

# Phase II Archeological Field Procedures

**T**HE FOLLOWING GUIDELINES outline Phase II archeological field and laboratory procedures. The guidelines are intended to provide comprehensive, detailed instructions for all Cultural Resources Program staff and ORISE interns members within a framework from which all Phase II evaluations will be conducted, as well as post-field laboratory procedures. Phase II archeological investigations are required by Sections 106 and 110 of the National Historic Preservation Act. Section 106 requires federal agencies to consider how their activities will affect historic properties, and requires archeological surveys prior to surface disturbing activities in areas not previously surveyed. Section 110 requires that federal agencies assume responsibility for identifying, evaluating, nominating and protecting historic properties under their control.

## Policy

### Field Technicians

All archeological technicians must have completed a formal archeological field school at a recognized university, community college, or equivalent and must have experience with Phase I survey and evaluation techniques. Each team member is required to attend a field safety and unexploded ordnance briefing prior to beginning field work. In the field, technicians are required to wear proper field attire and use appropriate equipment.

### Field Equipment Inventory

Prior to all field work, team members should account for and check the condition of all necessary field equipment. This includes: vehicle, shovels, screens, compasses, field attire, notebooks, pencils, pens, artifact bags, camera and film, flagging tape, water, radio, first aid kit, and the PA folder. Similarly, while in the field, all equipment not carried with team members must be kept in a locked field vehicle. The Field Equipment Inventory table lists the equipment that should accompany all field investigations.

## Part 2: Standing Operating Procedures

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### Pre-Field Preparation Procedures

The Cultural Resources Manager will provide all pertinent site information and survey guidance, including survey strategy/methodology or evaluation strategy/methodology and an appropriate timetable for completion. Field preparation should consist of the following steps:

1. Survey team members should first review the materials provided in the survey area and/or site folders. The Cultural Resources Manager compiles the folders as project managers request archeological survey of project areas. Survey area folders contain location, geomorphic unit and soils maps, and/or aerial photographs regarding known sites and previous surveys within or adjacent to the project area. Project folders contain all documentation collected during Phase I survey, the artifact catalogue, and a copy of the report citing the site.

2. All field equipment should be checked, evaluated, and maintained if necessary.

3. The field note box should be restocked with the following forms as appropriate:

- a) Field site forms
- b) Shovel test forms
- c) Test unit level forms
- d) Field specimen log
- e) Photograph log
- f) Graph paper
- g) Stamped bags for artifacts

### Phase II Field Evaluation Procedures

During the course of past fieldwork at Fort Bragg, a large number of archeological sites have been located by surveyors. Some sites have been evaluated as either eligible or not eligible for listing on the National Register of Historic Places (NRHP). Others have been evaluated as potentially-eligible; these were typically located, but definitive evaluations not accomplished.

Phase II field investigations are conducted to evaluate the significance of archeological sites and to determine eligibility for nomination to the National Register of Historic Places. Phase II evaluations are intensive

investigations in which 1x1, 1x2, 2x2 m<sup>2</sup> (or larger) units are excavated in discrete or arbitrary soil layers until layers that are sterile of cultural materials are encountered. Excavation and subsequent analysis of recovered artifacts should result in a determination of site type, site size, cultural affiliation, age, and site integrity. Sites located within the Impact Areas or any of the live-fire ranges will not be evaluated due to their potential for unexploded ordnance.

To be considered eligible, a site must be determined significant in American history or prehistory according to the National Register of Historic Places Criteria. A recommendation that a site is either eligible or not eligible for the NRHP must be justified with specific reasons. It is not acceptable to state merely that a site contains information dating to a particular time period and that this information is of local or regional importance. The investigator must state precisely why the site information is of value or why it is unique. For example, if a site contains material dating to a particular period, the value of the site should be expressed in terms of what is known about the local cultures represented by the material.

NRHP determinations must also specify how additional investigations would add significant knowledge to what is already known about the culture or components represented at the site. What specific research approaches are relevant to understanding these past cultures, and how would investigation of the site serve to provide new information? The questions asked, of course, depend on the nature of the resources under consideration and the state of knowledge concerning the prehistory and history of the project area. Existing historic context documents developed for this purpose are to be referenced wherever possible and appropriate.

Conversely, evaluations must include justifications for statements that sites are not significant (not eligible for the NRHP). Unsupported statements that other sites have similar deposits (without providing specific quantitative or qualitative evidence in support of this claim), or that refer only to site integrity, are not sufficient or acceptable. The statement that a site is not significant because it is small and lacks deep, intact subsurface deposits may or may not be true. Such a conclusion must be supported by the reason(s) why the investigator considers the site unimportant. The investigator must combine his/her knowledge resulting from the documentary research with the information and data obtained from the test excavations to arrive at legitimate, defensible conclusions concerning site significance.

For all sites that are recommended eligible for the NRHP by the Contractor, a detailed data recovery plan will be provided as part of the recommendations, detailing how adverse impacts at those sites are to be mitigated should such a need arise. The plan will address such questions as size, number, and locations of excavation units. Excavation methods, such as use of power machinery vs. hand excavation, water screening and flotation, and other special sampling procedures, are to be discussed as well. The recommended field data recovery program must be linked to research issues, specifically the kinds of important information that can be learned from the data to be collected. It must also indicate why the recommended procedures are appropriate to collect such information. The data recovery plan, or research design, by being linked to the NRHP eligibility justifications, provides additional justification as to why the site is eligible for inclusion on the NRHP.

A research design will be presented in the proposal. The research design will demonstrate the familiarity of the offerer with the archeology and history of the project area. The research design also will demonstrate how the offerer proposes to evaluate the sites to be investigated.

All archeological sites found that will be classified as eligible to the National Register of Historic Places must be reported to Mr. Wayne Boyko at 910-396-6680 at Fort Bragg as soon as possible after the resolution of such determinations to allow immediate protective measures to be taken. The investigator also will provide recommendations for the protection of National Register eligible sites at this time.

All recommendations for NRHP eligibility status must proceed, in part, through the use of comparative analyses making use of the results of past work on Fort Bragg. These analyses will be quantitatively based.

#### Fieldwork (Site Relocation, Testing, and Evaluation)

For the purpose of making determinations of NRHP eligibility, test excavations of the sites in question will be conducted. As part of this effort, site conditions, particularly those that have had an impact on or changed the site since discovery, will be assessed. At every site, however (save for those found to no longer exist), at least one 1.0 x 1.0 square meter unit will be opened as part of the testing.

At each site that has not been previously systematically shovel tested, or at those sites for which such previously collected data cannot be effectively used to determine intrasite patterning, including those with

excellent surface visibility, a uniform (i.e., with no internal gaps or areas where no tests are excavated) grid of 30 x 30 cm square shovel tests will be opened at 10 meter intervals to define site boundaries and internal structure. Site boundary definition will thus proceed using the same procedures used during intensive survey work on the installation. That is, once sites are located, shovel tests will be arranged so that they will be excavated in a grid oriented along cardinal directions at 10 meter intervals. The shovel tests will continue to be excavated until two consecutive negative tests are encountered. Every positive test will have tests excavated around it along cardinal directions (i.e., N/S and E/W) or grid directions, until at least two negative tests are reached; when new positive tests are found as a result of this work, testing will proceed in cardinal directions (i.e., N/S and E/W) around these tests until at least two negative tests are reached. The midpoint between the last positive shovel test and the first of the two negative tests shall constitute a boundary.

Shovel test locations for purposes of boundary definition are to be laid out using a transit and tape, with elevation data recorded for each unit to be used in the preparation of the site contour map. Pacing distances to shovel test locations is unacceptable during site boundary definition.

Shovel tests must be minimally 30 cm diameter, and must be opened to subsoil (i.e. as defined by specific soil conditions, but minimally encompassing Late Pleistocene and Holocene age sediments). No shovel test shall be shallower than 30 cm regardless of the depth of the subsoil and if subsoil is not reached, shovel tests should go to a depth of at least 75 cm. All excavated soil shall be screened through 1/4-inch mesh. Shovel test logs will be maintained providing information on the size, depth, soil conditions, and contents of all excavation units and shovel tests. The depth of all shovel tests will be noted in the report appendix for both positive and negative tests. Sufficient profiles to clearly delineate the natural and cultural structure of sites shall be drawn to scale, and soil horizons and strata shall be described in standard scientific terms. The Munsell Soil Color Chart shall be used to describe soil strata and colors. All features and other relevant phenomena shall be recorded in plan and profile, as appropriate, and other significant information including dimensions, depth, orientation, associations, etc., shall be recorded. All shovel test (and all other) excavations shall be backfilled.

Previous survey data shall be used in the determination of the site boundary and all previous test units and shovel tests opened on the site shall be placed on the site map. If it is not possible to accurately relocate

previous unit locations, detailed descriptions and illustrations of these unit locations will be provided, together with information on the contents of each provenience unit collected during prior work on the site.

Where previous survey work or the current intensive testing investigations have included systematic shovel testing using 30 cm diameter units, and at least twenty or more shovel tests were dug, artifact density/distribution maps must be prepared and used to guide the placement of larger test units (i.e., 50 x 50 cm and 1 x 1 m). This includes all cases where no such maps were produced as a result of previous investigations, otherwise earlier density/distribution maps may be used if they are considered appropriate. Where shovel testing is conducted as part of the site testing process itself, interpolated maps can be produced by hand in the field and use to guide the investigations. Most contour mapping programs, it should be noted, can be run on laptop computers, with the result that maps can produced in the field in an hour or less, including the time to enter data. Any such interpolated field maps that are generated will be curated with the field notes and records.

To reiterate, artifact density/distribution maps based on data collected during current and previous shovel testing activity must be used to guide the subsequent placement of test units, as well as the interpretation of material obtained from these units. No test units are to be opened in areas shovel testing programs have shown to be devoid of artifacts.

Standard archeological grid coordinates are to be used to locate and record all shovel test and larger units or collection areas opened, and these coordinates are to be included as part of the identification of specific units and their contents. Grid origins or other appropriate coordinates are to be indicated on site maps. Grid coordinate systems are the only acceptable intrasite identification method allowed.

The shovel test grid requirement will not be necessary at sites which have been adequately delineated through a 10m or 15 m interval, where site boundaries have been accurately ascertained during previous investigations. Density maps will, however, be produced using this data, and must be used to guide unit placement. The necessity of grid tests at particular sites will be determined by the Fort Bragg Cultural Resources Manager . All prior work at each site to be tested will, however, be thoroughly reported, and shall be considered part of the site assemblage used in all analyses and eligibility determinations.

Following site boundary definition (where this is warranted), 1 x 1 m or larger test units will then be opened at locations most likely to yield information concerning the site's significance. Typically, this means units should be placed in or near areas of high artifact density or unusual feature concentration. The placement of all units is to be justified in the report on the investigations, including explicit reference to density maps produced for the site.

All excavated soil shall be screened through 1/4-inch or smaller mesh. The size, depth, and contents of all excavation units shall be recorded. Sufficient profiles to clearly delineate the natural and cultural structure of sites shall be drawn to scale, and soil horizons and strata shall be described in standard scientific terms. The Munsell Soil Color Chart shall be used to describe soil strata and colors. All features and other relevant phenomena shall be recorded in plan and profile, as appropriate, and other significant information including dimensions, depth, orientation, associations, etc., shall be recorded. All excavations shall be backfilled.

A map shall be prepared for each site using a transit and tape. The locations of all shovel tests, test pits, grid data, contour intervals employing at least 30 cm resolution, and prominent cultural and natural features will be included on these maps. A separate map will be prepared for each site, and will be included in the evaluation report, drawn in a professional manner with lettering, scales, north arrows. Photocopies of field sketch maps are not acceptable, nor are statements that contours are not presented due to level terrain over the site area. That is, all shovel tests opened during fieldwork in the vicinity of project sites, as well as close interval boundary definition tests, must be illustrated on final project site maps. Negative as well as positive shovel tests along these transects and boundary definition tests in the vicinity of known sites and isolated finds must be included on the site maps. Grid coordinates and depths for all shovel tests and other surface and subsurface collection units (positive and negative) opened at sites are to be reported in the appendix. This will insure the easy relocation of individual concentrations or unusual features within both sites and isolated finds. On densely overgrown sites mapping will proceed employing (minimally) lines-of sight along the major and minor axes of the site grid, together with any additional mapping points as necessary to adequately document site boundaries and conditions. A minimum of 100 mapping points dispersed over and beyond the site area must be collected for each site in the generation of the contour map. Additional mapping points are to be collected as necessary to produce useful and accurate site maps.

A metal reference marker (site datum) will be placed at a prominent point (e.g., grid center, or at the corner of a key shovel test or test pit) at each site tested. The markers will aid in site relocation and serve as a reference for future investigations. If a metal marker had been placed at the site by a previous survey, attempts must be made to relocate it and use it as a reference point. If the previous marker cannot be relocated, a new metal marker will be placed and noted appropriately in the testing report. Whenever possible the locations of these markers are to be tied into permanent features and the marker tips should be brightly painted to facilitate location. No nails or spikes may be driven into trees for reference purposes however, it is recommended that the marker be located next to a large tree to both protect the marker and facilitate relocation. The marker shall be at least 30 inches long, and the upper 6 inches will be spray painted with day-glo orange coloring. The datum shall additionally be flagged with flagging tape, and left protruding at least 2 inches but no more than 4 inches above the ground surface.

Foundations, wells, cisterns, rock walls, and other surface features of historic sites shall be mapped as accurately as possible (using transit and tape) and photographed. Any extant structures shall also be mapped and photographed. Any cultural/historic landscape features that may figure into the area's evaluation as a historic landscape will also be mapped and photographed.

Every effort shall be made to determine the site- specific history, site function, date of construction, and occupation, and the identity of the inhabitants of historic sites. This will include examination of installation and local county property, tax, and other records as appropriate. Wells and cisterns shall be marked with flagging tape and reported to the CRM for future backfilling.

Exact site locations and boundaries will be plotted on USGS 7.5 minute Quadrangle Maps. The location of site datums or central grid points must also be documented using a Global Positioning System (GPS) accurate to within 5 meters. A list of UTM's based on these GPS readings and projected in NAD27 shall be included in the evaluation report.

Sufficient black and white and color photographs shall be taken to document the site area, the fieldwork, and the findings, to record significant data and information. Use of digital photography, as long as the resolution is comparable to black and white and color photographs, is encouraged. These shall include at least two photographs of the general site area. Unit or feature photographs shall contain an appropriate scale

and north arrow and include a menu or chalk board identifying the site, provenience, and subject. These shall be located clearly in the photographs, but placed so as not to detract from a clear rendering of the subject. Additional photographs of the subject may be taken without the information board, although the scale and directional indicator should be retained, and directional and other information shall be recorded for photograph captions.

During the fieldwork, a field log or journal shall be maintained detailing the work accomplished, findings, and observations, impressions, and all information obtained that will permit and assist attainment of the regulatory and research goals of the project. Printed forms may be used to record the various kinds of data obtained (i.e., photo logs, level forms, artifact bag lists, etc.), but the log should key observations etc., to the appropriate form containing additional or supporting information. This log or journal (together with the forms) shall become a part of the permanent project records and shall be included in the material to be curated.

All units will be opened to culturally sterile subsoil, or to the maximum depth possible for the unit size, with all fill screened. "Culturally sterile" levels are defined as natural depositional (soil) units where cultural evidence is no longer present, and the possibility of more deeply buried cultural deposits has been ruled out. That stage of unit excavation shall be determined by the Field Director or Principle Investigator. Unless rock or hard, compact clay (i.e., unequivocal subsoil) is reached, however, all units (shovel tests and test units) will be opened to a minimum of 50 cm, regardless of whether artifacts or features are present. Full justification for the testing procedures employed will be provided, particularly concerning the depth to which shovel tests and larger units are opened.

On all historic sites where evidence for substantial past occupation exists, such as evidence for the presence of domestic or industrial structures, sufficient historic archival research will be conducted to assist in the interpretation of the archeological materials recovered at these sites. This will include, minimally, documenting the chain of title for the property, the examination of census records where these are accessible, and the examination of other records such as relevant local histories, maps, and other data. Every effort shall be made to determine the site- specific history, site function, date of construction, and occupation, and the identity of the inhabitants of historic sites.

On sites with substantial historic components a systematic metal detector survey should be employed to assist in boundary delimitation, with positive hits flagged and mapped. If warranted, a sample of these hits may be excavated. Stabilization of all artifacts recovered must be conducted as part of curation requirements.

### Laboratory Analyses and Research

A professionally executed and legible map showing the location of all excavation units, 30 cm contour intervals, as well as significant cultural and natural features must be included in the report for each site examined. Grid coordinates for each unit opened at each site (whether positive or not) must be provided, together with a listing of the units size, depth, and contents. The contents of all positive shovel tests and excavation units are to be documented in such a way as to insure that the location can be revisited, and the artifacts (or lack thereof) coming from individual units can be determined. Readers must be able to go back and forth between the maps and appendices and easily determine which units produced materials, what those materials were, and how deep these units were opened. All positive, negative, and undug shovel tests in the vicinity of project sites, including those excavated from previous projects, must be illustrated on final project site maps where this is feasible. Where it is not possible to precisely map previous and current collection units, separate maps showing the locations of units excavated during earlier projects must be provided, together with information on the location of all artifacts found during this previous work. This information from earlier work must be reported by provenience in a report appendix.

Basic descriptive information about how the work was conducted must be provided in all reports, including the dates of the fieldwork and the number of person days it involved as well as the names of the field supervisors and crew members.

In all reports and state site forms, the official state site numbers will be used, and reference to the sites in the text will be by their official numbers. The use of temporary site numbers is unacceptable and will be the basis for the immediate rejection of draft or final reports.

Previous work at individual sites and in neighboring areas must be presented in sufficient detail for the reader to compare and determine what was done and what was found. If previously recorded collections units are located in site areas but could not be relocated, this should be discussed. If shovel testing or test pits were opened at sites during earlier

projects, maps showing the location of these tests must be presented or these previous tests should be added to the current site maps. Reproducing maps from earlier reports or fieldnotes (where these are legible) is acceptable. Summary data on the number and kinds of artifacts found during previous investigations must also be presented. These prior data are to be used to help assess the archeological record of the sites, areas, and isolated finds.

All cultural material obtained during the field research, including artifacts, faunal and flora remains, soil and other samples, etc., will be cleaned, stabilized when necessary, or treated as appropriate for the kind of material collected and the use for which it is intended. All material will be clearly labeled, using a permanent medium, in accordance with the Archeological Curation Standards and Guidelines North Carolina Department of Cultural Resources Division of Archives and History Office of State Archeology, 1995, the Fort Bragg Artifact Curation Facility Guidelines, 2000, or the standards in force at the time the work is carried out.

All cultural material collected will be systematically identified and analyzed using procedures or processes appropriate to the type of class of artifact under consideration. Projectile points will be classified typologically to assist chronological determinations. Ceramics will be analyzed to permit identification of known types where possible. The analytical methods and procedures used for each kind or class of artifact and the results of the analysis will be presented in the final report of investigations. A catalog/inventory of all artifacts by specific provenience and accession number, and which includes all summary information and identification generated during analyses, is to be included in the evaluation report.

All intact or potentially diagnostic projectile points and other intentionally retouched or ground stone or bone tools, representative examples of common ceramic categories, and all unusual or potentially typologically ambiguous sherds are to be illustrated using scaled photographs in the evaluation report. Every photograph will include a scale; a statement that artifacts are "Actual Size" is not acceptable. For each projectile point and other intentionally retouched or ground stone or bone tool, the following attribute data is to be included in the report: maximum length, width, and thickness, weight, and raw material. Additional attribute data may be compiled. For all prehistoric ceramic artifacts the following attribute data is to be included in the report: information about paste, surface finish, and rim and lip form. All lithic artifacts (i.e., tools and debitage) are to be

reported using standardized and well defined sorting criteria. All historic artifacts will likewise be described using standardized and well defined sorting criteria, and unusual specimens are to be illustrated.

A listing of primary references justifying the typological and artifactual analyses should be included in the report, to facilitate location and inspection of the original type descriptions or accounts of analysis procedures.

A primary emphasis of the laboratory analysis and reporting should be the determination of occupation span and function for each site, or for each component within complex sites. Sufficient data should be provided to insure that subsequent investigators can evaluate technical conclusions, interpretations, and NRHP eligibility determinations.

For sites with historic components, the evidence, procedures, and results taken to document the history, function, date of construction, occupation, and identity of inhabitants shall be presented. This will include recounting what was found in the installation, county, and other records.

At every site where 20 or more shovel tests are opened, artifact density/distribution maps must be produced to guide the interpretation of materials obtained from these units, and these maps must be presented in the report in a legible format. These maps may be produced using a standard computer mapping program such as Surfer, Symap, MacGridzo, or their equivalent. The method by which the maps were produced must be documented (i.e. the program, interpolative algorithm, scale/contour intervals must be referenced). Minimally, one map of overall artifact density must be prepared, based on the count or weight of materials, as considered appropriate by the project principal investigator. Additional maps of specific artifact categories (i.e. ceramics, lithics, historic glass, nails, etc.) may be produced at the discretion of the principal investigator to aid in site interpretation; the production and use of such additional maps is encouraged. Where widely differing components are present, such as 18th and 20th century historic occupations, or Late Archaic and Woodland occupations, and sufficient numbers of artifacts and discrete proveniences are present to yield useful results (>20 identifiable artifacts), separate maps must be produced. These maps must be used to recommend and guide the placement of larger test units during the testing programs. Unless compelling reasons are offered, no larger (50x50 cm or 1x1m ) units opened for purposes of NRHP evaluation should be excavated in areas that the shovel testing program has shown to be devoid of artifacts.