floor contact unit. Although originally recorded as two features the two halves have been placed under one feature in the provenience file.

The west part of the feature was excavated in two halves in 20 cm arbitrary levels. The north half was excavated first. Three 20 cm levels were excavated down to a compact clay lens, which overlays a natural gravel and cobble lens, similar to those seen in Cist 2 and in Pit Structure 1. The remains of two dogs, one fetal and the other juvenile, were found in the third level; the cervical vertebra of a deer was associated with the dog interments. To reach the floor of the cist, a single 80 cm thick unit was removed in the north half of the west section. The excavator then removed the fill from the entire south half of the west section in 20 cm levels. Thus, the north half was excavated in three 20 cm levels, followed by an 80 cm unit and a floor level. The south half was excavated in eight 20 cm levels, including a floor level. Materials from the floor in both halves have been labeled Level 8. Only a single turkey element was found in contact with the floor.

On the floor of the west portion a matting of plant material was found; it covered an area 0.99 by 1.23 m in the south and west portions of the floor. The plant material was laid parallel to the east–west

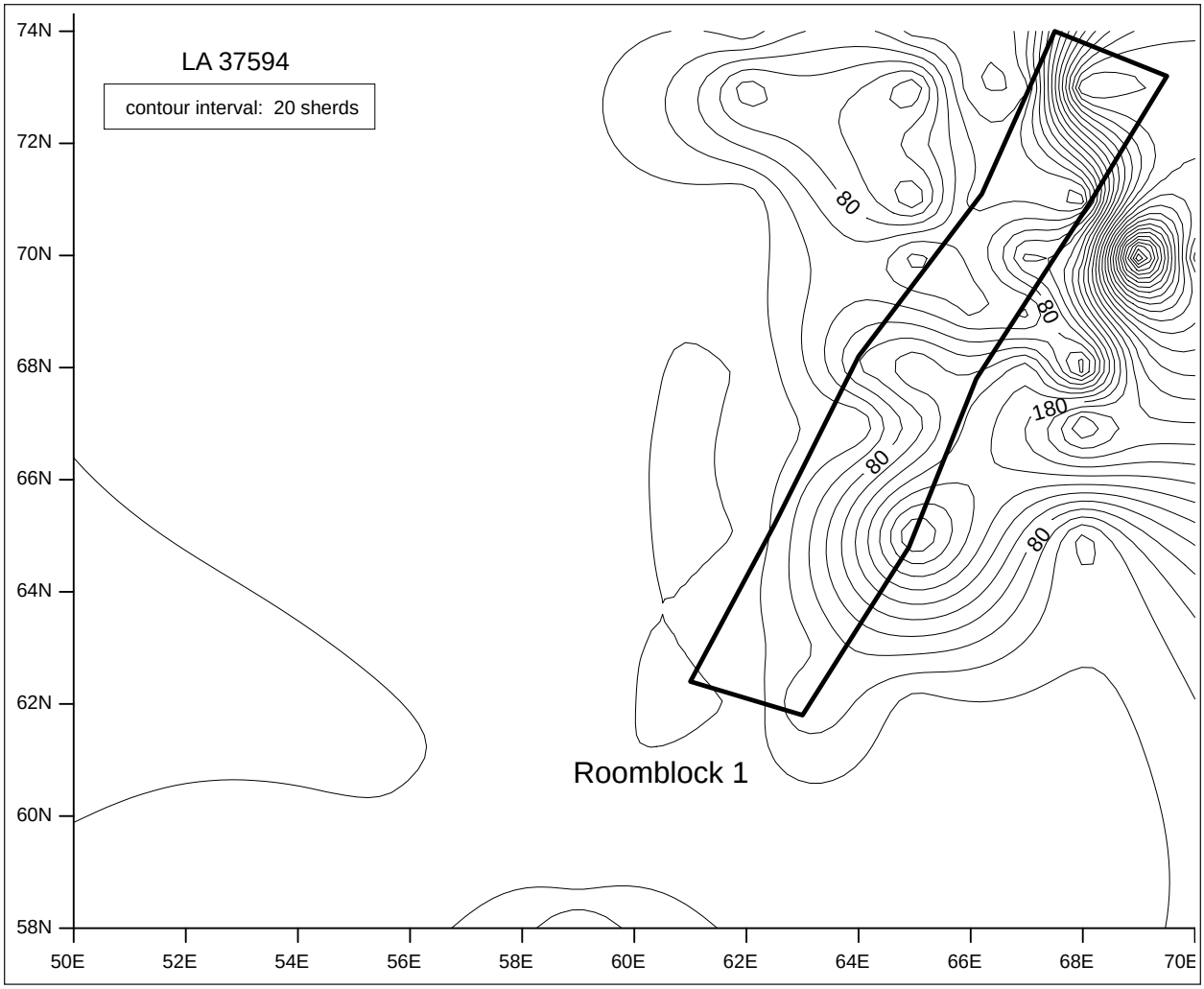


Figure 10.18. LA 37594, Extramural Area 2, combined surface and excavated distribution and density, ceramics.

axis (Figs. 10.24, 10.25b). No indications of cordage or woven cross members were found. The materials were identified as annuals in the field, but the botanical samples contain only sage and juniper wood, as well as a variety of seeds from the bottom level. Seed varieties include squash, grasses, mustards, chenopods, amaranth, *Mentzelia*, and *Euphorbia*. A partial turkey skeleton was found just above the floor along with a pile of cobbles and some fire-cracked rock adjacent to the matting. No matting was found on the floor of the east side; extensive rodent disturbance could explain its absence. Floor artifacts included one corrugated jar body sherd, one polished black-on-white jar body sherd, four stone flakes, one flaked stone core, four small mammal fragments, one *Spermophilus* sp. mandible, and one *Perognathus flavus* sacrum, confirming the activity of mice in the feature.

Thirty-five turkey elements were recovered from the rock concentration in the north half of the large, west portion of the feature, near the floor. All nine of the identifiable elements are from a left wing. Especially in terms of element counts, Cist 3 is important in the overall faunal counts from the site because of the two dogs in the fill and the turkey elements near the floor.

There is some ambiguity in the field notes about the nature of the fill from Cist 3. Burned adobe and unburned jacal with impressions were found in the upper fill from both excavated portions, especially toward the base of Level 3 in the west portion. According to the depths, this material must extend

Figure 10.19. LA 37594, Extramural Area 2, Level 3, Mancos Black-on-white olla (Pueblo II).

past the clay and cobbles noted in association with the dog interments at the base of Level 3. The north portion of the west half of Cist 3 contained chunks of charcoal along with sherds and a flaked stone core. The south portion of the west half of Cist 3 seemed nearly sterile in comparison.

Cist 3 is a major extramural storage feature with a shallower, adjunct portion on the east side, which the excavator called a "figure-eight" cist. The east portion may have been a means of entering the deeper, larger part of the cist. During its use, the floor of the cist was covered by vegetal matting, but there was no evidence of what was kept in the cist. The articulation of the two halves is of course obscured by the discovery trench.

The filling of the feature took place in at least four phases. Upon discontinuation of use, a load of burned rock was dumped in the east edge, probably through the shallow entryway. At the same time portions of a turkey, primarily the left wing, were also thrown in, either as incidental trash or as a symbolic closing of the feature. The next phase was intentional filling, using sandy material containing some burned architectural elements. This fill could have been gathered in the vicinity of Pit Structure 5, which is near Cist 3 and is heavily burned. This intentional fill layer contains only a few artifacts and shows no internal structure, indicating a rapid fill. The pit probably stood open for at least a while, and an alluvial event took place, depositing gravel and cobbles in Cists 2 and 3. After gravel deposition, the depression was still about 40 cm deep, at which time two young dogs, a juvenile and a very young (or even fetal) one, were deposited in the depression. The final filling of the feature was the result of natural washing and eolian deposition, possibly after the Pueblo II occupation.

Features 1, 2, 3, 4, 5, 6, 7, 8. To the east and southeast of Cist 3 in Extramural Area 3 were a number of closely spaced features that appeared to be contemporaneous with its use (Fig. 10.20). These included two small pits (Features 7 and 8, not shown) in the same 1 by 1m grid as a pit with a posthole (Feature 6), and a posthole (Feature 4) north of the pit cluster. Close by were two small trash pits (Features 2 and 3 on Figure 10.20, but not further recorded). Feature 6 had an unburned

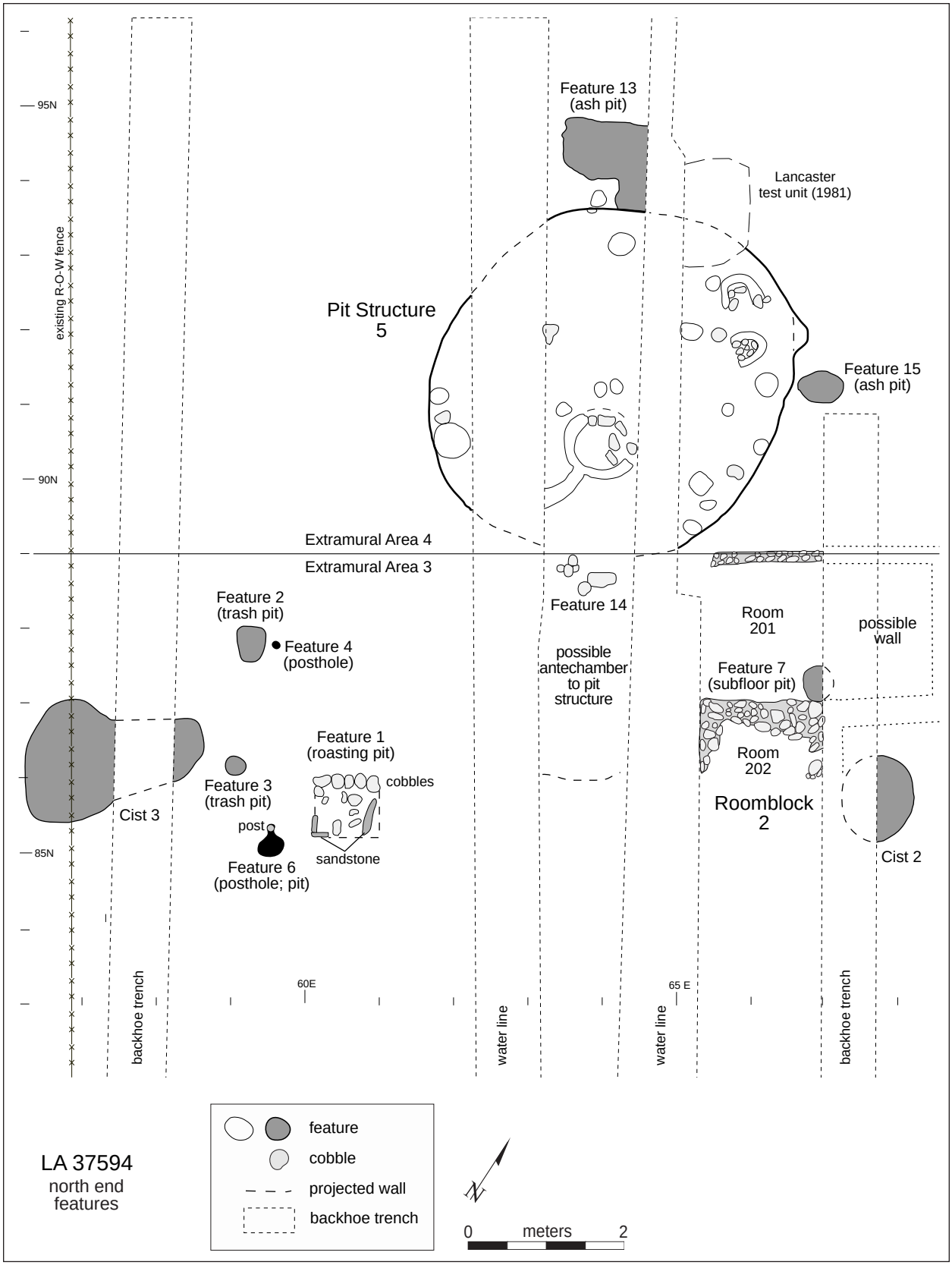


Figure 10.20. LA 37594, Extramural Areas 3 and 4, Roomblock 2, and Pit Structure 5, plan; extramural features near Roomblock 2 and Pit Structure 5.

Table 10.20. LA 37594, Extramural Area 3, features; summary table.

Feature	Type	Shape	Length (cm)	Width (cm)	Depth (cm)	Volume (l)	Fill Description
1	roasting pit	rectangular	89.0	70 est.	40.0	242.2	Sandy clay with charcoal flecks.
3	major storage cist, east half	cylindrical	100.0	100 est.	160.0	1256.8	Four layers: 2 overburden mixed trash and cobbles; 150 charcoal, many artifacts; compact sand containing ground stone at base.
3	major storage cist, west half	bilobed, 2 oblongs	175 70 est.	170 60 est.	150 80.0	3354.7	Natural fill to 60 cm, dog remains, 80 cm of mixed sand and burned material, intentional fill, rock and matting on floor.
4	posthole	inverted cone	10.0	8.0	8.0	1.6	Silty sand with charcoal flecks.
5	fire pit	hemispherical	55.0	50.0	6.0	13.0	Layer 1: oxidized adobe. Layer 2: ash with lots of charcoal, some artifacts.
6	pit with posthole	irregular	35.0	32.0	20.0	22.4	Three levels; sandy ash with charcoal flecks and artifacts. Unburned post still in posthole.
7 (was 2)	pit	oblong curvilinear	53.0	45.0	6.0	11.3	Layer 1: silty with charcoal flecks, some artifacts. Layer 2: fine sand, sterile.
8 (was 3)	pit	spherical	42.0	40.0	32.0	42.3	Compact alluvial fill, some artifacts.

post remaining in place. It is likely that the pit-with-posthole feature is the result of a post intrusive into an earlier pit, and possible that the posthole north of Feature 6 (Feature 4) resulted from an historic fence line given its alignment parallel to the highway and the survival of a post base in Feature 6. The presence of postholes associated with pits presents the possibility that a ramada structure was located there, although the postholes were over 2 m (7 ft) apart, and, again, may be part of a more recent fenceline. It is unlikely that a ramada was contemporaneous with the roasting pit or kiln. The small pits (Features 2 and 3) could have been interior features associated with such a ramada. The openings of Features 2, 3, and 4 had similar elevations, suggesting contemporaneity. All of these features lie about 1 m east of Cist 3. Whether or not a ramada was present, the density of features in this area attests to the heavy use and remodeling of this location, as was true of the site as a whole.

Also east of Cist 3 was a roasting pit or possible kiln (Feature 1), placing Feature 1 between Roomblock 2 on the east and the major storage Cist 3 on the west. Some portions of this feature had been disturbed by utility trenching. The intact remainder had cobble-lined walls with a large, shaped sandstone slab in the east wall. It was heavily oxidized, with a few cobbles and compact burned sand on the "floor." The only vegetal materials identified from the feature are juniper and piñon charcoal. The feature is unusual not only because it contains piñon, but also because piñon is more abundant than juniper. This feature bears some striking resemblances to ceramic kilns: a depth of 40 cm, upright slab walls, rocks in the base, and a square to possibly rectangular shape (Purcell 1993; Post and

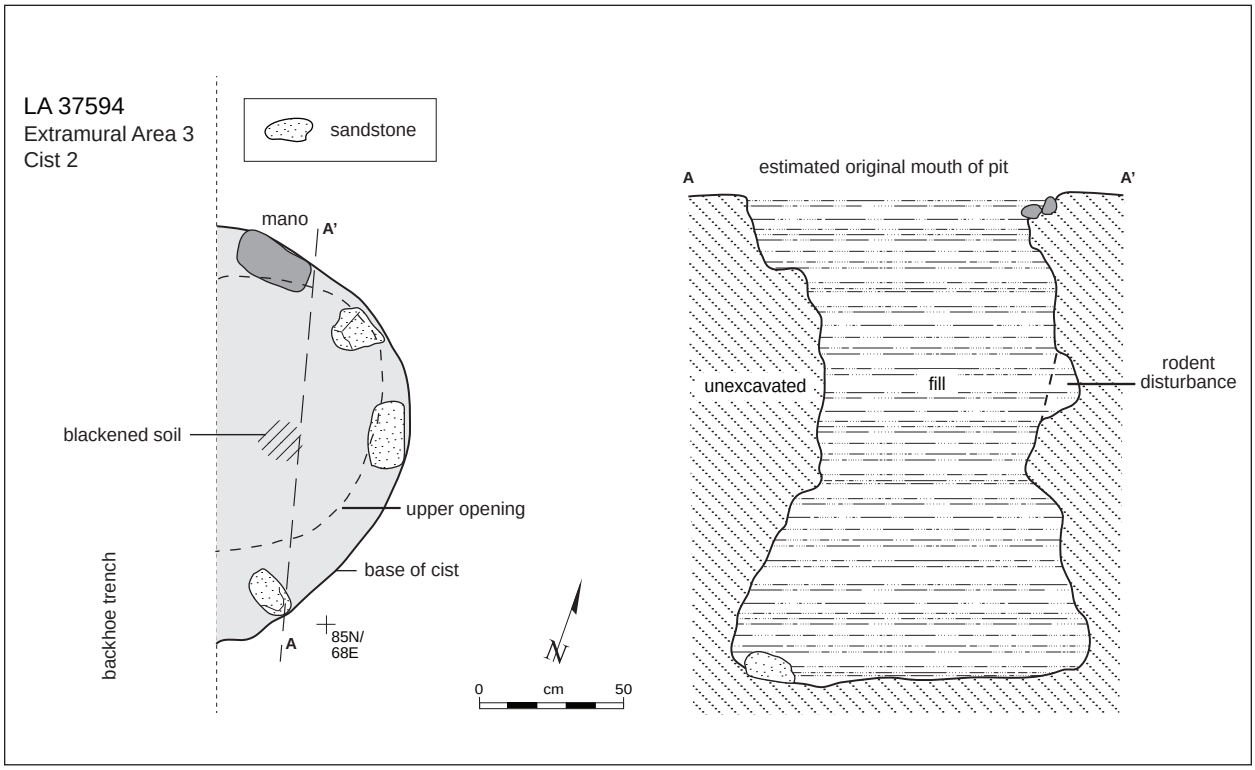


Figure 10.21. LA 37594, Extramural Area 3, Cist 2, plan and profile.

Figure 10.22. LA 37594, Extramural Area 3, Cist 2, view northeast.

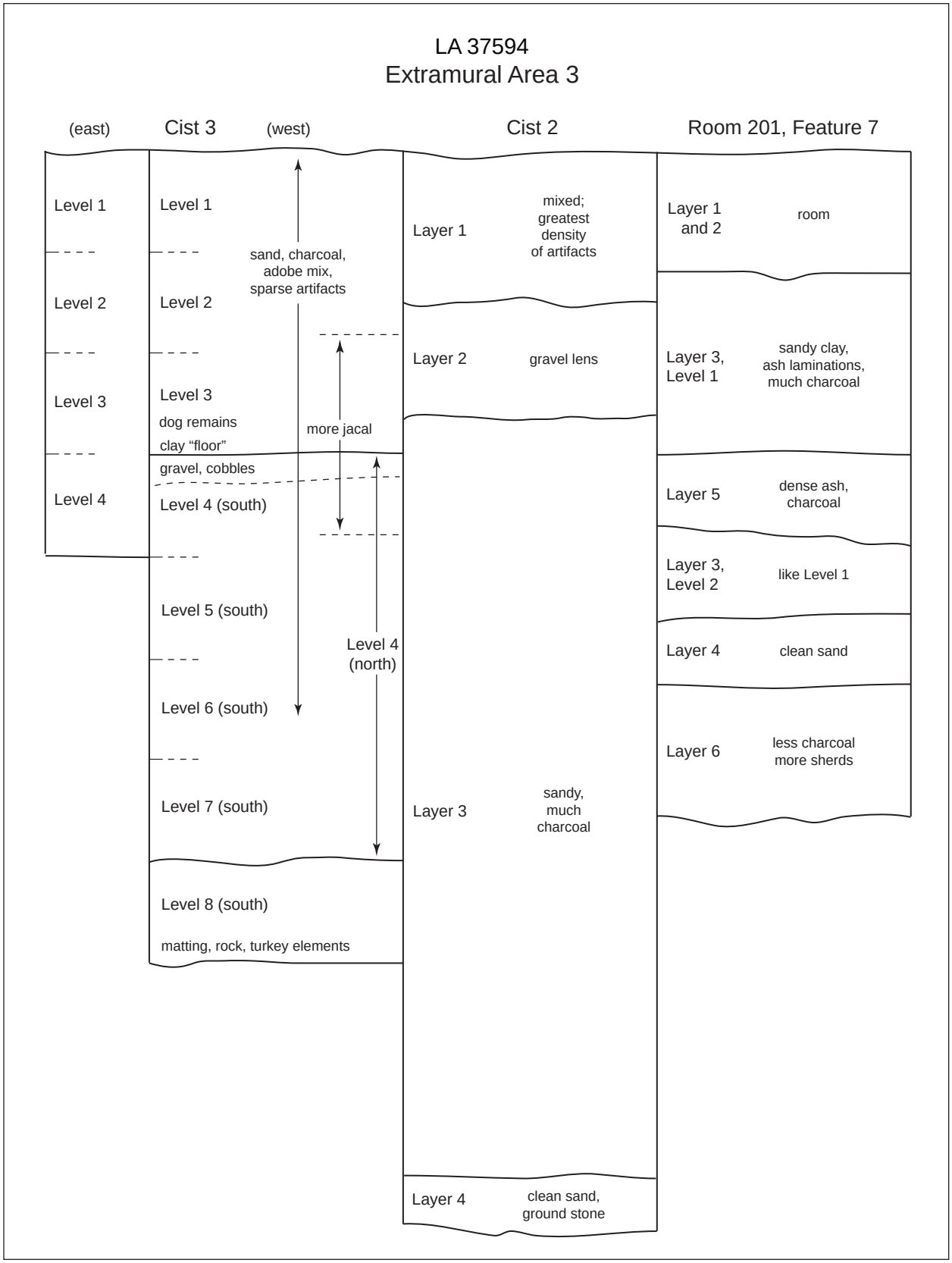


Figure 10.24. LA 37594, Extramural Area 3 and Roomblock 2; comparative fill depths from deep cists (extramural Cists 2, 3, and Room 201, Feature 7).

Table 10.21. LA 37594, Roomblocks 1 and 2, pollen counts by provenience and type.

FS	Provenience	Families	(Scan) Sum	(Full) Sum	Marker	Arboreal	N	Cheno-Am	N	Composite	N	Grasses	Domesti-cate	N	Shrubs	N	Other	N
–	Roomblock 1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	Other	96
223	Room 101, Floor 2	1	96	–	164	–	–	–	–	–	–	–	–	–	–	–	–	–
238	Room 101, hearth	16	–	231	75	*Pinus*	28	pollen	114	high-spine	11	18	*Zea*	6	*Sarcobatus*	6	*Eriogonum*	1
						Juniperus	3	anther	2	low-spine	3						Liguliflorae	1
						Quercus	2										Cactaceae	2
						Populus	2										*Ephedra*	2
245	Room 102, Floor 2, Feature 1, heating pit	2	–	13	56	*Pinus*	1	pollen	12	–	–	–	–	–	–	–	–	–
247	Room 102, Floor 2, Feature 2, heating pit	2	22	–	52	–		pollen	11	–	–	–	–	–	–	–	Other	11
270	Room 102, Floor 4, Feature 1, pit	10	–	212	74	*Pinus*	22	pollen	139	high-spine	6	5	–	–	*Salix*	1	Solanaceae	1
						Juniperus	1	anther	4	low-spine	1						*Ephedra*	1
276	Room 102, subfloor	1	6	–	53	–		pollen	6	–	–	–	–	–	–	–	–	–
284	Room 104, Feature 1, pit	12	–	237	81	*Pinus*	36	pollen	89	high-spine	7	41	*Zea*	31	*Sarcobatus*	3	*Polygonum*	1
										low-spine	2						*Sphaeralcea*	1
																	Ephedra	1
																	Liguliflorae	3
																	Platyopuntia	1
1532	Room 201, Layer 6, Feature 7, cist	12	–	227	174	*Pinus*	32	pollen	136	high-spine	9	13	–	–	*Sarcobatus*	1	*Polygonum*	1
						Juniperus	1										*Platyopuntia*	1
						Quercus	1										*Ephedra*	2
																	Cyperaceae	3
																	Other	5

Table 10.22. LA 37594, faunal remains in cists, counts by extramural area and Room 201.

	Cist 1 EA 1	Cist 2 EA 3	Cist 3W EA 3	Cist 3E EA 3	Stor.Cist Feat. 7 Room 201	Total
Prairie dog	–	–	3	–	–	**3**
Small squirrel	–	–	1	–	–	**1**
Pocket gopher	–	1	–	–	–	**1**
Mouse	–	–	11	1	107	**119**
Cottontail	–	6	–	–	–	**6**
Jackrabbit	–	2	5	–	2	**9**
Badger	–	3	–	–	–	**3**
Dog, coyote, wolf	–	–	259	–	–	**259**
Deer	1	1	3	1	1	**7**
Big-horned sheep	–	–	–	–	1	**1**
Artiodactyl	1	1	–	–	–	**2**
Small mammal	–	11	13	6	14	**44**
Medium–large mammal	–	–	8	–	–	**8**
Large mammal	–	14	2	3	–	**19**
Turkey	–	5	16	–	6	**27**
Birds	–	4	19	–	–	**23**
Toad and frog	–	1	–	–	–	**1**
Total	**2**	**49**	**340**	**11**	**131**	**533**

Eggshell is absent from the cists.

Lakatos 1995:144). Unfortunately, not enough fill was in place to assess if the fill was also similar to kiln fill. Feature 1 is also similar to the rectangular feature southwest of the pit structure at LA 37592.

Approximately 7 m (23 ft) southeast of Cist 3 was a hearth (Feature 5), containing oxidized adobe, ash, charcoal, and a few artifacts. The area around this hearth had been bladed, and no associated structures were found. The hearth was quite shallow, and its south half was oxidized.

Summary, Extramural Area 3

Ceramics found in the fill and on contact surfaces date this area to the Mid Pueblo II period (AD 1000–1100). Dynamic episodes of use and remodeling characterize this occupation over the entire site area, and this vicinity is no exception. At the east end, a large storage cist (Cist 2) lay directly to the east of Room 202, Roomblock 2. To the west, 4 to 8 m (13 to 26 ft) from Roomblock 2, are a large storage cist (Cist 3) and several pits, postholes, and a roasting pit. The postholes suggest a ramada that could have been contemporaneous with Cist 3 was placed here. The roasting pit/kiln is strikingly similar to shallow, slab-lined, square-to-rectangular ceramic kilns found in the valley and to the north. It was heavily oxidized and contained only fuel wood and no artifacts.

EXTRAMURAL AREA 4

Extramural Area 4 at LA 37594 contained a Basketmaker-period semisubterranean pit structure, dating to the Sambrito phase (pre–AD 600) (Fig. 10.4). The presence of the early structure in this area is only vaguely suggested by elevated counts of plain gray and especially polished gray pottery (Table 10.16). Most of the sherds from surface and subsurface deposits are Mid Pueblo II types, but no Pueblo II features or structures were encountered in Extramural Area 4.

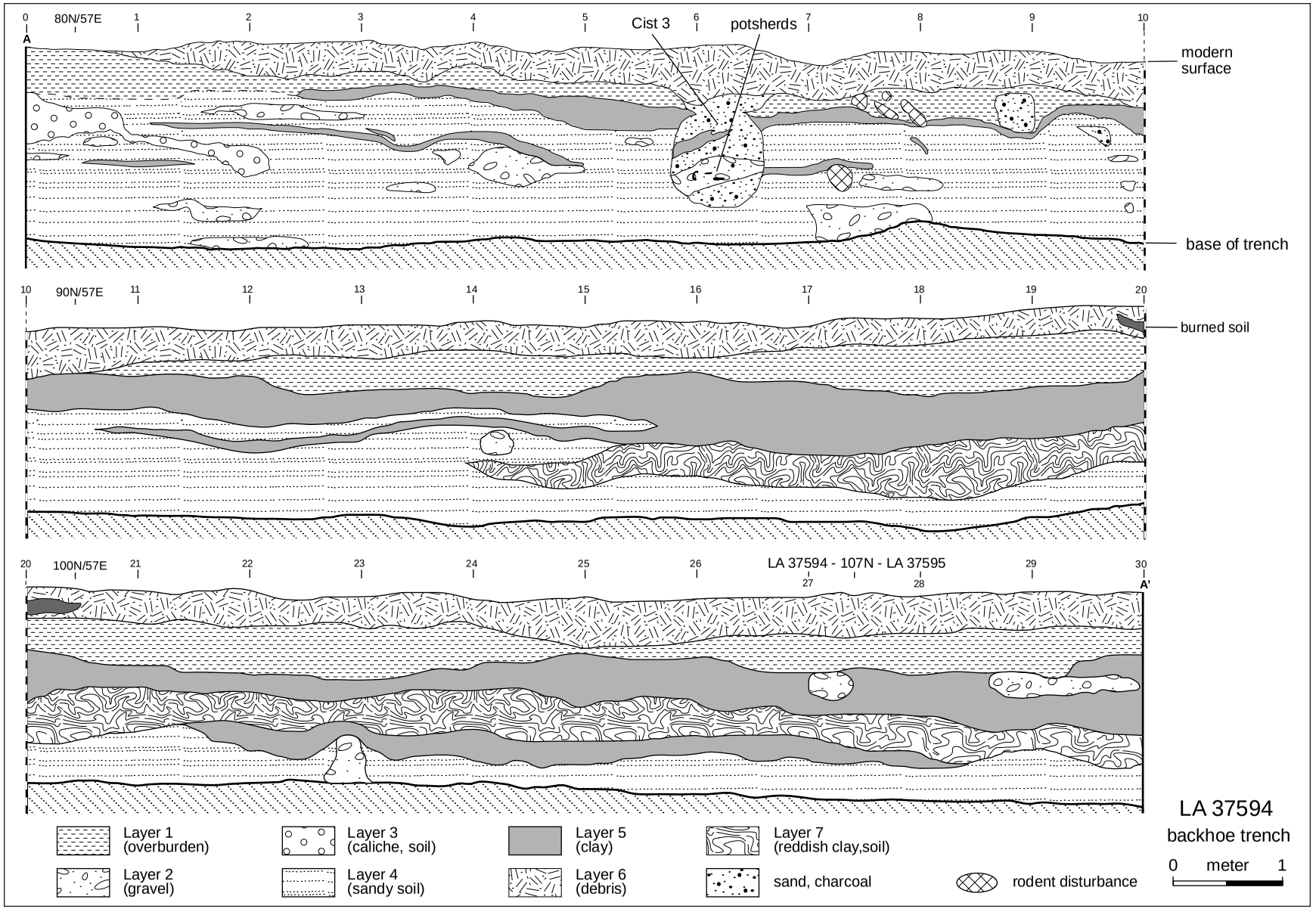


Figure 10.25a. LA 37594, Extramural Areas 3 and 4, backhoe trench, profile 80N/57E–107N/57E (along existing right-of-way fence), west wall.

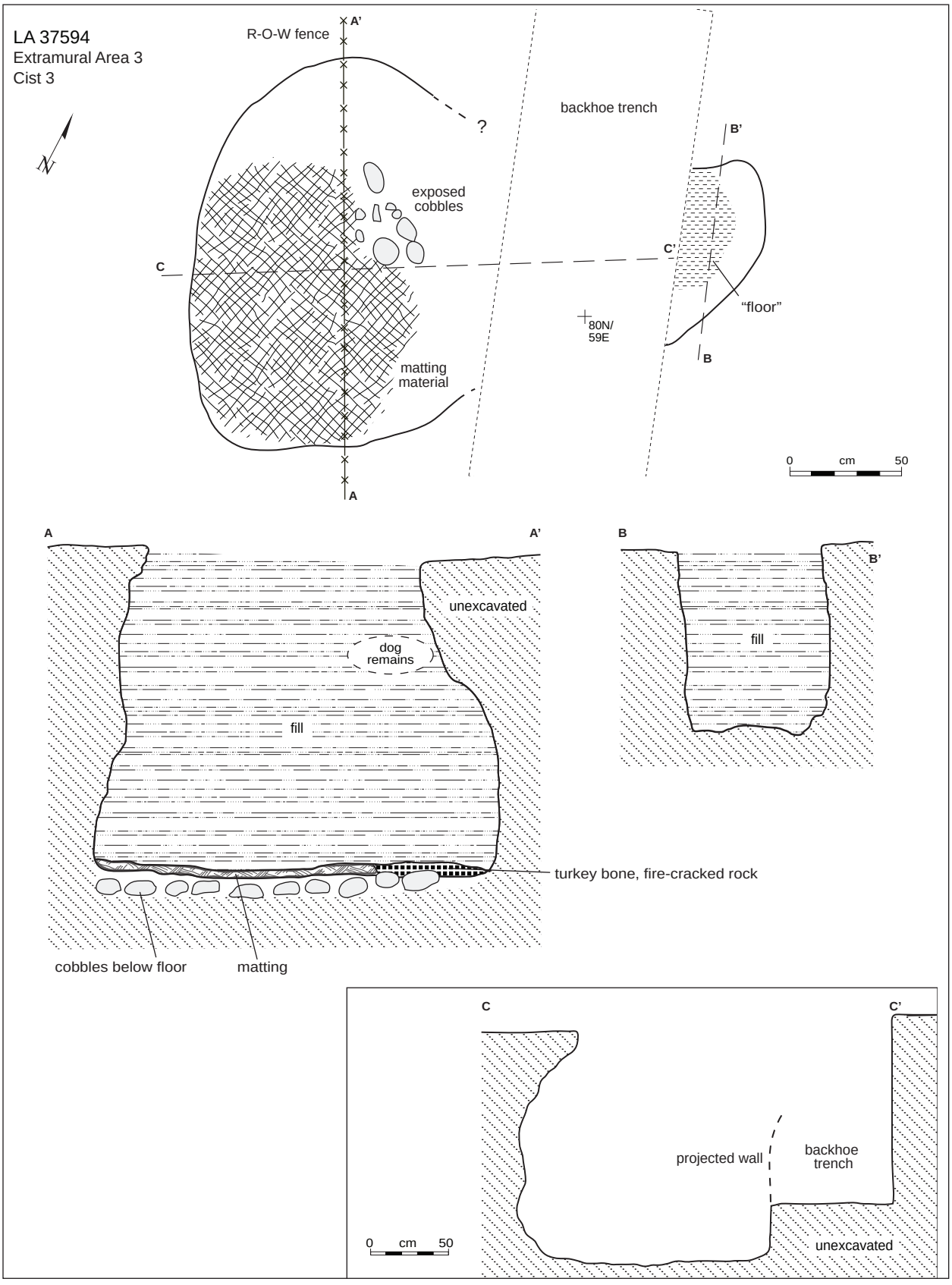


Figure 10.25b. LA 37594, Extramural Area 3, Cist 3, plan and profiles.

Figure 10.26. LA 37594, Extramural Area 3, Cist 3, detail, view west.

Pit Structure 5

Discovered during excavation of a test unit within a disturbed rubble pile, Pit Structure 5 appeared as a dark stain curving to the northeast from the rubble pile. Burning of the superstructure upon prehistoric abandonment left a very clear outline. Excavation exposed a circular, shallow (20–40 cm deep) pit structure 5 m (16 ft) in diameter. It had two floors. Floor 1 had 17 interior features (Figs. 10.27, 10.29, 10.30). Floor 2 had one interior feature. There were two external ash pit features near the edge of the pithouse exterior, apparently associated with Floor 1. Abutting the pit structure to the south was an antechamber that served as an entrance. It extended 3 m (10 ft) to the south, with the east and west walls cut off by two utility trenches. The area was at least 1.5 m (4.9 ft) in width. The fill of the antechamber appeared as a light charcoal stain, as opposed to the darker stain of the main structure. Sandstone slabs lined the wall where the antechamber and pit structure articulated, although the edge definition was poor. The antechamber was shallower than the pit structure, and not as burned or as well preserved.

Pit Structure 5 measured 5.0 m (16.4 ft) north–south by 5.0 m (16.4 ft) east–west. The antechamber measured 2.9 m (9.5 ft) north–south. The area of the chamber was 19.64 sq m; that of the chamber and antechamber combined was 28 sq m. The maximum height of the structure was 0.4 m (1.3 ft).

Ceramic analysis confirmed that both the pit structure and the antechamber had Sambrito-phase ceramics. Sambrito-phase pit structures found in the Navajo Reservoir District (Eddy 1966:352–364) have antechambers that typically extend due south of the main room. It is possible that this antechamber was larger than it appears now, although long, narrow antechambers are found in AD 600–900 contexts (Daifuku 1961:19, 20, 24, 27, 29) and, more importantly, were also seen at a similar site in Mancos Canyon, dating to AD 470 (Breternitz 1986:263; Hallisy 1974:6). Similar structures with very small assemblages of Sambrito Brown have been excavated east of the Navajo Reservoir in the Fruitland Project area, e.g., LA 83051 (Hovezak 2002) and LA 71610 (Sesler 2002), where the structures are similar but lack pottery. They date to the late AD 400s and 500s (Sesler and Hovezak 2002:141). None of these structures have the distinctive horse collar metate rests found at LA 37594. Two parallel water line trenches cut through the structure, leaving a small half-moon along the western edge (2.5 m [8.2 ft] north–south, 0.5 m [1.6 ft] east–west); a middle strip flanked by water line trenches on either side (5.0 m [16.4 ft] north–south, 1.5 m [4.5 ft] east–west), fortunately leaving the hearth intact; and an eastern, larger half-moon portion (3.8 m [12.5 ft] north–south, and 1.5 m [4.9 ft] east–west). Excavation proceeded by dividing the circular structure into quadrants; each quadrant served as an excavation unit. Dirt from the water line trenches was excavated separately and not screened due to its mixed nature.

Stratigraphy

Pit Structure 5 fill consisted of burned adobe and roof and wall fall interspersed with heavy charcoal, ash, and burned construction timbers. One beam was identified as juniper. Relatively intact pieces of closing material were found, made by sticks

Table 10.23. LA 37594, Extramural Area 3, Cist 3, faunal remains, counts from east and west sides of backhoe trench; by level and floor.

	Level 1	Level 2	Level 3	Level 4	Floor	Total
East of Trench						
Small mammal	–	–	2	4	–	6
Large mammal	3	–	–	–	–	3
Perognathus flavus	–	–	–	–	1	1
Odocoileus sp.	1	–	–	–	–	1
Total	4	–	2	4	1	11
West of Trench						
Small mammal	–	–	10	3	–	13
Medium mammal	–	–	8	–	–	8
Large mammal	–	–	–	2	–	2
Spermophilus sp.	–	–	–	–	1	1
Cynomys gunnisoni	–	–	1	2	–	3
Perognathus flavus	–	–	–	11	–	11
Lepus californicus	–	–	5	–	–	5
Canis sp.	1	3	255	–	–	259
Odocoileus sp.	–	–	2	1	–	3
Aves	–	–	–	19	–	19
Meleagris gallopavo	–	–	–	16	–	16
Total	1	3	281	54	1	340

Level 4, west half, includes the 80-cm level from the north half of the portion west of the trench.
The turkey bone was near the floor.

overlaid with strips of bark (species unknown). The floor had a thin plaster coating that was compacted and burned.

The stratigraphy of Pit Structure 5 was quite straightforward: the intensity of the burn upon abandonment clearly marked the edge of the structure and burned roofing material within. There were essentially two layers. Layer 1 was a hard chunky sand with some charcoal. Layer 2, the majority of structure fill, contained the roof and wall fall. Heavily burned soil along with burned adobe, wood, and ash were found in this relatively loose soil. Layer 2 also contained a mix of unburned sterile sand throughout. The lower part of Layer 2 was collected separately as fill to Floor 1.

Floor 1 and Interior Features

Floor 1 of the main structure was plastered, as were many of the features. A total of 17 features including metate rests, postholes, subfloor cists, a central hearth, pot rests, and two sand-filled pits were found on Floor 1 (Tables 10.24, 10.25).

Food preparation seemed to be an integral activity in this structure. Two metate rests were found in the northeast quadrant (Features 2 and 3), and several subfloor storage cists were found near the metate activity area. Each metate rest was a thick horseshoe-shaped adobe collar 3–9 cm high (Figs. 10.31, 10.32). The metates were removed before the structure was abandoned. In the center bottom of each metate rest was a lining of cobbles. One metate rest (Feature 2) was built so that it attached to the wall with a small adobe bridge. The other metate rest (Feature 3) may be associated with a subfloor storage cist (Feature 9) 30 cm to the southeast, although this feature had been sealed prior to abandonment. Feature 2 also had an adjacent plaster-lined pit (Feature 1), although it is smaller than the cist with the other rest (Features 3 and 9). These horseshoe-shaped adobe rests were similar to metate rests found at a late Basketmaker II pit structure at Talus Village, near Durango, Colorado (Morris and Burgh 1954:Fig. 5). They are quite distinct from later metate rests in form and location.

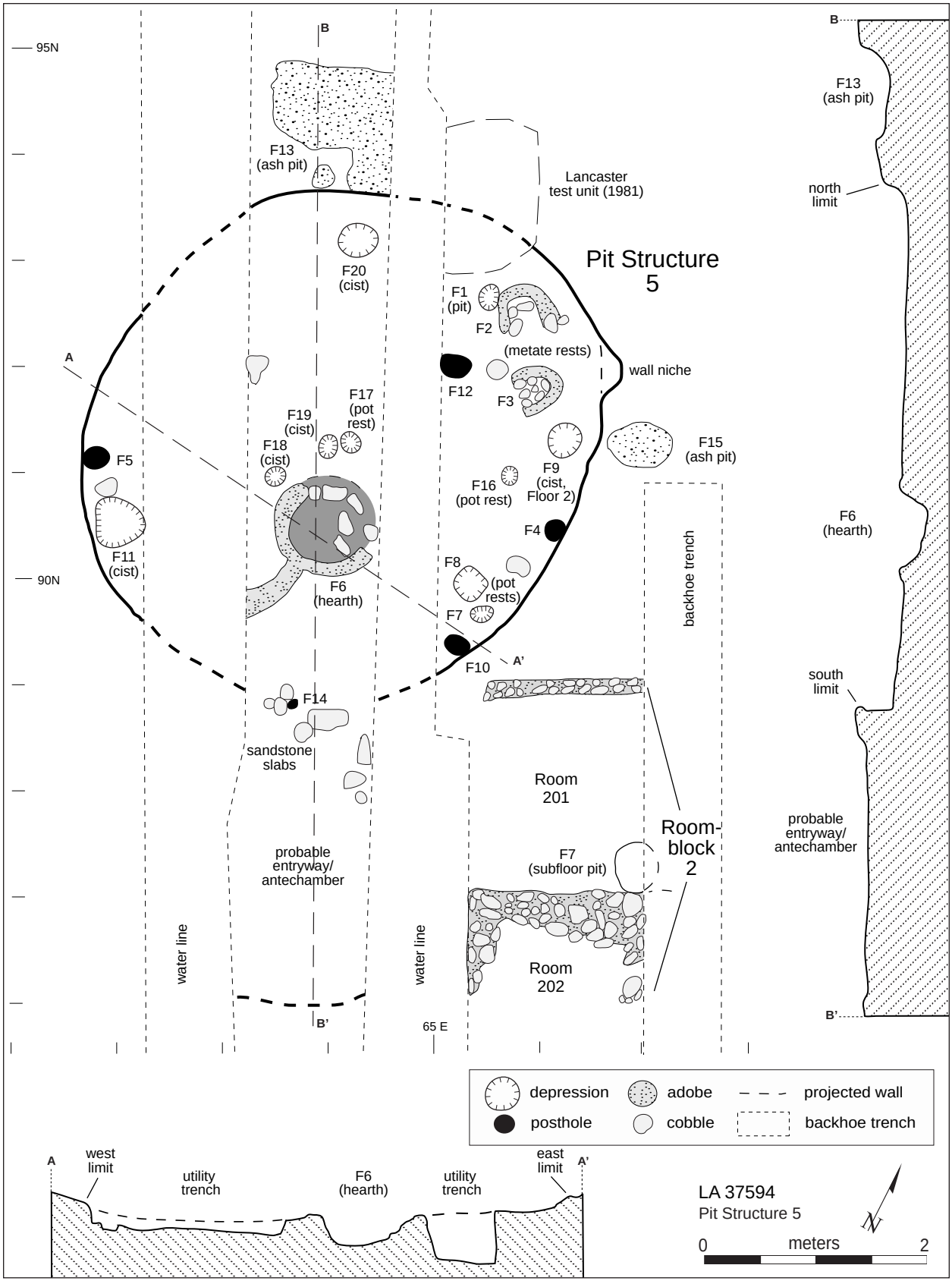


Figure 10.27. LA 37594, Extramural Areas 3 and 4; Pit Structure 5, Floor 1, detail plan and profiles, and Roomblock 2, plan.

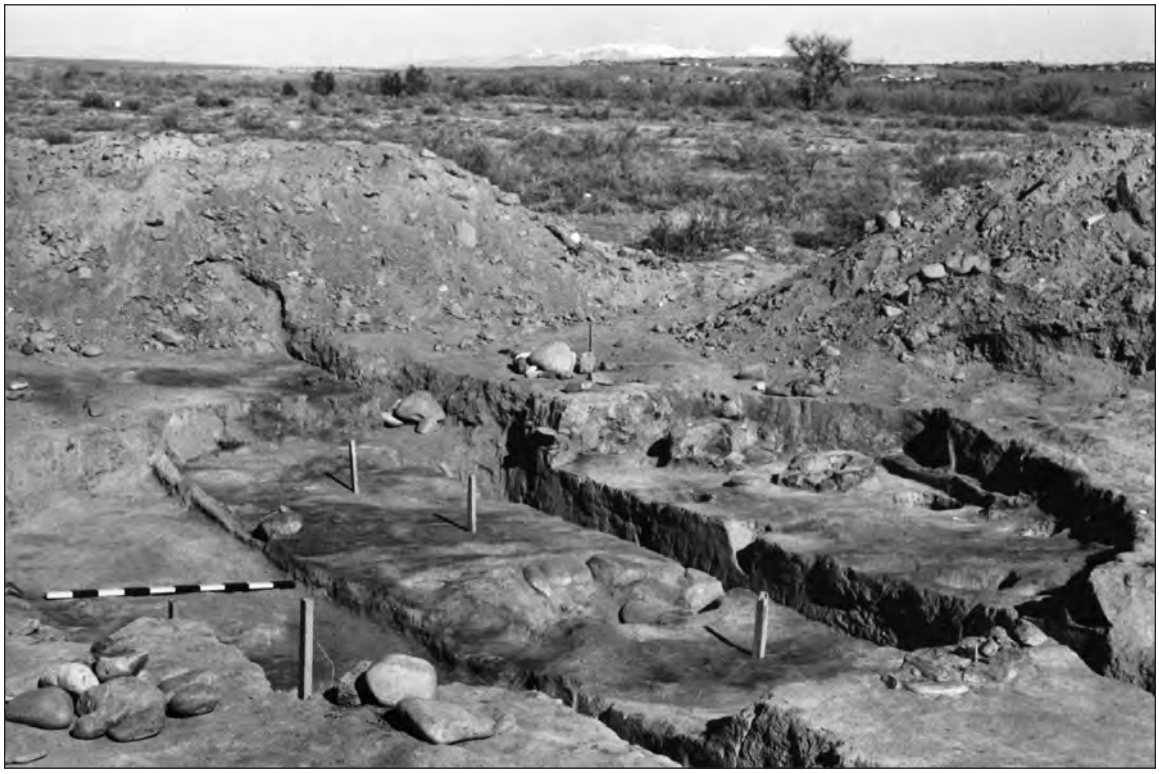


Figure 10.29. LA 37594, Pit Structure 5 and surrounding modern ground surface, view north.

Figure 10.30. LA 37594, Pit Structure 5, Floor 1, view south; northwest quad unexcavated.

Table 10.24. LA 37594, Pit Structure 5, features; Floors 1 and 2, and exterior; summary table.

Feature	Type	Shape	Length (cm)	Width (cm)	Depth (cm)	Volume (l)	Fill Description
Floor 1							
1	plastered pit	cylindrical	20.0	18.0	15.0	4.3	Sandy clay.
2	metate rest	semicircular	45.0	30.0	16.0		Layer 1: sandy clay. Layer 2: clay and burned adobe (room fill).
3	metate rest	semicircular	39.0	36.0	9.0	–	Sandy clay with burned wood.
4	posthole	oblong curvilinear	22.0	17.0	36.0	10.8	Burned soil, burned post at bottom; rock shims.
5	posthole	oblong curvilinear	23.0	27.0	43.0	21.1	Burned silty sand with charcoal and small pieces of wood; rock shims.
6	hearth	hemispherical	110 72.0 inner –	95 70.0 inner –	25.0	99.0	Layer 1: light yellow brown sandy clay. Layer 2: brown sandy clay. Layer 3: dark gray-brown silty sand, charcoal, and burned adobe.
7	pot rest	hemispherical	20.0	20.0	4.0	1.3	Burned soil.
8	pit	subrectangular	31.0	31.0	16.0	15.4	Yellow sand, charcoal.
10	posthole	cylindrical	29.0	19.0	45.0	20.4	Mottled soil with charcoal, burned adobe.
11	cist	cylindrical	50.0	50.0	54.0	–	Sand with ash, charcoal, ceramics, and lithics.
12	posthole	upright cone	24.0	30.0	49.0	28.1	Burned soil and adobe with burned post at bottom. Ground stone pipe at bottom.
14	pit	cylindrical	25.0	–	30.0	–	Silty sand with gray ash and charcoal.
							Burned yucca (?) fiber.
16	pot rest	hemispherical	17.0	16.0	7.0	–	Sandy clay.
17	pot rest	oblong curvilinear	30.0	23.0	7.0	–	Sandy clay.
18	sand-filled cist	spherical	21.0 top	20.0 top 31.0 max	35.0	26.4	White sand, some charcoal, 1 sherd.
19	sand-filled cist	irregular	24.0	21.0	41.0	20.7	White sand, bone, and lithics.
20	cist	cylindrical	34.0	32.0	62.0	53.0	Sandy clay with jacal; small cobbles and a few sherds.
Floor 2							
9	cist	oval	37.0	32.0	59.0	55.2	Sandy clay, much charcoal; remodeled at Floor 2.
Exterior Features							
13	ash dump	irregular	125.0	105.0	4.0– 10.0	103.9	Charcoal and burned sand, 8 rocks, 4 of which are ground stone.
15	ash dump	oblong curvilinear	60.0	42.0	8.0	20.0	–

A central hearth (Feature 6) was in the south central portion of Pit Structure 5. It was circular with a thick adobe collar that extended half the way around (Fig. 10.33). The northeastern half of the hearth was faced with large cobbles. The collar was mostly 12 to 15 cm thick, though it enlarges to 25 cm adjacent to where the lining changes to cobbles in the northwest corner. The cobbles and adobe were heavily oxidized and blackened. An adobe ridge extended from this hearth ring to the southwest 0.55 m

Table 10.25. LA 37594, Pit Structure 5, botanical remains by feature type; seed count and weight.

	Pit	Mealing Bin	Pot Rest	Cist	Hearth	Ash Pit	Total
Seed Count							
Amaranth	1	2	–	–	–	–	**3**
Goosefoot	42	5	–	1	9	1	**58**
Beeweed	7	–	–	–	–	–	**7**
Tansy mustard	2	–	–	–	–	–	**2**
Spurge	1	2	–	–	–	–	**3**
Pepperweed	–	–	–	–	1	–	**1**
Purslane	102	282	–	9	29	1	**423**
Grass family	–	–	–	–	–	1	**1**
Composite family	7	–	–	–	1	–	**8**
Mustard family	1	–	–	–	–	–	**1**
Groundcherry	–	–	–	–	1	–	**1**
Total	**163**	**291**	**0**	**10**	**41**	**3**	**508**
Macrobotanical (weight in grams)							
Features	**11, 20**	**3**	**8**	**9, 18**	**6**	**4, 5, 10, 12**	
Saltbush	–	1.0	–	–	–	–	**1.0**
Juniper	17.0	3.0	–	2.0	–	20.0	**42.0**
Piñon	–	3.0	–	2.0	–	12.0	**16.0**
Willow family	1.0	–	0.0	3.0	1.0	9.0	**15.0**
Nonconifer	0.0	–	–	1.0	–	–	**2.0**
Total	**18.0**	**7.0**	**0.0**	**8.0**	**1.0**	**41.0**	**76.0**

0 = present (less than a gram)

(1.8 ft), where it was cut off by a water line trench. Low "speed bumps" such as this one are an alternative to wing walls for partitioning the floor space. Especially in later Basketmaker III structures, paired wing walls run symmetrically from the hearth to the side walls of the structure (Bullard 1962:152; Hayes and Lancaster 1975:6, 9, 15). No sign of a twin wing wall was found to the southeast, including where it would have attached to the hearth collar. Whether it was removed by the water line trench or did not exist cannot be determined. Three postholes were inside the structure by the wall (Features 4, 5, 10); these are fairly regularly spaced, and two or three more probably succumbed to the water line trenches. A larger posthole near the center (Feature 12) must also have had counterparts, probably three, to support the roof. The postholes were dug 30–49 cm below the floor, with rocks used as wedges for Features 4 and 5. Features 4 and 12 contained a great deal of burned wood. Features 5 and 10 contained burned wood in burned roof fall fill, but no substantial post remains. Most of the postholes had plaster at the bottom and sides and did not appear to be collared. The excavator thought that Feature 14 was a posthole, but its placement in the entrance of the antechamber suggests otherwise, and too much of the feature had been removed by the water line to be sure of its function.

Four pot rests were found on Floor 1 (Features 7, 8, 16, and 17). They were generally very shallow, plaster-lined, and associated with a metate rest or the hearth. Features 7 and 8 were disturbed by rodents, although remaining portions showed plastering and a characteristic shallowness.

Two cists associated with Floor 1 (Features 11 and 20) were small and could have functioned only as small storage spaces. The fill for Features 11 and 20 was heavily burned, with Feature 20 oxidized on the upper edge, presumably from the burned superstructure. Two sand-filled pits (Features 18 and 19; Fig. 10.33) were near the central hearth. Both had a fill very different fill from that of the other cists, consisting of a very fine, white sand with a few trash items, including bone, a sherd, and lithic artifacts.

Figure 10.31. LA 37594, Pit Structure 5, Floor 1, Feature 2 (metate rest), view northwest.

Figure 10.32. LA 37594, Pit Structure 5, Floor 1, Feature 3 (metate rest), view northeast.

Figure 10.33. LA 37594, Pit Structure 5, Floor 1, Feature 6 (hearth, right), Feature 17 (pot rest, left top), Features 18 and 19 (sand-filled pits, left center and bottom); view northeast.

None of the heavily burned soil found in Features 11 and 20, for instance, was present in these features. The location, pairing, and fill of Features 18 and 19 resemble sand-filled pits from protokivas at the Dolores Archaeological Program dating to AD 760–900 (Wilshusen 1988:649–671). Dolores sand-filled pits are typically rectangular in cross section, circular in plan view, and filled with clean sand. They are found in pairs around the east, north, and west sides of the pit structure main room. While some of these pits had an unclear function, several pairs had the remains of charred posts preserved in the fill, suggesting that some sort of wooden framework was set into the sand-filled pit, such as a partition, altar, or loom. At Dolores, the altar function has the most supporting evidence. Other Pueblo I pit structures have similar features that were interpreted as pot rests or floor pits filled with sand when not in use to maintain usable floor space (Bullard 1962:172). Pit Structure 5 at LA 37594 is hundreds of years older than Pueblo I pit structures at Dolores and elsewhere. These two features may simply be sand-filled pits that were temporarily taken out of use to make better use of the floor surface. These features may indicate the early presence of movable ritual furniture.

Artifacts (Floor 1)

The majority (112) of the polished gray ceramics from Pit Structure 5, Floor 1, were recovered from the northeast quadrant, the most nearly intact portion of the structure as well as the location of the metate rests. The southeast quadrants contained only seven sherds of this type, and the northwest one sherd. The southwest quadrant lacked this type. The only bowl sherds of this type (4 out of 122) were from the east half of the structure.

Two unusual items were found in the east half of the floor. A pipe made of fine-grained volcanic tuff, fully shaped by grinding, coated with white unfired on the exterior and with a light soot stain on the upper interior half, was found in the bottom of a posthole, perhaps as an offering (Feature 12; Fig. 10.34). The shape of this pipe is nearly identical to that of a ceramic specimen found in the Badger House Community in a Basketmaker context (Hayes and Lancaster 1975:141). A selenite crystal was found on the floor of the southeast quadrant.

Twenty bones were also found (16 small mammal, 1 *Spermophilus* sp., and 3 jackrabbit elements), mostly small mammal elements and likely to be intrusive.

A variety of botanical remains were recovered from the floor. By far the most abundant were unburned purslane seeds, which were found in all feature types containing seeds. The highest count was from the mealing bins; this could relate to processing, but the fact that this seed type was in all locations and is unburned suggests that this wild seed was generally present in the structure through natural means. The early structures in Tohatchi Flats had a high occurrence of tobacco remains (Kearns et al. 2000:133), in keeping with the pipe found here. No tobacco seeds were recovered from Floor 1.

Floor 2

Floor 2 in Pit Structure 5 appeared as a small ephemeral patch of plaster along the northeastern edge of the main room, underneath one of the metate rests (Feature 2). A cist (Feature 9) was sealed over during Floor 1 remodeling, and it is the only feature associated exclusively with Floor 2. It contained artifacts and burned organic material including corncobs, which may indicate use as a trash pit. The shape of this feature in profile is much like a submerged ceramic jar with a constricted neck.

Figure 10.34. LA 37594, Pit Structure 5, Floor 1, ground stone pipe.

Exterior features

Two shallow ash pits were found directly north (Feature 13) and east (Feature 15) of Pit Structure 5's main room. Both of these features contained heavily burned soil and fire-cracked rock similar to the kind of rock lining the central hearth. The material on the north edge of the structure covers an area 1.25 by 1.05 m (4.1 by 3.4 ft) and was 4 to 10 cm deep. The only artifacts in the ashy fill were pieces of ground stone; the eight rocks in the fill were closely spaced, suggesting hearth cleaning and dumping. The east ash dump is smaller and more defined, measuring 42 by 60 by 8 cm deep.

Cultural Materials and Dating

The artifact assemblage and pollen analysis from Pit Structure 5 are presented in Tables 10.26–10.29. Ceramics recovered from the fill and floor of Pit Structure 5 and its antechamber were dark gray to brown and red in color, classified as Sambrito Utility (Wilson and Blinman 1993) or polished gray in the OAS ceramic analysis. These sherds were undecorated and polished, and tend to be thick. All were tempered with fine sand or sandstone and were fired to a dark gray to brownish core. A subsample of these sherds were fired in a controlled oxidation atmosphere, resulting in red colors, showing clays with high iron content. Pottery similar to this, sometimes also called Obelisk Gray, is very consistent in the earliest ceramic-bearing sites in the northern Colorado Plateau (Reed et al. 2000). The presence of this single ceramic type associated with this structure indicates an occupation during the early part of the Sambrito phase, AD 400–575 (Eddy 1966). Similarities in temper and paste characteristics indicate that all of these sherds from LA 37594 were made from the same or very similar sources. The temper is different from that of Mogollon Highland ceramics, challenging the assumption that these ceramics originated from sites in the Mogollon region (Wilson 1992). Investigation of clay sources in the La Plata Valley suggests that local self-tempering colluvial clays found along the La Plata River and other drainages in the northern San Juan basin were

Table 10.26. LA 37594, Pit Structure 5, pottery type and vessel form by provenience; counts and percents.

	Fill		Floor		Features		Antechamber		Total	
	Count	**Col.%**	**Count**	**Col.%**	**Count**	**Col.%**	**Count**	**Col.%**	**Count**	**Col.%**
Pottery Type										
Pueblo III corrugated	1	0.7%	–	–	–	–	–	–	**1**	**0.5%**
Plain gray	4	2.8%	–	–	1	6.3%	2	5.6%	**7**	**3.2%**
Corrugated gray	10	6.9%	–	–	3	18.8%	18	50.0%	**31**	**14.0%**
Polished gray	103	71.5%	24	96.0%	9	56.3%	13	36.1%	**149**	**67.4%**
Early Pueblo III black-on-white	1	0.7%	–	–	–	–	–	–	**1**	**0.5%**
Pueblo II–III black-on-white	1	0.7%	1	4.0%	–	–	1	2.8%	**3**	**1.4%**
Polished white	23	16.0%	–	–	3	18.8%	2	5.6%	**28**	**12.7%**
Polished black-on-white	1	0.7%	–	–	–	–	–	–	**1**	**0.5%**
Total	**144**	**100.0%**	**25**	**100.0%**	**16**	**100.0%**	**36**	**100.0%**	**221**	**100.0%**
Vessel Form										
Bowl rim	1	0.7%	–	–	–	–	1	2.8%	**2**	**0.9%**
Bowl body	14	9.7%	2	8.0%	2	12.5%	1	2.8%	**19**	**8.6%**
Seed jar rim	–	–	3	12.0%	–	–	–	–	**3**	**1.4%**
Cooking, storage rim	1	0.7%	–	–	2	12.5%	–	–	**3**	**1.4%**
Necked jar body	–	–	–	–	1	6.3%	7	19.4%	**8**	**3.6%**
Jar body	128	88.9%	20	80.0%	11	68.8%	27	75.0%	**186**	**84.2%**
Total	**144**	**100.0%**	**25**	**100.0%**	**16**	**100.0%**	**36**	**100.0%**	**221**	**100.0%**

Table 10.27. LA 37594, Pit Structure 5, chipped stone material and artifact type by provenience; counts and percents.

	Fill		Floor		Features		Antechamber		Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
Material Type										
Chert	28	32.9%	4	28.6%	11	27.5%	7	29.2%	**50**	**30.7%**
Chalcedony	–	–	–	–	1	2.5%	1	4.2%	**2**	**1.2%**
Silicified wood	9	10.6%	1	7.1%	3	7.5%	1	4.2%	**14**	**8.6%**
Quartzite	4	4.7%	1	7.1%	3	7.5%	2	8.3%	**10**	**6.1%**
Quartzitic sandstone	5	5.9%	1	7.1%	9	22.5%	4	16.7%	**19**	**11.7%**
Igneous	–	–	–	–	1	2.5%	–	–	**1**	**0.6%**
Siltstone	39	45.9%	7	50.0%	12	30.0%	9	37.5%	**67**	**41.1%**
Total	**85**	**100.0%**	**14**	**100.0%**	**40**	**100.0%**	**24**	**100.0%**	**163**	**100.0%**
Artifact Type										
Debitage	66	77.6%	11	78.6%	34	85.0%	16	66.7%	**127**	**77.9%**
Core	3	3.5%	–	–	1	2.5%	1	4.2%	**5**	**3.1%**
Biface	1	1.2%	–	–	–	–	–	–	**1**	**0.6%**
Retouched, utilized debitage	13	15.3%	1	7.1%	3	7.5%	7	29.2%	**24**	**14.7%**
Retouched, utilized core	1	1.2%	1	7.1%	1	2.5%	–	–	**3**	**1.8%**
Hammerstone	1	1.2%	–	–	1	2.5%	–	–	**2**	**1.2%**
Chopper, plane	–	–	1	7.1%	–	–	–	–	**1**	**0.6%**
Total	**85**	**100.0%**	**14**	**100.0%**	**40**	**100.0%**	**24**	**100.0%**	**163**	**100.0%**

Table 10.28. LA 37594, Pit Structure 5, ground stone artifact and material type by provenience; counts and percents..

	Fill		Ash Dumps		Floor		Features		Antechamber		Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
Artifact Type												
Abrading stone	–	–	–	–	–	–	–	–	1	25.0%	**1**	**3.0%**
Shaped slab	1	5.3%	–	–	–	–	–	–	1	25.0%	**2**	**6.1%**
Mano	13	68.4%	3	60.0%	3	75.0%	–	–	–	–	**19**	**57.6%**
Two-hand mano	–	–	2	40.0%	–	–	–	–	2	50.0%	**4**	**12.1%**
Two-hand slab mano	1	5.3%	–	–	–	–	–	–	–	–	**1**	**3.0%**
Metate	3	15.8%	–	–	–	–	–	–	–	–	**3**	**9.1%**
Slab metate	1	5.3%	–	–	–	–	–	–	–	–	**1**	**3.0%**
Pendant	–	–	–	–	1	25.0%	–	–	–	–	**1**	**3.0%**
Pipe	–	–	–	–	–	–	1	100.0%	–	–	**1**	**3.0%**
Total	**19**	**100.0%**	**5**	**100.0%**	**4**	**100.0%**	**1**	**100.0%**	**4**	**100.0%**	**33**	**100.0%**
Material Type												
Tuff	–	–	–	–	–	–	1	100.0%	–	–	**1**	**3.0%**
Granite	7	36.8%	1	20.0%	–	–	–	–	3	75.0%	**11**	**33.3%**
Sandstone	9	47.4%	4	80.0%	2	50.0%	–	–	1	25.0%	**16**	**48.5%**
Quartzite	3	15.8%	–	–	–	–	–	–	–	–	**3**	**9.1%**
Quartzitic sandstone	–	–	–	–	2	50.0%	–	–	–	–	**2**	**6.1%**
Total	**19**	**100.0%**	**5**	**100.0%**	**4**	**100.0%**	**1**	**100.0%**	**4**	**100.0%**	**33**	**100.0%**

Table 10.29. LA 37594, Pit Structure 5, pollen, counts by provenience.

FS	Provenience	Families	(Full) Sum	Marker	Arboreal	N	Cheno-Am	N	Composite	N	Grasses	Domesticate	N	Shrubs	N	Other	N
1233	Feature 2, mealing bin	10	42	31	*Pinus*	4	pollen	14	low-spine	3	2	–		*Sarcobatus*	1	Liguliflorae	1
					Juniperus	2	–	–	–	–	–	–	–	–	–	*Platyopuntia*	1
					Quercus	1	–	–	–	–	–	–	–	–	–	–	–
					Populus	2	–	–	–	–	–	–	–	–	–	–	–
1234	Feature 3, mealing bin	7	31	38	*Pinus*	2	pollen	9	high-spine	5	1	–	–	–	–	Liguliflorae	1
					Populus	1	–	–	low-spine	2	–	–	–	–	–	Other	1
1253	Feature 4, posthole	1	23	50	–	–	–	–	–	–	–	–	–	–	–	Other	23
1256	Feature 15, pit	11	102	48	*Pinus*	1	pollen	42	high-spine	7	6	*Zea*	9	*Sarcobatus*	1	Liguliflorae	2
					Juniperus	2	–	–	low-spine	9	–	–	–	–	–	Cactaceae	1
																Cyperaceae	1
1267	Feature 8, cist	3	50	55	–	–	–	–	–	–	–	–	–	–	–	Cactaceae	1
																Ephedra	1
																Other	47
1238	Antechamber slab, Layer 3	5	32	26	*Pinus*	6	pollen	12	low-spine	2	–	–	–	–	–	*Sphaeralcea*	2
					Populus	2	–	–	–	–	–	–	–	–	–	–	–

used. The widespread use of self-tempered clays during this early ceramic phase may indicate a technology geared towards expedient production of vessels suitable for the needs of a mobile agricultural population (Wilson 1994).

Tree-ring specimens (n = 23) were sent for analysis, making us quite optimistic that a good date would be obtained. Although ring series could be matched within the set, the series could not be placed temporally. At least one of the specimens is juniper, contributing to difficulty in dating, and many specimens appeared to have come from the same tree. These specimens were examined twice by the Laboratory of Tree-Ring Research, the second time in light of refined chronology for the area, and they still could not be dated. The radiocarbon age of a charcoal sample from this structure further supports this ceramic assessment, dating AD 544 (2-sigma calibrated range of 410–630, BP 1530 ± 50, Beta-41360; Appendix 4). This structure shows a striking similarity to Pit Structure 1, LA 2506, in plan, features, and ceramics (Kearns et al. 2000:126–130). That pit structure dated to the early AD 500s.

Pit Structure 5, Summary

Sambrito-phase (AD 400–600) pit structures found in the Navajo Reservoir District are morphologically similar to Pit Structure 5, as are structures from the same period in other regions (Kearns et al. 2000:130; Geib and Spurr 2000:190). The construction style of Pit Structure 5 is very close to the style called Early Western by Kearns et al. These features include a circular main room, a floor partition, a central fire pit, floor features including ash pits, heating pits, and subfloor cists, and an antechamber that extends south from the main room. Several of these features have been cited as characteristics of an "Anasazi architectural complex" in pre-AD 900 pit structures (Bullard 1962), particularly referring to the house orientation, the shape and location of the hearth, the partitioning of the main room at the south end, and the pattern of the postholes. This period pattern is reinforced by another example of a circular pit structure from the upper La Plata Valley (Foster 1983). The pattern of the remaining postholes in Pit Structure 5 suggests more than four peripheral posts, which probably supported a cribbed or partly cribbed roof. This posthole pattern is associated with circular houses (Bullard 1962:137). Several

pit structures from nearby La Plata Highway sites dating to AD 650 contrast to Pit Structure 5 in their semirectangular plans and greater depth (see also Kearns et al. 2000:130). Distinctly earlier in style in Pit Structure 5 are the raised adobe metate rests. A similar feature was found in a pit structure dating to AD 330 at Talus Village, near Durango, Colorado, (Morris and Burgh 1954:10–12, 48). Another early Basketmaker II (pre-AD 300) structure with brown ware (Adamana Brown) at Petrified Forest National Park bears striking resemblance in the placement of metates and in the circular shape of the main room (Burton 1991: 41, 105).

Around AD 600 there was a dramatic shift in a number of aspects of "Basketmaker" material culture and, probably, beliefs and organization. Structures become deeper and rectangular in plan, and had rectangular antechambers that are relatively large compared to the main room of the structure (for example, nearby LA 60751 and LA 37595; Brisbin 1981:124; Bullard 1962:141; Hayes and Lancaster 1975:6). The pottery from such structures is gray ware, using different materials, surface treatment, and firing, rather than polished brown ware.

The antechamber feature in the pre-AD 900 period was limited to the eastern Anasazi area, including the northern San Juan region, where it persisted the longest. Usually, the antechamber floor was somewhat higher than the floor of the main room (Bullard 1962:141), as was the case with Pit Structure 5 (Fig. 10.27, profile B). Antechamber doors are frequently found on the right side as one faces the "front," or in this case, north to northwest (Bullard 1962:141). In AD 600–900, pit structures in this region tend to have four post roof supports to hold stringers that form a rectangular roof plate supporting horizontal roof timbers (Bullard 1962:128,142). Though lacking a bench, Pit Structure 5 may have had a roof support system like this, or it may have relied more on peripheral posts. Paired adobe ridges are found in 70 percent of AD 600–900 pit structures in the Anasazi area. These "wing walls" set off a portion of the room from the fireplace and serve as a deflector for cold air coming in from the antechamber (Bullard 1962:152), though the deflecting properties of the ridges in Pit Structure 5 would have been minor without some sort of superstructure. Grinding activity becomes localized in the south portion of the structure behind more substantial wing walls, as contrasted to the location of metate rests in the northeast quadrant.

LA 37594: Material Culture

Three-quarters of the ceramic and lithic artifacts from LA 37594 are from extramural proveniences, and over half of each of those categories are from Extramural Area 2. Among the ceramic artifacts from extramural areas, only 868 of the sherds from extramural areas are from features, predominantly from the large cists in Extramural Area 3 (14 percent of the extramural ceramics are from features). Although the ground stone counts deviate somewhat, with larger counts in Pit Structure 5, weights follow the trends in the other materials more closely, with Pit Structure 5 still standing out as a ground stone provenience. Most of the material comes from the upper two levels of test trenches. Forty-six test units of varying sizes were excavated in extramural areas, many only to the second artificial level. No midden areas were identified, but the amount of material in the extramural areas suggests that one may have been present in the vicinity, perhaps intersected by one of the many modern disturbances. Surface artifact distributions (Figs. 10.5, 10.18) show increased material in front of both roomblocks where middens were probably present.

Ceramic Artifacts

The tables presenting LA 37594 ceramic artifact occurrence by provenience all use condensed ceramic type categories. Table 10.30 shows all detailed types recorded by major provenience. Most of the more specific types identified are still from the local Mesa Verde series; the specific types (which are used when a vessel is being analyzed or an unusual sherd comes across the sorting table) reinforce the message of the nearly exclusive use of local ceramics.

Whether quantified by count or weight, gray ware ceramics make up 71 percent of the 8,567 sherds from the site, and white ware 29 percent (Table 10.31). Only 11 red ware sherds were recovered from the whole site, from three different traditions: 8 Kayenta, 2 San Juan (1 Deadmans

Table 10.30. LA 37594, pottery type by major provenience; counts and percents.

	Pit Structure 1		Roomblock 1		Roomblock 2		EA2, Feature 2 (probable cist)		Extramural Areas		Pit Structure 5		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Plain rim	–	–	–	–	–	–	1	0.4%	4	0.1%	–	–	**5**	**0.1%**
Narrow banded	–	–	–	–	–	–	–	–	1	0.0%	–	–	**1**	**0.0%**
Fillet rim	–	–	–	–	–	–	–	–	1	0.0%	–	–	**1**	**0.0%**
Pueblo II corrugated	2	0.6%	4	0.3%	2	0.8%	6	2.4%	64	1.0%	–	–	**78**	**0.9%**
Pueblo II–III corrugated	3	0.8%	9	0.8%	–	–	–	–	33	0.5%	–	–	**45**	**0.5%**
Pueblo III corrugated	–	–	–	–	–	–	2	0.8%	10	0.2%	1	0.5%	**13**	**0.2%**
Plain gray	30	8.4%	22	1.9%	36	14.9%	6	2.4%	597	9.4%	7	3.2%	**698**	**8.1%**
Corrugated gray	272	75.8%	402	34.7%	116	48.1%	204	81.6%	3464	54.6%	31	14.0%	**4489**	**52.4%**
Polished gray	–	–	–	–	–	–	–	–	13	0.2%	149	67.4%	**162**	**1.9%**
Red Mesa–style black-on-white	–	–	–	–	–	–	1	0.4%	29	0.5%	–	–	**30**	**0.4%**
Pueblo II black-on-white	2	0.6%	13	1.1%	8	3.3%	1	0.4%	125	2.0%	–	–	**149**	**1.7%**
Sosi-style black-on-white	–	–	–	–	–	–	–	–	1	0.0%	–	–	**1**	**0.0%**
Dogoszhi-style black-on-white	2	0.6%	14	1.2%	5	2.1%	1	0.4%	62	1.0%	–	–	**84**	**1.0%**
Chaco-style black-on-white	–	–	–	–	–	–	–	–	6	0.1%	–	–	**6**	**0.1%**
Early Pueblo III black-on-white	–	–	–	–	–	–	–	–	3	0.0%	–	–	**3**	**0.0%**
Late Pueblo III black-on-white	–	–	–	–	–	–	–	–	4	0.1%	–	–	**4**	**0.0%**
Pueblo I–II black-on-white	–	–	–	–	–	–	–	–	2	0.0%	–	–	**2**	**0.0%**
Pueblo II–III black-on-white	10	2.8%	34	2.9%	16	6.6%	4	1.6%	225	3.5%	3	1.4%	**292**	**3.4%**
Pueblo III black-on-white	–	–	–	–	–	–	1	0.4%	17	0.3%	–	–	**18**	**0.2%**
Painted black-on-white	–	–	–	–	–	–	–	–	2	0.0%	–	–	**2**	**0.0%**
Polished white	19	5.3%	65	5.6%	48	19.9%	15	6.0%	1047	16.5%	28	12.7%	**1222**	**14.3%**
Polished black-on-white	14	3.9%	26	2.2%	8	3.3%	7	2.8%	386	6.1%	1	0.5%	**442**	**5.2%**
Squiggle hachure black-on-white	–	–	3	0.3%	–	–	–	–	6	0.1%	–	–	**9**	**0.1%**
Mancos Corrugated	–	–	2	0.2%	–	–	–	–	5	0.1%	–	–	**7**	**0.1%**
Dolores Corrugated	–	–	5	0.4%	–	–	–	–	–	–	–	–	**5**	**0.1%**
Plain gray	–	–	8	0.7%	–	–	–	–	10	0.2%	–	–	**18**	**0.2%**
Corrugated gray	–	–	480	41.5%	–	–	–	–	102	1.6%	–	–	**582**	**6.8%**
Cortez Black-on-white	–	–	1	0.1%	–	–	–	–	1	0.0%	–	–	**2**	**0.0%**
Mancos Black-on-white	3	0.8%	14	1.2%	1	0.4%	1	0.4%	39	0.6%	–	–	**58**	**0.7%**
Mancos Black-on-white, Sosi	–	–	–	–	–	–	–	–	13	0.2%	–	–	**13**	**0.2%**
Mancos Black-on-white, Dogoszhi	1	0.3%	12	1.0%	–	–	–	–	21	0.3%	–	–	**34**	**0.4%**
McElmo Black-on-white	–	–	1	0.1%	–	–	–	–	2	0.0%	1	0.5%	**4**	**0.0%**
Pueblo II-Pueblo III black-on-white	–	–	3	0.3%	–	–	–	–	–	–	–	–	**3**	**0.0%**
Polished white	–	–	33	2.9%	–	–	–	–	13	0.2%	–	–	**46**	**0.5%**
Polished black-on-white	–	–	–	–	–	–	–	–	4	0.1%	–	–	**4**	**0.0%**

Table 10.30 (continued)

	Pit Structure 1		Roomblock 1		Roomblock 2		EA2, Feature 2 (probable cist)		Extramural Areas		Pit Structure 5		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Mancos Black-on-white (squiggle hachure)	–	–	–	–	–	–	–	–	1	0.0%	–	–	1	0.0%
Deadmans Black-on-red	–	–	–	–	–	–	–	–	1	0.0%	–	–	1	0.0%
Plain San Juan Red	1	0.3%	–	–	–	–	–	–	–	–	–	–	1	0.0%
Gallup Black-on-white	–	–	–	–	–	–	–	–	1	0.0%	–	–	1	0.0%
Wingate Polychrome	–	–	–	–	–	–	–	–	1	0.0%	–	–	1	0.0%
Toadlena Black-on-white	–	–	–	–	1	0.4%	–	–	3	0.0%	–	–	4	0.0%
Indeterminate Tusayan Red	–	–	–	–	–	–	–	–	8	0.1%	–	–	8	0.1%
Plain Gray	–	–	1	0.1%	–	–	–	–	–	–	–	–	1	0.0%
Corrugated Gray	–	–	1	0.1%	–	–	–	–	1	0.0%	–	–	2	0.0%
Red Mesa Style black-on-white	–	–	–	–	–	–	–	–	1	0.0%	–	–	1	0.0%
Pueblo II black-on-white	–	–	1	0.1%	–	–	–	–	3	0.0%	–	–	4	0.0%
Dogoszhi Style black-on-white	–	–	1	0.1%	–	–	–	–	5	0.1%	–	–	6	0.1%
Early Pueblo III black-on-white	–	–	–	–	–	–	–	–	1	0.0%	–	–	1	0.0%
Polished white	–	–	1	0.1%	–	–	–	–	–	–	–	–	1	0.0%
Polished black-on-white	–	–	1	0.1%	–	–	–	–	1	0.0%	–	–	2	0.0%
Total	**359**	**100.0%**	**1157**	**100.0%**	**241**	**100.0%**	**250**	**100.0%**	**6339**	**100.0%**	**221**	**100.0%**	**8567**	**100.0%**
% of Total		**4.2%**		**13.5%**		**2.8%**		**2.9%**		**74.0%**		**2.6%**		**100.0%**

and 1 plain), and 1 White Mountain Wingate Polychrome. Ceramics from the Chuska Valley are even less common: there are only 4 trachyte-tempered Toadlena Black-on-white (a Pueblo II–III type) sherds in the assemblage, and a single Gallup sherd represents the Cibola white ware series.

After the extramural area pottery, the rooms account for a substantial portion of the ceramic count (Tables 10.30, 10.32). This is in part from high counts from the floor of Room 101, where a large corrugated vessel was used to line a subfloor pit. For the most part, mineral paint strongly outnumbers organic paint, although organic paint is a strong presence in Extramural Areas 2 and 4 (Table 10.32). The preponderance of organic paint comes from Extramural Area 2. No complete vessels were recovered; four were partially restored (Table 10.33), but even these vessels were not complete. These are all Pueblo II vessels: two Dolores Corrugated jars (Fig. 10.11) and two Mancos Black-on-white vessels (Fig. 10.19).

Locally produced, igneous-tempered pottery far outnumbers vessels with other tempers (generally around 80 percent), some of which come from other areas (Table 10.34). An exception to this is the unusually high occurrence of sherd-tempered ceramics from the extramural areas. In spite of the use of sherd temper, most of the sherd-tempered pottery is still in the Mesa Verde series rather than being Cibola or Kayenta. While there is clearly production variability in the ceramic assemblage, vessels from outside the Mesa Verde region or south of the San Juan River are very scarce.

Of 149 sherds of polished gray—or in this case brown—ware from the site, 136 come from Pit Structure 5, and they are clearly the early type, Sambrito Brown. The remainder of sherds of this type come from extramural areas nearby. This type is mostly in jar form, although there are six bowl sherds. No sherds of this type were identified from surface material, showing once again the difficulty of spotting this early component in multicomponent sites.

Chipped Stone Artifacts

Over 93 percent of the chipped stone from LA 37594 is in the form of debitage, and 12 percent of the debitage has identifiable use or retouch (Table 10.35). Another 4 percent are hammerstones and cores, and the remaining 3 percent are formal tools

Table 10.31. LA 37594, pottery types; counts, weights, and percents.

	Count	Col. %	Weight (g)	Col. %
Plain rim	5	0.1%	62.0	0.1%
Narrow banded	1	0.0%	2.0	0.0%
Fillet rim	1	0.0%	12.0	0.0%
Pueblo II corrugated	78	0.9%	877.0	1.9%
Pueblo II–III corrugated	45	0.5%	641.0	1.4%
Pueblo III corrugated	13	0.2%	166.0	0.4%
Plain gray	698	8.1%	2623.0	5.7%
Corrugated gray	4489	52.4%	23047.0	49.9%
Polished gray	162	1.9%	993.0	2.2%
Red Mesa–style black-on-white	30	0.4%	360.0	0.8%
Pueblo II black-on-white	149	1.7%	1178.0	2.6%
Sosi-style black-on-white	1	0.0%	5.0	0.0%
Dogoszhi-style black-on-white	84	1.0%	649.0	1.4%
Chaco-style black-on-white	6	0.1%	22.0	0.0%
Early Pueblo III black-on-white	3	0.0%	28.0	0.1%
Late Pueblo III black-on-white	4	0.0%	21.0	0.0%
Pueblo I–II black-on-white	2	0.0%	9.0	0.0%
Pueblo II–III black-on-white	292	3.4%	1890.0	4.1%
Pueblo III black-on-white	18	0.2%	121.0	0.3%
Painted black-on-white	2	0.0%	6.0	0.0%
Polished white	1222	14.3%	5102.0	11.1%
Polished black-on-white	442	5.2%	1711.0	3.7%
Squiggle hatchure black-on-white	9	0.1%	41.0	0.1%
Mancos Corrugated	7	0.1%	112.0	0.2%
Dolores Corrugated	5	0.1%	98.0	0.2%
Mesa Verde plain gray	18	0.2%	66.0	0.1%
Mesa Verde Corrugated gray	582	6.8%	4254.0	9.2%
Cortez Black-on-white	2	0.0%	11.0	0.0%
Mancos Black-on-white	58	0.7%	826.0	1.8%
Mancos Black-on-white, Sosi	13	0.2%	398.0	0.9%
Mancos Black-on-white, Dogoszhi	34	0.4%	296.0	0.6%
McElmo Black-on-white	4	0.0%	21.0	0.0%
Mesa Verde Pueblo II–III black-on-white	3	0.0%	42.0	0.1%
Mesa Verde polished white	46	0.5%	180.0	0.4%
Mesa Verde polished black-on-white	4	0.0%	28.0	0.1%
Mancos Black-on-white (squiggle hachure)	1	0.0%	13.0	0.0%
Deadmans Black-on-red	1	0.0%	1.0	0.0%
Mesa Verde plain red	1	0.0%	4.0	0.0%
Gallup Black-on-white	1	0.0%	8.0	0.0%
Wingate Polychrome	1	0.0%	2.0	0.0%
Toadlena Black-on-white	4	0.0%	38.0	0.1%
Kayenta red (indeterminate)	8	0.1%	12.0	0.0%
Plain gray	1	0.0%	1.0	0.0%
Corrugated gray	2	0.0%	6.0	0.0%
Red Mesa–style black-on-white	1	0.0%	16.0	0.0%
Pueblo II black-on-white	4	0.0%	17.0	0.0%
Dogoszhi-style black-on-white	6	0.1%	106.0	0.2%
Early Pueblo III black-on-white	1	0.0%	4.0	0.0%
Polished white	1	0.0%	2.0	0.0%
Polished black-on-white	2	0.0%	15.0	0.0%
Total	**8567**	**100.0%**	**46143.0**	**100.0%**

Table 10.32. LA 37594, ceramic vessel form and pigment type by major provenience; counts and percents.

	Pit Structure 1		Roomblock 1		Roomblock 2		EA 2, Feat. 2 (cist)		Extramural Areas		Pit Structure 5		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Vessel Form														
Indeterminate	–	–	2	0.2%	1	0.4%	–	–	26	0.4%	–	–	**29**	**0.3%**
Bowl rim	10	2.8%	27	2.3%	5	2.2%	2	0.8%	231	3.6%	2	0.9%	**277**	**3.2%**
Bowl body	11	3.1%	83	7.2%	34	14.8%	5	2.1%	717	11.3%	19	8.6%	**869**	**10.1%**
Seed jar rim	–	–	–	–	–	–	–	–	2	0.0%	3	1.4%	**5**	**0.1%**
Olla rim	–	–	–	–	1	0.4%	–	–	22	0.3%	–	–	**23**	**0.3%**
Olla neck	–	–	–	–	–	–	–	–	2	0.0%	–	–	**2**	**0.0%**
Cooking, storage rim	8	2.2%	36	3.1%	5	2.2%	13	5.3%	280	4.4%	3	1.4%	**345**	**4.0%**
Pitcher	–	–	1	0.1%	–	–	–	–	–	–	–	–	**1**	**0.0%**
Necked jar body	43	12.0%	209	18.1%	22	9.6%	62	25.5%	521	8.2%	8	3.6%	**865**	**10.1%**
Canteen	–	–	–	–	–	–	–	–	1	0.0%	–	–	**1**	**0.0%**
Jar body	285	79.4%	796	68.8%	161	70.3%	160	65.8%	4519	71.1%	186	84.2%	**6107**	**71.3%**
Ladle	1	0.3%	1	0.1%	–	–	1	0.4%	13	0.2%	–	–	**16**	**0.2%**
Ladle bowl	1	0.3%	1	0.1%	–	–	–	–	9	0.1%	–	–	**11**	**0.1%**
Ladle handle	–	–	1	0.1%	–	–	–	–	12	0.2%	–	–	**13**	**0.2%**
Open gourd dipper	–	–	–	–	–	–	–	–	2	0.0%	–	–	**2**	**0.0%**
Pipe	–	–	–	–	–	–	–	–	1	0.0%	–	–	**1**	**0.0%**
Total	**359**	**100.0%**	**1157**	**100.0%**	**229**	**100.0%**	**243**	**100.0%**	**6358**	**100.0%**	**221**	**100.0%**	**8567**	**100.0%**
Paint Type														
None	19	37.3%	101	45.3%	43	53.1%	14	46.7%	1058	52.4%	28	84.8%	**1263**	**51.8%**
Organic	2	3.9%	12	5.4%	13	16.0%	10	33.3%	365	18.1%	3	9.1%	**405**	**16.6%**
Mineral	30	58.8%	110	49.3%	25	30.9%	6	20.0%	597	29.6%	2	6.1%	**770**	**31.6%**
Total	**51**	**100.0%**	**223**	**100.0%**	**81**	**100.0%**	**30**	**100.0%**	**2020**	**100.0%**	**33**	**100.0%**	**2438**	**100.0%**

Table 10.33. LA 37594, reconstructible ceramic vessels, by provenience and pottery type, with temper type and sherd counts.

Provenience	Vessel	Sherd Count	Pottery Type	Vessel Form	Temper
Feature 3, Floor 2, Room 101	1	132	Mesa Verde corrugated gray	Jar body	Igneous
	1	111	Mesa Verde corrugated gray	Necked jar body	Igneous
	1	95	Mesa Verde corrugated gray	Jar body	Igneous
	1	4	Dolores Corrugated	Cooking, storage rim	Igneous
	2	1	Mesa Verde corrugated gray	Necked jar body	Igneous
70N/68E, mealing bin area, Level 3	3	5	Mesa Verde polished white	Olla rim	Igneous and sherd
Extramural Area 2	3	1	Mancos black-on-white, Sosi	Olla rim	Igneous and sherd
	3	11	Mancos black-on-white, Sosi	Jar body	Igneous and sherd
Burial 1, Floor 1 fill, Pit Structure 1	4	2	Mancos black-on-white	Bowl rim	Igneous and sand

including projectile points (2), bifaces (2), drills (3), and other tools. By far the most abundant material is chert, followed by siltstone, silicified wood, and quartzites (Table 10.35). The two projectile points are yellow-brown silicified wood side-notched points; they come from very close to each other on either side of the line separating Extramural Areas 1 and 2 (Fig. 10.35). One is very small and complete (14 mm long), the other snapped diagonally; both are rather expediently made. Again, most of the chipped stone comes from extramural contexts, and 62 percent of that is from Extramural Area 2.

Ground Stone Artifacts

The ground stone collection contains 115 pieces weighing a total of 115 kg. Most of this material by count and weight is grinding equipment, manos, and metates (Table 10.36). The grinding assemblage is weighted toward slab manos and metates in the specimens that could be identified. Half of the ground stone was recovered from extramural areas and another third from Pit Structure 5, where 24 manos were found. None of the 29 pieces of ground stone from Pit Structure 5 were whole, and except for three mano fragments and a tuff pipe, the material was from above the floor. Thus, in spite of the prominence of metate rests on the floor, little of the grinding complex survived intact. The 10.4 kg of ground stone making up the diverse ground stone assemblage from Pit Structure 5 is disproportionate to the other material classes.

Ornaments

Four pendants were found at LA 37594 in four different proveniences. The most unusual of these is a *Glycymeris* shell pendant from Pit Structure 1 fill. Marine shell is very rare in the project collections. Two "red dog" shale pendants were also recovered: one from Cist 2, and one from Room 102 (Fig. 10.36). From the floor of Pit Structure 5, a 44 by 37 by 3 mm flake from a probably local igneous rock was drilled in one corner. The only bead from the site also came from Room 102, associated with Floor 4—a tiny gray siltstone bead (Fig. 10.36).

Faunal Remains

Especially after removing eggshell from counts, faunal remains from LA 37594 are relatively sparse, and most are attributable to groups formed by whole or nearly whole individuals (Table 10.37). Thus, most of the remains from Roomblock 2 are from mice, and the dogs in Feature 3, Extramural Area 3, are a considerable portion of the element counts from the extramural areas. Even discounting the dog remains in Feature 3, this feature has a relatively abundant faunal assemblage, including large mammal, turkey, prairie dog, and cottontail elements. Economic species including deer, cottontail, and jackrabbit are spread thinly among the structures but most abundant in extramural areas, particularly in the cists, but elsewhere as well.

Turkey elements are less dispersed, represented

Table 10.34. LA 37594, ceramic temper by major provenience; counts and percents.

	Pit Structure 1		Roomblock 1		Roomblock 2		EA2, Feat. 2 (prob. cist)		Extramural Areas		Pit Structure 5		Tot.	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Igneous	3	60.0%	522	89.7%	1	50.0%	1	100.0%	155	51.5%	–	–	**682**	**76.5%**
Igneous and sand	2	40.0%	2	0.3%	–	–	–	–	8	2.7%	1	100.0%	**13**	**1.5%**
Fine sandstone	–	–	–	–	–	–	–	–	1	0.3%	–	–	**1**	**0.1%**
Sherd	–	–	16	2.7%	–	–	–	–	65	21.6%	–	–	**81**	**9.1%**
Igneous and sherd	–	–	36	6.2%	–	–	–	–	43	14.3%	–	–	**79**	**8.9%**
Igneous, sand, sherd	–	–	–	–	–	–	–	–	6	2.0%	–	–	**6**	**0.7%**
Fine sandstone, sherd	–	–	1	0.2%	–	–	–	–	–	–	–	–	**1**	**0.1%**
Quartz sand	–	–	5	0.9%	–	–	–	–	7	2.3%	–	–	**12**	**1.3%**
Quartz sand, sherd	–	–	–	–	–	–	–	–	13	4.3%	–	–	**13**	**1.5%**
Trachybasalt	–	–	–	–	1	50.0%	–	–	3	1.0%	–	–	**4**	**0.4%**
Total	**5**	**100.0%**	**582**	**100.0%**	**2**	**100.0%**	**1**	**100.0%**	**301**	**100.0%**	**1**	**100.0%**	**892**	**100.0%**

mostly by a probable single individual in Cist 3. Most of the eggshell from the site is from the floor of Pit Structure 1, and turkeys, while scarce, are more common in Pit Structure 1 than other structures on the site. Turkey remains are predominantly from Cist 2, Extramural Area 3. No immature turkey remains were identified at the site; most turkey remains are fragmentary and could be accounted for by only a few individuals.

Including a marine shell pendant (see Ornaments, above), 12 modified-bone artifacts were recovered (Table 10.38). Half of these are awls, and the three most nearly complete ones come from Pit Structure 1. Once again, much of the bone-tool material comes from extramural areas, but tools are not associated with features. One of the artifacts from the Extramural 2 probable trash area is identified as a bone shuttle or weaving tool. Ten of the 11 bone tools are from large-mammal elements.

Botanical Remains

Mollie S. Toll and Pamela J. McBride

Basketmaker III occupation. The majority of carbonized plant remains from Pit Structure 5 at LA 37594 were small numbers of weedy annual seeds and corn glumes and cupules (Table 10.39). One floor sample yielded grass stems, a grass seed was identified in the extramural pit just north of the main chamber, and a bell-shaped cist had mustard family seeds. The only floral remains from Feature 2 (metate rest) were uncharred annual seeds, including a large number of purslane seeds. However, unburned purslane was found in all contexts within the main chamber, and the structure was relatively shallow (20–40 cm below present ground surface), suggesting nonhuman vectors. Floral remains were also restricted to unburned seeds in the case of Layer 2 of the central hearth and the storage cist.

Common reedgrass showed up only in a posthole (Table 10.39). Common reedgrass was frequently used as roof-closing material (as at Pueblo Bonito in Chaco Canyon; Judd 1954; see also Whiting 1939:66) and for screens and partitions (as for a corncrib at Arroyo Hondo Pueblo; Wetterstrom 1986). However, reedgrass was absent from all roofing material samples at LA 37594.

Wood charcoal from flotation and macrobotanical samples was overwhelmingly juniper, fol-

Table 10.35. LA 37594, chipped stone material and artifact types by major provenience; counts and percents.

	Pit Structure 1		Roomblock 1		Roomblock 2		EA 2, Feat. 2 (prob. cist)		Extramural Areas		Pit Structure 5		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Material Type														
Chert	59	35.1%	98	56.6%	57	47.1%	29	69.0%	1126	48.6%	50	30.7%	**1419**	**47.5%**
Chalcedony	2	1.2%	8	4.6%	2	1.7%	1	2.4%	22	0.9%	2	1.2%	**37**	**1.2%**
Silicified wood	7	4.2%	15	8.7%	12	9.9%	3	7.1%	306	13.2%	14	8.6%	**357**	**12.0%**
Quartzite	9	5.4%	–	–	6	5.0%	–	–	53	2.3%	10	6.1%	**78**	**2.6%**
Quartzitic sandstone	22	13.1%	20	11.6%	8	6.6%	2	4.8%	148	6.4%	19	11.7%	**219**	**7.3%**
Igneous	2	1.2%	2	1.2%	–	–	–	–	2	0.1%	1	0.6%	**7**	**0.2%**
Rhyolite	–	–	–	–	–	–	–	–	5	0.2%	–	–	**5**	**0.2%**
Sandstone	–	–	–	–	–	–	–	–	6	0.3%	–	–	**6**	**0.2%**
Siltstone	67	39.9%	30	17.3%	36	29.8%	7	16.7%	650	28.0%	67	41.1%	**857**	**28.7%**
Total	**168**	**100.0%**	**173**	**100.0%**	**121**	**100.0%**	**42**	**100.0%**	**2318**	**100.0%**	**163**	**100.0%**	**2985**	**100.0%**
Artifact Type														
Debitage	127	75.6%	152	87.9%	94	77.7%	33	78.6%	1936	83.5%	127	77.9%	**2469**	**82.7%**
Core	28	16.7%	9	5.2%	6	5.0%	1	2.4%	64	2.8%	5	3.1%	**113**	**3.8%**
Uniface	–	–	–	–	–	–	–	–	1	0.0%	–	–	**1**	**0.0%**
Biface	–	–	–	–	–	–	–	–	–	–	1	0.6%	**1**	**0.0%**
Retouched/utlized debitage	7	4.2%	10	5.8%	17	14.0%	7	16.7%	270	11.6%	24	14.7%	**335**	**11.2%**
Retouched/utlized core	1	0.6%	–	–	–	–	1	2.4%	18	0.8%	3	1.8%	**23**	**0.8%**
Drill	–	–	–	–	1	0.8%	–	–	2	0.1%	–	–	**3**	**0.1%**
Notch	–	–	1	0.6%	–	–	–	–	6	0.3%	–	–	**7**	**0.2%**
Biface knife/scraper	–	–	–	–	–	–	–	–	1	0.0%	–	–	**1**	**0.0%**
Projectile point	–	–	–	–	–	–	–	–	2	0.1%	–	–	**2**	**0.1%**
Hammerstone	3	1.8%	1	0.6%	3	2.5%	–	–	17	0.7%	2	1.2%	**26**	**0.9%**
Chopper/plane	1	0.6%	–	–	–	–	–	–	1	0.0%	1	0.6%	**3**	**0.1%**
Axe	1	0.6%	–	–	–	–	–	–	–	–	–	–	**1**	**0.0%**
Total	**168**	**100.0%**	**173**	**100.0%**	**121**	**100.0%**	**42**	**100.0%**	**2318**	**100.0%**	**163**	**100.0%**	**2985**	**100.0%**
% of Total		**5.6%**		**5.8%**		**4.1%**		**1.4%**		**77.7%**		**5.5%**		**100.0%**

Materials from backhoe trenches included with extramural areas.

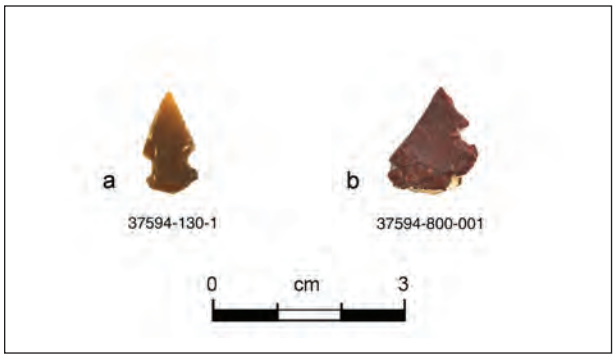


Figure 10.35. LA 37594, Extramural Areas 1 and 2, side-notched projectile points (yellow-brown silicified wood).

lowed by piñon and cottonwood/willow (Tables 10.40–10.43). A sample from the antechamber was also predominately juniper with a trace of cottonwood/willow. Wood from several postholes was examined, but the species that the posts were made from remains unknown. For starters, postholes often contain remains of multiple species (juniper and cottonwood/willow in Posthole 4, piñon and other taxa in Postholes 10 and 12). Less problematically (since roofs typically contain distinctly different functional elements), samples from roofing material were also frequently mixed.

Mid Pueblo II occupation. All three samples from the LA 37594 Pit Structure 1 mealing room contained corn cupules and unburned seeds of annuals, hedgehog cactus, and globemallow (Table 10.44). Numerous unburned amaranth and goosefoot seeds were recovered in the Feature 8 (catch basin) sample, but, like the purslane seeds found in Pit Structure 5, they were probably brought in by rodents or insects. Flotation and macrobotanical wood were predominately juniper and cottonwood/willow (Table 10.45). The macrobotanical sample from Feature 4 (metate rest) also had burned piñon cone scales and nutshell, perhaps representing the residue of nut grinding after roasting.

Corn was recovered from most Roomblock 1 and 2 contexts (Tables 10.46, 10.47). Yucca leaf fragments, identified in the Room 102 heating pit, were the only evidence of leaf succulent use at the site. These could be remnants from fiber extraction or split leaves for ties or matting. A large number of charred purslane seeds were recovered from the floor fill of Cist 7. However, numerous unburned goosefoot seeds were also found in the feature, making us suspect mixing by rodents or insects, possibly together with trash deposition.

Wood charcoal from flotation and macrobotanical samples was similar to that from the earlier Pit Structure 5, with juniper the most common type by weight. There were differences between flotation and macrobotanical samples, however. Sagebrush is absent from flotation samples, yet is the second most common wood identified in macrobotanical samples (all from Feature 7 in Room 201; Table 10.48).

A macrobotanical sample from surface stripping of what was originally described as a jacal structure [the probable cist in Extramural Area 2] may have been taken as a postoccupational control, but it does not differ greatly from the three roofing material samples (Table 10.49). Juniper and cottonwood/willow seem to have been the primary roofing elements. The minor shrubby component (cf. mountain mahogany, wild plum or cherry, and an unknown nonconifer) could have been part of the roof or trashy fill.

Burned floral remains from Extramural Areas 2 and 3 were very limited, consisting of burned hedgehog cactus seeds from Feature 7, cheno-am seeds from the ash pit and the dog burial in Cist 3 of Extramural Area 2, and corn cupules and a grass seed from the hearth in Extramural Area 3 (Tables 10.50, 10.51). The remaining features had unburned weedy and grass seeds, probably intrusive in origin. Burned plant remains were absent from both scan and full-sort samples from the floor fill of Cist 3, but a squash seed (the only specimen from the site) was identified in a macrobotanical sample from the floor fill (Table 10.52). Differences between remains found in Levels 4, 6, and 7 suggest different fill episodes took place that could not be detected during excavation.

Consistent with the rest of the site, juniper was the most common wood taxon present in both flotation and macrobotanical samples (Table 10.53). The largest number of taxa were recovered from Feature 2, a major storage cist, possibly reflective of secondary use of the feature as a trash pit. If a flotation sample had been analyzed from this feature, it might have lent some support to this interpretation.

Summary. Corn and a few species of weedy annuals were exploited during the Basketmaker III and Mid Pueblo II eras. Isolated occurrences of piñon (during both occupations of LA 37594) doc-

Table 10.36. LA 37594, ground stone artifact and material types by major provenience; counts and percents..

	Pit Structure 1		Room-block 1		Room-block 2		EA2, Feat.2(cist)		Extramural Areas		Pit Structure 5		Group Total	
	N	Col. %	N	Col. %	N	Col. %	N	Col. %	N	Col. %	N	Col. %	N	Col. %
Artifact Type														
Indeterminate fragment	–	–	–	–	–	–	–	–	1	1.9%	–	–	**1**	**0.9%**
Pottery polishing stone	–	–	–	–	–	–	–	–	2	3.8%	–	–	**2**	**1.7%**
Plaster polishing stone	–	–	–	–	–	–	–	–	2	3.8%	–	–	**2**	**1.7%**
Abrading stone	–	–	–	–	–	–	–	–	1	1.9%	1	3.0%	**2**	**1.7%**
Shaft straightener	–	–	–	–	–	–	1	25.0%	–	–	–	–	**1**	**0.9%**
Shaped slab	3	17.6%	–	–	2	40.0%	1	25.0%	6	11.5%	2	6.1%	**14**	**12.2%**
Pitted pounding stone	–	–	–	–	1	20.0%	–	–	–	–	–	–	**1**	**0.9%**
Mano	–	–	1	25.0%	–	–	2	50.0%	13	25.0%	19	57.6%	**35**	**30.4%**
One-hand mano	1	5.9%	–	–	–	–	–	–	4	7.7%	–	–	**5**	**4.3%**
Two-hand mano	–	–	–	–	–	–	–	–	5	9.6%	4	12.1%	**9**	**7.8%**
Two-hand trough mano	5	29.4%	–	–	–	–	–	–	–	–	–	–	**5**	**4.3%**
Two-hand slab mano	8	47.1%	–	–	1	20.0%	–	–	4	7.7%	1	3.0%	**14**	**12.2%**
Metate	–	–	–	–	–	–	–	–	2	3.8%	3	9.1%	**5**	**4.3%**
Trough metate	–	–	–	–	–	–	–	–	1	1.9%	–	–	**1**	**0.9%**
Slab metate	–	–	–	–	–	–	–	–	5	9.6%	1	3.0%	**6**	**5.2%**
Notched maul	–	–	–	–	1	20.0%	–	–	1	1.9%	–	–	**2**	**1.7%**
Weight	–	–	1		–	–	–	–	–	–	–	–	**1**	**0.9%**
One-notch axe	–	–	–	–	–	–	–	–	1	1.9%	–	–	**1**	**0.9%**
Two-notch axe	–	–	–	–	–	–	–	–	1	1.9%	–	–	**1**	**0.9%**
Tchamahia	–	–	–	–	–	–	–	–	1	1.9%	–	–	**1**	**0.9%**
Pendant	–	–	1	25.0%	–	–	–	–	1	1.9%	1	3.0%	**3**	**2.6%**
Bead	–	–	1	25.0%	–	–	–	–	–	–	–	–	**1**	**0.9%**
Pipe	–	–	–	–	–	–	–	–	–	–	1	3.0%	**1**	**0.9%**
Concretion	–	–	–	–	–	–	–	–	1	1.9%	–	–	**1**	**0.9%**
Total	**17**	**100.0%**	**4**	**100.0%**	**5**	**100.0%**	**4**	**100.0%**	**52**	**100.0%**	**33**	**100.0%**	**115**	**100.0%**
% of Total		**14.8%**		**3.5%**		**4.3%**		**3.5%**		**45.2%**		**28.7%**		**100.0%**
Weight % of Total		**15.0%**		**1.9%**		**3.6%**		**2.5%**		**66.8%**		**10.2%**		**100.0%**
Material Type														
Igneous	–	–	1	25.0%	–	–	–	–	2	3.8%	–	–	**3**	**2.6%**
Tuff	–	–	–	–	–	–	–	–	–	–	1	3.0%	**1**	**0.9%**
Granite	–	–	–	–	–	–	1	25.0%	15	28.8%	11	33.3%	**27**	**23.5%**
Sandstone	17	100.0%	1	25.0%	3	60.0%	3	75.0%	30	57.7%	16	48.5%	**70**	**60.9%**
Siltstone	–	–	1	25.0%	1	20.0%	–	–	3	5.8%	–	–	**5**	**4.3%**
Shale	–	–	1	25.0%	–	–	–	–	1	1.9%	–	–	**2**	**1.7%**
Quartzite	–	–	–	–	1	20.0%	–	–	1	1.9%	3	9.1%	**5**	**4.3%**
Quartzitic sandstone	–	–	–	–	–	–	–	–	–	–	2	6.1%	**2**	**1.7%**
Total	**17**	**100.0%**	**4**	**100.0%**	**5**	**100.0%**	**4**	**100.0%**	**52**	**100.0%**	**33**	**100.0%**	**115**	**100.0%**

N = count

ument the possible collection and roasting of immature cones to remove the nuts. Hedgehog cactus and yucca were other isolated examples of perennial plant use. The single squash seed from a Mid Pueblo II context was the only evidence for the use of cultivars besides corn. Local tree and shrub species were used for fuel and construction. Juniper was the most common wood taxon encountered. Distributions of wood and seed occurrence at the site are summarized in Table 10.43.

Pollen

The pollen tables in this chapter have been constructed from data provided by Richard Holloway. Indeterminate counts have not been

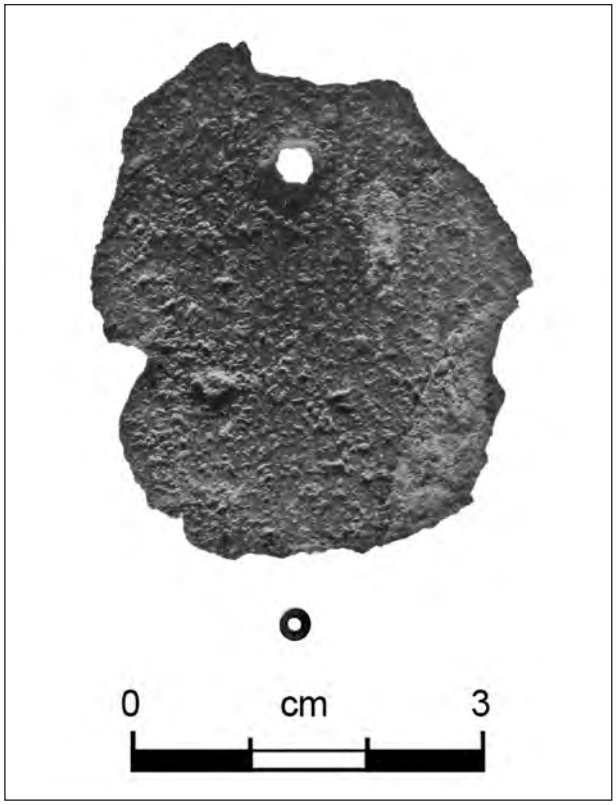


Figure 10.36. LA 37594, Room 102, red shale pendant (top); gray siltstone bead (bottom).

included, although they do show up in the overall pollen sums. *Chenopodium-Amaranthus* pollen is the most abundant type in every sample, followed in most cases by composites and pine pollen (Table 10.54). Juniper pollen, the most common macrobotanical remains, is also regularly present. Past these background genera, there are some interesting occurrences. *Quercus* (oak) and *Picea* (fir) show up in small counts in several locations. Oak is in Pit Structure 5 and some of the rooms, and fir is primarily in extramural samples. Both of these tree genera seem likely to have been brought into the site; neither is common in the area today. Corn is present in each type of provenience, including the earliest, Pit Structure 5; it is most common in the rooms. A single bean pollen grain was present in the mealing room. Single cactus grains are also present in each type of provenience.

LA 37594: Site History and Summary

The two major temporal components present at LA 37594 include distinct occupational phases separated by a 400-year hiatus (Fig. 10.37).

Early Basketmaker III Component

This component contained a solitary Transitional Basketmaker II–III, Sambrito-phase (pre–AD 600) pithouse with a round main room, 5 m (16 ft) in diameter, and an antechamber to the south (Fig. 10.37). The structure had domestic features including a central hearth, two metate rests, and storage cists. The ceramic assemblage is distinctive, consisting entirely of Sambrito Brown, dating to pre–AD 600. This gray to brown pottery is undecorated but consistently polished on the exterior, or both surfaces, and tempered with fine sand. Pottery like this is very similar to the earliest ceramics found in a wide surrounding area, including the Navajo Reservoir Project (Wilson et al. 1996:11; Reed et al. 2000). In spite of the burned superstructure and promising tree-ring specimens, no dendrochronological dates were obtained; a charcoal sample from this structure dates to the mid 500s (Beta-41360), corroborating the placement of this component in Transitional Basketmaker (Toll and Wilson 2000).

Although this structure seems isolated and is the only representative of this time period on the project, it surely had associated surface features and perhaps other structures outside the right-of-way (see Kearns et al. 2000:122). The level of activity prehistorically in the immediate area removed or masked these much earlier features. This component and the subsequent Classic Basketmaker are notoriously difficult to detect from the surface in multicomponent sites (Toll and Wilson 2000:24–26). Especially given this low visibility, there are numerous clues that a considerable population was present in the valley during the 500s. Sambrito Brown was recovered a few miles downvalley at LA 50337 (Vierra and Anschuetz 1993), across the river in the East Side Rincon (Dykeman and Langenfeld 1987), and in Nusbaum's 1935 survey (Hannaford 1993; Blinman 2008). Nusbaum's survey indicated around 25 pre–AD 600 sites in the area near Jackson Lake. The chipped stone assemblage shows a stronger preference for siltstone than do later components at this site and in the area, where chert is

Table 10.37. LA 37594, faunal remains by major provenience; counts and percents..

	Pit Structure 1		Room-block 1		Room-block 2		Probable Cist, Feat. 2 (EA 2) Structure		Extramural Areas		Pit Structure 5		Total	
	N	Col. %	N	Col. %	N	Col. %	N	Col. %	N	Col. %	N	Col. %	N	Col. %
Prairie dog	–	–	–	–	–	–	–	–	3	0.6%	–	–	**3**	**0.4%**
Small squirrel	1	2.4%	–	–	–	–	–	–	2	0.4%	1	3.6%	**4**	**0.5%**
Pocket gopher	–	–	–	–	–	–	–	–	1	0.2%	–	–	**1**	**0.1%**
Mouse	–	–	–	–	107	79.9%	–	–	12	2.3%	–	–	**119**	**15.6%**
Cottontail	4	9.5%	1	5.9%	–	–	1	9.1%	19	3.6%	1	3.6%	**26**	**3.4%**
Jackrabbit	–	–	2	11.8%	2	1.5%	1	9.1%	15	2.8%	4	14.3%	**24**	**3.1%**
Badger	–	–	–	–	–	–	–	–	3	0.6%	–	–	**3**	**0.4%**
Dog, coyote, wolf	8	19.0%	–	–	–	–	–	–	260	48.8%	–	–	**268**	**35.0%**
Deer	5	11.9%	4	23.5%	1	0.7%	–	–	13	2.4%	–	–	**23**	**3.0%**
Big-horned sheep	–	–	–	–	1	0.7%	–	–	–	–	–	–	**1**	**0.1%**
Artiodactyl	–	–	–	–	–	–	–	–	2	0.4%	–	–	**2**	**0.3%**
Mammal	–	–	–	–	–	–	–	–	14	2.6%	–	–	**14**	**1.8%**
Small mammal	8	19.0%	2	11.8%	17	12.7%	7	63.6%	52	9.8%	21	75.0%	**107**	**14.0%**
Medium-large mammal	–	–	–	–	–	–	–	–	16	3.0%	–	–	**16**	**2.1%**
Large mammal	2	4.8%	8	47.1%	–	–	1	9.1%	67	12.6%	1	3.6%	**79**	**10.3%**
Turkey	–	–	–	–	6	4.5%	–	–	25	4.7%	–	–	**31**	**4.1%**
Bird	13	31.0%	–	–	–	–	–	–	27	5.1%	–	–	**40**	**5.2%**
Toad and frog	–	–	–	–	–	–	1	9.1%	2	0.4%	–	–	**3**	**0.4%**
Marine or freshwater shell	1	2.4%	–	–	–	–	–	–	–	–	–	–	**1**	**0.1%**
Total (count)	**42**	**100.0%**	**17**	**100.0%**	**134**	**100.0%**	**11**	**100.0%**	**533**	**100.0%**	**28**	**100.0%**	**765**	**100.0%**
Provenience Percent		**5.5%**		**2.2%**		**17.5%**		**1.4%**		**69.7%**		**3.7%**		**100.0%**
Bird eggshell	**116**	**84.7%**	**12**	**8.8%**	**–**	**–**	**–**	**–**	**9**	**6.6%**	**–**	**–**	**137**	**100.0%**
Major Faunal Groups by Major Provenience														
Large mammal	2	6.3%	8	53.3%	–	–	1	33.3%	69	16.2%	1	16.7%	**81**	**16.5%**
Cottontail	4	12.5%	1	6.7%	–	–	1	33.3%	19	4.4%	1	16.7%	**26**	**5.3%**
Jackrabbit	–	–	2	13.3%	2	22.2%	1	33.3%	15	3.5%	4	66.7%	**24**	**4.9%**
Dog, coyote, fox, wolf	8	25.0%	–	–	–	–	–	–	260	60.9%	–	–	**268**	**54.5%**
Deer	5	15.6%	4	26.7%	1	11.1%	–	–	13	3.0%	–	–	**23**	**4.7%**
Turkey	13	40.6%	–	–	6	66.7%	–	–	51	11.9%	–	–	**70**	**14.2%**
Total	**32**	**100.0%**	**15**	**100.0%**	**9**	**100.0%**	**3**	**100.0%**	**427**	**100.0%**	**6**	**100.0%**	**492**	**100.0%**

Table 10.38. LA 37594, bone and shell tools and ornaments, counts by major provenience.

	Pit Structure 1	EA2, Feat.2,cist	Extramural Areas	Pit Structure 5	Total
Indeterminate preform	–	–	1	–	**1**
Shell pendant	1	–	–	–	**1**
Indeterminate tool fragment	–	1	–	1	**2**
Indeterminate point awl fragment	–	–	2	–	**2**
Coarse point awl	3	–	2	–	**5**
Shuttle	–	–	1	–	**1**
Total	**4**	**1**	**6**	**1**	**12**

Table 10.39. LA 37594, Pit Structure 5, flotation full-sort and scan plant remains (frequency and abundance per liter).

Sample Type	Full-Sort							Scan		Full-Sort		
Floor	Floor 1									Floor 2	Antechamber/ Entryway	Extramural Areas
Feature	Floor 1		Feature 2 Metate Rest	Feature 6 Central Hearth		Feature 11 Storage Cist	Feature 20 Bell-shaped Cist	Feature 4 Posthole	Feature 8 Pot Rest	Feature 9 Cist	Under Sandstone	Feature 13 Ash Pit N. of Main Chamber
FS	1235 SE 1/4	1241 NE 1/4	1233	1246 Layer 2	1247 Layer 3	1243	1268	1253	1267	1242	1238	1255
Cultural												
Annuals:												
Chenopodium	–	–	–	–	2.0	–	–	–	+	1.0	–	1.0
Cheno-Am	1.0	–	–	–	–	–	–	–	–	–	–	–
Lepidium	–	–	–	–	1.0	–	–	–	–	–	–	–
Cultivars:												
Zea mays	–	+ glume	–	–	–	–	+ glume	–	–	+ cupule	–	+ glume
Grasses:												
Gramineae	–	+ stem	–	–	–	–	–	–	–	–	–	–
Phragmites	–	–	–	–	–	–	–	+ stem	–	–	–	–
Other:												
Cruciferae	–	–	–	–	–	–	1.0	–	–	–	–	–
Possibly Cultural												
Annuals:												
Chenopodium	–	–	–	–	–	41.0	–	–	–	–	–	–
Portulaca	–	–	282.0	–	–	80.0	–	–	–	–	–	–
Noncultural												
Annuals:												
Amaranthus	1.0	–	2.0	–	–	–	1.0	–	–	–	–	–
Chenopodium	–	–	5.0	6.0	1.0	–	1.0	–	–	–	–	–
Cleome	–	–	–	–	–	7.0	–	–	–	–	–	–
Descurainia	–	–	–	–	–	1.0	1.0	–	–	–	–	–
Euphorbia	–	–	2.0	–	–	–	1.0	–	–	–	–	–
Portulaca	12.0	–	–	24.0	5.0	–	22.0	–	–	9.0	–	1.0
Other:												
Compositae	–	–	–	1.0	–	7.0	–	–	–	–	–	–
Physalis	–	–	–	1.0	–	–	–	–	–	–	–	–

All cultural plant remains are carbonized; plant remains are seeds unless indicated otherwise.
'+' = 1–10/liter

Table 10.40. LA 37594, Pit Structure 5, wood charcoal from flotation samples (weight in grams).

Floor	Floor 1							Floor 2	Ante-chamber/ Entryway	Extramural Areas		Total	
Feature	Feature 2 Metate Rest		Floor 1	Feature 6 Central Hearth		Feature 11 Storage Cist	Feature 20 Bell-shaped Cist	Feature 9 Cist	Under Sandstone	Feature 13 Ash Pit North of Main Chamber	Feature 15 Ash Pit East of Main Chamber	Weight (g)	Col. %
FS	1233	1234	1241 NE 1/4	1246 Layer 2	1247 Layer 3	1243	1268	1242	1238	1255	1256		
Conifers													
Juniperus	0.01	0.01	0.01	0.7	1.5	0.01	0.01	0.01	0.01	0.1	0.01	**2.38**	**71.0%**
Pinus edulis	0.01	–	–	0.20	0.20	0.01	0.01	–	–	–	–	**0.43**	**12.8%**
Unknown conifer	–	–	–	–	–	–	–	0.30	–	–	–	**0.30**	**9.0%**
Nonconifers													
Artemisia	–	–	–	–	–	–	–	–	–	0.01	–	**0.01**	**<1%**
Atriplex	0.01	–	0.01	–	–	–	0.01	0.01	–	–	–	**0.04**	**1.2%**
Salicaceae (*Populus/Salix*)	0.01	0.01	0.01	0.01	0.10	0.01	–	0.01	–	–	0.01	**0.17**	**5.1%**
Unknown nonconifer	0.01	0.01	–	–	–	–	–	–	–	–	–	**0.02**	**<1%**
Total	**0.05**	**0.03**	**0.03**	**0.91**	**1.80**	**0.03**	**0.03**	**0.33**	**0.01**	**0.11**	**0.02**	**3.35**	**100.0%**

Table 10.41. LA 37594, Pit Structure 5, macrobotanical wood taxa, features (weight in grams).

Floor	Floor 1						Floor 2						Total	
Feature	Feature 3 Metate Rest	Feature 4 Posthole SE 1/4		Feature 5 Posthole SW 1/4	Feature 6 Central Hearth	Feature 8 Pot Rest	Feature 9 Cist	Feature 10 Posthole SE 1/4	Feature 11 Storage Cist	Feature 12 Posthole NE 1/4	Feature 18 Posthole NE 1/4	Feature 20 Bell-shaped Cist	Weight (g)	Col. %
FS	1234	1253	1266	1239	1247	1267	1242	1248	1243	1254	1258	1268		
Conifers														
Juniperus	3.17	9.88	5.28	0.52	–	–	1.45	0.58	16.98	3.48	0.4	0.46	**41.81**	**55.6%**
Pinus edulis	2.81	–	–	–	–	–	1.20	–	–	10.31	–	–	**16.38**	**21.8%**
Nonconifers														
Atriplex												0.72	**0.72**	**1.0%**
Salicaceae (*Populus Salix*)	–	–	4.28	3.41	–	0.34	0.37	–	0.32	1.29	0.31	0.97	**14.56**	**19.4%**
Unknown nonconifer	–	–	–	0.08	–	–	–	–	–	–	0.62	0.26	**1.7**	**2.3%**
Total	**5.98**	**9.88**	**9.56**	**4.01**	**–**	**0.34**	**2.15**	**–**	**17.3**	**15.08**	**1.33**	**2.41**	**75.17**	**100.0%**

Table 10.42. LA 37594, Pit Structure 5 fill, macrobotanical wood taxa (weight in grams).

Context	Roofing Material SW 1/4	Roofing Material NW 1/4	East Trench	Roofing Material SE 1/4	Layer 1 Floor 1 NW 1/4	Layer 1 Floor 1 NE 1/4	Layer 1 Floor 1 SE 1/4	Floor Fill SE 1/4	Total	
FS	**1217**	**1222**	**1225**	**1226**	**1230**	**1232**	**1235**	**1240**	**Weight (g)**	**Col. %**
Conifers										
Juniperus	0.13	1.75	1.38	5.55	26.76	4.35	6.86	–	**46.78**	**47.5%**
Pinus edulis	3.21	11.75	–	4.21	–	1.99	2.17	–	**23.33**	**23.7%**
Nonconifers										
Atriplex	–	–	–	–	1.35	–	–	–	**1.35**	**1.4%**
Salicaceae (*Populus/Salix*)	6.75	0.25	–	0.58	4.24	5.09	0.32	8.16	**25.39**	**25.8%**
Unknown nonconifer	–	–	–	1.61	–	–	–	–	**1.61**	**1.6%**
Total	**10.09**	**13.75**	**1.38**	**11.95**	**32.35**	**11.43**	**9.35**	**8.16**	**98.46**	**100.0%**

more abundant. A similar structure was also excavated several miles up the river (Foster 1983).

Pueblo II Component

The Mid Pueblo II period (AD 1000–1100) accounts for most of the features and materials at this site. Features from this period include two roomblocks, a subterranean mealing room, three major storage cists, and numerous exterior features (Fig. 10.37). The habitations here were a part of a widespread and dynamic occupation of the area during the 1000s. In addition to the rare materials from the earlier component, there is some ceramic indication of later use of the area, but most later evidence is probably incidental to surrounding occupations.

Although the features recorded all conform to the same ceramic time segment, the degree to which they were contemporaneous and the duration of their uses are not determinable. The presence of two roomblocks that do not align suggests that there may have been two units at this site during this period. The more completely represented unit includes Roomblock 1, a mealing room (Pit Structure 1), a major storage cist (Cist 1), and in Extramural Area 2, an exterior mealing area (Features 1 and 7) and a jacal-imbued probable cist (Feature 2). Further, the roomblock was built over a deposit similar in ceramic age, showing that this unit was part of continued use of the area. The project area contained no standard Pueblo II pit structures, such as those found at nearby LA 37595 and LA 37592. From the location and orientation of the rooms and the mealing room, the pit structure "missing" from the Roomblock 1 complex might have been removed by the 1890s irrigation ditch (though the ditch is probably too far from the roomblock to have removed an associated pit structure) or may be outside the right-of-way, somewhere out in front of the roomblock and east of the mealing room.

The second Pueblo II unit would have centered around poorly known Roomblock 2. In addition to the rooms, we know of two major storage cists, one adjacent to the rooms, and perhaps predating it, a roasting pit or kiln. Postholes and pits in this activity area are suggestive of other features and activities adjacent to the northeastern roomblock. Once again, contemporary site patterning would suggest that there should have been at least one full-sized pit structure, and quite possibly a mealing room.

The flooding event visible in both units must have had an impact on habitation of the site. The use of the mealing room on the south may have already ceased: were it in use when flooded, we would have found some rare in situ metates. The construction of Roomblock 2 and the interment of dogs in upper Cist 3 are clear indicators of continued or renewed use of the site area. There is no ceramic indication that the interments occurred after Pueblo II.

Ceramic artifacts from earlier and later periods are present in small numbers on the site. The Early Pueblo II types, which are more abundant than the Early Pueblo III types, can be attributed to vessel

carryover and earlier occupation of the site area, and they may suggest that the temporal placement of the site is earlier in the 1000s, a position supported by the dominant use of mineral paint on the white wares. The few Early Pueblo III sherds are attributable to casual use of the site area during that time, since nearby sites were inhabited into that ceramic period. These sherds are from surface or shallow deposits. There is little indication that features were made during that period in this location.

Table 10.43. LA 37594, botanical remains by major provenience.

	Pit Structure 1	Roomblock 1	Roomblock 2	EA2, Feat.2,cist	Extramural Areas	Pit Structure 5	Total
Seeds (flotation counts)							
Amaranth	51	45	–	–	8	4	**108**
Goosefoot	59	1	57	–	35	58	**210**
Cheno-Am	12	–	–	–	4	1	**17**
Beeweed	–	–	–	–	–	7	**7**
Tansy mustard	1	1	6	–	1	2	**11**
Spurge	1	1	27	–	27	3	**59**
Pepperweed	–	–	–	–	–	1	**1**
White-stemmed stickleaf	–	–	–	–	1	–	**1**
Purslane	21	4	420	–	169	466	**1080**
Big sagebrush	–	1	–	–	–	–	**1**
Hedgehog cactus	1	2	–	–	1	–	**4**
Grass family	–	–	–	–	2	1	**3**
Corn	–	9	–	–	–	–	**9**
Composite family	–	–	–	–	–	8	**8**
Mustard family	–	–	–	–	7	1	**8**
Mallow family	–	–	–	–	1	–	**1**
Groundcherry	–	–	–	–	–	1	**1**
Nightshade family	–	–	–	–	1	–	**1**
Globemallow	1	–	–	–	2	–	**3**
Total	**147**	**64**	**510**	**0**	**259**	**553**	**1533**
Macrobotanical (weight in grams; 0 = present)							
Saltbush	0	0	–	–	1	2	**4**
Sagebrush	–	–	4	–	0	–	**4**
Rabbitbrush	–	0	–	–	–	–	**0**
Juniper	2	3	14	29	14	91	**153**
Creosotebush	–	0	1	0	–	–	**2**
Piñon	–	1	1		9	40	**50**
Cherry/plum/peach	–	1	0	0	0	–	**1**
Oak	–	1	–	–	–	–	**1**
Willow family	–	0	0	4	1	40	**46**
Greasewood/saltbush	–	–	–	–	1	–	**1**
Nonconiferous wood	–	1	0	0	2	3	**7**
Unknown wood	–	0	–	–	–	–	**0**
Total	**2**	**7**	**20**	**33**	**28**	**176**	**269**
Counts							
Juniper berry	–	2	–	–	–	–	**2**
Piñon nut	1	–	1	–	–	–	**2**
Piñon scale	1	–	–	–	–	–	**1**
Squash seed	–	–	–	–	1	–	**1**
Total	**2**	**2**	**1**	**–**	**1**	**–**	**6**

Table 10.44. LA 37594, Pit Structure 1, full-sort flotation plant remains (frequency and abundance per liter).

Feature	Vessel from Burial	Mealing Bin Catch Basin	Mealing Bin Catch Basin
FS	**808**	**814**	**817**
Cultural			
Cultivars:			
Zea mays	+ cupule	–	+ cupule
Possibly Cultural			
Annuals:			
Amaranthus	–	–	41
Chenopodium	–	–	49
Noncultural			
Annuals:			
Amaranthus	5	5	–
Chenopodium	–	10	–
Cheno-Am	–	–	12
Descurainia	–	1	–
Euphorbia	–	–	1
Portulaca	–	7	14
Other:			
Sphaeralcea	–	–	1
Perennials:			
Echinocereus	–	–	1

All cultural plant remains are carbonized.
Plant remains are seeds unless indicated otherwise.
+ = 1–10/liter

Table 10.45. LA 37594, Pit Structure 1, wood charcoal from flotation and macrobotanical samples (weight in grams).

Sample Type	Flotation			Macrobotanical		Total	
Feature	**Vessel from Burial**	**Feature 3 Mealing Bin Catch Basin**		**Feature 4 Adobe Metate Rest, Ash Concentration**	**Floor Fill 56N/62E**	**Weight (g)**	**Col. %**
FS	**808**	**814**	**817**	**809**	**833**		
Cultural							
Conifers:							
Juniperus	–	0.01	0.01	.39 pc	1.58	**1.99**	**95.2%**
Nonconifers:							
Atriplex	0.01	–	–	0.05	–	**0.06**	**2.9%**
Salicaceae (*Populus/Salix*)	0.01	–	0.01	–	–	**0.02**	**1.0%**
Unknown nonconifer	–	–	0.01	–	–	**0.01**	**<1%**
Other Cultural							
Pinus edulis	–	–	–	1 cs; 1 nut	–	–	–
Noncultural							
Nonconifers:							
Unknown nonconifer	.01 u	–	–	–	–	**0.01**	**<1%**
Total	**0.03**	**0.01**	**0.03**	**0.44**	**1.58**	**2.09**	**100.0%**

u = uncharred; pc = partially charred; cs = conescale

Table 10.46. LA 37594, Roomblocks 1 and 2, flotation scan and full-sort plant remains (frequency and abundance per liter).

Sample Type	Scan	Full-Sort	Full-Sort	Scan	Full-Sort		Scan	Full-Sort	
Room	**101**		**102**					**104**	**201**
Feature	**Floor 2**	**Central**	**Feature 1 Heating Pit**	**Feature 2 Heating Pit Floor 2**	**Feature 3 Hearth Floor 2**	**Feature 1 Pit Layer 5 Floor 4**	**Subfloor Fill**	**Trash Pit**	**Feature 7 Pit Floor Fill**
FS	**223**	**239**	**245**	**247**	**250**	**270**	**276**	**283**	**1532**
Context		**Floor 2**							**W 1/2**
Cultural									
Annuals:									
Portulaca	–	–	1.0	–	–	–	–	–	420.0
Cultivars:									
Zea mays	–	+ cupule	9.0 cob fragments, ++ cupule, ++ glume	+ cupule	+ cupule	–	+ kernel	+ cupule	+ cupule
Perennials:									
Yucca	–	–	–	–	+ leaf	–	–	–	–
Possibly Cultural									
Annuals:									
Chenopodium	–	–	–	–	–	–	–	–	57
Noncultural									
Annuals:									
Amaranthus	–	–	–	–	1.3	–	–	44.0	–
Chenopodium	+	–	–	–	–		–	1.0	–
Descurainia	–	–	–	–	–	1.0	–	–	6.0
Euphorbia	–	–	–	–	1.3	–	–	–	27.0
Portulaca	–	–	–	–	–	1.0	–	2.0	–
Perennials:									
Artemisia tridentata	–	–	–	–	–	1.0	–	–	–
Echinocereus	–	–	–	–	–	–	–	2.0	–

All cultural plant remains are carbonized.
Plant remains are seeds unless indicated otherwise.
+ = 1–10/liter; ++ = 11–25/liter

Table 10.47. LA 37594, Roomblocks 1 and 2, flotation wood charcoal (weight in grams).

Room	101		102			104	201	Total	
Feature	**Central Hearth**	**Feature 3 Storage Pit**	**Feature 1 Heating Pit**	**Feature 3 Hearth**	**Feature 1 Pit, Layer 5**	**Trash Pit**	**Feature 7 Pit**	**Weight (g)**	**Col. %**
FS	**239, Floor 2**	**236, Floor 2**	**245, Floor 2**	**250, Floor 2**	**270, Floor 4**	**283**	**1532, W 1/2**		
Conifers									
Juniperus	0.3	0.4	0.3	0.01	0.01	0.5	0.01	**1.53**	**58.2%**
Pinus edulis	0.1	0.01	–	–	–	–	0.01	**0.12**	**4.6%**
Nonconifers									
Atriplex	–	–	–	–	–	0.01	0.01	**0.02**	**<1%**
Salicaceae (*Populus/Salix*)	0.01	0.3	0.3	0.01	–	0.01	0.01	**0.64**	**24.3%**
Undetermined	–	0.2	0.1	0.01	–	0.01	–	**0.32**	**12.2%**
Total	**0.41**	**0.91**	**0.7**	**0.03**	**0.01**	**0.53**	**0.04**	**2.63**	**100.0%**

Table 10.48. LA 37594, Rooms 101, 102, and 201, macrobotanical sample taxa.

Room	101							102	201			Total	
Feature	Feature 1 Hearth		Feature 2 Heating/Ash Pit		Feature 3 Storage Pit			Feature 3 Hearth	Feature 7 Pit			Weight (g)	Col. %
FS	224 Floor 1 Full Cut	239 Floor 2 Layer 2	225 General Fill	226 Layer 1	231 General Fill	232 Layer 1	233 Layer 2	250 Floor 2	1528 Level 1 Layer 3	1529 Layer 5	1532 Layer 6, Floor Fill		
Conifers													
Juniperus	0.16	–	0.29	0.70	0.49	1.52	0.10	0.21	4.93	5.20	3.53	**17.13**	**63.4%**
Pinus edulis	0.12	–	–	–	0.44	–	–	–	–	1.02	–	**1.58**	**5.9%**
Nonconifers													
Artemisia	–	–	–	–	–	–	–	–	0.57	2.70	0.35	**3.62**	**13.4%**
Atriplex	–	–	–	–	–	–	0.06	–	–	–	–	**0.06**	**0.2%**
Chrysothamnus	–	–	–	–	–	–	0.02	–	–	–	–	**0.02**	**0.1%**
Larrea	–	–	–	–	–	–	0.26	–	0.38	0.45	0.25	**1.34**	**5.0%**
Prunus	–	0.64	–	–	–	–	–	–	–	–	0.16	**0.80**	**3.0%**
Quercus	0.04	–	0.17	0.55	–	–	–	–	–	–	–	**0.76**	**2.8%**
Salicaceae (*Populus/Salix*)	–	–	0.11	–	–	–	0.11	–	0.25	–	0.11	**0.58**	**2.1%**
Undetermined nonconifer	–	–	0.31	–	0.05	–	0.23	–	–	0.18	0.22	**0.99**	**3.7%**
Unknown wood	0.12	–	–	–	–	–	–	–	–	–	–	**0.12**	**0.4%**
Other													
Pinus edulis	–	–	–	–	–	–	–	–	1 cone scale/0.10	–	–	–	–
Zea mays	–	–	5 kernels/ 0.20	–	–	–	2 kernels/ 0.11	–	–	–	–	–	–
Total	**0.44**	**0.64**	**0.88**	**1.25**	**0.98**	**1.52**	**0.78**	**0.21**	**6.13**	**9.55**	**4.62**	**27.00**	**100.0%**

Wood by weight; other plants by count and weight.

Table 10.49. LA 37594, Extramural Area 2, Feature 2 (probable cist), macrobotanical wood charcoal by weight (weight in grams).

Context	69N/69E Surface Stripping	69N/69E Roofing Material			Total	
FS	**234**	**241**	**242**	**248**	**Weight (g)**	**Col. %**
Conifers						
Juniperus	3.91	1.73	8.02	10.01	**23.67**	**85.6%**
Nonconifers						
cf. *Cercocarpus*	–	–	0.18	–	**0.18**	**0.7%**
Prunus	0.13	–	–	–	**0.13**	**<1%**
Salicaceae (*Populus/Salix*)	0.83	0.18	1.18	1.39	**3.58**	**13.0%**
Undetermined nonconifer	–	–	–	0.18	**0.18**	**0.7%**
Total	**4.87**	**1.91**	**9.38**	**11.58**	**27.64**	**100.0%**

cf. = resembles taxon

Table 10.50. LA 37594, Extramural Areas 2 and 3, flotation full-sort plant remains (frequency and abundance per liter).

Extramural Area	2					3	
Feature	**From Partial Vessel near Mealing Bins**	**Feature 1 Mealing Bin 1**	**Feature 7 Mealing Bin 2**	**Feature 8 Small Hearth**	**Feature 9 Ash Pit**	**Feature 3 Floor of Major Storage Cist**	**Feature 5 Hearth**
FS	**133**	**222**	**275**	**288**	**285**	**1509**	**1527**
Cultural							
Annuals:							
Cheno-Am	–	–	–	–	2.0	–	–
Cultivars:							
Zea mays	–	–	–	–	–	–	+ cupule
Grasses:							
Gramineae	–	–	–	–	–	–	1.0
Perennials:							
Echinocereus	–	–	1.0	–	–	–	–
Possibly Cultural							
Annuals:							
Portulaca	–	–	–	146.0	–	–	–
Noncultural							
Annuals:							
Amaranthus	–	–	–	–	–	8.0	–
Chenopodium	4.0	21.0	1.0	1.0	–	8.0	–
Descurainia	–	–	–	–	–	1.0	–
Euphorbia	24.0	–	–	1.0	–	2.0	–
Mentzelia albicaulis	–	–	–	–	–	1.0	–
Portulaca	8.0	2.0	3.0	–	–	–	10.0
Grasses:							
Gramineae	–	–	–	–	–	1.0	–
Other:							
Cruciferae	–	–	–	–	–	7.0	–
Malvaceae	–	–	–	–	0.5	–	–
Solanaceae	–	–	–	–	0.5	–	–
Perennials:							
Sphaeralcea	1.0	–	–	1.0	–	–	–

Table 10.51. LA 37594, Extramural Areas 1 and 3, flotation scan plant remains (abundance per liter).

Extramural Area	**1**	**3**	
Feature	**Feature 1, Major Storage**	**Feature 2, Dog Burial in Cist 3, Major Storage**	**Floor of Cist 3, Major Storage**
FS	**822**	**1502**	**1508**
Cultural			
Annuals:			
Cheno-Am	–	+	–
Possibly Cultural			
Annuals:			
Amaranthus	–	+++	–
Noncultural			
Annuals:			
Amaranthus	–	–	++
Cheno-am	++	–	–
Chenopodium	+	+	+
Euphorbia	–	+	+
Mentzelia albicaulis	–	–	++
Portulaca	–	+	+
Other:			
Physalis	–	+	–
Perennials:			
Echinocereus	–	+	–

+ = 1–10/liter; ++ = 11–25/liter; +++ = 25–100/liter

Table 10.52. LA 37594, Extramural Areas 1–4, macrobotanical plant remains.

Extramural Area	1	2	3							4	Total	
Feature	Feature 1 Roasting Facility	Feature 2 Roasting Facility	Feature 1 Roasting Facility	Feature 2 Major Storage Cist	Feature 3 Major Storage Cist			Feature 7 Pit	Feature 5 Hearth	88N/62E	Weight (g)	Col. %
FS	822	246	1209	1003	1506 Level 4	1512 Level 6	1513 Level 7	1525	1527	1201		
Wood conifers:												
Juniperus	2.81	4.99	2.25	3.34	3.25	–	0.42	–	0.69	–	**17.75**	**51.6%**
Pinus edulis	4.29	–	3.54	1.24	–	–	–	–	–	–	**9.07**	**26.4%**
Nonconifers:												
Artemisia	–	–	–	0.22	–	–	0.01	–	0.15	–	**0.38**	**1.1%**
Atriplex	–	–	–	–	–	–		–	1.42		**1.42**	**<1%**
Prunus	–	–	–	–	–	–	–	–	0.15	–	**0.15**	**0.4%**
Salicaceae (*Populus/Salix*)	–	0.45	–	0.47	–	–	–	–	–	0.21	**1.13**	**3.3%**
Sarcobatus/Atriplex	–	–	–	–	–	–	–	–	1.29	–	**1.29**	**3.8%**
Undetermined	–	–	–	2.23	–	–	–	–	–	–	**2.23**	**6.5%**
Seeds:												
Cucurbita	–	–	–	–	–	1 u	–	–	–	–	–	–
Possibly Cultural												
Juniperus	–	–	–	–	–	.06 u	–	.89 u	–	–	0.95	2.8%
Total	**7.1**	**5.44**	**5.79**	**7.5**	**3.25**	**0.06**	**0.43**	**0.89**	**3.7**	**0.21**	**34.37**	**100.0%**

u = uncharred
Wood by weight, other plants by count and weight.

Table 10.53. LA 37594, Extramural Areas 2 and 3, flotation wood charcoal (weight in grams).

Extramural Area	2					3	Total	
Feature	From Partial Vessel	Feature 1 Mealing Bin 1	Feature 7 Mealing Bin 2	Feature 8 Small Hearth	Feature 9 Ash Pit	Feature 5 Hearth	Weight (g)	Col. %
FS	133	222	275	288	285	1527		
Conifers								
Juniperus	0.01	1	0.01	2.4	2.3	0.01	**5.73**	**87.3%**
Nonconifers								
Artemisia	–	–	–	–	–	0.01	**0.01**	**<1%**
Atriplex	–	–	–	–	–	0.6	**0.6**	**9.1%**
Salicaceae (*Populus/Salix*)	–	–	0.01	–	0.2	–	**0.21**	**3.2%**
Undetermined		0.01					**0.01**	**0.2%**
Total	**0.01**	**1.01**	**0.02**	**2.4**	**2.5**	**0.62**	**6.56**	**100.0%**

Table 10.54. LA 37594, pollen, counts by provenience.

Provenience	FS	Families	(Scan) Sum	(Full) Sum	Marker	Arboreal	N	Cheno-Am	N	Composite	N	Grasses	Domes-ticate	N	Shrubs	N	Other	N
Feature 1, cist, Layer 2, Extramural Area 1	822	7	201	–	47	*Pinus*	29	pollen	134	high-spine	3	11	–	–	–	–	*Cylindropuntia*	3
						Picea	2										*Ephedra*	2
Feature 3, cist, dog burial, Level 3, Extramural Area 3	1502	2	76	–	116	–	–	–	–	–	–	–	–	–	–	–	unknown	1
																	other	75
Feature 3E, Level 3, Extramural Area 3	1521	10	–	212	83	*Pinus*	8	pollen	167	high-spine	5	12	*Zea*	1	–	–	Solanaceae	1
						Picea	1			low-spine	3						Liguliflorae	1
																	Cylindropuntia	1
																	Sphaeralcea	1
Other Structure 2, jacal, vessel	235	11	–	235	75	*Pinus*	11	pollen	145	high-spine	12	21	–	–	*Sarcobatus*	3	*Eriogonum*	1
						Juniperus	2	anther	5	low-spine	1						*Ephedra*	1
																	Sphaeralcea	4
Feature 7, mealing bin, Extramural Area 2	275	8	–	225	102	*Pinus*	24	pollen	116	high-spine	26	16	–	–	–	–	Rosaceae	2
						Juniperus	2										Solanaceae	2
																	Sphaeralcea	1

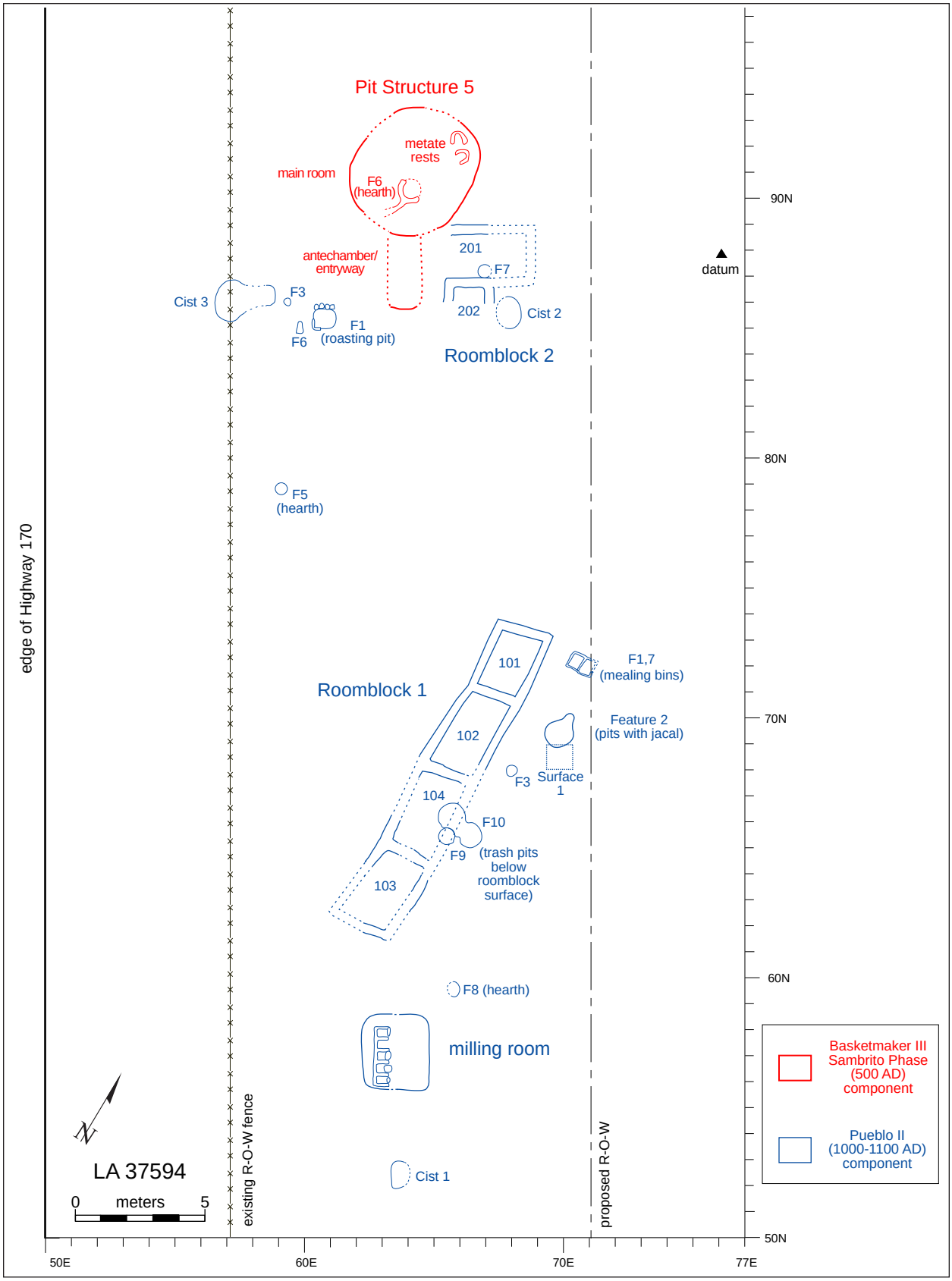


Figure 10.37. LA 37594, components by era, plan: Basketmaker III Sambrito phase (500 AD), Pueblo II (1000–1100 AD).

11 LA 60751 (Casa Quemada)

Stephen C. Lentz and H. Wolcott Toll

When first defined, LA 60751 consisted of a scatter of Pueblo II–III surface materials. Testing and excavation revealed a Basketmaker III–period pit structure not visible from surface materials or other indications. The site was not recorded in the initial survey (Lancaster 1982a) but was documented in 1987 by Toll and Hannaford (1987, 1997; Figs. pf.1, 1.1, 11.1) as a disturbed area of surface artifacts. Because of location problems with the 1982 survey, the resurvey initially identified this site as LA 37593. When the problem was recognized, the site number was changed to LA 60751. Its full extent was determined to be 95 by 98 m (312 by 321 sq ft), with an area of 9,310 sq m (100,212 sq ft). The site is on land owned by NM Department of Game and Fish and the NM Department of Transportation (NMDOT).

LA 60751 was excavated by OAS under the direction of Stephen Lentz from May 26, 1988, to August 18, 1988. The core crew was composed of Dorothy Zamora, Susan Moga, Kalay Melloy, Cindy Bunker, Rose Havel, Lillian King, and Rich Walle.

Environmental Setting

At first observation, LA 60751 was a dispersed artifact and cobble scatter distributed over a flat alluvial area dissected by small intermittent drainages. The installation of waterlines outside the existing highway right-of-way left the surface graded and the amount of vegetation reduced. Large expanses of the whitish, silty soil were visible prior to excavation. Small rivulets were present, especially along the edges of the drainages at either end of the site area. Further disturbance of the site occurred from the construction of an irrigation ditch in the early 1900s, also outside the proposed right-of-way. LA 60751 is along the east side of an alluvial fan or terrace remnant on the west side of the La Plata River floodplain, at an elevation of 5,432 ft (1,656 m). Relative to modern features, it is 366 m (1,200 ft) due east of Jackson Lake and on the east edge of NM 170 (Figs. 11.1, 11.3; see also Fig. 17.1, LA 37591 [Chapter 17, Vol. 1-Book 2, this report]). The pit structure and artifact scatter are approximately 610 m (2,000 ft) west of the present river channel. The site is drained to the north by a southeast-flowing arroyo, which originates just north of Jackson Lake, and to the south by a drainage separating it from LA 37592. The Pickering Ditch is a short distance to the east.

Local flora consists of two distinct plant communities. The first is the riparian zone, which includes cottonwood, Navajo willow, squawbush, tamarisk, and other species common to well-watered areas. However, the site boundaries barely extend into this zone. The immediate flora, more typical of the remainder of the La Plata drainage away from the river, includes sagebrush, rabbitbrush, grama grass, greasewood, foxtail, galleta grass, cheatgrass, and miscellaneous composites, which characterize the base of the terrace slopes. A variety of agricultural crops, especially alfalfa, is grown nearby.

Archaeological Setting

A number of large sites exist in the immediate vicinity of LA 60751. These include an isolated great kiva and associated rubble mound (LA 60746) and a large pueblo (LA 111902)—possibly a great house—to the southeast; both are outside the project right-of-way. Pueblo-phase structural sites such as LA 60745 (Chapter 5, Vol. 1-Book 1, this report) and LA 60748 are above LA 60751 to the west and southwest. LA 60751 is contiguous to LA 37592 to the south and LA 37593 to the north; these two structural Pueblo II and Pueblo III sites were investigated during the

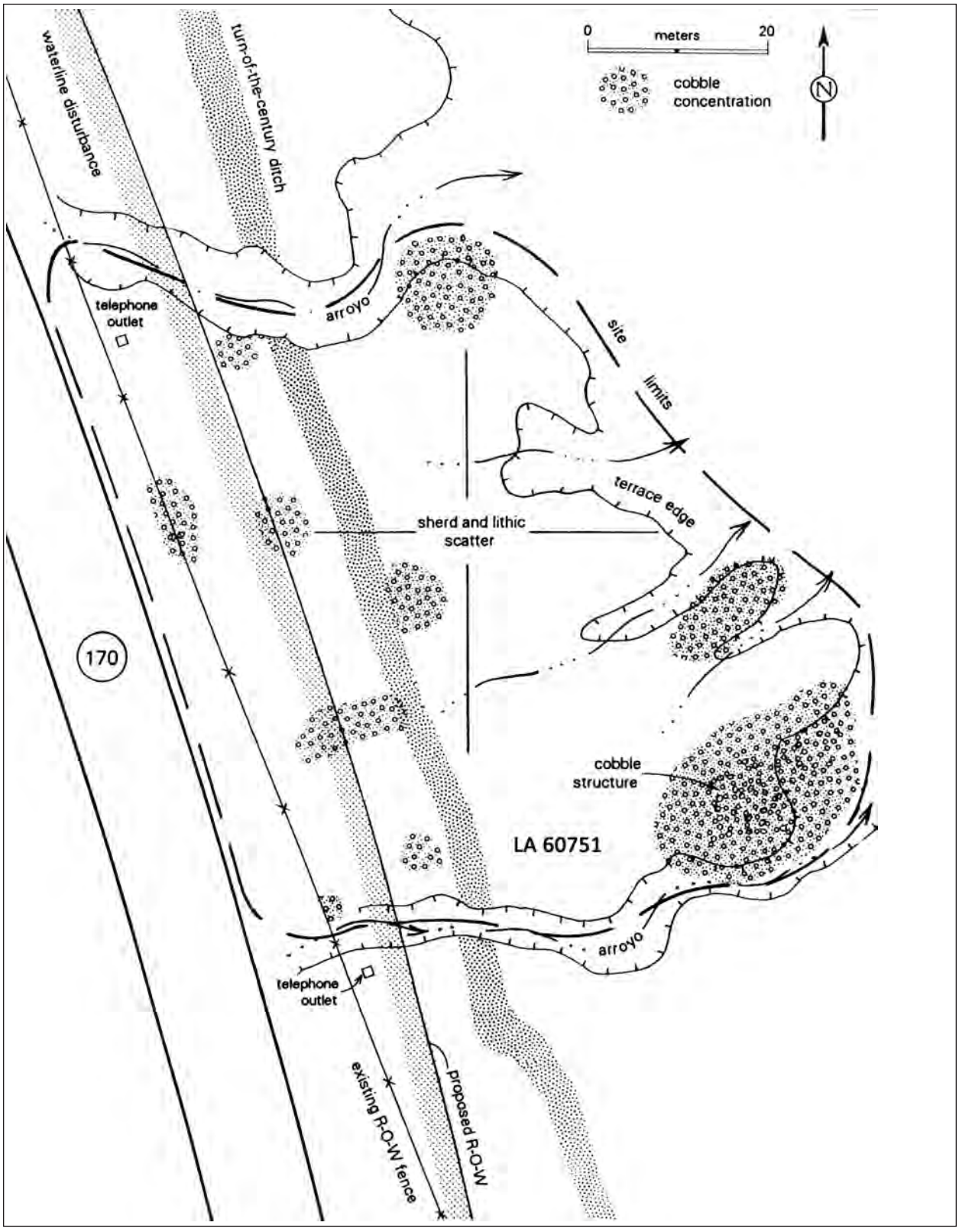


Figure 11.1. LA 60751, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

Figure 11.3. LA 60751, site overview, view east, pre-excavation.

highway project (Chapters 13 and 14, respectively, Vol. 1-Book 2, this report). A Transitional Basketmaker structure predating the structure at LA 60751 is at LA 37594 (Chapter 10, Vol. 1-Book 1, this report), just to the north, and a contemporary or nearly contemporary Classic Basketmaker III structure is present at LA 37595 (Chapter 12, Vol. 1-Book 1, this report), a little farther north. More Basketmaker-period features are present in the East Side Rincon (LA 3131) across the river, about 1,300 m to the southeast, where there are also Pueblo II–III features (Dykeman and Langenfeld 1987).

Field Methods

The LA 60751 project area measured 99 m north–south by 24 m east–west to the eastern edge of the pavement (Fig. 11.4). A total of 234 full or partial 3 by 3 m grids, which constituted the total site area of LA 60751, were used to provenience and surface-collect the site. These 3 by 3 m grids were subdivided into 2,106 1 by 1 m grids. Vertical and horizontal controls were maintained through the 1 by 1 m grid system, which was oriented along a north–south axis and a main datum point at 98N/65E, +1.5 m. Unit-specific datum points were located at the southwest corners of each grid. Vertical controls were established with reference to depth below site datum (bsd). Initially, 10 and 20 cm arbitrary levels were used. Arbitrary levels were designated "levels," and areas excavated in definable stratigraphic units were designated "layers."

The grids were numbered and the area divided into four strata. A 1 percent stratified random sample of 22 1 by 1 m units was then obtained using a random number generator. In addition, four 1 by 3 m units were placed nonrandomly to investigate areas with high surface-material densities. These consisted of artifact concentrations and possible cobble alignments. The 26 units described were then hand excavated. These excavations failed to yield stratified subsurface deposits or intact cultural features, although Pueblo II materials were recovered from the subsurface.

A pit structure was exposed on June 14, 1988, during backhoe operations, which followed the hand trenches. The profile of the pit structure (Pit Structure 1), a rock-lined posthole feature, and asso-

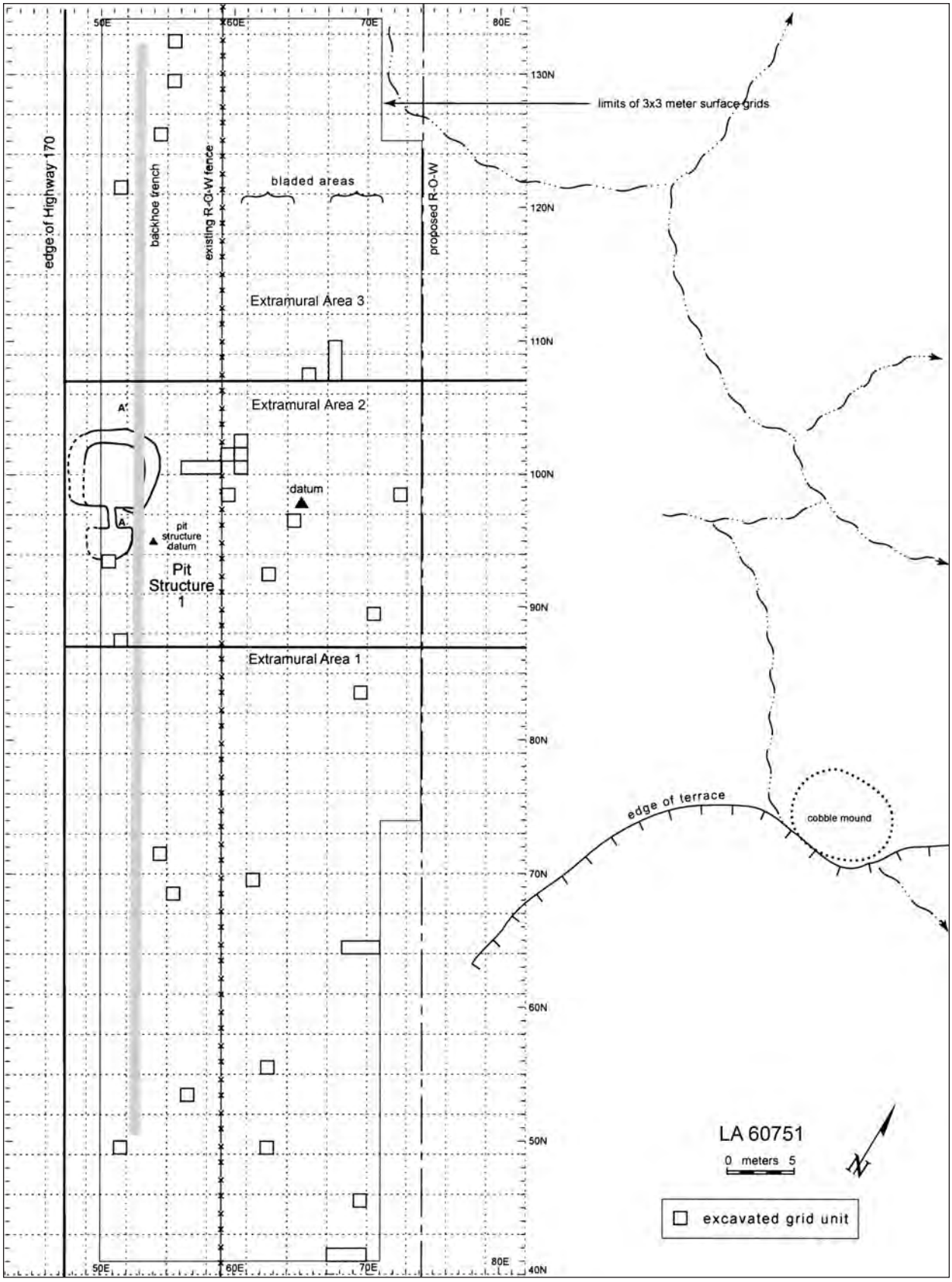


Figure 11.4. LA 60751, site plan.

ciated artifacts were visible in the west profile of a backhoe trench parallel to NM 170. The pit structure was excavated as the only intact feature on the site and an example of early architecture. All cultural fill was screened through 1/4-inch wire mesh. Postoccupational fill, primarily road-shoulder fill, was sample screened. To expose the pit structure, postoccupational fill (overburden) was not screened. Selected features (primarily storage features) within the pit structure were screened through 1/8-inch wire mesh to retrieve botanical remains or very small artifacts. *See Pit Structure 1 under Excavation Results, below, for a detailed field methods discussion*.

After the discovery and excavation of Pit Structure 1, a large oval stain in the vicinity of the fenceline was investigated. Hand excavations were supplemented by mechanical means when deeply buried deposits were suspected. Portions of postoccupational fill were removed from the surface of the pit structure as it became evident that large architectural features continued under the road shoulder. Blading at the end of the excavations also revealed a fenceline stain. Miscellaneous surface stains exposed during backhoe stripping were also excavated as potential features within the right-of-way.

LA 60751 was divided into three extramural areas to manage the investigation efficiently (Fig. 11.4). Extramural Area 1 is south of the pit structure from 41N to 87N. Extramural Area 2 encompasses a zone around the pit structure (87N to 107N). Extramural Area 3 included the north end of the site up to the arroyo separating it from LA 37593 (107N to 134N). These areas allowed for broad subdivision of the site and examination of material traces of the pit structure on the site surface.

It took 488 person-hours to clear vegetation, establish the grid system, and excavate the 26 excavation units. It took 44 hours to excavate a noncultural stain under the fenceline, and 1,659 person-hours (207 person days) to investigate the pit structure. The 13-member staff was mostly from OAS, but also included workers from San Juan College.

Surface Collection

Vegetation was removed from the site prior to surface collection, although much of the vegetation had already been removed by waterline construction.

One hundred and forty-one units contained cultural materials. One hundred and eighty lithic artifacts, 271 sherds, and 3 bones and 4 human skull fragments were recovered from the surface of the site (Fig. 11.5; Table 11.1). Human bone at the north end of the site (Extramural Area 3) was exposed during waterline trenching of the LA 37593 midden and pit structure. Deer and cottontail remains on the surface were probably recently deposited, especially given the large number of road kills in the area.

EXCAVATION RESULTS

Random 1 by 1 Grid Units and Intentionally Placed 1 by 3 Units

At LA 60751, the surface distribution of artifacts did not reflect the presence or type of subsurface remains (Fig. 11.5; Tables 11.1, 11.2, 11.3). For example, in grid units in the vicinity of Pit Structure 1 (93–103N/49–54E), only three lithic artifacts and one ceramic artifact were collected from the surface, and subsurface remains were not found in areas of higher-density surface artifacts.

The grid units with the highest concentrations of artifacts were 122N/71E, 125N/52, 107N/65, and 47N/68E. The northernmost (122 and 125N) grids probably contained denser surface material from peripheral midden scatter from LA 37593. More material was present in the top three levels of the subsurface test at 107N/65E, but no features or other indications of cultural activity were present. None of the test units encountered intact cultural features. One unit that contained charcoal flecks at considerable depth (64N/68E, 1 by 3 m; and its extension, 64N/70E, 1 by 1 m) was excavated to a depth of 2.78 m bsd (2.2 m below present surface) in search of the source of the charcoal. No artifacts were found below the uppermost levels of the trench, and it is likely that the deep charcoal is the result of alluvial action from above. Charcoal from the terrace slopes could have come from brush fires (natural or artificial) or from eroded cultural features. A burn with associated charcoal was also present at LA 37592 at similar depth immediately to the south of this site. This material was dated at 2290–1930 BC. This suggests that there may have been a fire in the area at

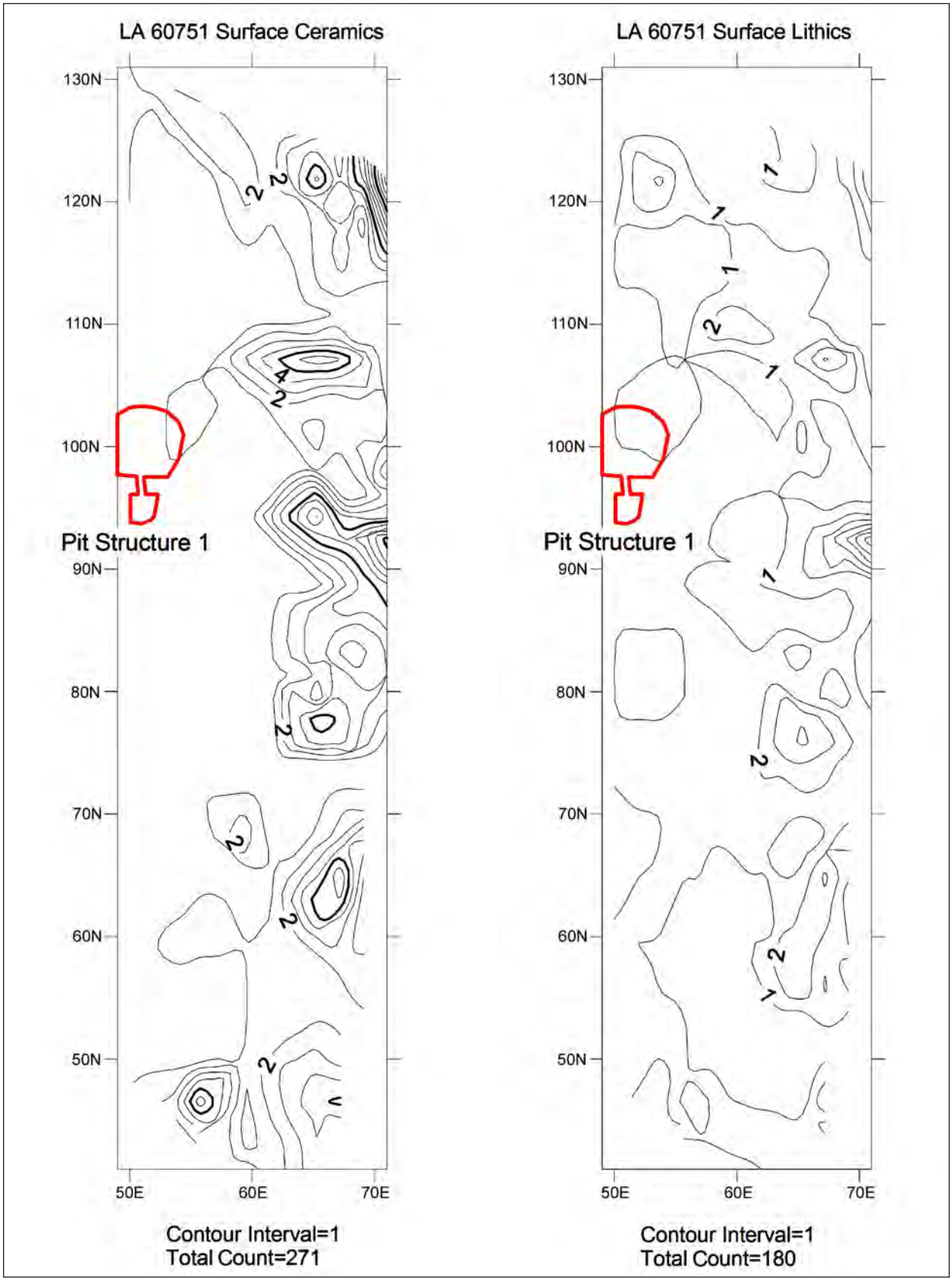


Figure 11.5. LA 60751, surface collection area, distribution and density, ceramics and lithics.

Table 11.1. LA 60751, materials from surface collection by extramural area; counts and percents.

Extramural Area	EA 1		EA 2		EA 3		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Ceramic Artifacts								
Gray ware	102	79.7%	44	74.6%	65	77.4%	**211**	**77.9%**
White ware	24	18.8%	14	23.7%	19	22.6%	**57**	**21.0%**
Red ware	1	0.8%	1	1.7%	–	–	**2**	**0.7%**
Brown ware	1	0.8%	–	–	–	–	**1**	**0.4%**
Total	**128**	**100.0%**	**59**	**100.0%**	**84**	**100.0%**	**271**	**100.0%**
Chipped Stone								
Chert	41	45.1%	21	50.0%	15	31.9%	**77**	**42.8%**
Chalcedony	1	1.1%	–	–	1	2.1%	**2**	**1.1%**
Silicified wood	6	6.6%	1	2.4%	7	14.9%	**14**	**7.8%**
Quartzite	1	1.1%	1	2.4%	–	–	**2**	**1.1%**
Quartzitic sandstone	12	13.2%	4	9.5%	1	2.1%	**17**	**9.4%**
Rhyolite	1	1.1%	–	–	1	2.1%	**2**	**1.1%**
Siltstone	29	31.9%	15	35.7%	22	46.8%	**66**	**36.7%**
Total	**91**	**100.0%**	**42**	**100.0%**	**47**	**100.0%**	**180**	**100.0%**
Faunal Bone								
Sylvilagus	–	–	–	–	2	66.7%	**2**	**50.0%**
Odocoileus	–	–	1	100.0%	1	33.3%	**2**	**50.0%**
Total	**–**	**–**	**1**	**100.0%**	**3**	**100.0%**	**4**	**100.0%**
Human bone	–	–	–	–	4	100.0%	**4**	**100.0%**
Total materials	**219**		**102**		**138**		**459**	

this time. Lacking associated artifacts, it was not possible to determine whether it was man-caused, but there is little question that people were in the vicinity at the time of the fire.

The absence of features or cultural stratigraphy in the 34 sq m of tests suggests that there was considerable cultural activity within the site area, but features have been removed by erosion and construction. Given the intensity of occupation surrounding the site area, there were certainly prehistoric features there at one time, but none except Pit Structure 1 appears to have been deep enough to have survived to the present.

PIT STRUCTURE 1

Discovered in the course of the north–south backhoe trench excavation through LA 60751, and parallel to NM 170, Pit Structure 1 was revealed in the west profile of the trench, in the Extramural Area 2 segment (Figs. 11.4, 11.6).

Pit Structure 1, the structural portion of LA 60751, was a Basketmaker III–phase pit structure (Figs. 11.4, 11.7, 11.8, 11.9). This structure was subrectangular with an antechamber connected by a narrow, north-sloping tunnel attached to the south side. The floor of the antechamber was up to 50 cm higher than the floor of the main structure chamber. Principal architectural features include a bench lining the interior of the structure along three sides, a central hearth, four main support posts, wing walls, a large corner bin, and numerous smaller features including pot rests, subfloor storage cists, and ash pits. Several activity areas were present (e.g., a grinding or processing facility in the southwest corner of the pit structure).

It became apparent that the pit structure had burned at or near abandonment. This burning probably contributed to the structure's preservation and yielded numerous tree-ring specimens. The antechamber, however, may have been spared during the burning. Stratigraphic excavation of the structure exposed three occupational surfaces, 21 features, and evidence of remodeling. No exterior activity areas associated with the pit structure were encountered, although it is probable that materials

Table 11.2. LA 60751, randomly selected 1 by 1 m excavations.

Grid (NE)	Levels	Auger Depth (m bsd)	Stratigraphy	Artifacts	Comments
45/69	5 at 10 cm	1.86	fine clay	no cultural materials	Adjacent to a possible cobble mound. No structure or subsurface stratigraphy encountered.
49/51	6 at 10 cm	1.28	sandy clay	1 ceramic 1 lithic	Artifacts confined to top levels. Some charcoal. No important cultural remains.
49/62	5 at 10 cm	2.04	consolidated sandy clay	9 ceramic 3 lithic	Artifacts in top 3 levels only. No important cultural deposition.
53/56	4 at 10 cm	1.74	hardpan	no cultural materials	No charcoal. No important cultural deposition.
55/62	4 at 10 cm	2.04	sandy clay/loam	8 ceramic 7 lithic	Artifacts in top 3 levels only. No charcoal. No important cultural deposition.
64/70*	22 at 10 cm	2.47	compact clay	no cultural materials	Appended to 64/68 because charcoal was found in auger hole. No cultural remains.
68/55	6 at 10 cm	2.23	alluvial silty sand	7 ceramic 4 lithic	Artifacts found in top 3 levels. Charcoal at 58 cm. No important cultural deposition.
69/61	5 at 10 cm	1.64	compact sandy clay	2 ceramic	Disturbed by telephone and water trenches. No important cultural deposits.
71/54	10 at 10 cm	2.5	compact sand and gravels	7 ceramic 11 lithic	Charcoal down to Level 8. Artifacts to Level 3. No important cultural remains.
83/69	3 at 10 cm	1.72	sandy clay, 20% gravels	2 ceramic 5 lithic	Artifacts confined to 5 cm below surface. No stratified deposits.
87/51	6 at 10 cm	2.2	sandy loam, gravels	3 ceramic 1 lithic	Artifacts confined to upper levels. Some charcoal in Level 4. No intact deposits.
89/70	4 at 10 cm	1.49	clayey/sandy loam 10YR 6/3	3 ceramic 6 lithic	Artifacts appear to be alluvially deposited.
92/62	9 at 10 cm	2.64	compact sandy clay	36 ceramic 6 lithic	Disturbed by phone cable. Eggshell present. Artifacts stop at Level 8. Material may have been redeposited by construction or alluvium.
93/50	10 at 10 cm	1.83	compact sandy clay	9 ceramic 9 lithic	Disturbed by highway shoulder upper levels. Charcoal at Level 7. Artifacts confined to upper 4 levels.
96/64	4 at 10 cm	1.15	compact sandy clay grading to fine sand	7 ceramic 3 lithic	Artifacts confined to Level 1 and appear disturbed. No intact cultural remains.
98/59	4 at 10 cm	1.06	compact sandy clay grading to fine sand	1 lithic	Within a cobble concentration. No important subsurface deposits.
98/72	5 at 10 cm	0.94	compact sandy clay	1 ceramic 1 lithic	Within a surface artifact concentration. No important subsurface remains.
107/65	5 at 10 cm	1.93	highly compact sandy clay	21 ceramic 6 lithic	Similar to 107/67 (1 by 3 m). Artifacts are confined to the top 3 levels; probably redeposited.
121/51	6 at 10 cm	0.25	compact sandy clay, gravels, and fine sand	1 ceramic	No intact deposits.
125/54	7 at 10 cm	1.8	sandy clay gravel lens	8 ceramic	Road trash down to Level 4. No intact subsurface deposition
129/55	7 at 10 cm	2.08	cobbles, sandy clay	4 ceramic 6 lithic	Disturbed by blading. Historic glass in Level 4. No intact deposits.
132/55	4 at 10 cm	2.18	sandy compact soil with gravels	1 ceramic	No intact cultural deposits.

* not random

Table 11.3. LA 60751, intentionally placed 1 by 3 m excavations.

Grid	Levels	Auger Depth (m bsd)	Stratigraphy	Artifacts	Comments
41/67	5 at 10 cm	3 tests to 2.93 maximum	highly compacted sandy clay with laminations; probably deposited alluvially	37 ceramic 19 lithic	Unit was excavated to determine whether materials were associated with a cobble mound outside of the right-of-way. No intact deposits encountered.
64/68	6 at 10 cm	3 tests to 2.47 maximum	silty compact clay with gravels, caliche at sterile	1 lithic	Excavated to investigate cobble concentration. 64/70 appended to the east. No stratified deposits encountered. Artifacts confined to Level 2.
100/56	5 at 10 cm	1 test to 2.25	compact sand, caliche at sterile	1 lithic	Excavated to investigate a cobble alignment. The trench was sterile. One fire-cracked rock in Level 2. Disturbed by phone line near center.
107/67	3 at 10 cm	3 tests to 2.07 maximum	sandy clay, compact sand, and gray sand	94 ceramic 44 lithic 3 ground stone	Trench was placed at this location because of a cranial fragment on surface. High quantity of artifacts in the top two levels, sterile thereafter. No stratified deposits.

Figure 11.6. LA 60751, Backhoe Trench, north–south, between NM 170 and existing right-of-way fence.

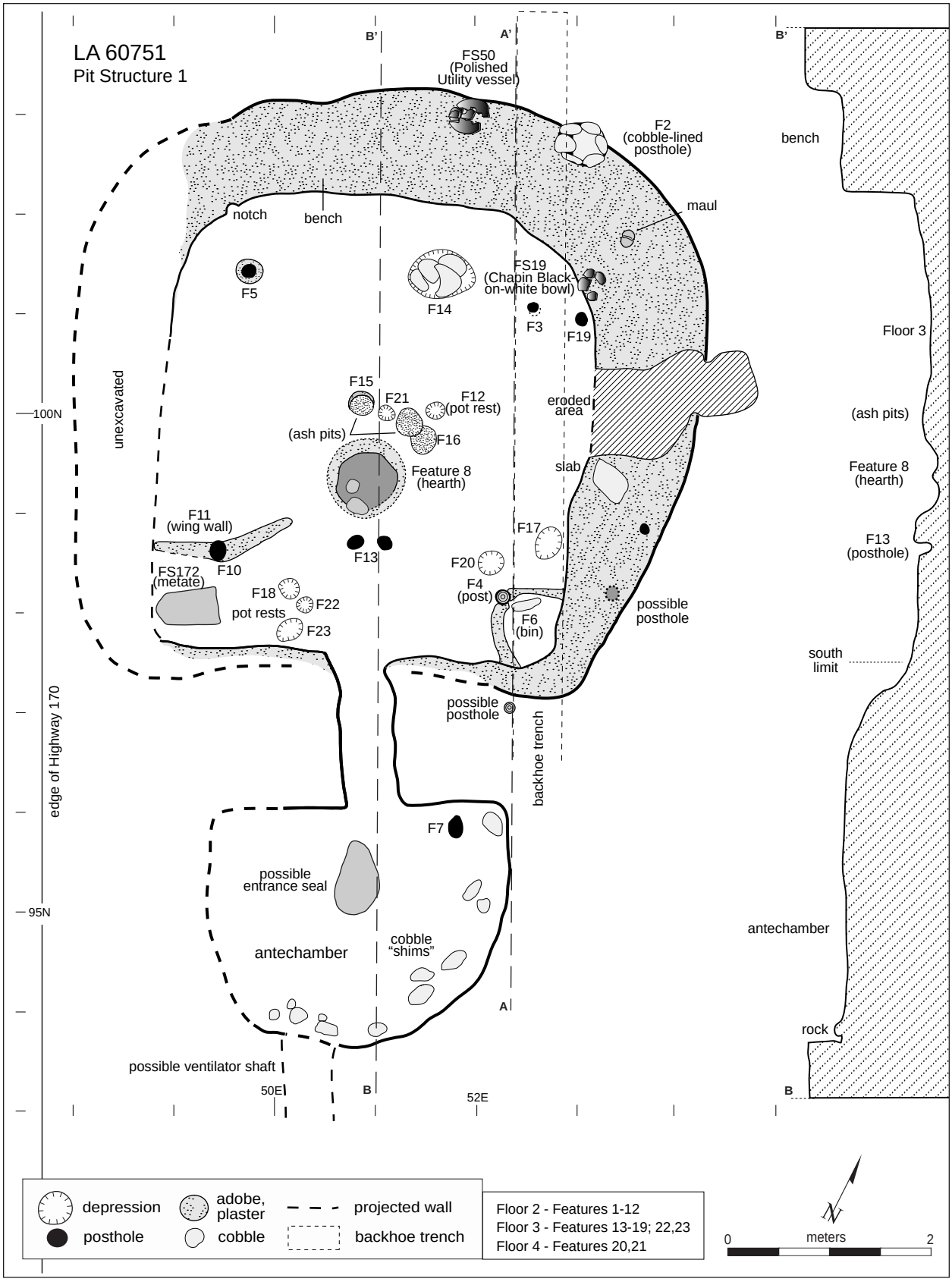


Figure 11.7. LA 60751, Pit Structure 1, plan and profile (B–B').

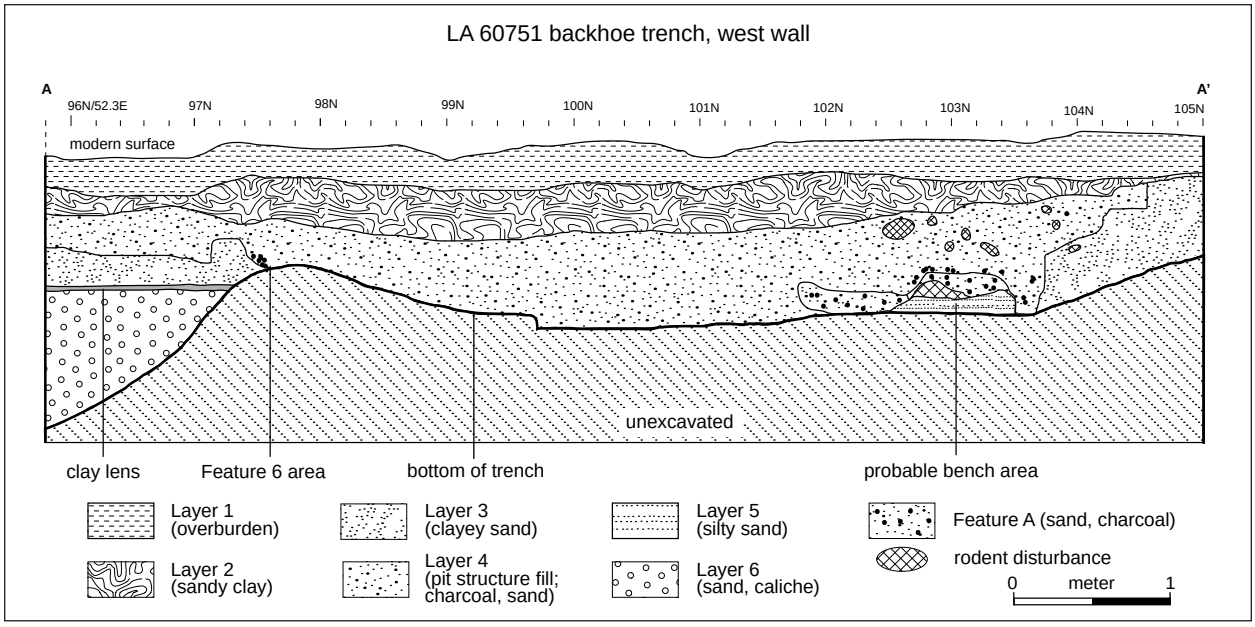


Figure 11.8. LA 60751, Pit Structure 1, Backhoe Trench, west wall profile (A–A').

Figure 11.9. LA 60751, Pit Structure 1, during excavation.

and charcoal present in nearby test pits originated from this structure.

Surviving Portions

The overall preservation of Pit Structure 1 was excellent because of the burning and subsequent burying under at least 1 m of colluvial fill. The factors contributing to the thermal efficiency of the pit structure also aided in its preservation: the surviving portions are primarily beneath the prehistoric ground surface. At or shortly after abandonment, the roof burned and collapsed onto the floor of the main chamber. This served to seal artifacts on the floor and the bench, and contributed to the preservation of surviving portions.

The antechamber appeared unburned, and preservation there was not as good as elsewhere (Figs. 11.7, 11.11). The walls and floor of the antechamber were difficult to define, as were the remnants of the tunnel or ventilator shaft south of the antechamber.

Portions of the western walls and bench were directly beneath the road shoulder. The extent of materials or features under the road is not known,

Figure 11.11. LA 60751, Pit Structure 1, Floor 2, Feature 8 (hearth; center), Feature 6 (bin; left), and bench; view southeast to antechamber.

since those portions of the pit structure that were hazardously close to or under the roadway were not excavated. We estimate that the unexcavated features included 5.0 m of the west wall and 3.0 m of bench, as well as floors and other possible features. Associated activity areas and the midden may currently be under the road, or they may have been removed by natural processes such as erosion after the site had been abandoned. But the structure appears to have been intact.

Initial backhoe trenching may have disturbed a shallow posthole on the exterior and near the middle of the southern arc of the pit structure. The west side of Feature 2, a cobble-lined posthole, and a portion of the bench were lightly damaged during backhoe operations as well. Fortunately, there was sufficient overburden to shield most of the major features from accidental damage through backhoe testing. A small arroyo channel impacted the east side of the structure, and segments of the bench and east wall were substantially eroded (Figs. 11.7, 11.8).

Excavation Methods

After the profile of the pit structure was exposed in the backhoe trench, hand excavations defined the contours of the structure. An area of approximately 400 sq m was surface-stripped in 1 by 1 m, 1 by 2 m, and 1 by 3 m excavation units. These were tied into the overall grid system for the site, and a main datum for the excavation of the pit structure was established at 97N/52E at +0.59 m. Fill from these units was initially screened; however, when it was determined that no relevant cultural materials were present, screening was discontinued.

When the outline of the eastern portion of the stain was defined, the structure was subdivided into northeast, southeast, southwest, and northwest quadrants. The strategy of the investigations was to expose an occupational surface and expand the excavations horizontally from that point. During the first exploratory excavations, stratified cultural deposits were encountered, and soon after, the bench of the structure was exposed. Once these were defined, excavations were guided primarily by architectural features.

Artifacts were collected and provenienced according to their location within a quadrant and with respect to the 1 by 1 m grid system. The southwest corner was used to identify units. Formal artifacts or samples associated with cultural surfaces were piece-plotted according to their north and east coordinates within a 1 by 1 m unit.

Vertical control was measured in meters and centimeters below the site datum. Subdatums B and C were also established during excavation. Arbitrary 10 cm levels and cultural layers were observed during excavation. Layers were defined as discrete stratigraphic units, whether architectural (e.g., contents of a feature) or cultural (e.g., roof fall).

When it became evident that the structure continued to the west of the backhoe trench, substantial quantities of overburden were mechanically removed. Hand excavations also removed portions of remaining overburden to the west. This postoccupational fill was not screened. All other cultural fill was screened through 1/4-inch wire mesh. Selected feature fill was screened through 1/8-inch mesh to recover smaller botanical or artifactual items.

Augering was limited to exploring for the bench and walls on the unexcavated west side, and for walls associated with Floor 5.

All features were mapped, described, and photographed. When major areas were exposed and documented, they were photographed using a bipod system. Soil characteristics were described with a Munsell color chart. All data were documented on excavation unit, feature, and sample forms, and artifacts were bagged and assigned a field specimen number according to their specific location within the site, so that all materials from a specific provenience were assigned the same field specimen number. Soil characteristics and other attributes were described and keyed to a Munsell color chart. Chronometric sample retrieval included tree-ring, radiocarbon (C-14), and archaeomagnetic methods. Emphasis was placed on obtaining systematic data from features with potential for yielding absolute dates in association with stratigraphic, artifactual, or subsistence information. Botanical specimens were recovered through systematic sampling of occupational surfaces as well as other appropriate contexts, such as storage facilities and organic layers.

Stratigraphy

Pit Structure 1 was excavated in cultural layers and in architectural units (Figs. 11.7, 11.8). The use-surfaces (floors) are described in the following section.

Layer 1 consisted of postoccupational fill (overburden) directly above the structure. It was removed by hand and backhoe to define the outline of the structure. The fill consisted of sandy-clayey loam with very few artifacts. Concentric calcium carbonate deposits suggests that water had pooled and evaporated in the pit structure depression. The layer terminated at 0.31 m bsd to the north edge, and 0.45 m bsd to the south.

Layer 2 consisted of fill above roof fall from 0.45 to 0.62 m bsd. Because of the thickness of the stratum, it was divided into two levels. Portions of the fill were laminated, characterized by alternating lenses of clay and sand with some pockets of hard clay. Increased charcoal and artifact inclusions were observed. The contact stratum consisted of the lower 10 cm of the stratum directly above the bench.

Layer 3 contained large quantities of burned roof fall. The roof fall (0.48 to 0.89 m bsd), consisting of approximately equal quantities of burned cottonwood and coniferous species, was concentrated along the eastern and northern portions of the bench. Due to the thickness of the layer in some areas, we excavated it in two levels. The burned elements, which probably represented a mix of burned posts, roof beams (vigas), and smaller roofing elements (latillas), averaged 6 to 9 cm in diameter. Large inclusions of burned clay in the roof fall suggested the roof was plastered with adobe. Roof casts with viga and latilla imprints were also recovered, along with miscellaneous artifacts that may have been present on the roof when the structure burned. Below the roof fall (within the contact stratum), a number of artifacts were present in situ along the surface of the bench. These included restorable pottery vessels, lithic tools, and miscellaneous artifacts (Table 11.4).

Layer 4 was roof fall above and in contact with Floor 2. As a representative measurement, the stratum occurs between 0.79 and 1.54 m bsd in the approximate center of the southeast quadrant (99N/52E). The fill consisted of mottled and compacted tan sand, with substantial amounts of oxidation, orange/red pockets of burned clay, and large quantities of burned roof fall. A surface first identified as Floor 1 was found at 0.95 m bsd; it is now labeled Surface 1. The majority of Layer 4 appears to have burned and collapsed directly on Floor 2.

Table 11.4. LA 60751, Pit Structure 1, artifacts associated with the major occupation.

FS	Horizontal Provenience	Provenience (m bsd)			Description
Bench					
19	101N/53E	Layer 3	0.69	bench contact	Chapin Black-on-white bowl with possible shaman motif, Vessel 2 (Fig. 11.16[b])
30	101N/52E	–	–	bench contact, NE 1/4	Chapin Black-on-white bowl fragment, Vessel 3 (Fig.11.16[c])
50	–	–	–	bench contact	small, complete two-hand mano
24	101N/53E	Layer 3	0.55	–	granite grooved maul, 1.8 kg
50	102N/52E 103N/52E 102N/51E 103N/51E	Layer 3	1.25	bench contact	restorable jar, polished utility (Vessel 1)
Antechamber					
79	95N/52E	Layer 6	0.8	floor	metate fragment
98	95N/51E	Layer 6	0.78	floor	complete two-hand mano
116	93N/51E	–	–	floor	complete two-hand mano
Northeast					
122	102N/52E	–	1.49	Floor 2	5 body sherds from polished utility jar
31	100N/52E	–	–	Floor 2 contact, NE 1/4	Jay point (Archaic)
47	100N/52E	Layer 4	–	Floor 2	siltstone grooved maul 0.7 kg
126	102N/50E	Layer 4	–	Floor 2 contact	heat-altered Late Archaic (En Medio) projectile point
129	102N/52E	–	1.45	Floor 2	fragments of basketry
Southeast					
49	98N/51E	Layer 4	–	Floor 2 contact	hammerstone
172	98N/49E	Layer 4	–	Floor 2 contact, SW 1/4	complete trough metate (62 by 35 by 9 cm, 30.6 kg)
178	99N/50E	–	–	Floor 2	cordage
Northwest					
110	100N/51E	Layer 4	–	SW 1/4	Chapin Black-on-white bowl sherd with figure (Fig. 11.16[a])

Present in the roof fall were the charred remains of several of the major load-bearing posts (Features 3, 4, 5, and 10) as well as large burned viga elements and latillas. The majority of the tree-ring samples obtained from the pit structure were recovered from this stratum (Figs. 11.13, 11.14; Tables 11.5, 11.6).

Remodeling

Evidence of remodeling was first noted during the excavation of Feature 2, a slab-lined posthole (Fig. 11.15a). This feature was exposed in the backhoe trench at 0.40 m bsd. Its location well above the bench and probably outside of the structure suggests that it was added during the last phase of occupation to reinforce the roof. In addition, the post was substantially burned, and it may have been incinerated during the final abandonment of the pit structure.

Remodeling was most evident during the excavation of Floor 2 (Fig. 11.15b). It is likely that all four of the main support elements (Features 3–5 and 10) underwent some form of stabilization or replacement during the occupation of this component. The northeast post (Feature 3) may have been entirely replaced during the Floor 2 occupation. The excavation of Floor 3 revealed a posthole slightly offset to the southeast, which probably represented

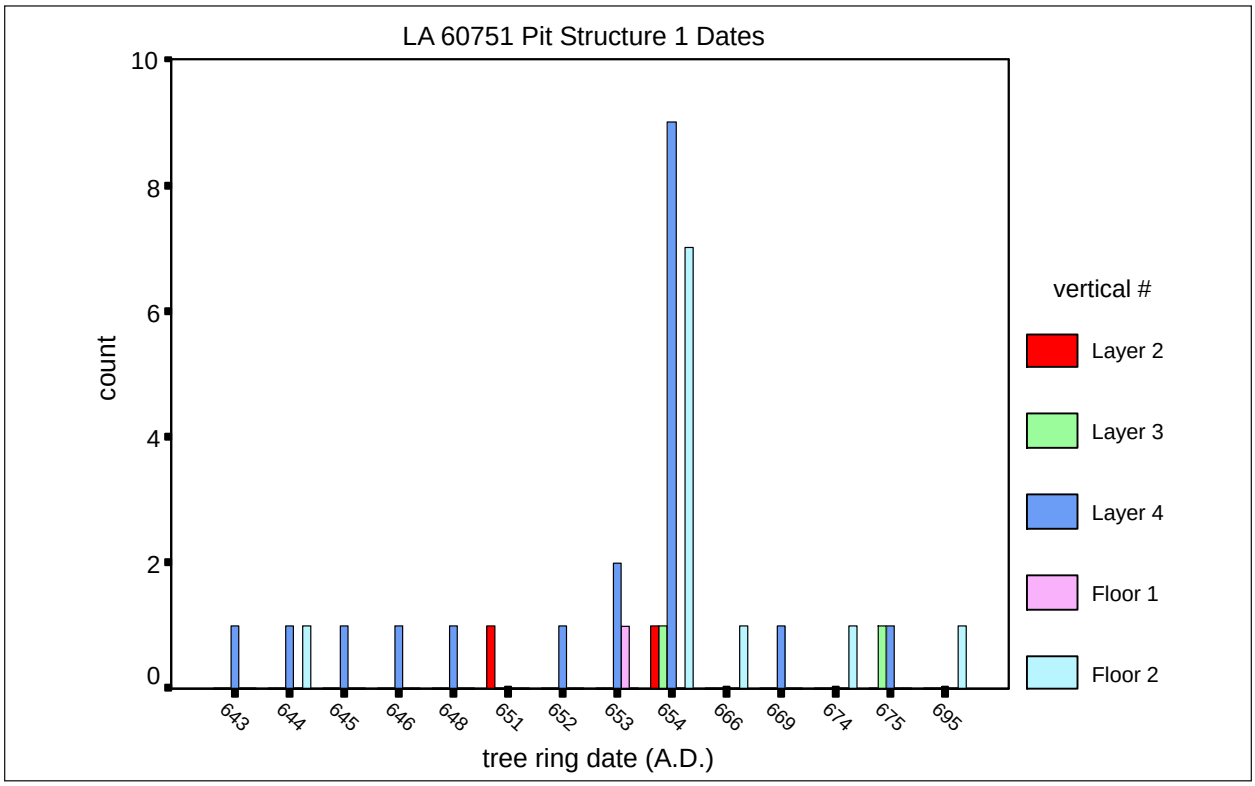


Figure 11.13. LA 60751, Pit Structure 1, tree-ring dates arranged by year, with color indicating stratigraphic location; histogram, only v, r, and rb dates shown.

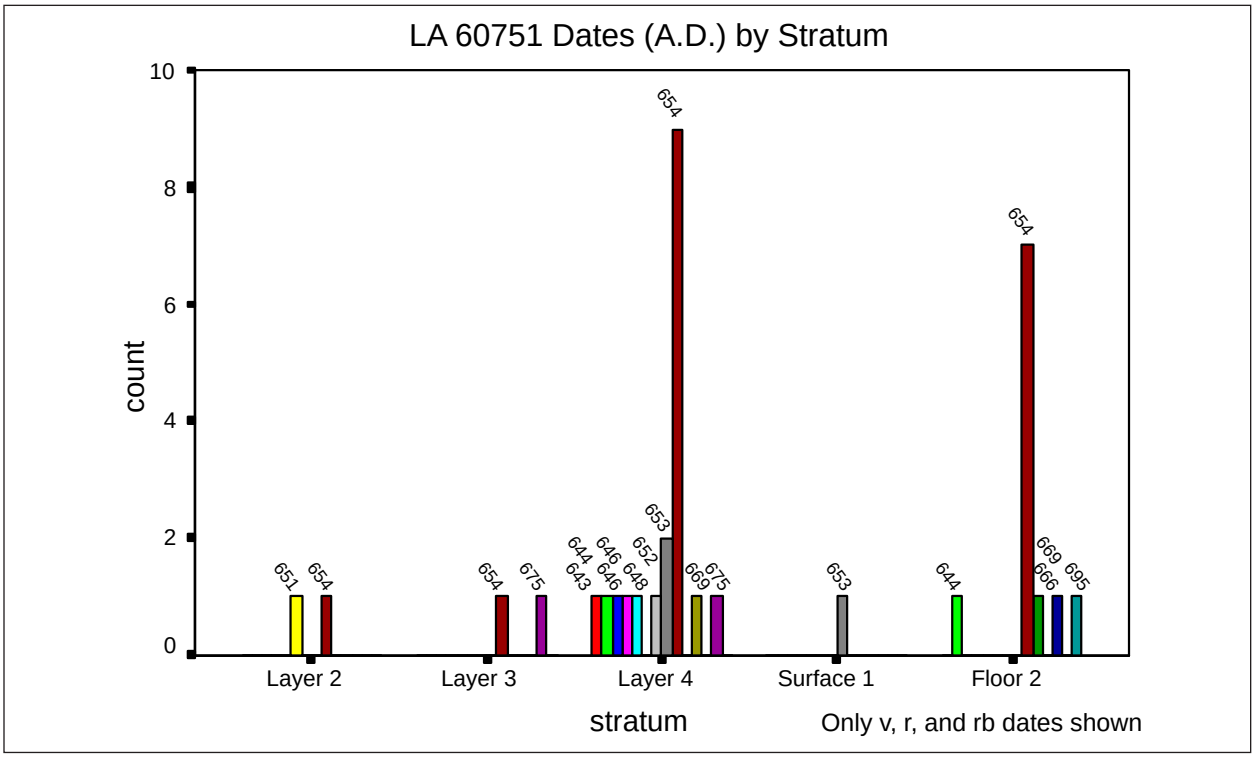


Figure 11.14. LA 60751, Pit Structure 1, tree-ring dates grouped by stratigraphic location, with color indicating date; histogram, only v, r, and rb dates shown.

Table 11.5. LA 60751, Pit Structure 1, tree-ring dates sorted by date and provenience.

Tree-ring Lab Catalogue No.	FS	Fragment	Species	Date/ Symbol	Provenience
LP-63	105	2	juniper	584 vv	NW posthole Feature 5
LP-11	25	3	juniper	590 +vv	SW Floor 2
LP-7	17	1	juniper	595 vv	Layer 4
LP-69	138	1	juniper	609 ++vv	Floor 2
LP-62	105	1	juniper	617 ++vv	NW post, Feature 5, Floor 2
LP-36	64	1	juniper	618 ++vv	Layer 4
LP-18	28	2	juniper	621 vv	Layer 3
LP-39	77	1	juniper	631 vv	NW Floor 2
LP-74	74	1	juniper	632 vv	NW Layer 4
LP-3	9	1	juniper	636 +vv	SE Layer 3
LP-40	78	1	juniper	643 rb	Fill Layer 4
LP-28	28	4	juniper	644 r	Layer 3
LP-50	95	2	juniper	644 +b	bench surface near Chapin Black-on-white bowl
LP-65	107	1	juniper	644 vv	SW Layer 4
LP-58	115	1	juniper	645 ++b	Layer 3
LP 76	161	1	juniper	646 ++rb	Layer 4
LP-55	102	1	juniper	647 +vv	NW post, Feature 5, Floor 2
LP-23	37	1	juniper	648 vv	NE Layer 4
LP-32	54	1	juniper	648 r	Layer 3
LP-60	128	1	juniper	650 vv	SW Layer 4
LP-4	10	1	juniper	651 v	SE Layer 2
LP-64	106	1	juniper	652 vv	NW post, Feature 5, Floor 2
LP-67	141	1	juniper	652 rb	Layer 4
LP-21	35	1	juniper	653/r	Layer 3
LP-29	51	1	juniper	653 r	Layer 4
LP-57	108	1	juniper	653 r	Layer 4
LP-6	10	3	juniper	654 r	Layer 2
LP-10	25	2	juniper	654 rb	Layer 3
LP-14	26	1	juniper	654 rb	Layer 3
LP-15	165	1	juniper	654 r	SE Floor 2
LP-16	27	1	juniper	654 r	bench surface contact
LP-24	38	1	juniper	654 rb	Floor 2 contact
LP-25	39	1	juniper	654 rb	Floor 2 contact
LP-26	40	1	juniper	654 r	Floor 2 contact
LP-27	40	2	juniper	654 r	Floor 2 contact
LP-30	52	1	juniper	654 rb	Floor 2 contact
LP-41	80	1	juniper	654 rb	Floor 2 contact
LP-43	84	1	juniper	654 r	Floor 2 contact
LP-46	76	1	juniper	654 B	Floor 2 contact
LP-54	101	1	juniper	654 r	Feature 5, NW roof support
LP-66	117	1	juniper	654 r	Floor 2 contact
LP-68	139	1	juniper	654 rb	Floor 2 contact
LP-70	142	1	juniper	654 r	Floor 2 contact
LP-73	154	1	juniper	654 r	Floor 2 contact
LP-34	62	1	juniper	666 vv	SE Layer 4
LP-52	99	1	juniper	666 +r	97N/50E, Layer 4, Floor 2 contact
LP-22	36	1	juniper	669 +v	NE Layer 4
LP-53	100	1	juniper	673 vv	NW post, Feature 5, Floor 2
LP-71	146	1	juniper	674 r	99N/50E, Layer 3

Table 11.5 (continued)

Tree-ring Lab Catalogue No.	FS	Fragment	Species	Date/ Symbol	Provenience
LP 31	53	1	juniper	675 rb	103N/51-52E, Layer 3
LP-44	85	1	juniper	675 v	NW Layer 4
LP-72	150	1	juniper	695 r	99N/50E, Layer 4, Floor 2 contact

Key to abbreviations (Towner 2003:30–32):

B = Bark is present.
G - Beetle galleries are present on surface.
c = The outermost ring is continuous; used only for full sections.
r = Less than a full section is present, but the outermost ring is continuous where available.
v = The analyst judges that the date is within a few years of the cutting date.
vv = There is no way of estimating how far the last ring is from the cutting date.
+ = One or more rings may be missing near the end of the ring series.
++ = A ring count was necessary since the specimen was undatable past a certain point.
The symbols B, G, c, and r indicate cutting dates in decreasing order of confidence.

Table 11.6. LA 60751, Pit Structure 1, tree-ring dates by quadrant, roof fall, and floor contact.

Date (AD)	Northeast Quad	Southeast Quad	Southwest Quad	Northwest Quad	Total
Roof Fall (Layer 3)					
643	–	–	–	1	1
644	–	–	1	–	1
645	–	–	1	–	1
646	–	–	1	–	1
648	–	1	–	–	1
652	–	–	1	–	1
653	–	1	1	–	2
654	4	–	5	1	10
669	1	–	–	–	1
675	–	–	–	2	2
Total	5	2	10	4	21
Floor Contact (Layer 4)					
644	1	–	–	–	1
653	1	–	–	–	1
654	4	–	2	1	7
666	–	–	1	–	1
674	–	–	1	–	1
695	–	–	1	–	1
Total	6	–	5	1	12

Table includes only r, v, and +B specimens (see Table 11.5).

Figure 11.15a. LA 60751, Pit Structure 1, Layer 3, Feature 2 (slab-lined posthole).

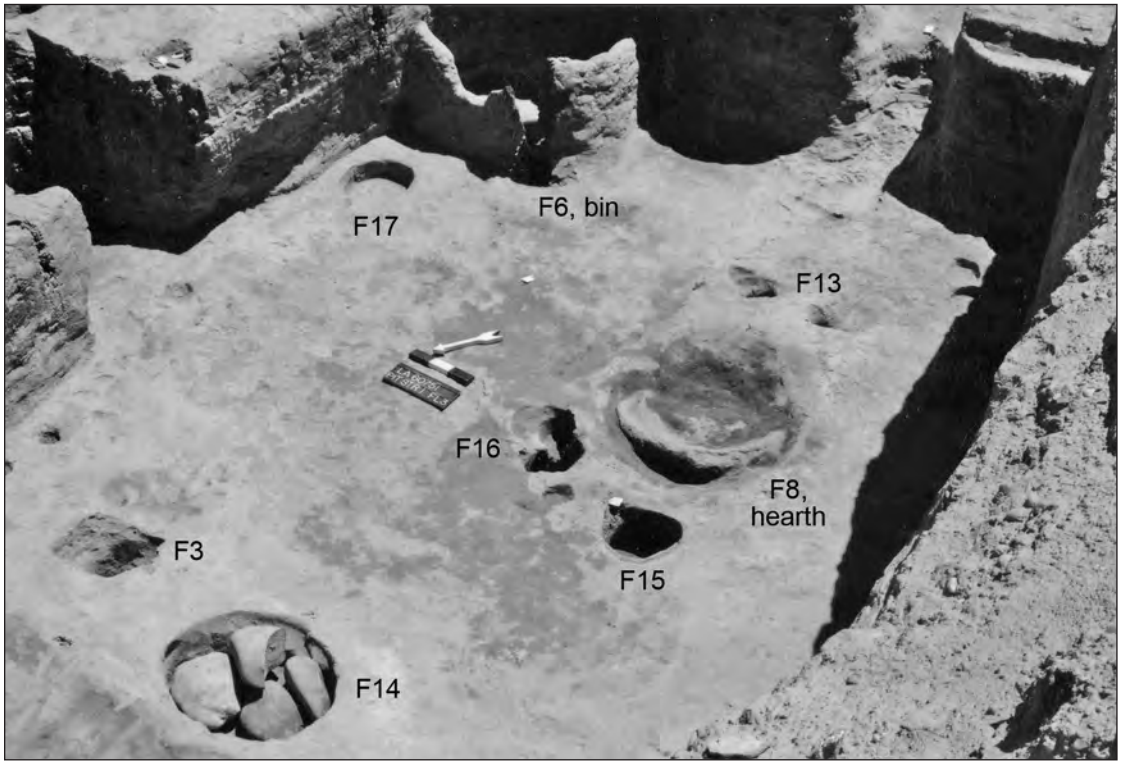


Figure 11.15b. LA 60751, Pit Structure 1, Floors 2 and 3, Features 3, 6 (bin), 8 (hearth), and 13–17; view east.

the main northeast support during the occupation of Floor 3. Alternatively, this function could have been filled by Feature 19, a posthole associated with Floor 3.

During the replastering of Floor 3, the antechamber, the bench, and numerous features were probably added. Floor 2 clearly articulates with the surface of the corridor that leads into the antechamber. However, the remaining cultural strata under Floor 2 appear to abut the corridor to the antechamber as well as the bench.

Contemporaneous with the Floor 2 occupation is the remodeling of the hearth (Feature 8), when a collar was added to the north side. Additional evidence of remodeling includes several features that were plastered over during the resurfacing of Floor 3 (Features 15–17 and 19). Feature 14 contained large burned cobbles, which, instead of having been removed from the structure, were apparently placed in the feature and covered with plaster. Although the original walls were probably constructed during the initial occupation, the bench, wing walls (Feature 11) and bin (Feature 6) were added during the Floor 2 sequence.

Architectural Details

Excavations conducted on the exterior of the pit structure confirm that the initial construction included digging the original pit into sterile soil. Prior to this occupation, an ephemeral and artifactually sterile surface (Floor 5) may have existed. The floor plan of the main chamber was symmetrical, that is, square with rounded corners, or subrectangular. No traces of plaster were evident on the walls, although the horizontal and vertical surfaces of the bench were well defined (primarily due to burning) and may have been plastered. The floor may have been prepared with a thin clay surface and compacted through foot trampling.

No evidence of burning was observed in the antechamber. A large flat sandstone slab, found on the interior, may have been used to seal the entrance from the south side. A significant difference in elevation existed between the antechamber and the main chamber of the pit structure. There was a gradual vertical drop of 80 cm as the corridor sloped downwards to the north for about 1.65 m before entering the main chamber. Only a single posthole (Feature 7), in the northeast corner of the antechamber, appeared to have been excavated into the ground (Fig. 11.7). The remaining posts were stepped on a series of eleven flat cobbles placed along the perimeter of the interior of the antechamber. These shimlike elements may have been inserted between the base of the posts and the floor and held in place by the weight of the antechamber roof. The flat rocks would have prevented the ends of the posts from being pushed into the ground by the weight of the superstructure, which would have destabilized the roof.

In the main chamber, the bench ringed the interior of the room, tapering out on the south side of the structure (Fig. 11.7). Rising to a height of 70–80 cm above the surface of Floor 2, its widest point (the northeast corner) measured 1.20 m. Exterior postholes were few and small, with the exception of Feature 2. The roof was supported by four main posts. The north posts (Feature 3, northeast; and Feature 5, northwest) were smaller in diameter than the southern posts, and both of them may have required additional support. The northeast post was excavated very deeply (80 cm below the floor) and may have been supported by a large element (a leaner) anchored in Feature 2.

Feature 2 (Fig. 11.15a), a socket-shaped posthole 18 to 25 cm deep, was at the back edge of the bench, where the northeast corner of the roof would have been. It was reinforced with cobble shims lining the hole and a flat cobble at its base. A leaner may have existed in Feature 2, cantilevered against the upright post in Feature 3 to reinforce the roof. The northwest post (Feature 5) was probably supported as well, although in a less robust fashion, by a lateral element leaning upward to stabilize the upright post. A notch in the face of the bench suggests that this support was embedded in the north wall of the bench, also near the location of the roof corner. Additional reinforcement was provided by an adobe collar around the base of the northwest post at floor level.

Both of the southern main posts were supported by adobe walls. The southeast post (Feature 4) was supported by the two bin walls (Feature 6), which joined the bench. This served the dual purpose of supporting the post and creating a space interstitial to the main chamber, the south wall, and the antechamber that probably served as a storage facility. The southwest post (Feature 10) was supported by two free-standing wing walls. Remodeling features such as leaners, small walls, and collars were

probably added as repairs and to reinforce preexisting roof supports.

No well-defined deflector was located between the ventilator aperture and the hearth, although Feature 13 may be the remains of a badly reduced jacal deflector.

Use Surfaces

Surface 1. This surface was a discontinuous ash lens (1–3 cm thick) in the upper fill of the pit structure at 0.95 m bsd; it was originally identified as a floor and takes up Floor 1 in the floor sequence. Portions of this layer were level, but generally it was more concave and conformed to the rest of the pit structure's stratigraphy, which dipped down in the center. This surface probably represented the top of the roof. When the structure burned and collapsed, the roof (lower beams, thick layer of soil on top, and roof surface) fell into the main chamber. This produced a layer of charred closing materials, overlain by the dirt roof. Surface 1 then formed on top of the roof fall. Several artifacts were recovered from this layer, including early gray ware sherds and a Basketmaker III projectile point. This surface corresponds to the displaced top of the roof, and the artifacts associated with the surface probably represent use of the roof. No features were present on Surface 1. A single tree-ring specimen dating to AD 653 was associated with this surface, which coincides with the dates obtained from the roof-fall stratum.

Floor 2. This floor reflects the latest occupation of the pit structure and is associated with Features 2–12, the antechamber, and the bench (Fig. 11.15b). Below burned roof fall (Layers 3 and 4) at an average depth of 1.50 m bsd, it consisted of a mottled, ash-stained, and oxidized (from burned roof fall as well as from the hearth) occupation surface that sloped gently up at the edges and articulated with the bench. The surface, which varied from 1 to 4 cm thick, was compacted by foot trampling and appeared to have been prepared with a light slip of clay.

Munsell color codes taken from the floor ranged from 10YR 4/2 (dark grayish brown) to 10YR 6/4 (pale red), 7.5YR (pinkish gray brown), and 10YR 3/1 (very dark gray). The central portion of the surface was relatively unburned, since the fire was apparently concentrated in the vicinity of the four main roof supports. The bench was either constructed or heavily remodeled during the occupation of Floor 2.

Artifacts associated with the floor include fragmentary and whole ceramics (n = 86), a Late Archaic projectile point, a large metate, charred basketry, cordage, ground stone, and various lithic artifacts and tools (Table 11.7). Some of these items, the ground stone in particular, may fall under the category of de facto refuse or "site furniture" (Binford 1979:255–273).

Eighteen lithic artifacts were associated with the Floor 2 occupation and only five with Floor 3. Chert was the dominant material type on both floors, both by count and weight. There was also one item of retouched/utilized debitage on each floor, a relatively large piece of silicified wood on Floor 2, and a piece of siltstone of similar size on Floor 3 (Table 11.8). The mean weight of the artifacts from Floor 2 was about half of that from Floor 3, although the Floor 3 sample is small. Features and activity areas associated with Floor 2 include the area around the hearth and the area in the space between the southwest wing walls and the south wall. The activity area around the hearth was composed of ash pits and a pot rest. The south activity area consisted of a large pecked sandstone basin metate, a metate rest, and several pot rests. Portions of the west part of Floor 2 were not exposed because it ran under the highway.

Floor 3. This surface was a prepared floor 4–10 cm below Floor 2, at an average elevation of 1.72 m bsd (Fig. 11.15b). Consisting of a prepared-clay lens, the surface was very thin, averaging only 1 cm, and sloped upwards at the edges. The overall color was a mottled gray-brown with areas of reddish-pink oxidation. It was unclear whether this floor articulated with the bench, but it probably predated the wing walls and the bin. Floor 3 articulated with the earlier use of the hearth (Feature 8) and with Features 13–19. Because of the structure's proximity to NM 170, a portion of this surface remained unexcavated. Only two early gray ware sherds were encountered in association with Floor 3, suggesting that it is probably not many years older than Floor 2. Chipped stone was also infrequent (n = 5), and only one artifact was utilized (Table 11.8). The Floor 3 occupation may represent the initial building episode of the structure. The roof, hearth, possibly the bench, and other features may have been installed during this occupation.

Table 11.7. LA 60751, Pit Structure 1, Floor 2, ground stone, chipped stone, and ceramic artifact counts by quadrant.

	Northeast Quad	Southeast Quad	Southwest Quad	Northwest Quad	Ante-chamber	Total
Ground Stone						
Anvil	–	1	–	–	–	**1**
Pitted pounding stone	–	1	–	–	–	**1**
Mano	–	–	1	–	–	**1**
Two-hand mano	–	–	–	–	2	**2**
Two-hand slab mano	–	–	1	1	–	**2**
Trough metate	–	–	1	–	–	**1**
Grooved maul	2	–	–	–	–	**2**
Total	**2**	**2**	**3**	**1**	**2**	**10**
Chipped Stone						
Debitage	9	–	14	2	–	**25**
Core	1	–	–	–	–	**1**
Utilized debitage	–	–	1	–	–	**1**
Projectile point	1	–	–	–	–	**1**
Hammerstone	1	–	–	–	–	**1**
Total	**12**	**–**	**15**	**2**	**–**	**29**
Ceramic						
Bowl rim	2v	–	–	1	–	**3**
Bowl body	10v	–	–	10	–	**20**
Necked jar body	–	–	–	11*	–	**11**
Jar body	–	–	–	52*	–	**52**
Total	**12**	**–**	**–**	**74**	**–**	**86**

* = Includes sherds from Vessel 1 (10 necked jar, 28 jar body); there are also 5 body sherds from a different polished gray jar.
v = Includes sherds from Vessel 2 (2 rim, 2 body).

Table 11.8. LA 60751, Pit Structure 1, Floors 2 and 3, chipped stone artifact type by material type; counts and weights.

	Chert		Silicified Wood		Quartzite and Quartzitic Sandstone		Siltstone		Total	
	Count	**Weight (g)**	**Count**	**Weight (g)**	**Count**	**Weight (g)**	**Count**	**Weight (g)**	**Count**	**Weight (g)**
Floor 2										
Debitage	18	66.0	1	8.0	2	5.0	4	68.0	**25**	**147.0**
Utilized	–	–	1	15.0	–	–	–	–	**1**	**15.0**
Point	1	19.0	–	–	–	–	–	–	**1**	**19.0**
Core	–	–	–	–	1	424.0	–	–	**1**	**424.0**
Hammerstone	1	170.0	–	–	–	–	–	–	**1**	**170.0**
Total	**20**	**255.0**	**2**	**23.0**	**3**	**429.0**	**4**	**68.0**	**29**	**775.0**
Floor 3										
Debitage	2	38.0	–	–	2	7.0	–	–	**4**	**45.0**
Utilized	–	–	–	–	–	–	1	14.0	**1**	**14.0**
Total	2	38.0	–	–	2	7.0	1	14.0	**5**	**59.0**
Table Total	**22**	**293.0**	**2**	**23.0**	**5**	**436.0**	**5**	**82.0**	**34**	**834.0**

Mean debitage weights: Floor 2 mean = 5.9 g, sd = 11.8; Floor 3 mean = 11.8 g, sd =15

Floor 4. Floor 4 was located at an average elevation of 1.80 m bsd. Munsell soil colors taken from the floor were 7YR 6.5/2 (pinkish gray), 10YR 4/3 (darkish brown), and 7.5YR 5.5/2 (pinkish gray-brown). The composition of the floor consisted of a mix of clay and sand with charcoal specks. It did not appear to articulate with the walls or the bench, as did Floors 2 and 3. No central hearth was associated with Floor 4, and no artifacts were present. Feature 20 (a cist in the southeast corner adjacent to the posthole) and Feature 21 (a small bell-shaped cist) were found during the excavation of this surface. Perhaps this surface was the base of the excavation during the construction of the pit structure.

Floor 5. We encountered a further surface that appears to predate the structure. The elevation of this surface was between 1.88 and 1.99 m bsd. It consisted of a concentrated burned area measuring 2.0 by 2.0 m and a mottled area associated with the burn. Oxidation from this feature appears to extend beyond the walls of the structure. The burning was not sufficiently intense to obtain an archaeomagnetic sample. No features or artifacts were recovered in association with this surface. A subfloor test revealed a sterile substratum. It is possible that this stratum may be the result of a preoccupational burn.

Bench surface. The surface of the bench consisted of a hard-packed, mottled gray, ash-stained clay oxidized in places by burning roof fall. The surface appeared prepared, was very thin (only 0.5 cm in some areas), and articulated with the structure walls. It ranged in depth between 0.51 and 0.81 m bsd. The bench, which ringed the interior of the main chamber, tapered out and disappeared on the south side of the structure and was not present (or could not be discerned) to the west or southwest. The top of the bench rose to a height of 70–80 cm above the surface of Floor 2; at its widest point in the northeast corner, it was 1.20 m wide. A portion of the eastern bench was eroded away by a small water channel (Fig. 11.7). Two shallow depressions (not recorded as features) were located along the southeast arc. They may have been highly eroded postholes.

A variety of artifacts was recovered in situ on the bench, including partially restorable vessels, a large grooved maul, and miscellaneous items of tabular sandstone (Table 11.4). The ceramic artifacts include one partial polished utility jar and two partial Chapin Black-on-white bowls (Fig. 11.16 [a–c]). Given the low frequency of white ware vessels, it is notable that two nearly intact examples were found in the structure living area. These may have been placed on the bench as part of the formal abandonment of the structure. Table 11.4 presents artifacts located directly on or in the contact layers of Floor 2, the use-surface associated with the final occupation. It shows that different artifact categories were located in different portions of the structure: ground stone was found in all parts of the structure, but especially in the southern part of the main chamber and the antechamber. The majority of floor artifacts were recovered from the bench: 81 of 86 pieces of pottery, 2 mauls, 1 mano, and 1 pounding stone. No chipped stone tools came from the bench surface. The En Medio Archaic projectile point was in contact with the floor in the northeast quadrant of the main chamber.

Antechamber surface. The elevation of the antechamber floor averaged 0.80 m bsd. Unlike the associated cultural layers in the pit structure, the antechamber surface was unburned and not well defined. It consisted of intermittently foot-packed sandy clay-loam, a 7.5YR 7/2 (pinkish gray) color. Few artifacts were encountered on the floor, with the exception of a mano and a fragmentary metate along the eastern side of the room. Especially with the scarcity of other artifacts, the presence of a second complete mano on the floor of the antechamber suggests food processing. Perhaps the antechamber served a secondary function as a storage area for ground stone, and mealing activities took place behind the wing walls of the main chamber. This large (46 by 70 cm) sandstone slab with a lightly pecked and ground area (43 by 27 cm) was inverted in the center of the antechamber about 30 cm south of the passage to the main chamber. The slab could have also been used to block the passageway, perhaps to modulate air flow. Rodent disturbance was evident throughout the surface.

Features, Floors 2–5

In this discussion, the features associated with the floors of the pit structure are grouped into functional categories. Table 11.9 lists information for features associated with Floors 2, 3, and 4.

Posts, postholes, and wing walls. This category includes Features 2–5, 7, 9, and 10 on Floor 2 (Figs. 11.7, 11.17, 11.18, 11.19), and Feature 19 on Floor 3.

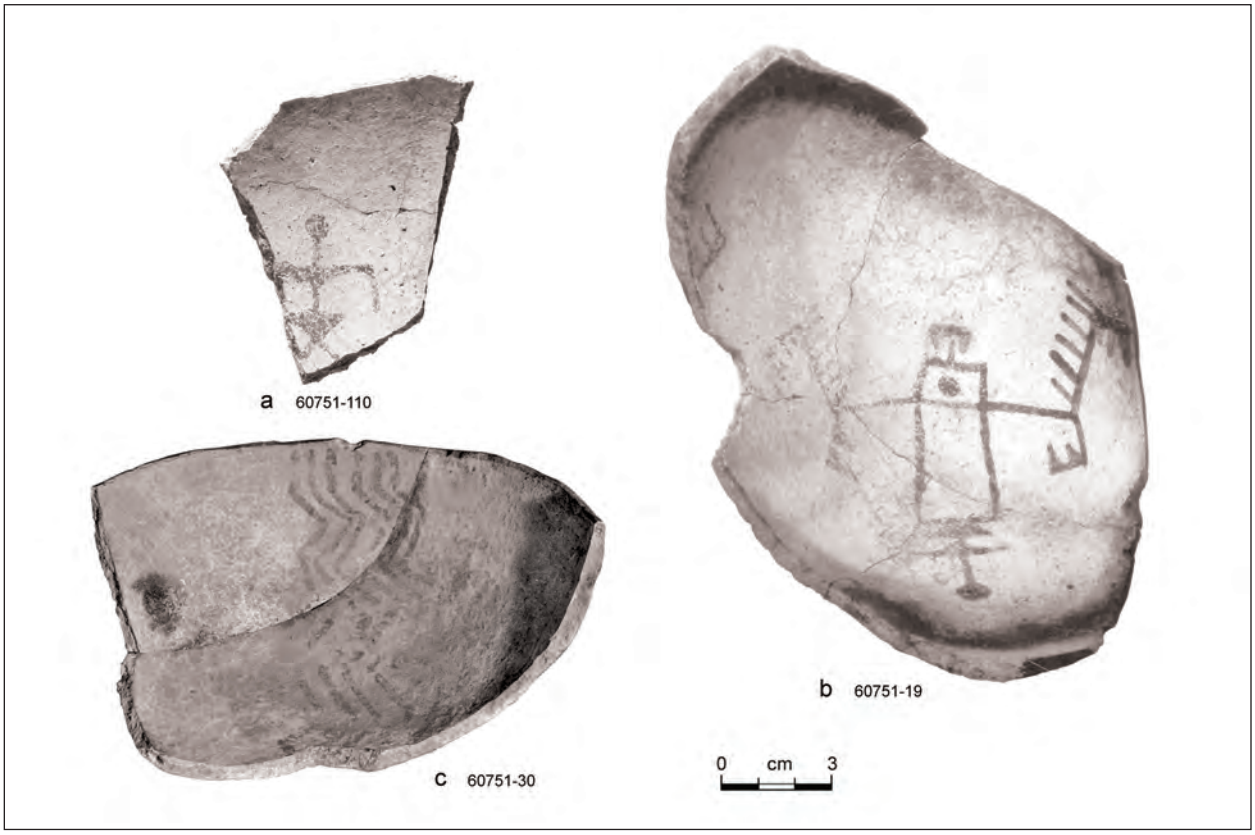


Figure 11.16 [a–c]. LA 60751, Pit Structure 1, Chapin Black-on-white bowl sherds: a. anthropomorphic form, from roofing layer (Layer 4), northwest quadrant; b. iconic figure, possibly a shaman, on Vessel 3; and c. Vessel 2, from bench, northeast quadrant.

Feature 2 was a large slab-lined posthole, 17 cm above the northeast corner of the structure, containing the fragmentary remains of a burned post (Fig. 11.15a). This specimen did not produce a tree-ring date. The feature appeared to be associated with the latest remodeling episode of Floor 2, although its relation to adjacent features was unclear. It may have served as additional support for the roof, or for the main support post (Feature 3). The location of this feature is somewhat problematic, because if it had been in use during the occupation of the pit structure, it would have had no collateral support from the surrounding fill, seemingly "floating in space." Perhaps, through some architectural sleight of hand, it received support from the roof, or perhaps it was a post with some extramural function. The disturbed context of this feature makes it difficult to interpret its function. Feature fill consisted of sandy/clayey soil with large burned cobbles, burned wood, and soil permeated with charcoal flecks.

Feature 9, a shallow posthole at approximately the same elevation as Feature 2 (0.30 m bsd), may have served as a support post as well. The surrounding stratigraphy suggested several oxidized lenses abutting the feature. These lenses, located above the bench, may have washed in postoccupationally. The fill of this feature consisted of sandy/clay with charcoal flecks.

Features 3, 4, 5, and 10 contained the main support posts for the structure. The wood used in construction was juniper. Feature 3, the northeast post, had a small diameter but was deeply embedded (80 cm below floor surface) in the ground. The top elevation of this feature was 1.44 m bsd. During the excavation of Floor 3, a posthole, slightly offset to the southeast, was exposed. This posthole may have been the main northeast roof support, erected during the Floor 3 occupation. Later, during the refurbishing of the structure, it was replaced by the Floor 2 occupants. The post may have been buttressed by Feature 2 (Fig. 11.15a), which could

Table 11.9. LA 60751, Pit Structure 1, Floors 2, 3, and 4, feature details.

Feature	Floor	Construction Details	Shape	Use Details	Assigned Function	Dimensions (cm long, wide, deep)	Volume (l)
1	2	roofed pit with attached antechamber, bench, and features	pit	burned	habitation	9.5 x 5.75 x 1.4 m	–
2	2	cobble-lined with a flat cobble at the base	hemispherical pit	unburned	posthole	30 x 30 x 25	17.7
3	2	main support post, northeast quad	inverted cone pit	top burned	posthole	33 x 33 x 80	68.4
4	2	main support post, southeast quad; two wing-walls attached	cylindrical pit	unburned	post	42 x 42 x 55 upper 12 x 12 x 55 lower	82 (76 + 6)
5	2	main support post, northwest quad	inverted cone pit	burned above floor	post and posthole	33 x 33 x 52	44.5
6	2	two adobe walls attached to Feature 6 and the walls of the structure	rectangular bin	burned	bin/ storage	75 x 95 x 47	335
7	2	main support post for roof of antechamber	cylindrical pit	unburned	posthole	19 x 15 x 32	7.3
8	2	plaster-lined	hemispherical pit	burned	hearth	72 x 80 x 16	70.7
9	2	exterior feature	hemispherical pit	unburned	post	14 x 14 x 7	1.1
10	2	main southwest roof support	inverted cone	unburned	post	15 x 15 x 53	9.4
11	2	two adobe walls attached to main support post	rectangular	burned	wing-walls	85 x 15 thick x 40 high (east); 50 x 15 thick x 38 high	–
12	2	unlined, open	hemispherical pit	unburned	pot rest	17 x 16 x ?	–
8	3	plaster-lined, remodeled from Floor 2, Feature 8	hemispherical pit	burned	hearth	72 x 80 x 16	70.7
13	3	small postholes for jacal deflector	hemispherical melted adobe pits	burned	deflector	62 x 19 x 18	–
14	3	unlined, floored over, filled with cobbles	oblong curvilinear	unburned	storage (?)	56 x 64 x 34	96.1
15	3	lined, with adobe collar on north side, floored over	hemispherical cist	burned	ash pit	30 x 30 x 24	17
16	3	unlined, floored over, two overlapping pits	irregular pits	burned	ash pits	34 x 34 23	20.9
17	3	clay-lined, floored over	hemispherical cist	unburned	storage (?)	36 x 33 x 10	9.3
18	3	shallow unlined pit, floored over	hemispherical pit	unburned	pot rest	18 x 18 x 19	4.8
19	3	unlined, floored over	cylindrical pit	unburned	posthole	10 x 9 x 23	1.6
22	3	shallow unlined pit, floored over	hemispherical pit	unburned	pot rest	12 x 11 x 3	0.3
23	3	shallow unlined pit, floored over	hemispherical pit	unburned	pot rest	20 x 20 x 4	1.3
20	4	unlined, floored over	cylindrical pit	unburned	storage (?)	32 x 26 x 30	19.8
21	4	clay-lined, floored over	conical cist	unburned	storage	19 x 19 x 16	4.5

Figure 11.17. LA 60751, Pit Structure 1, Floor 2, during excavation, view north.

Figure 11.18. LA 60751, Pit Structure 1, Floor 2, southeast wing wall and Feature 6 (bin), with Feature 4 (post).

Figure 11.19. LA 60751, Pit Structure 1, Floor 2, Feature 11 (west wing wall) and Feature 10 (southwest post).

have provided additional support for the post or a portion of the roof. The fill of this feature consisted of compact sand with charcoal chunks.

The northwest post (Feature 5) was supported by a leaner socketed in a niche along the north wall of the bench, and an adobe collar packed around the post at floor level provided additional reinforcement. The top of this post was at 1.41 m bsd, and it extended 54 cm below the surface of Floor 2. The fill consisted of sandy soil with wood fragments. Feature 3 was burned above the floor level and decomposed below the surface. The fill consisted of sandy soil, some clay, and chunks of decomposed wood. Only the northwest posthole contained tree-ring material that was datable. Six specimens from this feature returned tree-ring dates (Table 11.5). One specimen dated AD 654, suggesting that it was coeval with the main construction of the pit structure. The other five specimens are missing significant numbers of outer rings; they date 584vv, 617vv, 647vv, 652vv, and 673vv. With the exception of the AD 673 date, this large number of specimens from a single posthole could be explained as portions of the AD 654 post, but the single date at AD 673 suggests more complex circumstances. While several of the pre–AD 654 dates came from a wooden post, the locational information for the 673 date indicates that it came from Feature 5, but from *above* the floor. This date could either be a chance association of an element with the post, or it may represent a later shim or post.

The diameters of the northern main posts (Features 3 and 5) were significantly smaller than those of the southern posts, suggesting the need for auxiliary roof support, repair, or replacement. The large dimensions of the beams recovered from the roof fall and the bulk of soil associated with the roof fall suggest the roof was very heavy. It would therefore not be surprising that reinforcement and shoring-up measures were taken, especially during rebuilding episodes. Portions of the posts existing above the surface of the floor were burned, but below the surface they were largely unburned except at the base. This suggests that the tree had been felled through "girdling and burning," wherein a "tourniquet" stems the flow of sap to kill the tree, and a fire is placed strategically to burn through the trunk. Given the labor intensity of cutting down a tree with

stone tools, this is a very efficient method. However, faint cut marks along the base of these elements also suggest that lithic tools had been used to supplement the felling process. Unlike the decomposed wood of Feature 3, wood from the northwest post was intact, and tree-ring dates were obtained.

Both of the southern main posts (Features 4 and 10) were supported by adobe wing walls (Figs. 11.11, 11.15b, 11.17). The southeast post (Feature 4) was integrated into the architecture of a bin (Feature 6) attached to the bench and the south wall (Fig. 11.18). This element was the largest in diameter of all of the posts. The majority of the excavated postholes were conical in profile (wider at the top, and tapering down to a narrow base), suggesting that the posts may have been placed into the postholes upside down, with a truncated portion of the root mass at the top. This was confirmed by the partially unburned portions of Features 3, 4, and 5 (main roof supports), where knots along the bark suggested that the branches were pointing downwards and that the thinner portion of the tree (i.e., the top) was planted in the ground. The fill from Feature 4 consisted of fine-grained sand with charcoal and wood fragments. Feature 10 was not excavated below the floor surface for safety reasons.

Feature 19, a posthole, appears to represent an earlier posthole associated with the occupation of Floor 3. This posthole may represent a roof support or a leaner in use during the Floor 3 occupation but discarded during the Floor 2 occupation. The fill of this feature consisted of sandy brown soil with large chunks of charcoal and contained no artifacts.

The superstructure of the antechamber appears to have been primarily supported by a series of posts that ended flush with the floor and were held in place with sandstone slabs. Feature 7, however, may represent a deeply excavated roof-support posthole in the northeast corner of the antechamber. The fill of this feature consisted of medium-grained sand with charcoal flecks. No artifacts were present.

The southwest post (Feature 10) was supported by two freestanding wing walls (Feature 11) (Fig. 11.19). The southwest wing walls tapered upwards from the floor until joining the post at a maximum height of 50 cm. Functionally, the entire wing wall and post complex provided additional support for the post and directed the incoming air from the antechamber passage around the perimeter of the structure. Postholes were primarily on the interior of the structure. It is possible that the backhoe trench obliterated a posthole near the southern portion of the antechamber. Two shallow depressions were noted along the southeastern arc of the bench. These were not recorded as features.

Bins and pits. These features included Feature 6 from Floor 2, Features 14 and 17 from Floor 3, and Features 20 and 21 from Floor 4.

Feature 6, a bin, was formed by two adobe walls constructed at right angles, meeting at the southeast main support post (Feature 4) (Figs. 11.7, 11.18). Away from the post, the walls were joined to the bench. Since the bench was contemporaneous with Floor 3, Feature 6 was probably a component of the remodeling episode that occurred during the occupation of Floor 2. The adobe walls that connect the post to the bench stand an average of 30–40 cm high. Few artifacts were recovered from the fill, although a large pecked cobble was leaning against the interior of the north wall. The feature was considerably oxidized in the fire that consumed the pit structure and that intensified around the main interior support posts. The fill consisted of compact sand with charcoal chunks, charcoal flecks, pebbles, and artifacts. Apart from the bin, the remaining storage facilities appeared to be associated with the earlier occupations represented by Floors 3 and 4 (Fig. 11.15b). Feature 14 was a substantial oval pit near the northeast wall of the structure on Floor 3. The fill of this feature contained no artifacts, although four large unmodified burned cobbles were present. There was ample evidence of remodeling during the resurfacing of Floor 2. It was apparent that during the construction of Floor 2, the pit was filled with large cobbles, packed with sand, and sealed with plaster. Feature 17 was a shallow pit adjacent to the east wall, also associated with Floor 3. The feature was clay-lined, and a small center-drilled selenite bead with red pigment rubbed on all surfaces was recovered from within the feature (see Chapter 20, Vol. 2, this report). The fill consisted of sand with charcoal flecks.

Features 20 and 21, cists, consisted of circular storage features associated with Floor 4. They were both devoid of artifacts. Although the shape and location of Feature 20 suggests an ideal location for a posthole, the fill and profile suggested a storage facility. The fill of Feature 20 consisted of clayey/sandy soil. Feature 21, associated with the main hearth, is discussed below.

Hearth and associated features. Feature 8, the main hearth, was in the center of the structure. It was circular, basin-shaped, clay-lined, and 16 cm deep, with a built-up adobe collar around the top (Fig. 11.7, 11.15b). Two discrete use-episodes were inferred for this feature, which coincided with the occupations of Floors 2 and 3. The earlier, lower hearth may have consisted of a simple clay-lined depression, possibly with a slight collar on the south side. The liplike protrusion at the edge of the feature articulated well with Floor 3, especially on the east side. During the occupation of Floor 2, when the upper hearth was remodeled, the feature was apparently cleaned out, and the adobe coping was added on the north side.

The hearth was very well burned, as was the surrounding floor and soil, suggesting fairly intensive use. In spite of the good burn, archaeomagnetic dates obtained from this feature were inconclusive because of sampling problems. When profiled, the hearth revealed textbook stratigraphy (Figs. 11.7, 11.20). Three main burned strata were clearly defined, separated by sand lenses presumably representing times when the hearth was unused or remodeled. Excavation showed that both the earlier and later hearth had been cleaned out, and a bed of clean white sand had been laid down as a lining for the hearth prior to its final use. Half of the clean sand fill was oxidized bright pink, and the top level consisted of mixed charcoal and ash. An early gray ware sherd was found embedded in the hearth coping, and a heat-modified flake was recovered from the east half of the fill.

Features associated with the hearth include Feature 12 (Floor 2) and Features 13, 15, 16 (Floor 3), and 21 (Floor 4).

Feature 12, a shallow depression that probably served as a pot rest, is the only feature associated with the activity area in the vicinity of the upper hearth. Light oxidation is present around the rim of the feature. The fill from this feature was medium-grained sand with charcoal flecks.

Feature 13 was the badly eroded remains of the deflector. Two pits, a concentration of melted adobe, and three tabular sandstone elements on the south edge of the hearth suggest that a jacal deflector (possibly reinforced with short posts and faced with the rock slabs) existed between the antechamber passage and the hearth. The function of deflectors in pit structures has been well documented. As the

Figure 11.20. LA 60751, Pit Structure 1, Floor 2, Feature 8 (hearth), cross-section.

air is drawn in from the outside through the antechamber passage by the draft created by combustion in the hearth, it is circulated around the structure by the deflector, which also prevents the incoming air from scattering the fire. The fill of the pits consisted of sand, ash, and charcoal.

Feature 15 consisted of a hemispherical ash pit that articulated with Floor 3 (Figs. 11.7, 11.15b). This feature was bell-shaped, clay-lined, and filled with sand mixed with ash and specks of charcoal. A plain gray sherd was found midway in the fill, and a partial adobe collar was on the north side. Nearly equal quantities of sand and ash were present in the fill of this feature.

Feature 16 was an hourglass-shaped ash pit. The outline and irregular base of this feature gave it the appearance of two or three superimposed pits. However, excavation revealed a single pit. No immediate function could be ascribed to the unusual configuration of this feature, which was filled with mixed sand, ash, and charcoal.

Three pot rests were recorded as Features 18, 22, and 23 (Fig. 11.7). These features were probably associated with a probable mealing area south of the southwest post and wing walls on Floor 3. It contained a metate whose western end was raised above the surface of Floor 2 by a small mound of packed earth, which formed a metate rest. These shallow depressions were evidently used to hold pots upright during processing activities when Floor 3 was being used. The area was probably reused for a mealing area during the use of Floor 2, although these pot rests were sealed with plaster during Floor 2 remodeling. The fill from Features 18, 22, and 23 consisted of medium-grained sand with charcoal flecks.

Feature 21, a small circular clay-lined bell-shaped cist between Features 1 and 15, articulated with Floor 4. Although adjacent to the hearth, it was apparently not directly in association. Some specks of charcoal were visible in the clay lining, and a nonhuman bone was present in the fill. Feature fill was sand and ash. It was highly disturbed by rodents, which did not allow adequate recovery of botanical information. Artifacts were present in the fill and the contact stratum.

Layer 4, Floor 2, the antechamber, the bench, and Features 2–12 appear to represent the final occupation of the structure. Roof fall was primarily concentrated in the vicinity of the four major posts, where substantial oxidation occurred on the floor and on the bench walls, and from which archaeomagnetic samples were obtained. Unfortunately, these samples did not yield any results. Substantial rodent activity was noted during the excavation of this layer, particularly along the west and north walls. Fragments of cordage in 104N/54E consisting of twisted strips of squawbush (*Rhus trilobata*) had apparently been tied around several of the roof elements.

Layer 5, between 1.50 and 1.72 m bsd, was defined when subfloor excavations were being conducted. This layer included Floor 2, its immediate substratum, and contact with Floor 3. The actual surface, associated features, and architecture of Floor 2 are described above. Below the 1 to 4 cm thick floor surface, the substratum consisted of laminated, loosely consolidated sandy loam with charcoal specks, alternating with clay lenses. Oxidation was noted around the hearth. Very few artifacts were noted. Some rodent burrows were present east of the hearth, primarily in 99N/51E. The last 5 cm of Layer 5 formed the contact stratum associated with Floor 3; the majority of the few artifacts were recovered from this stratum.

Layer 6, between 0.42 and 0.85 m bsd, consisted of cultural fill in the antechamber. The fill was homogeneous, light gray sandy soil with occasional cultural inclusions. The fill also extended into the corridor/ventilator area, which led into the main chamber of the pit structure. The base of this stratum was in contact with the use-surface of the chamber. Unlike the associated cultural layers in the pit structure, the floor of the antechamber was not burned. The soil and color of the antechamber floor were identical to those of the floor itself: 7.5YR 7/2 (pinkish gray). Rodent disturbance was evident throughout the stratum.

Layer 7 was defined during the subfloor excavation of Floor 3 within the pit structure. This stratum occurred between 1.52 and 1.80 m bsd. Approximately 5 cm at the base of the layer consisted of the contact with Floor 4. The fill consisted of laminations of fine, sandy loam with occasional charcoal inclusions, alternating with thin clay lenses. Some traces of remnant oxidation were present in the vicinity of the hearth (Feature 8), which at that point was no longer in evidence. Rodent disturbance was observed throughout the stratum, which lacked artifacts.

Layer 8 consisted of Floor 4, subfloor fill, and

contact with Floor 5. The fill consisted of alternating laminations of sandy-loam and clay lenses. This stratum was present between 1.80 and 1.96 m bsd. No artifacts were present.

Interpretation

The stratigraphy of Pit Structure 1 at LA 60751 suggests a pattern of initial occupation, periods of disuse, intermittent reoccupation and remodeling, and eventual abandonment. The initial periods of occupation were not well defined.

Floor 5 may represent a natural burn stratum that may predate the cultural sequences in the pit structure. Similar occurrences were recorded at nearby LA 37592 and LA 60752. Strata between the floors suggest that the structure may have been open or partly open for unspecified periods of time between occupations. Portions of the roof may have been collapsed during this interval. Laminations present in the postoccupational fill indicate that eolian and alluvial soils were deposited during an occupational hiatus. However, the thinness of the layers of colluvial deposits washed in from the adjacent alluvial terraces suggests that the intervals between occupations were short.

The final occupation may be less problematic than the preceding ones. It was originally thought that Floor 1 represented the final occupation of the structure. The lens identified as Floor 1 was ephemeral to the extent that it was not possible to conclude whether it constituted a natural or cultural occurrence. Moreover, the relationship between this layer and the artifacts, features, and stratigraphy of Floor 2 is unclear. This layer may represent by-products of an activity area or areas that washed into the pit. The most plausible interpretation of the stratigraphic sequence of the structure of LA 60751 is that successive occupations (Floors 5–3) culminated in the final occupation represented by the Floor 2 component.

Nonarchitectural Areas

No extramural activity areas associated with Pit Structure 1 were encountered. The low visibility of extramural areas is primarily due to the high degree of surface disturbance to the site prior to the project. As discussed below, the ceramic assemblage collected from the surface contained few Basketmaker materials. Basketmaker populations did not typically confine their activities to the interior of their structures. However, any exterior activity areas associated with the structure at LA 60751 have been obliterated by the road or heavy equipment. It is possible that the lens identified as Floor 1 may have been the result of an extramural activity area washing into the fill of the pit structure once the roof had collapsed and the structure was filling in. In the absence of documented activity areas outside of the structure, the origin and function of this layer is conjectural—it could merely be the top of the burned roofing material.

Unexcavated Areas and Features Associated with Pit Structure 1

The structural component of LA 60751 was adjacent to existing NM 170, and portions of the western walls and bench of Pit Structure 1 were directly underneath the road shoulder. The extent of materials or features present beneath the road is not known, since those portions of the pit structure that were hazardously close to the roadway were not excavated. Assuming that the structure was symmetrical, the unexcavated portions consisted of about 5 m of the west wall, 1 m wide by 3 m north–south of bench, 0.2 by 3 m of floor, and any features surrounding the exterior perimeter of the structure.

Tree-Ring Data

Eighty-two tree-ring samples from Pit Structure 1 at LA 60751 were submitted to the Laboratory of Tree-Ring Research for analysis, and 52 were processed. The results are presented in Figs. 11.13 and 11.14 and Table 11.5. Forty-nine reliable (B, G, L, c, r, and v) tree-ring cases were obtained. As shown in Table 11.5, all of the samples are juniper (*Juniperus monosperma*). The dates from these samples ranged between AD 643 and AD 695 (Fig. 11.13). Of the 49 valid cases (which incorporated 12 "extreme" dates ranging from AD 584 to AD 695), the mean date was AD 646, with a median of AD 653. There were thirty-two cutting dates (r, B, and v). The mean date was AD 655.5, and the median was AD 654. Consequently, the construction of the pit structure roof was set at AD 654, coinciding with the majority of cutting dates from that interval.

The horizontal distribution of early, middle,

and late cutting dates is relatively uniform within the structure. Tree-ring samples were recovered primarily within the final episode of roof fall above the bench (Layer 3) and Floor 2 contact (Layer 4). The exception to this is FS 101, which consisted of the main support post in the northwest quadrangle of the structure. Several vv dates were obtained from the post, and one sample dated to AD 654 r. The range of dates (AD 643–695) does not appear to represent discrete components. For example, FS 52 (AD 654) and FS 53 (AD 675) were adjacent to one another and from identical elevations along the northern bench. A cluster of tree-ring samples was taken from the southwest quadrant, within the tunnel between the antechamber and the main chamber, as well as from a concentration of roof fall in the vicinity of 101N/52E, which includes the northeast post (Feature 3). These contained a mix of cutting dates ranging from AD 646 to 654. Whether the earlier series of cutting dates (AD 643–648) is contemporaneous with the earlier occupational episodes represented by Floors 3 and 5 is unknown. The early dates could be interpreted as an early construction episode. Alternatively, they could represent old wood salvaged during the AD 654 construction, or wood that has been stockpiled.

This data consistently suggests that a major construction episode occurred around AD 654. These dates may represent when the trees were harvested. The cutting date from the northwest post (Feature 5) provides good evidence for a significant construction episode during this interval. Any modification carried out in AD 654 would probably have been quite extensive, including major repairs to the roof and remodeling of features and floors. According to the stratigraphic record, Floor 2 represents the final occupation of the structure. The latest cutting date (FS 150, AD 695) was obtained directly above the main hearth and was probably roof fall and not fuelwood. The presence of later cutting dates from the roof fall mixed in with the cluster of AD 654 dates, as well as earlier dates, may represent a series of repairs done to the roof over a period of time, the last of which may have been around AD 695.

There is a clear relationship between the roof fall layer (Layer 4) and the dates found on Floor 2: differences between the floor and the roof are not indicated (Fig. 11.14). Based on this and stratigraphic and architectural data, we have estimated the minimum time the roof was standing at 40 years, or roughly two generations. This does not imply that the structure was continuously occupied during that time, but at least some portion of the roof was intact. Repairs may have occurred at intervals during the occupation, or possibly following periods of disuse. The terminal date cluster may coincide with the remodeling episode represented by Feature 2.

LA 60751: Material Culture

As was found elsewhere on the site, cultural materials from Pit Structure 1 were sparse, distributed relatively evenly throughout the fill and cultural layers. Diagnostic Basketmaker III materials and other artifacts were present in association with use surfaces, specifically Floor 2 (Table 11.7).

Ceramic Artifacts

Ceramic artifacts recovered from Pit Structure 1 at LA 60751 include 778 sherds and 3 reconstructible vessels. At least two distinctive components are evident (Table 11.11), one dating to Basketmaker III, the other to Pueblo II.

Generic ceramic types associated with the Basketmaker III occupation include plain rim, plain gray, polished utility, Basketmaker III black-on-white, Basketmaker III or Pueblo I black-on-white, and painted black-on-white. Plain and polished gray constitute most of the pottery from the early pit structure component. In most cases these sherds are distinctive from those associated with the later occupation, although some plain gray sherds could have derived from later corrugated vessels, and sherds assigned to polished utility may occasionally be misclassified as polished white. Such incidences will be rare and should have little effect on the assignment of components.

There is remarkably little contamination of later types (Tables 11.11, 11.12, 11.13). A total of 372 sherds (48.2 percent of the total sample) were assigned to these earlier types, which were rare or absent in extramural contexts (Table 11.11). The vessels from the bench and floor of the pit structure, including a bowl with an iconic figure painted on it (Fig. 11.16 [b]), and one with parallel zigzag lines from rim to center are excellent examples of Classic Basketmaker III pottery

Table 11.11. LA 60751, Pit Structure 1, pottery types by stratigraphic unit and extramural area; counts and percents.

	Pit Structure Fill		Floor 2		Bench		Floor 3		Extramural		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Plain rim	7	3.5%	–	–	–	–	–	–	1	0.2%	**8**	**1.0%**
Pueblo II–III corrugated	–	–	–	–	–	–	–	–	3	0.6%	**3**	**0.4%**
Plain gray	103	51.5%	5	100.0%	–	–	2	100.0%	127	24.4%	**237**	**30.5%**
Corrugated gray	8	4.0%	–	–	–	–	–	–	214	41.1%	**222**	**28.5%**
Polished gray	38	19.0%	–	–	45	90.0%	–	–	36	6.9%	**119**	**15.3%**
Basketmaker III black-on-white	8	4.0%	–	–	4	8.0%	–	–	–	–	**12**	**1.5%**
Pueblo I black-on-white	–	–	–	–	–	–	–	–	1	0.2%	**1**	**0.1%**
Pueblo II black-on-white	–	–	–	–	–	–	–	–	4	0.8%	**4**	**0.5%**
Dogoszhi-style black-on-white	–	–	–	–	–	–	–	–	1	0.2%	**1**	**0.1%**
Early Pueblo III black-on-white	–	–	–	–	–	–	–	–	2	0.4%	**2**	**0.3%**
Late Pueblo III black-on-white	–	–	–	–	–	–	–	–	1	0.2%	**1**	**0.1%**
Basketmaker III–Pueblo I black-on-white	1	0.5%	–	–	–	–	–	–	–	–	**1**	**0.1%**
Pueblo II-III black-on-white	1	0.5%	–	–	–	–	–	–	27	5.2%	**28**	**3.6%**
Pueblo III black-on-white	–	–	–	–	–	–	–	–	6	1.2%	**6**	**0.8%**
Painted black-on-white	11	5.5%	–	–	–	–	–	–	5	1.0%	**16**	**2.1%**
Polished white	22	11.0%	–	–	1	2.0%	–	–	54	10.4%	**77**	**9.9%**
Polished black-on-white	1	0.5%	–	–	–	–	–	–	35	6.7%	**36**	**4.6%**
Cibola indeterminate red ware	–	–	–	–	–	–	–	–	1	0.2%	**1**	**0.1%**
Wingate Black-on-red	–	–	–	–	–	–	–	–	1	0.2%	**1**	**0.1%**
Tsegi Orange	–	–	–	–	–	–	–	–	1	0.2%	**1**	**0.1%**
Reserve Smudged	–	–	–	–	–	–	–	–	1	0.2%	**1**	**0.1%**
Total	**200**	**100.0%**	**5**	**100.0%**	**50**	**100.0%**	**2**	**100.0%**	**521**	**100.0%**	**778**	**100.0%**

types with dates to match (Tables 11.7, 11.14). Extramural Area 2 has a much higher frequency of organic-paint white wares, suggesting that it may have a later component nearby (Table 11.15), but the later element is less evident in the type list (Table 11.11). Red wares are absent from the pit structure, but later red ware types (four sherds) are present in the extramural areas (Tables 11.11, 11.16). The vessel-form assemblages of the pit structure and the extramural areas are remarkably similar. The changeover from sand tempering to predominantly igneous tempering is clearly visible when comparing the pit structure ceramics with those from the extramural areas (Table 11.17). Igneous temper occurs in a quarter of the Basketmaker sample and in nearly three-quarters of the later sherds. Considering that a few of the extramural sherds may be from the Basketmaker component, the trend to igneous temper is very clear (Table 11.18).

Ceramic Groupings. Basketmaker III ceramic types

Table 11.12. LA 60751, Pit Structure 1, pottery types by fill and surface types; counts and percents.

	General Structure Fill		Upper Fill above Roof		Roofing Material		Surface or Floor		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Plain rim	1	4.8%	2	2.1%	3	8.8%	1	1.2%	**7**	**3.0%**
Plain gray	15	71.4%	55	56.7%	11	32.4%	26	31.7%	**107**	**45.7%**
Corrugated gray	–	–	7	7.2%	1	2.9%	–	–	**8**	**3.4%**
Polished gray	3	14.3%	16	16.5%	14	41.2%	39	47.6%	**72**	**30.8%**
Basketmaker III black-on-white	–	–	3	3.1%	2	5.9%	7	8.5%	**12**	**5.1%**
Basketmaker III–Pueblo I black-on-white	1	4.8%	–	–	–	–	–	–	**1**	**0.4%**
Pueblo II–III black-on-white	–	–	1	1.0%	–	–	–	–	**1**	**0.4%**
Painted black-on-white	–	–	1	1.0%	1	2.9%	–	–	**2**	**0.9%**
Polished white	–	–	12	12.4%	2	5.9%	9	11.0%	**23**	**9.8%**
Polished black-on-white	1	4.8%	–	–	–	–	–	–	**1**	**0.4%**
Total	**21**	**100.0%**	**97**	**100.0%**	**34**	**100.0%**	**82**	**100.0%**	**234**	**100.0%**

Table 11.13. LA 60751, Pit Structure 1, pottery types, counts by layer and floor

	Layer 1	Layer 2	Layer 3	Layer 4	Floor 2		Floor 3	Total	
	Count	Count	Count	Count	Count	Col. %	Count	Count	Col. %
Plain rim	2	–	–	3	1	1.3%	–	6	3.8%
Plain gray	8	16	4	7	24	30.4%	1	60	38.0%
Corrugated gray	1	–	1	–	–	–	–	2	1.3%
Polished gray	9	3	7	7	39	49.4%	–	65	41.1%
Basketmaker III black-on-white	1	3	–	2	6	7.6%	–	12	7.6%
Painted black-on-white	–	1	–	1	–	–	–	2	1.3%
Polished white	–	–	1	1	9	11.4%	–	11	7.0%
Total	21	23	13	21	79	100.0%	1	158	100.0%

One Basketmaker III black-on-white sherd from "Floor 1" is included with Layer 2.

Table 11.14. LA 60751, Pit Structure 1, diagnostic pottery types in provenienced contexts, with associated tree-ring dates.

FS	Horizontal Provenience	Vertical Provenience	Description	Tree-ring Sample	Tree-ring Date (AD)
19	101N/53E	Layer 3, 69 cm bsd, bench contact	Chapin Black-on-white bowl	LP-10 LP-14	654 rb 654 rb 654 r
50	102N/52E 103N/52E 102N/51E 103N/51E	Layer 3, 66 cm bsd, bench contact	polished utility (restorable jar)	LP-30	654 rb
30	101N/52E	Layer 4, Floor 2 contact	Chapin Black-on-white	LP-2 LP-14 LP-150 LP-31	653 654 rb 695 r 675 rb
122	101N/50E	149 cm bsd, Floor 2	polished utility	LP-54	654 r

Table 11.15. LA 60751, ceramic paint types, counts and percents by Pit Structure 1 and extramural areas.

	Pit Structure 1		EA 1		EA 2		EA 3		Pueblo I–III Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
None	34	65.4%	18	46.2%	14	43.8%	24	37.5%	**56**	**41.5%**
Organic	1	1.9%	6	15.4%	13	40.6%	6	9.4%	**25**	**18.5%**
Mineral	17	32.7%	15	38.5%	5	15.6%	34	53.1%	**54**	**40.0%**
Total	**52**	**100.0%**	**39**	**100.0%**	**32**	**100.0%**	**64**	**100.0%**	**135**	**100.0%**

Table 11.16. LA 60751, pottery types by extramural areas; counts and percents.

	EA 1		EA 2		EA 3		Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
Plain rim	–	–	–	–	1	0.6%	**1**	**0.2%**
Pueblo II–III corrugated	–	–	1	1.4%	2	1.2%	**3**	**0.7%**
Plain gray	40	24.7%	25	34.2%	35	20.3%	**100**	**24.6%**
Corrugated gray	72	44.4%	25	34.2%	74	43.0%	**171**	**42.0%**
Polished gray	13	8.0%	3	4.1%	8	4.7%	**24**	**5.9%**
Pueblo I black-on-white	1	0.6%	–	–	–	–	**1**	**0.2%**
Pueblo II black-on-white	2	1.2%	1	1.4%	1	0.6%	**4**	**1.0%**
Early Pueblo III black-on-white	–	–	–	–	1	0.6%	**1**	**0.2%**
Late Pueblo III black-on-white	–	–	1	1.4%	–	–	**1**	**0.2%**
Pueblo II–III black-on-white	4	2.5%	2	2.7%	9	5.2%	**15**	**3.7%**
Pueblo III black-on-white	2	1.2%	2	2.7%	2	1.2%	**6**	**1.5%**
Painted black-on-white	1	0.6%	1	1.4%	–	–	**2**	**0.5%**
Polished white	15	9.3%	11	15.1%	16	9.3%	**42**	**10.3%**
Polished black-on-white	10	6.2%	–	–	22	12.8%	**32**	**7.9%**
Indeterminate White Mountain Red Ware	–	–	1	1.4%	–	–	**1**	**0.2%**
Wingate Black-on-red	1	0.6%	–	–	–	–	**1**	**0.2%**
Tsegi Orange	–	–	–	–	1	0.6%	**1**	**0.2%**
Reserve Smudged	1	0.6%	–	–	–	–	**1**	**0.2%**
Total	**162**	**100.0%**	**73**	**100.0%**	**172**	**100.0%**	**407**	**100.0%**

from LA 60751 can be separated into two basic technological groups. The first includes most gray ware types (all but polished utility) and all white ware types identified during the study. Vessels are generally thin and well constructed. Surfaces are usually unpolished and light in color. Cores are usually light gray to gray and often fire to buff colors when exposed to oxidation conditions. The use of clays from local shale formations and firings in fairly well-controlled neutral atmospheres appears likely. Almost all these ceramics are tempered with crushed igneous rock. These characteristics indicate Mesa Verde tradition types, primarily Chapin Gray and Chapin Black-on-white (Abel 1955; Breternitz et al. 1974; Wilson and Blinman 1995a).

The second technological group consists of polished utility, which represents a category created during the analysis of La Plata Highway ceramics in order to distinguish sherds exhibiting a unique combination of attributes. Vessels are often thick, and construction appears to have been relatively crude. Surfaces are often polished and streaked. Surface color varies considerably, usually gray to dark gray, but may be reddish or brown. Color may vary significantly on a given vessel. Sherd cores are usually dark gray or brown and are often vitrified. Pastes fire to bright red in oxidation atmospheres. Temper consists of numerous relatively large sand grains. These traits suggest the use of alluvial clays with high iron content and firings in poorly controlled atmospheres.

Table 11.17. LA 60751, ceramic temper types, in Pit Structure 1 contexts and extramural areas; counts and percents.

	Pit Structure Fill		Pit Structure Floors		Bench Surface		Extramural Areas		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
None	–	–	–	–	–	–	1	1.8%	**1**	**0.9%**
Igneous	10	27.0%	1	25.0%	4	25.0%	39	68.4%	**54**	**47.4%**
Igneous and sand	–	–	–	–	–	–	1	1.8%	**1**	**0.9%**
Quartzite	–	–	–	–	–	–	2	3.5%	**2**	**1.8%**
Igneous and sherd	–	–	–	–	–	–	4	7.0%	**4**	**3.5%**
Quartz and sherd	–	–	–	–	–	–	2	3.5%	**2**	**1.8%**
Fine sandstone, sherd	–	–	–	–	–	–	1	1.8%	**1**	**0.9%**
Quartz sand	27	73.0%	3	75.0%	12	75.0%	6	10.5%	**48**	**42.1%**
Quartz sand, sherd	–	–	–	–	–	–	1	1.8%	**1**	**0.9%**
Total	**37**	**100.0%**	**4**	**100.0%**	**16**	**100.0%**	**57**	**100.0%**	**114**	**100.0%**

Table 11.18. LA 60751, ceramic temper by ware type, for whole site and by Basketmaker III components only; counts and percents.

	Gray Ware		White Ware		Red Ware		Brown, Smudge Ware		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Whole Site										
None	1	0.4%	–	–	–	–	–	–	1	0.3%
Igneous	70	28.6%	55	77.5%	–	–	–	–	125	39.1%
Igneous and sand	–	–	1	1.4%	–	–	–	–	1	0.3%
Quartzite	1	0.4%	–	–	–	–	1	100.0%	2	0.6%
Igneous and sherd	–	–	5	7.0%	–	–	–	–	5	1.6%
Quartz and sherd	–	–	–	–	2	66.7%	–	–	2	0.6%
Fine sandstone, sherd	–	–	–	–	1	33.3%	–	–	1	0.3%
Quartz sand	172	70.2%	10	14.1%	–	–	–	–	182	56.9%
Quartz sand, sherd	1	0.4%	–	–	–	–	–	–	1	0.3%
Total	245	100.0%	71	100.0%	3	100.0%	1	100.0%	320	100.0%
Basketmaker III										
Igneous	–	–	19	67.9%	19	13.2%	–	–	38	13.2%
Quartz sand	116	100.0%	9	32.1%	125	86.8%	–	–	250	86.8%
Total	116	100.0%	28	100.0%	144	100.0%	–	–	288	100.0%

The attributes observed in these sherds are similar to those noted in Sambrito Brown from sites in the Navajo Reservoir area (Eddy 1966; Wilson 1989). While the classification of this type as a brown ware has been attributed by some to early influence from the Mogollon region, it is also possible that it represents a local variation of the Anasazi technology, since differences seem to be based primarily on the use of different resources (Wilson 1989).

Ceramic Dating. Tree-ring dates place the construction of Pit Structure 1 at AD 654, Basketmaker III. The ceramic assemblage from this site is similar to that from other Basketmaker III sites in the Mesa Verde region and is particularly close to those from Sambrito-phase sites investigated during the Navajo Reservoir Project (Eddy 1966, 1972). The Sambrito phase is thought to date between AD 400 and 700. This phase is defined by Sambrito Brown, a type defined by criteria almost identical to those described for polished utility. Sambrito Brown is postulated to be the only ceramic type present during the early periods of this phase, while it is thought to be associated with other types later in this phase (Eddy 1966).

The dating of this phase is somewhat controversial. It has even been maintained that it does not exist, and that sites defining this phase were actually occupied during the earlier Los Pinos phase (Berry 1982). A Basketmaker III date, however, is indicated by recent investigations at the Oven Site, one of the sites that originally defined the Sambrito phase (Wilson 1989). A tree-ring sample dating to the early seventh century was associated with this site (Wilson 1989). Dating of the earlier span assigned to this period is still problematic. The absence of ceramics indicating a Pueblo I occupation indicates that the initial occupation of the Oven Site ended sometime during the Basketmaker III period (Toll and Wilson 2000).

Areal Classification and Exchange of Pottery. The Sambrito cultural variant (as defined by ceramics and architecture described for Sambrito phase sites during the Navajo Reservoir Project) has recently been described as a distinct subregional variant of the Anasazi Basketmaker III. The Sambrito variant has been characterized as being limited to the Upper San Juan drainage and Gobernador area (Vivian 1990). Based on the presence of ceramics classified as brown wares and other traits, this variant was assumed to represent Mogollon influence. Thus, ceramic data from LA 60751 assigned to polished utility could support the eastern extension of this cultural variant into the La Plata River drainage. This situation, however, is complicated by the presence of assemblages at nearby sites, which may be contemporaneous, but which contain only Mesa Verde ceramics and no polished utility. Furthermore, Sambrito Brown has been found in an increasingly large area, including the eastern base of the Chuska Mountains (Kearns and McVickar 1996; Kearns et al. 2000) and in the La Plata Valley at the East Side Rincon and LA 37594, very close to LA 60751 (Toll and Wilson 2000). Another possibility is that resource utilization rather than purely cultural association is indicated. It is possible that the ceramics classified as polished gray were produced at limited localities and with poorer-quality alluvial clay. This pottery was used for limited tasks along with higher-quality "Mesa Verde" pottery types obtained through exchange with groups making this pottery a short distance away.

Vessel Function. The distribution of ceramic functional classes associated with Basketmaker III ceramics was also examined (Table 11.19). Most (94.4 percent) of these are gray or utility ware types, while a small proportion (5.6 percent) belong to white ware types. Most of the gray ware sherds are jar body sherds, while most of the rim sherds belong to wide-mouth cooking/storage jars. A few bowls and indeterminate gray ware forms were noted. Most of the white wares are bowls, although a low frequency of jars was also noted. Three reconstructible vessels were also associated with the early occupation of LA 60751 (Table 11.4). These vessels were all in floor contexts in Pit Structure 1. They include one partial polished utility jar and two partial Chapin Black-on-white bowls (Fig. 11.16 [a–c]). Given the low frequency of white ware vessels, it is notable that two nearly intact examples were found in the structure living area. Nearly all the painted

Table 11.19. LA 60751, ceramic vessel forms, counts and percents by Pit Structure 1 contexts and extramural areas.

	Pit Structure Fill		Pit Structure Floors		Bench Surface		Extramural Areas		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Indeterminate	–	–	–	–	–	–	10	1.9%	**10**	**1.3%**
Bowl rim	7	4.6%	–	–	3	4.1%	13	2.5%	**23**	**3.0%**
Bowl body	29	19.1%	1	12.5%	13	17.6%	90	17.3%	**133**	**17.6%**
Cooking, storage rim	8	5.3%	–	–	–	–	11	2.1%	**19**	**2.5%**
Necked jar body	13	8.6%	–	–	11	14.9%	32	6.1%	**56**	**7.4%**
Jar body	95	62.5%	7	87.5%	47	63.5%	361	69.3%	**510**	**67.5%**
Ladle bowl	–	–	–	–	–	–	2	0.4%	**2**	**0.3%**
Ladle handle	–	–	–	–	–	–	2	0.4%	**2**	**0.3%**
Total	**152**	**100.0%**	**8**	**100.0%**	**74**	**100.0%**	**521**	**100.0%**	**755**	**100.0%**

sherds from the Basketmaker component have mineral paint, although there is one sherd with organic paint.

Pueblo II–III Occupation. Generic ceramic types indicating later occupations during the Pueblo II and Pueblo III periods include corrugated body, Pueblo II–III corrugated, Pueblo II black-on-white, Pueblo II Doghoszhi-style black-on-white, Early Pueblo III black-on-white, Late Pueblo III black-on-white, Pueblo II–III black-on-white, Pueblo III black-on-white, polished white, polished black-on-white, Pueblo II–III black-on-red, polished red, and plain smudged. These late types number 399 specimens, or 51.8 percent of the total ceramic sample from the site.

Ceramics from gray, white, red, and brown ware groups were identified (Table 11.18). A slight majority (57.4 percent) of the sherds examined are gray wares; white wares are also represented in fairly high frequencies (41.6 percent). Wares represented in very low frequencies include red wares (0.8 percent) and brown wares (0.3 percent). The great majority of the gray wares are jar body sherds, while the majority of the rim sherds identified derived from cooking/storage jars. A single gray ware sherd belongs to an indeterminate form. A variety of vessel forms is represented by white wares, which are dominated by bowls but include jar and ladle forms as well. All identified red ware and brown ware sherds belong to bowls. Distributions described here are similar to functional distributions described for late sites in other areas of the Mesa Verde region.

Late Ceramic Types. Late ceramic types from LA 60751 appear to be associated with a surface of shallow deposits and appear to represent contaminants from nearby sites such as LA 37592 and LA 37593. Ceramics deriving from Pueblo II and Pueblo III occupations are present. Those associated with Pueblo II occupations include Pueblo II black-on-white and Pueblo II Dogoszhi-style black-on-white. Types indicating a Pueblo III occupation include Pueblo III black-on-white and Late Pueblo III Black-on-white. The remaining types may be associated with either of these late components. The presence of ceramics dating to both periods is consistent with the interpretation that these ceramics are associated with the occupations at LA 37592 and LA 37593. The distribution of organic and mineral paints in white wares suggests that neighboring uses of the site area were of different ages (Tables 11.15, 11.16). An increased occurrence of organic-painted sherds increases near the center of the site may have resulted from wash from LA 37591, now across the highway, where there is a Pueblo III component. Mineral paint constitutes higher percentages in Extramural Areas 1 and 3, at the south and north ends of the site.

Chipped Stone Artifacts

Table 11.20 presents the lithic items and materials recovered from LA 60751 (n = 544). Debitage, retouched/utilized items, cores, and tools are represented on the site, which includes Basketmaker and Pueblo II–III components. The Pueblo II–III component has a few more lithic artifacts than the Basketmaker component. The total weight of the lithic collection was 10.206 kg: 5.512 kg for the Basketmaker component, and 4.694 kg for the Puebloan component. Lithic materials were present on the surface of the site, in fill layers, and on occupation surfaces within the pit structure. Recorded debitage categories were limited to debitage and retouched/utilized. Core reduction was indicated by the presence of debitage, hammerstones, and cores. The majority of debitage, cores, and informal and formal tools were manufactured from chert obtained from local sources. Cutting and scraping activities were suggested by edge damage on retouched and utilized debitage. There was a scarcity of tools and debitage associated with use surfaces. Floors 2 and 3, Pit Structure 1, each had an item of retouched/utilized debitage in association. Tools suggesting specialized activities, such as projectile points, were confined to the Basketmaker component (Fig. 11.21 [a–f]. Choppers were recovered primarily from cultural layers. In general, Pueblo- and Basketmaker-period lithic materials show no substantive differences.

Debitage accounts for 85 percent (n = 463) of the total artifact assemblage count for both components. The proportion of debitage is slightly higher for the Basketmaker occupation (87 percent, n = 210) than for the Pueblo occupation (83.5 percent, n = 253). The dominant material type by count for both components was local chert, followed by siltstone.

By weight, there is actually more siltstone

Table 11.20. LA 60751, chipped stone artifacts, counts and percents by cultural component and material type.

	Chert		Chalcedony		Silicified Wood		Quartzite		Igneous		Siltstone		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Basketmaker III Component														
Debitage	116	86.6%	9	100.0%	17	81.0%	12	80.0%	1	100.0%	55	87.3%	**210**	**86.4%**
Core	9	6.7%	–	–	–	–	1	6.7%	–	–	5	7.9%	**15**	**6.2%**
Utilized debitage	4	3.0%	–	–	3	14.3%	–	–	–	–	2	3.2%	**9**	**3.7%**
Utilized core	–	–	–	–	–	–	–	–	–	–	–	–	**–**	**–**
Graver	–	–	–	–	–	–	–	–	–	–	–	–	**–**	**–**
Notch	–	–	–	–	–	–	–	–	–	–	–	–	**–**	**–**
Projectile point	4	3.0%	–	–	1	4.8%	1	6.7%	–	–	–	–	**6**	**2.5%**
Hammerstone	1	0.7%	–	–	–	–	1	6.7%	–	–	–	–	**2**	**0.8%**
Chopper/plane	–	–	–	–	–	–	–	–	–	–	1	1.6%	**1**	**0.4%**
Total (row %)	**134**	**55.1%**	**9**	**3.7%**	**21**	**8.6%**	**15**	**6.2%**	**1**	**0.4%**	**63**	**25.9%**	**243**	**100.0%**
Pueblo II–III Component														
Debitage	109	84.5%	10	90.9%	18	75.0%	30	90.9%	4	100.0%	82	82.0%	**253**	**84.1%**
Core	8	6.2%	–	–	3	12.5%	–	–	–	–	4	4.0%	**15**	**5.0%**
Utilized debitage	9	7.0%	1	9.1%	2	8.3%	2	6.1%	–	–	9	9.0%	**23**	**7.6%**
Utilized core	2	1.6%	–	–	–	–	–	–	–	–	2	2.0%	**4**	**1.3%**
Graver	–	–	–	–	1	4.2%	–	–	–	–	–	–	**1**	**0.3%**
Notch	1	0.8%	–	–	–	–	–	–	–	–	–	–	**1**	**0.3%**
Projectile point	–	–	–	–	–	–	–	–	–	–	–	–	**–**	**–**
Hammerstone	–	–	–	–	–	–	–	–	–	–	2	2.0%	**2**	**0.7%**
Chopper/plane	–	–	–	–	–	–	1	3.0%	–	–	1	1.0%	**2**	**0.7%**
Total (row %)	**129**	**42.9%**	**11**	**3.7%**	**24**	**8.0%**	**33**	**11.0%**	**4**	**1.3%**	**100**	**33.2%**	**301**	**100.0%**
Table Total (row %)	**263**	**48.3%**	**20**	**3.7%**	**45**	**8.3%**	**48**	**8.8%**	**5**	**0.9%**	**163**	**30.0%**	**544**	**100.0%**

Igneous includes 2 rhyolite specimens.

Quartzite includes 41 quartzitic sandstone specimens.

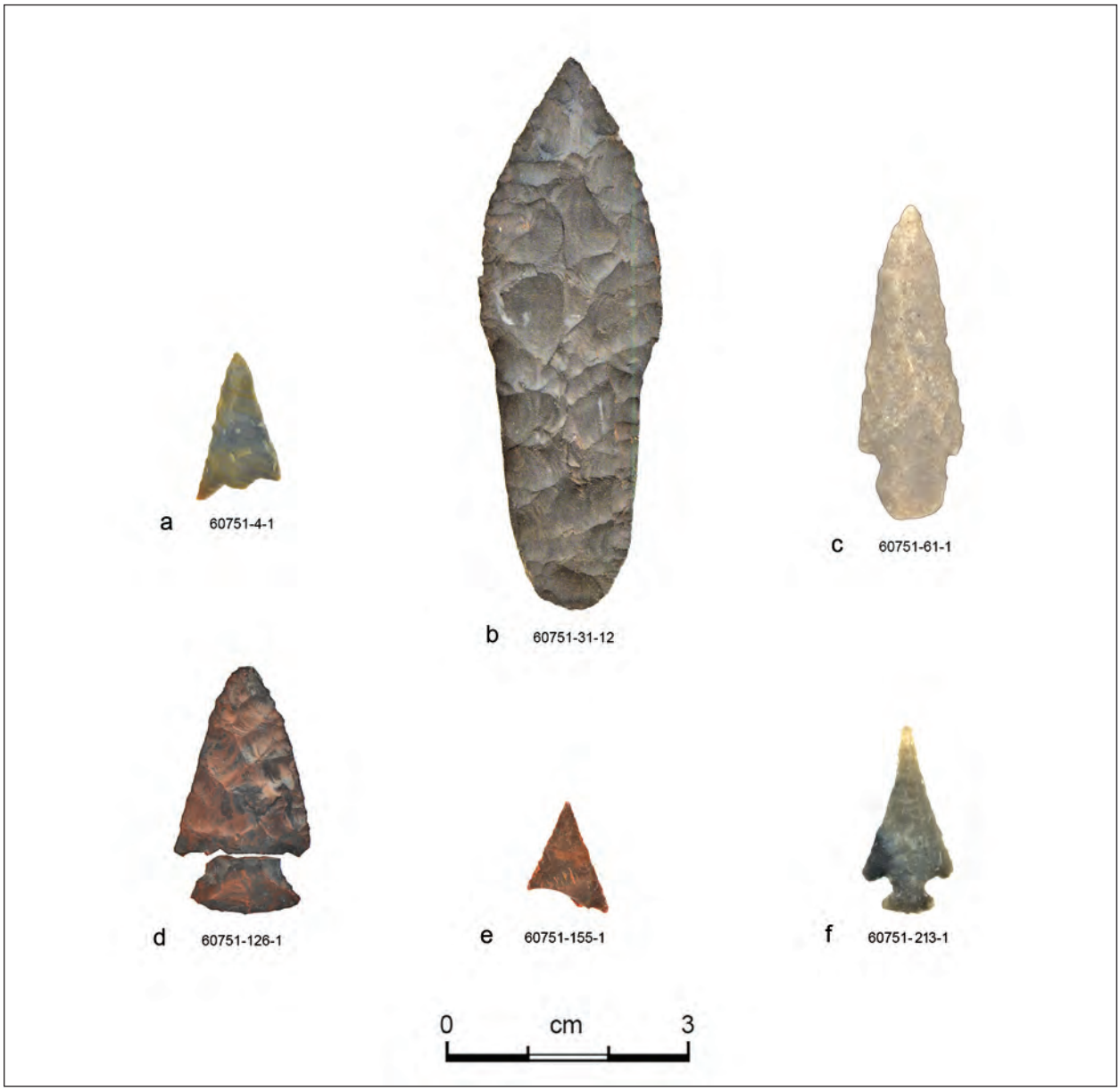


Figure 11.21 [a–f]. LA 60751, Pit Structure 1, projectile points: a., e., f. are late Basketmaker III (point f. probably served as a drill); b. Jay (5500–4800 BC); c. and d. are probably En Medio points (ca. 800 BC–AD 400). They were recovered as follows: Layer 1 (a.), Floor 2 (b.), Layer 2 (c.), Layer 4 (d., e.), and general fill (f.).

than chert (Table 11.21). Chert was slightly more abundant in the Basketmaker materials than in the Puebloan, whereas the proportion of siltstone was higher in the Pueblo component. Only the Basketmaker component had prehistoric use-surfaces with lithic materials in association. Thirty-two informal tools (retouched/utilized debitage) were identified at LA 60751. The frequency of retouched/utilized debitage is higher in the Pueblo component (n = 23, 7.6 percent) than in the Basketmaker (n = 9, 3.7 percent), although projectile points are more common in the Basketmaker contexts. Cryptocrystalline materials are predominant in both components, but in the Pueblo II–III component, siltstone is a larger component of retouched/utilized debitage.

The mean weights of utilized flakes are similar in the two components, and utilized flakes are considerably larger than unutilized flakes (Table 11.22). Tools accounted for 3.5 percent of the total lithic item

Table 11.21. LA 60751, chipped stone artifacts, weights and percents by cultural component and material type.

	Chert		Chalcedony		Silicified Wood		Quartzite		Igneous		Siltstone		Total	
	Weight (g)	Col. %	Weight (g)	Col. %	Weight (g)	Col. %	Weight (g)	Col. %	Weight (g)	Col. %	Weight (g)	Col. %	Weight (g)	Col. %
Basketmaker III Component														
Debitage	616.0	30.8%	9.0	100.0%	94.0	69.1%	63.0	11.0%	5.0	100.0%	797.0	28.6%	**1584.0**	**28.7%**
Core	1137.0	56.9%	–	–	–	–	424.0	74.0%	–	–	1610.0	57.7%	**3171.0**	**57.5%**
Utilized	53.0	2.7%	–	–	41.0	30.1%	–	–	–	–	62.0	2.2%	**156.0**	**2.8%**
Utilized core	–	–	–	–	–	–	–	–	–	–	–	–	**–**	**–**
Graver	–	–	–	–	–	–	–	–	–	–	–	–	**–**	**–**
Notch	–	–	–	–	–	–	–	–	–	–	–	–	**–**	**–**
Projectile point	24.0	1.2%	–	–	1.0	0.7%	4.0	0.7%	–	–	–	–	**29.0**	**0.5%**
Hammerstone	170.0	8.5%	–	–	–	–	82.0	14.3%	–	–	–	–	**252.0**	**4.6%**
Chopper/plane	–	–	–	–	–	–	–	–	–	–	320.0	11.5%	**320.0**	**5.8%**
Total (row %)	**2000.0**	**36.3%**	**9.0**	**0.2%**	**136.0**	**2.5%**	**573.0**	**10.4%**	**5.0**	**0.1%**	**2789.0**	**50.6%**	**5512.0**	**100.0%**
Pueblo II–III Component														
Debitage	625.0	43.2%	27.0	87.1%	90.0	35.2%	404.0	48.4%	18.0	100.0%	703.0	33.4%	**1867.0**	**39.8%**
Core	528.0	36.5%	–	–	88.0	34.4%	–	–	–	–	465.0	22.1%	**1081.0**	**23.0%**
Utilized debitage	118.0	8.2%	4.0	12.9%	68.0	26.6%	68.0	8.1%	–	–	139.0	6.6%	**397.0**	**8.5%**
Utilized core	173.0	12.0%	–	–	–	–	–	–	–	–	359.0	17.0%	**532.0**	**11.3%**
Graver	–	–	–	–	10.0	3.9%	–	–	–	–	–	–	**10.0**	**0.2%**
Notch	3	0.2%	–	–	–	–	–	–	–	–	–	–	**3.0**	**0.1%**
Projectile point	–	–	–	–	–	–	–	–	–	–	–	–	**–**	**–**
Hammerstone	–	–	–	–	–	–	–	–	–	–	281.0	13.3%	**281.0**	**6.0%**
Chopper/plane	–	–	–	–	–	–	363.0	43.5%	–	–	160.0	7.6%	**523.0**	**11.1%**
Total (row %)	**1447.0**	**30.8%**	**31.0**	**0.7%**	**256.0**	**5.5%**	**835.0**	**17.8%**	**18.0**	**0.4%**	**2107.0**	**44.9%**	**4694.0**	**100.0%**
Table Total (row %)	**3447.0**	**33.8%**	**40.0**	**0.4%**	**392.0**	**3.8%**	**1408.0**	**13.8%**	**23.0**	**0.2%**	**4896.0**	**48.0%**	**10206.0**	**100.0%**

Igneous includes 2 rhyolite specimens.
Quartzite includes 41 quartzitic sandstone specimens.

count from LA 60751. The nine tools from the Basketmaker assemblage include six projectile points (Table 11.23), two hammerstones, and one chopper/plane. Included in the Basketmaker component are several curated items from other periods. A well-executed, stemmed, Jay-phase projectile point (5500–4800 BC; Irwin-Williams 1973:5) (Fig. 11.21 [b]; a Basketmaker II corner-notched point (Fig. 11.21 [d]); and an Archaic stemmed point manufactured from quartzitic sandstone (Fig. 11.21 [c]) were recovered from surfaces and fill layers within Pit Structure 1. The Jay projectile point may have been abandoned with the structure, or it may have been left as an offering. Since this object obviously belongs to an earlier culture, it was probably a found object curated by the inhabitants of LA 60751. Kearns et al. (2000:131) found a cache of Archaic and Basketmaker II projectile points on the bench of an oversize pit structure at Tohatchi Flats.

The remarkable projectiles from earlier time periods give the LA 60751 assemblage a notable diversity of point forms for such a small collection. All the points from the site were recovered from Pit Structure 1 contexts. In addition to the two earlier stemmed points and the Basketmaker II corner-notched point (Fig. 11.21 [b, c, d], three smaller corner-notched points were found that fit in the late Basketmaker III period (Fig. 11.21 [a, e, f]). Although no projectile points were recovered in the Pueblo collection, one graver, one notched tool, four cores, two hammerstones, and two chopper/planes were present in the extramural surface collection.

Ground Stone Artifacts

Twenty-nine pieces of ground stone were recovered at LA 60751, 26 of which were from Pit Structure 1 (Table 11.24). All identifiable manos from the pit structure are from two-hand manos, indicating full transition from basin-metate grinding. Two of

Table 11.22. LA 60751, chipped stone artifact types by cultural component; mean weights and counts.

Artifact Type	Component	Mean Weight (g)	Count	Standard Deviation
Debitage	Basketmaker III	7.54	210	16.31
	Pueblo II–III	7.38	253	11.99
	Total	**7.45**	**463**	**14.1**
Core	Basketmaker III	211.4	15	274.13
	Pueblo II–III	72.07	15	58.89
	Total	**141.73**	**30**	**207.3**
Utilized debitage	Basketmaker III	17.33	9	13.01
	Pueblo II–III	17.26	23	12.99
	Total	**17.28**	**32**	**12.78**
Utilized core	Pueblo II–III	133.00	4	70.14
	Total	**133.00**	**4**	**70.14**
Graver	Pueblo II–III	10.00	1	–
	Total	**10.00**	**1**	**–**
Notch	Pueblo II–III	3.00	1	–
	Total	**3.00**	**1**	**–**
Projectile point	Basketmaker III	4.83	6	7.05
	Total	**4.83**	**6**	**7.05**
Hammerstone	Basketmaker III	126.00	2	62.23
	Pueblo II–III	140.5	2	30.41
	Total	**133.25**	**4**	**40.85**
Chopper/plane	Basketmaker III	320.00	1	–
	Pueblo II–III	261.5	2	143.54
	Total	**281.00**	**3**	**106.97**
Table Total	**Basketmaker III**	**22.68**	**243**	**86.42**
	Pueblo II–III	**15.59**	**301**	**36.39**
	Total	**18.76**	**544**	**63.82**

Table 11.23. LA 60751, Pit Structure 1, projectile points, summary table.

FS	Lot	Material	Point Type	Vertical Provenience	Subdivision and Grid	Weight (g)	Comment
4	1	brown silicified wood	tanged corner notch	Layer 1	odd grid unit 97N/52E	1.0	–
61	1	white quartzitic sandstone	stemmed	Layer 2	northwest quad 103N/51E	4.0	–
126	1	red brown silicified wood	corner notch	Layer 4	northwest quad	3.0	En Medio Basketmaker II
155	1	dark red chert	corner notch	Layer 4	southwest quad 97N/51E	1.0	–
213	1	light gray chert	long-tanged corner notch	Level 4	1 x 1 m grid unit 100N/50E	1.0	–
31	12	black chert	Jay point, stemmed	Floor 1	northeast quad 100N/52E	19.0	Archaic

the two-hand manos are relatively small—16.4 and 18.0 cm long, compared to average dimensions of 20.8 cm for all two-hand manos—but they are still for two-hand grinding. Only two manos were identified as to metate type; both have slab- rather than trough-metate wear. Two-thirds of the manos are sandstone, and one-third "granite," which includes diorite, probably from the local alluvial terraces (Table 11.25).

Grinding tools in the pit structure were concentrated in the antechamber and south of the wing wall, where food processing and tool storage probably took place. A trough metate and a slab metate fragment were recovered from Pit Structure 1, again from the antechamber and the area south of the wing wall. The trough metate was supported at one end by a metate rest. It was perhaps placed so that the grinder could brace her feet against the west wall and grind toward the midline of the structure. A group of pot rests (Features 18, 22, and 23) clustered 60 to 80 cm east of the end of the metate could have held vessels for ground meal and unground corn. Two grooved mauls—hallmark Basketmaker-period artifacts—were found on Floor 2. One is siltstone, the other granite. Both are complete; the granite tool weighs 1.8 kg, the siltstone 0.7 kg.

Table 11.24. LA 60751, Pit Structure 1, ground stone and ornament types, counts by layer and floor.

	Layer 2	Layer 3	Layer 4	Floor 1*	Floor 2	Floor 3	Total
Pottery polishing stone	–	–	1	–	–	–	**1**
Abrading stone	–	–	1	–	–	–	**1**
Jar cover	–	1	–	–	–	–	**1**
Anvil	–	–	1	–	1	–	**2**
Pitted pounding stone	–	–	2	–	1	–	**3**
Mano	–	–	1	–	1	–	**2**
Two-hand mano	–	–	–	2	–	–	**2**
Two-hand slab mano	–	–	1	–	2	–	**3**
Trough metate	–	–	–	–	1	–	**1**
Slab metate	–	–	–	1	–	–	**1**
Grooved maul	–	–	–	–	2	–	**2**
Ornament	1	–	–	–	–	–	**1**
Pendant	–	–	–	–	–	1	**1**
Concretion	–	1	4	–	–	–	**5**
Total	**1**	**2**	**11**	**3**	**8**	**1**	**26**

* = antechamber

Table 11.25. LA 60751, ground stone tool types, counts by material type.

	Granite	Sandstone	Siltstone	Quartzite	Selenite	Total
Pottery polishing stone	–	–	1	–	–	**1**
Abrading stone	–	–	–	–	1	**1**
Jar cover	–	–	1	–	–	**1**
Anvil	–	1	–	1	–	**2**
Pitted pounding stone	–	–	1	2	–	**3**
Mano	2	2	–	–	–	**4**
Two-hand mano	–	2	–	–	–	**2**
Two-hand slab mano	1	2	–	–	–	**3**
Two-hand loaf mano	1	–	–	–	–	**1**
Trough metate	–	1	–	–	–	**1**
Slab metate	–	1	–	–	–	**1**
Grooved maul	1	–	1	–	–	**2**
Ornament	–	–	–	–	1	**1**
Pendant	–	–	–	–	1	**1**
Concretion	–	–	–	2	3	**5**
Total	**5**	**9**	**4**	**5**	**6**	**29**

Ornaments

The only ornaments recovered from LA 60751 were made of selenite. A single bead or small pendant (18 by 15 by 2 mm) was the only artifact in the fill of Feature 17, Floor 3. This artifact was drilled through the center with a biconical hole, and its surfaces had been rubbed with red pigment. Four very shiny, similar-sized (20 to 27 mm average measurement of longest axis), pieces of selenite were present in the roof fall layer. The size and appearance of these pieces suggest that they might have been destined for use in inlay work. The other piece of ground selenite was found in Layer 2 of the Pit Structure 1 fill. Surprisingly, selenite is the second most abundant material type in the ground stone collection, since there are also a selenite abrading stone and five concretions, two of quartzite and three of selenite. Since their function is unknown, these items may be manuports brought in for ceremonies and left as offerings.

Human and Faunal Remains

No human burials were present at LA 60751 and animal remains were few (Tables 11.26, 11.27). There are 71 items in the faunal data file, but 33 of these are eggshell fragments, most of which were thought to be from turkey eggs. The majority of the eggshell is from Extramural Area 2, recovered from a random test at 92N/62E in levels 5, 6, and 7 (see Table 11.2). No other faunal material is present at this location. Scant ceramics, lithics, and charcoal are also present in association with the eggshell. There is modern disturbance along one edge of the test, and these cultural materials may have been introduced from that disturbance. Other faunal materials from extramural areas are cottontail (107N/56E) and parts of a mule deer skull (104N/68E, 110N/65E) elements from the ground surface, likely to be modern highway casualties.

Most of the faunal material recovered from the pit structure came from roof fall Layer 4 (Table 11.28). Large mammals and rabbits are represented. The single jackrabbit element (a scapula) is from roof fall, while the several cottontail elements (limbs) come from Floors 2 and 3 and the antechamber. Two pieces of large-mammal bone from the same provenience in Layer 4 are calcined and come from an unspecifiable tool. The few pieces of eggshell in the pit structure are all from fill contexts.

Botanical Remains

Mollie S. Toll and Pamela J. McBride

Flotation samples from at least three occupations of a Basketmaker III pit structure at LA 60751, Pit Structure 1, highlight the use of weedy annuals throughout the use of the structure, and corn during the two most recent occupations (Tables 11.29, 11.30,

Table 11.26. LA 60751, faunal remains, element counts by species.

	Mammal	Large Mammal	*Sylvilagus audubonii*	*Lepus californicus*	*Odocoileus* sp.	Total
Indeterminate fragment	14	–	–	–	–	**14**
Long-bone fragment	–	5	–	–	–	**5**
Plate, blade fragment	–	–	–	–	7	**7**
Occipital region	–	–	–	–	1	**1**
Temporal region	–	–	–	–	1	**1**
Temporal	–	–	–	–	1	**1**
Premaxilla	–	–	–	–	1	**1**
Scapula	–	–	–	1	–	**1**
Ilium	–	–	1	–	–	**1**
Acetabulum	–	–	1	–	–	**1**
Humerus	–	–	1	–	–	**1**
Tibia	–	–	4	–	–	**4**
Total	**14**	**5**	**7**	**1**	**11**	**38**

Does not include eggshell (n = 33).

Table 11.27. LA 60751, faunal remains, species counts by major provenience unit.

	Pit Structure	Antechamber	Extramural Area	Total
Mammal	8	6	–	14
Large mammal	5	–	–	5
Sylvilagus audubonii	4	1	2	7
Lepus californicus	1	–	–	1
Odocoileus sp.	–	–	11	11
Aves	4	–	–	4
Meleagris gallopavo	–	–	29	29
Total	22	7	42	71

All bird "elements" are eggshell.

Table 11.28. LA 60751, Pit Structure 1, faunal remains, species counts by layer and floor.

	Layer 1	Layer 4	Floor 2	Floor 3	Layer 6	Total
Mammal	–	8	–	–	6	**14**
Large mammal	1	4	–	–	–	**5**
Sylvilagus audubonii	–	–	1	3	1	**5**
Lepus californicus	–	1	–	–	–	**1**
Aves	1	3	–	–	–	**4**
Total	**2**	**16**	**1**	**3**	**7**	**29**

All bird "elements" are eggshell.
Layer 6 is strictly in the antechamber.

11.31a, 11.31b). Corn was identified in three of the Floor 2 samples, but the bulk of the corn remains was found in features from Floor 2 and 3. The earliest use of the structure is represented by two cists in Floor 4, which may have been the base of the excavation during the pit structure construction. The cists yielded burned cheno-am and grass seeds and unburned tobacco seeds. Tobacco was found in many of the features as well as roof fall samples; although the majority of the seeds are unburned, the presence of both charred and uncharred seeds indicates use of the plant ceremonially during the entire occupation of the site.

Evidence of other perennial plant use was limited to two occurrences of hedgehog cactus (*Echinocereus*) and one of marsh elder (*Iva axillaris*) (Tables 11.31a, 11.31b). Hedgehog cactus fruits were eaten fresh, made into a conserve, or baked (Castetter 1935:26). The only use of marsh elder in the ethnobotanical record was soaking the roots to make a tea to treat bowel disorders by the Shoshone (Murphey 1959:42). This use of marsh elder would not really explain the presence of seeds in the roof fall layer or Floor 2 contact, unless the plant was gathered whole.

A section of relatively intact roof matting consisted of cottonwood/willow sticks, grass leaves, and common reedgrass stems gives us a pretty good idea of the composition of roof-closing material (Tables 11.33a–11.33f). Macrobotanical remains from roof fall contexts suggest that vigas and roof support beams were most likely either juniper or cottonwood, and closing material was matting composed of willow twigs and possibly juniper twigs, common reedgrass stems, and grass leaves. Common reed was frequently used as roof-closing material (as at Pueblo Bonito in Chaco Canyon; Judd 1954; see also Whiting 1939:66), and for screens and partitions (as

Table 11.29. LA 60751, Pit Structure 1, botanical taxa, counts by layer.

	Layer 2	Layer 3	Layer 4	Total
Juniperus	2	8	2	**12**
Pinus edulis	–	–	1	**1**
Scirpus	1	–	2	**3**
Gramineae	3	2	3	**8**
Phragmites	5	–	5	**10**
Zea mays	3	3	3	**9**
Amaranthus	6	2	5	**13**
Echinocereus	–	1	4	**5**
Atriplex	–	1	–	**1**
Chenopodium	10	8	16	**34**
Cycloloma	5	4	6	**15**
Sarcobatus	–	1	–	**1**
Compositae	–	–	1	**1**
Artemisia tridentata	–	2	–	**2**
Chrysothamnus	2	–	–	**2**
Iva axillaris	1	–	2	**3**
Descurainia	2	4	2	**8**
Euphorbia	2	3	4	**9**
Quercus	1	–	–	**1**
Mentzelia albicaulis	4	3	6	**13**
Sphaeralcea	1	2	1	**4**
Portulaca	9	4	14	**27**
Salicaceae *(Populus/Salix)*	2	2	1	**5**
Solanaceae	–	1	–	**1**
Nicotiana attenuata	8	7	9	**24**
Physalis	5	1	3	**9**
Cheno-Am	3	2	4	**9**
Nonconiferous wood	1	1	–	**2**
Unknown taxon	1	–	–	**1**
Total	**77**	**63**	**94**	**234**

Table 11.30. LA 60751, Pit Structure 1, Floors 2, 3, and 4, botanical remains, flotation full-sort; frequency and abundance per liter.

	Floor 2					Floor 3					Floor 4	
Feature	**6 Bin**	**8 Central Hearth**			**12 Pot Rest**	**14 Pit**	**15 Ash Pit**	**16 Ash Pit**	**17 Cist**	**18 Pot Rest**	**20 Cist**	**21 Cist**
FS	**93**	**176**	**192**	**195**	**177**	**182**	**189**	**180**	**183**	**201**	**194**	**196**
Quadrant	**SW 1/4**			**E 1/2**		**NE 1/4**			**SE 1/4**			**NW 1/4**
Cultural												
Annuals:												
Chenopodium	–	1	–	67	–	–	–	–	–	–	–	–
Cheno-Am	1	18	1	–	–	–	–	3	–	–	1	–
Cycloloma	–	1	–	–	–	–	–	–	–	–	–	–
Descurainia	–	–	–	–	–	–	1	1	–	–	–	–
Nicotiana attenuata	1	–	–	–	–	1	–	–	–	–	–	–
Portulaca	–	–	1	–	–	–	–	–	–	–	–	–
Cultivars:												
Zea mays	+ cupule	+ cupule	1.0 kernel	–	+ cupule	–	+ cupule, 1.0 kernel	–	–	–	–	–
Grasses:												
Gramineae	–	2.0	–	–	–	–	1.0	–	–	1.0	1.0	–
Phragmites	++ stem	–	–	–	–	–	–	–	–	–	–	–
Other:												
Solanaceae	–	–	–	–	–	–	–	1.0	–	–	–	–
Unknown	1.0	–	–	–	–	–	–	–	–	–	–	–
Possibly Cultural												
Annuals:												
Chenopodium	–	–	–	–	–	–	–	–	92.0	–	–	–
Euphorbia	–	–	–	–	–	61.0	–	–	–	–	–	–
Mentzelia albicaulis	–	–	–	–	–	–	–	–	–	–	–	85.0
Nicotiana attenuata	8.0	–	–	–	–	11.0	8.0	35.0	13.0	1.0	1.0	–
Portulaca	–	–	–	–	–	–	–	–	34.0	–	–	–
Noncultural												
Annuals:												
Amaranthus	11.0	–	–	–	–	7.0	–	–	7.0	–	–	–
Chenopodium	12.0	–	–	7.0	3.0	14.0	9.0	11.0	–	1.0	12.0	5.0
Cycloloma	19.0	–	–	–	–	–	1.0	1.0	–	2.0	–	–
Descurainia	–	–	–	–	–	–	–	–	1.0	–	–	2.0
Euphorbia	–	1.0	–	–	–	–	–	–	10.0	–	–	–
Mentzelia albicaulis	1.0	–	–	–	–	1.0	–	2.0	–	–	–	–
Portulaca	13.0	–	–	–	4.0	–	1.0	–	–	–	–	2.0
Other:												
Physalis	–	1	–	–	–	–	–	2	–	–	–	–
Sphaeralcea	–	–	–	–	–	8	1	–	–	–	–	–
Perennials:												
Echinocereus	–	–	–	–	–	–	–	–	1	–	–	–

+ = 1–10/liter; ++ = 11–25/liter

Table 11.31a. LA 60751, Pit Structure 1, botanical remains FS 16–109, 147, 193, flotation scan, species type by structure unit; abundance per liter.

	Floor 2	Floor 3	Above Bench				Floor 2							
Feature/ Context	**5 NW 1/4 Collared Posthole**	**19 Posthole**	**Roof Fall Layer 3**				**Roof Fall/ Floor Contact Layer 4**							
FS	**147**	**193**	**16**	**25**	**27**	**29**	**51**	**74**	**77**	**84**	**88**	**99**	**106**	**109**
Cultural														
Annuals:														
Amaranthus	–	–	–	–	–	–	–	–	–	–	–	–	+	–
Chenopodium	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cheno-Am	–	–	–	–	–	–	–	–	–	–	–	–	+	–
Cycloloma	–	–	–	–	–	–	–	+	–	–	–	–	–	–
Descurainia	–	–	–	–	–	–	–	–	–	–	–	–	+	–
Euphorbia	–	–	–	–	–	–	–	–	–	–	+	–	–	–
Nicotiana attenuata	–	–	–	–	–	–	–	–	–	–	–	–	+	–
Cultivars:														
Zea mays	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Grasses:														
Phragmites	–	–	–	–	+ stem	+ stem	–	–	–	–	+ stem	+ stem	–	–
Possibly Cultural														
Annuals:														
Nicotiana attenuata	–	+	–	–	–	+	–	+	+	–	–	–	+	–
Portulaca	–	–	–	–	–	++++	–	–	–	–	–	–	++++	+++
Noncultural														
Annuals:														
Amaranthus	–	–	–	++++	–	–	–	–	+++	–	+	–	–	+
Chenopodium	–	++++	+	–	+	++	+++	+	+++	+	+++	++	+++	+
Cycloloma	–	+	–	–	–	–	+	–	–	–	–	–	+	–
Descurainia	–	+	–	–	–	–	–	–	–	–	–	–	–	–
Euphorbia	–	+	–	–	–	+++	–	–	+	–	–	–	–	–
Mentzelia albicaulis	–	++	–	–	–	+	+++	–	+	–	+	–	+	–
Nicotiana attenuata	–	–	–	–	–	–	+	–	–	+	+	–	–	–
Portulaca	+	++	–	+	–	–	++	+	+++	+++	++++	–	–	–
Perennials:														
Artemisia tridentata	–	+	–	–	–	–	–	–	–	–	–	–	–	–
Echinocereus	–	–	–	–	–	–	–	–	–	–	–	–	–	+
Iva axillaris	–	–	–	–	–	–	–	–	+	–	–	–	–	+
Scirpus	–	–	–	–	–	–	–	+	+	+	–	–	–	–
Grasses:														
Gramineae	–	–	–	–	–	–	–	–	–	–	–	–	++++	+
Other:														
Compositae	–	–	–	–	–	–	–	–	–	+	–	–	–	–
Physalis	–	–	–	–	–	–	–	–	–	–	–	–	+	–
Sphaeralcea	–	–	–	–	–	–	–	–	–	–	–	+	–	–

+ = 1–10/liter; ++ = 11–25/liter; +++ = 25–100/liter; ++++ = >100/liter

Table 11.31b. LA 60751, Pit Structure 1, botanical remains FS 112–170, flotation scan, species type by structure unit; abundance per liter.

	Roof Fall/Floor 2 Contact, Layer 4											
FS	**112**	**117**	**128**	**133**	**138**	**141**	**144**	**154**	**159**	**160**	**165**	**170**
Cultural												
Annuals:												
Chenopodium	+	–	–	–	–	–	–	–	–	–	–	–
Cheno-Am	–	–	+	–	–	+	+	–	–	–	–	–
Cycloloma	+	–	–	+	–	+	–	–	–	–	–	–
Portulaca	–	–	–	–	–	–	+	–	–	–	–	–
Cultivars:												
Zea mays	+ kernel	–	+ kernel	–	–	–	–	–	–	–	–	–
Grasses:												
Gramineae	+	–	–	–	–	–	–	–	–	–	–	–
Phragmites	+ stem	–	+ stem	+ stem	+ stem	–	–	–	–	+ stem	–	–
Other:												
Physalis	–	–	+	–	–	–	–	–	–	–	–	–
Perennials:												
Echinocereus	–	–	–	+	–	–	+	–	–	–	–	–
Iva axillaris	–	–	+	–	–	–	–	–	–	–	–	–
Possibly Cultural												
Annuals:												
Nicotiana attenuata	–	–	+	+	+	–	+	–	+	+	–	–
Noncultural												
Annuals:												
Amaranthus	–	+	–	+++	–	+	–	+	–	–	–	+
Chenopodium	+	+	+	+++	+	+	+	–	+	+	+	–
Cycloloma	–	–	+	–	–	–	–	–	+	–	–	++
Descurainia	–	–	–	+	–	–	–	–	+	–	–	–
Euphorbia	–	–	–	++	–	–	+++	–	–	–	–	–
Mentzelia albicaulis	+	–	–	+++	–	–	–	–	+	–	–	–
Portulaca	+++	+	+	+++	+	–	+	+	+++	–	+	–
Grasses:												
Gramineae	–	–	–	–	–	–	–	+	–	–	–	–
Other:												
Physalis	–	–	+	–	–	–	+	+	+	+	–	–
Sphaeralcea	+	–	–	–	–	–	–	–	–	–	–	–
Perennials:												
Echinocereus	–	+	–	–	–	–	–	–	–	–	–	–

+ = 1–10/liter; ++ = 11–25/liter; +++ = 25–100/liter; ++++ = >100/liter

for a corncrib at Arroyo Hondo Pueblo; Wetterstrom 1986). Uses include arrow shafts, cigarettes, flutes, prayer sticks, and other household items (Reagan 1928:159; Robbins et al. 1916:66, Curtin 1949:75). Reedgrass inflorescence fragments, leaves, and stems were recovered from a number of contexts at the Gila Cliff Dwellings (Adams and Huckell 1986:297). At LA 5407, near Quemado, New Mexico, in Catron County, reedgrass used as thatching material made its ways into floor deposits, vessel contents, and general fill of a burned pit structure (Toll and McBride 1998). Another component of LA 60751 roof fall deposits was yucca fiber, which could have been cordage used to tie supplies to the roof. Seven fragments of three-ply cordage were found on the southwest quadrant of Floor 2, as well.

Macrobotanical wood was 88 percent juniper (Table 11.33f) by weight, and flotation wood was

Table 11.33a. LA 60751, Pit Structure 1, macrobotanical samples, species type by structure unit; wood by weight (g), other plant parts by count and weight (g). See also Tables 11.33b–11.33f for continuation and totals.

Feature	Backhoe Trench		Roof Fall above Bench, NE 1/4, Layer 3				Roof Fall above Bench, NW 1/4, Layer 3			
FS	**3**	**34**	**25**	**26**	**27**	**29**	**50**	**52**	**58**	**71**
Cultural										
Conifers:										
Juniperus	44.70	2.50	1.10	1.00	–	5.70	–	0.40	–	0.40
Pinus edulis	–	6.70	–	–	–	–	–	–	–	–
Nonconifers:										
Populus	–	–	–	–	–	–	–	0.80	–	13.50
Rhus	–	–	–	–	–	–	–	0.01	–	–
Salicaceae (*Populus/Salix*)	–	–	5.80	0.40	–	–	–	–	4.20	–
Salix	–	–	–	1.30	3.30	2.00	0.30	0.30	–	–
Other Cultural										
Phragmites stem	–	–	0.30	0.01	0.20	0.01	–	0.01	–	–
Yucca leaf	–	–	–	–	–	–	–	0.01	–	–
Total	**44.70**	**9.20**	**6.90**	**2.70**	**3.30**	**7.70**	**0.30**	**1.51**	**4.20**	**13.90**

Table 11.33b. [continuation of Table 11.33a]

Floor	Roof Fall/Floor 2 Contact, Layer 4								
Quadrant	**SE 1/4**			**NW 1/4**					
FS	**9**	**17**	**165**	**46**	**73**	**74**	**77**	**78**	**81**
Cultural									
Conifers:									
Juniperus	72.10	20.70	122.60	–	84.70	6.70	–	44.40	–
Nonconifers:									
Populus	0.10	–	–	–	0.40	2.20	1.50	0.70	–
Salicaceae (Populus/Salix)	–	–	–	0.01	–	–	–	–	–
Salix	–	–	–	–	–	–	3.50	–	0.40
Other Cultural									
Gramineae leaf	–	–	–	0.01	–	–	–	–	–
Phragmites stem	1.90	0.10	–	0.01	0.30	–	0.20	0.01	0.01
Total	**72.20**	**20.70**	**122.60**	**0.01**	**35.10**	**8.90**	**6.40**	**45.10**	**0.40**

79 percent juniper (Table 11.34). The next most common wood in flotation and macrobotanical samples was cottonwood/willow, but it occurred in much lower percentages. Small amounts of piñon, sagebrush, saltbush, sumac, rabbitbrush, oak, and greasewood were also present. Wood from two postholes was juniper; wood from a third posthole, Feature 5, was a mixture of charcoal species, largely cottonwood/willow. Macrobotanical samples from the antechamber entrance and the main chamber were a similar mix of juniper, cottonwood/willow, and occasional reed fragments, indicating similar construction parameters and/or mixing of deposits.

Floor 5, which appeared to extend outside the walls of the pit structure, was interpreted as a possible preoccupational burn. No artifacts or features were associated with this surface. The only sample from the northwest quadrant of Layer 5 contained

Table 11.33c. [continuation of Table 11.33a]

Feature	Roof Fall/ Floor Contact, NW 1/4, Layer 4						5 NW 1/4 Posthole	3 NW 1/4 Posthole	NW 1/4, Layer 5 Preoccupational Burn
FS	**94**	**104**	**109**	**112**	**129**	**159**	**100**	**153**	**82**
Cultural									
Conifers:									
Juniperus	29.10	134.70	–	0.60	2.80	323.40 pc	0.40	10.50	–
Nonconifers:									
Populus	–	–	23.70	–	–	–	0.80	–	–
Rhus	–	–	–	–	0.01	–	–	–	–
Salicaceae (*Populus*/*Salix*)	–	–	–	1.50	0.10	–	1.50	–	2.80
Salix	–	–	–	–	–	–	0.30	–	–
Other Cultural									
Phragmites stem	–	–	–	0.10	–	–	–	–	0.30
Yucca fiber	–	–	0.01	0.01	–	–	–	–	–
Yucca leaf	–	–	–	–	0.01	–	–	–	–
Possibly Cultural									
Conifers:									
Juniperus	–	–	–	–	–	–	–	109.90 u	–
Total	**29.10**	**134.70**	**23.70**	**2.10**	**2.91**	**323.40**	**3.00**	**120.40**	**2.80**

pc = partially charred; u = uncharred

Table 11.33d. [continuation of Table 11.33a]

Feature	Roof Fall/Floor Contact, SW 1/4, Layer 4									
FS	**80**	**88**	**89**	**90**	**95**	**99**	**107**	**118**	**128**	**134**
Cultural										
Conifers:										
Juniperus bark	–	–	–	–	–	–	–	–	0.01	–
Juniperus	1.50	1.20	137.40	41.20	0.01	0.01	64.80	181.70	5.00	1.20
Pinus edulis	–	–	–	–	–	–	–	–	4.00	–
Nonconifers:										
Atriplex	0.01	–	–	–	–	–	–	–	–	–
Populus	–	–	–	–	0.30	1.70	–	–	0.80	0.20
Salicaceae (*Populus*/*Salix*)	1.80	1.50	–	–	0.80	0.60	–	–	–	–
Salix	6.20	–	–	–	0.70	1.40	–	–	–	0.20
Other Cultural										
Phragmites stem	1.60	0.01	–	–	–	0.01	–	–	0.70	1.00
Possibly Cultural										
Conifers:										
Juniperus	–	–	–	–	–	–	.30 u	–	–	–
Total	**9.51**	**2.70**	**137.40**	**41.20**	**1.81**	**3.71**	**65.10**	**181.70**	**9.80**	**1.60**

u = uncharred

Table 11.33e. [continuation of Table 11.33a]

Feature	Roof Fall/Floor Contact, SW 1/4, Layer 4								
FS	**144**	**145**	**139**	**141**	**146**	**150**	**154**	**160**	**161**
Cultural									
Conifers:									
Juniperus bark	–	–	–	0.01	–	–	–	–	–
Juniperus	1.40	125.80	12.40	193.30	0.01	0.01	0.30	–	0.80
Pinus edulis	–	–	–	0.50	–	–	–	–	–
Nonconifers:									
Populus	–	–	–	–	–	–	1.30	–	–
Salicaceae (*Populus*/*Salix*)	1.90	–	2.50	0.20	0.01	0.01	–	–	1.50
Unknown nonconifer	–	–	–	–	–	–	–	0.01	–
Other Cultural									
Phragmites stem	–	–	0.01	0.01	0.01	–	0.01	0.01	0.70
cf. *Typha* culm	–	–	0.01	–	–	–	–	0.01	–
Total	**3.30**	**125.80**	**14.90**	**194.00**	**0.02**	**0.02**	**1.60**	**0.01**	**2.30**

cf. = resembles taxon

Table 11.33f. [continuation of Table 11.33a, with Total Weights and Percents for Tables 11.33a–f]

Feature	Roof Fall/Floor Contact, SW 1/4, Layer 4		Ante-chamber Entrance		8 Hearth	Floor	Total (Tables 11.33a–11.33f)	
FS	**167**	**170**	**76**	**166**	**176**	**178**	**Weight (g)**	**Col. %**
Cultural								
Conifers:								
Juniperus	19.70	0.10	–	0.90	30.80	–	**1728.04**	**88.0%**
Pinus edulis	–	–	–	–	–	–	**11.20**	**<1%**
Nonconifers:								
Atriplex	–	–	–	–	–	–	**0.01**	**<1%**
Populus	–	–	2.10	–	–	–	**50.10**	**3.0%**
Rhus	–	–	–	–	–	–	**0.02**	**<1%**
Salicaceae *(Populus/Salix)*	–	0.50	1.50	8.20	–	–	**38.73**	**2.0%**
Salix	–	–	–	–	–	–	**19.90**	**1.0%**
Unknown nonconifer	–	–	–	–	–	–	**0.01**	**<1%**
Other Cultural								
Phragmites stem	–	0.01	0.40	0.01	–	–	**–**	**–**
Yucca fiber	–	–	–	–	–	0.01	**–**	**–**
Possibly Cultural								
Conifers:								
Juniperus	–	–	–	–	–	–	**110.20**	**6.0%**
Total	**19.70**	**0.60**	**3.60**	**9.10**	**30.80**	**–**	**1958.21**	**100.0%**

Table 11.34. LA 60751, Pit Structure 1, Floors 2, 3, and 4, wood charcoal flotation; weights (g) by species type and cultural context.

	Floor 2					Floor 3					Floor 4		Total	
Feature	**6 Bin**	**8 Central Hearth**			**12 Pot Rest**	**14 Pit**	**15 Ash Pit**	**16 Ash Pit**	**17 Cist**	**18 Pot Rest**	**20 Cist**	**21 Cist**	**Weight (g)**	**Col. %**
FS	**93**	**176**	**192**	**195**	**177**	**182**	**189**	**180**	**183**	**201**	**194**	**196**		
Quadrant	**SW 1/4**			**E 1/2**		**NE 1/4**			**SE 1/4**			**NW 1/4**		
Cultural														
Conifers:														
Juniperus	0.30	5.00	0.01	1.00	0.10	0.01	0.40	0.10	0.01	0.01	0.01	–	**6.95**	**79%**
Pinus edulis	–	–	–	–	–	–	–	–	–	–	–	0.01	**0.01**	**<1%**
Nonconifers:														
Artemisia tridentata	–	–	–	–	–	–	–	0.01	–	–	–	–	**0.01**	**<1%**
Atriplex	–	–	–	–	–	–	–	–	0.01	–	–	–	**0.01**	**<1%**
Chrysothamnus	0.01	0.01	–	–	–	–	–	–	–	–	–	–	**0.02**	**<1%**
Quercus	–	0.01	–	–	–	–	–	–	–	–	–	–	**0.01**	**<1%**
Salicaceae (*Populus*/*Salix*)	1.30	0.30	–	0.01	–	–	–	0.01	–	–	–	0.01	**1.63**	**19%**
Sarcobatus	–	–	–	–	–	–	–	0.01	–	–	–	–	**0.01**	**<1%**
Unknown nonconifer	0.10	–	–	–	–	–	–	0.01	–	–	–	–	**0.11**	**1%**
Noncultural														
Juniperus	–	–	–	–	–	–	–	–	–	.01u	–	–	**0.01**	**<1%**
Total	**1.71**	**5.32**	**0.01**	**1.01**	**0.10**	**0.01**	**0.40**	**0.14**	**0.02**	**0.02**	**0.01**	**0.02**	**8.77**	**100%**

u = uncharred

roof fall–like material consisting of cottonwood/willow wood and common reedgrass stems, which indicates mixing of deposits or that Floor 5 was more than a preoccupational burn.

Floral remains from LA 60751 offer one of the best opportunities for understanding roof construction. Food residues were not abundant, but the plant assemblage indicates that corn and weedy annuals appear to be dietary staples, with some use of cactus, grass, and groundcherry. Year-round habitation is not clearly documented in the floral record, considering the paucity of plants that set seed or fruit in the spring or fall.

LA 60751: Site History

Pit Structure 1: Construction Sequence

Based on the information contained in this chapter, the construction and occupation of the pit structure probably followed this sequence:

1. The initial construction of the pit occurred at AD 654 or earlier, probably during the Floor 4 or 3 occupations. Wood dated to AD 643 was harvested and stockpiled, or wood that had been lying around ("old wood") was collected for use in roof construction. The northwest roof support (AD 654) was installed. The antechamber may have been added during the occupation of Floor 3.

2. During the final occupation, major repairs were made to the roof, represented by Floor 2, between AD 654 and 695, but especially around AD 666 to 675. Roof elements include dates of AD 666, AD 674, AD 675, and AD 695.

3. Abandonment of the structure was followed by a major burn and the eventual collapse of the roof. As the roof collapsed, the roof elements (AD 643–AD 695) collapsed onto the bench and Floor 2.

An alternate scenario is that the structure was built earlier than AD 654, and that the main roof supports were replaced in AD 654. There is some evidence to suggest that the northeast post was replaced at these times. However, the other main roof supports were strengthened by adding leaners, adobe collars, and wing walls, suggesting that they may have been fortified rather than replaced. The interpretation of the building sequence in which we have the most confidence is that it was built in AD 654, repaired occasionally up to AD 695, and abandoned shortly after AD 695.

Site History Discussion

Two clear components are present at LA 60751. The Basketmaker III component is primarily associated with Pit Structure 1, whereas the Pueblo II–III materials are in extramural, nonarchitectural contexts. The Pueblo II–III ceramic assemblage results from peripheral scatter from nearby Pueblo-phase sites: LA 37592, LA 37593, and structures outside the right-of-way immediately east of Pit Structure 1. A total of 372 Basketmaker-phase sherds and three restorable vessels were analyzed. These include varieties of plain rim, plain gray, polished utility, Basketmaker III black-on-white, Basketmaker III or Pueblo I black-on-white, and painted black-on-white (Chapin Black-on-white). The presence of roof elements whose tree-ring dates range between AD 654 and AD 695 indicates that Chapin Black-on-white was in use in the La Plata Valley during that interval (see Table 11.14).

The use of local clays and pottery-making paraphernalia (e.g., a polishing stone, FS 42) suggests that ceramics were produced on-site. The correspondence between the surface scatter and the pit structure remains unclear. Approximately 8 percent of the ceramic artifacts on the surface of the site date to the Basketmaker component, but the origin of these artifacts is not known. It is likely that exterior activity areas associated with the pit structure were present but could not be detected archaeologically. The surface scatter is primarily associated with the nearby Pueblo II–III sites (LA 37591, LA 37592, LA 37593, and LA 60750). A small proportion of the ceramics identified represent types known to have been produced outside the Mesa Verde region, including those belonging to White Mountain Redware, Tsegi Orange ware, and Mogollon Brown ware. Long-distance exchange of other wares is known to have occurred during this time, and the absence of non–Mesa Verde white and gray wares is probably a function of the absence of temper analysis for late ceramics from the site, rather than their actual absence. Such sherds are generally scarce in the project sample, and their absence here may also be a result of the small sample size.

Tree-ring dates and ceramic cross-dating indicate that the initial occupation of LA 60751 occurred at AD 654. There is a cluster of tree-ring dates at AD 643-648, but these may be a result of old wood or stockpiling. The final occupation or repair took place at around AD 695. The stratigraphy suggests that the occupational episodes were relatively closely spaced.

The inferred building sequence includes a possible activity area occupied by the founding population. Whether this occurred during the Floor 5 occupation is problematic; this layer might be a natural occurrence. Several options are possible to account for the first sequence. The first option is that Floor 5 is actually an old burn. The fact that the burning extends past the walls of the structure, and that similar occurrences are present at adjacent sites LA 37592 and LA 60752, makes this a strong possibility. The second, less likely, possibility is that Floor 5 represents a pit excavation followed by a burn. The distribution of this burned layer, which does not appear to be associated with any architecture, suggests that Floor 5 antedates the structure.

The first unambiguous use of the pit as a habitation occurred during the Floor 4 component. It was not determined whether the structure was excavated into the ground during this interval, or whether it was an open-air site. It was also not possible to infer how the surface articulated with the walls of the structure, or whether this surface was contemporaneous with the original prehistoric ground surface. If it was a pit at this point, leaving it unroofed would not make sense in terms of degradation of the structure. Two storage features were associated with Floor 4 during this period, and storage and processing are evident.

The earlier component (Floor 3) represents a

much more substantial occupation. It is probable that during this stage the main chamber of LA 60751 resembled the structure defined during the Floor 2 occupation. A well-dated tree-ring sample from the northwest roof support suggests that a roof was installed in AD 654. A central hearth and deflector (Features 8 and 13) were constructed, along with numerous storage features (Features 14, 17, and 19). It is difficult to determine whether the bench was present at this time. There are indications that storage may have played a significant role during this component. After an undetermined amount of time, Floor 3 was abandoned, and the roof fell into disrepair, allowing runoff and wind-blown sand to accumulate.

Following this hiatus, Floor 2 was constructed on top of the laminated fill deposited during the time the structure remained partially exposed. Remodeling and major repairs were most evident during the excavation of this surface. The northeast post (Feature 3) may have been replaced during this final phase of occupation, the roof refurbished, and the hearth remodeled, in addition to substantial repairs to the roof and other structural elements. Following the resurfacing of Floor 2, during which Features 15–17 and 19 were sealed with plaster, the antechamber and storage facilities were constructed. Also contemporaneous with the Floor 2 occupation is the remodeling of the hearth (Feature 8)—a collar was added to the north side. Discrete activity areas, such as a grinding/processing locale in the southwest corner of the structure, were in use.

Artifacts left in situ in areas associated with Floor 2 suggest burning and abandonment. Whether the burning was deliberate or accidental is difficult to know. De facto refuse may have included objects left behind because they were too cumbersome to move, such as large items of ground stone or at least slabs, unserviceable items such as broken pottery or defunct basketry, or items to be used when returning to the site—so-called site furniture. Also present were curated items of probable symbolic significance such as Archaic-phase projectile points and the "shaman" bowl. Chapin Black-on-white (AD 600–900) ceramics were associated with this component.

The pit structure may have been occupied continuously, or intermittently, between AD 654 and 695, the last tree-ring date. These later dates probably reflect repairs done to the roof. It is unlikely that the structure was continuously occupied for 41 years. It is probable, however, that the roof was standing for at least the duration of that interval, if not longer.

According to these dendrochronological data, abandonment occurred around AD 695. The distribution of burned roof fall suggests that the fire that consumed the structure burned quickly and with intensity, since many of the wooden structural supports (posts, vigas) were not burned clear through. The fire was concentrated around the area of the four main posts but did not reach the antechamber. Shortly thereafter, the burning superstructure probably collapsed inwards and extinguished itself, possibly from oxygen deprivation. Some portions of the structure may have remained standing after the fire was extinguished. The abandoned depression continued to be filled by erosion and the sloughing off of architectural debris, and finally by the collapse of the remaining standing elements. The surface called Floor 1 may have been created at that time by the pooling of soil, water, and charcoal.

LA 60751: Summary

Materials from LA 60751 show that there are two temporally distinct components at this site: Basketmaker III and Pueblo II–III. The Pueblo II–III materials were present only on the surface of the site and were probably the result of scatter from nearby Pueblo sites and the occupation of adjacent areas outside the right-of-way. The Basketmaker materials were primarily associated with the pit structure.

A leading aspect of the data lies in the abundance of tree-ring dates associated with the structure. These data show with an unusual degree of clarity that the structure was constructed at AD 654 and abandoned around AD 695. Pottery was recovered on Floor 2, which was also associated with tree-ring cutting dates. Diagnostic pottery types, such as Chapin Gray and Chapin Black-on-white, are known to have been in use during this interval.

Since the majority of the faunal remains were recovered from roof fall, it could be inferred that much of the processing of animal species occurred on the roof, rather than inside the structure. This choice might have been motivated by the concern that butchering and related activities in such a confined space could create a disagreeable living

environment. Ethnographic studies show that butchering is nearly always an open-air activity (Lentz 2003:73–86). The analysis of the lithic assemblages recovered from the two main site components suggests a range of on-site activities. Core reduction is indicated for both components by the presence of hammerstones and cores. Formal and informal tool categories suggest hunting (projectile points), cutting (bifaces retouched/utilized flakes), and scraping (scrapers). The processing and consumption of wild or domesticated plants is evident in a mealing area south of the wing wall in the southwest corner of the main chamber of the structure. Here, a trough metate was supported at one end by a metate rest, placed so that the person doing the processing could be braced against the west wall and grind in the direction of the center of the structure. A group of pot rests placed a short distance due east attests to further expansion of the activity area as temporary storage for the processed materials.

Botanical remains indicate the widespread use of wild tobacco, the consumption of corn and wild plants, and the processing of foodstuffs using mealing stones. These data, combined with the tree-ring dates, suggest several interruptions in the occupational sequence, and possibly some seasonal occupation. The floral remains from LA 60751 offer one of the best opportunities for understanding roof construction. The structure was probably occupied intermittently; reoccupation is clearly indicated by the repairs, remodeling, and reuse of features. Food residues were not abundant, but the plant assemblage indicates that corn and weedy annuals were dietary staples, with some use of cactus, grass, and groundcherry.

It is unfortunate that all of the archaeomagnetic data failed because of a sample-collection defect. Although the structure is well-dated through tree-rings, a greater understanding of the intervening occupations could have been achieved had these data been available, and the effectiveness of the two techniques could have been compared. This could have clarified some gaps in the occupational sequence, since year-round habitation is not clearly documented in the botanical record (flowering plants from the spring and summer seasons are conspicuously missing). No Basketmaker reoccupation of any consequence appears to have occurred in the wake of the final abandonment of the site after AD 695.

The picture that emerges from the investigation of this pit structure is that of a practical, utilitarian operation where the resources of the rich La Plata floodplain were exploited, domestic plants were tended, and the quotidian affairs of survival were observed. There are also indications of ceremonial behavior (for example, the use of sacramental substances such as tobacco and corn pollen) and of items deliberately left prior to a planned and final abandonment. Ceremonial closures have been documented here and elsewhere within prehistoric communities of the Four Corners area. Reasons for this phenomenon vary and are probably quite complex, but most likely involve a forceful statement on the part of the formed inhabitants that the occupation of that structure was, without question, over. The ceremonial closures of LA 60751 and a nearby burned structure dating to around AD 550 (LA 37594) may be among the earliest documented of their kind in the area. LA 60751 is a well-dated and well-preserved structure, but it is only a single site. Site-based information can contribute substantially to existing local databases, but it is equally important that it be incorporated into broader-based, integrative regional studies.

12 LA 37595 (La Casa Cortada)

H. Wolcott Toll

LA 37595, La Casa Cortada, is one of a cluster of sites at the base of the steep slope above the second terrace in the La Plata Valley (Figs. 1.1, 1.20, 12.1). Intermittent human activity over 1,500 years left a complicated archaeological record, although at first appearance all that was evident at this location were the paved La Plata Highway, an abandoned irrigation ditch, and some prehistoric surface artifacts. Excavation revealed that structures were built and lived in during the seventh and eleventh to twelfth centuries, long before an irrigation ditch that may never have been used was built through the area in the early twentieth century. The location of the modern road has probably been a non-native travel route since the 1800s, and the highway, which runs directly over features from earlier times, was paved in the 1940s (Fig. 12.2).

Jesse Nusbaum surveyed the area in the 1930s, but we do not know if he recorded this particular location as a site. It was identified by the NMDOT survey in 1981 and recorded by the Museum of New Mexico (Lancaster 1982a:75–76). Based on surface observations and testing results, the preliminary assessment of the site was that intact subsurface remains were unlikely. The fan to the east of the highway right-of-way has numerous artifact concentrations and small cobble mounds on it (LA 60750, not part of this highway project), and LA 37594 (Chapter 10, Vol. 1-Book 1, this report) and LA 37593 (Chapter 14, Vol. 1-Book 2, this report) are in the area south of LA 37595. Both of these sites had indications of structures before they were excavated. Only one place at the edge of the area defined as LA 37595, however, contained a concentration of artifacts and cobbles, and test trenches hand-dug in 1982 and 1988 showed that the concentration lacked depth. Otherwise the surface was characterized by waterline and highway shoulder disturbance, and by scattered artifacts (Figs. 12.1, 12.2, 12.3).

Lancaster (1983:36–37) placed two 1 by 2 m tests on this site in 1982 and recommended that no further work take place. Based on our evaluation of LA 37595 in 1987, however, we recommended that further excavation be performed, mostly because of the density of Anasazi features in the immediate vicinity, but also because of the quantity of surface material, especially at the edge of the right-of-way (Fig. 12.1; Toll and Hannaford 1987, 1997). OAS ultimately defined the full site extent as 70 by 56 m (229 by 184 ft), or 3,920 sq m (42,195 sq ft).

LA 37595 was excavated by OAS under the direction of H. Wolcott Toll from September 10 through December 21, 1988. Crew included Pat Alfred, Peter Arena, Leslie Barnhardt, Alphonso Benallie, Peter Bullock, Cindy Bunker, Kate Fuller, Rose Marie Havel, Janet Johnson, Liz King, Kalay Melloy, Yvonne Oakes, Rich Walle, Penny Whitten, Leonard Yazzie, and volunteers Dave Bunker and Luis Vergilio.

ENVIRONMENTAL SETTING

A west-to-east cross section of this part of the La Plata Valley shows eight major landform types: the piñon-mesa badlands, a gravel terrace, alluvial fans from side drainages, the La Plata River floodplain, the La Plata River, the sloping terrace below the cliffs, the cliffs defining the east side of the valley, the mesa above the cliffs, and the Farmington Glade to the east. The landforms on which most occupation took place are the higher gravel terrace, the fans, and the terrace on the east side of the river. The edges of the fans on the west side of the river show nearly continuous signs of Anasazi occupation, and structures (such as those excavated here by the highway project) occur all the way to the base of the slope to the upper terrace (Figs. 12.2, 12.4, 12.5).

By virtue of a long irrigation ditch and Jackson Lake, the top of the large fan southeast of LA 37595 is under irrigation and cultivation, but away from these modern modifications, the fan tops are dis-

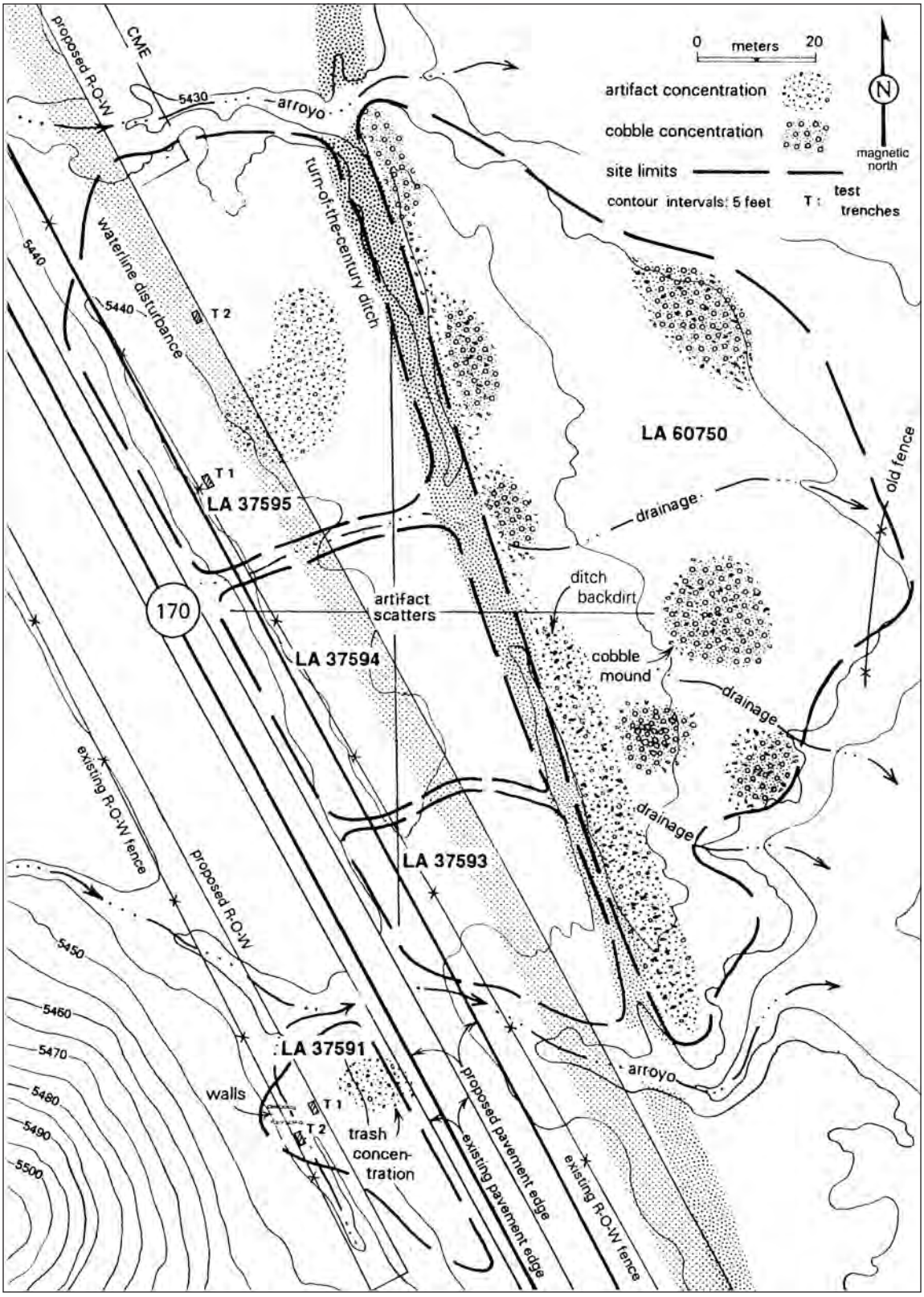


Figure 12.1. LA 37595, site area map (adapted from OAS survey map, Toll and Hannaford 1997).

Figure 12.2. LA 37595, site overview, view northeast from LA 60746 (outside the project right-of-way), pre-excavation.

Figure 12.3. LA 37595, early excavation, view northeast.

Figure 12.4. LA 37595, early excavation, view west; concentration of rock and surface artifacts at the edge of the new right-of way is visible in foreground.

Figure 12.5. LA 37595, dissected alluvial fans, showing silty unvegetated ground and surface erosion.

sected by small erosion channels and support mostly greasewood and sparse grasses. Some architectural features have been removed by this erosion of the fans (Fig. 12.5). Both because of the site distribution and the silty, barren appearance of unmodified fan tops, it seems likely that the flood plain on the floor of the valley was where most of the horticulture took place. The majority of the site area is quite flat, though it slopes gently to the east toward the river; the main site area elevation ranges from 5,432–5,440 ft (1,655.7 to 1,658.1 m) above sea level.

The north edge of the site area is defined by a substantial arroyo over 3 m deep, though alteration of drainage by the highway makes the local topography during Basketmaker and Pueblo times unclear. The east edge of the site area is defined by the abandoned irrigation ditch. Although there were clearly concentrations of activity on the fan surface, in the AD 1000s much of the fan area would have been taken up with structures and features, some in use and some abandoned. Even then, separating the area into "sites" might have been difficult.

Field Methods

The grid system established for work at LA 37593 and LA 37594 was extended into the LA 37595 site area (Fig. 12.6). This grid paralleled the existing right-of-way fence on a magnetic north bearing of 327.5 degrees. This grid system was convenient for working around the fence but required an extra conversion for spatial plotting. The site datum for this section of the grid is 107N/73E, just east of the new right-of-way. Grids are identified by the coordinates of the southwest corner.

The time we estimated for excavation was very short. Our initial work at the site supported the surface and testing evaluations (discussed below). When a backhoe trench was approximately halfway down the length of the site, however, it was clear that a major subsurface feature was present. Excavation of this feature revealed a Pueblo II pit structure, and a subsequent backhoe trench indicated that other pit structures were under the existing highway. By the time excavations were complete, the site was shown to have two full-size Pueblo II pit structures, a Pueblo II mealing room pit structure, and a Basketmaker III pit structure. The Basketmaker structure had been very precisely bisected by one of the later pit structures, leaving only half of the Basketmaker hearth. The precision of this placement of the later structure and the importance of Pueblo II reoccupation of Basketmaker III sites (Toll and Wilson 2000) gives this site its name of La Casa Cortada ("Cut House").

This site serves as a warning on two issues:

First, conventional assessment of surface material followed by placement of just a few small tests can be very misleading. Lancaster's (1983) first test was very near Pit Structure 1, but it just missed the feature (it may have even been between the vent shaft and the structure!). The second test, in an area subsequently disturbed by the waterlines, also failed to show cultural materials with any depth. As defined by Lancaster (1983), this site measured about 24 by 27.5 m, with 13 by 24 m within the new right-of-way (compare to our whole site dimensions, 70 by 56 m, stated earlier). Two 2 sq m tests come to only 1.3 percent of the site area within the right-of-way as Lancaster defined it, or much less of the total site size that either of us defined. The features studied on this site were all buried, and there was no surface indication of their presence. The total area of the structures we excavated is around 48.5 sq m, although at least 6 sq m of that is overlap between superimposed structures, coming to 13 to 16 percent of the smallest site size defined. In this empirical case, then, the effort to find features taking up 16 percent of the area with a 1.3-percent sample faced long odds of success (1 in 500, but still better than the lottery), and did, in fact, fail; these percentages would, of course, be much smaller using larger site areas.

The second caveat is that estimates of population from surface data are almost certainly going to be low without a large upward correction (see Hayes et al. 1981:48–51).

Surface Collection

Due to the large amount of earth moving at this site, we concluded that surface collection in 12 by 12 m grids was appropriate. It was possible to define seven full 12 by 12 m grids and two 6 by 12 m grids within the study area, arranged as seven contiguous full grids extending up to 155N, and two 6 by 12 grids at the north end of the site, where the road fill in the arroyo narrows the exposed surface within the right-of-way.

The majority of the site's surface within the new

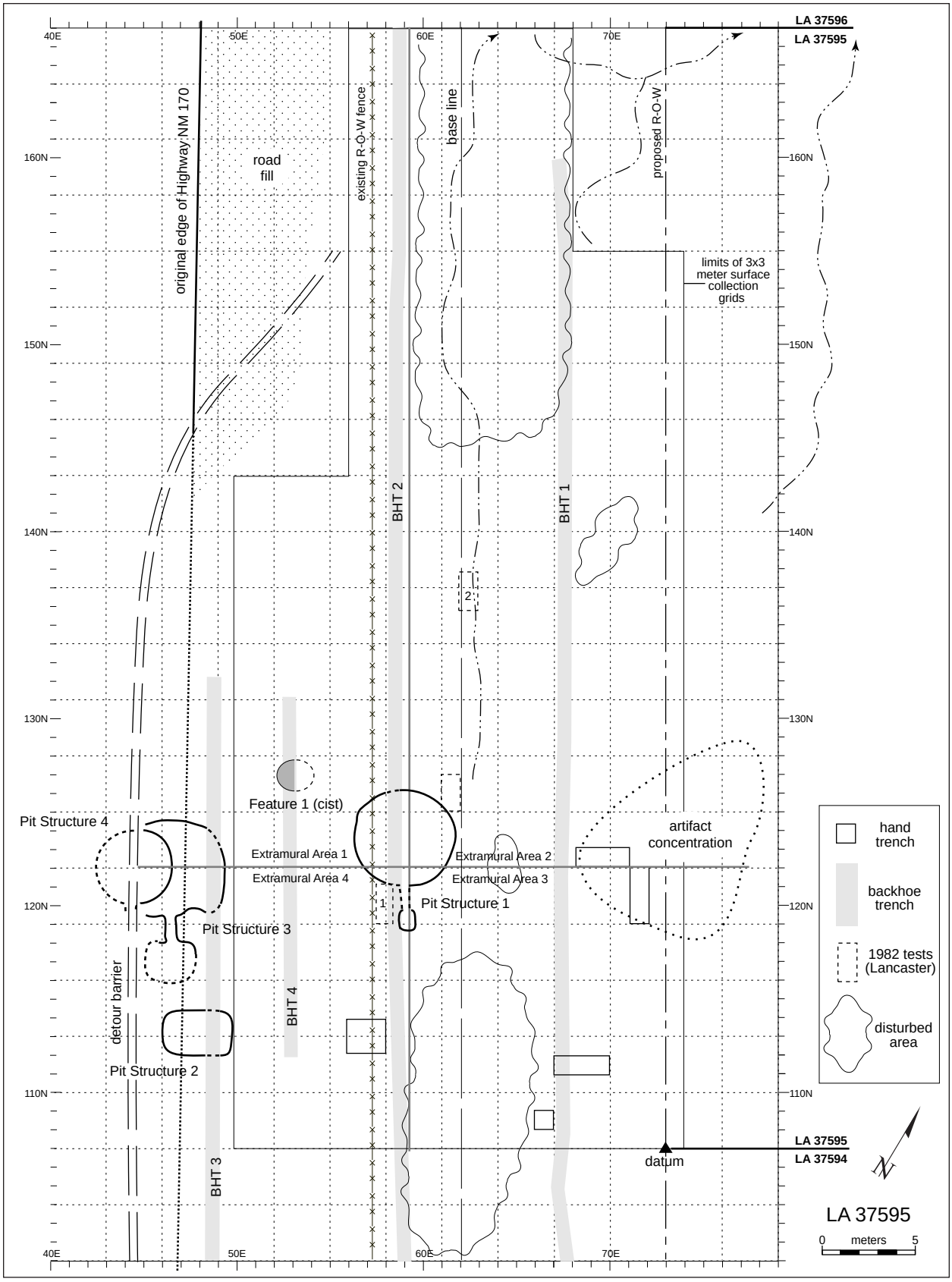


Figure 12.6. LA 37595, site plan.

right-of-way had experienced some form of modern modification. From west to east these included the highway and its shoulders, with a substantial fill of the arroyo at the north edge of the site area; the old right-of-way fence; phone lines inside and outside the *old* right-of-way; two waterlines side by side outside the old right-of-way but inside the new one; and asphalt mixing on contiguous LA 37594 at the south end of the site area. The waterline trenches were quite visible because of changed vegetation, smoothed and subsequently eroded surface, and low spoil piles running along the edges.

A total of 902 sherds and 601 pieces of chipped stone were collected during the surface collection, along with six pieces of ground stone. Over 80 percent of both the ceramics and the chipped stone were from two grids, and, within those grids, most of the material came from a dense concentration at the east edge of the collection area, the deflated remains of a structure and/or a midden (Figs. 12.6, 12.8a, 12.8b, 12.8c). No faunal material was recovered, and ceramic, lithic, and ground stone materials are similarly distributed. These large surface collections constitute 34.5 and 38.6 percent of the total ceramic and chipped stone assemblages from the site, respectively. Most of the site surface averaged fewer than 0.5 artifacts per square meter, but the concentration in grid 119N/62E has a cumulative density of over 5 artifacts per square meter (combining sherds and lithics), bringing the overall average to around 1 artifact per square meter. The pit structures on the site were in areas of low surface artifact density and under the pavement. The surface material distribution guided the placement of two trenches within the area of concentrated material. Since the extramural areas were defined after the fieldwork, and the surface collection used large grids, the axes of the extramural areas (see below) do *not* precisely match the surface collection grids. Surface materials were placed in extramural areas based on where the majority of the surface collection fell.

Backhoe Trenches

During fieldwork backhoe trenches were recorded by grid location, and sequential numbers were not assigned. The numbering on the figures and in the data files was assigned during analysis. All of the numbered trenches run north–south, parallel to the right-of-way fence (Fig. 12.6).

Backhoe Trench (BHT) 1 was along the 67E grid line at the east edge of the site. It extended from 107N, the south boundary with LA 37594, to 160N. The trench continued in LA 37594. Since the trench was in Extramural Areas 2 and 3, material collected during backhoe trenching was broken down into 95–114N (Extramural Area 3), 114–128N (Extramural Areas 2–3), and 128–143N (Extramural Area 2). This was a relatively deep trench, ranging from 1.6 to 1.9 m deep. No major cultural features were present in the walls of this trench.

Backhoe Trench 2, along the existing right-of-way fence (± 58E and referred to as such), was intended as a clearance zone for the new phone line. The trench extended all the way across the site, to the arroyo at the north end of the grid, and continued in LA 37596 from 107N to 167N. This trench revealed Pit Structure 1. The trench included portions in Extramural Areas 1 and 4, as well as Pit Structure 1. Collected material was broken down into ca. 125N, 129–143N, and 143–162N, all of which were in Extramural Area 1.

Backhoe Trench 3, next to the pavement along 50E, extended onto LA 37594 (107N) to 132N. This trench exposed Pit Structures 2 and 3. This trench was not as deep as Backhoe Trench 1, ranging from 1 to 1.3 m deep.

Backhoe Trench 4 was in the area between Pit Structures 1 and 3 along 53E from 112N to 131N. Half of this trench is in Extramural Area 1 and half in Extramural Area 4.

A final, small, unnumbered trench was dug with the backhoe from the edge of Pit Structure 1 on the 122N line to reveal the large off-chamber cist designated Floor 1, Feature 2, Pit Structure 1. This excavation measured 0.7 by 1.75 m.

Stratigraphy

In the process of fully examining the site for cultural features, four backhoe trenches parallel to the pavement were cut within the highway right-of-way (BHT 1–4; Figs. 12.6, 12.9**)**. In addition to revealing cultural features, these trenches provided extensive views of the natural stratigraphy. The deepest excavations carried out were in the pit structures. The floor of Pit Structure 1 is around 2 m below the present ground surface, and Pit Structure 4, to the west, is 2.5 m below the paved surface of the highway.

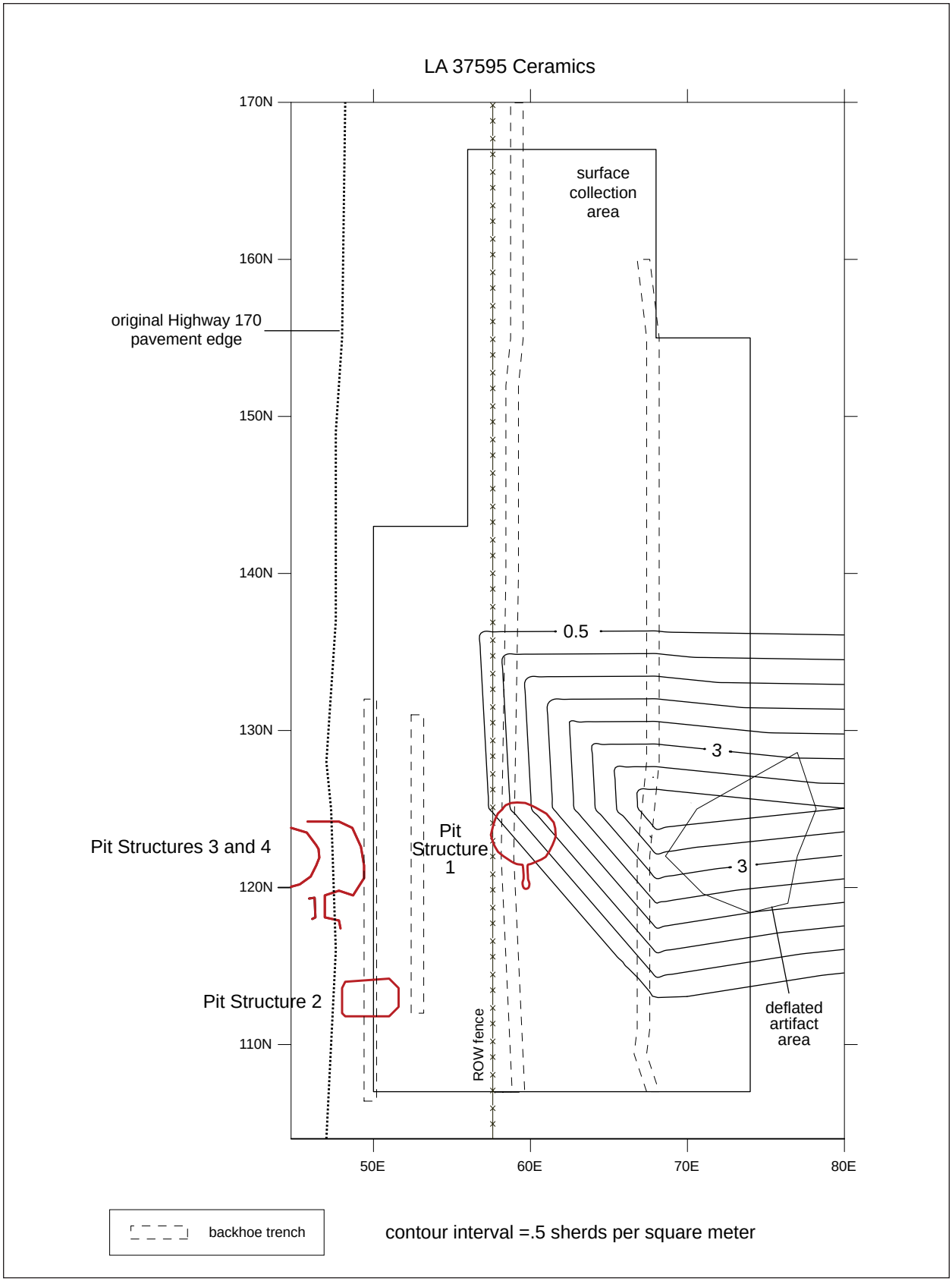


Figure 12.8a. LA 37595, surface collection area, distribution and density, ceramics.

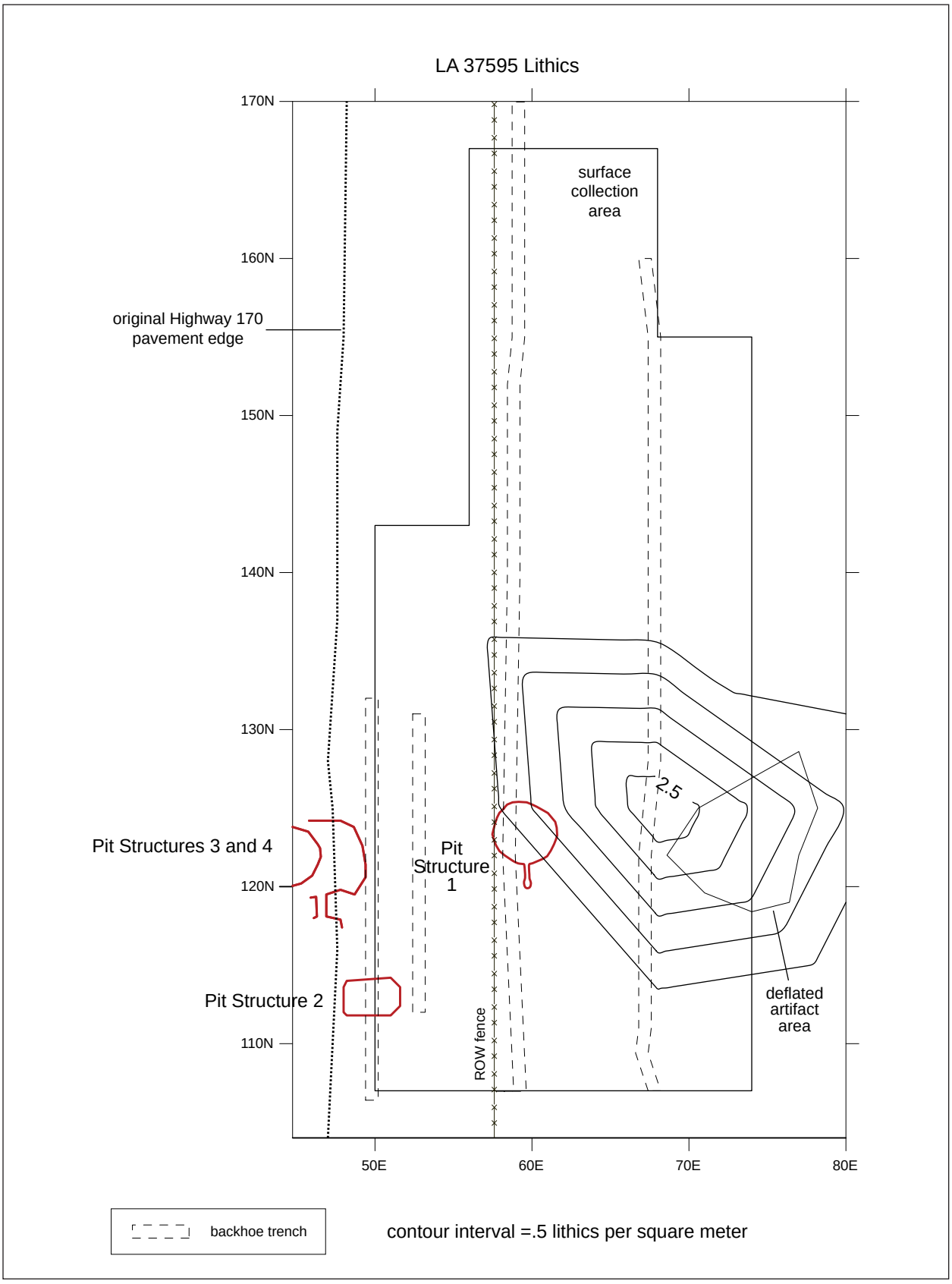


Figure 12.8b. LA 37595, surface collection area, distribution and density, lithics.

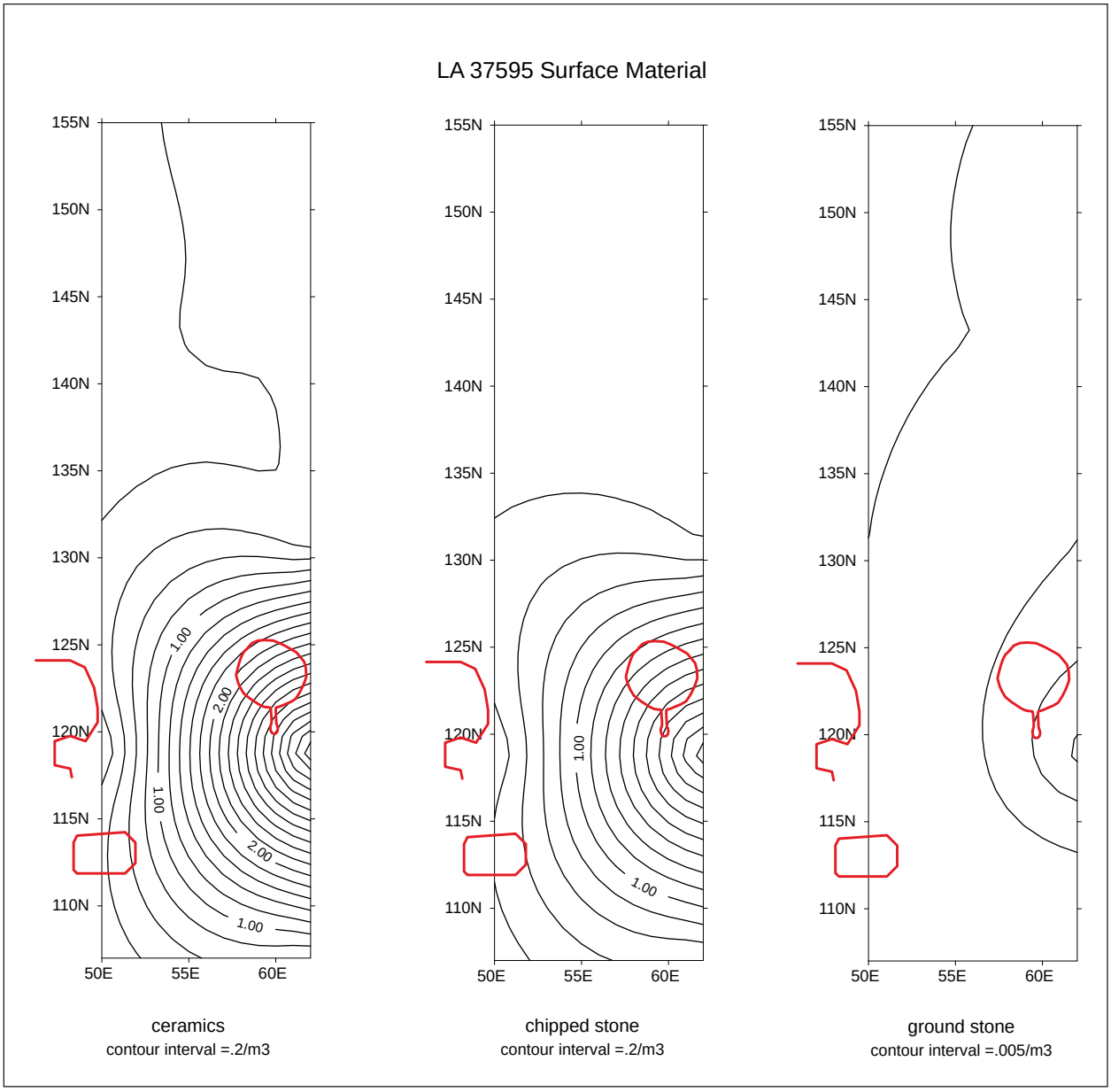


Figure 12.8c. LA 37595, comparative surface-density maps, 50E–60E: ceramics, chipped stone, and ground stone.

Extensive gravels are present below the Pit Structure 1 floors; these sites are on gravel fans deposited either by the main channel of the river or from more active erosion of the terraces. Gravels, however, are quite rare in the deposits into which all of the recorded cultural features were excavated. Where present, gravels are clearly in small channels crossing the fan as they flowed toward the river. In 60 m of Backhoe Trench 2, there are four gravel lenses ranging from 1.6 to 0.4 m wide in the profile, and from 0.1 to 0.3 m thick. These lenses are all south of Pit Structure 1, on the higher part of the fan (Fig. 12.5).

The extensive profiles from these backhoe trenches show overall similarity of large units with localized variations caused by smaller events such as channels, plants, and human activity. In addition to the gravel layer at the base of our trenches, which we did not have an extensive exposure of in section, there are four major sedimentary units in the vi-

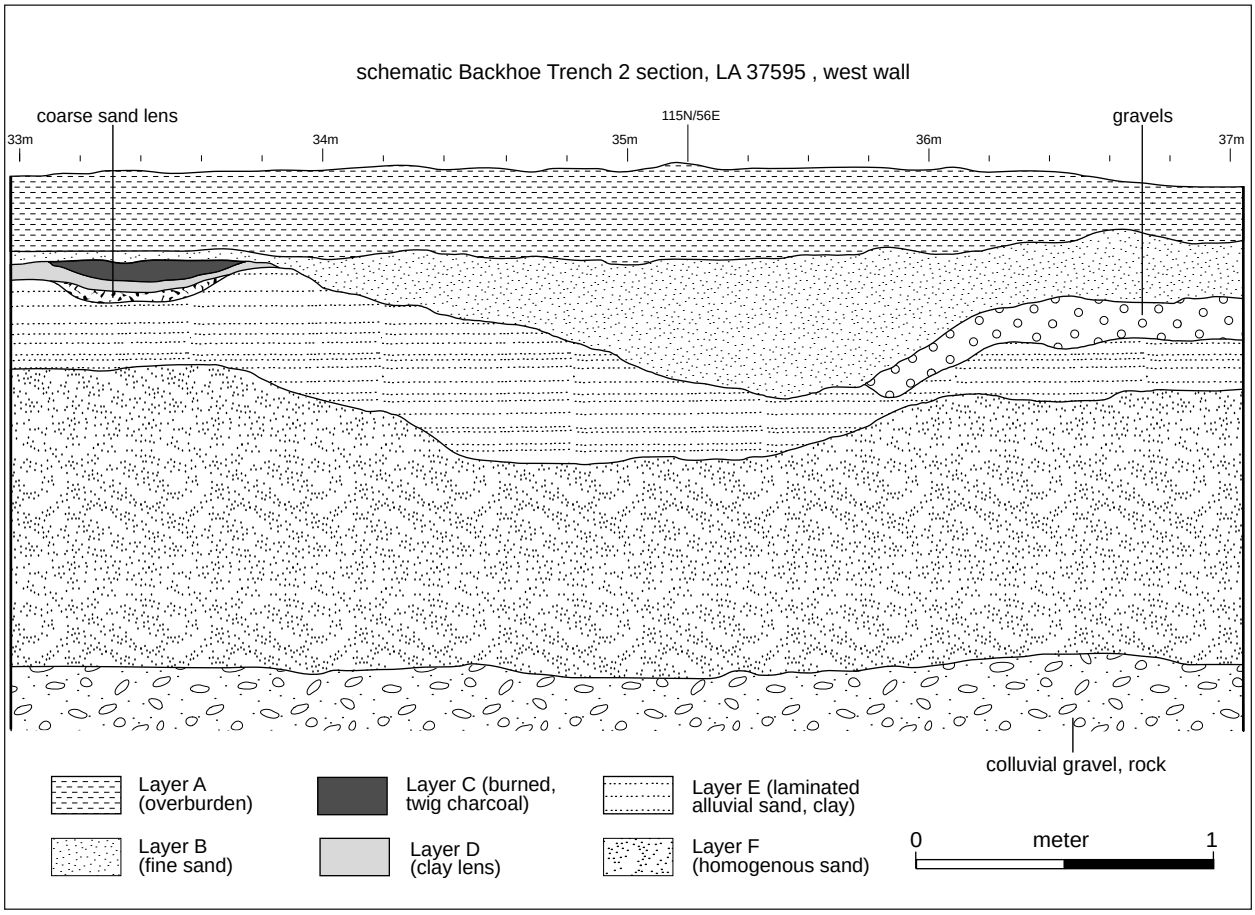


Figure 12.9. LA 37595, Backhoe Trench 2, natural fan deposit section (south of Pit Structure 1), west wall, profile.

cinity of the site. At the top there is a compact layer that breaks into plates within 3 cm of the surface and into more massive blocks of up to around 17 cm below the surface. This layer, grayish overall, is darker with a maroon tinge near the surface, grading to tan at the base. The texture and color result from paving and traffic, asphalt mixing, and human activity probably extending as far back in time as the Anasazi.

Next is a layer of variable thickness, ranging from 10 to 60 cm, which consists of very fine, pale tan sand. No layering structure is apparent, although the grain size of the sand is larger toward the base. This is probably an eolian deposit filling in irregularities on the surface. Next is an alluvial deposit of finely laminated clay and fine to medium sand; there are occasional pockets of coarser sand and very rare charcoal flecks. North of Pit Structure 1, toward the arroyo, this layer reaches thicknesses over 1.5 m. The last layer above the gravel is also sandy, but with less lamination than in the overlying layer. This layer is generally soft, although there are bands that are harder, probably due to higher $CaCO_3$ content. This layer is similar in texture to that below the surface layer, but similar in color to the layer immediately above it. In contrast to the alluvial layer, this layer is thicker south of Pit Structure 1, toward the crest of the fan, reaching thicknesses of over 1 m (Fig. 12.9). The colors of these units all are variations of light yellowish brown to brownish gray (10YR 5/4–6/4 to 2.5Y 6/2–5/4).

A charcoal lens in one of the profiles proved to be a noncultural basin in a small filled channel that contained charcoal (112N/57E) when excavated. A cigarette package was found at the same level nearby, indicating that the channel was a recent one,

even though the charcoal was around 40 cm below the present ground surface.

EXCAVATION RESULTS

Site Components

LA 37595 fits nicely into two Pecos Classification periods: Basketmaker III and Mid Pueblo II. The proveniences at the site have been divided into space-time groups for purposes of analysis (Table 12.1). We know the earlier occupation only from the east half of a pit structure (Pit Structure 3). There is no question that this structure dates to Basketmaker III, probably in the second half of the AD 600s. At that time there was a substantial Basketmaker population in this part of the valley (Toll 1991; Toll and Wilson 2000), including a structure just to the south at LA 60751. Given the presence of this major feature, a surprisingly small amount of temporally diagnostic material dates to Basketmaker III. Wherever the midden associated with the structure was, it was not within our excavation area, and it is fairly clear that the structure was cleaned out and probably dismantled at the time of its abandonment. Unlike the structure at LA 60751, however, this structure was not burned. Only proveniences directly associated with the floor of Pit Structure 3 have been assigned to the Basketmaker component. Of 169 temporally placed proveniences at the site, only 15 are Basketmaker III. These temporally placed proveniences are all Pit Structure 3 floor features.

With one exception, absolute dating techniques failed us at LA 37595. No archaeomagnetic samples returned dates, and only two tree-ring specimens were datable: a specimen from the roof layer of Pit Structure 1 yielded a date of AD 1010++vv, and a specimen from the large off-chamber cist in Pit Structure 4 yielded a more useful date of AD 1041+rB. No dates were returned for the earlier Pit Structure 3, and no archaeomagnetic samples had small enough errors to be meaningful. As is true of most of the proveniences in the project, then, components at this site have been temporally placed by ceramic assemblages and architectural style. The assigned ceramic ages all indicate use of the site in Pueblo II, with the exception of Pit Structure 3. Even Pit Structure 3 (Basketmaker III) contained substantial Pueblo II ceramics as a result of the intrusion of Pit Structure 4 (Pueblo II). The ceramic placements correspond well to the tree-ring dates in the AD 1000s (Table 12.2).

Some of the components in Table 12.1 contained very few sherds, allowing only general, tentative temporal placement. In some such cases, however, it was possible to be quite certain of a more specific time placement based on stratigraphic relationships. In Pit Structure 4, for example, the postoccupational fill contained a clearly Pueblo II assemblage. The small sample from the constructional fill suggests Pueblo II, and the floor lot contained even fewer sherds. Still, the consistency of fill and the lack of contradictory types makes assignment to Pueblo II logical, and it is in accord with the tree-ring date. In the layer of constructional debris in Pit Structure 2, there is enough pottery to place it in Mid Pueblo II, but there are so few sherds on the floor that that component by itself could only be called Pueblo II or Pueblo III. Under these circumstances, it is again reasonable to assign the floor to Mid Pueblo II.

The fills in all three Pueblo II pit structures (1, 2, and 4) contained pottery of similar age, dating to Mid Pueblo II. The relative simplicity of the temporal composition of this site means that mixing of deposits is less problematic than it might be. Even backhoe trenches (Component 0) and disturbed contexts (Components 7–8) at this site contain ceramic assemblages that have very little temporal mixing and were placed in Mid Pueblo II. If there is far more nonceramic material from the Basketmaker component than the tiny sample of Basketmaker ceramics indicates, that material would be temporally misclassified in this approach. Generally, in later samples from this project, lithic and ceramic occurrences tend to be correlated. Ceramics are probably less abundant in Basketmaker III deposits, but the quantity of incorrectly placed Basketmaker III lithics is unlikely to be a major problem here. Except for the roofing material on and near the floor, the majority of Pit Structure 1 was filled with windblown and waterborne deposits that contained some cultural material. The pottery in this fill is all Pueblo II, and Burial 1, at the upper edge of the structure fill, has Pueblo II vessels associated with it. It is therefore safe to assume that the structure filled during Pueblo II and that materials in the fill are mostly Pueblo II.

Table 12.1. LA 37595, provenience units, definitions and age; summary table.

Unit	Definition	Component	Provenience Count	Age
Backhoe trenches	Mechanically removed deposits	0	14	–
Historic disturbance	Areas affected by the major construction and other recent activity; majority of surface material, multiple cultural deposition processes	8	17	Mid Pueblo II, disturbed
Surface concentration; deflated jacales or midden	Defined spatially: area at edge of right-of-way containing dense surface material (119N/62E) and associated trenches; natural cultural deposition	7	7	Mid Pueblo II
Postoccupational Anasazi pit structure fill beneath disturbance zone, Pit Structure 1, Levels 2–5; Layer 1, Levels 3–9	Includes eolian/alluvial fill of Pit Structures 1, 2, and 4	6.1 6.2 6.3	24 2 6	Pueblo II, postdepositional
Uppermost fill in Pit Structure 1, Level 1; Levels 1 and 2, Layer 1	Eolian/alluvial deposits; somewhat increased organic paint, mineral paint still dominant	6.12	9	Pueblo II, slightly later?
Features in fill of Pit Structure 1	Burials 1 and 2; fire pit	6.11	5	Mid Pueblo II
Pit Structure 1 constructional debris	Roof dirt and fall, vent fill and floor fill	3.2	41	Mid Pueblo II small sherd sample
Pit Structure 1 floor association	Nonconstructional floor fill and floor contact "kiva", 2 large cists, numerous features associated	3.1	37	Mid Pueblo II
Pit Structure 2 constructional debris	Mealing room roofing and wall debris	4.2	4	Mid Pueblo II
Pit Structure 2 floor association	Mealing room, bins present; disturbed by backhoe	4.1	17	Mid Pueblo II
Pit Structure 4 constructional debris	Roof dirt and "kiva" that cuts through BM III structure	5.2	3	Mid Pueblo II, small sample
Pit Structure 4 floor association	Slightly less than half of floor excavated	5.1	6	Mid Pueblo II, by context; very small sample
Pueblo II extramural features	Little known features probably contemporary with Pit Structures 1, 2, and 4	2	3	Pueblo II or Pueblo III; virtually no sherds
Pit Structure 3 fill	Materials from just above floor	1.2	3	Basketmaker III, Pueblo II contamination; very small sample lacks Basketmaker III types
Pit Structure 3 floor association	Pithouse; half of floor removed by Pit Structure 4	1.1	20	Basketmaker III, Pueblo II contamination; very small sample

Table 12.2. LA 37595, pottery type and paint type by Pit Structures 1–4 and fill contexts; counts and percent.

	Pit Structure 3		Pit Structure 1		Pit Structure 2		Pit Structure 4		Pueblo II Pit Structure Fill		Jacal		Disturbed		Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
Ceramic Type																
Pueblo II corrugated	–	–	1	0.2%	–	–	1	2.1%	10	1.4%	–	–	1	0.2%	**13**	**0.5%**
Pueblo II–III corrugated	1	1.3%	21	4.6%	2	1.4%	–	–	5	0.7%	–	–	4	0.8%	**33**	**1.3%**
Plain gray	10	13.3%	11	2.4%	11	7.5%	2	4.2%	78	10.6%	129	19.3%	76	15.8%	**317**	**12.1%**
Corrugated gray	39	52.0%	335	73.6%	63	42.9%	17	35.4%	373	50.6%	349	52.2%	239	49.8%	**1415**	**54.2%**
Mud ware	2	2.7%	–	–	–	–	–	–	–	–	–	–	–	–	**2**	**0.1%**
Red Mesa–style black-on-white	–	–	3	0.7%	–	–	–	–	8	1.1%	–	–	–	–	**11**	**0.4%**
Pueblo II black-on-white	1	1.3%	2	0.4%	4	2.7%	5	10.4%	40	5.4%	–	–	8	1.7%	**60**	**2.3%**
Sosi-style black-on-white	–	–	–	–	–	–	–	–	1	0.1%	–	–	–	–	**1**	**0.0%**
Dogoszhi-style black-on-white	2	2.7%	1	0.2%	1	0.7%	8	16.7%	19	2.6%	1	0.1%	2	0.4%	**34**	**1.3%**
Chaco-style black-on-white	–	–	–	–	1	0.7%	–	–	–	–	–	–	–	–	**1**	**0.0%**
Pueblo II–III black-on-white	6	8.0%	13	2.9%	21	14.3%	5	10.4%	48	6.5%	71	10.6%	47	9.8%	**211**	**8.1%**
Painted black-on-white	–	–	4	0.9%	–	–	–	–	2	0.3%	–	–	–	–	**6**	**0.2%**
Polished white	12	16.0%	53	11.6%	44	29.9%	8	16.7%	134	18.2%	118	17.6%	99	20.6%	**468**	**17.9%**
Polished black-on-white	1	1.3%	2	0.4%	–	–	1	2.1%	9	1.2%	1	0.1%	1	0.2%	**15**	**0.6%**
Squiggle hatch black-on-white	1	1.3%	8	1.8%	–	–	–	–	5	0.7%	–	–	2	0.4%	**16**	**0.6%**
Mesa Verde Deadmans Black-on-red	–	–	–	–	–	–	–	–	2	0.3%	–	–	–	–	**2**	**0.1%**
Mesa Verde plain red	–	–	–	–	–	–	1	2.1%	–	–	–	–	–	–	**1**	**0.0%**
Mesa Verde Black-on-red	–	–	1	0.2%	–	–	–	–	2	0.3%	–	–	–	–	**3**	**0.1%**
Cibola red ware (indeterminate)	–	–	–	–	–	–	–	–	–	–	–	–	1	0.2%	**1**	**0.0%**
Kayenta Tsegi Orange	–	–	–	–	–	–	–	–	1	0.1%	–	–	–	–	**1**	**0.0%**
Total	**75**	**100.0%**	**455**	**100.0%**	**147**	**100.0%**	**48**	**100.0%**	**737**	**100.0%**	**669**	**100.0%**	**480**	**100.0%**	**2611**	**100.0%**
Paint Type																
None	12	52.2%	53	61.6%	44	62.0%	8	29.6%	135	50.9%	118	62.1%	99	62.3%	**469**	**57.1%**
Organic	–	–	2	2.3%	–	–	2	7.4%	12	4.5%	–	–	5	3.1%	**21**	**2.6%**
Mineral	11	47.8%	31	36.0%	27	38.0%	17	63.0%	118	44.5%	72	37.9%	55	34.6%	**331**	**40.3%**
Total	**23**	**100.0%**	**86**	**100.0%**	**71**	**100.0%**	**27**	**100.0%**	**265**	**100.0%**	**190**	**100.0%**	**159**	**100.0%**	**821**	**100.0%**

There is a very slight increase in the occurrence of organic-painted white ware in the very uppermost levels of Pit Structure 1. Carbon-painted black-on-white ceramics during the Pueblo II period can mean a couple of things. Toward the end of the period, approaching AD 1100, carbon pigment began to be adopted by local potters. Potters in other areas, especially to the west, used this paint type at the same time that potters in the Chaco, Mesa Verde, and Totah areas were using mineral paint nearly exclusively. Only 21 sherds with organic paint were recovered from LA 37595. Almost all of these sherds were from contexts near the present ground surface, suggesting that they are later products, although three did come from deeper contexts in Pit Structures 1 and 4 and are perhaps more likely to be nonlocal. This increase of organic-painted sherds on and near the surface could come from incidental use of the site area following abandonment and filling of the structures; it could also indicate that the final use of the site occurred just as organic paint began to be popular. These uppermost, most disturbed deposits were excluded from general analysis data sets. Some Chuska Valley potters used carbon paint throughout the time sequence. Only three trachybasalt-tempered sherds, which had to have come from the Chuska area, were recovered from the site, and two of these are carbon-painted.

Pit Structures 3 and 4 Fill

The fact that Pit Structure 4 cut through Pit Structure 3 and subsequently collapsed, and the necessity of finding the earlier structure from its edge in a paved-over backhoe trench, made separation of the constituent components difficult. Since Pueblo II pottery attributable to the filling of Pit Structure 4 (Pueblo II) was present very near the floor of Pit Structure 3 (Basketmaker III), the only units placed in Pit Structure 3 components were those that were identified as roof fall and floor contact. Materials described as the upper fill of Pit Structure 3 were placed in the component containing the postoccupational fill to Pit Structure 4 (Pueblo II).

Features Outside Pit Structures

Much of the surface of this site has experienced considerable disturbance, including irrigation ditching, highway construction, asphalt mixing, and waterline and phone line installation. This level of disturbance left the site surface within the project area featureless, and there were no cobble concentrations or other indications of structures. A few meters east of Pit Structure 1 and the waterline disturbance were a concentration of gravels and the area of most abundant surface artifacts on the site (Figs. 12.8a, 12.8b, 12.8c). Test trenches in this area revealed these deposits to virtually lack depth. It is likely that these materials represent a deflated surface structure, although it could also have been a deflated midden. This material is again ceramically consistent enough and spatially concentrated enough to be included in analyses. This concentration was the closest manifestation of any surface structure on the site. We never encountered surface rooms of any kind, though there is little doubt that some existed at the time of occupation of the pit structures. East of this site's east boundary there is an extensive portion of fan that has a number of cobble and artifact concentrations on it (LA 60750), which is likely to also relate to this surface material concentration.

There are a few features about which little is known and which contain little diagnostic material, but which are likely to have been part of the Pueblo II occupation that created Pit Structures 1, 2, and 4. These include a large extramural cist between Pit Structures 1 and 4, and a burned area that may be part of a room or an extramural activity area southwest of Pit Structure 4 (mostly under pavement). Little was recovered from these features, and given their unclear temporal placement, they were placed in a separate component.

EXTRAMURAL AREAS

Extramural areas were added to the provenience file for LA 37595 after it was excavated. Two grid axes (122N and 59E) were chosen to divide the excavated area into four areas. These axes intersect inside Pit Structure 1, and the east–west line crosses Pit Structures 3 and 4. The northern areas are much bigger than the southern ones, but the majority of features are in the southern ones (Table 12.3). Compared to LA 37592, LA 37595 has very few extramural features—only a posthole, a cist, and a pit. There are three pits (a basin-shaped pit, a fire pit, and a grave) in pit structure fills, which might be considered extramural as well, although each would have been in a noticeable depression. By far the most notable

extramural occurrence is the very high density of materials adjacent to the east edge of the new right-of-way at the dividing line between Extramural Areas 2 and 3 (122N; see Fig. 12.6). The areas on the west side of the site, Extramural Areas 1 and 4, contain very little material on the surface or from excavation, in part because this area is taken up by highway pavement, shoulder, and verge.

Extramural Area 1

Extramural Area 1 is the northwest quadrant of the site. This area includes parts of Pit Structures 1, 3, and 4, and is largely taken up with highway shoulder and fill to the drainage at the north edge of the site (Fig. 12.6). A large storage cist (Feature 1) was located between Pit Structures 1 and 4. The feature was excavated primarily by the backhoe, and we recovered little material from it. It contained two corrugated sherds, and it is therefore quite likely that the feature was part of the Pueblo II use of the site, which included Pit Structures 1, 2, and 4 (Table 12.3). The floor of the feature was clearly burned. Given the shape and depth of the feature, it seems likely that this burning was part of feature preparation rather than feature function. It contained no other evidence of fire such as expended fuel or ash layers, although there are ash pockets in the fill. This feature appears to have been filled intentionally for about 70 cm from the base, and then to have had the remainder filled by a series of natural events. The floor of the feature is nearly as deep as the floor of the nearby pit structures.

Extramural Area 2

Extramural Area 2, the northeast quadrant of the site, accounts for two-thirds of the material from extramural areas, mostly because of the dense surface material in the area of the probable deflated jacal structure or midden. There is so much material in this area that it accounts for 30 percent of the site lithic count and 25 percent of the ceramic count. Other than this area, there are no defined features in Extramural Area 2. Within the right-of-way much of the area is taken up by the waterlines and the edge of the arroyo that separates this site from LA 37596.

The surface of the fan in the vicinity of the site

Table 12.3. LA 37595, extramural features and features in structure fill; summary table.

Feature	Grid	Construction Details	Use Details	Fill	Assigned Function	Volume (l)	Length (cm)	Width (cm)	Depth (cm)
Feature 1, Extramural Area 1	–	unlined	oxidized	Five units of silts and laminated sands; bottom layer is mixed fine and coarse sand with clay peds, charcoal, and ash pockets.	major storage cist	–	138	70+	124+
Feature 1, Extramural Area 3	108N/66E	unlined	unburned	Fine sand; charcoal flecks, burned soil.	unknown	–	>65	>30	34
Feature 1, Extramural Area 4	126N/52E	post shims	unburned	Burned sand and charcoal, clean sand, darkly stained sand at base; mano shim.	posthole	12.7	25	24	27
Pit Structure 1, Layer 1	–	unlined	unburned	Burial 1.	grave	–	–	91	53
Pit Structure 1, Feature 1, Layer 1, Level 2	–	unlined	unburned	Contains charcoal and ash, but sides are not oxidized.	pit	6.7	35	35	7

is characterized by clumps of vegetation (mostly grasses and greasewood) separated by bare, nearly white, very fine-grained natural soil. In the area of material concentration the bare soil has a dense covering of pebbles, fire-cracked rock, sherds, and chipped and ground stone. This material concentration measures around 8 m east–west and 10 m north–south (Lancaster 1983:35). As we found no definable formal constructions, we did not number these artifact concentrations as features. The bare soil has the appearance of hardpan with low permeability that probably becomes very sticky when wet, with some mud cracking. We placed two trenches at the west edge of the material concentrations; they revealed that there is little depth to the cultural deposits in that area. Both trenches were excavated to around 40 cm below present ground surface. In the top 10 cm level of one trench there were 28 sherds after surface collection; the top level of the other trench contained only 1 sherd. Levels 2 and 3 contained 1 sherd each in each trench, and no sherds were found in the bottom level of either trench. Chipped stone was more abundant (47 pieces) in the top level than sherds but similarly scarce in Levels 2 and 3 and absent in Level 4.

The profiles of these trenches indicate small-scale cutting and filling of the surface and some ponding and evaporation. Gravel is virtually absent below the surface here, suggesting that the numerous pebbles on the surface were transported there by Anasazis. Although it may be that something like a major pot-polishing industry took place here, it seems more likely that these pebbles were incorporated into a largely mud structure or resulted from decomposition of gravel-rich sandstone. The sandstones on Piñon Mesa, to the west, are very soft and loosely aggregated and contain abundant chert pebbles. If this material represents a midden rather than a structure, the pebbles are still hard to account for, although small channels with gravels were visible in the long backhoe trench profiles. Probably because of long exposure on the ground surface, most of the pottery is in the form of small sherds, classifiable into only broad categories because of their size and condition. The average sherd weight in this area is 2.3 g, whereas the average sherd weight for the rest of the site (with this area's sherds excluded) is 11.9 g. Gray wares make up 71 percent of the 669 sherds from the area; the remainder are white wares, most of which have no classified design. Although 19 percent of the white ware sherds do have paint, only one Dogoszhi-design sherd was classified (Table 12.4).

All the recorded paint is mineral, in keeping with the Mid Pueblo II date of the site. Over 90 percent of the 478 pieces of chipped stone are debitage, and, as is common elsewhere, the primary materials are chert, siltstone, and quartzite (Table 12.5). Although the debitage is half chert, 70 percent of the ten cores are siltstone, and only 30 percent are chert. Formal tools are rare at the site as a whole (Tables 12.6, 12.7). The only drill from the site is from this extramural area, and three notches, found mostly in extramural contexts at this site, were found in this area. The percentages of cores and hammerstones are somewhat lower than those of the overall site. Other than the pebbles, which may or may not have been utilized, there is little indication of particular activities in this part of the site, though the variety of formal tools does suggest activity, perhaps associated with a ramada or, again, a midden. The ground stone assemblage consisted of five manos and one trough metate, all fragmentary. In the aggregate, all of this material looks like unremarkable daily by-products.

Table 12.4. LA 37595, pottery types, counts by paint type; surface concentration, east edge of site.

	Pigment		Mineral		Total
	Indeterminate	None	Strong	Diffuse	
Plain gray	–	129	–	–	**129**
Corrugated gray	–	349	–	–	**349**
Dogoszhi-style black-on-white	–	1	–	–	**1**
Pueblo II–III black-on-white	1	36	23	11	**71**
Polished white	–	118	–	–	**118**
Polished black-on-white	–	–	1	–	**1**
Total	**1**	**633**	**24**	**11**	**669**

Table 12.5. LA 37595, lithic tool types, counts and percents by material types; deflated surface material concentration.

	Chert		Chalcedony		Silicified Wood		Quartzite		Quartzitic Sandstone		Igneous		Siltstone		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Col. %
Debitage	223	50.6%	1	0.2%	9	2.0%	38	8.6%	8	1.8%	2	0.5%	160	36.3%	**441**	**92.3%**
Core	3	30.0%	–	–	–	–	–	–	–	–	–	–	7	70.0%	**10**	**2.1%**
Retouched/utilized debitage	11	57.9%	–	–	2	10.5%	2	10.5%	–	–	–	–	4	21.1%	**19**	**4.0%**
Retouched/utilized core	1	100.0%	–	–	–	–	–	–	–	–	–	–	–	–	**1**	**0.2%**
Drill	1	100.0%	–	–	–	–	–	–	–	–	–	–	–	–	**1**	**0.2%**
Notch	3	100.0%	–	–	–	–	–	–	–	–	–	–	–	–	**3**	**0.6%**
Hammerstone	1	33.3%	–	–	–	–	1	33.3%	–	–	–	–	1	33.3%	**3**	**0.6%**
Total	**243**	**50.8%**	**1**	**0.2%**	**11**	**2.3%**	**41**	**8.6%**	**8**	**1.7%**	**2**	**0.4%**	**172**	**36.0%**	**478**	**100.0%**

The analysis suggests that at least some of the deposit is trash, but context and content do not allow further assessment of the type and function of Extramural Area 2.

Extramural Area 3

Extramural Area 3 extends southeast of Pit Structure 1 to the boundary with LA 37594. This area includes a portion of the dense surface material area at the east edge of the site, but much less than Extramural Area 2. The backhoe trenches across this area revealed some subsurface disturbance from the time of the Anasazi occupation, but few formal features.

Extramural Area 4

Extramural Area 4, the southwest portion of the site, is bounded by LA 37594 on the south and the highway pavement on the west (Fig. 12.6). As with the rest of the site within the right-of-way, no features were visible from the surface. After removal of the road surface for the excavation of Pit Structures 2 and 3, a 2 by 2 m burned surface was observed south of Pit Structures 3 and 4 and west of Pit Structure 3, extending to the edges of these two structures. The burned surface appeared to be unprepared; burned jacal was present, as was a burned stick (taken as a tree-ring sample but providing no date) and a posthole. The few sherds associated with the surface are Pueblo II in age, suggesting that whatever feature was here—a jacal room, perhaps—went with Pit Structure 4 rather than Pit Structure 3. As per project practice, we did not submit a carbon-14 sample because we felt the improvement over the ceramic date was not sufficient to merit the expense. There is no evidence of burning in the pit structure, so if a structure were present on the surface it is likely to have gone out of use at a different time than the pit structure.

Feature 1, a posthole, was below but not directly associated with the dendro specimen. As a single feature it is difficult to attribute to a structure, but burned jacal is present in the area. A complete mano was found inside the posthole, resting at an angle within the pit. This mano could have served as a shim, but if it did, it was dislodged when the post was removed. Dark, stained soil was in the base of the pit, further suggesting that it may have held a post. The upper fill of the pit consists of oxidized sand.

Table 12.6. LA 37595, chipped stone tool types, weights and materials, by extramural areas and pit structures.

Unit	FS	Lot	Material	Artifact Type (Edge 2)	Weight (g)	Layer/ Level	Feature
Extramural Areas							
1	5	26	chert	notch	4	–	–
2	4	218	chert	notch	7	–	–
2	4	263	chert	notch	7	–	–
2	4	268	chert	notch	12	–	–
2	4	380	chert	drill	1	–	–
2	6	11	siltstone	notch, retouched/ utilized debitage	27	–	–
2	8	17	siltstone	notch, retouched/ utilized debitage	33	–	–
3	2	19	quartzite	notch	23	–	–
3	2	29	chert	denticulate	7	–	–
3	2	32	chert	notch	42	–	–
3	16	7	chert	notch	2	.01	–
3	18	16	chert	notch	39	3.00	–
3	20	3	chert	notch, retouched/ utilized debitage	9	–	–
Pit Structures							
1	131	7	siltstone	denticulate	19	1.02	7
1	167	1	chert	projectile point	1	.06	12
2	222	5	silicified wood	denticulate	5	1.00	–
3	310	1	chert	projectile point	15	1.00	–
3	310	23	chert	chopper/plane	207	1.00	–
3	310	24	chert	denticulate	10	1.00	–
3	313	14	chert	denticulate	10	1.00	–
4	411	2	quartzite	notch	13	1.02	–
4	411	18	siltstone	notch	86	1.02	–
4	413	4	siltstone	notch	18	1.00	–
4	415	17	chert	graver	2	2.01	–

Table 12.7. LA 37595, chipped stone tool types, counts and percents, by extramural areas and pit structures.

Tool Type	Pit Structure		Extramural Area		Total	
	Count	Col. %	Count	Col. %	Count	Col. %
Drill	–	–	1	7.7%	**1**	**4.2%**
Graver	1	9.1%	–	–	**1**	**4.2%**
Notch	3	27.3%	11	84.6%	**14**	**58.3%**
Denticulate	4	36.4%	1	7.7%	**5**	**20.8%**
Projectile point	2	18.2%	–	–	**2**	**8.3%**
Chopper/plane	1	9.1%	–	–	**1**	**4.2%**
Total	**11**	**100.0%**	**13**	**100.0%**	**24**	**100.0%**

PIT STRUCTURE 1 (PUEBLO II): CASA CALABASA, OR KIN NAGEEZI

The dimensions of Pit Structure 1 at LA 37595 were as follows: north–south at floor level, it measured 4.17 m, and the bench height was 1.34–1.42 m. East–west at floor level it measured 4.12 m floor, and the bench width was 0.04–0.38 m (Figs. 12.6, 12.10a). The floor area was 13.50 sq m, and the maximum height of the walls was 2.08 m. The axis of the structure was oriented 342 degrees true north. (The axis of pit structures such as Pit Structure 1 is defined by the alignment of the centers of the ventilator shaft, the deflector, the hearth, and the sipapu or north wall niche in that alignment.) Pit Structure 1 is remarkably similar in shape, construction, feature complement, and morphology to Pit Structure 1 at LA 37592 (Figs. 12.10a, 12.10b, 12.10c). The two structures are also similar in their minimal use of masonry, although this structure takes the earthen construction about as far as possible: no pilasters were recorded, the vent shaft and tunnel use no rock (unlike the structure at LA 37592), and there is little or no rock in the deflector. The builders of this structure were clearly capitalizing on the natural hardness of the soil at this location. This hard, clay-silt, fine sand is remarkably homogeneous for an alluvial/colluvial fan deposit. Very little variation was observed in the structure walls. The floor of the structure rests on a gravelly deposit, and rock work was employed only in a few places, apparently to fix in the wall near the floor. Cobbles in the fill indicate that the structure had some masonry elements that did not survive, but the builders came close to creating an all-earth structure.

The discovery of Pit Structure 1 in a long backhoe trench indicated that the testing recommendations (no further work) were inadequate. The long trench was excavated in part to investigate the subsurface (we had already recommended further work) and also to accommodate the telephone company, which was anxious to lay a cable before the completion of our work. Our effort to clear a trench for the phone company determined the way in which this structure was excavated. The long backhoe trench intersected the western one-third to one-quarter of the pit structure, passing just west of the deflector. After the trench was excavated to floor level and the profile sketched, we divided the segment of the circle west of the trench in half, resulting in two excavation units from 92 cm wide at the dividing line to zero where the ends meet the trench. The southwest "quad" was 190 cm and the northwest quad 150 cm in maximum dimension along the edge of the trench. These units were excavated to the floor; the upper fill was removed in 50 cm levels down to Layer 5 and then in natural stratigraphic units to the floor. This cleared the portion of the structure within the proposed phone line. The phone company's effort to shortcut the clearance procedure was a dubious ploy. Fortunately, they did not install the line before we completed the entire structure.

To provide a control block, we excavated a 1 by 3 m east–west trench on the structure's midline. We removed and screened (1/4 inch) eolian and alluvial Layer 1 in nine 20 cm levels, followed by Layers 4 and 5, which we also subdivided into levels, leaving floor fill. Layer 1, in the remaining northeastern and southeastern quadrants, was removed by backhoe to a level above a disarticulated burial (Burial 2), excavated in the control trench. The remainder of Layer 1 was removed by hand to expose the roof fall and floor fill layers. Floor fill was removed in equal floor quadrants rather than the odd quads formed by the original trench; the trench area was therefore missing from the west quads.

Structural Fill

The roof of Pit Structure 1 was dismantled at the time of abandonment, which determined the nature of the fill (Table 12.8). The uppermost fill, including the modern ground surface, was designated Layer 1. Layer 1 was a thick unit of clearly postoccupational eolian/alluvial fill (Fig. 12.10c). It is coded as natural fill with cultural material. The materials within Layer 1 are homogeneously Pueblo II, and, together with the Pueblo II vessels with Burial 1, rapid filling of the structure is indicated.

The presence of a shallow ash- and charcoal-filled pit about midway between the ground surface and the structure floor shows that people were around as the structure filled, and that the filling took place within the span of Pueblo II. The function of this pit is unclear; it is *not* burned, but it was visible because of increased charcoal and ash content and its regular shape.

Layer 1 contained alternating lenses of sand and laminations with higher clay and silt content. The dip of the laminations indicates that the structure

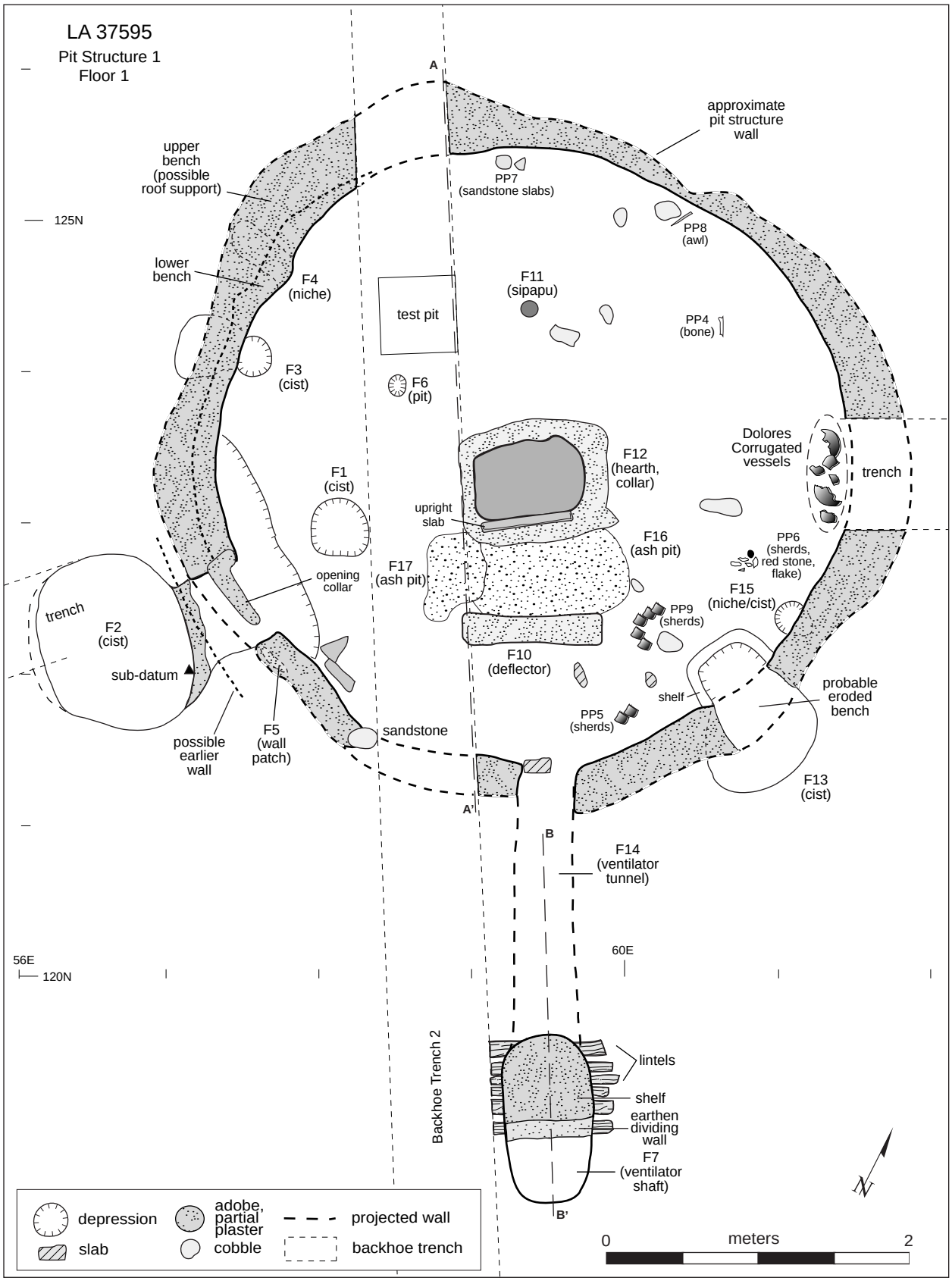


Figure 12.10a. LA 37595, Pit Structure 1, Floor 1, plan.

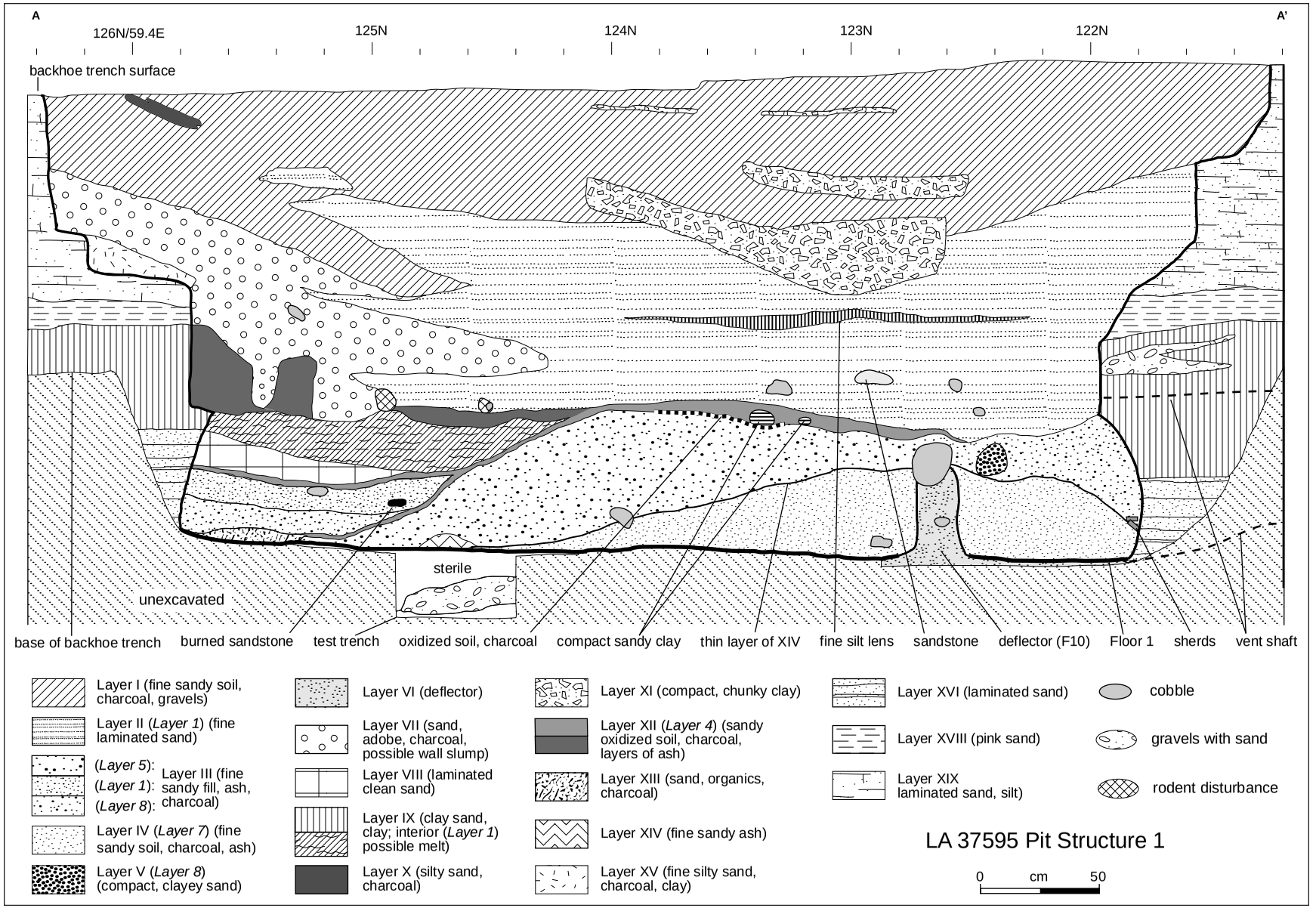


Figure 12.10b. LA 37595, Pit Structure 1, Backhoe Trench 2, east wall, profile.

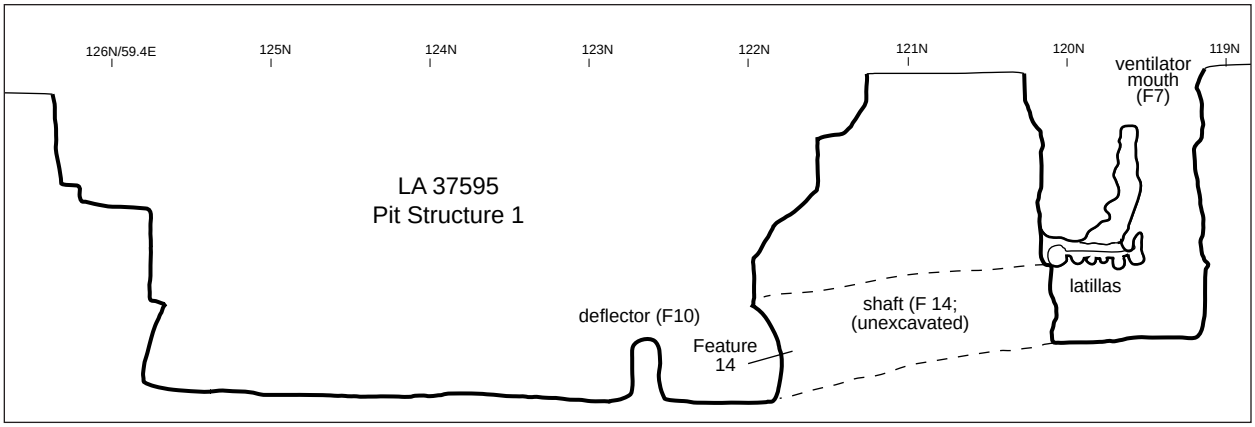


Figure 12.10c. LA 37595, Pit Structure 1, architectural profile.

Table 12.8. LA 37595, Pit Structure 1, stratigraphy.

Layer	Type of Deposit	Depth (mbsd)	Description
1	natural with cultural material	0.30–1.93	Thick eolian and alluvial layer filling most of the structure. Lenses are abundant, and there is evidence for sparse use of the site during filling. Minimal rock and few artifacts, variable charcoal. Includes redeposited Burial 2.
2–3	not used	–	–
4	roof fall	1.52–2.12	Burned roof fall, probably the roof covering; variable charcoal and adobe content. All quads, especially around edges of structure.
5	roof dirt	1.88–2.08	Clean and unlaminated, probably the roof covering. Contains few artifacts and little charcoal except where mixed with Layer 4. Heaped near center of the structure.
6	floor fill	2.09–2.16	Thin, ashy, fine-grained layer on floor of west third of structure; no sherds.
7	roof dirt	–	Loose, heaped layer around deflector. Similar to Layer 5 but contains more charcoal and is looser. More charcoal south of deflector.
8	roof fall	1.79–1.95	Roof or wall fall containing much adobe and some rock. Rests on Layer 4 at north edge of structure and on Layer 7 south of the deflector.
Floor 1	Layers 4, 5, 6, 7	2.14–2.16	Complete floor.
Layer 9, Floor 2	plaster	–	Partial floor, thin layer of plaster; very few artifacts.

filled as a depression, with the low spot near the center. The upper part of the layer contained more ash and charcoal than the lower ones, again suggesting continued human activity in the vicinity of the filling structure. Clay-silt lenses were thicker and more strongly developed toward the east edge of the structure. Because of use of the area for mixing highway asphalt, the top of the layer at and below the present ground surface was quite compact and contained bits of asphalt.

Layer 1 contained two burials. Burial 1 was a 20- to 30-year-old woman placed on her back in a pit dug down to near the bench in the southwest part of the structure. The legs were tightly flexed. Both arms were also flexed. The left arm was across the chest, and the right hand was near the

face. Two vessels accompanied this burial, placed on the right side of the head. One is slightly more than half of a Deadmans Black-on-red canteen decorated with hatchured bands with parallel lines between them (Fig. 12.11 [a]. The break is definitely ancient and shows some wear. The second vessel is a small (11.5 cm diameter, 8 cm high), spherical, unusual gray ware seed jar (Fig. 12.11 [b]. It is constructed of wide, somewhat irregular bands that are only moderately corrugated. The exterior is heavily sooted. This vessel does not have a customary gray ware rim fillet; instead, the last coil was rounded and smoothed, and appears heavily worn. Inside the pot below the rim a series of 1–3 cm long, parallel painted hash marks extends from the rim into the pot; the lines are perpendicular to the rim. Al-

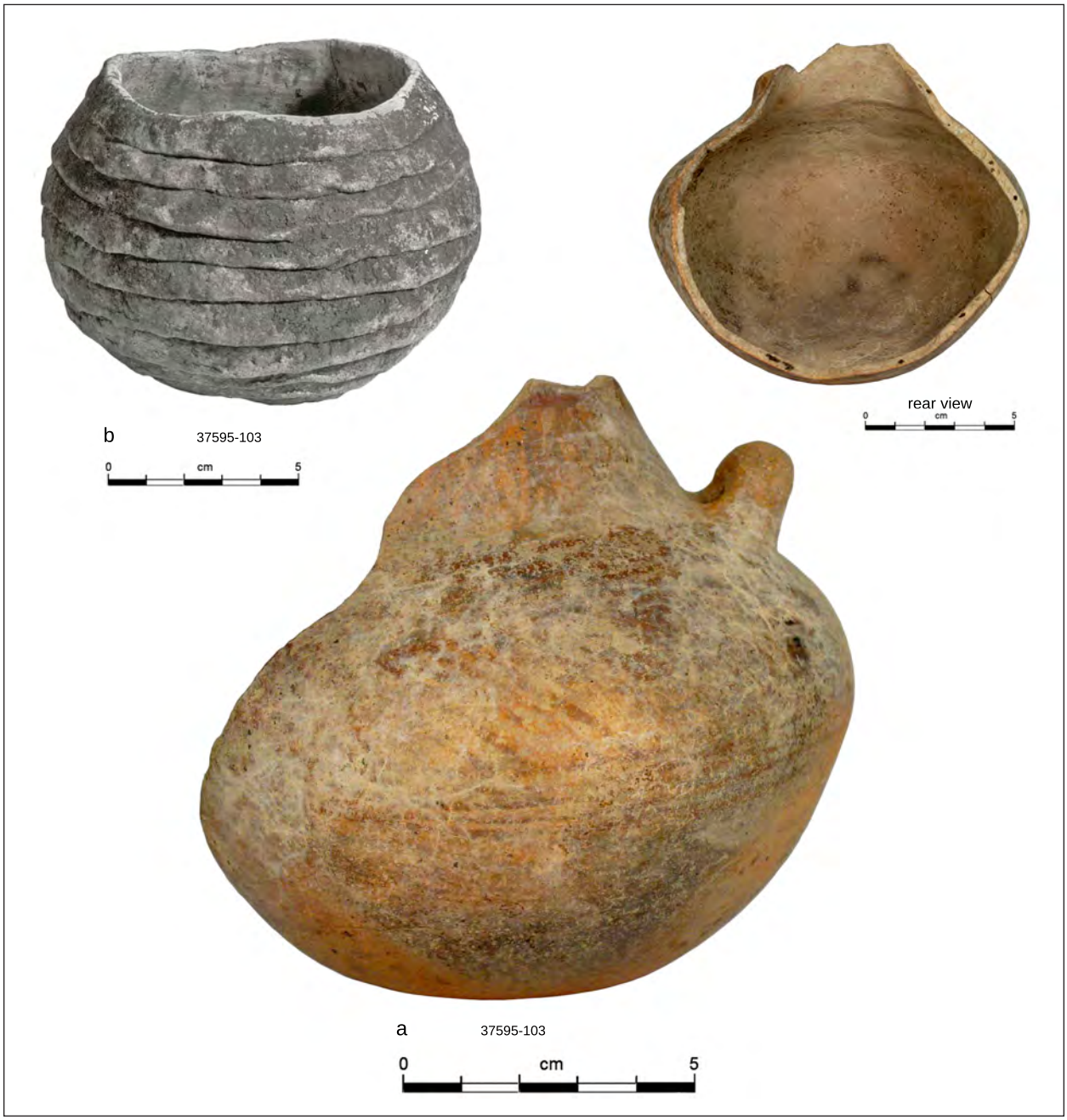


Figure 12.11 [a–b].LA 37595, Pit Structure 1, Layer 1: a. Deadmans Black-on-red canteen fragments (front and rear views); b. gray ware seed jar.

though this burial is likely to date to Pueblo II, it is noteworthy that the paint on this vessel is one of the few examples of organic paint at the site, and the only example of painted gray ware. There are brown stains on the interior of the vessel, especially near the rim, and the painted lines are difficult to see in some places.

There are only 43 painted gray ware jar sherds in the entire project ceramic assemblage; this is the only one associated with a burial. Corrugated vessels with additional decoration—either painting or incisions across coils—are unusual in the whole assemblage. Though it is difficult to determine, given the small number of such sherds, they seem to show up in special contexts such as this one or in the subfloor vent at Pit Structure 1, LA 37600. Since red wares are also rare in the assemblage, and, among those, jars are even rarer, both vessels with Burial 1 are unusual.

Burial 2 was completely redeposited within one of the many alluvial lenses in Layer 1. As found, this was not a formal burial. Many of the recovered elements exhibit damage from carnivore gnawing, including missing epiphyses and condyles, broken bone, and tooth puncture marks. It seems likely that a burial was placed in or near the abandoned pit structure (see Toll and Schlanger 1998) and was then disturbed by wild or domestic canines. The remaining bone then washed back into the structure depression as it continued to fill. Portions of ribs and most of the long bones were present, as well as the mandible, portions of the clavicles, and a scapula.

Layer 1 also contained nine disarticulated human elements, including a tooth, rib, clavicle, femur, and hand bones from at least two individuals (Table 12.9). These are the only disarticulated remains from the site. All but one of these elements were in the northeast quadrant, and most were from the upper part of Layer 1. Although the apparent skeletal age and the elements present indicate that some of these elements may pertain to Burial 2, comparison of the clavicles and the other elements indicates that they were not all from that individual. None of these disarticulated elements has any modification, human, thermal, or otherwise. In addition to the human elements, Layer 1 contained an articulated turkey foot.

The layers in contact with the floor were complex, consisting of four different fill units, all components of the roof. The roof dirt, Layer 5, was clean fill, mostly heaped in the center of the chamber. Layer 4, burned organic roofing material and adobe, was around the edges of the room, partially resting on the floor and partially on top of the edges of Layer 5 (Figs. 12.12a, 12.12b). Layer 7 was located only around the deflector; it combined the softness and charcoal content of Layer 4 and the fill dirt of Layer 5; it is likely that this apparent mixture resulted from the dismantling of the hatchway and perhaps the introduction of materials through it before the roof came down. Layer 6 was a thin (less than 5 cm thick) clay and fine sand layer on the floor and at the north edge of the structure in an area where the floor was missing, suggesting some deterioration of the roof to the north and west prior to the removal of the roof.

Table 12.9. LA 37595, Pit Structure 1, human remains (disarticulated), bone type count by quadrant and layer/level.

	SW 1/4, Layer 1, Layer 2	NE 1/4, Layer 1, Level 1	NE 1/4, Layer 1, Level 5	Total
Indeterminate	–	1	–	**1**
Central upper permanent incisor	–	1	–	**1**
Rib	–	–	1	**1**
Clavicle	–	1	–	**1**
Radius	1	–	–	**1**
First phalanx (manus)	–	1	–	**1**
Second phalanx (manus)	–	2	–	**2**
Femur	–	1	–	**1**
Total	**1**	**7**	**1**	**9**

None of these elements is culturally modified.

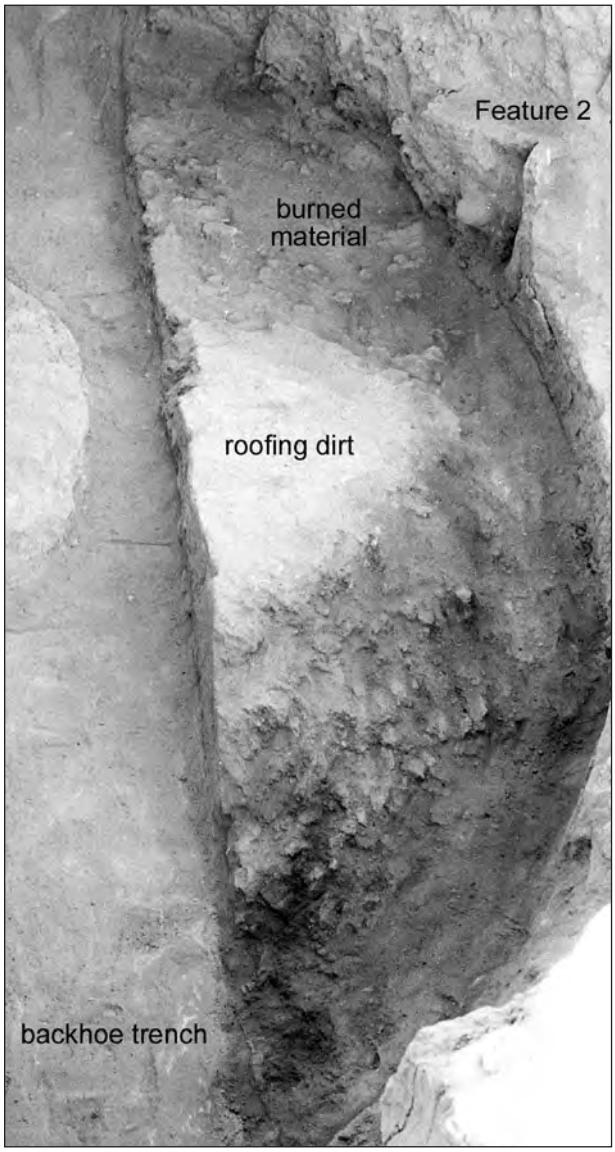


Figure 12.12a. LA 37595, Pit Structure 1, Layer 4, burned roofing material, west wall.

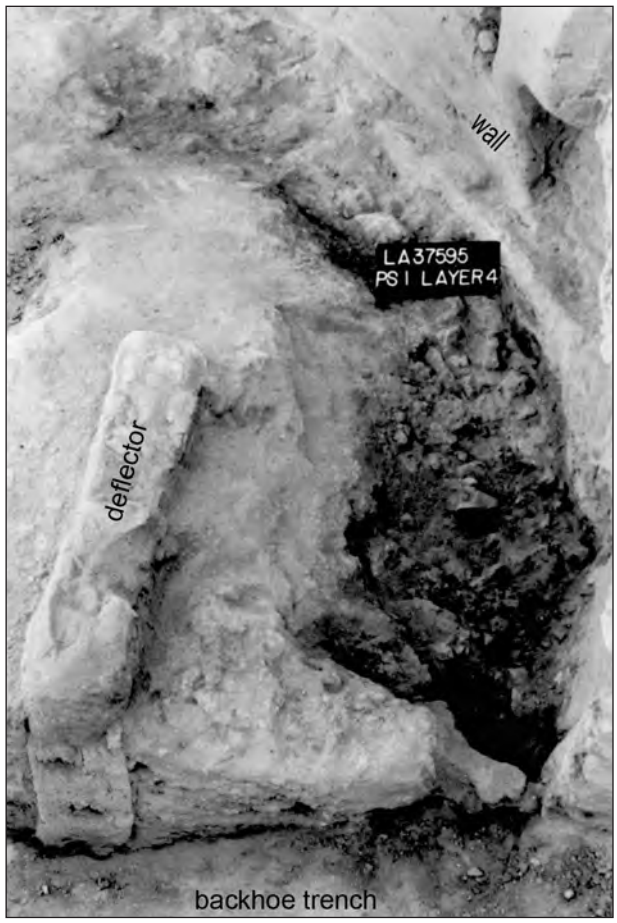


Figure 12.12b. LA 37595, Pit Structure 1, Layer 4, burned roofing material, south wall.

Two components of the roof rested directly on the structure's floor. There were bits of burned roofing material around the edge of the structure (Layer 4; Figs. 12.12a, 12.12b); unfortunately, this material did not include any datable tree-ring specimens. The flotation results show that juniper, piñon, willow, yucca, and saltbush were in the roofing material layers, suggesting composite materials in roof construction, but no surprising elements. Occasional food and ceremonial species were also found in roofing material samples: maize, piñon, squash, and tobacco (Tables 12.10–12.12). There was also a massive unit of relatively clean fill that we are quite sure was the dirt resting on the roof during the use of the structure as part its covering (Layer 5). These two units were somewhat intermixed, with some roofing material resting on top of roof dirt, especially near the center of the structure, and roof dirt on top of organic material, especially around the edge. The roof dirt layer extended into the large off-chamber cist (Feature 2), and the roofing material layer was in a larger subfloor cist (Feature 13), indicating that both of these features were open at the time of roof dismantling. Some light burning was present on the roof dirt, so it seems likely that roofing material burned during or after removal of the major roof timbers. There was no indication of a major conflagration, which would be expected had the roof burned intact. Within lower Layer 5 on the east side of the structure there were some unburned sticks and adobe beam impressions. The

Table 12.10. LA 37595, Pit Structure 1, plant remains from roofing material, floor, and features, flotation full-sort results by taxon; frequency and abundance per liter.

Feature	Roofing Material	Floor	2 Large Subfloor Cist	7 Ventilator Shaft	12 Fire Pit		13 Large Subfloor Cist	16 Bark-lined Ash Pit
FS	**112**	**193**	**509**	**171**	**501**	**502**	**512**	**517**
Provenience	**W 1/2**	**NE 1/4**		**Fill**	**Layer 2**	**Layer 3**		
Cultural								
Annuals:								
Amaranthus	–	–	–	–	–	2.0	–	–
Chenopodium	–	–	–	–	–	3.0	–	–
Descurainia	1.0	–	–	–	–	–	–	–
Cultivars:								
Zea mays	+ cupule	–	–	–	+ cupule	+++ cupule	–	–
Perennials:								
Juniperus	+ leaflet	–	–	–	–	–	–	–
Yucca baccata	1.0	–	–	–	–	–	–	–
Possibly Cultural								
Annuals:								
Nicotiana attenuata	3.0 u	3.0 u	–	10.0 u	–	–	–	–
Portulaca	–	–	–	–	–	–	399.0 u	–
Noncultural								
Annuals:								
Amaranthus	1.0	–	43.0	27.0	3.0	1.0	8.0	–
Chenopodium	4.0	1.0	1.0	–	–	–	8.0	–
Corispermum	–	–	–	1.0	–	–	–	–
Cycloloma	1.0	–	1.0	4.0	–	–	–	–
Descurainia	3.0	–	–	–	–	–	–	–
Euphorbia	19.0	–	–	8.0	–	–	–	–
Mentzelia	–	–	1.0	62.0	–	–	9.0	–
Monolepis	–	–	1.0	–	–	–	–	–
Portulaca	4.0	1.0	3.0	472.0	–	–	86.0	–
Grasses:								
Oryzopsis	–	–	1.00	7.00	–	–	2.00	–
Other:								
Malvaceae	–	–	–	1.0	–	–	–	–
Oenothera	2.0	–	–	–	–	–	–	–
Physalis	1.0	–	1.0	–	–	–	–	–
Unidentifiable	1.0	–	–	–	–	–	–	1.0
Perennials:								
Atriplex canescens	+ leaf	–	–	+ leaf	–	–	–	–
Echinocereus	–	–	–	1.0	–	–	–	–
Juniperus	+ leaflet	–	–	++ leaflet	–	–	–	–

All cultural plant remains are carbonized.
Plant remains are seeds unless indicated otherwise.
+ = 1–10/liter, ++ = 11–25/liter, +++ = 25–100/liter; u = uncharred

Table 12.11. LA 37595, Pit Structure 1, plant remains from roofing material and other fill, by taxon; wood by weight (g), other plant parts by count and weight (g).

Context	Roofing Material		Lower Fill	Floor Fill				Roofing Material			Upper Fill Above Roof		Floor Fill	Upper Fill	Roofing Material		Floor Fill		Total Wood	
	NW 1/4	SW 1/4	Below Roof, SE 1/4											Above Roof Fall, SE 1/4	NE 1/4	SE 1/4	NE 1/4	SE 1/4	Weight (g)	Col. %
FS	**110**	**113**	**156**	**177**	**179**	**180**	**182**	**185**	**186**	**189**	**202**	**205**	**207**	**413**	**414**	**415**	**416**	**417**		
Cultural																				
Conifers:																				
Juniperus	6.81	6.71	1.53	–	0.2	1.53	3.11	1.36	0.48	0.89	10.72	1.92	7.45	–	0.74	2.32	1.02	–	**46.79**	**69%**
Pinus edulis	0.4	–	1.78	–	–	–	0.07	1.67	–	–	–	–	–	–	–	1.38	–	–	**5.3**	**8%**
Nonconifers:																				
Artemisia	–	–	0.18	–	–	–	0.22	–	–	–	0.22	–	–	–	–	–	–	–	**0.62**	**1%**
Atriplex	2.7	–	–	–	–	–	0.14	0.41	–	0.18	–	–	0.94	–	–	–	–	–	**4.37**	**6%**
Salicaceae	0.15	–	–	–	–	–	0.07	0.44	0.17	0.03	–	–	–	–	–	0.38	0.11	–	**1.35**	**2%**
Quercus	–	–	–	–	–	–	–	–	–	–	–	–	0.16	–	–	–	–	–	**0.16**	**<1%**
Undetermined nonconifer	0.11	0.4	–	–	–	–	–	2.23	0.75	–	–	–	0.28	–	–	0.99	–	–	**4.76**	**7%**
Other:																				
Unknown	–	–	–	–	–	–	–	–	–	2.51	–	–	–	–	–	–	–	–	**2.51**	**4%**
Other Cultural																				
Cultivars:																				
Cucurbita seed	–	–	1 u/ .01	–	–	–	1u/ .01	3 u/ .02	–	–	–	–	–	1/.01	–	1/.01	–	1/.01	–	–
Possibly Cultural																				
Conifers:																				
Juniperus	–	1.77	–	–	–	–	–	–	–	0.12	–	–	–	–	–	–	0.18	–	**2.07**	**3%**
Pinus edulis nutshell	1 u/.01	–	–	1/.01	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	**10.17**	**8.88**	**3.49**	**–**	**0.2**	**1.53**	**3.61**	**6.11**	**1.4**	**3.73**	**10.94**	**1.92**	**8.83**	**–**	**0.74**	**5.07**	**1.31**	**–**	**67.93**	**100%**

Table 12.12. LA 37595, Pit Structure 1, wood charcoal from roofing material and Feature 12 (fire pit), flotation results by taxon; counts and weights (g).

Feature	Roofing Material	12 Fire Pit		Total	
FS	112	501	502	Weight (g)	Col. %
Context	W 1/2	Layer 2	Layer 3		
Conifers:					
Juniperus	13/.52	30/1.15	–	**1.67**	**74%**
Nonconifers:					
Artemisia	–	3/.08	6/.13	**0.21**	**9%**
Atriplex	7/.36	–	–	**0.36**	**16%**
Salicaceae	–	–	1/.01	**0.01**	**<1%**
Total	**20/.88**	**33/1.23**	**7/.14**	**2.25**	**100%**

base of the layer appeared sooty in some areas, suggesting it came from the underside of the roof. Associated with the roof materials were two units of roof or wall fall, designated Layer 8. One of these units was at the north edge of the structure. It had a relatively high rock content (n = 8) for this structure. The second part of Layer 8 was around the deflector; this subunit had a high adobe clump content.

To tabulate the fill materials, the following consolidations of stratigraphic units were made: Levels 1 and 2, from the west side of the structure, were put with Layer 1, since the base of Level 2 was at a maximum depth of 1.13 m bsd, and the base of Layer 1 in the stratigraphic control block was 1.5 to 1.8 m bsd. Level 3 crosscut the boundary between Layers 1 and 4; because Layer 4 contained more material and because of the nature of the level-layer overlap, these materials have been placed with Layer 4. All of the levels within the layers in the stratigraphic control block were named only with a layer number. This is most relevant to Layer 1, which was excavated in nine levels.

Floor 1

Probably because the Pit Structure 1 roof was dismantled and the structure did not stand open or was partially roofed, the condition of the floor at the time of clearing was very good. Seventeen features were associated with the floor, including the ventilation system and the bench (Table 12.13). These features range from a large off-chamber cist to smaller floor pits (Figs. 12.10a, 12.13, 12.14, 12.15).

Very few artifacts were found lying directly on Floor 1 (Table 12.14), and the sherds and lithics are unlikely to have much functional significance. A bone awl was found at the base of the wall in the northeast quadrant of the structure. Given the frequency with which bone tools are found on pit structure benches (as at LA 37598 Pit Structure 2, or see McKenna 1984:360–361), this tool seems likely to have fallen off the bench during structure dismantling. Another awl was found in association with the northeast quadrant of the bench, further suggesting that there was a bone tool assemblage in place there. Two awls were also recovered from the discovery trench.

Three broken, incomplete Dolores Corrugated jars were found, one on the northeast quadrant of the bench (7 sherds, Vessel 4) and two next to the east wall on the structure midline (53 sherds, Vessel 3; 12 sherds, Vessel 5). These vessels are similar in size (rim diameters of 21–22 cm), and both are sooted. Curiously, given the commonness of the bowl form, there was only one white ware bowl sherd among the floor-contact ceramics; the rest are jar sherds, most of which are gray ware.

Eggshell fragments were present in a number of areas, with a distinct concentration between the hearth and the deflector. By far the largest amount of eggshell came from this area and the southeast quad (Table 12.15). There was also a "concentration" of five lithic flakes (PP 1–3) south of the deflector. Given the other similarities with LA 37592, Pit Structure 1, and the placement of adult turkeys in the same part of the floor at structure closure, it seems possible that an egg or two were used in the same way when this structure was closed, especially since the LA 37595 structure was closed with dog and turkey burials in the vent shaft. In addition to the broken gray ware jars, there were a number

Table 12.13. LA 37595, Pit Structure 1, Floors 1 and 2, features; summary table.

Feature	Type	Shape	Com-plete	Construction Details	Use Details	Fill	Assigned Function	Volume (l)	Length (cm)	Width (cm)	Depth (cm)
Floor 1											
1	cist	cone	100%	unlined, cobble-sealed, but unfilled	unburned	Empty except for sloughed sand.	storage	75.5	45	44	52
2	off-chamber cist with side entry	truncated cone	100%	constructed entry	unburned	Nine layers, similar to structure fill. Roof fall and dirt, alluvial, collapsed sterile.	major storage	351.1	114	112	110
3	cist	sphere	100%	sealed with slab	unburned	Mostly empty; some clean, fine sand, small gravel.	storage	50.3	40	40	–
4	wall niche	–	100%	cobble patch at rear, cobble at base	unburned	Two layers: fine sand with rare charcoal on brown fine-to-medium sand with charcoal.	niche	6.6	21	20 (excluding patch)	
5	wall	irregular	75%?	plastered over	unburned	Unconsolidated sand, charcoal, ash, adobe, sandstone spalls, cobble.	wall patch?	–	44	25	18
6	pit	cone	100%	open, unlined	unburned	Fine sand.	floor/pit	0.9	13	13	7
7	pit	cylinder	80%	closed at abandonment, adobe wall	unburned; filled	Alluvial, roofing material, dog and turkey burials.	vent shaft	–	64	39	± 200
8	pit	–	100% ±90%	–	deconse-cration	Roofing material in vent.	dog burial	49.9	46	47	30
9	bench (partial)	ring-shaped	40%	open, plastered	unburned	Alluvial lenses of Layer 1; some in situ artifacts.	bench	–	–	–	–
10	block	rectangle	100%	adobe and chunks of sterile	–	None.	deflector	–	50 (height)	84–90	15–18 thick-ness
11	pit	cylinder	100%	open, plaster lined	unburned	Two layers: sand, charcoal, adobe, resting on sand with sparse charcoal; eggshell.	sipapu	2.7	10	10	34
12	pit	rectangle	100%	slab and adobe lined	burned	Four layers: structural debris, 3 ash layers.	hearth	57.8	68	50	17

Table 12.13 (continued)

Feature	Type	Shape	Com-plete	Construction Details	Use Details	Fill	Assigned Function	Volume (l)	Length (cm)	Width (cm)	Depth (cm)
13	cist, wall-floor junction	sphere	100%	unlined; may have had slab cover	unburned	Upper (wall) area filled with laminar alluvial layers; subfloor-filled roofing layers. Both are similar to structure fill.	large storage	277.1	80	76	58
14	tunnel	–	100% (50% dug)	plaster-lined juniper lintels	closed at abandon-ment	Four layers: 1–3 natural, Layer 4 is roof fall.	vent tunnel	–	50 (height)	43	–
15	niche with subfloor cist	cone	100%	cobble-sealed at back; unlined	unburned, open	Two layers: laminated sandy alluvium resting on unlaminated sand, ash, and adobe.	niche; subfloor cist	1.0	55 17	17 30	30 22
16	pit	oval	100%	unlined	unburned, closed	Compact gray and white ash lenses; some eggshell.	ash pit	15.6	95	46	4
17	cist	sphere	100%	unlined	partially burned (by contents?)	Three layers: gravel, coarse sand, ash on tan very fine sand with gray lens, on fine gray sand with rare charcoal.	ash pit	33.9	50	30	27
Floor 2											
1	pit	cylinder	100%	plaster lined,	unburned	Sandy fill, sparse charcoal flecks.	sipapu	1	–	–	–
2	pit	irregular	100%	sealed by Floor 1	unburned	Natural: coarse sand and fine gravel.	pit?; floor defect?	1.6	12	8	5
3	pit	sub-rectangle	100%?	sealed by Floor 1	unburned	Sand and gravel, very rare charcoal.	pit?; floor defect?	7.8	–	–	–
4	pit	hemi-sphere	100%?	sealed by Floor 1	unburned	Layer 9.	pot rest?	0.2	–	–	–

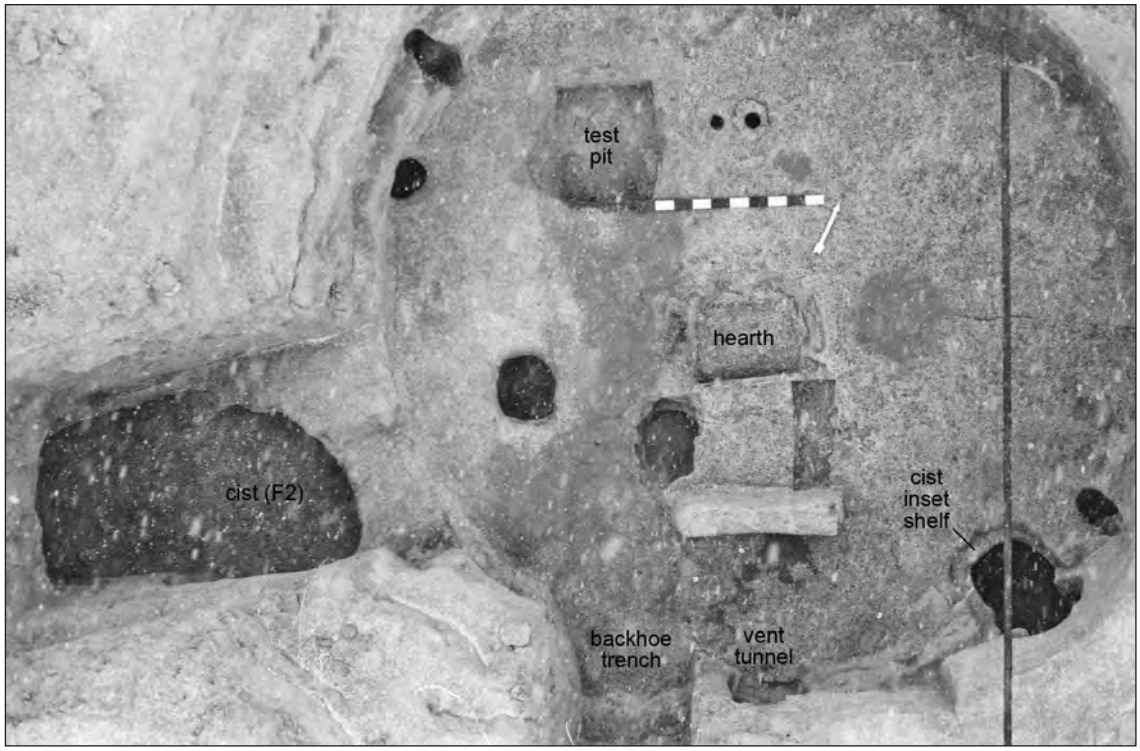


Figure 12.13. LA 37595, Pit Structure 1, Floor 1; bipod shot (in snowstorm), view northwest.

Figure 12.14. LA 37595, Pit Structure 1, Floor 1, features excavated, view southeast.

Figure 12.15. LA 37595, Pit Structure 1, Floor 1, detail at southwest wall (phone cable bisects the structure and is visible above the floor), view southwest.

of artifacts in the fill near the floor in the northeast quadrant of the structure, including a piece of tabular sandstone, which was used for grinding red pigment; a two-notched, igneous rock ax with a broken bit; and an unusual hard green stone item with two ground faces, a hole bored through the center, and chipped edges. This artifact measured around 2 cm on a side and was about 1 cm thick; the sides were more or less straight, and the corners were rounded. The hole through the middle was biconical, less than 1 cm at the surface tapering to less than 0.5 cm in the center. Ground and polished to a high sheen, it had a nice feel to it. Obviously it had taken a lot of work to make and was a valuable item. It was recorded in the notes and on the specimen sheets but never made it to analysis, even though all other artifacts in the field sample did. It may have been stolen. This varied group of artifacts was recovered from Layer 4, the roofing layer. They could have been on—or in—the roof or on the floor at the time of structure dismantling. Other ground stone artifacts on or near the floor consisted of two metate fragments and a piece of a ground slab.

Features (Floor 1)

Bench (Feature 9). A clear bench surface was not defined for Pit Structure 1, Floor 1, although burned and partially plastered areas indicate that the bench was high. The absence of a clearly definable bench is due to the height of the bench intersecting the point where the walls had deteriorated. The surviving portions were from 1.34 to 1.42 m above the floor, with widths varying from 4 to 38 cm (Fig. 12.10a). Several artifacts were present on the bench: in the northeast quadrant these included an awl, a number of large-mammal long-bone fragments and deer foot bones, one piece of turkey eggshell, a flake, two groups of corrugated sherds, and a white ware sherd (Table 12.16).

Hearth (Feature 12). This hearth was earth-lined and basin-shaped on three sides, with one upright sandstone slab forming an overhanging south side. This large slab (60 cm long, 5 cm thick, and 26 cm tall) was out of parallel with the deflector just to the south, like the large slab in the same position at LA 37592, Pit Structure 1 (Figs. 12.10a, 12.16, 12.17a,

Table 12.14. LA 37595, Pit Structure 1, Floor 1, ceramics, chipped stone, ground stone, and faunal remains; counts by type and material.

Ceramics						
	Gray Ware	**White Ware**				**Total**
Bowl	–	1				**1**
Jar rim	7	–				**7**
Jar body	61	17				**78**
Total	**68**	**18**				**86**
Chipped Stone						
	Chert	**Chalcedony**	**Silicified Wood**	**Quartzitic Sandstone**	**Siltstone**	**Total**
Debitage	33	1	4	1	6	**45**
Core	1	–	–	–	–	**1**
Retouched/utilized debitage	–	–	1	1	–	**2**
Hammerstone	–	–	–	1	1	**2**
Total	**34**	**1**	**5**	**3**	**7**	**50**
Ground Stone						
	Igneous	**Sandstone**				**Total**
Shaped slab	–	4				**4**
Two-hand mano	–	1				**1**
Slab metate	–	1				**1**
Two-notch axe	1	–				**1**
Total	**1**	**6**				**7**
Faunal Material						
	Long Bone	**Vertebra**	**Phalanx**	**Eggshell**	**Other**	**Total**
Mammal	1	–	–	–	8	**9**
Small mammal	15	–	–	–	–	**15**
Medium mammal	2	–	–	–	1	**3**
Large mammal	18	–	–	–	–	**18**
Peromyscus	–	–	–	–	4	**4**
Artiodactyl	–	1	2	–	1	**4**
Aves/Meleagris	–	–	–	26	–	**26**
Ranidae	5	1	1	–	9	**16**
Total	**41**	**2**	**3**	**26**	**23**	**95**

Excludes vent and dog burial; includes other features.

12.17b). The pit had a smooth, low collar on the east and north sides, and a more distinct, narrower one on the west side. Four fill units were identified in the pit. On the top (Layer 1) was sand mixed with charcoal and a few cobbles, probably representing immediate postuse filling. Below that layer were three ash units representing varying proportions of ash and sand. The largest unit was white ash with charcoal (Layer 3); above and below Layer 3 were two gray layers, which contained more sand.

Eighteen faunal elements were recorded, all from Layer 3, and all burned (Table 12.17). All but four elements are from small mammals; all of the small-mammal elements and half of the large-mammal elements are calcined. One large-mammal element is split, the only sign of processing other than burning. The hearth contained 5 gray ware sherds, 11 pieces of chert debitage, and 1 piece of quartzitic sandstone debitage. The material from recorded feature layers was mostly from Layer 3.

Table 12.15. LA 37595, Pit Structure 1 and 4, eggshell distribution; counts and percents by layer and fauna type.

Structure, Layer	Turkey		Aves		Total	
	N	Col. %	N	Col. %	N	Col. %
Pit Structure 1, Layer 1	12	2.3%	–	–	12	**2.2%**
Pit Structure 1, Layer 4 roof fall	14	2.7%	–	–	14	**2.6%**
Pit Structure 1, Layer 5 roof dirt	133	25.4%	–	–	133	**24.2%**
Pit Structure 1, Layer 7 roof dirt	36	6.9%	–	–	36	**6.6%**
Pit Structure 1, Layer 8 roof fall	–	–	1	3.8%	1	**0.2%**
Pit Structure 1, vent roofing material	65	12.4%	–	–	65	**11.8%**
Pit Structure 1, Floor 1	254	48.6%	20	76.9%	274	**49.9%**
Pit Structure 1, Floor 2	–	–	1	3.8%	1	**0.2%**
Pit Structure 4, Layer 2 roof and wall fall	–	–	4	15.4%	4	**0.7%**
Pit Structure 4, Floor 1	9	1.7%	–	–	9	**1.6%**
Total	**523**	**100.0%**	**26**	**100.0%**	**549**	**100.0%**

Table 12.16. LA 37595, Pit Structure 1, Floor 1 and bench, point-provenienced artifacts.

PP	Quad	Item
Floor 1		
1	SW	chert flake
2	SW	chert flake (by deflector)
3	SE	chert flake
4	NE	bone (FS 177)
5	SE	2 gray ware jar sherds
6	SE	lightning or polishing stone pebble with red pigment (FS 196)
6	SW	chert flake (FS 118), 4 polished white jar sherds
7	SW	pieces of 2 shaped sandstone slabs
8	NE	coarse-point awl (large mammal)
9	NE/SE	Vessel 3 (73 sherds, 1650 g) and Vessel 5 (12 sherds, 514 g) by east wall (FS 145, 196)
9	SW	jet fragment?
9	SW	flake
9	SW	flake
9	SW	lignite
9	SW	flake
9	SW	ground slabs
801	vent	bead with dog burial
Bench (FS 150)		
B1	NE	bone fragments
B2	NE	large chert flake with cortex (110 g)
B3	NE	fine-point awl
B4	NE	20 percent of sooted Dolores Corrugated jar (7 sherds, 330 g), Vessel 4
B5	NE	2 corrugated jar sherds (49 g)
B6	NE	4 white ware jar sherds (35 g)
B7	NE	white chert flake (6 g)

Figure 12.16. LA 37595, Pit Structure 1, Floor 1, Feature 10 (deflector) and Feature 12 (hearth), view southwest.

Figure 12.17a. LA 37595, Pit Structure 1, Floor 1, Feature 12 (hearth), profile.

Layer 3 also contained the most botanical materials, including corn and amaranth. All layers contained fuel remnants consisting of juniper, piñon, willow, sage, and saltbush (Tables 12.10, 12.18).

Ventilation system (Features 7, 10, 14). The vent shaft for this structure (Feature 7, vent profile) was an independent excavation 1.75 m from the edge of the main chamber pit; the north edge of the open shaft was 2.25 m south of the chamber (Figs. 12.10a, 12.19a, 12.19b). The upper fill of the feature was removed during definition, and its precise articulation with the surface was not observable. The alluvial upper fill included a gravel lens, suggesting that the upper portion of the feature had experienced considerable washing. The vent was very well preserved, with intact lintels and much organic roofing material. The vent shaft contained dog and turkey burials placed during structure closure as "deconsecrations" (Truell 1986:225–227; Hill 2000:386–387). It was constructed by digging a hole about twice the size of the desired shaft, placing juniper lintels across the chamber (north) side of the shaft, and then building an earth wall to the surface and filling behind it (Figs. 12.10a, 12.19a, 12.19b, 12.20). We did not fully excavate the tunnel, but it was probably punched through the hard soil into the structure chamber, apparently without lintels supporting the

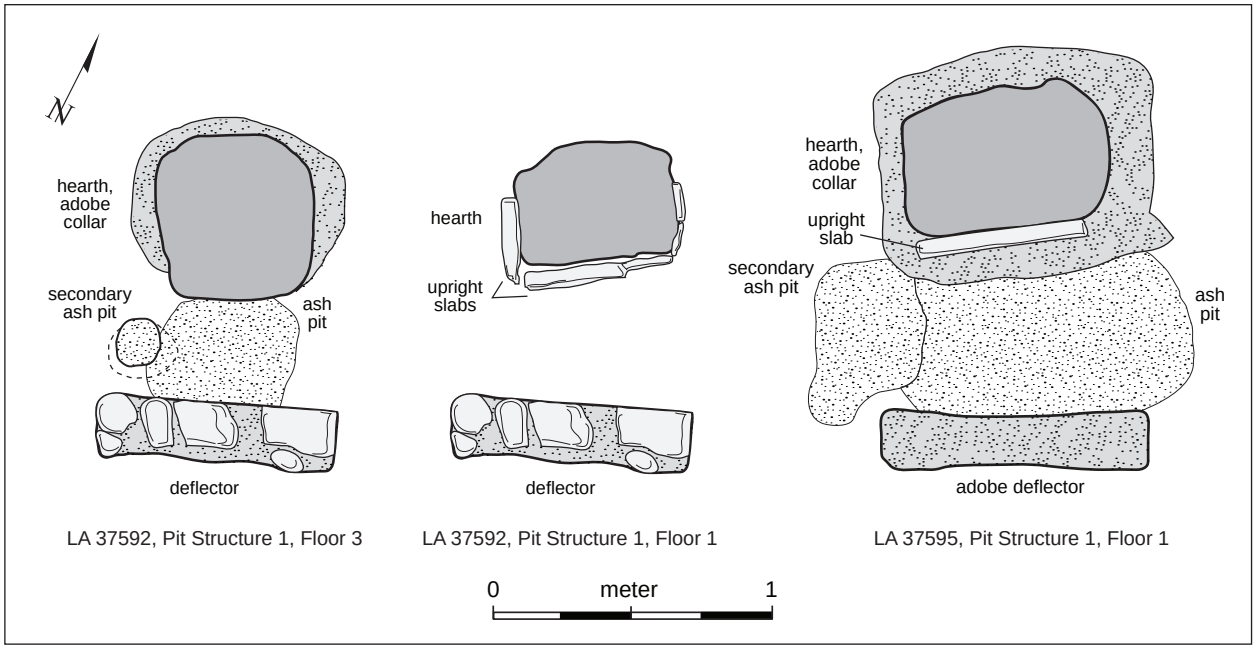


Figure 12.17b. Hearth complex comparison, plan: LA 37595 (Pit Structure 1, Floor 1; far right), LA 37592 (Pit Structure 1; Floor 3, left, and Floor 1, center).

tunnel roof. The floor of the ventilator tunnel must have sloped down, since the floor of the shaft was 40 cm higher than the floor of the pit structure over a distance of 1.7 m (Fig. 12.19b).

The tunnel opening (Feature 14) in the chamber was a bowed rectangle 52 cm high and 43 cm wide at the widest, middle point. The top of the opening was 31 cm wide, and base of the opening was 33 cm wide. There was a suggestion of mud plaster around the opening (Fig. 12.21). A flat cobble formed the base of the opening; both the opening and the tunnel slope up to the south, toward the vent shaft. No lintels were visible at the chamber end of the tunnel—apparently the hardness of the soil was sufficient to hold up the tunnel (we excavated only around 45 cm into the tunnel from the chamber). At the shaft end of the tunnel, the lintels in this feature were in exceptionally good condition—we had to cut the lintels with a saw, and, when cut, they smelled of fresh cedar. They did not, however, yield tree-ring dates. At the time of abandonment a large quantity of organic materials, dirt, and some cobbles were dumped down the vent shaft. The organic material seemed to be chiefly juniper bast, presumably from the structure roof. This material formed a deposit layered with dirt that sloped down into the vent tunnel, reflecting its source at the top of the shaft (Fig. 12.19b). This material formed a deposit layered with dirt that sloped down into the vent tunnel, reflecting its source at the top of the shaft. This material effectively plugged the vent system, along with a large cobble resting against the lintel at the edge of the shaft. This plugging meant that the remainder of the fill of the tunnel came from the structure chamber, more or less independent of filling the shaft from above. Fill from the chamber side of the vent included roofing material (Structure Layer 4) and alluvial layers (Layer 1; see Figs. 12.10b, 12.19b).

A number of probably complete animals were represented by numerous skeletal elements in the vent fill. A dog was buried in the vent shaft, resting just above the shaft-tunnel juncture (the dog burial is Feature 8). The dog was placed on top of a mass of organic materials and cobbles that probably came from the structure roof (Table 12.17). One white stone bead was associated with the dog burial, but it is unknown whether the association was intentional or coincidental. Insect casings were noted in association with the dog burial, suggesting that the animal had been dead for a while before being deposited, or that it was not covered immediately after being placed in the vent. Deposited earlier, but quite likely as part of the intentional filling of the

Table 12.17. LA 37595, Pit Structures 1–4, Pueblo II features with artifact counts by type.

Feature	Type	Ceramics	Lithics	Ground Stone	Fauna	Other
Floor 1, Pit Structure 1						
1	subfloor cist	1 gray	–	–	–	–
2	major off-chamber cist	34 gray	18 debitage	–	14 mammal	–
		10 white	1 utilized		16 frog	
			1 hammer			
4	wall niche	1 gray	–	–	2 mammal	–
		2 white				
5	wall defect	–	1 debitage	–	–	–
			1 hammer			
7	vent shaft	9 gray	–	–	–	–
		4 white				
8	ventilator shaft dog burial	–	1 core	–	160 dog	1 bead
					120 mammal	
					2 bird	
9	bench	–	3 debitage	–	11 mammal	–
					[awl]	
					1 eggshell	
11	sipapu	–	–	–	3 mammal	–
					8 eggshell	
12	hearth	5 gray	12 debitage	–	18 mammal	–
13	large wall cist	–	1 debitage	–	–	–
14	vent tunnel	–	1 debitage	–	6 eggshell	–
15	wall niche	–	1 debitage	–	–	–
16	ash pit	1 gray	4 debitage	–	3 mammal	–
					11 eggshell	
17	ash pit	–	–	1 mano	–	–
Floor 2, Pit Structure 1						
3	–	–	–	–	1 eggshell	–
Floor 1, Pit Structure 2						
4	–	2 gray	9 debitage	–	2 mammal	botanical
7	–	–	10 debitage	–	–	squash seed
			1 utilized			
8	–	1 white	5 debitage	1 mano	1 mammal	–
			1 core			
9	–	–	–	–	–	squash seeds
12	–	1 white	2 debitage	–	4 mammal	–
			1 denticulate		(mouse or kangaroo rat)	
			2 hammer			
Floor 1, Pit Structure 4						
1	pit	–	1 debitage	–	4 mammal	–
					1 bird eggshell	
4	cist	6 gray	7 debitage	–	11 mammal	–
		4 white			1 bird	

Table 12.18. LA 37595, Pit Structure 1, plant remains, features and proveniences by taxon; wood by weight (g), other plant parts by count and weight (g).

Feature	2 Major Off-chamber Cist		5 Indeterminate		7 Vent Shaft		8 Dog Burial in Vent Shaft	12 Hearth				13 Large Subfloor Cist		14 Vent Tunnel	16 Bark-lined Ash Pit	Total	
FS	**504**	**507**	**126**	**170**	**171**	**172**	**175**	**500**	**501**	**502**	**503**	**510**	**512**	**514**	**517**	**Weight (g)**	**Col. %**
Provenience	**N 1/2**	**Floor/Wall Juncture**	**Floor 1**	**Level 8**	**Level 9**	**Level 10**	**Floor 1**	**Floor 1, Layer 1**	**Floor 1, Layer 2**	**–**	**–**	**Floor 1, Layer 2**	**Floor 1, Layer 4**	**Floor 1, Layer 3**	**Floor 1**		
Cultural																	
Conifers:																	
Juniperus	5.10	1.68	–	0.26	1.84	–	0.46	1.56	3.87	4.44	0.24	2.76	–	–	–	**22.21**	**34.0%**
Pinus edulis	–	0.38	–	–	–	1.87	–	–	0.32	1.13	3.44	0.31	1.07	–	–	**8.52**	**13.0%**
Nonconifers:																	
Artemisia	–	–	–	0.09	–	–	0.06	0.56	3.30	0.44	1.59	–	–	–	–	**6.04**	**9.0%**
Atriplex	–	–	–	0.09	0.76	–	0.89	0.65	1.62	–	0.24	0.20	0.44	–	–	**4.89**	**7.0%**
Salicaceae	–	–	–	0.24	0.85	–	0.27	0.47	0.49	0.62	2.09	–	–	–	–	**5.03**	**8.0%**
Unknown nonconifer	–	–	1.48 pc	–	0.61	–	0.08	1.50	–	–	–	–	–	–	–	**3.67**	**6.0%**
Other Cultural																	
Cultivars:																	
Cucurbita seed	2/.01 u	2/.01 u	–	2/.01 u	2/.01 u	–	–	–	–	–	–	–	–	1/.01 u	1/.01 u	–	–
Possibly Cultural																	
Conifers:																	
Juniperus	–	–	–	14.83 u	–	–	–	–	–	–	–	–	–	–	–	**14.83**	**235.0%**
Pinus edulis (nutshell)	–	–	–	–	1/.01 u	–	–	–	–	–	–	–	–	–	–	–	–
Nonconifers:																	
Atriplex	–	.48 u	–	–	–	–	–	–	–	–	–	–	–	–	–	**0.48**	**<1.0%**
Total	**5.1**	**2.54**	**1.48**	**15.51**	**4.06**	**1.87**	**1.76**	**4.74**	**9.6**	**6.63**	**7.6**	**3.27**	**1.51**	**–**	**–**	**65.67**	**100.0%**

pc = partially charred; u = uncharred

vent, are abundant pieces of turkey eggshell and 110 turkey elements. These represent at least one individual, but probably not many more—a count of 15 paired pelvis elements probably results from the large and fragile nature of turkey pelves rather than a large number of individuals. Both the dog burial and the turkey remains were in pockets of soil probably representing filling of the area after decomposition of the fleshy parts of the animal. The cedar bast associated with eggshell and squash seeds ties this deposit (Vent Fill Unit D) in the vent to the floor fill of the main chamber (Layer 4), where the same combination of materials was found. The material looked like roofing, and it rested directly on the floor, suggesting that turkeys may have been kept on the roof. Alternatively, these materials may have formed some sort of turkey bedding, making it easier to understand the mixture of cedar bark and eggshell, since bark in a roof was presumably covered with roof dirt. Most of the turkey elements and nearly all of the eggshell from this site came from Pit Structure 1 (Table 12.15), and although only one conjoinable individual was identified (the foot in Layer 1), a few individuals probably account for most of the turkey bone elements (Table 12.19). A coarse-point bone awl was recovered from this organic layer in the vent, as well. The plugging of the shaft with Vent Fill Units D and E and the animal burials were followed by decomposition of the feature sides, resulting in Vent Fill Unit A, consisting of sand, adobe, and charcoal.

Even though only a section of the vent was excavated, three-quarters of all the turkey and bird elements in the pit structure are from the vent. Indeed, nearly half of all the turkey elements (as opposed to individuals represented) from the site were recovered from the vent shaft (Tables 12.20, 12.21, 12.22, 12.23). All but one of the elements to which an age at death could be assigned are from mature birds, and only one shows cut marks. Turkey eggshell was found associated with both floors in Pit Structure 1 and in the lower fill of the sipapu, suggesting that association with the structure lasted some time (Table 12.15).

Also present in the vent were a grasshopper mouse, part of a snake (18 elements), and a lizard (22 elements), all of which are likely to have been deposited after site abandonment. The steep walls and dark interior seem to have made the abandoned vent a very effective small-animal trap.

Figure 12.19a. LA 37595, Pit Structure 1, Floor 1, Feature 7 (ventilator shaft), detail. Shows larger excavated hole reduced with lintels and earth wall; shaft to right, tunnel below.

Deflector (Feature 10). Feature 10 was well preserved, probably because it had been immediately and completely covered by roof dirt and other material at structure demolition. It was constructed of neatly mortared chunks of adobe or native soil (Figs. 12.10a, 12.16). It was carefully finished and plastered. It appears that a 6–7 cm plaster addition was made to the west end, perhaps to adjust air flow in the chamber. The addition included a piece of fire-cracked rock, but the otherwise it was made entirely of hard earth and mortar. Remarkably robust, it proved to be cohesive during dissection with a small pick.

Sipapu (Feature 11). Feature 11, a 10 cm diameter pit, was on the axis of the structure (Fig. 12.10a). It was excavated to a depth of 34 cm, at which point the excavator thought it might be deeper but could

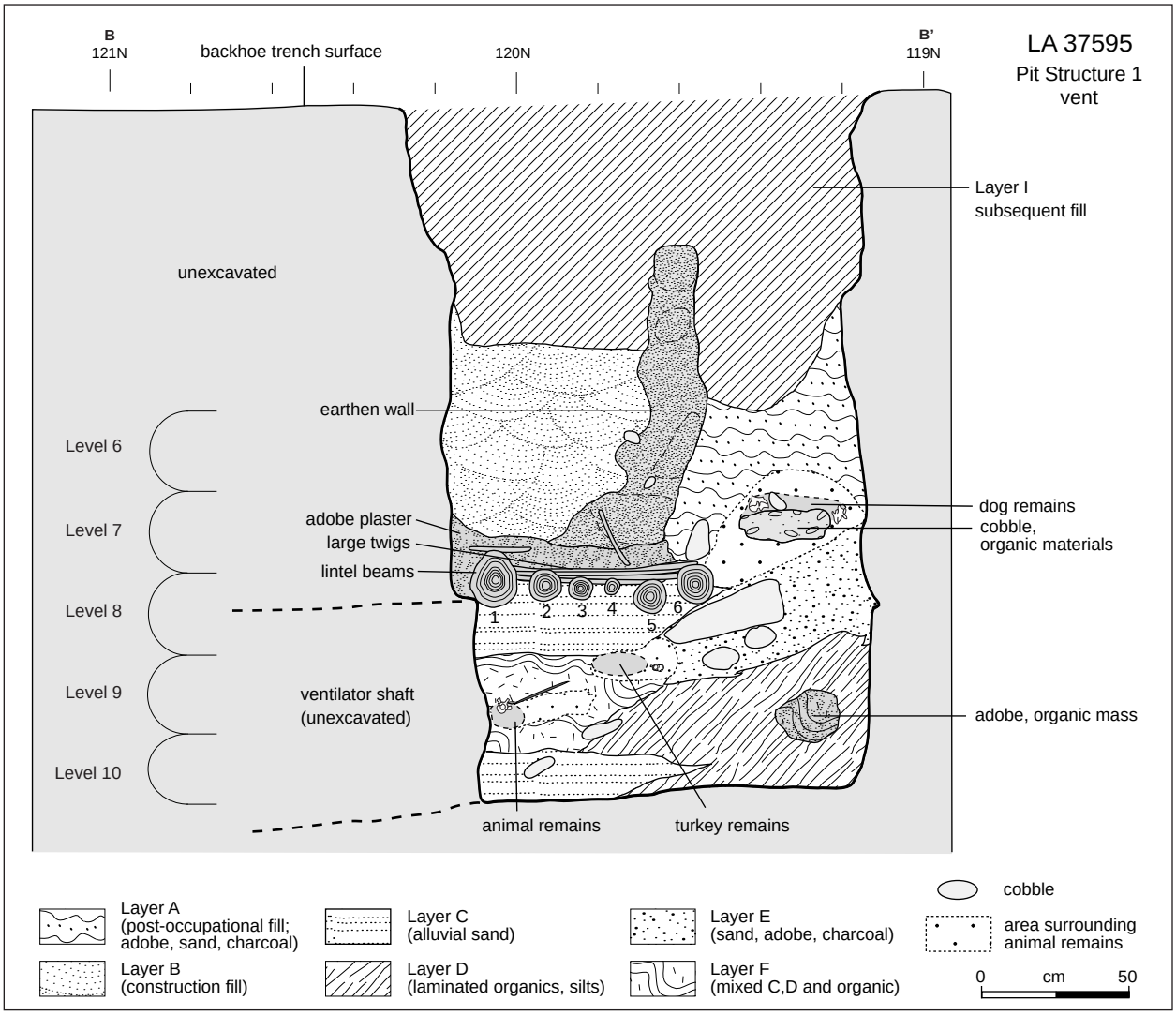


Figure 12.19b. LA 37595, Pit Structure 1, Floor 1, Feature 7 (ventilator shaft), profile.

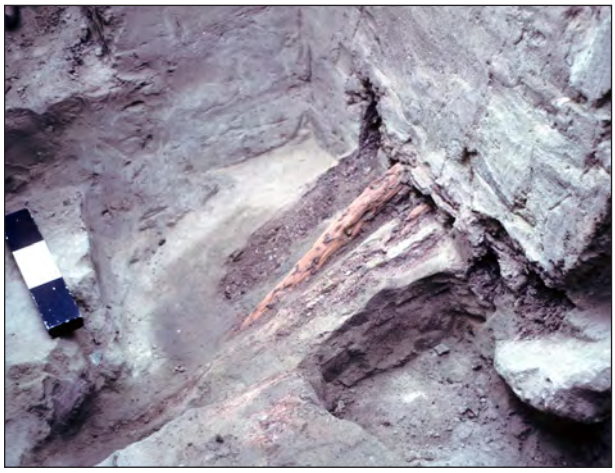


Figure 12.20. LA 37595, Pit Structure 1, Floor 1, Feature 7 (ventilator shaft), detail showing lintels in place.

Figure 12.21. LA 37595, Pit Structure 1, Floor 1, Feature 14 (ventilator tunnel) opening, Layer 4 (roof fall) in situ.

Table 12.19. LA 37595, Pit Structure 1, turkey and deer bone type, counts by stratigraphic unit and vent feature.

Taxon	Layer 1	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Vent	Floor 1	Total
Deer									
Long bone fragment	11	2	–	–	–	–	1	19	**33**
Plate, blade fragment	1	4	–	–	1	–	–	–	**6**
Cancellous tissue	1	2	–	–	–	–	–	–	**3**
Tooth fragment	–	–	–	–	1	–	–	1	**2**
Mandible	1	1	–	–	–	–	–	–	**2**
Lower permanent incisor	–	1	–	–	–	–	–	–	**1**
Lumbar vertebra	1	–	–	–	–	–	–	1	**2**
Rib	1	–	–	–	–	–	–	–	**1**
Scapula	–	1	–	–	–	1	–	–	**2**
Humerus	–	1	–	–	–	–	–	–	**1**
Radius	2	2	–	–	–	–	–	–	**4**
Scaphoid	–	1	–	–	–	–	–	–	**1**
Metacarpal	1	–	–	–	–	–	–	–	**1**
Femur	4	–	–	–	–	–	–	1	**5**
Metatarsal	–	2	1	–	–	–	–	1	**4**
Metapodial	1	2	–	–	–	–	–	–	**3**
First phalanx	–	1	–	–	–	–	1	1	**3**
Third phalanx	–	–	1	–	–	–	–	–	**1**
Total	**24**	**20**	**2**	**–**	**2**	**1**	**2**	**24**	**75**
Turkey									
Long bone fragment	3	–	1	–	2	–	9	8	**23**
Plate, blade fragment	–	–	1	–	–	–	1	–	**2**
Cervical vertebra	–	–	–	–	–	–	3	–	**3**
Sternum	–	–	–	–	–	–	1	–	**1**
Rib	–	1	1	–	–	–	5	–	**7**
Paired pelvis	–	–	–	–	–	–	15	–	**15**
Humerus	1	–	–	–	–	–	–	–	**1**
Radius	1	–	–	–	–	–	–	–	**1**
Ulna	2	–	–	–	–	–	–	–	**2**
Cuneiform	1	–	–	–	–	–	–	–	**1**
First phalanx (foot)	–	–	–	–	–	–	3	–	**3**
Sesamoid	–	–	–	–	–	–	1	–	**1**
Ossified tendon	1	–	–	–	–	–	40	–	**41**
Furculum	–	1	–	–	–	–	–	–	**1**
Carpometacarpus	1	–	–	–	–	–	–	–	**1**
Pollex	1	–	–	–	–	–	–	–	**1**
Digit II, phalanx 1	1	–	–	–	–	–	–	–	**1**
Digit III	1	–	–	–	–	–	–	–	**1**
Digit II, phalanx 2	1	–	–	–	–	–	–	–	**1**
Tarsometatarsus	–	–	–	–	–	–	2	–	**2**
Phalanx	–	–	–	–	–	–	2	–	**2**
First phalanx	–	–	–	–	–	–	6	–	**6**
Second phalanx	–	–	–	–	–	–	7	–	**7**
Third phalanx	–	–	–	–	–	–	7	–	**7**
Ungual phalanx, claw	–	–	–	–	–	–	8	–	**8**
Eggshell	12	14	139	8	36	1	71	254	**535**
Total	**26**	**16**	**142**	**8**	**38**	**1**	**181**	**262**	**674**

Table 12.20. LA 37595, Pit Structure 1, primary faunal groups, counts and percents by stratigraphic unit and vent feature.

	Large Mammal		Cottontail		Jackrabbit		Dog		Deer		Turkey		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Layer 1	17	34.7%	1	25.0%	5	83.3%	–	–	10	32.3%	14	9.9%	**47**	**11.5%**
Layer 4	9	18.4%	2	50.0%	–	–	–	–	8	25.8%	2	1.4%	**21**	**5.1%**
Layer 5	–	–	1	25.0%	–	–	–	–	–	–	2	1.4%	**3**	**0.7%**
Layer 7	1	2.0%	–	–	–	–	–	–	1	3.2%	2	1.4%	**4**	**1.0%**
Layer 8	–	–	–	–	–	–	–	–	1	3.2%	–	–	**1**	**0.2%**
Vent	1	2.0%	–	–	1	16.7%	177	100.0%	1	3.2%	110	78.0%	**290**	**71.1%**
Floor 1	21	42.9%	–	–	–	–	–	–	10	32.3%	11	7.8%	**42**	**10.3%**
Total	**49**	**100.0%**	**4**	**100.0%**	**6**	**100.0%**	**177**	**100.0%**	**31**	**100.0%**	**141**	**100.0%**	**408**	**100.0%**
% of Total	**49**	**12.0%**	**4**	**1.0%**	**6**	**1.5%**	**177**	**43.4%**	**31**	**7.6%**	**141**	**34.6%**	**408**	**100.0%**

dig no farther because of its size and the ambiguity of the base. Fill consisted of two layers. The upper 10 cm was similar to Layer 4, suggesting that the feature was open at the time of structure filling. The lower fill was much cleaner but still contained some charcoal, indicating that it was probably open and filled to that depth before the structure was taken apart. The lower layer also contained eight pieces of eggshell. The sides of the pit were plastered.

Ashpits (Features 16, 17). Features 16 and 17 were paired in a way that is, again, very reminiscent of LA 37592 Pit Structure 1 (Fig. 12.17b). One of these features was similar to ash pits often seen in Anasazi pit structures in Chaco Canyon (Truell 1986:208). It was a shallow basin filling the space between the deflector and the hearth. It contained up to 4 cm of ash resting on a thin layer of sand that was laid down on top of the gravelly substrate of the floor. Except for the absence of bark lining, this was similar to the ash pit on Floor 3 of Pit Structure 1, LA 37592. Though shallower than the ash pit at LA 37592, this one had a larger volume because of its larger area (15.6 vs. 9.8 liters). This feature's dimensions deviate from the mean dimensions reported by Truell for Chaco because of its shape (Table 12.13).

The second ash "pit" was a subfloor pit at the west edge of the basin ash pit. The second pit contained three fill units, including two lower ones with little charcoal and ash; the upper layer consisted of burned gravel, sand, and ash. It may be that this material was derived primarily from hearth remodeling rather than from ash dumping. Although similar in location and depth to the second ash pit at LA 37592, the contents of this pit were less clearly deposits from the hearth.

Large off-chamber cist (Features 2, 5). We first identified this cist as a floor-level opening in the southwest wall of the structure (Figs. 12.10a, 12.23, 12.24a, 12.24b). The right, or north, edge of the opening was clearly visible as a curving corner, and an adobe lintel was visible, forming the upper right of the opening (Fig. 12.23). The top of the feature had partially collapsed, leaving the top of the opening sloped down quite markedly from right to left. The left side was considerably less well preserved, but a fill change could be noted. Some of the definition problem for the left side resulted from the presence of fill and disturbance behind the wall to the left of Feature 2 (Figs. 12.23, 12.24a). During

Table 12.21. LA 37595, Pit Structures 1–4, faunal classes, counts and percents by structure.

	Pit Structure 1		Pit Structure 2		Pit Structure 4		Pit Structure 3		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Mammalia	557	74.1%	18	64.3%	271	96.4%	72	67.9%	**918**	**78.7%**
Aves	139	18.5%	7	25.0%	10	3.6%	1	0.9%	**157**	**13.5%**
Reptilia	18	2.4%	–	–	–	–	–	–	**18**	**1.5%**
Amphibia	38	5.1%	3	10.7%	–	–	33	31.1%	**74**	**6.3%**
Total	**752**	**100.0%**	**28**	**100.0%**	**281**	**100.0%**	**106**	**100.0%**	**1167**	**100.0%**
% of Total	**752**	**64.4%**	**28**	**2.4%**	**281**	**24.1%**	**106**	**9.1%**	**1167**	**100.0%**

Table 12.22. LA 37595, Pit Structures 1–4, faunal taxa, counts and percents by structure.

	Pit Structure 1		Pit Structure 2		Pit Structure 4		Pit Structure 3		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Faunal Bone and Shell										
Prairie dog	–	–	–	–	–	–	1	0.9%	**1**	**0.1%**
Rock squirrel	–	–	–	–	–	–	1	0.9%	**1**	**0.1%**
Pocket gopher	–	–	–	–	3	1.1%	2	1.9%	**5**	**0.4%**
Mouse	26	3.5%	4	14.3%	35	12.3%	1	0.9%	**66**	**5.6%**
Northern grasshopper mouse	18	2.4%	–	–	–	–	–	–	**18**	**1.5%**
Cottontail	4	0.5%	–	–	14	4.9%	15	14.2%	**33**	**2.8%**
Jackrabbit	6	0.8%	1	3.6%	24	8.5%	6	5.7%	**37**	**3.2%**
Dog	157	20.9%	–	–	–	–	–	–	**157**	**13.4%**
Gray wolf	–	–	–	–	4	1.4%	–	–	**4**	**0.3%**
Dog, coyote, wolf	20	2.7%	–	–	10	3.5%	–	–	**30**	**2.6%**
Dog, coyote, fox, wolf	–	–	–	–	–	–	3	2.8%	**3**	**0.3%**
Deer	32	4.3%	4	14.3%	14	4.9%	3	2.8%	**53**	**4.5%**
Artiodactyl	5	0.7%	–	–	78	27.5%	–	–	**83**	**7.1%**
Mammal	14	1.9%	3	10.7%	–	–	1	0.9%	**18**	**1.5%**
Small mammal	97	12.9%	–	–	40	14.1%	19	17.9%	**156**	**13.3%**
Medium–large mammal	130	17.3%	–	–	27	9.5%	7	6.6%	**164**	**14.0%**
Large mammal	48	6.4%	6	21.4%	22	7.7%	13	12.3%	**89**	**7.6%**
Turkey	107	14.2%	1	3.6%	8	2.8%	–	–	**116**	**9.9%**
Bird	32	4.3%	6	21.4%	2	0.7%	1	0.9%	**41**	**3.5%**
Whiptail lizard	22	2.9%	–	–	–	–	–	–	**22**	**1.9%**
Nonvenomous snake	18	2.4%	–	–	–	–	–	–	**18**	**1.5%**
Toad and frog	16	2.1%	3	10.7%	–	–	33	31.1%	**52**	**4.4%**
Marine or freshwater shell	–	–	–	–	3	1.1%	–	–	**3**	**0.3%**
Total	**752**	**100.0%**	**28**	**100.0%**	**284**	**100.0%**	**106**	**100.0%**	**1170**	**100.0%**
Eggshell										
Turkey eggshell	514	95.9%	9	69.2%	523	95.3%	–	–	–	–
Bird eggshell	22	4.1%	4	30.8%	26	4.7%	–	–	–	–
Total eggshell	**536**	**100.0%**	**13**	**100.0%**	**549**	**100.0%**	**–**	**–**	**–**	**–**

Table 12.23. LA 37595, Pit Structures 1–4, primary faunal groups, counts and percents by structure.

	Pit Structure 1		Pit Structure 2		Pit Structure 4		Pit Structure 3		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Large mammal	53	12.9%	6	33.3%	100	58.1%	13	34.2%	**172**	**26.9%**
Cottontail	4	1.0%	–	–	14	8.1%	15	39.5%	**33**	**5.2%**
Jackrabbit	6	1.5%	1	5.6%	24	14.0%	6	15.8%	**37**	**5.8%**
Canid	177	43.1%	–	–	10	5.8%	–	–	**187**	**29.3%**
Deer	32	7.8%	4	22.2%	14	8.1%	3	7.9%	**53**	**8.3%**
Turkey	139	33.8%	7	38.9%	10	5.8%	1	2.6%	**157**	**24.6%**
Total	**411**	**100.0%**	**18**	**100.0%**	**172**	**100.0%**	**38**	**100.0%**	**639**	**100.0%**

excavation, this area (Feature 5) was variously attributed to rodent activity and wall collapse followed by patching.

Above the opening was a second, apparently disturbed and difficult-to-explain area. Since Feature 2 was a major subfloor wall cist, it is possible that the disturbances in the wall related to construction and/or disintegration of the large feature. The feature had no added means of support evident; presumably, it, like the rest of the structure, was constructed by excavation into the compact, undisturbed soil. This has two implications. First, excavation of a hole of this size must have required some working room, especially if the final opening was the size indicated by the lintel and jamb that remained. This work space may have resulted in the disturbed and patched area recorded as Feature 5 to the left of the cist entrance. Second, the presence of such a hole without buttressing must have created a structural weakness in the soil, leaving it prone to collapse. Although we did not observe them, it seems probable that lintels similar to those in the vent tunnel were used to close off the top of the entry into the cist. Traces of such lintels would be slight after the entry collapsed. The excavator suggested that the intersection of the structure with a buried feature was a further possible source for the plastered-over disturbed areas. As was generally true of these features, excavation of this cist was difficult due to its depth and location, lending perspective on how hard it would have been to construct it initially. To define the extent and plan of the feature, we eventually removed the 2 m of overlying soil with the backhoe and then defined the edges of the feature when they were visible. After sorting out the numerous confusing factors in the stratigraphy, we concluded that this feature consisted of an oval storage chamber measuring 1 m from front to back and 1.14 m from side to side (Figs. 12.10a, 12.23, 12.24b). The floor of the feature was 36 cm below the level of the floor of the main chamber of the structure. Entrance to the chamber was through a doorway in the structure wall 60–70 cm wide and 47 cm high, which extended back 54 cm from the chamber to the edge of the main part of the cist. The sides of the door to the cist were plastered, and the plastered floor surface extended into the short tunnel to the cist.

Outside the feature entrance was a low ridge in the floor extending 40 cm on either side of the entrance, which seems to have demarcated the entry to the feature. Just outside the area defined by the floor ridge, four pieces of shaped sandstone slab were against the wall. The four pieces of sandstone represent two slabs, one 17 mm thick, the other 30 mm thick. Only parts of each larger slab were present. Both were composed of the same fine-grained, tan gray sandstone. The thinner one has many fine laminations that exfoliate easily. This material, especially in the thinner, exfoliating slab, breaks easily. The thicker one has one very smooth surface and is blackened on the outside and oxidized pink in the inside. They were shaped by chipping the edges of the slab, and the thinner slab also exhibits considerable grinding. The thicker slab bowed out near the middle and may have been used over the vent tunnel opening. The corners of the thinner one are closer to right angles, suggesting the thin slab may have been used with the off-chamber cist. It seems likely that one or both of these slabs were used to close the entrance to Feature 2, although the large cist in the southeast (Feature 13) and the vent tunnel were probably also closed with slabs. Sandstone is

Figure 12.23. LA 37595, Pit Structure 1, Floor 1, opening to Feature 2 (off-chamber cist); shows collapsed lintel and disturbed area to left (Feature 5).

not accessible in the immediate vicinity of the site, so these slabs must have been transported from another place. While this large-volume feature contained a number of artifacts, there is little indication of how the feature was used (Table 12.17). No artifacts were identified as being on the floor of the feature, and the artifacts from the feature closely follow the overall occurrence of lithics, sherds, and fauna. The most notable faunal occurrence is 16 frog or spadefoot toad elements. No turkey elements or eggshell were found in this feature, counter to Mick-O'Hara's (1994) suggestion that these features related to turkey raising. Crumbly lignite was recovered in several layers of the feature (Table 12.24). Lignite does not commonly occur in fill contexts in La Plata although the abundance of coal in the valley would make it easy to obtain. In Chaco Canyon, lignite was used for subfloor material and for posthole packing (Windes 1993). The quantity in this cist is much less than was used in Chaco structures, but it is possible that this material was incorporated in the construction of the cist.

Figure 12.24a. LA 37595, Pit Structure 1, Floor 1, southwest corner; shows Feature 2 (off-chamber cist) opening and Feature 1 (floor pit) with cobble plug.

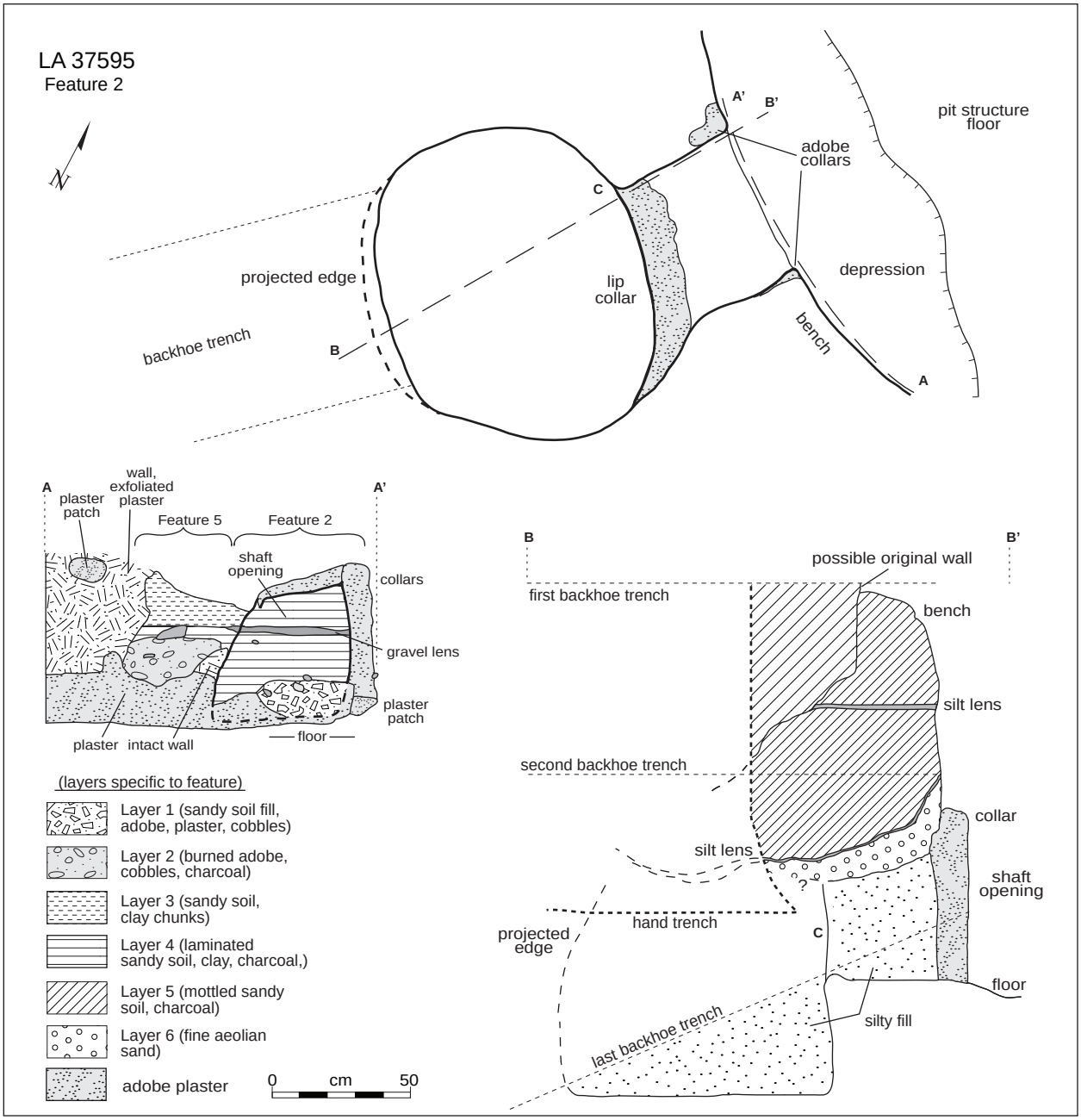


Figure 12.24b. LA 37595, Pit Structure 1, Floor 1, Feature 2 (large off-chamber cist), plan and profiles.

Storage cist (Feature 13). This large subfloor feature was at the base of the wall in the southeast quadrant of the main chamber, east of the vent-tunnel opening (Fig. 12.10a). The subfloor portion of the feature extended back underneath the structure's earthen wall, and there was an above-floor portion of the feature cut less deeply into the wall. The opening of the subfloor portion had a ledge below floor level that could have held a slab cover. This recessed area appears to have been remodeled and eliminated by the placement of Floor 1. Layers of fill, similar to the structure roof fall, indicated that the cist was open at the time of dismantling. Though the feature contained squash seeds and adobe impressions in the roof-fall portion of the fill, it contained only one piece of debitage and no faunal remains.

Table 12.24. LA 37595, other lithic material, by weight and provenience.

Unit	Vertical (Level/ Layer)	Feature Type	Feature	Material	Color	Probable Use	Weight (g)
Extramural Area 3	–	–	–	limonite	yellow	pigment	1.0
Pit Structure 1	–	–	–	azurite	blue and green	curiosity	2.4
Pit Structure 1	–	–	–	azurite	blue and green	curiosity	0.9
Pit Structure 1	0.03	–	–	hematite	red	unknown	27.0
Pit Structure 1	1	–	–	lignite	black	unknown	21.0
Pit Structure 1	1	cist	1	lignite	black	construction	35.0
Pit Structure 1	1	cist	1	selenite	gray	unknown	0.2
Pit Structure 1	1.01	–	–	shale	pink	ornament manufacture	3.0
Pit Structure 1	1.02	–	–	shale	reddish yellow	ornament manufacture	0.5
Pit Structure 1	5.03	–	–	shale	reddish yellow	ornament manufacture	0.3
Pit Structure 1, Floor 1	5.03	–	–	petrified wood	white	curiosity	20.0
Pit Structure 1	1	sipapu	11	limonite	yellow	pigment	0.2
Pit Structure 1	1	major off-chamber cist	2	shale	reddish yellow	ornament manufacture	0.3
Pit Structure 1	1	major off-chamber cist	2	lignite	black	unknown	5.0
Pit Structure 1	1	major off-chamber cist	2	lignite	black	unknown	18.0
Pit Structure 1	1	major off-chamber cist	2	shale	reddish yellow	ornament manufacture	1.0
Pit Structure 1	1	major off-chamber cist	2	lignite	black	unknown	149.0
Pit Structure 3	1	bench	19	limonite	yellow	pigment	0.3

This cist had an uncommon shape involving both wall and subfloor components (Fig. 12.25). The wall portion of each feature was suggested by disturbances of the natural stratigraphy that composed the structure walls, rather than by clearly defined structural elements or plaster. Given the perennial problems of water migration through walls in excavated pit structures, it seems quite possible that the above-floor portions of these features may have developed from wall deterioration after the structure had been in use for a while

Niches (Features 4 and 15). Features 4 and 15 were across from each other in the northwest and southeast quadrants at the wall-floor juncture (Fig. 12.10a). They both involved cobble masonry repairs or plugs in the wall with a subfloor element included. Since each had a subfloor component, they were not typical of the simple, finished niches often seen in pit structure walls. The presence of cobble masonry shows they were intentional. Feature 4, in the northwest quad, looks especially like a repair in a larger feature or a defect in the wall (Fig. 12.26). In section it looks as though it may have been a sizable cist, like Feature 13, extending 40 cm back from the chamber and 20 cm below the floor. There is a cobble at the apparent bottom of the earlier, modified feature, well below the bottom of the niche. Cobbles in a clay-with-charcoal mortar form the back of the niche (also within the earlier fill), making the niche 17–20 cm deep; the floor of the niche is plastered fill. The niche contained three sherds, including a large piece of a Red Mesa design ("Cortancos") jar sherd, which may have been deposited inten-

Figure 12.25. LA 37595, Pit Structure 1, Floor 1, Feature 13 (storage cist); note irregular shape.

tionally when the final niche was filled (Fig. 12.27). The large, empty cavity under the floor (Feature 1 on this floor) raises the possibility that much of this earlier feature was in fact a repair of a natural cavity during construction.

Feature 15, in the southeast quadrant, was smaller than Feature 4; it was about 25 cm away from a much larger storage cist, Feature 13. It showed as a break in the natural stratigraphy of the wall and as a break in the edge of the floor. Above the floor the feature had a pointed top; below it was a small, curve-sided pit. Wall plaster was little preserved in this portion of the structure, and it is likely that the shape of the feature at the time of excavation resulted from wall erosion. The fill was similar to Layer 5, indicating that the feature was open at the time of structure dismantling. Again, there was no material within the feature to indicate its use.

Subfloor pits (Features 1, 3, and 6). Feature 1, a large subfloor feature in the southwest quadrant of the floor, was quite unusual in being completely unfilled at the time of excavation. A flat, oval cobble (28 by 29 by 6 cm) had been placed in the orifice of the pit, with the top of the cobble more or less flush

Figure 12.26. LA 37595, Pit Structure 1, Floor 1, Feature 4 (wall/subfloor niche) with cobble patch.

Figure 12.27. LA 37595, Pit Structure 1, Floor 1, Feature 4 (wall/subfloor niche); Red Mesa jar-handle sherd is intentional fill.

with the floor (Figs. 12.10a, 12.24a). The cobble collapsed into the pit under an excavator's knee, suggesting that the sides of the pit may have sloughed some since the structure was occupied, or that the occupants knew not to step on the cobble. The sides of the pit were unlined and consisted of exfoliating sandy soil, but there was a plastered basin around the opening. Up to 10 cm of fine, soft sand with aggregated lumps rested on the distinct gray floor of the pit; this fill material was probably from exfoliation of the pit walls.

Feature 3, another plugged, unfilled feature, was at the base of the wall in the northwest quadrant of the structure, south of the niche at the base of the wall (Feature 4). The opening of this cist was at the edge of the floor. Most of the cist extended 30 cm back under the structure wall, and only about 10 cm opened inside the chamber. A sandstone slab (25 by 21 by 5 cm) was wedged under the wall, resting in a shallow depression in the floor at the mouth of the feature.

Features 1, 3, 4, and 15 suggest that the homogeneity and hardness of the overlying sediments, which allowed an all-earth structure to be built and used, may have changed at floor level, requiring some patching and leaving some voids. It may also be that the voids (Features 1 and 3) were so well sealed that they did not fill. Feature 4, especially, suggests that there were structural problems at floor level.

Feature 6 was a smaller, conical pit in the northwest quadrant of the floor, west of the hearth, visible mostly because of a difference in the color of the fill from that of the floor.

Similarities between Pit Structure 1, LA 37595, and Pit Structure 1, LA 37592

The similarities between LA 37592's Pit Structure 1 (Chapter 13, Vol. 1-Book 2, this report) and this LA 37595 Pit Structure 1 are uncanny: they seem to follow the same plan well beyond coincidence. Particularly noteworthy are the large slabs on the south side of each hearth, placed at an angle to the structure axis, and the two ash pits in each structure (Fig. 12.17b). Other similarities include the co-occurrence of a large pit at wall base, an off-chamber cist, and the apparent absence of a normal bench, at least at the north side of each structure. Both also had turkey deconsecration placements, although Pit Structure 1 at LA 37595 also had a dog. That these small details are so much alike suggests that the builders of the two structures were the same, but is this temporally feasible? To all appearances, the LA 37595 structure was built substantially earlier than that at LA 37592—the LA 37595 structure dates firmly in Pueblo II, while the LA 37592 structure dates to the Pueblo II–III transition. The similar ash pits at LA 37592 are on the earliest floor and did not co-occur with the slab-lined hearth, which was on the latest floor. At LA 37595 both the slab-lined hearth and the ash pits were on the same floor. There is little question that LA 37595 Pit Structure 1 predates AD 1100, but it probably was in use in the second half of the 1000s.

Differences between the two structures include the design and construction of the vent shafts, the locations of the off-chamber and large wall-base cists, the orientation of the axes (328 degrees true north at LA 37592 versus 342 degrees true north at LA 37595), the larger diameter of the LA 37595 structure (0.5 m larger), and its consequently larger floor area (13.5 sq m versus 9.7 sq m). The similarities are sufficient and the locations close enough—the two structures are only 275 m apart—that it seems quite likely that there was some relationship between the builders of the two structures, whether hereditary or social.

Floor 2

Floor 2 did not cover the entire base of Pit Structure 1. It was found only in a crescent-shaped area encompassing the north side of the hearth, separated from Floor 1 by only 2–3 cm of Floor 1 plaster (Layer 9; Fig. 12.28). Four pits were identified on Floor 2; one of these is likely to have been an earlier sipapu, but the others (Features 2–4) were irregular and may have been floor defects or part of the floor construction process. Floor 2 probably represents an area that was repaired or remodeled after the structure had been used for a while, or, given its color and lack of artifacts and other evidence of use, it may have been a step in leveling and finishing the structure floor. It is quite possible that this remodeling took place at the same time that the hearth was modified. The floor surface appeared worn, indicating it was used longer than Floor 1, but the floor was less gray than Floor 1, suggesting less time of exposure to ash accumulation and foot traffic. Formal features and artifacts were very few (there were no sherds associated with this floor).

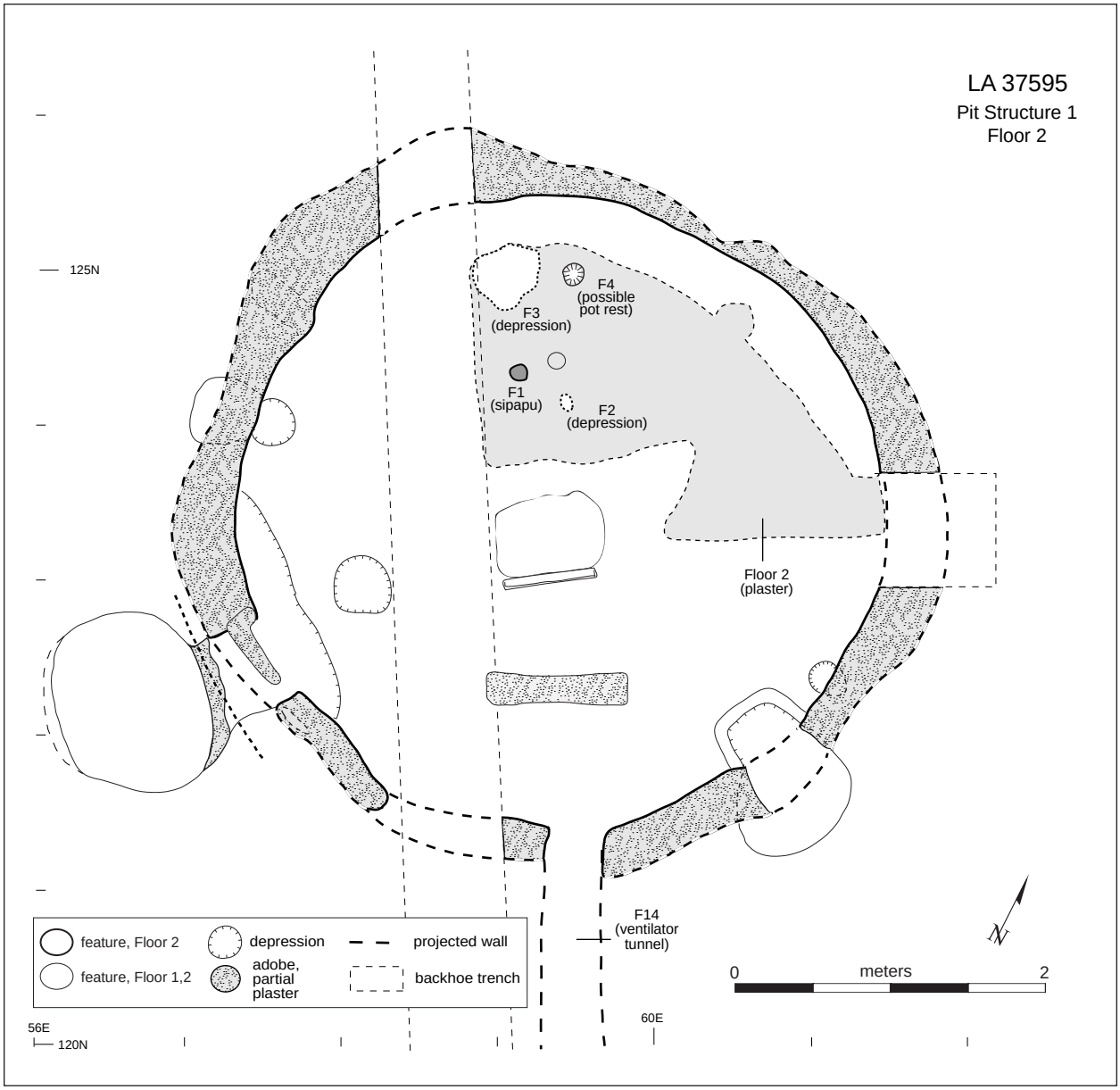


Figure 12.28. LA 37595, Pit Structure 1, Floor 2, plan.

Features (Floor 2)

Sipapu (Feature 1). Feature 1, a regular pit, was 7 cm southwest of the Floor 1 sipapu and very similar in diameter, although not as deep (Fig. 12.29).

Other pits (Features 2–4). Features 2 and 3 were irregular; they may be defects in the floor from wear or areas filled and smoothed in the process of finishing the structure (Fig. 12.28). Feature 4 was a small hemispherical pit that could have been a pot rest.

Subfloor

A subfloor test in the northwest quadrant of Pit Structure 1 showed that the floor of the structure rested on undisturbed alluvial materials. There was some indication of additional floor layering in the area north of the hearth, but its absence elsewhere in the structure makes it likely that it was part of floor construction.

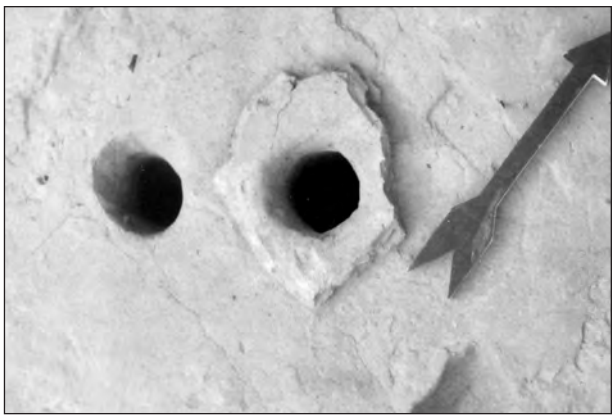


Figure 12.29. LA 37595, Pit Structure 1, sipapu comparison, Floor 2 (Feature 1, left) and Floor 1 (Feature 11, right), view northwest; the floors were separated by a thin layer of plaster (shown around Feature 11).

Cultural Materials

Ceramics. The ceramic assemblage from Pit Structure 1 at LA 37595 is similar to the overall site assemblage (Tables 12.25, 12.26). Within the structure there are small deviations from the overall pattern, such as more decorated ware and less gray ware than the overall in Layer 1 and the vent and the reverse in the roofing layers. The materials from the floor and the floor fill are remarkably close to the overall distribution, suggesting that they are incidental rather than related to use of the floor. The clearest indication of ceramic use in the structure are the Dolores Corrugated jars from the bench and near the floor. White wares seem notably sparse from contexts suggestive of use.

Chipped stone. Like the ceramic assemblage, the lithic assemblage from Pit Structure 1 follows the site trends in materials and artifact types, with a few minor exceptions (Tables 12.27, 12.28). The frequency of quartzitic sandstone is higher than the site count, although quartzite is below the site expectation. As with other materials, these are found mostly in the form of debitage, but they are also common hammerstone materials, and hammerstones are somewhat more abundant in Pit Structure 1 than in the site as a whole. The only projectile point from the structure, a tiny, possibly corner-notched point, was found in the vent, along with the abundant fauna discussed below. This point is made from yellow-brown silicified wood and is missing enough of the base that it is not clear whether it was side- or corner-notched (Fig. 12.30 [b]). The only other point from the site, from the fill of Pit Structure 3, is clearly corner-notched (Fig. 12.30 [a], suggesting a date in earlier Pueblo II.

Ground stone. Two of three one-hand manos from the site were in the fill of Pit Structure 1 (Tables 12.29, 12.30). There were more manos in the fill than near the floor. The only tchamahia from the site is also from the fill above the roofing material. This artifact is made from a teardrop-shaped, flat cobble that has been shaped along the edges by grinding and chipped somewhat at the bit end.

Two pieces of azurite with turquoise inclusions were recovered from structure fill in the trench that defined the structure. These two pebbles (20 by 14 by 6 cm and 14 by 11 by 3 cm) are a beautiful deep blue with areas of turquoise—under magnification they are reminiscent of views of the earth from space. They are flattened and show some possible wear. Unfortunately we know little of the context beyond feature fill, but given the importance of both blue and turquoise, it seems very likely that these pieces of azurite were part of a medicine kit or some other collection of important items. The high points on these pebbles look abraded, as though they had been carried in a bag with other hard objects. It is of course possible that this wear is just natural weathering from before their collection, but, again, the special and nonlocal nature of these objects suggests otherwise.

Faunal remains. The faunal materials in Pit

Figure 12.30 [a, b]. LA 37595, projectile points: a. corner-notched point (Pit Structure 3); b. side- or corner-notched point, base missing (Pit Structure 1).

Table 12.25. LA 37595, pottery and temper types by Pit Structures 1–4 and extramural contexts; counts and percents.

	Pit Structure 1		Pit Structure 2		Pit Structure 4		Pit Structure 3		Extramural		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Pottery Type												
Pueblo II corrugated	6	0.6%	2	0.8%	4	2.4%	–	–	1	0.1%	**13**	**0.5%**
Pueblo II-III corrugated	25	2.5%	3	1.2%	1	0.6%	1	1.1%	3	0.3%	**33**	**1.3%**
Plain gray	59	5.8%	38	14.7%	12	7.1%	10	10.8%	198	18.3%	**317**	**12.1%**
Corrugated gray	646	63.8%	114	44.2%	66	38.8%	45	48.4%	546	50.5%	**1417**	**54.2%**
Mud ware	–	–	–	–	–	–	2	2.2%	–	–	**2**	**0.1%**
Red Mesa–style black-on-white	7	0.7%	3	1.2%	1	0.6%	–	–	–	–	**11**	**0.4%**
Pueblo II black-on-white	28	2.8%	6	2.3%	21	12.4%	1	1.1%	5	0.5%	**61**	**2.3%**
Sosi-style black-on-white	1	0.1%	–	–	–	–	–	–	–	–	**1**	**0.0%**
Dogoszhi-style black-on-white	17	1.7%	3	1.2%	10	5.9%	2	2.2%	2	0.2%	**34**	**1.3%**
Chaco-style black-on-white	–	–	1	0.4%	–	–	–	–	–	–	**1**	**0.0%**
Pueblo II–Pueblo III black-on-white	52	5.1%	24	9.3%	11	6.5%	8	8.6%	116	10.7%	**211**	**8.1%**
Painted black-on-white	5	0.5%	1	0.4%	–	–	–	–	–	–	**6**	**0.2%**
Polished white	143	14.1%	62	24.0%	36	21.2%	21	22.6%	207	19.1%	**469**	**17.9%**
Polished black-on-white	10	1.0%	–	–	2	1.2%	2	2.2%	1	0.1%	**15**	**0.6%**
Squiggle hachure black-on-white	10	1.0%	1	0.4%	3	1.8%	1	1.1%	1	0.1%	**16**	**0.6%**
Deadmans Black-on-red	1	0.1%	–	–	1	0.6%	–	–	–	–	**2**	**0.1%**
Mesa Verde plain red	–	–	–	–	1	0.6%	–	–	–	–	**1**	**0.0%**
Mesa Verde Black-on-red	3	0.3%	–	–	–	–	–	–	–	–	**3**	**0.1%**
Cibola indented red ware	–	–	–	–	–	–	–	–	1	0.1%	**1**	**0.0%**
Tsegi Orange	–	–	–	–	1	0.6%	–	–	–	–	**1**	**0.0%**
Total	**1013**	**100.0%**	**258**	**100.0%**	**170**	**100.0%**	**93**	**100.0%**	**1081**	**100.0%**	**2615**	**100.0%**
Temper												
Igneous	193	78.5%	28	75.7%	79	71.8%	–	–	2	66.7%	**302**	**76.3%**
Igneous and sand	2	0.8%	–	–	3	2.7%	–	–	–	–	**5**	**1.3%**
Quartzite	5	2.0%	1	2.7%	1	0.9%	–	–	–	–	**7**	**1.8%**
Sherd	27	11.0%	4	10.8%	7	6.4%	–	–	1	33.3%	**39**	**9.8%**
Igneous and sherd	8	3.3%	1	2.7%	13	11.8%	–	–	–	–	**22**	**5.6%**
Igneous + sand + sherd	1	0.4%	–	–	2	1.8%	–	–	–	–	**3**	**0.8%**
Quartz and sherd	–	–	1	2.7%	–	–	–	–	–	–	**1**	**0.3%**
Quartz sand	7	2.8%	1	2.7%	2	1.8%	–	–	–	–	**10**	**2.5%**
Quartz sand + sherd	1	0.4%	1	2.7%	2	1.8%	–	–	–	–	**4**	**1.0%**
Trachybasalt	–	–	–	–	1	0.9%	–	–	–	–	**1**	**0.3%**
Trachybasalt + sherd	2	0.8%	–	–	–	–	–	–	–	–	**2**	**0.5%**
Total	**246**	**100.0%**	**37**	**100.0%**	**110**	**100.0%**	**–**	**–**	**3**	**100.0%**	**396**	**100.0%**

Table 12.25 (continued)

	Pit Structure 1		Pit Structure 2		Pit Structure 4		Pit Structure 3		Extramural		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Vessel Form												
Indeterminate	2	0.2%	2	0.8%	3	1.8%	1	1.1%	5	0.5%	**13**	**0.5%**
Bowl rim	15	1.5%	3	1.2%	9	5.3%	1	1.1%	16	1.5%	**44**	**1.7%**
Bowl body	59	5.8%	16	6.2%	11	6.5%	4	4.3%	93	8.6%	**183**	**7.0%**
Seed jar rim	1	0.1%	–	–	1	0.6%	–	–	–	–	**2**	**0.1%**
Olla rim	3	0.3%	1	0.4%	–	–	2	2.2%	1	0.1%	**7**	**0.3%**
Olla neck	1	0.1%	–	–	–	–	–	–	–	–	**1**	**0.0%**
Cooking/storage rim	50	4.9%	8	3.1%	9	5.3%	2	2.2%	35	3.2%	**104**	**4.0%**
Necked jar body	104	10.3%	11	4.3%	21	12.4%	11	11.8%	35	3.2%	**182**	**7.0%**
Canteen	2	0.2%	–	–	–	–	–	–	–	–	**2**	**0.1%**
Jar body	770	76.0%	217	84.1%	109	64.1%	72	77.4%	894	82.7%	**2062**	**78.9%**
Ladle	2	0.2%	–	–	–	–	–	–	–	–	**2**	**0.1%**
Ladle bowl	3	0.3%	–	–	4	2.4%	–	–	–	–	**7**	**0.3%**
Ladle handle	–	–	–	–	1	0.6%	–	–	1	0.1%	**2**	**0.1%**
Open gourd dipper	–	–	–	–	1	0.6%	–	–	–	–	**1**	**0.0%**
Pipe	–	–	–	–	1	0.6%	–	–	–	–	**1**	**0.0%**
Nonvessel	1	0.1%	–	–	–	–	–	–	1	0.1%	**2**	**0.1%**
Total	**1013**	**100.0%**	**258**	**100.0%**	**170**	**100.0%**	**93**	**100.0%**	**1081**	**100.0%**	**2615**	**100.0%**
Paint Type (white ware only)												
None	144	52.9%	62	61.4%	36	42.9%	21	60.0%	207	62.5%	**470**	**57.1%**
Organic	15	5.5%	–	–	2	2.4%	3	8.6%	1	0.3%	**21**	**2.6%**
Mineral	113	41.5%	39	38.6%	46	54.8%	11	31.4%	123	37.2%	**332**	**40.3%**
Total	**272**	**100.0%**	**101**	**100.0%**	**84**	**100.0%**	**35**	**100.0%**	**331**	**100.0%**	**823**	**100.0%**
Ware												
Gray ware	736	72.7%	157	60.9%	83	48.8%	58	62.4%	748	69.2%	**1782**	**68.1%**
White ware	273	26.9%	101	39.1%	84	49.4%	35	37.6%	332	30.7%	**825**	**31.5%**
Red ware	4	0.4%	–	–	3	1.8%	–	–	1	0.1%	**8**	**0.3%**
Total	**1013**	**100.0%**	**258**	**100.0%**	**170**	**100.0%**	**93**	**100.0%**	**1081**	**100.0%**	**2615**	**100.0%**
% of Total	**1013**	**38.7%**	**258**	**9.9%**	**170**	**6.5%**	**93**	**3.6%**	**1081**	**41.3%**	**2615**	**100.0%**

Table 12.26. LA 37595, Pit Structure 1, ceramic types and vessel forms by stratigraphic unit and vent feature; counts and percents.

	Layer 1		Layer 4		Layer 5		Layer 7		Layer 8		Vent		Floor 1		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Pottery Type																
Pueblo II corrugated	5	1.2%	–	–	–	–	–	–	–	–	–	–	1	0.6%	**6**	**0.6%**
Pueblo II-III corrugated	3	0.7%	1	0.7%	15	10.6%	–	–	–	–	–	–	5	3.0%	**24**	**2.6%**
Plain gray	39	9.3%	5	3.5%	4	2.8%	–	–	–	–	2	8.0%	2	1.2%	**52**	**5.5%**
Corrugated gray	223	53.2%	110	78.0%	112	78.9%	30	83.3%	12	85.7%	12	48.0%	104	63.4%	**603**	**64.1%**
Red Mesa–style black-on-white	4	1.0%	–	–	–	–	1	2.8%	–	–	1	4.0%	1	0.6%	**7**	**0.7%**
Pueblo II black-on-white	19	4.5%	1	0.7%	–	–	–	–	–	–	5	20.0%	–	–	**25**	**2.7%**
Sosi-style black-on-white	1	0.2%	–	–	–	–	–	–	–	–	–	–	–	–	**1**	**0.1%**
Dogoszhi-style black-on-white	12	2.9%	3	2.1%	–	–	–	–	–	–	–	–	1	0.6%	**16**	**1.7%**
Pueblo II–III black-on-white	33	7.9%	5	3.5%	2	1.4%	–	–	–	–	2	8.0%	7	4.3%	**49**	**5.2%**
Painted black-on-white	1	0.2%	–	–	–	–	–	–	1	7.1%	–	–	3	1.8%	**5**	**0.5%**
Polished white	71	16.9%	12	8.5%	8	5.6%	5	13.9%	1	7.1%	3	12.0%	32	19.5%	**132**	**14.0%**
Polished black-on-white	5	1.2%	3	2.1%	–	–	–	–	–	–	–	–	1	0.6%	**9**	**1.0%**
Squiggle hachure black-on-white	1	0.2%	–	–	1	0.7%	–	–	–	–	–	–	7	4.3%	**9**	**1.0%**
Mesa Verde Black-on-red	2	0.5%	1	0.7%	–	–	–	–	–	–	–	–	–	–	**3**	**0.3%**
Total	**419**	**100.0%**	**141**	**100.0%**	**142**	**100.0%**	**36**	**100.0%**	**14**	**100.0%**	**25**	**100.0%**	**164**	**100.0%**	**941**	**100.0%**
Vessel Form																
Indeterminate	1	0.2%	–	–	1	0.7%	–	–	–	–	–	–	–	–	**2**	**0.2%**
Bowl rim	10	2.4%	1	0.7%	–	–	–	–	–	–	–	–	3	1.8%	**14**	**1.5%**
Bowl body	34	8.1%	6	4.3%	–	–	–	–	2	14.3%	3	12.0%	10	6.1%	**55**	**5.8%**
Seed jar rim	1	0.2%	–	–	–	–	–	–	–	–	–	–	–	–	**1**	**0.1%**
Olla rim	1	0.2%	–	–	–	–	–	–	–	–	–	–	1	0.6%	**2**	**0.2%**
Olla neck	–	–	1	0.7%	–	–	–	–	–	–	–	–	–	–	**1**	**0.1%**
Cooking/storage rim	17	4.1%	5	3.5%	15	10.6%	–	–	1	7.1%	–	–	10	6.1%	**48**	**5.1%**
Necked jar body	59	14.1%	3	2.1%	19	13.4%	–	–	1	7.1%	1	4.0%	5	3.0%	**88**	**9.4%**
Canteen	–	–	–	–	–	–	1	2.8%	–	–	–	–	–	–	**1**	**0.1%**
Jar body	292	69.7%	125	88.7%	107	75.4%	34	94.4%	10	71.4%	20	80.0%	135	82.3%	**723**	**76.8%**
Ladle	1	0.2%	–	–	–	–	–	–	–	–	1	4.0%	–	–	**2**	**0.2%**
Ladle bowl	2	0.5%	–	–	–	–	1	2.8%	–	–	–	–	–	–	**3**	**0.3%**
Nonvessel	1	0.2%	–	–	–	–	–	–	–	–	–	–	–	–	**1**	**0.1%**
Total	**419**	**100.0%**	**141**	**100.0%**	**142**	**100.0%**	**36**	**100.0%**	**14**	**100.0%**	**25**	**100.0%**	**164**	**100.0%**	**941**	**100.0%**

Table 12.27. LA 37595, chipped stone artifact and material types by Pit Structures 1–4 and extramural contexts; counts and percents.

	Pit Structure 1		Pit Structure 2		Pit Structure 4		Pit Structure 3		Extramural		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Tool Type												
Debitage	237	86.2%	124	74.7%	102	81.6%	83	80.6%	802	90.5%	**1348**	**86.7%**
Core	13	4.7%	13	7.8%	6	4.8%	5	4.9%	26	2.9%	**63**	**4.1%**
Uniface	1	0.4%	–	–	–	–	–	–	–	–	**1**	**0.1%**
Retouced/utilized debitage	6	2.2%	4	2.4%	3	2.4%	9	8.7%	35	4.0%	**57**	**3.7%**
Utilized core	–	–	–	–	–	–	–	–	1	0.1%	**1**	**0.1%**
Drill	–	–	–	–	–	–	–	–	1	0.1%	**1**	**0.1%**
Graver	–	–	–	–	1	0.8%	–	–	–	–	**1**	**0.1%**
Notch	–	–	–	–	3	2.4%	–	–	11	1.2%	**14**	**0.9%**
Denticulate	1	0.4%	1	0.6%	–	–	2	1.9%	1	0.1%	**5**	**0.3%**
Projectile point	1	0.4%	–	–	–	–	1	1.0%	–	–	**2**	**0.1%**
Hammerstone	16	5.8%	24	14.5%	10	8.0%	2	1.9%	9	1.0%	**61**	**3.9%**
Chopper/plane	–	–	–	–	–	–	1	1.0%	–	–	**1**	**0.1%**
Total	**275**	**100.0%**	**166**	**100.0%**	**125**	**100.0%**	**103**	**100.0%**	**886**	**100.0%**	**1555**	**100.0%**
% of Total	**275**	**17.7%**	**166**	**10.7%**	**125**	**8.0%**	**103**	**6.6%**	**886**	**57.0%**	**1555**	**100.0%**
Debitage:utilized debitage	39.5		31		34		9.2		22.9		**23.6**	
Sherds:lithics	3.68		1.55		1.36		0.9		1.22		**1.68**	
Material Type												
Chert	142	51.6%	99	59.6%	65	52.0%	40	38.8%	437	49.3%	**783**	**50.4%**
Chalcedony	6	2.2%	1	0.6%	–	–	–	–	2	0.2%	**9**	**0.6%**
Silicified wood	27	9.8%	3	1.8%	13	10.4%	28	27.2%	39	4.4%	**110**	**7.1%**
Quartzite	6	2.2%	9	5.4%	6	4.8%	7	6.8%	78	8.8%	**106**	**6.8%**
Quartzitic sandstone	29	10.5%	7	4.2%	5	4.0%	1	1.0%	21	2.4%	**63**	**4.1%**
Igneous	2	0.7%	1	0.6%	1	0.8%	–	–	5	0.6%	**9**	**0.6%**
Rhyolite	–	–	1	0.6%	–	–	–	–	–	–	**1**	**0.1%**
Sandstone	1	0.4%	2	1.2%	–	–	–	–	3	0.3%	**6**	**0.4%**
Siltstone	60	21.8%	43	25.9%	35	28.0%	27	26.2%	301	34.0%	**466**	**30.0%**
Other	2	0.7%	–	–	–	–	–	–	–	–	**2**	**0.1%**
Total	**275**	**100.0%**	**166**	**100.0%**	**125**	**100.0%**	**103**	**100.0%**	**886**	**100.0%**	**1555**	**100.0%**

Structure 1 reflect both its natural filling and its orderly abandonment. Of 752 elements in the assemblage, many are large portions of a few individuals. Many of these individuals were in the vent, and others are whole rodents and amphibians attributable to natural filling rather than cultural deposition (Tables 12.19, 12.20, 12.21). Only 10 rabbit elements were recorded. Large-mammal elements make up 11 percent (87 elements) of the total; only deer was identified to species. Deer elements include those from left and right sides, and rear and fore legs, as well as vertebrae and cranial parts. The incompleteness of many elements makes it possible that only one or two deer are represented.

As noted, most of the turkey and all of the dog remains in this structure were found in the ventilator, where a bird and a dog were placed when the structure was closed. Seventy-one percent of the major species elements were in the vent, but only a single deer element. Within the fill of the pit structure itself, there were 29 turkey elements in all, 14 of which were from Layer 1; of those, at least 9 are from one individual (conjoinable phalanges, ulna, humerus, and radius from the right side of a bird). There are a couple of elements in Layers 4, 5, and 7. On the floor there was abundant eggshell around the hearth but only 9 bone elements, 8 long-bone fragments, and one plate fragment (cranial, pelvic, or scapular). Deer and large mammal elements were split among Layers 1 (natural fill), Layer 4 (roofing),

Table 12.28. LA 37595, Pit Structure 1, chipped stone material and artifact type by stratigraphic unit and vent feature; counts and percents.

	Layer 1		Layer 4		Layer 5		Layer 7		Layer 8		Vent		Floor 1		Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
Material Type																
Chert	54	43.9%	22	62.9%	6	54.5%	2	40.0%	3	42.9%	10	62.5%	44	62.0%	**141**	**52.6%**
Chalcedony	4	3.3%	–	–	–	–	–	–	–	–	1	6.3%	1	1.4%	**6**	**2.2%**
Silicified wood	13	10.6%	3	8.6%	–	–	–	–	1	14.3%	2	12.5%	7	9.9%	**26**	**9.7%**
Quartzite	3	2.4%	1	2.9%	1	9.1%	–	–	–	–	1	6.3%	–	–	**6**	**2.2%**
Quartzitic sandstone	16	13.0%	2	5.7%	2	18.2%	1	20.0%	1	14.3%	1	6.3%	6	8.5%	**29**	**10.8%**
Igneous	1	0.8%	1	2.9%	–	–	–	–	–	–	–	–	–	–	**2**	**0.7%**
Sandstone	1	0.8%	–	–	–	–	–	–	–	–	–	–	–	–	**1**	**0.4%**
Siltstone	29	23.6%	6	17.1%	2	18.2%	2	40.0%	2	28.6%	1	6.3%	13	18.3%	**55**	**20.5%**
Other	2	1.6%	–	–	–	–	–	–	–	–	–	–	–	–	**2**	**0.7%**
Total	**123**	**100.0%**	**35**	**100.0%**	**11**	**100.0%**	**5**	**100.0%**	**7**	**100.0%**	**16**	**100.0%**	**71**	**100.0%**	**268**	**100.0%**
Artifact Type																
Debitage	105	85.4%	30	85.7%	11	100.0%	5	100.0%	6	85.7%	14	87.5%	62	87.3%	**233**	**86.9%**
Core	8	6.5%	2	5.7%	–	–	–	–	1	14.3%	–	–	2	2.8%	**13**	**4.9%**
Uniface	1	0.8%	–	–	–	–	–	–	–	–	–	–	–	–	**1**	**0.4%**
Retouched/utilized debitage	3	2.4%	–	–	–	–	–	–	–	–	1	6.3%	2	2.8%	**6**	**2.2%**
Denticulate	1	0.8%	–	–	–	–	–	–	–	–	–	–	–	–	**1**	**0.4%**
Projectile point	–	–	–	–	–	–	–	–	–	–	1	6.3%	–	–	**1**	**0.4%**
Hammerstone	5	4.1%	3	8.6%	–	–	–	–	–	–	–	–	5	7.0%	**13**	**4.9%**
Total	**123**	**100.0%**	**35**	**100.0%**	**11**	**100.0%**	**5**	**100.0%**	**7**	**100.0%**	**16**	**100.0%**	**71**	**100.0%**	**268**	**100.0%**

7 artifacts with no vertical assignment (backhoe trench)

Table 12.29. LA 37595, Pit Structure 1, ground stone material and tool type by stratigraphic unit; counts and percents.

	Layer 1		Layer 4		Layer 8		Floor 1		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Material										
Igneous	–	–	–	–	–	–	1	11.1%	**1**	**3.7%**
Granite	4	33.3%	–	–	–	–	–	–	**4**	**14.8%**
Travertine	1	8.3%	–	–	–	–	1	11.1%	**2**	**7.4%**
Sandstone	4	33.3%	5	100.0%	1	100.0%	7	77.8%	**17**	**63.0%**
Siltstone	2	16.7%	–	–	–	–	–	–	**2**	**7.4%**
Shale	1	8.3%	–	–	–	–	–	–	**1**	**3.7%**
Total	**12**	**100.0%**	**5**	**100.0%**	**1**	**100.0%**	**9**	**100.0%**	**27**	**100.0%**
Type										
Shaped slab	–	–	2	40.0%	–	–	4	44.4%	**6**	**22.2%**
Palette	–	–	1	20.0%	–	–	–	–	**1**	**3.7%**
Lapidary stone	–	–	–	–	1	100.0%	–	–	**1**	**3.7%**
Mano	1	8.3%	–	–	–	–	1	11.1%	**2**	**7.4%**
One-hand mano	2	16.7%	–	–	–	–	–	–	**2**	**7.4%**
Two-hand mano	3	25.0%	–	–	–	–	1	11.1%	**4**	**14.8%**
Two-hand slab mano	1	8.3%	–	–	–	–	–	–	**1**	**3.7%**
Trough metate	–	–	1	20.0%	–	–	–	–	**1**	**3.7%**
Slab metate	–	–	1	20.0%	–	–	1	11.1%	**2**	**7.4%**
Notched maul	1	8.3%	–	–	–	–	–	–	**1**	**3.7%**
Tchamahia*	1	8.3%	–	–	–	–	–	–	**1**	**3.7%**
Two-notch axe	1	8.3%	–	–	–	–	1	11.1%	**2**	**7.4%**
Pendant	1	8.3%	–	–	–	–	–	–	**1**	**3.7%**
Bead	1	8.3%	–	–	–	–	1	11.1%	**2**	**7.4%**
Total	**12**	**100.0%**	**5**	**100.0%**	**1**	**100.0%**	**9**	**100.0%**	**27**	**100.0%**

* changed from mano (FS 129)

and Floor 1, with just a few elements in the other layers. Elements indicate that more than one individual is represented, but still probably a small number. Most of the floor remains are fragmentary, while those from roof layers are most likely to be complete. The majority of deer elements are from legs and feet, with a few cranial elements.

The large volume of Layer 1 and the much smaller volume of Floor 1 fill and contact account for most of the rest of the faunal remains.

Botanical remains (Mollie S. Toll). In Pit Structure 1, squash seeds and tobacco seeds were the most commonly encountered culturally significant taxa (Tables 12.10, 12.18, 12.32). Other taxa were very limited in distribution. Corn was restricted to roofing material and the Feature 12 hearth. Mustard and banana yucca were also identified in the roofing material, goosefoot and pigweed in the hearth, and stickleaf in a floor contact sample. A concentration of unburned purslane seeds found in a large subfloor cist (Feature 13) could represent stored resources. Macrobotanical and flotation wood were overwhelmingly juniper (Tables 12.11, 12.32, 12.33). The contents of the vent shaft, including construction materials, materials associated with the dog burial, and natural fill, were the most diverse: sagebrush, saltbush, cottonwood/willow, and piñon, in addition to more squash seeds (Table 12.33). Sage and saltbush occurred in a majority of the floor features, but not the major off-chamber cist. The occurrence of saltbush (*Atriplex*) in the roofing material (Table 12.12) and burned features indicates its wide use.

PIT STRUCTURE 2 (PUEBLO II): MEALING ROOM

Pit Structure 2 at LA 37595 measured 2.20 m north–south and 3.45 m east–west. The floor area was 7.24 sq m. The maximum height of the structure was 1.18 m (Figs. 12.6, 12.31a).

Table 12.30. LA 37595, ground stone artifacts by Pit Structures 1–4 and extramural contexts; counts and percents.

	Pit Structure 1		Pit Structure 2		Pit Structure 4		Pit Structure 3		Extramural		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Indeterminate fragment	–	–	–	–	–	–	1	7.7%	1	7.7%	**2**	**2.6%**
Pottery polishing stone	–	–	–	–	–	–	–	–	1	7.7%	**1**	**1.3%**
Plaster polishing stone	–	–	–	–	–	–	–	–	1	7.7%	**1**	**1.3%**
Shaped slab	7	22.6%	–	–	–	–	–	–	–	–	**7**	**9.1%**
Palette	1	3.2%	–	–	–	–	–	–	–	–	**1**	**1.3%**
Lapidary stone	1	3.2%	–	–	1	14.3%	–	–	–	–	**2**	**2.6%**
Mano	3	9.7%	1	7.7%	1	14.3%	4	30.8%	5	38.5%	**14**	**18.2%**
One-hand mano	2	6.5%	1	7.7%	1	14.3%	–	–	–	–	**4**	**5.2%**
Two-hand mano	4	12.9%	2	15.4%	–	–	4	30.8%	4	30.8%	**14**	**18.2%**
Two-hand slab mano	1	3.2%	3	23.1%	1	14.3%	1	7.7%	–	–	**6**	**7.8%**
Metate	–	–	–	–	–	–	1	7.7%	–	–	**1**	**1.3%**
Trough metate	1	3.2%	1	7.7%	1	14.3%	1	7.7%	1	7.7%	**5**	**6.5%**
Ends-open trough	–	–	2	15.4%	–	–	–	–	–	–	**2**	**2.6%**
Slab metate	2	6.5%	–	–	–	–	–	–	–	–	**2**	**2.6%**
Notched maul	1	3.2%	–	–	–	–	–	–	–	–	**1**	**1.3%**
Grooved maul	–	–	–	–	–	–	1	7.7%	–	–	**1**	**1.3%**
Two-notch axe	2	6.5%	–	–	1	14.3%	–	–	–	–	**3**	**3.9%**
Tchamahia	1	3.2%	–	–	–	–	–	–	–	–	**1**	**1.3%**
Paint stone	1	3.2%	1	7.7%	–	–	–	–	–	–	**2**	**2.6%**
Lightning stone	1	3.2%	–	–	–	–	–	–	–	–	**1**	**1.3%**
Pendant	1	3.2%	1	7.7%	1	14.3%	–	–	–	–	**3**	**3.9%**
Bead	2	6.5%	1	7.7%	–	–	–	–	–	–	**3**	**3.9%**
Total	**31**	**100.0%**	**13**	**100.0%**	**7**	**100.0%**	**13**	**100.0%**	**13**	**100.0%**	**77**	**100.0%**
% of Total	**31**	**40.3%**	**13**	**16.9%**	**7**	**9.1%**	**13**	**16.9%**	**13**	**16.9%**	**77**	**100.0%**

Pit Structure 2 was one of three pit structures discovered during controversial backhoe trenching next to the northbound lane of the highway. There was absolutely no surface indication of their presence. The pavement had to be removed to excavate Pit Structure 2. This small, relatively shallow (1.18 m) structure contained a row of four or five mealing bins across the narrow axis at the east end of the structure. Pit Structure 2 was south of Pit Structures 3 and 4 and southwest of Pit Structure 1; the latter two may have been contemporaneous with Pit Structure 2. A cobble masonry wall had been placed on the north edge of the structure, but the rest of the walls were native earth. The masonry was probably necessitated by the filled Pit Structure 3. Since the wall rests on the floor, it is likely that it was emplaced during the structure's initial construction to retain the softer fill of Pit Structure 3 (Figs. 12.31b, 12.32, 12.33).

Two metates (one complete, weighing 23 kg) were found in the structure fill, and two others (one complete, weighing 54 kg) were recovered from the trench that revealed Pit Structures 2, 3 and 4. It appears that no metate was in place in mealing bins when the structure was abandoned (Fig. 12.32). One of the metates from the trench is an open-ended trough metate on a huge cobble-shaped piece of sandstone weighing 54 kg. It is hard to imagine that this extraordinarily large metate was removed once it was in place, and we did not observe it being removed from the structure by the backhoe. Thus, it may have been in place in the structure and moved by the backhoe without our observing it—also hard to believe—but in any case we do not know exactly where it was located at site abandonment. Unfortunately, most of the mealing bin construction was removed during excavation of the backhoe trench (Figs. 12.31a, 12.32, 12.34). This trench divided the

Table 12.32. LA 37595, Pit Structure 1, plant remains from floor quadrants and Feature 9 (bench), flotation scan results by taxon; abundance per liter.

Feature Type	Floor Contact				Bench
Feature					9
FS	116	117	191	192	150
Quadrant	NW 1/4	SW 1/4	SE 1/4 (Roof Fall)	NE 1/4	
Cultural					
Other:					
Mentzelia	+	–	–	–	–
Possibly Cultural					
Annuals:					
Nicotiana attenuata	–	–	+ u	–	–
Noncultural					
Annuals:					
Amaranthus	–	+	–	++	+
Chenopodium	+	+	+	+++	++
Cycloloma	–	1	–		–
Euphorbia	+++	–	–	++	–
Portulaca	+	+	+	+++	+
Other:					
Malvaceae	–	–	+	–	–
Mentzelia	–	–	–	+++	–
Oenothera	–	–	–	+	–
Physalis	–	–	+	–	–
Perennials:					
Atriplex canescens	+ leaf	+ leaf	–	+ leaf	+++
Juniperus	–	–	–	–	+ leaflet
Platyopuntia	–	–	–	–	+

All cultural plant remains are carbonized.
Plant remains are seeds unless indicated otherwise.
+ = 1–10/liter; ++ = 11–25/liter; +++ = 25–100/liter; u = uncharred

chamber into two unequal parts; the larger portion was west of the trench. These two parts were named Segments 1 (west) and 2 (east). The placement of the trench makes the functioning layout of the structure conjectural. Based on the shapes of features and the layout of other mealing rooms, however, it is likely that the grinders sat with their backs to the east wall, and that the remaining row of features were catchment basins for meal. It is also possible that the preserved edge of the row of features was the upper end of the metate supports, but the shape of the features argues otherwise (compare Pit Structure 6 at LA 37599 [Vols. 3–4, this report]). If this were the case, somewhat less than half of the structure's floor space would have been taken up by bins and kneeling ledge. Segment 2, the east end of the structure, would correspond quite closely to the kneeling area. This layout, with half of the chamber open (probably for entry and exit and a staging area for materials waiting to be processed), is the norm for mealing rooms.

The open, nonbin part of this structure was apparently divided by a low adobe wall running across the west end of the structure, extending from the south wall to about 40 cm from the north wall, about 45 cm from the west side of the pit. This wall was superimposed on a pit feature and so was clearly added after the structure had been in use. Part of this wall was removed with Layer 3; the maximum height defined was 10 cm, and it is unlikely that the wall was more than 20 cm high at the time of excavation. At the base, the wall was 10 to 15 cm thick. Presumably it formed a storage area opposite the mealing bins.

Table 12.33. LA 37595, Pit Structure 1 features, plant remains by taxon and floor contexts; wood by weight (g), other plant parts by count and weight (g).

Feature	2 (Major Off-chamber Cist)		5 (Indeter-minate)	7 (Vent Shaft)			8 (Dog Burial in Vent Shaft)	12 (Hearth)				13 (Large Subfloor Cist)		14 (Vent Tunnel)	16 (Bark-lined Ash Pit)	Total	
FS No.	**504**	**507**	**126**	**170**	**171**	**172**	**175**	**500**	**501**	**502**	**503**	**510**	**512**	**514**	**517**	**Weight (g)**	**Col. %**
Context	**Floor 1, N 1/2**	**Floor/ Wall Junct-ure**	**Floor 1**	**Level 8**	**Level 9**	**Level 10**	**Floor 1**	**Floor 1, Layer 1**	**Floor 1, Layer 2**	**Floor 1, Layer 3**	**Floor 1, W 1/2**	**Floor 1, Layer 2**	**Floor 1, Layer 4**	**Floor 1, Layer 3**	**Floor 1**		
Cultural																	
Conifers:																	
Juniperus	5.10	1.68	–	0.26	1.84	–	0.46	1.56	3.87	4.44	0.24	2.76	–	–	–	**22.21**	**34%**
Pinus edulis	–	0.38	–	–	–	1.87	–	–	0.32	1.13	3.44	0.31	1.07	–	–	**8.52**	**13%**
Nonconifers:																	
Artemisia	–	–	–	0.09	–	–	0.06	0.56	3.30	0.44	1.59	–	–	–	–	**6.04**	**9%**
Atriplex	–	–	–	0.09	0.76	–	0.89	0.65	1.62	–	0.24	0.2	0.44	–	–	**4.89**	**7%**
Salicaceae	–	–	–	0.24	0.85	–	0.27	0.47	0.49	0.62	2.09	–	–	–	–	**5.03**	**8%**
Undetermined	–	–	1.48 pc	–	0.61	–	0.08	1.5	–	–	–	–	–	–	–	**3.67**	**6%**
Other Cultural																	
Cultivars:																	
Cucurbita seed	2/.01 u	2/.01 u	–	2/.01 u	2/.01 u	–	–	–	–	–	–	–	–	1/.01 u	1/.01 u	–	–
Possibly Cultural																	
Conifers:																	
Juniperus	–	–	–	14.83 u	–	–	–	–	–	–	–	–	–	–	–	**14.83**	**23%**
Pinus edulis (nutshell)	–	–	–	–	1/.01 u	–	–	–	–	–	–	–	–	–	–	–	–
Nonconifers:																	
Atriplex	–	0.48 u	–	–	–	–	–	–	–	–	–	–	–	–	–	**0.48**	**<1%**
Total	**5.10**	**2.54**	**1.48**	**15.51**	**4.06**	**1.87**	**1.76**	**4.74**	**9.60**	**6.63**	**7.6**	**3.27**	**1.51**	**–**	**–**	**65.67**	**100%**

pc = partially charred; u = uncharred

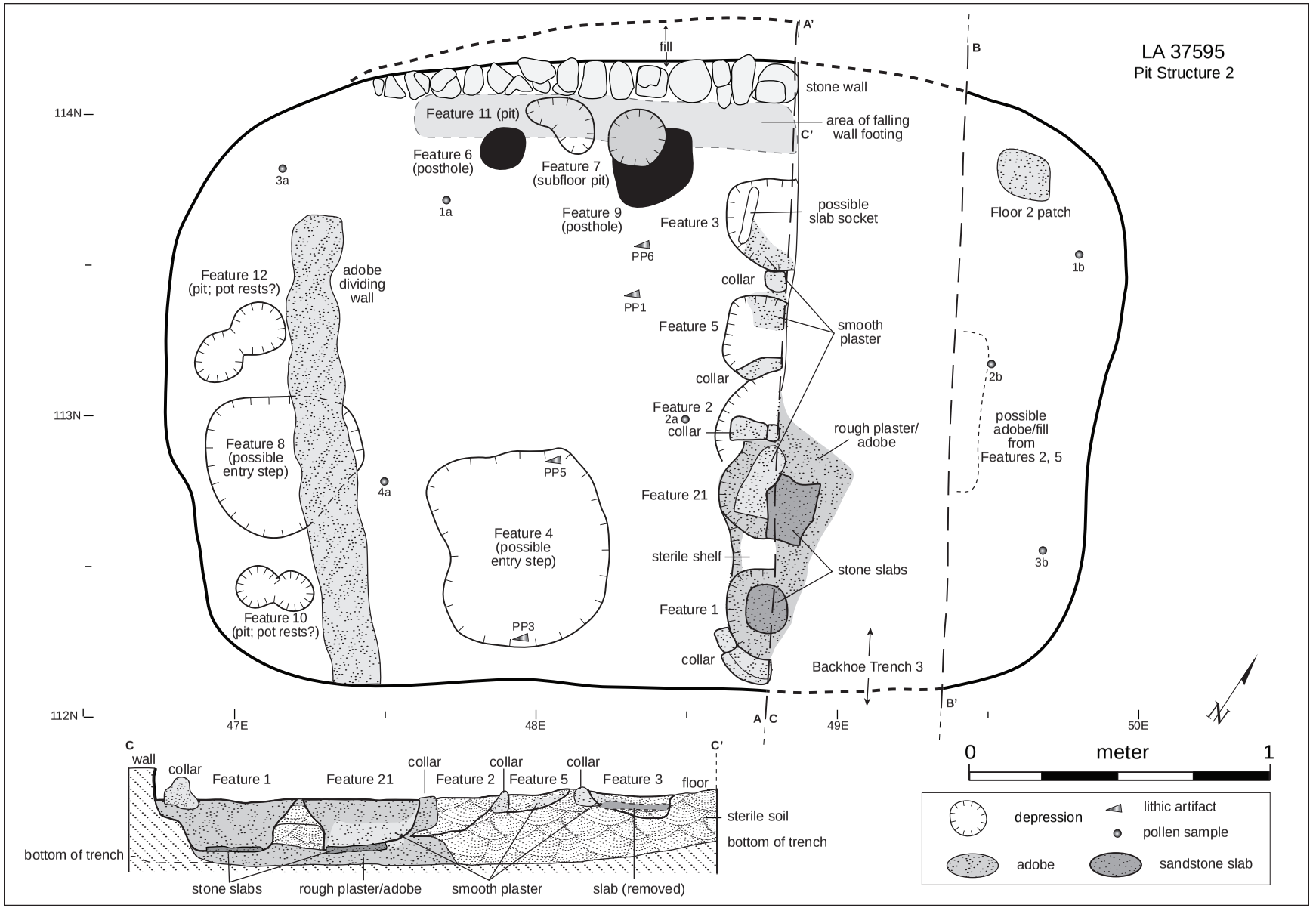


Figure 12.31a. LA 37595, Pit Structure 2, plan, and profile of Features 1, 2, 3, 5, 21 (mealing bins).

Figure 12.31b. LA 37595, Pit Structure 2, view north; Backhoe Trench 3 cuts through the eastern half. The sole masonry wall (north interior) was likely built to retain Pit Structure 3 fill; the trench bisected the mealing bin features.

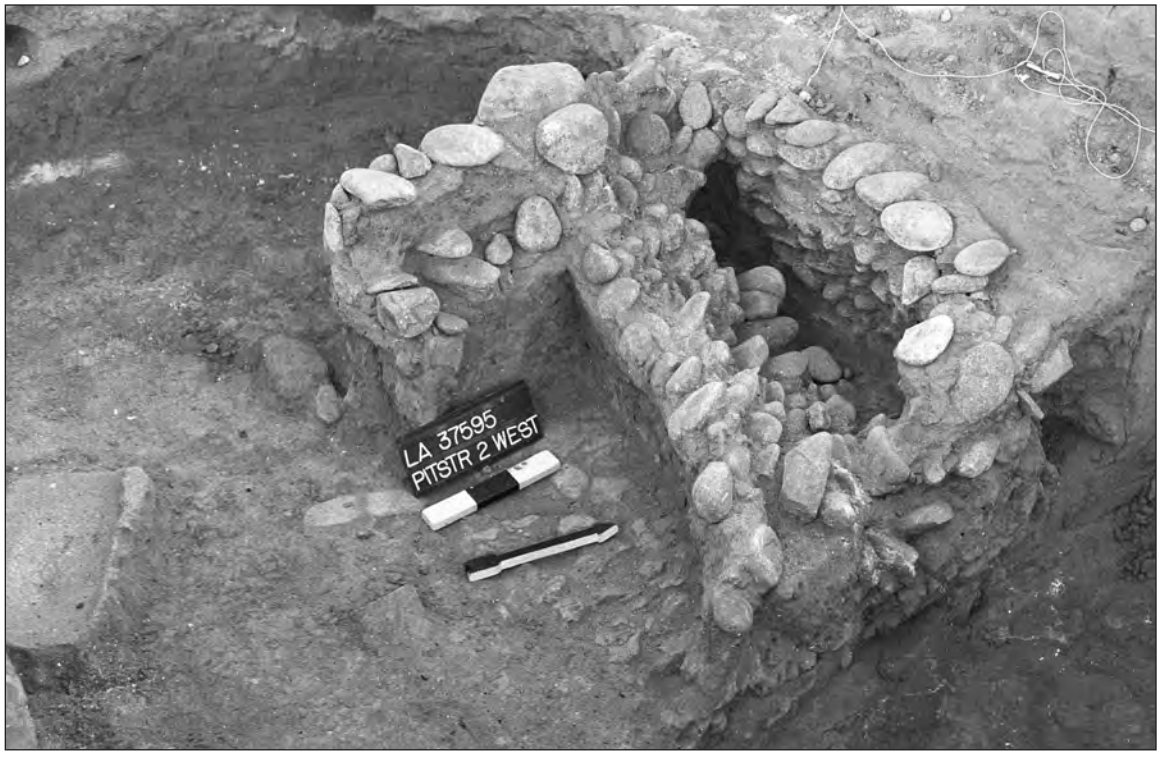


Figure 12.32. LA 37595, Pit Structure 2, view northwest showing north wall collapse; note large metate in fill at left edge of frame.

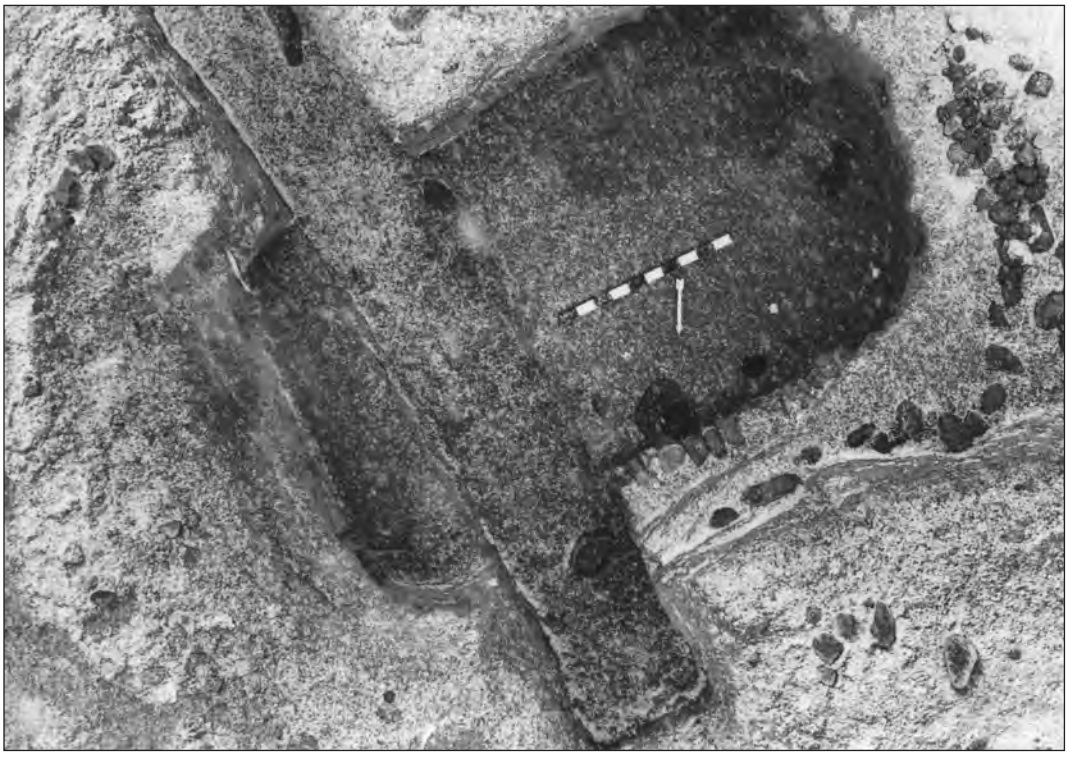


Figure 12.33. LA 37595, Pit Structure 2, Floor 1, during snowfall; bipod shot, view south.

Figure 12.34. LA 37595, Pit Structure 2, view west; in foreground, note mealing bins (Features 1, 2, 3, 5, 21) truncated by Backhoe Trench 3.

Structural Fill

The uppermost fill in Pit Structure 2 contained considerable quantities of charcoal and some rock. The fill materials were waterlain (Fig. 12.35). The construction materials in the upper layer came from the deterioration of the structure and probably from the adjacent surfaces, since an extensive burned area was present west of the structure. Because of the method of deposition, this upper layer has been coded as natural fill with cultural material and placed in the postoccupational component. Five layers were defined in profile, but only three were excavated. Table 12.34 lists the excavated layers.

Layer 2 was principally the product of the falling of the cobble wall forming the north wall of the structure. Its cobble content was higher toward the wall. Layer 3 resulted from roof fall and initial destruction of the room. It rests directly on the surviving portions of the mealing bins.

Floor 1

The main floor in Pit Structure 2, Floor 1, was a compact earth surface that apparently had not been plastered. The floor sloped up slightly to meet the wall bases. Materials point-located on the floor are mostly chipped stone flakes but also include two gray ware sherds and a number of sherds from the same white ware jar. Remodeling of the floor was visible in one of the mealing bins and in the addition of an adobe wall at the west end of the chamber (Fig. 12.31a).

Point-provenienced artifacts, recorded as FS 208, include one chert flake with cortex (16 g); three chert flakes of 1 g each; one corrugated sherd; one siltstone flake (1 g); one chert flake (5 g); seven matching polished white, unpainted jar sherds; and one plain gray sherd. A hematite paint stone (20 by 19 by 6 mm, 5 g) was recovered from a flotation sample from the floor in the west half of the room.

Features (Floor 1)

Mealing features (Features 1, 2, 3, 5, 21). Features 1, 2, 3, 5, and 21 were the edges of a row of catchment basins (Figs. 12.31a, 12.35, 12.37). These basins varied in depth and construction. Those to the south were the deepest (Table 12.35). Feature 3, at the north edge of the structure, apparently included an upright slab in the relatively shallow surviving depression. The two basins at the south edge had flat-lying slabs in the bottom, contributing to the interpretation of these features as basins rather than metate rests. Some of the difference in depth probably relates to the angle at which the trench cut the structure, removing more of each feature as it moved north. Five basins are indicated, but it is unlikely that any more than three were in use at a given time. Though the partial survival of these features makes it impossible to be certain, it appears that Features 1, 21, and 3 were in use just before abandonment. Feature 2 cut Feature 5, and Feature 5 was partially plastered over, leaving no doubt that Feature 5 was not in use. The relationship of Features 2 and 21 is less clear, but it appears that Feature 21 (paired with Feature 1) was built inside of Feature 2. Pit Structure 6 at LA 37599 contained five contemporaneous bins, but three is the most common number (Mobley-Tanaka 1993, 1997). Mobley-Tanaka suggests that mealing bins are set up so that the grinders would face the pit structure with which the mealing room was associated. In that case, Pit Structure 2 would have pertained to Pit Structure 4.

Irregular Pits or Possible Entry Steps (Features 4, 8). Features 4 and 8, irregular depressions, were near the south wall (Fig. 12.31a). Feature 4 was in the middle of the open portion of the structure floor, and Feature 8 was at the west end of the structure. The adobe wall base defined at the west end of the chamber overlay Feature 8, indicating that this feature had gone out of use during the life of the structure. If both features represent entry steps, the location of the entrance must have been changed during the structure's use.

Feature 4's location is similar to that of worn spots in the floors of Pit Structures 5 and 6 at LA 37599, which were also mealing rooms. The excavator noted that the edges of the pit were ragged and difficult to discern from the surrounding matrix. The location, shape, and intentional fill of this pit probably indicate a worn area caused by people stepping in and out of the structure. As also seems to be common in mealing rooms, a relatively large quantity of very small flakes was noted in the vicinity of this feature. A sandstone trough metate measuring 52 by 31 by 10 cm and weighing 23 kg was found in the fill above Feature 4 in structure Layer 2. This metate might have been put in this location to act as a step, although it rested at an angle

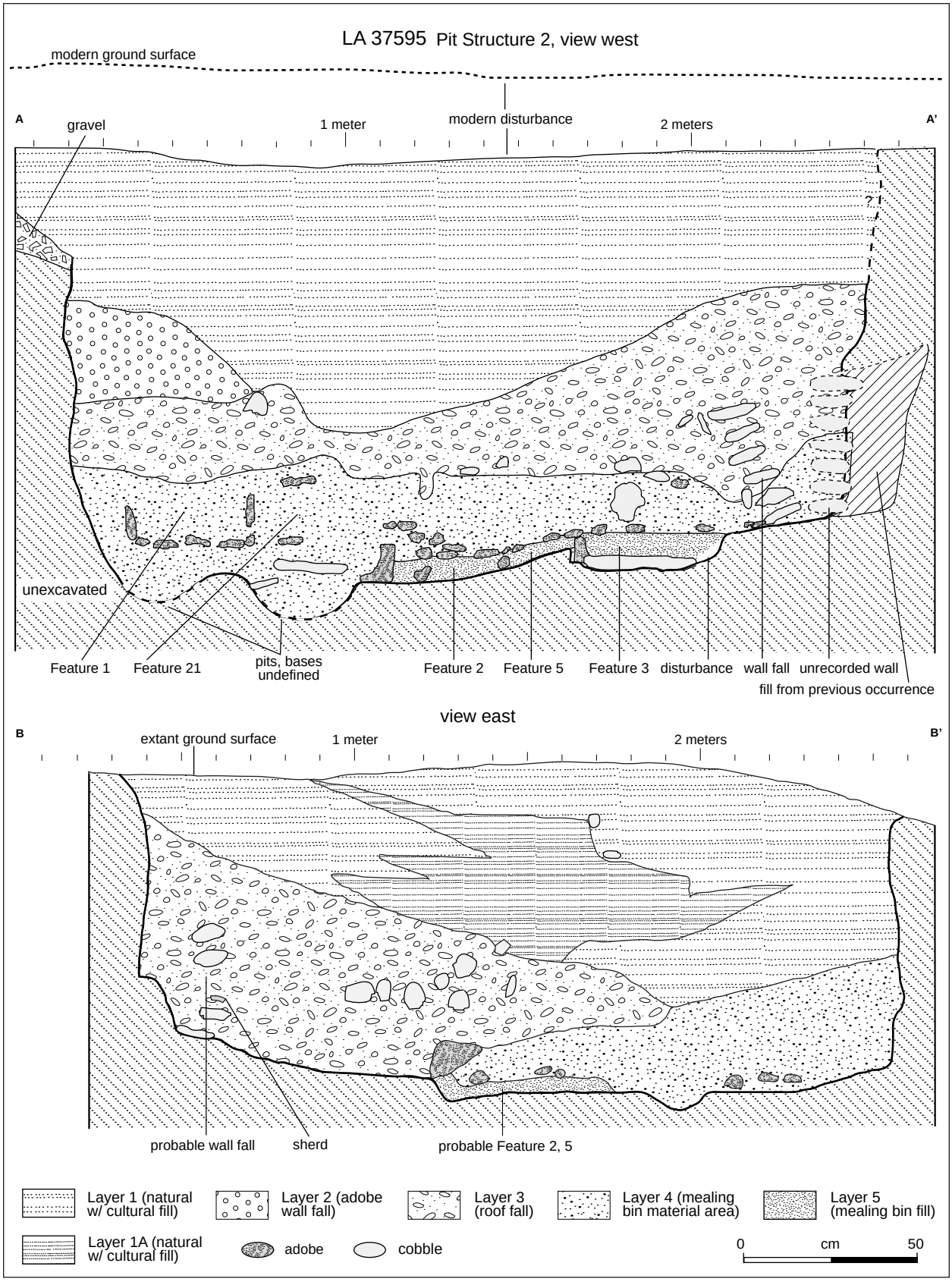


Figure 12.35. LA 37595, Pit Structure 2, fill profiles.

Table 12.34. LA 37595, Pit Structure 2, stratigraphy; summary table

Layer	Type of Deposit	Description
1	Natural with cultural material.	Light yellowish brown, laminated eolian and alluvial sandy filling of upper part of structure. High charcoal content (mostly <1 cm, all <2 cm) probably derives from burned surface to the west. Clean sandy pockets also present; variable compaction. Extends beyond the upper edges of the structure.
2	Construction material, wall fall.	High cobble content especially by north wall; also contains adobe and charcoal. Darker and less rocky unit similar to Layer 3 at the south edge of structure on top of the layer (2a). Corncob impression present near base of layer. Profiled as Layers 2 (now 2a) and 3 (now 2).
3	Roof material, floor fill.	Ashy fill containing adobe nodules and some cobbles; similar to Layer 2a but contains more, larger adobe. Profiled as Layers 4 and 5. Lighter color (less charcoal) in the vicinity of the mealing bins.
Floor 1	De facto refuse.	Ashy floor fill contains adobe (base of Layer 3). Six floor artifacts.
Floor 2	Construction (plaster).	Small patch cleared only in northeast corner of structure. No materials collected.

Figure 12.37. LA 37595, Pit Structure 2, Features 1, 2, 3, 5, 21 (mealing bins) cut by backhoe trench; detail, view southwest.

Table 12.35. LA 37595, Pit Structure 2, Floor 1 and fill, features; summary table.

Feature	Shape	Complete-ness	Construction Details	Use Details	Fill	Assigned Function	Volume (l)	Length/ Width/ Depth (cm)
1, Floor 1	pit basin	25%	plaster lined, slab in bottom	unburned	Structure fill; clayey sand, charcoal.	catchment basin	15.0	–
21, Floor 1	pit basin	25%	plaster lined, slab in bottom	unburned	Structure fill; clayey sand, charcoal, plaster fragments.	catchment basin	1.5	–
2, Floor 1	pit oblong curvilinear	25%	closed by Feature 21 (part of Feature 21?)	dismantled, unburned	Not recorded; Feature 1.	catchment basin	–	23/16/12
3	pit basin	–	slab impression open	unburned	Clean silty sand, adobe. Slab impression suggests metate support.	catchment basin	–	28/24/6
4	pit hemisphere	100%	unlined open	unburned	Burned sandstone and soil, micro flakes, vegetal material.	pit entry step?	53.0	80/70/12
5	pit hemisphere	–	plaster lined, cut by Feature 2, sealed	unburned	Yellow-brown clayey sand; scarce charcoal	pit	1.2	–
6	pit inverted cone	100%	open unlined	unburned	Clayey sand; scarce ash and small charcoal flecks.	posthole	4.3	14/14/32
7	pit hemisphere	100%	open	unburned	Sandy clay with charcoal flecks, decomposing organics, burned soil; cobble; squash seed.	pit	13.7	36/30/16
8	pit irregular	100%	intentional fill closed by wall	unburned	Yellow-brown clayey sand, artifacts, spalls; hard layer on top.	pit entry step?	4.1	63/51/16
9	pit cylinder	50%	unlined, superimposed by Feature 7	unburned	Below Feature 7; mixture of gravels, brown sandy clay, charcoal, peds of compact light brown clay.	posthole?	13.5	20/20/43
10	pit bilobed hemispheres	100%?	unlined	unburned	Soft yellow brown sand; scant charcoal.	two pot rests?	14.9	33/19/7
11	pit irregular ("kidney")	100%	unlined	unburned	Sandy; rare charcoal.	pit	1.1	23/14/4
12	pit bilobed	100%	unlined	unburned	Yellow-brown silty sand, rare charcoal.	–	–	35/17/18

to the wall. A floor sketch suggests that the metate was lying with the trough side down, which would allow it to serve better as a step.

Feature 8's location makes its function as an entry step seem less likely than that of Feature 4, but it shared the characteristics of size and irregularity common to that feature type. The edge of the pit extended to the wall itself. The excavator noted a hard clay or plaster layer 2–10 cm thick on top of the fill extending above the pit and onto the floor. The fill was a compact sandy matrix containing small cobbles, some burned rock, a few lithics, a sherd, a bone, and five hammerstones. The maximum depth of the depression itself was 16 cm. This greater depth and the presence of the hammerstones may indicate that this pit was used for storage or for trash, either after the structure entrance was relocated, or for the entire life of the pit.

Subfloor Pits (Features 6, 7, 9). Feature 7 in Pit Structure 2 was recorded as overlying Feature 9 on the basis of shape and a fill difference between the two. They were next to the north wall approximately in the middle of the wall (Fig. 12.31a). Feature 9 was shaped like the base of a posthole, extending 26 cm past the base of Feature 7 (for a total depth of 43 cm from the floor). Although the fill of these two features was distinctive in appearance, both were reported to contain squash seeds, suggesting some linkage of filling or function. If Feature 9 did hold a post, it was removed, probably prior to the abandonment of the structure. This would account for the differing fill in the upper (Feature 7) and lower (Feature 9) portions of the hole.

Feature 6 was a deep, straight-sided pit interpreted as a posthole. It was a single unit of sandy fill and no indication of function other than shape. Features 6 and 9 are next to the cobble wall; if they were postholes for supporting the structure roof, a third post would probably have been necessary in the area of the backhoe trench. This would be an unusual roof system for the mealing rooms in the La Plata Highway sample, since most seem to have had roofs supported outside the structure. This structure is, however, different from the others in the highway sample in having one masonry wall. At the time of excavation the wall was leaning in toward the center of the structure; it may be that a row of posts was installed to brace the wall, although none of the possible postholes contained remains of posts. In reexamining the profile, we were struck by the nearly intact nature of the wall fall leaning into the structure (Fig. 12.32). It seems unlikely that a substantial portion of cobble wall could slump down and remain intact. Rather, is seems more likely that the north wall of the structure was actually two courses thick at least in its final form. The posts next to the base of the wall could have been emplaced to prevent what eventually did happen: the inside course separated from the outside one and tilted into the structure, which was especially likely after the posts rotted as the structure filled. Having realized this possibility later, we did not pay the attention to fill between the two wall faces that may have confirmed this interpretation. At least in part, the fill between the faces is the same as that in the upper structure.

Floor 2

A 30 by 35 cm area east of Backhoe Trench 3 and adjacent to the masonry north wall of Pit Structure 2 was designated Floor 2. No materials were collected from this "floor," which was presumably a construction patch.

Cultural Materials

While Layer 1 of Pit Structure 2 contained the largest quantity of sherds (111), with only 13 sherds on the floor, a quarter of the 166 pieces of chipped stone from the structure came from floor association (Tables 12.36, 12.37). Over half of the chipped stone (by count) is in the form of flakes weighing a gram or less, making this mealing room similar to others in terms of the presence of small, probable sharpening flakes on the floor. Six hammerstones were also associated with the floor.

Ceramics. A total of 258 sherds were recovered from Pit Structure 2, half of which were in Layer 1, and only 14 percent (35) from Layer 3. Anomalies in the distribution of types include higher than expected percentages of white wares in Layer 2, a Chaco Black-on-white–style sherd in Layer 3, and very few bowl sherds. No organic-painted sherds were found in Pit Structure 2, and red wares were absent.

Chipped stone. Of all the major provenience groups, Pit Structure 2 shows the most interesting

Table 12.36. LA 37595, Pit Structure 2, pottery type and vessel form by stratigraphic unit; counts and percents.

	Layer 1		Layer 2		Layer 3		Floor 1		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Pottery Type										
Pueblo II corrugated	2	1.8%	–	–	–	–	–	–	**2**	**0.8%**
Pueblo II/III corrugated	1	0.9%	2	2.0%	–	–	–	–	**3**	**1.2%**
Plain gray	27	24.3%	8	8.1%	2	5.7%	1	7.7%	**38**	**14.7%**
Corrugated gray	51	45.9%	36	36.4%	24	68.6%	3	23.1%	**114**	**44.2%**
Red Mesa–style black-on-white	3	2.7%	–	–	–	–	–	–	**3**	**1.2%**
Pueblo II black-on-white	2	1.8%	4	4.0%	–	–	–	–	**6**	**2.3%**
Dogoszhi-style black-on-white	2	1.8%	1	1.0%	–	–	–	–	**3**	**1.2%**
Chaco-style black-on-white	–	–	–	–	1	2.9%	–	–	**1**	**0.4%**
Pueblo II–III black-on-white	3	2.7%	19	19.2%	2	5.7%	–	–	**24**	**9.3%**
Painted black-on-white	1	0.9%	–	–	–	–	–	–	**1**	**0.4%**
Polished white	18	16.2%	29	29.3%	6	17.1%	9	69.2%	**62**	**24.0%**
Squiggle hatch black-on-white	1	0.9%	–	–	–	–	–	–	**1**	**0.4%**
Total	**111**	**100.0%**	**99**	**100.0%**	**35**	**100.0%**	**13**	**100.0%**	**258**	**100.0%**
Vessel Form										
Bowl rim	2	1.8%	1	1.0%	–	–	–	–	**3**	**1.2%**
Bowl body	4	3.6%	10	10.1%	1	2.9%	1	7.7%	**16**	**6.2%**
Olla rim	–	–	1	1.0%	–	–	–	–	**1**	**0.4%**
Cooking/storage rim	4	3.6%	4	4.0%	–	–	–	–	**8**	**3.1%**
Necked jar body	6	5.4%	4	4.0%	1	2.9%	–	–	**11**	**4.3%**
Jar body	93	83.8%	79	79.8%	33	94.3%	12	92.3%	**217**	**84.1%**
Indeterminate	2	1.8%	–	–	–	–	–	–	**2**	**0.8%**
Total	**111**	**100.0%**	**99**	**100.0%**	**35**	**100.0%**	**13**	**100.0%**	**258**	**100.0%**

deviations from the overall site assemblage (Tables 12.27, 12.37). It contains more chert and less silicified wood and siltstone. It also has a lower percentage of debitage and a much higher percentage of hammerstones. The higher incidence of chert follows from the unusually high percentage of chert hammerstones. Unlike some subsequent excavations of mealing pit structures, the floor fill of this structure was not fine-screened, which would have doubtless increased the chert debitage count with tiny flakes from metate conditioning. The low incidence of silicified wood can be explained by the focus on ground stone technology, since silicified wood is more common in formal flaked stone tools and utilized flakes, and since chalcedony and silicified wood occur as smaller nodules and were rarely used as hammerstones (Table 12.38).

Hammerstones were present in all stratigraphic units within the structure (Table 12.37). This ubiquity indicates that hammerstones were present in all contexts around the structure, including on the floor, on the roof, around the structure in extramural contexts, and perhaps in the construction of the north wall. Cores, which might also have been used as hammerstones, were also more common in Pit Structure 2 than in other proveniences at the site, although none from the site is coded with hammerstone as a second use (the lithic recording system allows for up to three uses to be coded for any given item). The core frequency is also notable, given the smaller percentage of debitage, 75 percent, compared to 87 percent site-wide occurrence of debitage. It may be that cores were accumulated at the mealing room for potential hammerstone use. It is also possible that some hammerstone use was not evident to the analysts. Again, had fine screening been done, it is likely that much more small debitage was present, as in other mealing rooms.

Table 12.37. LA 37595, Pit Structure 2, chipped stone tool and material type by stratigraphic unit; counts and percents.

	Layer 1		Layer 2		Layer 3		Floor 1		Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
Artifact Type										
Debitage	13	65.0%	45	71.4%	34	81.0%	32	78.0%	**124**	**74.7%**
Core	2	10.0%	7	11.1%	3	7.1%	1	2.4%	**13**	**7.8%**
Retouched/ utilized debitage	1	5.0%	2	3.2%	–	–	1	2.4%	**4**	**2.4%**
Denticulate	–	–	–	–	–	–	1	2.4%	**1**	**0.6%**
Hammerstone	4	20.0%	9	14.3%	5	11.9%	6	14.6%	**24**	**14.5%**
Total	**20**	**100.0%**	**63**	**100.0%**	**42**	**100.0%**	**41**	**100.0%**	**166**	**100.0%**
Material Type										
Chert	10	50.0%	38	60.3%	23	54.8%	28	68.3%	**99**	**59.6%**
Chalcedony	–	–	–	–	1	2.4%	–	–	**1**	**0.6%**
Silicified wood	–	–	2	3.2%	–	–	1	2.4%	**3**	**1.8%**
Quartzite	–	–	5	7.9%	3	7.1%	1	2.4%	**9**	**5.4%**
Quartzitic sandstone	–	–	2	3.2%	1	2.4%	4	9.8%	**7**	**4.2%**
Igneous	1	5.0%	–	–	–	–	–	–	**1**	**0.6%**
Rhyolite	1	5.0%	–	–	–	–	–	–	**1**	**0.6%**
Sandstone	–	–	2	3.2%	–	–	–	–	**2**	**1.2%**
Siltstone	8	40.0%	14	22.2%	14	33.3%	7	17.1%	**43**	**25.9%**
Total	**20**	**100.0%**	**63**	**100.0%**	**42**	**100.0%**	**41**	**100.0%**	**166**	**100.0%**

Although ground stone tools are surprisingly uncommon in this structure, Pit Structure 2 contains a remarkable assemblage of hammerstones. Of 61 hammerstones on the site, 20 come from the constructional and lower fill of this structure, and a total of 26 come from the structure as a whole. Though its volume is much smaller than that of Pit Structure 1, Pit Structure 2 contains more hammerstones. Thirteen of these tools came from the lower fill. The hammerstones from Pit Structure 2 are, on average, smaller than the overall site average, and the mean weight of 231.7g is less than other provenience groups (Figs. 12.39a, 12.39b). The mean weight for the site is 295.7 g (SD = 182.2); without the hammerstones from Pit Structure 2, the mean weight is 343.1g; for Pit Structure 2 alone it is 231.7g (Table 12.39). The mean weights of the Pit Structure 2 hammerstones and those from the rest of the site are significantly different (t = -2.637, p = .011, df = 56.9). This indicates that the hammerstones used for conditioning ground stone were smaller and less variable than the broader range of hammerstones used for other tasks elsewhere on the site. In keeping with the smaller hammerstones in Pit Structure 2, there are far more chert hammerstones. Chert is a harder, less friable material, which seems preferable for grinding surfaces. Also, chert nodules are smaller, which probably made them better suited for metate conditioning. There are a few larger hammerstones in the mealing room, but most are even smaller than the mean, in the 150 g range.

Pit Structure 2 also has the most diverse and interesting assemblage of floor and floor-fill lithics at the site (Table 12.40), probably more nearly related to activities in the structure than in other floor contexts. Hammerstones are again an important part of the assemblage, and a core, a denticulate, and a piece of utilized debitage were all present. Even with the presence of other tools, debitage still constitutes 79 percent of the materials from the floor.

Ground stone. Since Pit Structure 2 was clearly a mealing room, a significant quantity of ground stone would be expected. However, the grinding bins were dismantled at abandonment, and only six

Table 12.38. LA 37595, Pit Structure 2, chipped stone tool type by material type; counts and percents.

	Chert		Chalcedony		Silicified Wood		Quartzite		Igneous		Sandstone		Siltstone		Total	
	Count	Col .%	Count	Col .%	Count	Col .%	Count	Col .%	Count	Col .%	Count	Col .%	Count	Col .%	Count	Col .%
Debitage	686	87.6%	9	100.0%	99	90.0%	143	84.6%	7	70.0%	5	83.3%	397	85.2%	**1346**	**86.7%**
Core	32	4.1%	–	–	2	1.8%	3	1.8%	1	10.0%	1	16.7%	24	5.2%	**63**	**4.1%**
Uniface	–	–	–	–	–	–	1	0.6%	–	–	–	–	–	–	**1**	**0.1%**
Retouched/utilized debitage	28	3.6%	–	–	8	7.3%	7	4.1%	–	–	–	–	14	3.0%	**57**	**3.7%**
Reouched/utilized core	1	0.1%	–	–	–	–	–	–	–	–	–	–	–	–	**1**	**0.1%**
Notch	8	1.0%	–	–	–	–	2	1.2%	–	–	–	–	4	0.9%	**14**	**0.9%**
Perforator	5	0.6%	–	–	1	0.9%	–	–	–	–	–	–	1	0.2%	**7**	**0.5%**
Projectile point	2	0.3%	–	–	–	–	–	–	–	–	–	–	–	–	**2**	**0.1%**
Hammerstone	20	2.6%	–	–	–	–	13	7.7%	2	20.0%	–	–	26	5.6%	**61**	**3.9%**
Heavy	1	0.1%	–	–	–	–	–	–	–	–	–	–	–	–	**1**	**0.1%**
Total	**783**	**100.0%**	**9**	**100.0%**	**110**	**100.0%**	**169**	**100.0%**	**10**	**100.0%**	**6**	**100.0%**	**466**	**100.0%**	**1553**	**100.0%**

Quartzite includes quartzite and quartziitic sandstone.
Igneous includes rhyolite.
Perforator includes drills, denticulates and gravers.
Heavy includes choppers and cobble tools.

grinding tools were recovered from the structure itself, along with one mano from the floor. Most of the intact grinding tools were recovered from Layer 2, a construction material layer, perhaps because they were in storage off the floor, either outside the structure or on some form of ledge, or because of the common practice of recycling ground stone as building material. Somewhat surprisingly, the ground stone assemblage from this structure includes a bead, a thick selenite pendant blank shaped and ground on all faces with an incipient drill hole in it, and a paint stone. The presence of these materials, which are likely to have had decorative and/or ceremonial uses, in a "mealing room" suggests that activities beyond food preparation took place in such structures. Though small, the paint stone has a highly ground, faceted face and was clearly used extensively.

Faunal remains. Faunal materials were extremely rare in this structure, totaling 23 elements, 16 of which are economic species (Tables 12.21, 12.41, 12.42). In view of the small sample of faunal material, a surprising amount of it—six pieces—is modified (Table 12.43). The modified bone is all fragmented or the by-product of tool production. These materials came from upper fill as well as floor fill, but none of it came directly from the floor.

Botanical remains. Botanical materials would be expected in a plant-processing facility. Squash seeds—also found in other mealing rooms and in both other Pueblo II pit structures—were present in this structure. In addition to minor amounts of corn found in flotation samples, there is evidence for corn in the form of a corncob impression in Layer 2. Pollen was not analyzed from this structure.

Mealing bins were separated by a low adobe wall from a possible storage area. Corn cupules were present on the floor and in one of the mealing bin catchment basins (Table 12.44). Other floral remains from the two catchment basins included hedgehog cactus, pigweed, and tobacco seeds; juniper leaflets; and juniper and sagebrush wood (Table 12.45). These carbonized remains are representative of trashy fill rather than of the actual plants processed in the mealing room. Ethnographically, there are no indications that hedgehog cactus seeds were ground into meal; instead, the whole fresh fruit was eaten or cooked and made into cakes (Standley 1911:450; Castetter 1935:26, 37). Feature 8, an entry

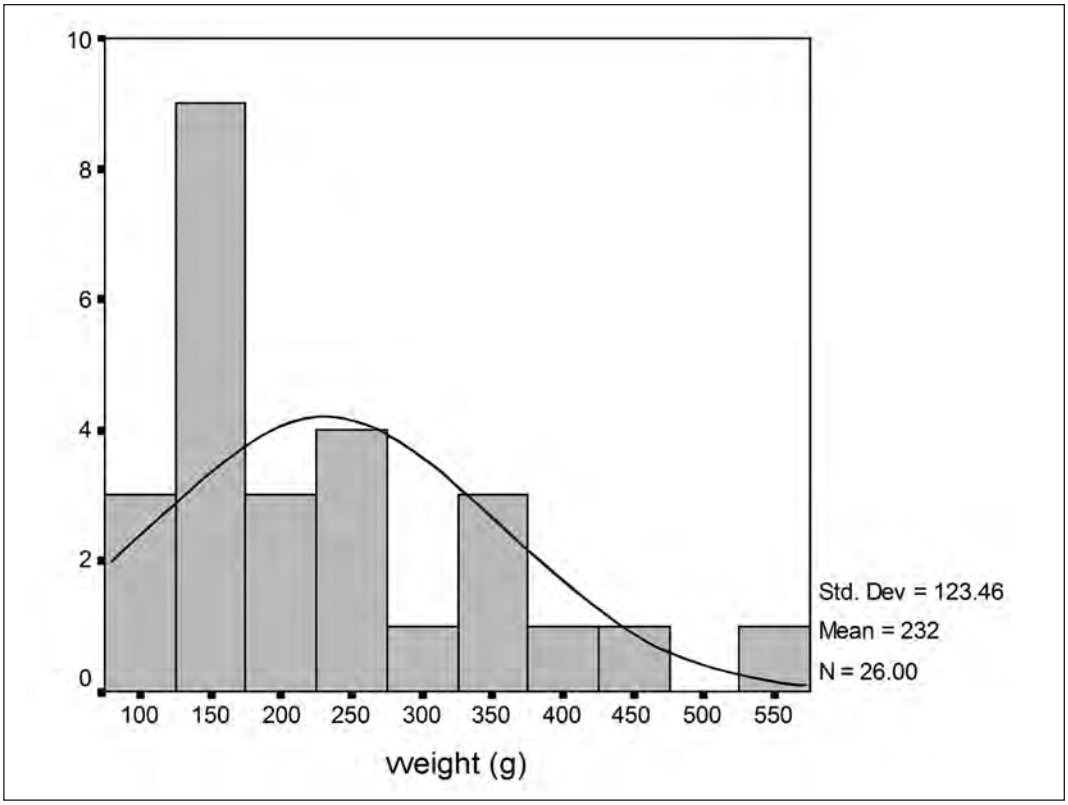


Figure 12.39a. LA 37595, Pit Structure 2, hammerstone histogram, counts by weight.

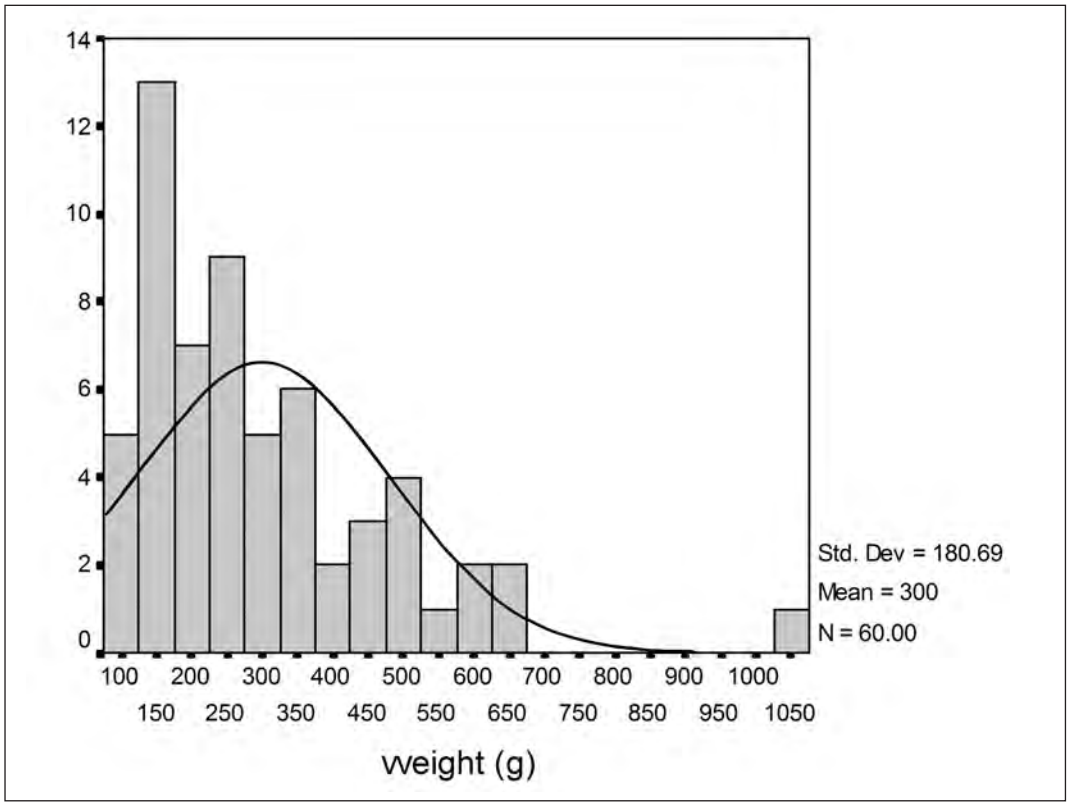


Figure 12.39b. LA 37595, site-wide, hammerstone histogram, counts by weight.

Table 12.39. LA 37595, Pit Structure 2 and site-wide, hammerstone materials; counts, percents, and mean weight (g).

Material	Pit Structure 2			All			Not inc. PitStructure2		
	N	Col. %	Mean Weight (g)	N	Col. %	Mean Weight (g)	N	Col. %	Mean Weight (g)
Chert	12	46.2%	179.6	20	32.8%	242.5	8	22.9%	336.9
Quartzite	3	11.5%	311	8	13.1%	328.8	5	14.3%	339.4
Quartzitic sandstone	–	–	–	5	8.2%	383.8	5	14.3%	383.8
Igneous	–	–	–	1	1.6%	661	1	2.9%	661
Rhyolite	1	3.8%	572	1	1.6%	572	–	–	–
Siltstone	10	38.5%	254.4	26	42.6%	284.7	16	45.7%	314.9
Total	**26**	**100.0%**	**231.7**	**61**	**100.0%**	**295.7**	**35**	**100.0%**	**343.1**
SD			**123.46**			**182.22**			**204.8**

SD = Standard Deviation

Table 12.40. LA 37595, Pit Structures 1–4, chipped stone tool types from structure floors and floor fill; counts and percents.

	Pit Structure 1		Pit Structure 2		Pit Structure 4		Pit Structure 3		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Debitage	68	88.3%	66	79.5%	19	90.5%	9	69.2%	**162**	**83.5%**
Core	2	2.6%	4	4.8%	–	–	2	15.4%	**8**	**4.1%**
Retouched/ utilized debitage	2	2.6%	1	1.2%	1	4.8%	1	7.7%	**5**	**2.6%**
Denticulate	–	–	1	1.2%	–	–	–	–	**1**	**0.5%**
Hammerstone	5	6.5%	11	13.3%	1	4.8%	1	7.7%	**18**	**9.3%**
Total	**77**	**100.0%**	**83**	**100.0%**	**21**	**100.0%**	**13**	**100.0%**	**194**	**100.0%**

step or trash pit, contained more tobacco seeds, juniper leaflets, and ricegrass. Corn and possibly pigweed seeds were ground in the mealing bins. Wood from the possible step and two unburned pits was primarily juniper, with small amounts of piñon, saltbush, oak, cottonwood/willow, and unknown conifer. An unburned squash seed fragment was found in a posthole.

PIT STRUCTURE 4 (PUEBLO II)

Pit Structure 4 at LA 37595 measured 3.85 m (estimated) north–south (bench height unknown) and 4 m (estimated) east–west (bench width unknown) (Figs. 12.6, 12.40a). Its floor area was 12.10 sq m, and its maximum height was 2.05. The axis of the structure was about 340 degrees (true north).

Although Pit Structure 4 was only partially excavated, it bears numerous similarities to Pit Structure 1 at this site, and in turn to LA 37593 Pit Structure 1 and LA 37592 Pit Structure 1. It was a circular structure dug into native soil using little masonry reinforcement (Fig. 12.40a). All four structures bell outward toward the floor. With a 3.85 m north–south diameter, this structure is between Pit Structure 1, LA 37595 (4.2 m); slightly larger than Pit Structure 1, LA 37592 (3.6 m); and nearly identical to Pit Structure 1, LA 37593 (3.80 m). The construction of Pit Structure 4 is something of an enigma. It was very obviously dug through the fill of Pit Structure 3, yet there was no sign of any means of shoring up the Pit Structure 3 fill, and no indication of a bench (Fig. 12.40b). In digging Pit Structure 3, in fact, the existence of Pit Structure 4 was not even suspected until the Pit Structure 3 floor stopped. More enigmatic than the absence of a retaining wall is the presence of a fire pit/burn, which lay directly above the cut between the two chambers (Figs. 12.40c, 12.41, 12.42, 12.43). Obviously the burn postdates both chambers, but

Table 12.41. LA 37595, Pit Structures 1–4, faunal taxa; counts and percents.

	Pit Structure 1		Pit Structure 2		Pit Structure 4		Pit Structure 3		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Prairie dog	–	–	–	–	–	–	1	0.9%	**1**	**0.1%**
Rock squirrel	–	–	–	–	–	–	1	0.9%	**1**	**0.1%**
Pocket gopher	–	–	–	–	3	1.1%	2	1.9%	**5**	**0.4%**
Mouse	26	3.5%	4	14.3%	35	12.3%	1	0.9%	**66**	**5.6%**
Northern grasshopper mouse	18	2.4%	–	–	–	–	–	–	**18**	**1.5%**
Cottontail	4	0.5%	–	–	14	4.9%	15	14.2%	**33**	**2.8%**
Jackrabbit	6	0.8%	1	3.6%	24	8.5%	6	5.7%	**37**	**3.2%**
Dog	157	20.9%	–	–	–	–	–	–	**157**	**13.4%**
Gray wolf	–	–	–	–	4	1.4%	–	–	**4**	**0.3%**
Dog, coyote, wolf	20	2.7%	–	–	10	3.5%	–	–	**30**	**2.6%**
Dog, coyote, fox, wolf	–	–	–	–	–	–	3	2.8%	**3**	**0.3%**
Deer	32	4.3%	4	14.3%	14	4.9%	3	2.8%	**53**	**4.5%**
Artiodactyl	5	0.7%	–	–	78	27.5%	–	–	**83**	**7.1%**
Mammal	14	1.9%	3	10.7%	–	–	1	0.9%	**18**	**1.5%**
Small mammal	97	12.9%	–	–	40	14.1%	19	17.9%	**156**	**13.3%**
Medium–large mammal	130	17.3%	–	–	27	9.5%	7	6.6%	**164**	**14.0%**
Large mammal	48	6.4%	6	21.4%	22	7.7%	13	12.3%	**89**	**7.6%**
Turkey	107	14.2%	1	3.6%	8	2.8%	–	–	**116**	**9.9%**
Bird	32	4.3%	6	21.4%	2	0.7%	1	0.9%	**41**	**3.5%**
Whiptail lizard	22	2.9%	–	–	–	–	–	–	**22**	**1.9%**
Nonvenomous snake	18	2.4%	–	–	–	–	–	–	**18**	**1.5%**
Toad and frog	16	2.1%	3	10.7%	–	–	33	31.1%	**52**	**4.4%**
Marine or freshwater shell	–	–	–	–	3	1.1%	–	–	**3**	**0.3%**
Total	**752**	**100.0%**	**28**	**100.0%**	**284**	**100.0%**	**106**	**100.0%**	**1170**	**100.0%**
Eggshell										
Turkey	514	95.9%	–	–	9	69.2%	–	–	**523**	**95.3%**
Bird	22	4.1%	–	–	4	30.8%	–	–	**26**	**4.7%**
Total	**536**	**100.0%**	**–**	**–**	**13**	**100.0%**	**–**	**–**	**549**	**100.0%**

Table 12.42. LA 37595, Pit Structure 2, major faunal taxa by stratigraphic unit; counts and percents.

	Large Mammal		Jackrabbit		Deer		Turkey		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	%
Layer 1	1	50.0%	–	–	1	50.0%	–	–	**2**	**100.0%**
Layer 2	–	–	1	10.0%	2	20.0%	7	70.0%	**10**	**100.0%**
Floor fill	4	100.0%	–	–	–	–	–	–	**4**	**100.0%**
Total	**5**	**31.3%**	**1**	**6.3%**	**3**	**18.8%**	**7**	**43.8%**	**16**	**100.0%**

why would it have been possible to have had a fire in this area, a mere 80 cm above the floor, which should have been within the fill or even the wall? A surface depression would have been present, and the low point would have provided shelter from the wind, so this placement may have related only to the topography at the time. Also hard to understand is the fact that a retaining wall was used in Pit Structure 2 (Fig. 12.31b), even though Pit Structure 2 was a shallower, smaller structure than Pit Structure 4, which lacked any attempt to shore up the loose fill. Pit Structure 2 was sufficiently south of the Pit Structure 3 antechamber that loose fill seems unlikely; clearly there was a

Table 12.43. LA 37595, Pit Structures 1–4, bone tools and other modified faunal material, counts by structure.

FS	Modification	Taxon, Element	Layer	Floor	Feature	Fill Type
Pit Structure 1 (n = 9)						
100	awl, fine point	medium mammal long bone	–	–	–	full cut
100	awl, fine point	large mammal long bone	–	–	–	full cut
148	waste, polished, multiple striations	large mammal long bone	1.02	–	–	fill above roof
153	awl, coarse point	*Odocoileus* sp., metapodial	1.02	–	–	fill above roof
171	awl, coarse point	Large mammal long bone	.09	–	vent shaft	roofing material
150	awl, fine point	*Odocoileus* sp., metatarsal		1	bench	bench fill
149	awl fragment, indeterminate point	*Odocoileus* sp., metatarsal	4.00	1	bench	bench surface
177	preform, indeterminate	*Odocoileus* sp., metatarsal	5.03	1	–	floor fill
196	awl, coarse point	large mammal long bone	–	1	–	floor
Pit Structure 2 (n = 6)						
201	waste, multiple cuts/grooves	*Odocoileus* sp., metacarpal	1.00	–	–	fill above roof
202	tool, indeterminate fragment	*Lepus californicus* , tibia	2.00	–	–	fill above roof
202	waste, multiple striations	*Odocoileus* sp., metacarpal	2.00	–	–	fill above roof
207	tool, indeterminate fragment	large mammal long bone	3.00	–	–	floor fill
207	awl fragment, indeterminate point	large mammal long bone	3.00	–	–	floor fill
207	waste, polished, multiple striations	large mammal long bone	3.00	–	–	floor fill
Pit Structure 4 (n = 4)						
411	waste, multiple striations	*Odocoileus* sp., ulna	1.02	–	–	fill above roof
411	waste, transverse	shell (nfs), mollusk	1.02	–	–	fill above roof
414	waste, polished, multiple striations	large mammal horn core	2.01	–	–	roofing material
415	awl, fine point	large mammal horn core	2.01	–	–	roofing material
Pit Structure 3 (n = 4)						
303	awl fragment, indeterminate point	large mammal long bone	–	–	–	general fill
303	awl fragment, indeterminate point	large mammal long bone	–	–	–	general fill
310	awl, fine point	large mammal long bone	1.00	–	–	general fill
310	tinkler	*Lepus californicus* , tibia	1.00	–	–	general fill

Totals: 12 awls, 1 tinkler, 3 other, 7 waste, 23 total
nfs = not further specified

perceived need to shore up the north side of the structure but not the other three walls. Although we did not examine this at the time of excavation, Figure 12.32 clearly shows fill behind the wall, indicating that Pit Structure 2 was placed inside an earlier feature, perhaps a cist or an earlier version of the mealing room.

There may have been a fill collapse after Pit Structure 4 had been dismantled and had partially filled naturally. Perhaps the abandonment took place because of signs of structural stress, since it seems possible that there was little time between dismantling and collapse. The remaining stratigraphy at the east side of Pit Structure 4 did not indicate such a collapse, since the fill up to the level of Floor 1 of Pit Structure 3 was flat-lying alluvial lamination. This stratigraphy supports the interpretation that Pit Structure 4 was already filling when the collapse took place. Pit Structure 3 was built and abandoned considerably earlier than Pit Structure 4 (at least 300 years— conservatively, AD 700 vs. AD 1050; Fig. 12.41), but Pueblo II sherds were recovered inside Pit Structure 3 well away from Pit Structure 4, with little vertical distance between the sherds and the floor of Pit Structure 3. There was little or no remnant of the Pit Structure 4 roof; clearly it had been completely removed (Figs. 12.41, 12.43). Possibly, a retaining structure was also removed at the time the roof was dismantled. A subsequent deterioration of the remaining east earthen wall of Pit

Table 12.44. LA 37595, Pit Structure 2, plant remains, flotation scan and full-sort results; taxon by feature and floor, frequency and abundance per liter.

Sample Type	Full-Sort		Scan		
Feature	**1**	**21**	**Floor**	**4**	**8**
Feature Type	**Mealing Bin 2**	**Mealing Bin 1**	**Contact**	**Possible Entry Step**	**Trash Pit**
FS	**212**	**211**	**208**	**213**	**217**
Cultural					
Annuals:					
Amaranthus	7.00	2.00	–	–	–
Cultivars:					
Zea mays	+ cupule	–	+ cupule	–	–
Grasses:					
Oryzopsis	–	–	–	–	+
Other:					
Unidentifiable	–	–	–	+	–
Perennials:					
Echinocereus	1.0	–	–	–	–
Juniperus	–	+ leaflet	–	–	+ leaflet
Possibly Cultural					
Annuals:					
Nicotiana attenuata	1.0	1.0	–	–	+
Noncultural					
Annuals:					
Amaranthus	3.0	7.0	+	+	+
Chenopodium	3.0	2.0	+	+	–
Descurainia	–	–	–	–	+
Euphorbia	1.0	1.0	+	–	+
Portulaca	–	3.0	–	–	+++
Other:					
Malvaceae	–	–	–	–	+
Mentzelia	1	1	–	–	+
Oenothera	–	–	+	–	+
Perennials:					
Echinocereus	–	–	–	–	+

All cultural plant remains are carbonized.
Plant remains are seeds unless indicated otherwise.
+ = 1–10/liter; +++ = 25–100/liter.

Structure 4, probably stimulated by water action, could account for the flat alluvial lenses and horizontal displacement of the Pueblo II pottery.

Stratigraphy and Fill Removal

Fill was removed from Pit Structure 4 in two layers from within the area of Pit Structure 3, beginning from the level somewhat above the floor of Pit Structure 3 (Table 12.46). A full profile from the NM 170 pavement to the Pit Structure 4 floor was recorded (Figs. 12.40a, 12.41), but the fill above the level of Pit Structure 3's floor fill was removed during pavement lifting and by backhoe. The profile shows that nearly all of this upper fill was naturally deposited. The pavement and underlying gravel were around 15 cm thick. They rested on about 80 cm of yellowish brown compact medium sand, within which we defined no soil structure. Below these units lay up to 90 cm of pale brown laminated sand separated by layers of silt and at least three long (up to 1.25 m) lenses of ashy silt. In the center of the profile was an oddly shaped deposit of dark

Table 12.45. LA 37595, Pit Structures 2, 3, and 4, wood charcoal flotation results by time period and feature; counts and weights (g).

Time Period	Basketmaker III	Middle Pueblo II		Total	
Structure	Pit Structure 3	Pit Structure 2	Pit Structure 4	Weight (g)	Col. %
Feature	1	1	1		
Feature Type	Hearth	Mealing Bin 2	Fire Pit		
FS	316, Layer 2	212	419		
Cultural					
Conifers:					
Juniperus	12/.14	17/.59	13/.57	**1.3**	**73%**
Nonconifers:					
Artemisia	4/.05	3/.07	–	**0.12**	**7%**
Salicaceae (*Populus/Salix*)	1/.01	–	3/.15	**0.16**	**9%**
Undetermined	3/.03	–	4/.17	**0.2**	**11%**
Total	**20/.23**	**20/.66**	**20/.89**	**1.78**	**100%**

gray and grayish brown compact clay. This unit represents either a major (up to 1.75 m across and 1.00 m thick) intrusion or variability in the fill that was misinterpreted as a single unit. Its location in the center of the structure, where silt and clay sediments would have been most likely to collect, and its improbable shape make it likely that it resulted from rapid alluvial filling of a steep-sided depression. Since it is clear that human activity was taking place at this location as the structure's depression filled, there may have been some excavation in the fill to create this steep-sided void, which then filled with a combination of silty alluvium and collapsed sediments from its sides.

Another, perhaps more important unit in the profile was also ambiguous in the profile. This unit rested on a small remnant of Pit Structure 3's floor and extended into Pit Structure 4 fill, helping define the collapse and fill sequence of both pit structures. It was described as pale brown medium sand with charcoal flecks, and is shown as resting on the presumed Pit Structure 3 floor, but also as extending into the fill of Pit Structure 4. The profiler drew a dotted line extending from the end of the earlier pit structure floor to the top of the fill unit but did not provide elucidation of the line. Unless this unit was one that collapsed into the structure, this single unit should perhaps be defined as two. Beneath this unit were two adjacent layers of clean sand against the north wall of Pit Structure 4; these layers rested on a coarse sand layer with clay laminae and charcoal. This layer rested on roof material (see Layer 2, below) and is present only in the north half of the structure. These coarse laminae were the first sediments deposited after removal of the Pit Structure 4 roof.

Layer 1. This unit was the lower portion of the eolian and alluvial fill. It was removed by hand and by backhoe. Laminae are apparent throughout the layer, and clay-silt lenses were more numerous near the center of the structure. Rock was more abundant in this natural fill than in the similar fill of Pit Structure 1, and the quantities of rock and charcoal increased toward the bottom of the deposit. Some of the charcoal was quite large, up to 4 cm in diameter. Charcoal of this size would not occur naturally with the local vegetation, indicating that more cultural material was on the surrounding surface early in the filling of the depression. Some of the rock was fire spalled. Within this layer there were at least two ash lenses, including one designated as Feature 1, in the fill of Pit Structure 3, just above the edge of the Pit Structure 4 wall. These ash occurrences show that the depression was used after the abandonment and initial filling of Pit Structure 4. The fire pit above the edge of Pit Structure 4 also indicates that the depression extended well past the hole left by the more recent structure. This depression shape supports the idea that the fill of Pit Structure 3 collapsed sometime around the end of Pit Structure 4's use. This pit reached a point only 6 cm above the Pit Structure 3 floor, indicating how deeply the fill had collapsed.

Layer 2. This layer represents roof material and

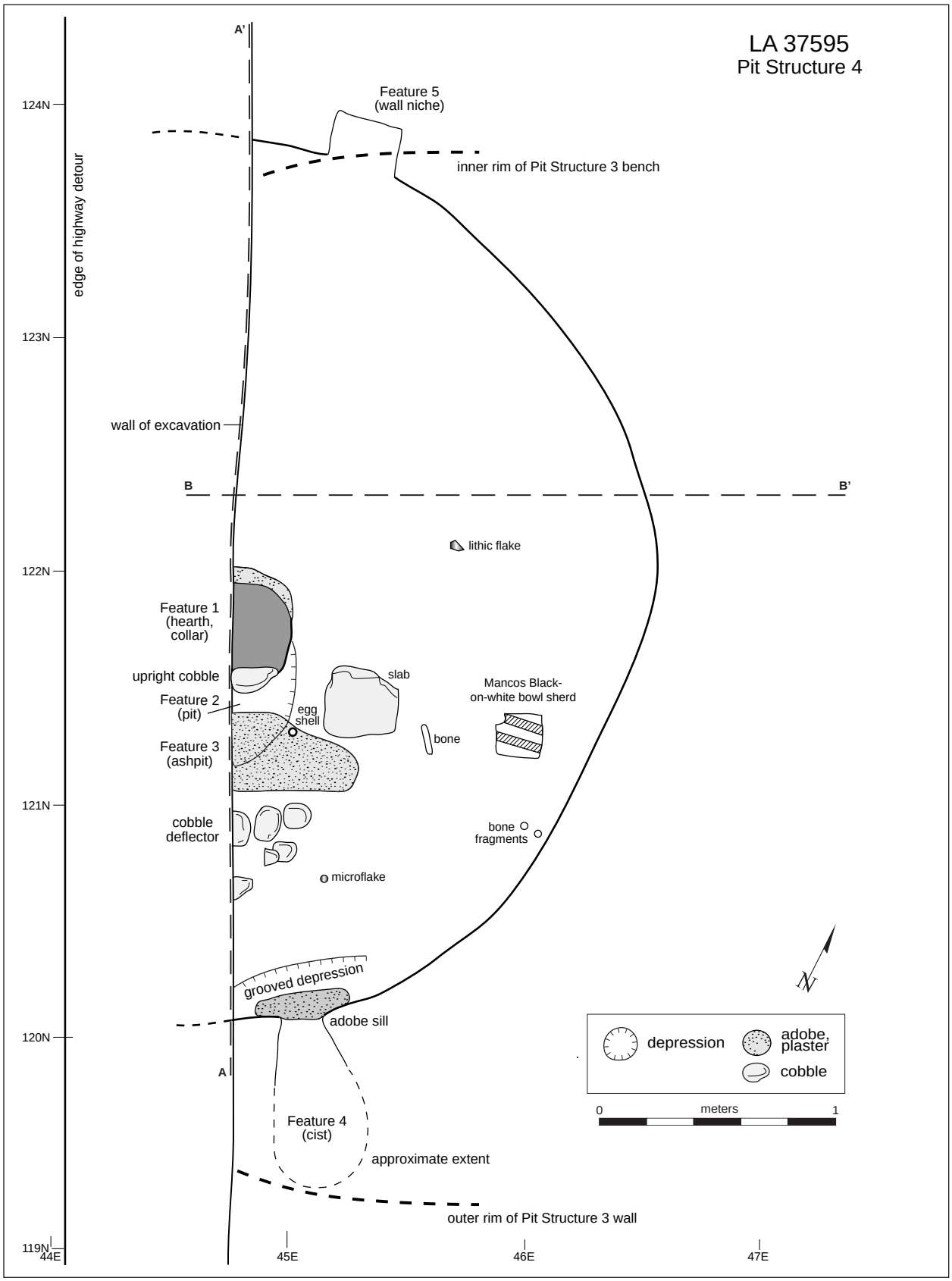


Figure 12.40a. LA 37595, Pit Structure 4, Floor 1, plan.

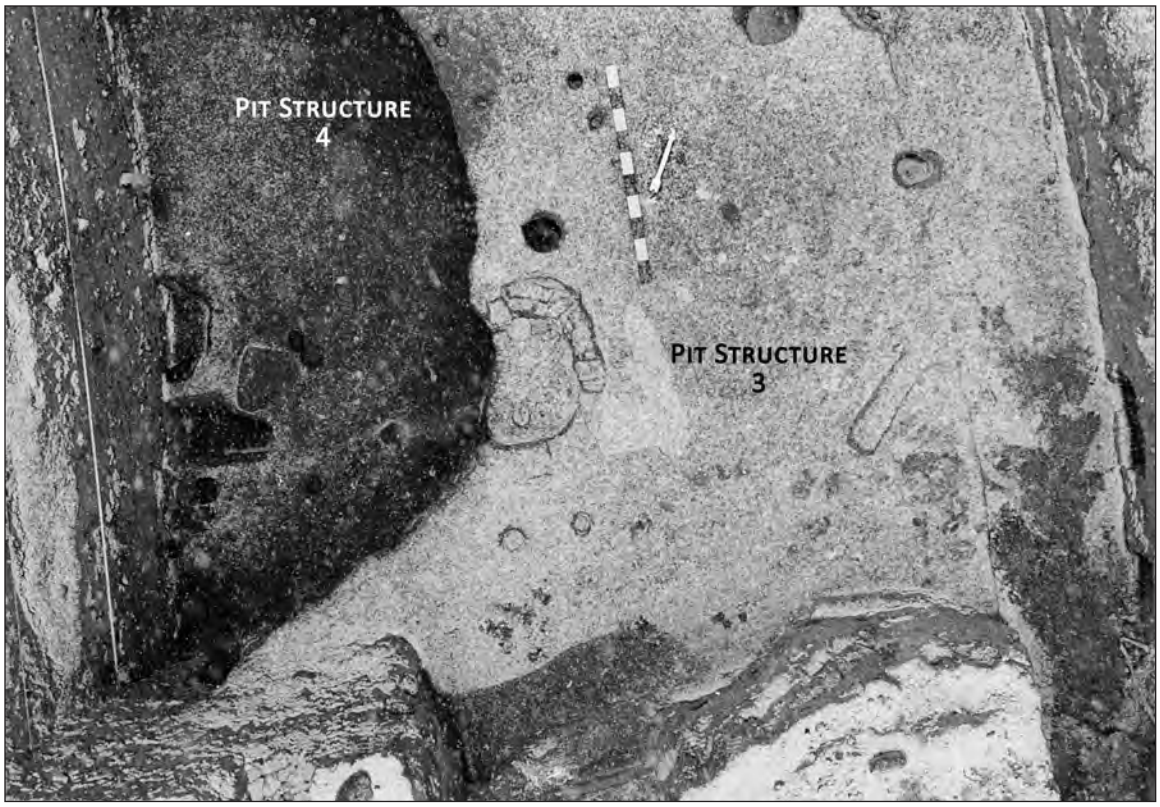


Figure 12.40b. LA 37595, Pit Structures 3 (right) and 4 (left); bipod shot, view northwest.

Figure 12.40c. LA 37595, Pit Structure 3, Floor 1, Feature 1 (hearth), view northwest; fill above the Pit Structure 4 floor is seen at the top of this photo.

some wall fall. It was primarily homogeneous sandy fill with lumps of adobe and charcoal flecks and relatively few artifacts. The top of the layer was formed by a thin layer of burned material, presumably part of the organic portion of the roof. The layer was irregularly distributed: it was piled up around the south and southeast sides of the structure. The layer was more or less coextensive with intact wall, indicating that it was rapidly deposited. Like the roof materials in the other Pueblo II pit structures (1 and 2) at this site, Layer 2 had squash seeds in it (Pit Structure 3, Basketmaker III, does not). This layer was mostly roof dirt, but soft reddish fill that contained chunks of material with sooted surfaces around the base of the walls shows that wall material was contained within it. Since the roofing material rested directly on the structure's floor, the lower 10 cm of this layer was divided into Level 2, floor fill.

Floor 1

Floor 1 in Pit Structure 4 was somewhat less than half exposed due to the location of the highway

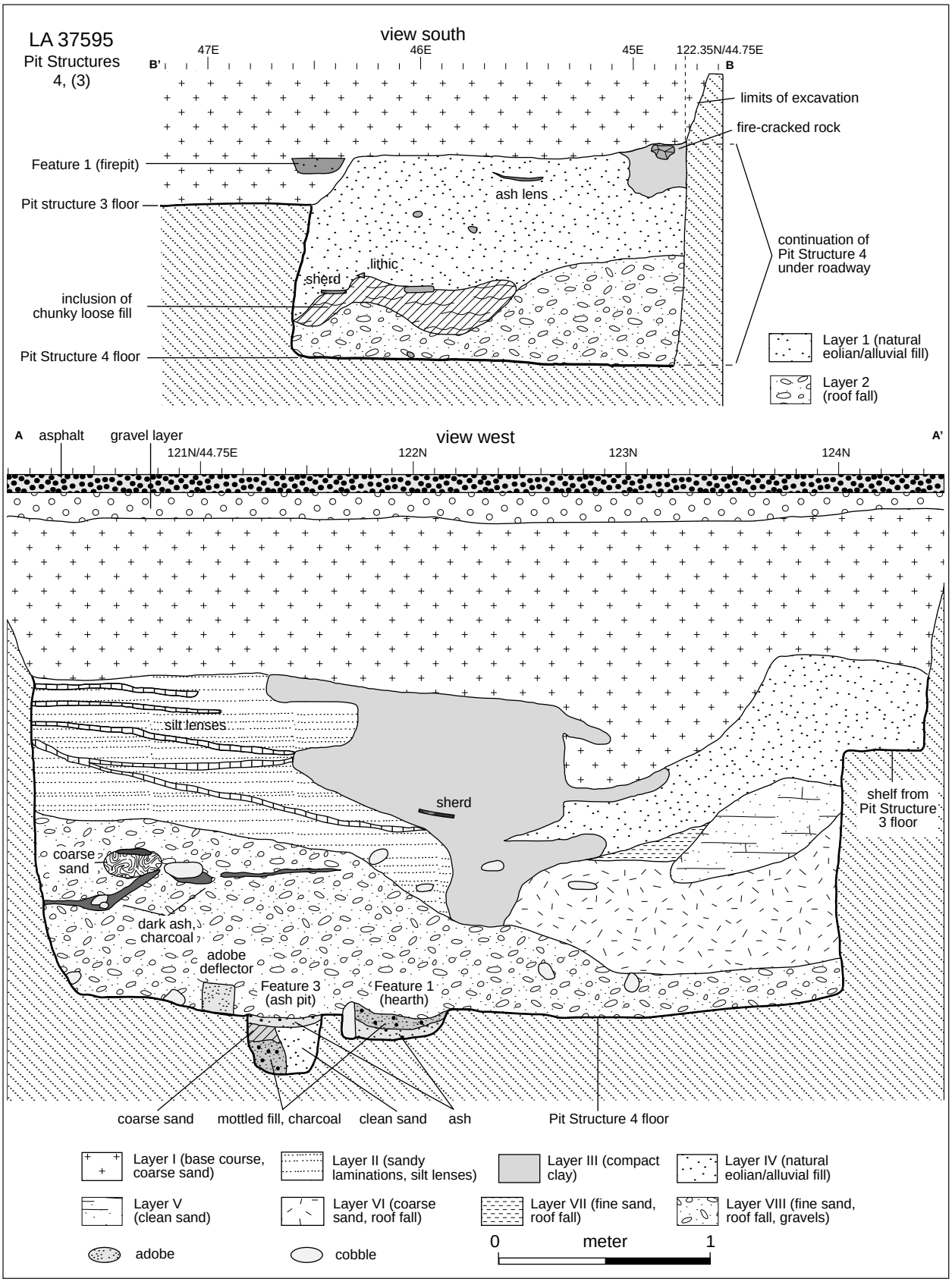


Figure 12.41. LA 37595, Pit Structure 4 in relation to Pit Structure 3 floor, profiles: E–W (top), N–S (bottom).

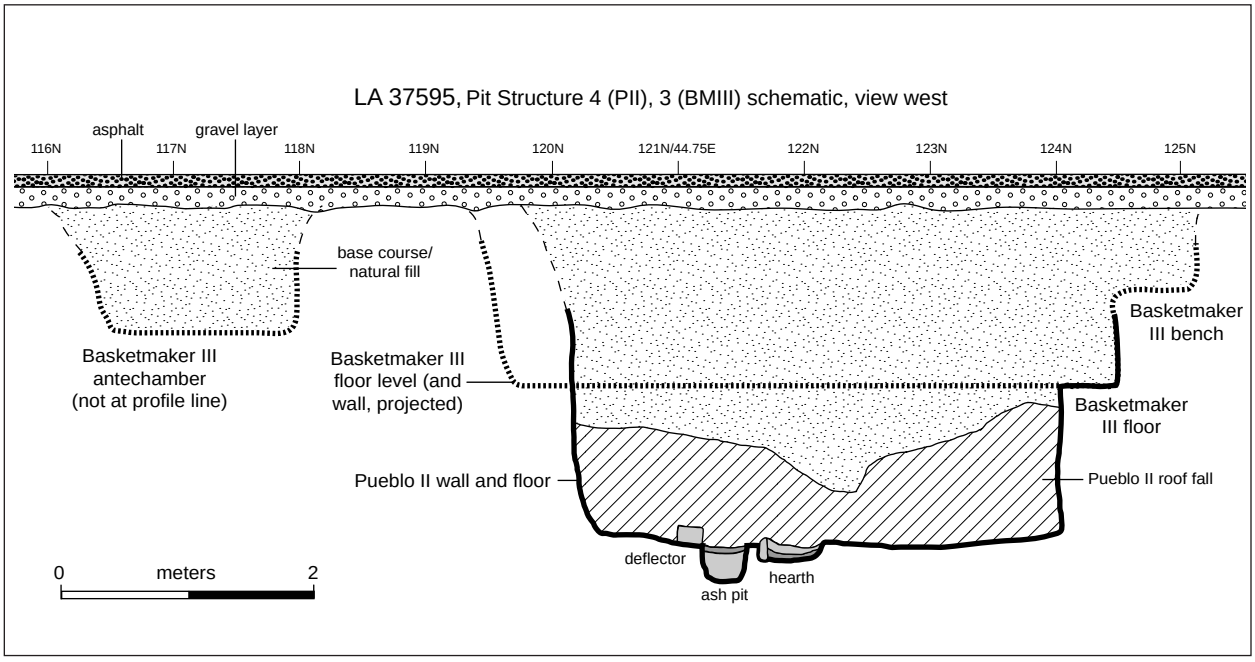


Figure 12.42. LA 37595, Pit Structure 4 (Pueblo II) and Pit Structure 3 (Basketmaker III), schematic profile showing key features and overlaying floors and roof fall; view west.

Figure 12.43. LA 37595, Pit Structure 4, fill profile, from pavement surface to Floor 1.

Table 12.46. LA 37595, Pit Structure 4, stratigraphy; summary table.

Layer	Type of Deposit	Description	* North–South (A–A') Profile Correspondence
–	natural and road fill	95 cm of medium and coarse sands underlying highway pavement.	Layer I: base course gravels and coarse sand
–	natural alluvial	Pale brown sandy laminae with silt lenses.	Layer II: pale brown sandy alluvial
–	intrusive, cultural?	Dark gray to grayish brown compact clay, discrete.	Layer III: dark gray compact clay to grayish brown (10YR 4/1–5/2)
1	natural: eolian and alluvial	From 20 to 28 cm above the level of Pit Structure 3 floor. Laminated sand and silt, but contains ash lens and a fire pit. Though natural, contains charcoal, artifacts, and small rocks including fire-cracked rock.	Layer IV: coarse sand with charcoal flecks
2	roof fall, roof dirt	Primarily homogeneous sandy material containing some lumps of adobe and some sloughed wall plaster. Irregular thickness, thicker to the west. Contains relatively abundant bone.	Layers V, VI, VII, VII: fine to coarse sand with charcoal and small gravels
2 (Level 2)	roof dirt	Floor 1 fill and contact.	lower Layer VIII
Floor 1	constructed	Mud plaster.	–

**** see Figure 12.41, A–A' profile***

Figure 12.46. LA 37595, Pit Structure 4, Floor 1, view southeast; note Feature 4 (large off-chamber cist) opening in wall.

pavement (Figs. 12.40b, 12.46). In the southeast floor quad there was a large portion of a hatchured Mancos Black-on-white bowl. Other materials in contact with the floor included a couple of small flakes and four faunal specimens, including a cottontail femur, a large-mammal long-bone fragment, a flat bone fragment, and eggshell fragments. Several rotted sticks 3 cm or less in diameter were also on and near the floor. The hearth is quite likely to have been remodeled. It appeared that two features were present, forming a rather large pit; this in turn probably went under the deflector, which was only suggested by rock and a bit of wall. The upper fill of the intersecting pits south of the hearth as it existed at abandonment was very ashy, and at least the upper part of the depression formed by the pits probably served as an ash pit. Eggshell was present near the hearth and in the fill of the ash pit (Feature 3), like the floor in Pit Structure 1 (Table 12.15). Rock on the floor, especially to the south, was probably the remains of a collapsed masonry deflector.

Point-provenienced Floor 1 artifacts (FS 418; Fig. 12.40a) include two silicified wood flakes (1 g each), cottontail and large-mammal bone, eggshell (fill of Feature 3), a large Mancos Black-on-white bowl sherd (264 g), two bone fragments, and a chert flake (1 g).

Features (Floor 1)

The half floor exposed during Pit Structure 4 excavation contained only five features (Table 12.47; Figs. 12.40a, 12.46). Some of the features that are seem to missing such as a bench and deflector were probably absent because of wall collapse. Others, such vent tunnel and sipapu, were probably present, but could not be examined because of the highway location.

Hearth (Features 1, 2, 3). The hearth last in use in this structure appears to have been within two successively larger, earlier pits. Below the roof fall, the fill of Feature 1 was white ash with lumps of charcoal. The north edge of the feature was a clay collar that rested on more ash, clearly a remodel, and a cobble also was apparently added to the pit lining at the southeast corner of the pit. Much of the feature looked little burned, though a burn did extend from the north edge around to the cobble on the southeast. The one-third to one-half of the hearth excavated contained only a few small mammal bones and a flake (Table 12.17).

Ventilation system. None of the ventilation system was exposed, unless Feature 4 (see below) was a vent opening rather than a cist. No intact deflector was observed, but fallen rock on the floor in the south part of the structure was probably from a masonry deflector.

Large off-chamber cist (Feature 4). The opening at the in the southeast wall of the chamber, Feature 4, extends back from the chamber nearly 1 m, but time did not allow full definition. The opening is horseshoe-shaped, narrower at the floor, and wider and curved at the top. A small stick lintel survived above the opening. The sides of the feature were plastered,

Table 12.47. LA 37595, Pit Structure 4, features; summary table.

Feature	Shape	Construction Details	Use Details	Fill	Assigned Function	Volume (l)	Length/Width/ Depth (cm)
1, Floor 1	pit, oval	cobble and adobe lined, remodeled	burned	roof fall resting on ash and charcoal	hearth	66.1	90/55/16
2	pit, hemisphere	unlined	unburned	clean, homogeneous sandy fill	construction	?	76/?/27
3	pit, oblong, irregular	–	unburned	coarse, ashy fill	ash pit?	?	17+/26+/13
4	cist	unburned	unburned	incompletely excavated; roof fall from structure or feature; 1041 R dendro	large off-chamber cist	–	26 wide x 32 high opening 48 wide x 74+ high interior
5	rectangular	unburned	unburned	alluvial resting on roof fall	wall niche	10.4	22/25/19

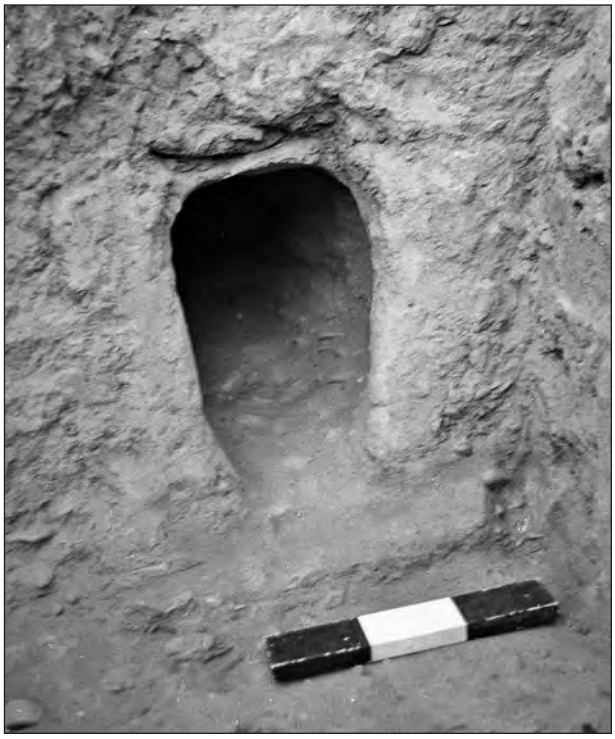


Figure 12.47. LA 37595, Pit Structure 4, Floor 1, Feature 4 (large off-chamber cist) opening, detail.

and an adobe sill and groove on the floor in front of the opening were present (Fig. 12.46, 12.47). The fill of the cist was similar to the roof fall, containing charcoal and abundant adobe. This fill is similar to structure roof fall but could also be feature roof. The largest dendrochronological specimen from the site was found 40 cm inside the feature. This specimen is piñon and has a cutting date of AD 1041.

Feature 4 was so far off the structure midline that it is unlikely to have been a vent, though its placement and morphology do not rule out its having been the vent opening. Its location in the southeast is similar to that of features in Pit Structure 1 at LA 37592 and Pit Structure 1 at this site. It was most likely another large storage cist rather than part of the vent system.

Niche (Feature 5). This niche opened at floor level from the northeast quadrant of the structure floor. The sides were well defined, though the right side was evident for 8 cm more than the left, making the top more difficult to define; the maximum height of the opening was 25 cm. The upper portion of this feature was filled with alluvial laminae (structure Layer 1), while the lower portion was filled with structural debris (structure Layer 2), indicating that the upper portion of the feature was likely to have been eroded during natural filling. No artifacts were present in the feature.

Cultural Material

With the exception of faunal material, the material assemblages from Pit Structure 4 are relatively small—only 170 sherds, 125 pieces of chipped stone, and 6 pieces of ground stone. The total faunal element count is 284, a substantial portion of which is a fragmented horn core (77 pieces).

Ceramics. The ceramic assemblage from Pit Structure 4 is distinctive for two main reasons: the percentage of white ware sherds is much higher than that of other major proveniences (Tables 12.25, 12.48), and the average sherd weight is also high relative to other provenience groups (Table 12.49). As indicated by the mean sherd size (as represented by weight), the deposits in this structure seem to have been less trampled and redeposited than elsewhere. The high sherd weights come primarily from Layer 1 and from Floor 1. The large floor sherd among the few other sherds gives a high mean weight for the floor, but removing the floor sherds still gives a high mean for the structure. The ware means for Layer 2, a trashier cultural deposit than Layer 1, are similar to the site mean, while Layer 1, a natural layer, has a much larger mean weight. Both gray and white wares are above the average for the site. This large sherd size in Layer 1 could mean that, while we did not encounter a midden in our sample, one may have been near Pit Structure 4, and may have eroded into it as it filled. With the exception of faunal material, Layer 1 accounts for the highest material counts from the structure. A quartz sand-tempered gray ware pipe and an open Mancos Black-on-white gourd-shaped dipper sherd, both unusual forms, were found in the structure, in Layers 1 and 2, respectively.

Chipped stone. The chipped stone assemblage conforms to the site profile except for an elevated percentage of hammerstones (8 percent; Table 12.50). There are not as many hammerstones as there were in Pit Structure 2 (14.5 percent), but the frequency for Layer 2 is similar to that in Layer 2 of Pit Structure 2. The proximity of the mealing room to Pit Structure

Table 12.48. LA 37595, Pit Structure 4, pottery type and vessel form by stratigraphic unit; counts and percents.

	Layer 1		Layer 2		Floor 1		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Pottery Type								
Pueblo II corrugated	3	2.5%	1	2.7%	–	–	**4**	**2.4%**
Pueblo II–III corrugated	1	0.8%	–	–	–	–	**1**	**0.6%**
Plain gray	10	8.2%	2	5.4%	–	–	**12**	**7.1%**
Corrugated gray	49	40.2%	11	29.7%	6	54.5%	**66**	**38.8%**
Red Mesa–style black-on-white	1	0.8%	–	–	–	–	**1**	**0.6%**
Pueblo II black-on-white	16	13.1%	5	13.5%	–	–	**21**	**12.4%**
Dogoszhi-style black-on-white	2	1.6%	7	18.9%	1	9.1%	**10**	**5.9%**
Pueblo II–III black-on-white	6	4.9%	3	8.1%	2	18.2%	**11**	**6.5%**
Polished white	28	23.0%	6	16.2%	2	18.2%	**36**	**21.2%**
Polished black-on-white	1	0.8%	1	2.7%	–	–	**2**	**1.2%**
Squiggle hachure black-on-white	3	2.5%	–	–	–	–	**3**	**1.8%**
Deadmans Black-on-red	1	0.8%	–	–	–	–	**1**	**0.6%**
Mesa Verde plain red	–	–	1	2.7%	–	–	**1**	**0.6%**
Tsegi Orange	1	0.8%	–	–	–	–	**1**	**0.6%**
Total	**122**	**100.0%**	**37**	**100.0%**	**11**	**100.0%**	**170**	**100.0%**
Vessel Form								
Indeterminate	2	1.6%	–	–	1	9.1%	**3**	**1.8%**
Bowl rim	5	4.1%	3	8.1%	1	9.1%	**9**	**5.3%**
Bowl body	5	4.1%	6	16.2%	–	–	**11**	**6.5%**
Seed jar rim	1	0.8%	–	–	–	–	**1**	**0.6%**
Cooking/storage rim	8	6.6%	1	2.7%	–	–	**9**	**5.3%**
Necked jar body	19	15.6%	2	5.4%	–	–	**21**	**12.4%**
Jar body	78	63.9%	22	59.5%	9	81.8%	**109**	**64.1%**
Ladle bowl	3	2.5%	1	2.7%	–	–	**4**	**2.4%**
Ladle handle	–	–	1	2.7%	–	–	**1**	**0.6%**
Open gourd dipper	–	–	1	2.7%	–	–	**1**	**0.6%**
Pipe	1	0.8%	–	–	–	–	**1**	**0.6%**
Total	**122**	**100.0%**	**37**	**100.0%**	**11**	**100.0%**	**170**	**100.0%**

Table 12.49. LA 37595, mean sherd weights (g) by Pit Structures 1–4 and extramural contexts.

	Pit Structure 1	Pit Structure 2	Pit Structure 4	Pit Structure 3	Extramural	All
Mean*	13.2	11.6	19.3	10.5	3.9	**11.2**
Standard Deviation	28.7	12.5	34.4	9.3	4.1	**23.9**
No. of lots	295	67	79	37	166	**644**

* Mean calculated as weight of a ceramic lot divided by the number of sherds.

4 in both time and space may help account for this, and the hammerstone occurrence may indicate a functional pairing of Pit Structures 2 and 4. Another possible relationship is indicated in the tool distributions. An exceptional number of notches were in the jacal area at the northeast of our excavation area; notches do not occur in other contexts, except for the fill of Pit Structure 4, although the notches in Pit Structure 4 are all in Layer 1, the upper fill. Since the fill above the roof fall is unlikely to relate to the structure's use, this co-occurrence may indicate use of the jacal area Pit Structure 4 began to fill. Alternatively, the use of notches may also have taken place on the surface next to Pit Structure 4.

Ground stone. An incomplete shale pendant

Table 12.50. LA 37595, Pit Structure 4, chipped stone material and tool type by stratigraphic unit; counts and percents.

	Layer 1		Layer 2		Floor Fill		Floor 1		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Material Type										
Chert	43	58.9%	13	41.9%	3	30.0%	6	54.5%	**65**	**52.0%**
Silicified wood	5	6.8%	3	9.7%	3	30.0%	2	18.2%	**13**	**10.4%**
Quartzite	3	4.1%	1	3.2%	1	10.0%	1	9.1%	**6**	**4.8%**
Quartzitic sandstone	1	1.4%	3	9.7%	1	10.0%	–	–	**5**	**4.0%**
Igneous	–	–	1	3.2%	–	–	–	–	**1**	**0.8%**
Siltstone	21	28.8%	10	32.3%	2	20.0%	2	18.2%	**35**	**28.0%**
Total	**73**	**100.0%**	**31**	**100.0%**	**10**	**100.0%**	**11**	**100.0%**	**125**	**100.0%**
Artifact Type										
Debitage	62	84.9%	21	67.7%	8	80.0%	11	100.0%	**102**	**81.6%**
Core	3	4.1%	3	9.7%	–	–	–	–	**6**	**4.8%**
Retouched/utilized debitage	1	1.4%	1	3.2%	1	10.0%	–	–	**3**	**2.4%**
Graver	–	–	1	3.2%	–	–	–	–	**1**	**0.8%**
Notch	3	4.1%	–	–	–	–	–	–	**3**	**2.4%**
Hammerstone	4	5.5%	5	16.1%	1	10.0%	–	–	**10**	**8.0%**
Total	**73**	**100.0%**	**31**	**100.0%**	**10**	**100.0%**	**11**	**100.0%**	**125**	**100.0%**

Table 12.51. LA 37595, Pit Structure 4, ground stone tool types, counts by stratigraphic unit.

	Layer 1	Layer 2 Level 1	Layer 2 Floor Fill	Total
Lapidary stone	1	–	–	**1**
Mano	–	1	–	**1**
One-hand mano	–	1	–	**1**
Two-hand slab mano	1	–	–	**1**
Trough metate	–	1	–	**1**
Two-notch axe	–	1	–	**1**
Pendant	–	–	1	**1**
Total	**2**	**4**	**1**	**7**

was in the floor fill of the southeast floor quad. Most of the ground stone from the structure was from Layer 2, and only the pendant and a one hand mano were complete. Single fragments of each of several other ground stone tool types were also present (Table 12.51), including a substantial portion of a two-notch axe.

Faunal remains. The overall counts show that Pit Structure 4 contains a relatively large quantity of large-mammal bone (Tables 12.41, 12.52). The majority of this material is from the floor fill, lower Layer 2, and most of it consists of 77 horn-core fragments, probably representing a single bighorn sheep or antelope. Both of these species are very rare in project collections, although an exterior cist at LA 37592, also Pueblo II in age, contained bighorn sheep horn cores.

Removing this high count results in another mostly unremarkable fauna count—all the major economic taxa are present, but all in small quantities. The assemblage does include a number of unusual items. Four wolf teeth including a very large canine tooth are reported in Layer 1, and there were a number of canid tooth fragments in the same provenience, suggesting that portions of at least one wolf jaw were present, or perhaps even a wolf-tooth ornament. These are the only wolf elements at the site; indeed, the only other wolf element from the project is a bone tool from LA 37592. The absence of other wolf elements suggests that the teeth had been collected elsewhere.

Three parts of a single piece of shell were also recovered from upper Layer 1. Aquatic shell is extremely rare in the La Plata Highway assemblage.

The majority of the cottontail elements are cranial, while the jackrabbit is leg and foot; notably, other than some deer foreleg elements, most of the bone is not suggestive of much nutritive value. While most of the material is above the floor, each major group is represented on the structure floor.

Table 12.52. LA 37595, Pit Structure 4, faunal taxa by stratigraphic unit; counts and percents.

	Layer 1 - Upper		Layer 2 - Roofing		Floor Fill		Floor 1		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Pocket gopher	1	1.0%	1	1.6%	1	1.0%	–	–	**3**	**1.1%**
Mouse	20	19.0%	11	17.2%	4	4.2%	–	–	**35**	**12.3%**
Cottontail	7	6.7%	5	7.8%	–	–	2	10.5%	**14**	**4.9%**
Jackrabbit	11	10.5%	12	18.8%	–	–	1	5.3%	**24**	**8.5%**
Gray wolf	4	3.8%	–	–	–	–	–	–	**4**	**1.4%**
Dog, coyote, wolf	10	9.5%	–	–	–	–	–	–	**10**	**3.5%**
Deer	6	5.7%	6	9.4%	1	1.0%	1	5.3%	**14**	**4.9%**
Artiodactyl	1	1.0%	–	–	77	80.2%	–	–	**78**	**27.5%**
Small mammal	7	6.7%	20	31.3%	3	3.1%	10	52.6%	**40**	**14.1%**
Medium–large mammal	20	19.0%	4	6.3%	2	2.1%	1	5.3%	**27**	**9.5%**
Large mammal	9	8.6%	3	4.7%	7	7.3%	3	15.8%	**22**	**7.7%**
Turkey	6	5.7%	1	1.6%	1	1.0%	–	–	**8**	**2.8%**
Bird	–	–	1	1.6%	–	–	1	5.3%	**2**	**0.7%**
Aquatic shell	3	2.9%	–	–	–	–	–	–	**3**	**1.1%**
Total	**105**	**100.0%**	**64**	**100.0%**	**96**	**100.0%**	**19**	**100.0%**	**284**	**100.0%**
Eggshell										
Turkey	–	–	–	–	–	–	9	100.0%	**9**	**69.2%**
Bird	–	–	–	–	4	100.0%	–	–	**4**	**30.8%**
Total	**–**	**–**	**–**	**–**	**4**	**100.0%**	**9**	**100.0%**	**13**	**100.0%**

Table 12.54. LA 37595, Pit Structure 4, plant remains, flotation full-sort (Feature 1 [hearth]) and scan (Floor 1) results by taxon; frequency and abundance per liter.

Sample Type	Full Sort	Scan	
Feature	**1 - Hearth**	**Floor**	
FS	**419**	**416 NE 1/4**	**417 SE 1/4**
Cultural			
Cultivars:			
Zea mays	++++	–	–
Perennials:			
Juniperus	+ leaflet	–	–
Possibly Cultural			
Annuals:			
Nicotiana attenuata	–	+	–
Noncultural			
Annuals:			
Amaranthus	1.0	+	–
Chenopodium	–	–	+++
Euphorbia	–	+	–
Monolepis	–	–	+
Portulaca	1.0	+	+
Other:			
Mentzelia	4.0	–	+
Polygonaceae	–	–	+

All cultural plant remains are carbonized.
Plant remains are seeds unless indicated otherwise.
+ = 1–10/liter; +++ = 25–100/liter; ++++ = >100/liter

A single awl was found in the roof layer, along with two pieces of bone tool manufacturing debris (Table 12.43).

Botanical remains. The fire pit produced charred corn cupules and juniper leaflets, both probable remnants of fuel use (Tables 12.53, 12.54). Flotation and macrobotanical wood from the fire pit were primarily juniper, with smaller quantities of sagebrush, cottonwood/willow, and unknown nonconifer (Table 12.55). The only possible cultural plant remains from the floor were unburned tobacco seeds. A squash seed fragment was recovered from Feature 3, a pit with coarse, ashy fill. The unburned squash seed clearly is not part of materials burned in a fire pit; it was probably swept from the floor directly into the ash pit.

PIT STRUCTURE 3 (BASKETMAKER III): THE CUT HOUSE

The floor dimensions (only) of Pit Structure 3 at LA 37595 are 4.12 m north–south and 4.04 m east–west (based on east half). The bench is 0.70 m high and 0.65–1.00 m wide. The floor area is 16.64 sq m (based on east half). The maximum surviving height

Table 12.55. LA 37595, Pit Structures 2, 3, and 4, macrobotanical sample taxa by time period and feature; wood by weight (g), other plant parts by count and weight (g).

Time Period	**Basketmaker III**	**Pueblo II**						**Total**	
Structure	**Pit Structure 3**	**Pit Structure 2**				**Pit Structure 4**		**Weight (g)**	**Col. %**
Feature	**4**	**4**	**7**	**9**	**11**	**1**	**3**		
Feature Type	**Posthole**	**Possible Entry Step**	**Pit**	**Posthole**	**Pit**	**Hearth**	**Pit**		
FS	**322**	**213**	**218**	**219 Floor 1 W 1/2**	**221**	**419**	**420**		
Cultural									
Conifers:									
Juniperus	1.34	0.71	1.16	–	0.83	1.22	–	**5.26**	**59%**
Pinus edulis	0.31	0.44	–	–	–	–	–	**0.75**	**8%**
Nonconifers:									
Artemisia	0.03	–	–	–	–	0.69	–	**0.72**	**8%**
Atriplex	–	0.01	0.4	–	–	–	–	**0.41**	**5%**
Quercus	–	–	0.13	–	–	–	–	**0.13**	**1%**
Salicaceae *(Populous/Salix)*	–	–	0.07	–	–	0.91	–	**0.98**	**11%**
Unknown nonconifer	0.04	0.01	0.25	–	–	0.37	–	0.67	8%
Other Cultural									
Cultivars:									
Cucurbita seed	–	–	–	1/.01	–	–	1/.01 u	–	–
Total	**1.72**	**1.17**	**2.01**	**–**	**0.83**	**3.19**	**–**	**8.92**	**100%**

u = uncharred

Figure 12.48. LA 37595, overview, Backhoe Trench 3 through Pit Structures 2 and 3, just east of northbound NM 170.

of the structure is 1.0 m, and its axis is oriented 338 degrees (true north).

Pit Structure 3 was discovered by means of Backhoe Trench 3, which was placed just east of the existing highway pavement (Figs. 12.6, 12.48). This trench barely cut the east edge of the structure. We painted our estimate of where the structure lay on the pavement for the project engineer. He rerouted the northbound lane of the La Plata Highway, and we removed the pavement (Fig. 12.49). During initial excavation of the structure, pottery in the fill seemed to match that of the Pueblo II architecture of Pit Structures 1 and 2, but the rectangular shape and relatively shallow depth of Pit Structure 3 seemed unusual for a Pueblo II structure. The resolution to this dilemma was that Pueblo II pottery had been introduced quite deeply into the fill of Pit Structure 3—a subrectangular Basketmaker III structure—by the construction and eventual collapse of Pit Structure 4, a round Pueblo II structure (Fig. 12.50).

As evident in the overall ceramic counts for the site (Table 12.25), no pottery at the site is clearly Basketmaker III. Very little pottery was found in Pit Structure 3, and our excavations at the site obviously did not encompass the trash area for that occupation. There is a somewhat elevated plain gray pottery count in the upper fill of Pit Structure 2 and in the extramural areas. This pottery may be in part related to the occupation of Pit Structure 3; if so, it was obviously many steps removed from its initial place of deposition.

What remained of Pit Structure 3 indicates a structure with a bench on the north, east, and presumably west sides (Fig. 12.52a). Wing walls extended from the bench, creating a separate space on the south side of the structure, where the entry passage came into the main structure. Judging from the dimension from the east wall to the center of the hearth, the east–west dimension of the main chamber would have been about 5.4 m (including the bench). An oval antechamber 2.4 m wide was attached by a passage extended 2.5 to 3 m (including the entryway) further to the south (Fig. 12.41). Entry into the main chamber from the antechamber was through a narrow passage that opened onto a ramp down into the room (Feature 17). This structure was found very late in our excavation season, and we did not excavate the antechamber. The plan of the whole

Figure 12.49. LA 37595, overview, Pit Structures 2, 3, and 4; northbound NM 170 pavement removal in progress.

structure is very similar to that of Pit Structure 1 at LA 60751 and to Pithouse A in the Badger House Community (Hayes and Lancaster 1975:6).

Fill

The fill of Pit Structure 3 was difficult to understand and separate because of the intrusion and collapse of Pit Structure 4 and constraints on excavation due to the presence of the highway and its pavement. The fire pit overlying the cut made by Pit Structure 4 and only 6 cm above the floor of Pit Structure 3 shows that the surviving fill near the cut was very shallow. There were no indications of historic disturbance in the materials around this fire pit; it probably dates to Pueblo II.

The profile formed by Backhoe Trench 3, at the east edge of the structure, was less than ideal for interpreting the fill of the structure (Figs. 12.52a, 12.52b). It suggests that fill attributable to Pit Structure 3 (rather than to the disturbance caused by Pit Structure 4) was probably as deep as the top of the Pit Structure 3 bench, around 35 cm below the surface (the bench was about 70 cm high). As fill was removed as rapidly as possible, the units within the structure must have cut through deposits of quite different ages. The roof fall material on the

Figure 12.50. LA 37595, Pit Structures 3 and 4, view south.

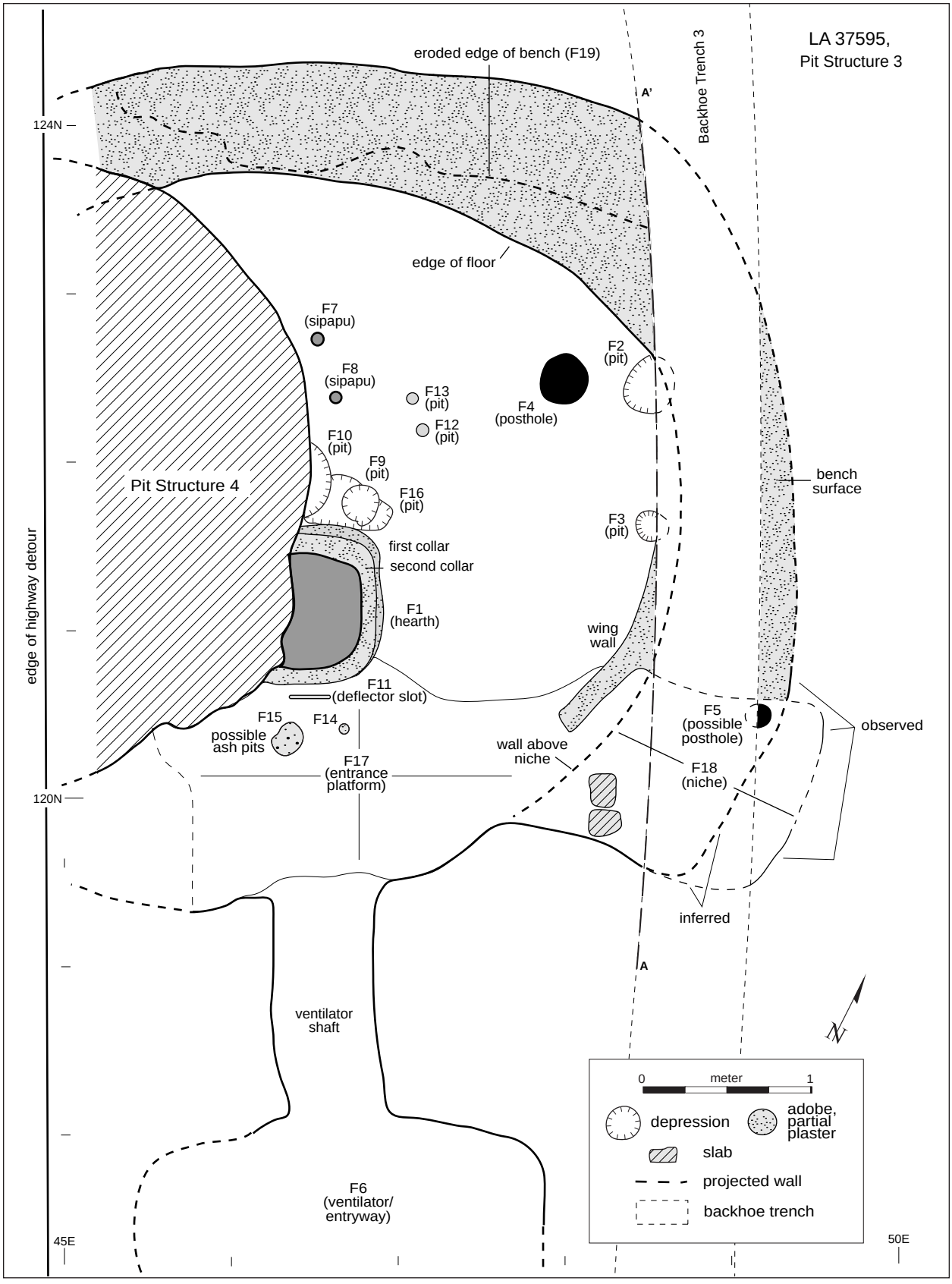


Figure 12.52a. LA 37595, Pit Structure 3, Floor 1, plan.

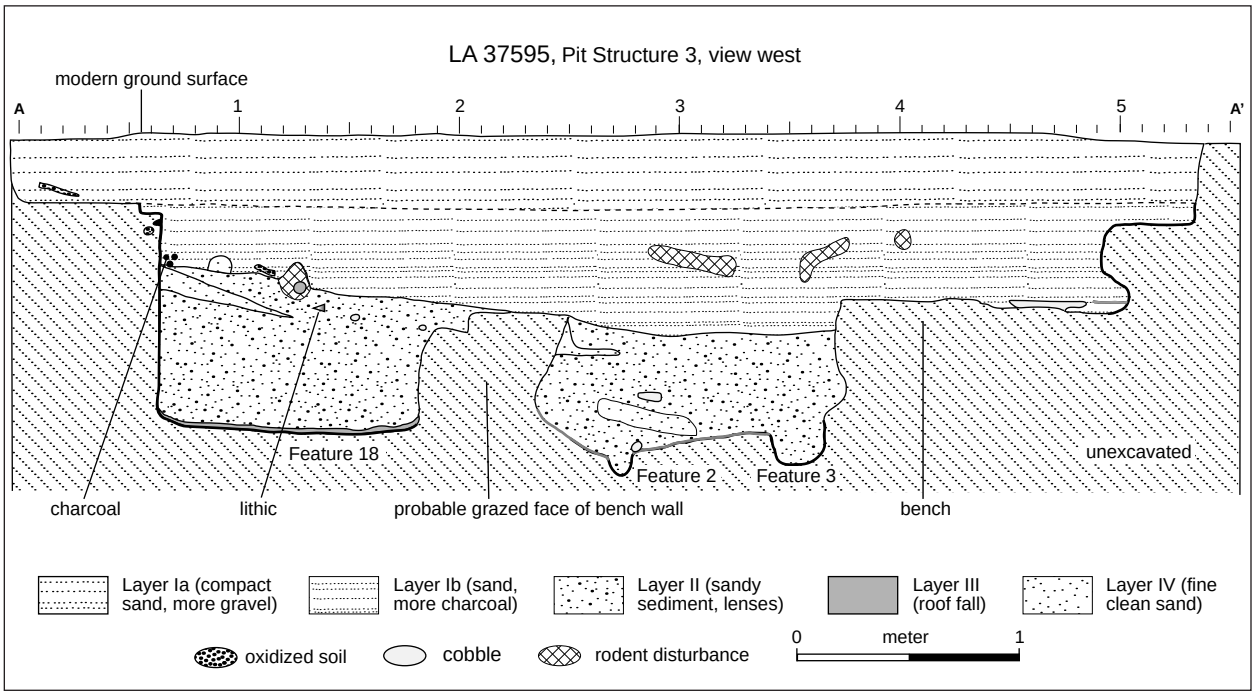


Figure 12.52b. LA 37595, Pit Structure 3, Backhoe Trench 3, profile, view west.

floor of Pit Structure 3, however, may reasonably be attributed to the dismantling of the structure's roof, and those associated artifact lots have been placed in the Basketmaker component. Pottery within this unit does, however, include Pueblo II types. At the same time, these deposits contained a high ratio of chipped stone to sherds, suggesting a Basketmaker contribution.

Four fill units were defined at the east edge of the structure (Fig. 12.52b). The upper layer was sandy and contained decreasing amounts of gravel and rock as it got deeper, as well as increasing frequencies of charcoal and small bits of oxidized soil. This layer was over 50 cm thick toward the middle of the structure's profile. Beneath this sandy unit was a layer of browner sandy sediment that filled most of the lower parts of the visible structure. Within it there were a couple of clean sandy wedges, suggesting that its accumulation probably took some time, allowing for varying wind and waterlain deposition. This layer also exceeded 50 cm in thickness, but, again, was being cut at the edge of the structure. Near the floor was a layer of fine, ashy and charcoal-bearing sand ranging from a film to a 2 cm thick layer resting on the floor.

Construction

The roof support for Pit Structure 3 is somewhat unclear. In the east half of the structure available to us, there normally would have been a posthole in the northeast quadrant of the floor and one in the "wing wall" (more of a bump in this structure) in the southeast (Table 12.56). The northeast posthole was present, but none was found in the southeast. A possible posthole at the level of the probable south end of the bench at the southeast corner was identified at the edge of the trench (Backhoe Trench 3) that originally alerted us to the presence of the structure. It was noted that the earth wall was undercut in this area. Evidence for a wing wall separating an area on the south edge of the main chamber consisted of a low adobe wall base, which terminated about 50 cm from the east wall. Presumably roofing elements rested on the ground outside the bench, but we recovered no direct evidence for these elements. Entry to the structure was through the antechamber on the south, which was connected to the main chamber by a 1.4 m long entry passage.

Floor 1

The single floor in Pit Structure 3 at LA 37595 ex-

Table 12.56. LA 37595, Pit Structure 3, features; summary table.

Feature	Location	Feature Type	Shape	% Complete	Construction Details	Use	Fill (L. = layer)	Assigned Function	Volume (l)	Length/Width/ Depth (cm)
1	PS 3–4 (fill)	pit	oval basin	100%	unlined	burned, slight oxidation	loose brown ash and sand	fire pit	49.8	70/60/15
1	Floor 1	pit	sub-rectangular	75%	adobe lined, open	burned	L.1: roof fall L.2: ash, slabs	hearth	69.7	66/66/16
2	Floor 1	pit	hemisphere	–	unlined, digging stick marks, open	unburned	L.1: roof fall L.2: clean sand	pit storage?	14.5	30/28/22
3	Floor 1	pit	oval/ cylindrical	–	unlined, digging stick marks, open	unburned	L.1: roof fall L.2: loose sand, some charcoal L.3 compact sand	pit	4.8	22/17/16
4	Floor 1	pit	truncated cone	–	unlined, open	unburned	L.1: upper roof fall L.2: roof fall below compact L.3: clean sand	posthole	50.8	34/34/56
5	Floor 1	pit	cylindrical	–	unlined, open	unburned	roof fall, no samples	posthole?	3.9	15/15/22
6	Floor 1 (vent, entry)	tunnel	rectilinear	–	floored, unknown roof, open	unburned	L.1: laminated, some jacal L.2: some jacal, sand matrix L.3: coarse jacal, sand matrix	vent/entry	630.0	~150/~60/ 70–75
7	Floor 1	pit	conical	–	unlined, stick marks, open	unburned	L.1: roof fall L.2: loose fine-to-medium sand	sipapu?; paho support?	0.3	7/7/8
8	Floor 1	pit	truncated cone	–	unlined, stick marks, open	unburned	loose clean sand	sipapu?; paho support?	0.3	6/6/~9
9	Floor 1	pit	cylindrical	–	unlined, intentionally filled	unburned	sand and charcoal	pit	6.3	20/20/22
10	Floor 1	pit	hemisphere	–	floor depression, open	unburned	roof all	pit, pot rest?	6.4	45/20/4
11	Floor 1	pit	irregular slot	–	slab filled (?), open	unburned	L.1: roof fall L.2: ash, sand, and charcoal; no specimens or samples	deflector support	–	20/7/4
12	Floor 1	pit	truncated cone	–	unlined, open	unburned	clean sand	pit	0.5	8/7/12
13	Floor 1	pit	cylindrical	–	unlined, filled	unburned	L.1: roof fall L.2: compact sand	pit	0.4	7/7/10

Table 12.56 (continued)

Feature	Location	Feature Type	Shape	% Complete	Construction Details	Use	Fill (L. = layer)	Assigned Function	Volume (l)	Length/Width/ Depth (cm)
14	Floor 1	pit	cylinder	–	unlined, open	unburned	L.1: ash, charcoal L.2: sand with ash and charcoal	ash pit?	0.5	10/10/6
15	Floor 1	pit	hemisphere	–	unlined, open	unburned	L.1: roof fall L.2: ash, abundant charcoal, sand	ash pit?	0.9	12/12/8
16	Floor 1	pit	irregular	–	? Intentional fill	unburned	sand, charcoal, ash, jacal; not excavated	pit	–	6/~30
17	Floor 1	–	raised, flat	–	adobe	unburned	roof fall	entry platform	–	~120/400
18	Floor 1 (east wall)	over-hang	irregular	–	excavated	unburned	not excavated	wall niche	–	115 wide/ 0–40 deep
19	Floor 1	bench	horseshoe	–	plastered surface	unburned	roof fall	bench	–	65–100 wide

hibited few in situ materials (Fig. 12.53). There were only three items on the bench and five small items along the southeast wall, south of whatever wing wall was present. These items include some possible potting clay and a grooved maul. Some shaped slabs were also present in the area south of the wing wall (Fig. 12.54). In addition to removing most artifacts, the last occupants of the structure probably also removed the roof timbers and supports. The only remodeling noted was of the hearth and in a complex of pits just north of it (Fig. 12.52a).

The following point-provenience artifacts were recorded from Pit Structure 3: from Floor 1 (FS 314), bones (one *Sylvilagus* tibia, one *Lepus* tibia; and small mammal), a silicified wood flake, shale (possible potting clay), a grooved granite maul (1,550 g), and a quartzite hammerstone (155 g); from the bench (FS 308), a complete sandstone mano (900 g), a silicified wood core, and an articulated deer tibia and carpal.

Features (Floor 1)

Nineteen features were recorded on the single floor of Pit Structure 3, including the bench and the entry platform, but not the vestige of the wing wall (Figs. 12.52a, 12.53, 12.54; Table 12.56).

Entryway/vent (Feature 6). Feature 6 consisted of a trench connecting the antechamber with the main chamber. Its floor was around 40 cm higher than the platform on the main floor. No features were observed in the adjacent surface, walls, or floor; any traces of roofing features had probably been removed by surface scraping. The walls of the trench were at least 70 cm high. The upper fill of the trench was eolian/alluvial laminated sand with some pieces of jacal. The lower fill was two units of sand and jacal. The unit at the base contained the largest pieces of jacal. This fill suggests dismantling, followed by disintegration of the structure and natural filling. The trench was somewhat wider at the floor than at the surface due to undercutting of the west wall.

Deflector (Feature 11). All that remained of the deflector was a slot, which could have supported a slab. Breakage around the edges of the slot implied that the slab was pushed over to the north. The slot was only 20 cm long, indicating a relatively small slab. Relatively little plaster to hold a slab remained, also indicating a small slab. A piece of a

Figure 12.53. LA 37595, Pit Structure 3, Floor 1, view southeast; shows Pit Structure 4 intrusion in the western portion of structure.

Figure 12.54. LA 37595, Pit Structure 3, Floor 1; view southwest to bisected Feature 1 (hearth) and Pit Structure 4.

slab was present at the base of the roof fall in the hearth, but the excavator thought it didn't fit the deflector slot.

Hearth (Feature 1). Feature 1 showed two burned areas, indicating that it had been remodeled. The earlier version of the feature was more nearly round, smaller than the later version, and had a lower coping. The later version had a smooth, rounded coping a full 10 cm higher on the north side than the earlier coping. At the south edge, the platform or entry ramp came up to the hearth, resulting in no above-floor coping, strongly suggesting that the entry platform was added at the time of hearth remodeling. Two layers of fill were present in the hearth. The top fill was material from roof dismantling. At the contact of the roofing and the hearth material layer, there was a complete two-hand mano similar in size to that found on the bench, as well as a flat-lying slab. The hearth contained a number of different types of wild plant seeds and four different types of fuelwood (Table 12.57).

Pits (Features 2, 3, 9, 10, 12, 13, 16). Seven of the floor features are in the generic category of "pit." These features ranged in volume from 0.4 to 14.5 liters, with a mean of 5.5 l (for six pits: no volume was calculated for features with inadequate measurements). The majority of pits were smaller than this mean.

The largest of these pits is Feature 2, which was at the edge of the main chamber floor near the northeast corner. It was hemispherical, and about a third of the feature undercut the east wall of the structure. The upper 10–14 cm of the pit was filled with roof fall, indicating it was open at roof dismantling. The basal fill unit of the pit was clean sand. Feature 3 also undercut the east wall but was much smaller than Feature 2. The upper fill was roof fall, underlain by sand with some charcoal in it, and then by clean compact sand at the base of the pit.

Features 9, 10, and 16 were all immediately north of the hearth. Features 9 and 10 were superimposed on Feature 16, and Feature 10 was partially removed by the construction of Pit Structure 4. Feature 10 was a shallow basin, Feature 9 a straight-sided cylindrical pit, and Feature 16 an irregular fill unit that was not completely excavated. Feature 16 had apparently been intentionally filled, and its fill was difficult to distinguish from that of Feature 9. Both of these features were probably filled at the time of abandonment. Feature 10, on the other hand, contained roof fall and was probably open at aban-

Table 12.57. LA 37595, Pit Structure 3, ceramics, chipped stone, and ground stone artifacts and faunal remains; type counts by feature.

Feature	Feature Type	Ceramics	Chipped Stone	Ground Stone (cm)	Fauna
1	hearth	–	–	complete two-hand mano (211 x 120 x 67)	1 small, 3 medium mammal
2	pit	–	–	–	1 small mammal
3	pit	–	–	–	1 bird
4	posthole	–	2 debitage	–	2 small mammal
6	vent/entry	–	1 debitage	–	1 small mammal
9	pit	1 white	1 debitage	–	1 small, 1 medium mammal
10	pit	–	2 debitage	–	–
12	pit	–	–	–	1 medium mammal
19	bench	2 gray, 1 white	4 debitage 2 retouched/ utilized	complete two-hand mano (210 x 102 x 29)	4 small, 3 medium, 9 large mammal

donment. In spite of their proximity to the hearth, none of these pits contain much charcoal or ash. Materials recovered from these pits were for the most part small bones and a few lithics.

Features 12 and 13 were tiny conical to cylindrical pits in the northeast quadrant of the floor, between the main support post and the sipapus. Both were filled primarily with clean sand, suggesting that they were filled prior to roof dismantling.

Possible sipapus (Features 7, 8). Both of these 6–7 cm diameter pits were conical and had digging-stick marks in the sides. Both were north of the hearth. Both had loose sand fill, which, as the excavator suggested, could have been used for paho supports. Feature 8 is right on the structure axis, while Feature 7 is slightly to the left of the axis. At 250 to 310 cc, these pits are smaller than most of the rest of the pits in this structure.

Postholes (Features 4, 5). Features 4 and 5 were quite different from each other. Feature 4 was in the northeast quadrant of the floor, where a support post would be expected in a four-post roof-support system; the posthole was of sufficient size to have held a major support post. This pit contained two units of roof fall. In the upper 25 cm the fill was looser, followed by a compact surface and another 25–28 cm of roof fall. There was a thin, patchy layer of clean sand at the base. At the level of the compact surface the hole constricted somewhat, from around 34 cm in diameter to around 24 cm. Roof fall in most of the pit indicates that the support post had been removed when use of the structure was discontinued. Feature 5 was in the southeast part of the structure behind the wing wall and adjacent to the bench. It was at the left edge of the large niche (Feature 18) and may have held a post related to the opening of the niche or supporting the wing wall. This feature also contained roof fall for its entire depth, indicating that the post (or other contents) was probably removed at the time of structure abandonment.

Ash pits (Features 14, 15). These two pits, south of the hearth, were designated ash pits on the basis of their fill, but they were both quite small. Their locations were also similar to those of later ash pits; neither was burned. Feature 14 contained two ashy layers, with the charcoal content decreasing toward the base of the pit. Feature 15 contained a thin layer of roof material on top of 11–15 cm of ash and charcoal. Because of the small size of these features, it is unclear how regularly they were used for ash, but the two fill units in Feature 14 and the roof fall in upper Feature 15 indicate repetitive and continuing use for this purpose. Corn cupules from Feature 14 were the only remains of domesticated plants in the structure.

Niche (Feature 18). This large feature was behind the wing wall at the east edge of the structure. This area was partially disturbed by the discovery trench, but it appeared that the feature spanned the width of the wing wall area. The niche was formed by undercutting the structure wall to a depth of about 40 cm at the floor level and tapering back to the top of the feature, forming a triangular cross section. A post may have formed the left side of the opening, perhaps in combination with the wing wall (see Feature 5).

Bench (Feature 19). Only a portion of the north bench was excavated. The east side was cut by the discovery trench, and the west side was cut by Pit Structure 4 and covered by the highway. A number of artifacts were associated with the bench (Table 12.57), but some of these may have been from the later fill, since the height of the bench meant it was near the Pueblo II surface. One of two silicified wood cores from the site was found on the bench, probably in situ, because of the higher frequency of silicified wood in this structure (Tables 12.27, 12.38).

Cultural Materials

Materials from the small amount of fill associated with Pit Structure 3 were scant. As shown by the sherds, the association of even this material with the occupation of the structure is tenuous. There are artifacts that show some Basketmaker materials remained within the structure, but there is little point to showing provenience breakdowns beyond association with the structure (Tables 12.22, 12.25, 12.27, 12.30, 12.58). Chipped stone, ground stone, and faunal materials all have some distinctive elements likely to have had a Basketmaker source.

Ceramics. As noted, Pueblo II ceramics were introduced close to the floor of this Basketmaker structure, and even the small number of proveniences attributed to this structure contain a pottery assemblage that looks essentially Pueblo II—even

Table 12.58. LA 37595, Pit Structures 1, 2, and 4, ornaments; summary table.

FS	Morphology	Material Type	Weight (g)	Length (mm)	Width (mm)	Thickness (mm)	Layer	Floor
Pit Structure 1								
106	pendant	red shale	1.0	16.0*	16.0	2.0	.02	–
158	disc bead	travertine	1.0	5.0	5.0	2.0	1.06	–
175	disc bead	travertine	1.0	4.0	4.0	2.0	1.00	dog burial (vent)
Pit Structure 2								
205	pendant blank	selenite	37.0	38.0	36.0	15.0	2.00	–
207	disc bead	travertine	1.0	6.0	6.0	2.0	3.00	–
Pit Structure 4								
411	other object	shell, nfs	2.0	16.0*	15.0*	1.0	1.02	–
417	pendant	red shale	5.0	35.0	25.0*	5.0	2.02	Floor 1 fill
310	tinkler	*Lepus californicus*	8.0	134.0	19.0	18.0	1.00	–

* incomplete dimensions; nfs = not further specified

the plain gray and corrugated sherd occurrence is in line with other proveniences at the site. Using ceramics as a proxy for other materials that actually date to the occupation of Pit Structure 3, there are very few materials from that period. The materials in the proveniences attributed to Pit Structure 3 are more likely to be related to Pit Structure 4.

Chipped stone. Although the samples are small, the ratio of chipped stone items to sherds (1.11) is higher for the Pit Structure 3 proveniences than for any other at the site, including the mealing room and the extramural area, with its very high lithic count. This hints that some of the material here may be from the early occupation, since ceramics are generally less abundant in Basketmaker contexts, increasing lithics to ceramics ratios, but that cannot be verified. Perhaps significantly, silicified wood is a much higher percent and chert a lower percent in Pit Structure 3 than in the other proveniences, suggesting a preference for that raw material in this earlier occupation. Most of the silicified wood is in the form of debitage (plus one core and one retouched piece), while the chert is in the form of every tool type found in the structure. One of the two projectile points from the site and the only whole specimen was recovered from the fill. It is an exquisitely made, very delicate corner-notched brown chert point weighing 0.44 g. Stylistically this point is Early Pueblo II rather than Basketmaker III (Fig. 12.30 [a]).

Ground stone. Ceramic complement notwithstanding, a classic Basketmaker grooved, rounded maul weighing 1.5 kg was recovered from the floor. This is the only grooved maul recovered at this site (Tables 12.30, 12.59). Its context, on the floor close to the south wall, is a secure one, and it is unlikely to have been introduced from the collapse of Pit Structure 4. Nine manos, three of which are complete, were attributed to Pit Structure 3. The complete specimens are all two-hand manos; one came from the hearth fill, resting immediately on the hearth contents (rather than the roof fall fill), and another from the bench surface. These relatively secure (for Pit Structure 3) contexts suggest that this type of mano was in use at this period. Two-hand manos outnumber one-hand manos in post–AD 600 deposits from the Dolores Project (Hruby 1988: Table 6D). The lengths of these two manos (209 and 210 mm) fit within the mean and modal lengths for this tool type for the project sample.

Faunal remains. By element count, a third of the faunal remains are amphibian, probably an intact individual that burrowed into the fill. Rabbits are especially well represented, constituting a fifth of the sample. The high rabbit association is interesting in that it may serve to distinguish Basketmaker and Pueblo II faunal patterns. The Pueblo II assemblages show much more emphasis on turkey-bird and artiodactyl, as opposed to the rabbits and small mammals in Pit Structure 3, but the sample

Table 12.59. LA 37595, Pit Structures 1–4, manos and metates; summary table.

FS	Function 1/ Function 2	Material	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Fill Type
Pit Structure 1							
106	mano	granite	–	–	–	210.0	upper fill above roof
106*	two-hand mano	granite	167.0	88.0	43.0	743.0	upper fill above roof
106*	two-hand slab mano	sandstone	207.0	101.0	70.0	2400.0	upper fill above roof
107*	two-hand mano	sandstone	204.0	107.0	43.0	650.0	upper fill above roof
107*	two-hand mano/same	siltstone	132.0	88.0	51.0	900.0	upper fill above roof
113	trough metate	sandstone	–	–	39.0	444.0	roofing material
117	mano/same	sandstone	–	–	22.0	214.0	floor fill
129*	tchamahia	siltstone	141.0	70.0	15.0	278.0	general structure fill
137	mano	sandstone	–	–	31.0	125.0	upper fill above roof
137*	one-hand mano	granite	143.0	86.0	57.0	965.0	upper fill above roof
148*	one-hand mano/mano	sandstone	151.0	90.0	38.0	759.0	upper fill above roof
154	slab metate	sandstone	–	–	94.0	636.0	roofing material
184	slab metate	sandstone	–	123.0	16.0	487.0	surface or floor
518	two-hand mano/same	sandstone	–	–	20.0	450.0	surface or floor
Pit Structure 2							
200*	two-hand slab mano/same	sandstone	200.0	100.0	22.0	520.0	full cut
200*	two-hand slab mano	sandstone	203.0	129.0	65.0	2550.0	full cut
200**	two-hand mano/trough metate	sandstone	250.0	81.0	42.0	1350.0	full cut
200*	ends open trough	sandstone	540.0	370.0	180.0	54091.0	full cut
202	trough metate/two-hand mano	sandstone	–	–	58.0	2150.0	upper fill above roof
202*	two-hand mano/same	sandstone	170.0	92.0	31.0	600.0	upper fill above roof
202*	two-hand mano/same	sandstone	220.0	127.0	49.0	2450.0	upper fill above roof
203*	ends open trough	sandstone	520.0	314.0	103.0	23200.0	upper fill above roof
207	one-hand mano/hammerstone	sandstone	–	61.0	18.0	162.0	floor fill
217	mano	sandstone	–	100.0	22.0	350.0	surface or floor
Pit Structure 4							
412	two-hand slab mano	sandstone	–	–	19.0	250.0	upper fill above roof
414*	one-hand mano	granite	89.0	77.0	24.0	240.0	roofing material
414	trough metate	sandstone	–	–	75.0	120.0	roofing material
414	mano	granite	–	–	42.0	138.0	roofing material
Pit Structure 3							
301	trough metate	sandstone	–	–	89.0	9750.0	upper fill above roof
302	metate	sandstone	–	–	26.0	247.0	lower fill below roof
302	mano	granite	–	–	–	144.0	lower fill below roof
302*	two-hand mano	sandstone	171.0	107.0	66.0	1400.0	lower fill below roof
303	two-hand slab mano	sandstone	–	–	31.0	950.0	general structure fill
303	mano	sandstone	–	–	–	44.0	general structure fill
303	mano	sandstone	–	–	–	72.0	general structure fill
308*	two-hand mano	sandstone	210.0	102.0	29.0	900.0	bench surface (PP 1)
310	mano	sandstone	–	–	–	40.0	general structure fill
313	two-hand mano/same	granite	–	101.0	41.0	650.0	general structure fill
315*	two-hand mano	sandstone	209.0	138.0	33.0	1600.0	hearth fill

Table 12.59 (continued)

FS	Function 1/ Function 2	Material	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Fill Type
Extramural Area 2							
4	mano/ hammerstone	granite	–	–	44.0	400.0	present ground surface
4	mano	igneous	–	–	34.0	150.0	present ground surface
4	trough metate	sandstone	–	–	52.0	700.0	present ground surface
6	mano	quartzite	–	–	–	10.0	present ground surface
8	mano	granite	–	–	73.0	400.0	present ground surface
10	mano	granite	–	65.0	38.0	300.0	cultural
10	two-hand mano	granite	–	92.0	53.0	600.0	cultural
10	two-hand mano	granite	–	67.0	59.0	750.0	cultural
22	two-hand mano	sandstone	–	–	73.0	450.0	full cut
Extramural Area 4							
401*	two-hand mano/same	sandstone	211.0	120.0	67.0	2750.0	cultural

* complete; ** dimensions for Function 1 (complete mano made from metate fragment)

Table 12.60. LA 37595, Pit Structure 3, plant remains, flotation full-sort (Floor 1; Features 1, 14, 19) and scan (Floor 1) results by taxon; frequency and abundance per liter.

Sample Type	**Full-Sort**					**Scan**
Feature	**Floor**	**1**		**14**	**19**	**Floor**
Feature Type		**Hearth**		**Ash Pit**	**Bench**	
FS	**313**	**312**	**316**	**330**	**305**	**310**
Location	**SE 1/4**	**Layer 1**	**Layer 2**			**NE 1/4**
Cultural						
Annuals:						
Amaranthus	–	3.0	–	–	–	–
Chenopodium	–	–	4.0	–	–	–
Cycloloma	–	–	1.0	–	–	–
Cultivars:						
Zea mays	+ cupule	–	–	+ cupule	–	+ cupule
Other:						
Malvaceae	–	5.0	–	–	–	–
Unidentifiable	–	2.0	12.0	–	–	–
Perennials:						
Atriplex canescens	–	2.0 fruit	–	–	–	–
Noncultural						
Annuals:						
Amaranthus	1.0	3.0	90.0	–	–	+
Chenopodium	–	3.0	18.0	–	–	+
Euphorbia	1.0	1.0	–	–	–	–
Portulaca	–	1.0	–	–	2.0	+
Other:						
Malvaceae	–	1.0	2.0	–	–	–
Perennials:						
Atriplex canescens	–	–	+ leaf	–	–	–
Echinocereus	–	–	1.0	–	–	–

All cultural plant remains are carbonized.
Plant remains are seeds unless indicated otherwise.
+ = 1–10/liter

Table 12.61. LA 37595, Pit Structures 2, 3, and 4, plant remains, taxon by time period and feature; wood by weight (g), other plant parts by count and weight (g).

Time Period	Basketmaker III	Middle Pueblo II						Total	
Structure	Pit Structure 3	Pit Structure 2				Pit Structure 4		Weight (g)	Col. %
Feature	4	4	7	9	11	1	3		
Feature Type	Posthole	Possible Entry Step	Pit	Posthole	Pit	Fire Pit	Pit		
FS	322	213	218	219	221	419	420		
Location				Floor 1, W 1/2					
Cultural									
Conifers:									
Juniperus	1.34	0.71	1.16	–	0.83	1.22	–	**5.26**	**59.0%**
Pinus edulis	0.31	0.44	–	–	–	–	–	**0.75**	**8.0%**
Nonconifers:									
Artemisia	0.03	–	–	–	–	0.69	–	**0.72**	**8.0%**
Atriplex	–	0.01	0.4	–	–	–	–	**0.41**	**5.0%**
Quercus	–	–	0.13	–	–	–	–	**0.13**	**1.0%**
Salicaceae (*Populus/Salix*)	–	–	0.07	–	–	0.91	–	**0.98**	**11.0%**
Undetermined nonconifer	0.04	0.01	0.25	–	–	0.37	–	**0.67**	**8.0%**
Other Cultural									
Cultivars:									
Cucurbita seed	–	–	–	1/.01	–	–	1/.01 u	–	–

is very small and has association ambiguities. The rabbit remains include a perforated jackrabbit tibia, or tinkler (Hayes and Lancaster 1975:170). This artifact was found in Layer 1 and is therefore of questionable association with the early structure.

Botanical remains. Corn cupules were the only carbonized plant remains identified from the ash pit and in floor samples from Pit Structure 3 (Tables 12.45, 12.60, 12.61). Unburned purslane seeds on the bench are most likely intrusive. The hearth had slightly different and more diverse floral remains, including pigweed, goosefoot, winged pigweed, and globemallow family seeds, and four-wing saltbush fruits, but no corn. Saltbush fruits are sometimes present as firewood residue, but in this case no saltbush wood was found. Sagebrush, juniper, cottonwood/willow, and an unknown nonconifer were all part of the hearth wood assemblage. Charcoal fragments in Posthole 4 look much like samples at this and other La Plata sites (largely juniper, plus piñon, sage, and an unknown). These may be floor sweepings or roof flotsam.

LA 37595: Material Culture

Considering that all or part of four pit structures and several extramural features were excavated, the total material culture assemblage from LA 37595 is small. This is primarily the result of the absence of middens in the excavation sample, as well as the apparently orderly abandonment of all of the structures. The materials are quite differently distributed among the major proveniences on the site. Durable materials such as ceramics and lithics are abundant in Pit Structure 1 and in the extramural contexts. The high extramural frequencies of these materials are chiefly from a deflated area at the east edge of the right-of-way with very high surface artifact density. The importance of surface material to the extramural counts is seen in the extremely low occurrence of faunal material in the extramural group—all but two faunal elements were recovered from the pit structures.

Ceramic Artifacts

The ceramic assemblage for the entire site consists of only 2,615 sherds. Most of this material came from extramural proveniences and from the upper fill of Pit Structure 1. It is a solidly Pueblo II assemblage with no late types and a total of only 21 sherds with organic paint. In spite of the presence of a Basketmaker pit structure on the site, early pottery is only visible in the presence of more plain gray pottery than usual, and this increased plain gray ware is more abundant in Pit Structure 2 and the extramural contexts than it is in Pit Structure 3 (Table 12.25). The fill of Pit Structure 4 contained a remarkably low occurrence of gray ware, compensated by higher frequencies of white and red wares. The average sherd weight in the Pit Structure 4 assemblage is larger than in the other major provenience groups, indicating that sherds there have been subjected to less comminution. (Note the small size of sherds in extramural contexts [Table 12.49]). This sherd size is in accordance with the appearance of the fill—while it did not appear to be "good trash" and did not contain large quantities of any material category, it was a cultural deposit that probably had not suffered redeposition.

Paint on white wares is nearly all mineral. The 21 sherds with organic paint are mostly from the upper fill of Pit Structure 1, although two came from Layer 4, and one from Layer 2 of Pit Structure 4 (Table 12.62). The three carbon-painted sherds from Pit Structure 3 are *not* Basketmaker III sherds—all are Pueblo II–III black-on-white, probably from the upper fill of Pit Structure 4. One organic painted sherd is Dogoszhi style and could actually be Dogoszhi Black-on-white or a later Mancos or a Chuskan sherd (temper was not analyzed). Only three Chuskan, trachybasalt-tempered sherds were recorded; all are white wares, and two are carbon-painted. The Chuska sherds come from the upper fill of Pit Structure 1 and the roofing material of Pit Structure 4. One of the organic-paint vessel group is the unusual corrugated gray seed jar associated with Burial 1, which has vertical stripes painted on the interior.

Eight red ware sherds were found at this site, seven from Pit Structures 1 and 4. Six of the seven red ware specimens are Mesa Verde series sherds; the only identified type is one Deadmans Black-on-red sherd from each pit structure. The Deadmans Black-on-red from Pit Structure 1 is the canteen from Burial 1—an unusual form in an unusual type. The seventh red sherd is a Tsegi Orange from Pit Structure 4. The sole White Mountain Redware sherd was from an extramural context. The red ware complement again fits with a date after AD 1050 and before AD 1100.

In keeping with the small sample, unusual forms are nearly absent—there are only 12 ladle sherds, 2 canteen sherds, 2 seed jar sherds, 1 piece of a miniature, and 1 pipe fragment (Table 12.63). Pipes *are* a very rare form; only 12 ceramic pipe fragments were recorded from the project. Five restorable vessels were recovered, all from Pit Structure 1, two of which were from a burial context (Table 12.64). Four of the five are Dolores Corrugated, one of which is the seed jar with the unusual interior paint from Burial 1. The remaining vessel, which is incomplete, is a Deadmans Black-on-red canteen, a highly unusual type-form combination in the project assemblage, which was placed with Burial 1 in spite of being already broken at the time of interment. The vessel is heavily worn, making the design difficult to see, and the broken edges are weathered and worn as well. This postbreakage curation suggests that the site occupants also regarded it as a notable artifact (Fig. 12.11 [a]).

Burial 1 was accompanied by a second unusual

Table 12.62. LA 37595, carbon-painted sherds by pottery type and temper; counts and percents.

	Igneous		Quartzite		Sherd		Trachybasalt + Sherd		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Corrugated gray	1	25.0%	–	–	–	–	–	–	**1**	**9.1%**
Pueblo II	1	25.0%	–	–	–	–	–	–	**1**	**9.1%**
Pueblo II–III black-on-white	2	50.0%	3	100.0%	2	100.0%	2	100.0%	**9**	**81.8%**
Total	**4**	**100.0%**	**3**	**100.0%**	**2**	**100.0%**	**2**	**100.0%**	**11**	**100.0%**

Table 12.63. LA 37595, pottery types by vessel form and ware group; counts and percents.

	White Bowl		Red Bowl		Gray Jar		Decorated Jar		Ladle		Specialized		Indeterminate		Total	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
Mud ware	–	–	–	–	2	100.0%	–	–	–	–	–	–	–	–	**2**	**100.0%**
Pueblo II–III corrugated	–	–	–	–	46	100.0%	–	–	–	–	–	–	–	–	**46**	**100.0%**
Plain gray	–	–	–	–	313	99.1%	–	–	1	0.3%	–	–	2	0.6%	**316**	**100.0%**
Corrugated	–	–	–	–	1416	100.0%	–	–	–	–	–	–	–	–	**1416**	**100.0%**
Pueblo II Sosi style	23	31.5%	–	–	–	–	39	53.4%	9	12.3%	–	–	2	2.7%	**73**	**100.0%**
Pueblo II Dogoszhi style	14	27.5%	–	–	–	–	37	72.5%	–	–	–	–	–	–	**51**	**100.0%**
Pueblo II–III black-on-white	95	43.8%	–	–	–	–	113	52.1%	1	0.5%	–	–	8	3.7%	**217**	**100.0%**
Polished white	89	18.4%	–	–	–	–	390	80.6%	1	0.2%	1	0.2%	3	0.6%	**484**	**100.0%**
San Juan Red	–	–	4	66.7%	–	–	1	16.7%	–	–	1	16.7%	–	–	**6**	**100.0%**
White Mountain Red	–	–	1	100.0%	–	–	–	–	–	–	–	–	–	–	**1**	**100.0%**
Tsegi Orange	–	–	–	–	–	–	1	100.0%	–	–	–	–	–	–	**1**	**100.0%**
Total	**221**	**8.5%**	**5**	**0.2%**	**1777**	**68.0%**	**581**	**22.2%**	**12**	**0.5%**	**2**	**0.1%**	**15**	**0.6%**	**2613**	**100.0%**

1 gray bowl, 1 gray miniature not shown.

vessel, a small corrugated seed jar with black organic-painted lines on the interior, pendant from the rim. As noted above, painted gray ware is very rare in the project ceramic assemblage (Fig. 12.11 [b]). The vessel is even more remarkable because of the site date. The paint in this vessel is organic, in contrast to the use of mineral paint on the overwhelming majority of decorated white ware.

Chipped Stone Artifacts

The lithic material assemblage at LA 37595 (n = 1,556) is similar to that of other Jackson Lake sites. Half the material is chert and a third siltstone, and the majority of the remainder is silicified wood, quartzite, and quartzitic sandstone (Fig. 12.56; Table 12.27). Overall percentages of materials are remarkably similar to those at LA 37592; the only differences are that LA 37595 had more quartzite and less quartzitic sandstone (Table 12.38). Identifiably exotic materials are extremely rare. No obsidian is present in the collection, and only a single piece of Narbona (née Washington) Pass chert angular debris and two cores identified as Pedernal chert were recovered. All three of these exotics were found in the deflated surface concentrations. The tables presented here use the collapsed categories of the standardized lithic analysis, which suggests great sameness of material. Using the color-based differentiations of the first Jackson Lake lithic analysis, however, reflects more variety in the lithic materials—this analysis includes 117 categories, many with five or fewer items. Eight of these categories contain 50 or more specimens. In descending order of occurrence, they are black siltstone, gray siltstone, cream-yellow chert with brown cortex, creamy tan fossiliferous chert, green siltstone, mottled gray chert, pink quartzite, gray oolitic chert, and red siltstone.

The basic lithic material distributions are similar across the three Pueblo II structures (Pit Structures 1, 2, 4), reflecting the site distribution (Figs. 12.57a, 12.57b, 12.57c, 12.57d). The earlier Pit Structure 3, which has a small sample, is notably different in its high frequency of silicified wood, which cuts into the chert percentage; quartzite is also relatively more frequent in Pit Structure 3.

Aside from hammerstones and utilized edges, there are only 24 "formal" lithic tools from this site (Table 12.6). Of these, 14 are "notches"; considering

Table 12.64. LA 37595, Pit Structure 1, reconstructible ceramic vessels by pottery type and form; summary table.

FS	Vessel	Form	Pottery Type	Weight (g)	Rim Radius (mm)	Layer	Feature
103	1	seed jar	corrugated gray (painted)	308.0	45	.02	grave
103	2	canteen	Deadmans Black-on-red	316.0	–	.03	grave
145	3	jar body	corrugated gray	390.0	–	5.01	–
145	3	necked jar body	corrugated gray	510.0	–	5.01	–
145	3	cooking/storage rim	Pueblo II–III corrugated	750.0	110	5.01	–
			Dolores Corrugated	1650.0	–	–	–
150	4	cooking/storage rim	Pueblo II–III corrugated	230.0	105	4.00	bench
150	4	necked jar body	corrugated gray	30.0	–	4.00	bench
150	4	jar body	corrugated gray	70.0	–	4.00	bench
			Dolores Corrugated	330.0	–	–	–
145	5	cooking/storage rim	Pueblo II–III corrugated	227.0	105	5.01	–
145	5	necked jar body	corrugated gray	167.0	–	5.01	–
145	5	jar body	corrugated gray	120.0	–	5.01	–
			Dolores Corrugated	514.0	–	–	–

All vessels have igneous temper.

that the entire LA 37592 collection (n = 14,049) contained only 19 of these tools, this is a large number. Even more intriguing is the fact that 11 of the notches came from extramural contexts, although the overall occurrence of material in extramural areas is small, especially outside of the deflated concentration area at the northeast, where three notches were found. Although classified as a tool type, these are largely expedient implements, as well—flakes with one modified edge. Items in this category weigh from 2 to 86 g with a mean of 23 g (SD = 22.3). The mean for just the extramural notches is 18.6 g (SD = 14.7). The notches are mostly chert, but also siltstone and quartzite; the four siltstone notches are much larger, averaging 41 g.

Only two projectile points were recovered from the site, from Pit Structures 1 and 3 (Fig. 12.30 [a, b]). The incidence of projectile points in the project assemblage is 0.2 percent, and at this site points are only 0.1 percent of the total. Other formal tools (uniface, drill, graver, denticulate) constitute 0.5 percent of the total, similar to the overall assemblage occurrence. Although the point from Pit Structure 1 is not complete (Fig. 12.30 [b]), both appear to be small corner-notched points. This style is usually associated with Early Pueblo II, and it is unlikely that the point from Pit Structure 3 was from the Basketmaker occupation.

The tool assemblages from entire structure fills are at best blurred reflections of structure function, but Pit Structure 2 stands out for its low relative frequency of debitage and the relatively large number of hammerstones (26 or 43 percent of the total number of hammerstones from the site). Pit Structure 2 has a concomitantly higher frequency of chert, in part because hammerstones from this mealing room tend to be small chert hammerstones. Materials strictly from floor fill and contact are also dominated by debitage, but the presence of hammerstones and other tools are again notable in Pit Structure 2 (Table 12.65). The hammerstones in Pit Structure 2, probably used for grinding-tool conditioning, cover a range of sizes, but, as is true of the site assemblage, they cluster around 150 g. The small quantity of chipped stone from Pit Structure 1 (only 17.7 percent of the total) is disproportionate to other material categories, in which counts run closer to 40 percent (Tables 12.25, 12.30, 12.65).

Ground Stone Artifacts

Including ornaments, 75 ground stone items were recovered from LA 37595. The greatest number and variety of ground stone artifacts were found in Pit Structure 1, followed by extramural contexts (Table 12.30). Although the counts for Pit Structures 2 and 3 are small, they form greater percentages of the overall ground stone counts than do the

assemblages of ceramics and chipped stone from those structures. Moreover, four more pieces were found in Backhoe Trench 3, which defined these structures. These items include a huge metate made from a cobble, which is likely to have come from Pit Structure 2.

Just over half of the 37 manos from the site are classified as two-hand tools; 14 are not identified beyond "mano" (tools that are incomplete in at least one dimension). Among the complete two-hand manos (n = 13) there is a strong cluster around 205 mm long, although shorter manos with a minor group around 170 mm suggest variability in metates and the use of several metates on the site. Like the mano assemblage for the project as a whole, the modal size of manos at this site is at 200 mm (mean = 192, SD = 26.0). Two-hand manos from this site are more variable than at other Jackson Lake sites, in part because of a 250 mm long mano made from a metate fragment. Sixty percent of all ground stone is sandstone. Another 21 percent is granite, mostly taking the form of manos and axes (Table 12.66).

There are two complete metates in the collection, both found in Pit Structure 2. Of 11 pieces of metate, 8 are from trough metates and 2 are from slab metates. Ground stone showing second uses mostly have evidence for multiple uses of the same function (Table 12.59), although some manos were used as hammerstones, and two pieces of metates were converted to manos.

Three axes and two mauls were recovered from the site, all from pit structures. One of the mauls is a distinctive full-groove, egg-shaped tool weighing over 1.5 kg (Fig. 12.58 [a]; Table 12.67). Mauls such as this one seem to characterize Basketmaker assemblages (a similar maul was found nearby at LA 60751). It was recovered from the floor of Pit Structure 3, one of the few clearly Basketmaker artifacts recovered. The Pueblo II maul, from the fill of Pit Structure 1, is longer and thinner, and weighs half as much. Two of the three axes were broken in use, and one was worn out (Fig. 12.58 [b]; Larralde and Schlanger 1994). All were in pit structure fill (two in Pit Structure 1, one in Pit Structure 4), although one could have been on the floor of Pit Structure 1 at the time of structure dismantling. We found no axes broken in production, suggesting that axes used at LA 37595 were made elsewhere, although some of the axes do have bits broken during use.

The single tchamahia recovered from this site does not fit into the two main types of this tool. While it is siltstone and triangular with a convex bit end and a pointed hafting end, it is not highly polished and sharp. The sides have been chipped in a few places and ground, but the faces are largely unmodified cortex (Fig. 12.58 [c]). It therefore does not fit into the less finished type of siltstone tchamahia, which has a more distinct hafting element (Chapter 20, Vol. 2, this report; Larralde and Schlanger 1994). This item is clearly an artifact, and it is closer in morphology to a tchamahia than other categories of tool.

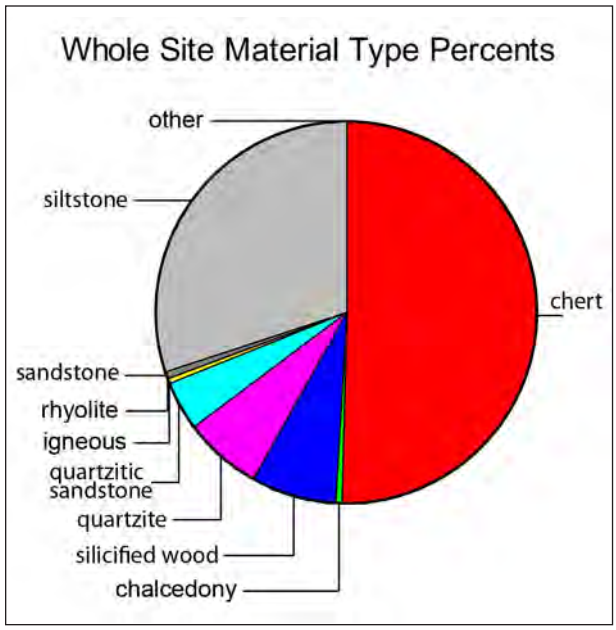


Figure 12.56. LA 37595, lithic material types, site-wide, pie chart.

One paint stone and one palette with pigment were found. The paint stone was on the floor of Pit Structure 2, a mealing room. The palette was near the floor of Pit Structure 1 and could have been on the structure's roof or its floor. Ground stone artifact completeness was not remarkable compared to the whole project assemblage in terms of artifact type or where whole artifacts were found.

Ornaments

Only eight ornaments were recovered from LA 37595: three small beads, three pendants, one tinkler, and one shell object (Table 12.58). This low occurrence probably says more about the lack of a

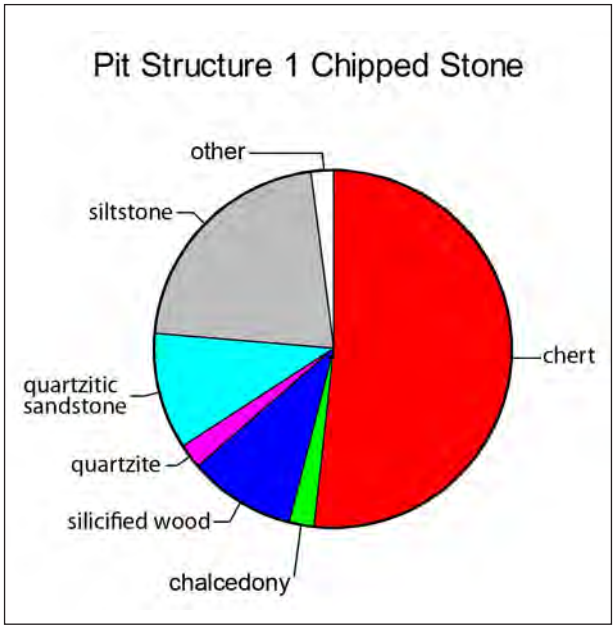


Figure 12.57a. LA 37595, Pit Structure 1, chipped stone material types, pie chart.

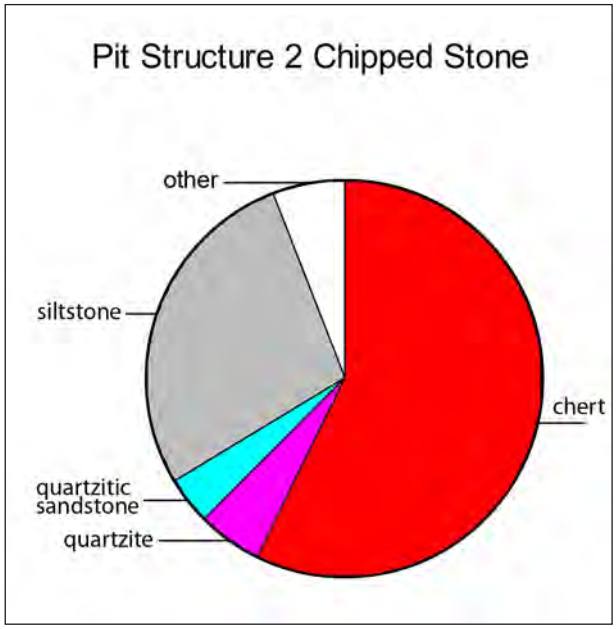


Figure 12.57b. LA 37595, Pit Structure 2, chipped stone material types, pie chart.

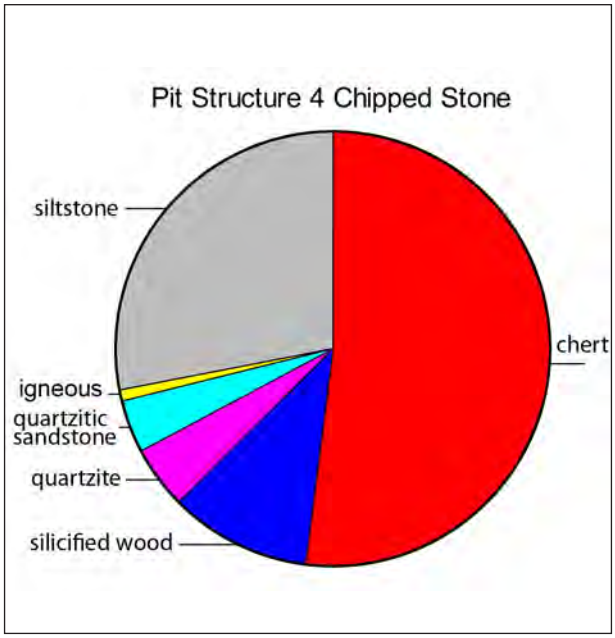


Figure 12.57c. LA 37595, Pit Structure 4, chipped stone material types, pie chart.

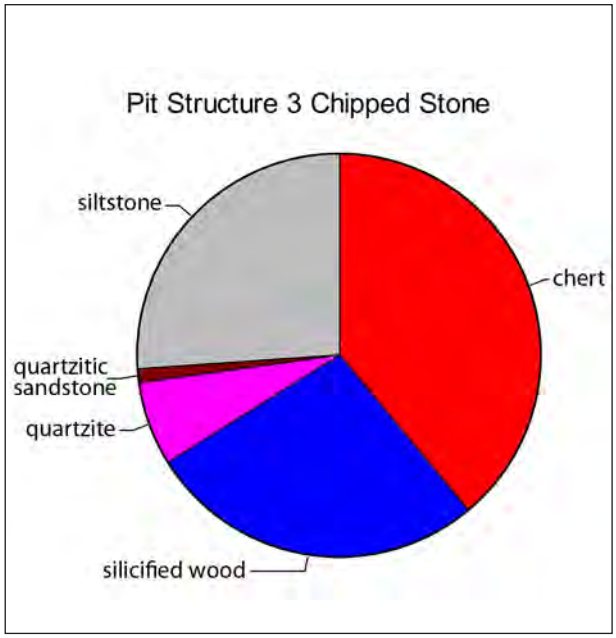


Figure 12.57d. LA 37595, Pit Structure 3, chipped stone material types, pie chart.

midden deposit in the sample than it does about the possibility that the inhabitants did not make or wear ornaments. Each pit structure contained at least one item. Shell is very rare in the project assemblage, so the presence of a piece in this small collection is noteworthy. One of the pendants is made of selenite; it is thick and large, and the perforation in it has been started but not bored all the way through. Most of the ornaments were in fill contexts, but one bead was associated with the dog burial in the vent shaft of Pit Structure 1, and one broken shale pendant was in the floor fill of Pit Structure 4.

Table 12.65. LA 37595, Pit Structures 1–4, floors, chipped stone tool types by structure; counts and percents.

	Pit Structure 1		Pit Structure 2		Pit Structure 4		Pit Structure 3		Total	
	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %	Count	Col. %
Debitage	68	88.3%	66	79.5%	19	90.5%	9	69.2%	**162**	**83.5%**
Core	2	2.6%	4	4.8%	–	–	2	15.4%	**8**	**4.1%**
Retouched, utilized debitage	2	2.6%	1	1.2%	1	4.8%	1	7.7%	**5**	**2.6%**
Denticulate	–	–	1	1.2%	–	–	–	–	**1**	**0.5%**
Hammerstone	5	6.5%	11	13.3%	1	4.8%	1	7.7%	**18**	**9.3%**
Total	**77**	**100.0%**	**83**	**100.0%**	**21**	**100.0%**	**13**	**100.0%**	**194**	**100.0%**

Human Remains

All human remains from this site were associated with Pit Structure 1. They include intact Burial 1, redeposited Burial 2, and some scattered elements in the upper fill of the pit structure. A maximum of five individuals are represented by all of these materials, although some (but not all) of the scattered elements from the fill may have come from Burial 2. These individuals are adults and young adults; no very young or very old individuals were present (Table 12.9).

Faunal Remains

Dog and turkey remains at LA 37595 were found primarily in Pit Structure 1, almost exclusively as interments of whole animals. Other identifiable economic species are represented by relatively few elements (Tables 12.21, 12.22). When compared to the whole site distribution, there are greater than expected occurrences of artiodactyls and rabbits in Pit Structure 4 and of rabbits in Pit Structure 3. The fact that 46 percent of all faunal elements were recovered from the vent shaft of Pit Structure 1 illustrates the nature of the faunal assemblage from the site. Eggshell is associated with the floors of Pit Structures 1 and 4, although the count from Pit Structure 4 is very small. In addition to the numerous, but very small, pieces in the probable roofing material of Pit Structure 1, both of these contemporary structures had eggshell on the floor in the vicinity of the hearth (Table 12.15). It is possible that some of the eggshell in Pit Structure 1 came from the roofing layer, but a large quantity was in contact with the floor. Eggshell was present throughout the fill of Pit Structure 1 but was localized on the Pit Structure 4 floor. No other contexts on the site contained eggshell.

Identified conjoinable animal individuals are mostly small rodents (four mice), amphibians (three frogs or toads), and a lizard. All were found in fill contexts, indicating that they were natural rather than cultural introductions. Also identified were a dog from the Pit Structure 1 vent shaft and a turkey foot from the natural fill of Pit Structure 1.

All of the modified bone was recovered from pit structures, though few tools were found in primary contexts (Table 12.43). All or part of 12 awls were found, 7 of them in Pit Structure 1. One of these was on the bench; another was at the base of the bench and could have fallen from the bench. The only tinkler from the site was found in Pit Structure 3; it could be Pueblo II or Basketmaker III in age.

Processing is unevenly distributed among the species. Most of the instances of cut marks are on deer (60 percent of elements with cut marks, 12 percent of total elements, including large mammal and artiodactyl), with some instances on rabbit elements. Cut marks on turkey, in spite of the larger number of elements, were observed only on one ulna from Pit Structure 1. Although the amount of processing recorded is more or less proportional to the numbers of elements in each structure (Pit Structures 1, 4, 3, and 2, in order of amount of bone and number of cut elements), Pit Structures 2–4 contain more processed bone than would be expected from sheer numbers of elements from the whole site. This stems from the higher counts in the more middenlike fill of Pit Structure 4, the whole, unprocessed animals in Pit Structure 1, and the presence of small bits of refuse in Pit Structures 2 and 3. More rabbit elements show processing in the Basketmaker structure than in the later houses.

Table 12.66. LA 37595, ground stone tool type by material type; counts and percents.

	Igneous		Granite		Sandstone		Siltstone		Quartzite		Quartzitic Sandstone		Hematite		Total	
	Count	**Row %**	**Count**	**Row %**	**Count**	**Row %**	**Count**	**Row %**	**Count**	**Row %**	**Count**	**Row %**	**Count**	**Row %**	**Count**	**Row %**
Indeterminate fragment	–	–	–	–	–	–	–	–	–	–	2	100.0%	–	–	**2**	**100.0%**
Pottery-polishing stone	–	–	–	–	–	–	1	100.0%	–	–	–	–	–	–	**1**	**100.0%**
Plaster-polishing stone	–	–	1	100.0%	–	–	–	–	–	–	–	–	–	–	**1**	**100.0%**
Shaped slab	–	–	–	–	7	100.0%	–	–	–	–	–	–	–	–	**7**	**100.0%**
Palette	–	–	–	–	1	100.0%	–	–	–	–	–	–	–	–	**1**	**100.0%**
Lapidary stone	–	–	–	–	2	100.0%	–	–	–	–	–	–	–	–	**2**	**100.0%**
Mano	1	7.1%	6	42.9%	6	42.9%	–	–	1	7.1%	–	–	–	–	**14**	**100.0%**
One-hand mano	–	–	2	50.0%	2	50.0%	–	–	–	–	–	–	–	–	**4**	**100.0%**
Two-hand mano	–	–	4	28.6%	9	64.3%	1	7.1%	–	–	–	–	–	–	**14**	**100.0%**
Two-hand slab mano	1	16.7%	–	–	5	83.3%	–	–	–	–	–	–	–	–	**6**	**100.0%**
Metate	–	–	–	–	1	100.0%	–	–	–	–	–	–	–	–	**1**	**100.0%**
Trough metate	–	–	–	–	5	100.0%	–	–	–	–	–	–	–	–	**5**	**100.0%**
Ends open trough	–	–	–	–	2	100.0%	–	–	–	–	–	–	–	–	**2**	**100.0%**
Slab metate	–	–	–	–	2	100.0%	–	–	–	–	–	–	–	–	**2**	**100.0%**
Notched maul	–	–	1	100.0%	–	–	–	–	–	–	–	–	–	–	**1**	**100.0%**
Grooved maul	–	–	1	100.0%	–	–	–	–	–	–	–	–	–	–	**1**	**100.0%**
Two-notch axe	1	33.3%	–	–	–	–	2	66.7%	–	–	–	–	–	–	**3**	**100.0%**
Tchamahia	–	–	–	–	–	–	1	100.0%	–	–	–	–	–	–	**1**	**100.0%**
Paint stone	1	50.0%	–	–	–	–	–	–	–	–	–	–	1	50.0%	**2**	**100.0%**
Total	**4**	**5.7%**	**15**	**21.4%**	**42**	**60.0%**	**5**	**7.1%**	**1**	**1.4%**	**2**	**2.9%**	**1**	**1.4%**	**70**	**100.0%**

Massive quartz lightning stone not included.

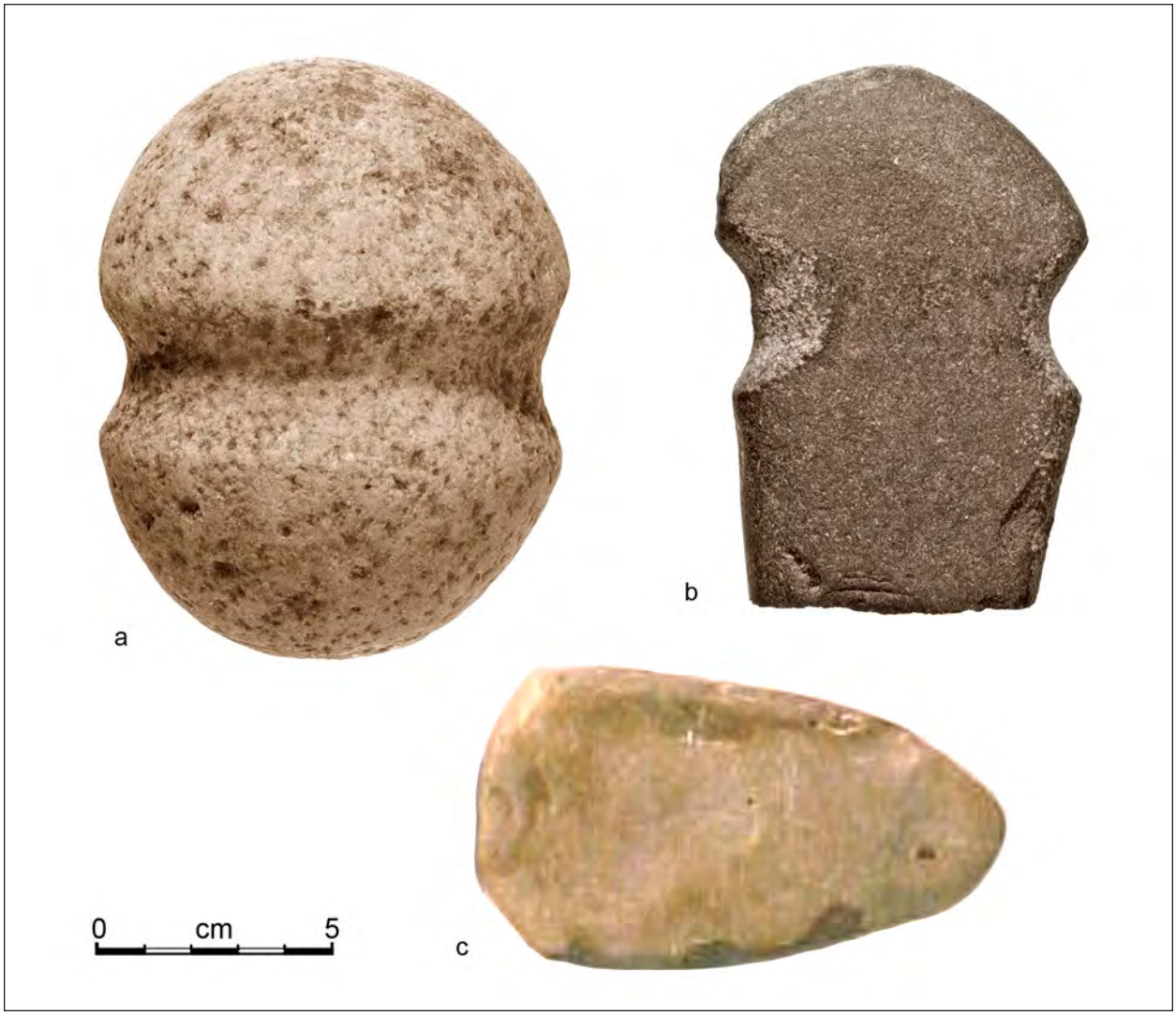


Figure 12.58 [a–c]. LA 37595, ground stone: a. maul; b. axe; and c. tchamahia.

Botanical Remains

Throughout the occupation of LA 37595, corn and weedy annuals were targeted, with the addition of squash in the Pueblo II period. Evidence for use of perennial taxa and grasses is scarce, with isolated occurrences of banana yucca, hedgehog cactus, and four-wing saltbush. Only one incidence of grass was recorded. Tobacco was found in each of the Pueblo II structures. Juniper was the most common wood taxon in roofing material and thermal features. Eight samples were submitted for dendrochronological analysis, but only two returned dates. The analyzed samples were evenly split between juniper and piñon. Compared to other project sites, this is a high percentage of piñon. Both of the dates returned were piñon. Of 100 dated tree-ring samples, only five dates were from piñon specimens, making these two dates notable. The dates correspond well to the dates we derived from ceramics and architecture. As noted in the description of Pit Structure 1, the preservation of the juniper elements in the vent shaft was remarkably good, but none could be dated. The two dates returned were from roof fall, Layer 4 in the northwest quarter of Pit Structure 1 (838p–1010 ++vv); and from the interior of Feature 4 Pit Structure 4, a large off-chamber cist (929p–1041 +RB).

Table 12.67. LA 37595, Pit Structures 1, 3, and 4, axes and mauls; summary table.

FS	Function	Material	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)	Fill Type
Pit Structure 1							
107*	notched maul	granite	165	77.0	38.0	750.0	upper fill above roof
148*	two-notch axe	siltstone	139.0	84.0	34.0	631.0	upper fill above roof
149	two-notch axe	igneous	–	82.0	34.0	637.0	floor fill
Pit Structure 4							
415	two-notch axe	siltstone	–	80.0	29.0	500.0	roofing material
Pit Structure 3							
314*	grooved maul	granite	130.0	99.0	84.0	1550.0	Floor 1, PP 4

* complete

Table 12.68. LA 37595, features by Pit Structures 1–4 and extramural contexts; counts and percents.

	Pit Structure 1		Pit Structure 2		Pit Structure 3		Pit Structure 4		Extramural		Total	
	Count	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**	**Count**	**Col. %**
Indeterminate	1	4.5%	–	–	–	–	–	–	–	–	**1**	**1.7%**
Floor or wall patch	1	4.5%	–	–	–	–	–	–	–	–	**1**	**1.7%**
Pit	3	13.6%	4	30.8%	8	53.3%	2	40.0%	1	33.3%	**18**	**30.5%**
Mealing collection basin	–	–	5	38.5%	–	–	–	–	–	–	**5**	**8.5%**
Pot rest	–	–	1	7.7%	–	–	–	–	–	–	**1**	**1.7%**
Cist	2	9.1%	–	–	–	–	–	–	–	–	**2**	**3.4%**
Storage facility	1	4.5%	–	–	–	–	–	–	–	–	**1**	**1.7%**
Major off-chamber cist	1	4.5%	–	–	–	–	1	20.0%	–	–	**2**	**3.4%**
Major storage cist	–	–	–	–	–	–	–	–	1	33.3%	**1**	**1.7%**
Hearth	1	4.5%	–	–	1	6.7%	1	20.0%	–	–	**3**	**5.1%**
Ash receptacle	2	9.1%	–	–	1	6.7%	1	20.0%	–	–	**4**	**6.8%**
Fire pit	–	–	–	–	1	6.7%	–	–	–	–	**1**	**1.7%**
Trash pit	–	–	1	7.7%	–	–	–	–	–	–	**1**	**1.7%**
Posthole	–	–	2	15.4%	1	6.7%	–	–	1	33.3%	**4**	**6.8%**
Deflector	1	4.5%	–	–	?	?	?	?	–	–	**1**	**1.7%**
Vent tunnel	1	4.5%	–	–	1	6.7%	–	–	–	–	**2**	**3.4%**
Vent shaft	1	4.5%	–	–	–	–	–	–	–	–	**1**	**1.7%**
Bench	1	4.5%	–	–	1	6.7%	–	–	–	–	**2**	**3.4%**
Niche	2	9.1%	–	–	–	–	1	20.0%	–	–	**3**	**5.1%**
Sipapu	2	9.1%	–	–	1	6.7%	–	–	–	–	**3**	**5.1%**
Grave	1	4.5%	–	–	–	–	–	–	–	–	**1**	**1.7%**
Animal burial	1	4.5%	–	–	–	–	–	–	–	–	**1**	**1.7%**
Total	**22**	**100.0%**	**13**	**100.0%**	**15**	**100.0%**	**5**	**100.0%**	**3**	**100.0%**	**59**	**100.0%**

LA 37595: Features Summary

Because of the severe surface disturbance, LA 37595 had a paucity of extramural features and, of course, no surface room features. The types of features recorded conform to the types of structure excavated (Fig. 12.6; Table 12.68). That is, no mealing bins were found in round pit structures, although mealing features do occur in some contemporary similar structures, but five bins were present in the mealing room. Each "round room" pit structure had a major off chamber cist, and the fully excavated Pit Structure 1 contained a variety of storage features in addition to the major off chamber cist. Pit Structure 4, comparable in size and age to Pit Structure 1, seems "light" on features. This naturally stems from somewhat less than half of the structure having been excavated, but even taking that fact into account, the structure seems to have relatively few floor features. This suggests a shorter and/or less intensive use of Pit Structure 4. The additional fire pit in Pit Structure 3 (Table 12.68) is the feature in the fill at the juncture of Pit Structures 3 and 4.

LA 37595: Site Synopsis

LA 37595 during Basketmaker III

As evidenced by the AD 500s pit structure at LA 37594, the immediate vicinity of LA 37595 had clearly been occupied for some time, but the first clear evidence for use of this location is the construction and occupation of Pit Structure 3 in the AD 600s. The layout and construction of Pit Structure 3 is very similar in construction to well-dated Basketmaker III Pit Structure 1 at LA 60751, a few hundred meters to the south, and these structures probably were part of a substantial, although apparently dispersed, settlement. We have little way of gauging the length of the occupation since we have no absolute dates and no contemporaneous midden deposit. Little apparent remodeling and sparse cultural material suggest that the occupation of this particular structure was brief, but the lack of midden may be the result of sampling error. For at least a few years, a family group lived here in the latter 600s. Theirs was the only house on this part of the fan, but there were other families within view, including several across the river in the East Side Rincon. The lack of any material datable to Pueblo I from any Jackson Lake area excavation strongly suggests that this part of the valley was uninhabited during the 700s and 800s.

LA 37595 during Pueblo II

The great majority of the activities for which there is evidence at this site occurred during Pueblo II. There is little reason to suspect that our excavated sample represents anything other than a single settlement in the mid-1000s, consisting of two pit structures, a mealing room, and some associated surface rooms. Although there is a somewhat elevated percentage of carbon-painted sherds directly associated with Pit Structure 4, the carbon-painted sherd percentage results from the small number of painted sherds in the Pit Structure 4 sample and has little temporal meaning. Pit Structure 4 is a smaller structure with apparently fewer features than Pit Structure 1, which suggests it may have been added later, but spatial relationship to surface rooms would be a better index of sequence of construction, and the location of surface rooms is unknown. The grinding bins in Pit Structure 2 would have had the grinders facing west, more or less in the direction of Pit Structure 4, suggesting that Pit Structures 2 and 4 were paired (Mobley-Tanaka 1997:441). If that pairing pattern is correct, any mealing room associated with Pit Structure 1 is therefore likely to be outside the new right-of-way. The possible jacal structures at the east edge of the right-of-way may have been the location of associated surface structures, and the ceramic composition there fits with the same time period, containing only one organic painted sherd and all Pueblo II decorated types. These remains, however, are at some distance from and northeast of even Pit Structure 1. Beyond this sketchy evidence, the location of surface structures is unknown for either component at this site.

We have noted continuities between Basketmaker III and Pueblo II occupations in terms of obviously intentional reoccupation of the same location (Toll and Wilson 2000). In examining pit structure orientations at LA 37595, it is also clear that the definition and determination of structure axis was the same for both temporal components. Some of this would have resulted from the location of Pueblo II Pit Structure 4 on top of Basketmaker III

Pit Structure 3, but it seems very likely that the orientation of the Pueblo II structures to within 4 degrees of the earlier structure was purposeful.

The abandonment process is especially evident at Pit Structure 1. There, a dog and a turkey were placed in the ventilator shaft, and the stratigraphy shows that the roof was dismantled and removed. Some of the roofing material was also burned after removal of the main supports. There is less evidence of formal closing practices of the mealing room and Pit Structure 4, but the roof was also removed from the Pit Structure 4. Though not a dense midden, the lower fill of Pit Structure 4 contained more trash than the fill of Pit Structure 1, indicating that occupation of the vicinity during Pueblo II probably continued after dismantling of Pit Structure 4, but probably not Pit Structure 1, at least until later, when Burial 1 was emplaced.

Use of the Site after Structure Abandonment

Both of the larger Pueblo II pit structures at this site were revisited after they had filled considerably. The alluvial fill of Pit Structure 1 contained an ash-filled pit and two burials, and the fill of Pit Structures 3 and 4 contained a fire pit and an ash lens. The fire pit in Pit Structure 4 tells us something about its construction and postabandonment collapse. This fire pit was above the intersection of Pit Structures 3 and 4, its base only 6 cm above the floor of Pit Structure 3, but extending over the area where that floor had been cut by the later Pit Structure 4. Though Pit Structure 4 had been cut through the fill of 3, we never saw any sign that the less consolidated fill material had been shored up or retained in any way. Presumably that fill was sufficiently cohesive that the later structure could be built and used for some period. Upon abandonment and removal of the roof, however, the steep bank in the fill cut was no doubt less stable than the cuts in undisturbed soil. At some point during the alluvial filling of Pit Structure 4, this unstable bank must have collapsed, although we did not record evidence of that collapse in our profiles. This collapse accounts for the presence of Pueblo II materials not far above the floor of Pit Structure 3.

When the site was revisited, either in Late Pueblo II or Early Pueblo III, depressions resulting from Pit Structures 1 and 4, and perhaps Pit Structure 2, would have been visible. Within these depressions fires were built and burials were placed. Though we have no way of knowing the frequency or duration of these revisits, or whether the use of Pit Structure 1's depression was contemporaneous with that in Pit Structure 4, the evidence suggests that there were several reuses within a fairly short period of time. Even within the highway excavation sample, there were post–Pueblo II sites in the immediate vicinity. LA 37593, immediately to the south, has ceramic types immediately subsequent to those at LA 37595, as well as some temporally overlapping proveniences.

It is possible that there was no period when some part of this fan was not occupied. LA 60749, LA 37592, and LA 37591, all within 300 m of LA 37595, were occupied into the 1100s and early 1200s, as was LA 37598, 1 km to the north. Placement of burials in abandoned, filling pit structures was probably a means of signifying continued links to locations (Toll and Schlanger 1998; Varien 1999:210), and this took place at LA 37594, LA 37595, and LA 37592. In spite of all this surrounding later activity, LA 37595 collections are remarkable for their lack of later ceramic types. The feature and closure similarities between LA 37592 and LA 37595 suggest a pattern in which families maintained connections to the LA 37595 structures. Further, the contemporaneous lithic material assemblages of LA 37595 and LA 37592 are statistically similar, while the LA 37595–LA 37593 and LA 37595–LA 37598 pairings are statistically different in lithic material selection.

The site of Sikyatuupela on Second Mesa, north of the present Hopi villages, shows similarities to LA 37595. Most strikingly, it contains a pit structure labeled Basketmaker III, about a third of which was removed by a deeper Pueblo II pit structure (Sebastian 1985). The pattern of Pueblo II relocation directly on top of an earlier occupation is very similar to that at LA 37595. The architecture of the earlier structures at Sikyatuupela and their clear construction date of AD 805 seem to make a designation of Pueblo I seem more appropriate, and the interval between earlier and later occupations less. These details notwithstanding, there is a clear pan-Pueblo pattern of intentional site reoccupation.

The structures at the Cuthouse Site provide something like a set of family snapshots of parts of the larger settlements of which each phase was a part. We can get an idea of perhaps two families living here for a generation or two at two different times. De-

scendants of the family that lived here in the seventh century may have returned in the eleventh century. They had neighbors, probably including relatives who may have followed the same occupation and reoccupation pattern living nearby. In both occupations the residents stayed for the use-life of the structures—probably 20 to 30 years—and then moved on, perhaps not far, taking the major logs and many of the important tools such as metates with them, and ceremonially closing the main structure. As Varien (1999:197–213) puts it, they were mobile households in persistent communities. They remained cognizant of their past, returning to it occasionally, sometimes to bury members of their group to reaffirm their link to this place.

This site is a graphic demonstration of resettlement of this part of the valley after 900. The reoccupation of this part of the valley was a dramatic change in the cultural landscape. This renewed intensity of occupation continued for over a century.

Archaeology Notes 242
2017

Office of
Archaeological Studies

NEW MEXICO DEPARTMENT
OF TRANSPORTATION