

CATHLAPOTLE PROJECT HISTORY

Initial Site Search: 1991

The initial survey of Brush Ridge was conducted by a group of Portland State University volunteer students on December 16, 1991. Augers were placed into the dry channel closest to Lake River, in Long Meadow, and atop Site Ridge. A total of seven augers were completed, and in only one case was cultural material located. The location of the successful attempt was atop Site Ridge, at what would turn out to be the northern extent of the site. No surface cultural material was observed in the area, undoubtedly a result of heavy leaf cover. Due to the unsatisfactory outcome of this attempt to locate the site, it was determined that a period of ethnographic research would be beneficial prior to the resumption of testing at the site. This material was summarized in Parchman and Hickey (1991). This study included conversations with James Carty, whose family had sold the land to the Fish and Wildlife Service and who had intimate knowledge of the landscape from growing up there. It was Mr. Carty's information that led us to the Cathlapotle site during subsequent work.

Augering: 1992

In February, 1992, a small crew of student volunteers returned to the area. Based on Carty's information, the area of 45CL1 was closely examined. Since much of the annual understory vegetation had died off, and the surface topography was much more visible than in December, 1991, it quickly became apparent that there was a major residential site on what we came to call Site Ridge.

Field investigation of the site resumed in June of 1992. This stage of the project lasted ten days. With the exception of the first day, which was showery, the weather was excellent. A crew of four established a 400 meter baseline running roughly parallel to the direction of the Brush Ridge landform, (325 degrees true north). This baseline was placed atop Site Ridge, and was cut through understory so that the transit would have an unimpeded line of sight. Next, five parallel lines were placed, at twenty meter intervals, along the Brush Ridge landform. This provided the crew with a

grid on which to place and record auger units. The location of the augers was recorded in crew notebooks, and by the placement of metal tags upon nearby trees. In addition, a vial containing the address of the auger was placed within the auger shaft prior to backfilling. The augers were identified according to their placement on the grid. For instance, the north-south (site orientation) baseline was Line 1 (L1). The east-west baseline was North 0 (N0). The auger twenty meters north of this point was, therefore, "L1 N2." Although the grid was plotted in twenty meter increments across the Brush Ridge landform, after it became apparent that the site was limited to Site Ridge, not all of the auger points were excavated. This method of recording augers was abandoned and replaced following the 1993 field season, and all augers from 1992 were given new designations (92-26, for example).

Several augers were placed to examine topographic features deemed of interest. These included the suspected house depressions and the adjacent ridge or berm areas. These were recorded according to their placement on the "working map" of the site, and referenced to nearby grid points or auger tags.

Each auger 'bite' constituted a level, and materials were recorded and bagged by level. The levels averaged 11 cm. in depth, with a 20 cm. diameter, which produced auger levels of 3457 cubic centimeters. Depth from surface measurements were taken after each auger bite. When possible, general stratigraphy was noted on a field form. Sediment descriptions were also noted on field forms. All sediment was screened through 1/8" mesh. Lithic debitage, lithic artifacts, floral specimens, faunal material and artifacts, hardened clay, cobble material, and trade items were collected. Charcoal samples were taken for possible testing. Soil samples were taken under circumstances when they were considered to be of particular interest. Augers were taken down until the sediments seemed culturally sterile, or, in some instances, until roots prevented farther extension.

In the course of laying the augering grid, it became apparent that there was a surface component to the site which had been concealed by leaf litter the previ-

ous winter. Several large cobble items and one scoria figurine preform were recorded and collected. Fire-cracked rock and faunal material was also observed on the surface of Site Ridge but not collected.

Upon completion of the augering in 1992, we had established that the surface and subsurface cultural components of the site were limited to Site Ridge. Based upon the augering results, it appeared that the site extended for approximately two hundred meters along Site Ridge, and was as much as fifty meters wide. The depth and density of the cultural deposits varied considerably, but several of the augers were still producing cultural material when they were fully extended (approximately 2.5 meters), and could not be continued. The deepest areas of the site appeared to be the ridges or berms associated with the depressions. This was interpreted as being due to periodic house construction and cleaning.

Artifacts recovered included two cryptocrystalline (CCS) projectile points, one barbed metal projectile point, cobble tools, abraders, glass trade beads and a rolled copper bead, as well as worked bone.

Features were detected in several augers. A shell midden deposit was located in 92-13. The augers placed into Depression 1 detected probable hearth related deposits, a cobble cache, and a small peg mold comprised of charred wood.

Topographic Mapping: 1992

In late winter, when the visibility of the landform is best, personnel from USFWS completed a topographic map of the site area using a laser transit (Figure 7). A PSU project staff member familiar with the site assisted. A 40-meter interval horizontal grid system was set up. Steel rebar was driven into the ground to mark the mapping points. Each rebar has a 1 1/4" aluminum cap with the grid point designation. The grid-system baseline runs north-south in the open meadow (Long Meadow). Where trees interfered, the mapping points on the grid were displaced. The datum was placed at the southern end of the baseline and keyed into the USGS system. The landform topography was mapped by recording elevations at approximately 20 meter intervals, focusing on places where landform variations are most pronounced. Where the landform is complex,

such as in the vicinity of oval depressions, the number of recorded reference points was increased in order to pick up the details. The resulting contour interval is 0.20 meters.

The surface area mapped is limited to the immediate area of the site as defined by the distribution of cultural materials and features identified during auger testing. This area includes the entire width of Brush Ridge from the present Lake River shoreline into the western portion of Long Meadow. It extends just beyond the presently defined north and south boundaries of the site. As the project proceeds, pertinent information will be placed on the topographic map. For example, in addition to general topographic features, we have thus far recorded the location of mapping grid points, excavation units, auger probes, house pits, cultural features (e.g., ovens, wall trenches, hearths) and the Quarry Haul Road.

The topographic integrity of the site is excellent. To take full advantage of this potential information, it would be worthwhile to increase the accuracy of the map in order to more clearly delineate midden berms and topographic variation between sections of the larger house depressions.

Augering: 1993

Testing of the site resumed in July of 1993. This phase of the project lasted twenty days. A five person crew, occasionally augmented by student volunteers, participated in additional augering and the excavation of two test units. In contrast to the 1992 field season, which had been dry and temperate, the 1993 work was conducted during the one of the wettest Julys on record.

In 1994, the augers were placed to firmly establish horizontal site boundaries, and to examine the topographic features of Site Ridge in order to see how they related to the vertical dimensions of the site. Auger location was recorded by transit using the recently placed mapping points, and augers were numbered sequentially as they were performed (Auger 93-15). As the crews often worked some distance apart, one crew was designated "odd" and one "even." By the end of the augering portion of the project, more "even" than "odd" augers had been completed, hence the omitted numbers in our records. Vials with the auger iden-



FIGURE 7.
TOPOGRAPHIC MAP OF BRUSH RIDGE SHOWING LOCATION OF 1992 AND 1993 AUGERS.

tification number were again placed within the shaft prior to backfilling. All sediment was screened through 1/8" mesh, and materials were recorded and collected consistent with the fashion of the previous auger testing. The inclement weather made differentiating the composition and appearance of the sediment more difficult than it had been the previous summer, and the cultural material was also more difficult to retrieve from the screens. Despite these disparate circumstances, the material assemblages and descriptions of stratigraphy produced in 1992 and 1993 are essentially the same.

Artifacts recovered during auger tests included projectile points, chipped and ground stone tools, trade beads, shoto clay, and worked bone tools.

The results of the auger testing clearly show that Site Ridge was the locus of cultural activity at 45CL1. The

west slope of Site Ridge, in particular, appeared to have the greatest density (defined as number of examples) per cubic meter of cultural material. Auger 92-13 produced the highest density of FCR; Auger 93-01, the highest density of macrobotanical material; and Auger 92-12 the highest density of faunal material. The greatest artifact density indicated by an auger test was from Auger 92-28. It should be noted that this was one of the augers that revealed a feature, and that a number of these artifacts were unmodified pieces of raw material that were assumed to have been cached. High density of cultural material of one type can be seen to indicate that there is a likelihood of high densities of other cultural materials in the auger as well.

The auger tests also clearly demonstrate that the areas of cultural activity are bordered by areas of little or no activity on the east slope of Site Ridge, and of no activity beyond approximately the 5.4 meter contour line

on the west slope of Site Ridge. This was probably due to the riverine orientation of the town, and the location of the river channel.

Six large, rectangular depressions were noted atop Site Ridge. They vary somewhat in length and consistency of shape, with those from the middle of the site to the north appearing generally more distinct than those to the south. The vegetation on Site Ridge is more dense to the south, and this probably has played a role in obscuring the depressions in that area. The depressions vary between 20 and 70 meters in length, and between eight and twelve meters in width, with their long axis orientated parallel to the direction of Site Ridge. Their depths vary, but average between 1-2 meters. Often the “rims” of the depressions appear as berms around them.

Fifteen of the 53 augers were placed in order to investigate deposits within the depressions or beneath the associated berms.

Augers placed in the depressions in 1992 were 92-27, 92-28, 92-30, and 92-31 in Depression 1, and 92-32 in Depression 3. These augers exposed a layer of duff and relatively sterile recent sediments to approximately 25-30 cm below surface. Beneath that, all contained significant cultural deposits, with some of the in-house variation suggested by extensive excavations at other plankhouses (Ames, et al., 1992). Augers 92-27 and 92-30 were quite close to each other and both encountered deposits of burned earth, ash, charcoal, calcined bone, and fire-cracked rock which appeared to be hearth-related.

Auger 92-27 contained a small charcoal deposit, approximately 4 cm across and surrounded by notably compact sand, which extended downward from 28 cm past 45 cm. This was interpreted as being a small postmold, perhaps related to the construction of a hearth box. Auger 92-31 was placed near the center of the depression in an area which may have been an area of storage pits, as it contained the deepest cultural content of the augers placed in the depression. Auger 92-28 produced dark, organic soil similar in appearance to that called “reworked pit fill” at the Meier house (Ames, et al., 1992). It also struck a cache of cobbles between 75 and 100 cm below surface, which would be appropriate for an interior pit deposit. Some of the

cobbles showed slight cultural alteration (battering, hammerstone use), but most appeared unused.

Auger 92-32 was placed in Depression 3 at the south end of the site. It was placed in the center of the depression, and may have also been related to storage features, as no hearths were struck. Cultural materials continued down to 1.15 meters below surface. A rolled copper bead was found between 36 and 45 cm below surface.

In 1993, Auger 93-18 was placed within Depression 2, from which several artifacts had been surface collected in 1992. The results of this auger were similar to those of 1992 in which cultural material was intermingled with recent duff in its upper levels and increased noticeably around 25-30 cm below surface. It contained sediments interpreted as reworked pit fill, and was probably in an area of the house comparable to Auger 92-28, which appeared to be an interior storage pit.

Auger 93-14 was placed with the intention of investigating the northern extent of Depression 1 toward the north end of the site. The stratigraphy is unlike that of the other house depression augers in that it is relatively uniform, and shows little evidence of cultural features. The auger contains less cultural material than other Depression probes, and is sterile below 75 cm.

Two interpretations of these results have been hypothesized. The auger may have been placed in an area outside a house due to difficulty in reading the landform through the foliage. The other possibility is that the depression is noncultural in origin. Excavation of a 1x4 meter trench which took place subsequent to this auger, placed so as to investigate the subterranean evidence of a house wall, indicates that an auger placed in a “wall” area might appear relatively sterile.

Other augers placed in the border or “berm” areas of the depressions uncovered deep and extensive deposits. Auger 92-09, placed on the ridge surrounding the Depression 3, produced cultural deposits which extended below two meters from surface. Such variation in the nature of house-associated deposits would be natural at a town site that was occupied for a long time, as houses were built, maintained, rebuilt, and built anew.

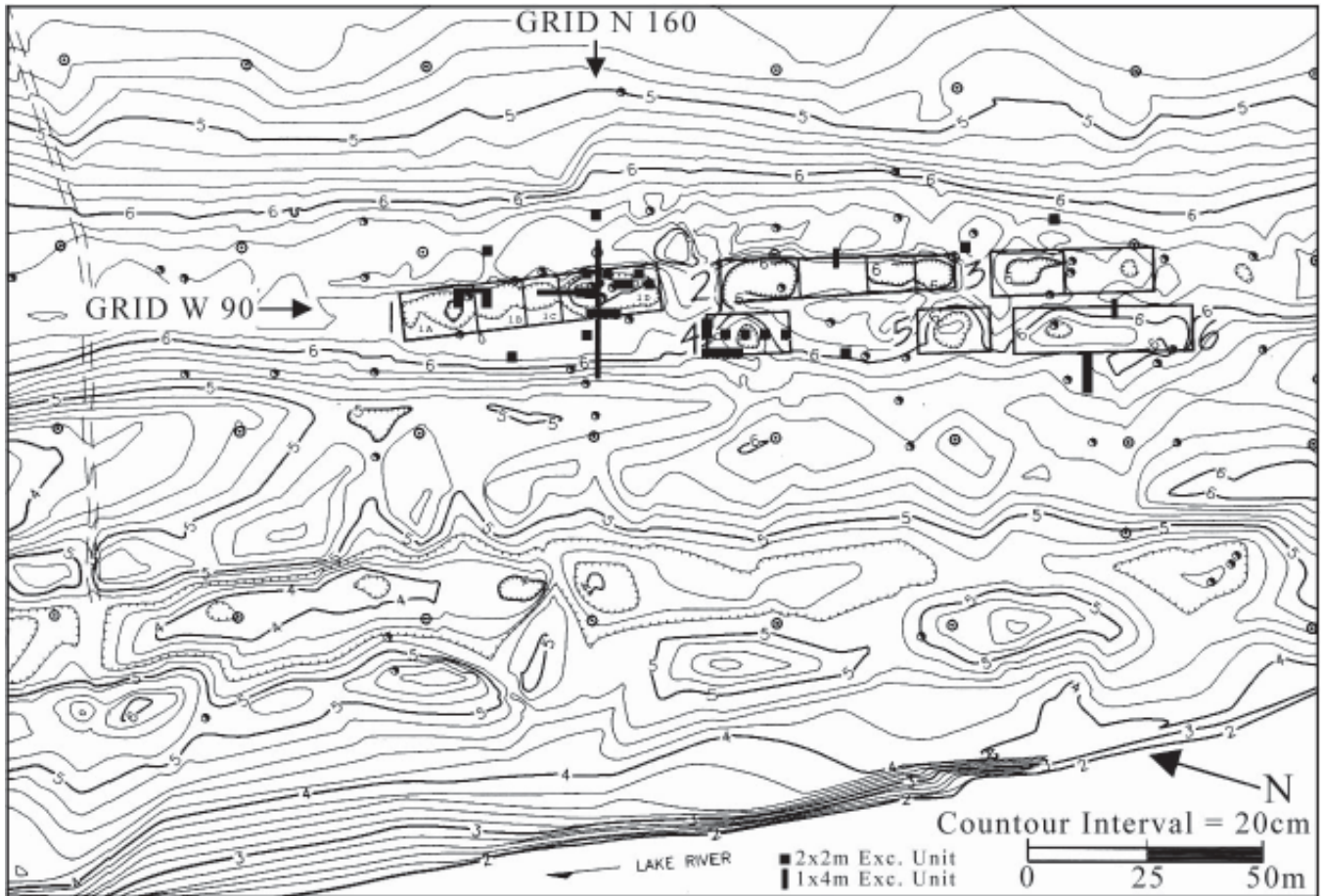


FIGURE 8.
TOPOGRAPHIC MAP SHOWING LOCATION OF 1993, 1994, 1995 AND 1996 EXCAVATION UNITS.

Excavations: 1993

1993 Goals and Methods

Following the completion of augering in 1993, two test units were excavated in areas deemed promising from our assessment of the auger data. One was a 1x4 meter unit placed to investigate the interior slope of a suspected house depression. This was an area of Depression 1, into which Augers 92-27, 92-28, 92-30, and 92-31 had been placed. It was designated “House” in the field, but was later identified as N159-160/W91-95. A 2x2 meter unit was placed in an area where cultural material appeared to extend beyond the reach of Auger 93-20. It was referred to as “midden” in the field paperwork, but was later designated as N107-109/W98-100.

Excavation was conducted using shovel, trowel, and brush in both test units. Sediment was screened through 1/4" mesh. The only exception to this was during the course of work in N107-109/W98-100, when three buckets of sediment were screened through 1/8" mesh to test whether trade beads were being missed. Five were found. Cultural material was sorted into obvious “types” (e.g., bone, chipped lithic tools, debitage) in the field and bagged for examination in the lab. All faunal material, botanical material unrelated to current site habitat, unworked stone that appeared to be raw material, debitage, and any unique or curious items were collected. Charcoal was collected for possible use in radiocarbon dating when deemed appropriate. Cultural features were noted, drawn, mapped, and in some instances, photographed prior to removal. Since this was a test, however, they were not assigned a separate feature number.

Artifacts recovered included projectile points, ground stone tools, chipped lithic tools, scrapers, bone tools (including a bone tool handle and several bone awls), trade beads, a Phoenix button, a Chinese coin, a bone digging stick handle, net weights, scrapers, a geometrically-incised pumice fragment and a bone pendant that appears to have a somewhat zoomorphic shape.

Excavations: 1994

The auger probes and two units excavated in 1993 provided a good basis for initiating the Phase I testing program in 1994. The 1992-1993 limited subsurface testing provided basic information on the distribution of cultural deposits (vertical and horizontal) and revealed the richness of these deposits. The testing had also shown the complexity of the site. The purpose of the 1994 testing project was to more adequately understand the site's contents by exposing stratigraphic profiles and cultural features in a wide variety of site deposits. The excavations were conducted over a seven week period during the summer. The weather was remarkable, and excavation conditions were optimal.

1994 Goals

The 1994 excavation project had three distinct goals. Goal 1 was to complete the unfinished 1993 test unit N107-109/W98-100. Goal 2 was to begin testing three major on-site topographic features— rear berm, oval depressions, and front debris fields. Goal 3 was to clarify general site stratigraphy by determining: (a) the depth of cultural deposit, (b) the stratigraphic record in relation to depth, and (c) the nature of the stratigraphic profile across the site's major topographic features.

Carrying out Goal 1 was straightforward. The 1993 excavation of unit N107-109/W98-100 revealed a deep sequence of discrete depositional events that were deemed invaluable for providing information on site chronology and formation processes. At the end of the 1993 field season, this unit contained substantial cultural deposits below the final excavated level. Excavation through the remaining cultural deposits was completed to get the full stratigraphic record for this portion of the site (front debris field).

Goal 2 was to test the three major topographic features on the site: (a) the rear berm, which is an el-

evated ridge that extends the full length of the site between the eastern most row of depressions and Long Meadow, (b) the rectangular depressions believed to be house pits, and (c) the midden debris fields covering much of the west portion of the site.

Auger probes and 1993 testing led us to hypothesize that these features are the result of three distinct formation processes at the town site. Testing in 1994 was therefore aimed at providing information about the formation of each feature and to determine if there is significant spatial variation in content and temporal chronology within each feature type.

Goal 3 was to enhance our understanding of site stratigraphy. The pertinent aspects of stratigraphy include the depth of cultural deposits, the stratigraphic record in relation to depth, and the nature of the stratigraphic profile through the site's major topographic features. The stratigraphic profile of concern crosses east to west from the rear berm, through a house depression, through the front debris field and into the beach deposits.

From the information gained by testing the topography of Site Ridge through augering and initial phase I excavations, we have the ability to begin inferring site formation processes and determining the history of those processes. This allows us to formulate a basic template by which to assess future exposures.

1994 Methods

Each 2 m² was excavated by a two-person crew of students. Additionally, three field crew members were assigned to assist students in excavation strategies and interpretations of complex deposits. A field lab director was also employed to manage preliminary curation and record keeping. The students and staff were overseen by a field director and assistant field director.

Each 2m² unit was subdivided into four 1x1 meter quadrants for increased spatial control. A combination of skim-shovelling and trowelling was used to excavate each quadrant. Where features and large faunal material were encountered, more careful methods of excavation were usually employed. Material collected from each quadrant was treated as a separate sample, but recorded on a single level form for each

level excavated in a 2m² unit. Arbitrary 10 cm, 15 cm or 20 cm levels were excavated, depending on their location at the site. All elevation measurements were taken using line levels on nylon string attached to the unit datum. Each elevation was transcribed into meters above sea level (ASL) according to the elevations provided by the laser transit record for unit datums.

A variety of sampling strategies were applied to each level excavated. Given the extraordinarily high density of cultural material at the site, the matrix in three of the four quadrants was screened through 1/4" mesh. The remaining quadrant was screened through 1/8" mesh to recover smaller materials such as retouched flakes, fish bone, and trade beads that are often lost through the larger mesh. To supplement these larger samples, a one-quart 1/16" screen sample and a one-quart bulk soil sample were taken from the same quadrant as the 1/8" screen sample. These samples were obtained to collect the small items necessary for microbotanical, microfaunal, and soil analysis. These smaller samples were also taken from some features, such as storage pits. The 1/16" screen samples were water screened adjacent to the site at Gee Creek.

Pertinent information was recorded in a variety of places, including a label on each artifact and specimen container, three field catalogues (artifact, specimen, and feature), level forms, feature forms, and personal notebooks.

Data from each excavated level was recorded on a level form. This data included the number of sample bags and the kinds of material collected (e.g., bulk soil, faunal, botanical, lithic), the count and weight of fire-cracked rock, a soil matrix description (color and character), a list of field catalogued artifacts and specimens, an interpretive summary, and a floor map showing soil boundaries, features and artifacts.

Three catalogs were maintained at the field lab: an artifact catalog, a specimen catalog, and a feature catalog. Formed artifacts (i.e. bone tools and stone tools, preforms, and cores) were recorded in the artifact catalog. Other items of interest that were found *in situ* such as charcoal, wood, shell with hinges, nuts, and bulbs were recorded as specimens. Bulk soil samples and 1/6" screen samples were also recorded as specimens. When possible, the three-point provenience was recorded for each item cataloged. Other information in-

cluded a field name, the date found, unit address, level, elevation, and the recorder's name. This basic information was recorded in their respective catalog, on the artifact or sample container, and on the level form.

Features are obviously treated somewhat differently than collected items. Basic feature data was recorded in the field catalog. More detailed description of the feature was recorded on a feature form. In addition to the basic field information, the form data includes, when pertinent, a feature sketch at various levels of excavation, soil matrix descriptions, shape and orientation, and contents. Samples collected from the feature were also recorded on the feature form, as well as the level form.

Cultural material collected from the screens and found *in situ* were placed in labeled field containers. Formed artifacts and specimens were individually placed in field containers and the three-point provenience recorded when possible. These were sent directly to the field lab for processing. Other materials collected were separated by material type and by quadrant and feature. Basic material categories included lithic, faunal, botanical, and miscellaneous. These materials were placed in a level box and given to the field lab for processing at the termination of each level excavated. Fire-cracked rock was weighed and counted for each quadrant and/or feature, but was not collected.

Personal notebooks were kept by each individual. These contained daily descriptions of anything the students believed to be relevant to the archaeological project. Such diverse information as excavation methodology, their interpretation of the unit, the weather, their mood and how they were getting along with their partner or other crew members were included.

Three cameras were used to keep a photographic record of site excavation. One Minolta 35 mm contained black and white print film, a second Minolta 35 mm contained color slide film, and the third was a Polaroid. The photographic record includes overview pictures of the site and unit blocks, in-progress shots of feature excavation, and formal pictures of features, unit floors and profiles. The Polaroid was primarily used to take snapshots of features, which were attached to the feature form. A photo log was maintained for each roll of black and white and color slide film.

A field lab was established to process collected materials and paper work. Artifacts, specimens, and level boxes were field checked to make certain items were properly labeled and in appropriate containers. Paper work such as field forms and feature forms were also checked to be sure all pertinent data was recorded and consistent with other recorded data. Additionally, the field lab was responsible for processing the 1/16" samples.

A main laboratory was also in operation at PSU during the field work. Catalogued artifacts and specimens were sent to the main lab daily while level boxes were sent in once the level was completed. After preliminary processing in the field, the main lab did final curation. Here perishable material was properly curated and general artifact data was entered into a spreadsheet (EXCEL 5.0). A running database therefore provided basic information on artifact frequency and distribution that could be used for methodological decision making in the field while excavation progressed.

A total of 19 units were opened (including the reopening of the 1993 units) in 1994. Each unit covered a 4 m² area. The three goals discussed above and the kinds of data desired at particular locations influenced the shape, orientation, and spatial placement of units. Where the recognition of features was deemed most important, we used 2x2 meter units to maximize horizontal exposure. When stratigraphic profiles were the primary goal, we used 1x4 meter units. To increase the stratigraphic exposure in one oval depression, we linked a series of 1x4 m units to create two long, perpendicular profiles.

The units were laid out using the same laser transit system employed in making the 1993 topographic site map. One corner of each unit (usually the NW) was placed on the landform and the address related to the grid system of the topographic map. The remaining three corners were triangulated from the unit corner laid out by the transit using tape measures and, when necessary, a plumb bob. Unit datums were also laid out for each unit using the laser transit. A primary datum point for a mechanical field transit was created as a single reference point for easily correlating the elevations of the units comprising the N159-160/W79-107 trench and the N161-172/W88-89 trench.

1994 Excavation Unit Placement

The placement of units was geared toward excavating a broad sampling the site and examining a substantial stratigraphic exposure linking major features together. In addition to reopening the 1993 test units, eight units were widely spaced over the site to collect a spatially-broad sample from the three major topographic features. Previous work on the rear berm was limited to auger probes. The 1994 testing included four 2x2 m excavation units (N183-185/W78-80; N159-161/W70-72; N75-77/W76-78; N56-58/W70-72) intermittently dispersed along the full length of the east berm. The testing strategy was aimed at finding cultural features as well as revealing the stratigraphic record at various locations along the entire extent of the berm. Unit N75-77/W77-81, although on the rear berm, was unique in that it was placed on a mound associated with a berm between two house depressions (Figure 8).

The 1993 testing of the front debris fields was expanded to include two additional units (N136-138/W94-96 and N179-181/W101-103). The units were widely spaced northward from the 1993 test to cover the northern extent of this feature. Two-meter square units were used in hopes of finding yard activity features within these midden fields.

Two strategies were employed to increase our sample of house pit deposits. First, two house pits were tested using the same basic technique as in the 1993 oval depression test. Each depression was tested by placing one 1x4 meter unit, oriented E-W, on the eastern side slope (N106-107/W77-81 and N44-45/W89-93). The tests were successful in locating the house wall trench features and linking these to storage pit corridors. The second strategy was employed in Depression 1. Here, three 1x4 meter units were linked together to create a 1x12 m, N-S oriented trench that bisected the approximate center of the northern side slope of the depression. This was done, in part, to find the northern wall trench and the location of various interior house features.

Finally, to maximize the stratigraphic exposure and study the relationship between the three major types of site deposits, eight 1x4 meter units were linked together with the 1993 test unit, creating a 32 m trench that crosscuts E-W through the three major topographic

features. The trench, N159-160/W79-107, crosses westward from the rear berm, bisects the northern half of Depression 1, and cuts through the frontal debris fields just short of what is believed to be a beach front. The primary goal of this trench was to create a continuous stratigraphic profile linking these major features together. The information gained by such a large exposure may now be used as a basis for interpreting smaller, isolated stratigraphic profiles at the site. Additionally, the trench stratigraphically links features in each depositional context. For example, the continuous exposure should allow the house floor and other household features to be more easily linked to dumping episodes and yard activity features in the debris field and rear berm.

Unfortunately, discontinuities and facies changes may make this more difficult than originally expected. Finally, the combination of the two trenches in the same house pit provides a substantial horizontal exposure for studying the house structure and interior deposits.

Excavations: 1995

1995 Goals

The 1995 excavations focused on three house depressions: 1, 4, and 6 (see Figure 8). The excavations continued to be guided by the goals of the 1994 season, but with refinements based upon what we had learned and on changes in the context of the project. In a Memorandum of Agreement between the USFWS, the Washington State Historic Preservation Office (WA SHPO), and the Advisory Council for Historic Preservation (ACHP), it was agreed that 1997 would be the final season for excavation in Phase 1 work at Cathlapotle. It had also become clear that the site was so rich that excavations would be difficult to continue over a long period of time without significant increases in funding levels from the various sources supporting the project. It was thought that, due to funding problems, 1996 might actually be the last season of work. Therefore, the sampling approach was modified. Twenty units were opened, for an exposure area of 88 m².

1995 Methods

Field and recording methods used in 1994 continued, with one significant change. Bulk samples were collected from the NW quadrant of every unit, as well as from features (on a judgment basis). These 10-liter minimum bulk samples were water screened through four nested screens of 4 mm², 2 mm², 1 mm², and .5 mm². The resulting samples were then dried. These samples replaced the 1/8-inch mesh screen samples of 1994. It was felt that constant volume sampling and sorting in laboratory conditions would provide greater control over microartifacts than would 1/8-inch mesh screening and field sorting. This procedure was very successful.

1995: House Depression 6

Auger tests in the east berm of Depression 6 had recovered charcoal that had produced three of the four oldest dates in our sample (910 ± 210, 740 ± 140, and 720 ± 150 BP) (see *Radiocarbon Dating* in Results, and Table 5). The samples were recovered at depths approaching 2 meters. It was necessary to expose these sediments and to determine the context from which the samples were taken. We also wanted an exposure at the south end of the site comparable to the long trench excavated in 1994 through Depression 1. To these ends a 2x6 meter trench (N52-54/W99-105) was excavated from the western edge of Depression 6 to the west. The placement of the trench was intended to locate the western wall of the structure, and to expose a long profile and the deep sediments as close to where the dates had been recovered as possible.

1995: House Depression 4

The house depressions at Cathlapotle occur in two rows (see *Other Structural Features* in Results). The three depressions in the westernmost row (Depressions 4, 5, and 6) are, as a group, smaller than the three depressions to the east. Our previous work, and that described below, had focused on Depression 1, the largest depression of the six. Since we were sampling the largest structure, it was necessary then to sample at least one small structure. In contrast to Depression 1 which is approximately 73 meters x 10 meters, Depression 4 is only 20 meters x 10 meters. (The Meier structure is 32 meters x 15 meters). We had located

the north wall of the structure in 1994. Five units were laid out across the center of the house depression to sample what we expected to be the area containing the structure's central hearths and roof supports (see Ames et al. 1992). The plan was to complete a checkerboard by excavating a second series of units in 1996 to sample the house's sleeping areas. The units in Depression 4 were aligned along the W96 grid line (W96-98/E132-134, W96-98/E128-130, W96-98/E124-126 and W96-98/E120-122).

1995: House Depression 1

Depression 1, or House 1, is subdivided into several subdepressions based on internal topography (see section *Large House Depressions* in Results). The deepest and largest subdepression (D) is at the southern end of the depression. It has received the most attention of the depressions and the 1995 excavations continued that focus. The house test of 1993 had been located on its western rim, and the long test trenches of 1994 were excavated through it. In 1995, this effort was expanded by placing a checkerboard arrangement of four 2x2 meter units (N147-149/W86-88, N149-151/W84-86, N155-157/W84-86), one 2x4 meter unit (N151-153/W 86-88) to the south of the 1994 trench, one 2x2 meter unit (N160-162/W84-86), and a large 3x4 meter unit (N160-164/W87-90) to the north. The units to the south of the trench exposed a portion of the central area of the house and portions of the area along the structure's east wall, under where the sleeping benches would have been located. The single 2x2 meter unit north of the 1994 trench was also placed to expose sediments in this area. The large block to the north of the trench exposed a large portion of the center of the structure.

Work at the Meier Site (Ames et al. 1992) and our earlier work at Cathlapotle had made it clear that major storage features were located below the floors and sleeping platforms of these structures. The placement of units was arranged in part to sample those features. Additionally, work at Meier had shown that both significant architectural features and hearths were located in the center of these structures. The central hearths at the Meier Site had proven important in developing a construction history of that structure, as well as providing evidence for the intense food processing and other activities. The sampling of such areas was, there-

fore, considered an important part of the overall excavation strategy.

1995: Other Areas

Two excavation units begun in 1994 were completed in 1995. Unit N159-160/W103-107 was excavated down to culturally-sterile deposits. Completion of this unit finished excavation of the N159 trench. Unit N75-W77/W76-78, located on the eastern-most portion of the midden lobe (Lobe B) between Depressions 2 and 3, was also completed by excavating down to sterile. A third 1994 unit (N136-138/W94-96) was extended two meters south to unit N136-138/W 92-94. The 1994 unit had exposed a portion of the north wall of House 4 and we planned to extend that exposure. We also intended to expand our sample of the midden deposits capping the wall.

Excavation units in the two midden lobes were placed to acquire topographically-parallel samples. Unit N70-72/W93-95, located 20 meters west of N75/W76 in midden Lobe B, was opened in 1995. It exposed deposits in the western portion of Lobe B, between Depressions 5 and 6. Unit N136-138/W86-88 was opened at the eastern edge of Lobe A between Depression 1 and 2. Unit N136/W86 in Lobe A approximately parallels the placement of N 75/W76 in Lobe B, and N70/W93, in Lobe B, paralleled the 2x4 m² unit N136-138/W92-96 in Lobe A.

Excavations: 1996

1996 Goals

The objectives of the 1996 excavation were: 1) to increase our samples of a large house (House 1) and a smaller structure (House 4); 2) to expose interior structural features of these houses as well as a corner of House 4, and 3) to sample the debris field west of House 1. These goals were pursued in order to "round out" the Cathlapotle excavation project, considering that excavations in 1997 might not be possible for reasons mentioned above.

1996 Methods

Field methods were generally the same as those used in previous years at Cathlapotle. Units were excavated

primarily by trowel and skim-shoveling technique. Five-liter bulk samples taken from a predetermined 1x1m quad of each excavation unit, and botanical waterscreening continued at Gee Creek. In addition to the bulk samples collected for the botanical analysis, extensive bulk samples were collected opportunistically for forthcoming microdebitage, botanical, mechanical and chemical analyses.

1996: House Depression 1

As previously noted, Depression 1 has been divided into four subdepressions or “compartments:” A, B, C, and D, consecutively from north to south. Two 2x2 meter excavation units were placed in compartment B to identify structural features and hearth and pit deposits (N180-182/W88-90 and N180-182/W90-92). Both units yielded excellent samples of these deposits. One 1x4meter unit crossed from compartment B into compartment C. This unit (N176-180/W88-89), aligned with the roughly north-south axis of the plankhouse, was intended to sample cellar deposits as well as any features relating to the low berm between compartments B and C, possibly an interior wall or partition. Both wall and pit deposits were encountered in this long unit, evidence that pits at Cathlapotle are often found directly adjacent to walls. Compartment C was sampled by two 2x2 meter units (N174-176/W90-92 and N174-176/W88-90) placed to sample hearth and pit deposits. Feature 478, a large, sand-lined hearth in excellent preservation was found and excavated in the easterly of these two units (Figure). This is one of the few Cathlapotle hearths with a hearth box as commonly seen at the Meier site. The western unit produced a rich and diverse assemblage of artifacts, many in strikingly undisturbed sandy deposits.

Three excavation units were placed in depression 1D , bringing the total sample of House 1 excavations to over twenty units. Two 2x2 meter units were placed just South of the 1994 trench to expose the western wall as well as pit deposits (N157-159/W90-92 and N155-157/W90-92). Excavators here encountered typically excellent preservation which yielded a wide variety of artifacts as well as many informative structural features. The western wall was exposed as a 4 meter long wall trench feature traversing both excavation units, roughly aligned NNW. In the southeastern area of unit N155-157/W90-92 a large charcoal

feature was discovered, possibly representing a burn episode of this structure. In 1996, a unit just north of the 1994 trench on the western side of the house (N160-162/W90-92) yielded pit deposits directly adjacent to what must have been the western wall. Among the artifacts recovered from this unit is a wooden stake which was situated vertically in the matrix.

The establishment of stratigraphic relations between strata exposed in the 1994 trench and strata documented in the 1996 excavation units should be very instructive as to site formation and questions of depositional continuity. Analysis of the features recorded should reveal important details of construction history.

1996: House Depression 4

This depression, sampled previously in 1994 and 1995, was sampled by four excavation units aligned north-south as a large, 2x8 meter trench (N128-130/W99-101, N130-132/W99-101, N132-134/W99-101 and N134-136/W99-101). These units were placed to identify both cellar and wall deposits. Extensive wall features were encountered, including a series of intersecting plank- and postmolds in the most northerly unit. This appears to be a structural corner, with the corner turning east as expected and correlating with the wall trench identified in a separate excavation unit in 1994. At one point, a north-south trending wall trench roughly 8 meters in length traversed most of these excavation units simultaneously. The presence of multiple, overlapping structural features in this trench clearly indicated that the wall here had been replaced several times, or that several different walls were placed in the same area over some span of time. In addition to these distinct features, the usual wide variety of artifacts were recovered.

1996: Debris Field West of House 1

One unit was excavated by staff members only. This unit (N161-163/W104-106) was intended to sample the debris field west of Depression 1 and north of the 1994 trench at grid 159 North. This unit exposed a variety of burn features (though notably not hearths), ash, charcoal and generally-turbated deposits rich in artifacts and bones, and rather lacking in structural features aside from some indeterminate postmolds. Thus, it appears that the debris field characteristics identi-

fied in the 1994 trench extend at least to grid 163 North. This, as well as the deposits found in the western 1994 trench units, is suggestive of the great extent of the debris field deposit type between the village proper and Lake River. It will be of great interest to compare the activities suggested by the debris field contents with those suggested by 'within-dwelling' deposits.

1997 Laboratory Exercises

Due to the likelihood of flooding at 45CL1 in the summer of 1997, and due to a lack of funding, a lab school

was conducted in place of a field school. Students were instructed in the generation and handling of archaeological laboratory data, specifically Meier Site and Cathlapotle Site data. Each student then chose an excavation unit from Cathlapotle or Meier (representing either bench, cellar, or hearth/hearth-periphery deposits) and analyzed its contents with a variety of methods, such as mass analysis of lithic debitage, or the examination of artifacts for evidence of recycling. While the results are too limited to mention here, they clearly indicated that such studies are both feasible and worthwhile, if laborious.