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|--|---------------|-----------|---|---------------|
| Report No. | Report Date | No. Pages | Type Report: | Project No. : |
| VTRC 89-R9 | November 1988 | 68 | Period Covered: | Contract No.: |
| Title and Subtitle | | | Key Words | |
| Virginia Department of Transportation Compliance with Section 106 of the National Historic Preservation Act | | | National Historic Preservation Act Section 106 Archeology Archaeology Historic Preservation | |
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| Supplementary Notes | | | | |
| Abstract | | | | |
| <p>Whenever a highway construction project is federally assisted, Section 106 of the National Historic Preservation Act, in effect, requires the Virginia Department of Transportation (VDOT) to locate and evaluate historic and prehistoric properties within the project area and to minimize any adverse effects that the project might have on a property determined to be included in or eligible for inclusion in the National Register of Historic Places. The process of complying with Section 106 contributes significantly to both national and state historic preservation efforts, but is time-consuming and costly for the VDOT or any other state agency whose federally assisted projects might impact historic sites. While Section 106 mandates consideration of both standing structures and archeological sites, the focus of this study is on the latter.</p> <p>This study (1) summarizes the theoretical process of compliance with Section 106, (2) summarizes and compares the compliance procedures of several East Coast states' transportation departments to those of the VDOT, and (3) makes several recommendations to expedite the VDOT's compliance process while still maintaining a commitment to historic preservation. These recommendations involve not only the VDOT but also other state agencies involved with cultural resources.</p> | | | | |

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VIRGINIA DEPARTMENT OF TRANSPORTATION COMPLIANCE WITH SECTION 106
OF THE NATIONAL HISTORIC PRESERVATION ACT

by

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(The opinions, findings, and conclusions expressed in this
report are those of the author and not necessarily those of
the sponsoring agencies.)

Virginia Transportation Research Council
(A Cooperative Organization Sponsored Jointly by the Virginia
Department of Transportation and the
University of Virginia)

Charlottesville, Virginia

November 1988
VTRC 89-R9

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INTRODUCTION

Federal and state laws require the Virginia Department of Transportation (VDOT) to consider the effect that proposed projects, both large and small, will have on certain historic properties including districts, buildings, historic and prehistoric archeological sites, and structures of local or national significance. Section 106 of the National Historic Preservation Act (NHPA) requires the VDOT to take the additional step of actually locating such properties.*

The amount of time and money spent locating and accounting for historic properties, particularly archeological sites, has become substantial. This has prompted several states and the federal government to examine the procedures used to identify and account for historic properties before and during highway construction. Because Virginia is committed both to the continued expansion of highway construction and to historic preservation, there is a desire to coordinate these two goals so that historic resources may be preserved while highway construction may continue at the desired pace.

The purpose of this study was to determine whether VDOT procedures for complying with historic preservation laws are comparable to those of other states with a similar historic background in the same geographic area. The states surveyed in addition to Virginia were Delaware, Maryland, North Carolina, and Pennsylvania.

*Because there are many parties involved and unfamiliar terms used with regard to compliance with federal and state historic preservation laws, Appendix A provides definitions and other relevant material that will be useful in understanding this study.

At the state level, historic preservation legislation is increasing. In some cases, recent state laws were enacted, but enforcement provisions were not yet promulgated. The Governor of Virginia recently created a commission to study historic preservation. The commission's task is to examine what Virginia does with regard to historic preservation, how Virginia's programs compare to those of other states, and how to involve the private sector in historic preservation.

Procedures do of course differ where state laws are involved since there are different compliance requirements in various state laws. However, since all states must comply with the same federal laws, there is a natural point of comparison. The primary federal law involved when a project is federally funded, licensed, or assisted is Section 106 of the NHPA. Therefore, a majority of the points of comparison in this study involve questions of Section 106 compliance. The main focus of this study is archeological investigation. However, Section 106 compliance requires consideration of both historic standing structures and archeological resources. The review for each is similar. Appendix B indicates what is involved in the consideration of standing structures in Virginia. The Maryland Highway Administration and the North Carolina Department of Transportation have an architectural historian on staff. The VDOT, the Delaware Department of Transportation, and the Pennsylvania Department of Transportation each have at least one staff archeologist with a background in architectural history. Generally, a standing structure can be considered significant if it is 50 years old or older, though there are exceptions.

FEDERAL LAWS

Though the NHPA, the National Environmental Policy Act (NEPA), the Department of Transportation Act, and Executive Order 11593 are most often encountered by state transportation agencies when highway construction projects are planned and carried out, numerous other federal laws relate to historic preservation. This section provides a discussion of most of the federal laws and shows the increasing national concern for cultural resources.*

*For a more detailed discussion of federal historic preservation laws, see Fowler, Federal Historic Preservation Law: National Historic Preservation Act, Executive Order 11593, and Other Recent Developments in Federal Law, 12 Wake Forest L. Rev. 31 (1976); Bower, Legal Aspects of Historic Preservation in Highway and Transportation Programs, NCHRP Report No. 138, Transportation Research Board, 1982.

The Antiquities Act of 1906
16 U.S.C. §§ 431-433

The Antiquities Act authorizes the President to designate significant historic places on federal land as national monuments. It also extends protection to other historic resources located on federal land but does not provide for consideration of federal projects that might negatively impact the properties.

The Historic Sites Act of 1935
16 U.S.C. §§ 461-467

The Historic Sites Act was the first to establish a national policy of historic preservation. The Act also provides a mechanism by which historic properties of national significance can be identified, evaluated, and maintained.

The National Historic Preservation Act of 1966
16 U.S.C. § 470-470w-6

The NHPA reaffirmed the national policy of preserving cultural and historic resources. Section 106 of the NHPA, 16 U.S.C. § 470f (1982), requires federal agencies with jurisdiction over a project to ensure that properties eligible for inclusion in the National Register of Historic Places (National Register) (i.e., those properties significant in American history, architecture, archeology, engineering, and culture) are identified along with potential impacts of the project and that mitigation measures are considered to minimize any adverse effects the project may have on the property. 36 C.F.R. § 60.4 (1987) governs the criteria for inclusion of a property in the National Register and is included in Appendix A for reference. (Section 106 of the NHPA is discussed more thoroughly later in this report.)

Section 4(f) of the Department of Transportation Act of 1966,
49 U.S.C. § 303, (and The Federal-Aid Highway Act of 1966,
23 U.S.C. § 138)

What is commonly known as Section 4(f) of the Department of Transportation Act forbids federal approval of a transportation project involving the use of land from any significant historic site of national, state, or local significance unless there is no feasible or prudent alternative to the use of the land and all possible planning to minimize the project's harmful effect on the site will be carried out and implemented. The Code of Federal Regulations

defines a historic site as significant only if it is in or eligible to be included in the National Register unless it is determined that Section 4(f) is otherwise applicable. 23 C.F.R. § 771.135(e) (1988).

Compliance with Section 4(f) can be more difficult than compliance with Section 106 of the NHPA since the latter recommends mitigation whereas the former commands avoidance unless there is no prudent or feasible alternative. Nothing in the NHPA requires a project to be stopped because of an expected adverse effect on a significant historic property. The information necessary to determine whether Section 4(f) documentation regarding historic standing structures or archeological sites will be necessary should be provided through the Section 106 review process. Once the Section 106 review process shows that a project will have an effect on a significant historic site, Section 4(f) planning should begin if it has not already begun.

With regard to historic sites, Section 4(f) most often involves and is traditionally invoked when a National Register or National Register-eligible standing structure is within the project boundaries. This is because of a caveat in the regulations promulgated to enforce compliance with Section 4(f) that states that an archeological site should be subject to Section 4(f) only if the site warrants preservation in place. See 23 C.F.R. § 771.135(g)(2) (1988). Otherwise, data recovery and mitigation will exempt the site from "mandatory" avoidance. The prudent and feasible alternatives do not have to be considered, but an excavation to obtain information or recover data must be completed before construction.*

A recent change in Section 4(f) compliance procedures provides that an individual 4(f) evaluation is not necessary in all cases. Rather, a nationwide programmatic evaluation may be substituted when certain conditions are met. 52 Fed. Reg. 31111 (1987). Generally, projects that can be processed using a programmatic evaluation are those that are confined to existing right of way and those that will use only a small amount of new right of way while not disturbing archeological resources that the State Historic Preservation Officer (SHPO) determines should be preserved in place. (For a list of the criteria to identify the applicability of the programmatic evaluation to a particular project, see Appendix C.) The programmatic evaluation reduces the amount of "project-by-project internal review and interagency coordination" normally associated with an individual Section 4(f) evaluation. Id. at 31112. Together with similar provisions for projects that will use "minor amounts of

*For a discussion of the treatment of archeological properties under Section 4(f), see Note, The Roads Through Our Ruins: Archeology and Section 4(f) of the Department of Transportation Act, 28 Wm. & Mary L. Rev. 155 (1986).

land from publicly owned public parks, recreation areas, and wildlife refuges," the programmatic evaluation for projects affecting historic sites is expected to result in a savings of three to six months. Id.

The National Environmental Policy Act of 1969
42 U.S.C. §§ 4321-4370

The NEPA declares that the federal government is to "preserve important historic, cultural, and natural aspects of our national heritage. . . ." 42 U.S.C. § 4331(b)(4). Compliance with the NEPA goes well beyond historic resource protection and requires consideration of all environmental aspects to be encountered by the project. The NEPA provides for the preparation of an environmental impact statement (EIS) for major federal undertakings. The NEPA and the NHPA overlap in their applicability to cultural and historic resources, and compliance with Section 106 of the NHPA will provide the necessary archeological information for inclusion in the EIS. The regulatory provisions of the Council on Environmental Quality require, to the extent possible, that a draft EIS be prepared "concurrently with and integrated with" the analyses required by Section 106 of the NHPA and other environmental review laws, which would include Section 4(f) of the Department of Transportation Act. 40 C.F.R. § 1502.25(a) (1987). Likewise, the federal regulatory provisions for the NHPA call for the integration of Section 106 compliance and NEPA requirements. See 36 C.F.R. §800.14 (1987). This coordination ensures that there will be a single document meeting all applicable requirements.

Executive Order 11593
"Protection and Enhancement of the Cultural Environment"
16 U.S.C. § 470

This Order, signed May 13, 1971, directs federal agencies to assume leadership in preserving the historical and cultural environment and also to locate and nominate properties within their jurisdiction for listing in the National Register. With the signing of this Order, a historic property no longer had to be listed in the National Register to be accounted for: the property only had to be determined to be eligible for inclusion in the National Register. This provision and many others of the Order have since been incorporated into the NHPA.

The Archeological and Historic Preservation Act of 1974
16 U.S.C. § 469a-469c

The Archeological and Historic Preservation Act, which amended the Reservoir Salvage Act of 1960, applies to federal construction projects or federally licensed projects, activities, or programs that could irreparably destroy important historic or archeological data through alteration of terrain. It provides for the recovery of data that would otherwise be lost because of construction activities. The Act also provides for the Secretary of the Interior to conduct the recovery in certain cases, a special funding mechanism using project funds, and reimbursement for delays in construction.

The Archeological Resources Protection Act of 1979
16 U.S.C. § 470aa-470ll

The Archeological Resources Protection Act prohibits disturbance and destruction of archeological resources on federal and Indian lands without a permit from the federal agency charged with management of the land.*

SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the NHPA, 16 U.S.C. § 470f, requires federal agencies with jurisdiction over a federal, federally assisted, or federally licensed undertaking to account for the effects the undertaking will have on properties included in or eligible for inclusion in the National Register. Though there are several criteria for evaluating a property's eligibility, it is most often criterion "d" that is used to evaluate the significance of an archeological site. It states: "that have yielded, or may be likely to yield, information important in prehistory or history." 36 C.F.R. § 60.4(d) (1987).

Any federally assisted highway project that could affect archeological or other historic properties must comply with the Section 106 review process governed by 36 C.F.R. §§ 800.1-800.15 (1987). The process must be completed and approved by the SHPO and, in some cases, the Advisory Council on Historic

*For a discussion of the relationship between the Archeological Resources Protection Act and the NHPA, see Holt, Archeological Preservation on Indian Lands: Conflicts and Dilemmas in Applying the National Historic Preservation Act, 15 *Envtl. L.* 413 (1985).

Preservation (the Council) before approval of the expenditure of federal funds or issuance of permits. Section 106 entails locating properties within the project area, evaluating them for eligibility for inclusion in the National Register, determining the effect the project will have on the properties, and, if necessary, accounting for archeological or historic resources through the development of a mitigation plan to lessen the project's adverse effect on the property.

Parties Involved in Section 106 Compliance

The NHPA also established the Council to coordinate the national historic preservation program and to develop the regulatory procedures for Section 106 compliance. The Council is to review and comment on all federal undertakings that are determined to have an effect on historic properties in or eligible for inclusion in the National Register. Council members include the Secretary of the Interior, the Secretary of Agriculture, the heads of four other U.S. agencies, and members chosen from the general public. See 16 U.S.C. § 470i.

The SHPO is designated by the governor or by statute to administer the state historic preservation program and to advise and assist federal and state agencies with Section 106 implementation and compliance. See 16 U.S.C. § 470a(b). Most often the SHPO is a director of the state agency that has jurisdiction over historic preservation and cultural resources. The SHPO may also assume primary responsibility for the review of federal undertakings in the state. The SHPO's responsibilities vary from state to state but may include assisting in the identification of historic properties within or near the project area; making recommendations for further investigative activities, such as field surveys, that may be necessary to identify properties before project approval; assessing effects and adverse effects of the project on historic properties; and assisting in the development of a mitigation plan if necessary. In all five states surveyed for this report, the SHPO (or the Review and Compliance Officer in the SHPO's office) reviews and must approve documentation of the state DOT's archeological conclusions before a project can be approved. The Federal Highway Administration (FHWA) relies on the expertise and access to information of these SHPOs and usually concurs in their final recommendations, but it is the FHWA that is ultimately responsible for Section 106 compliance.

The FHWA may use the services of the state's DOT to prepare the necessary information and analyses. In Virginia, as in Delaware, Maryland, North Carolina, and Pennsylvania, the state's DOT is responsible for carrying out the actual review process with the necessary assistance of and coordination by the SHPO. Other state agencies may be involved in the review. For example, in Maryland the Maryland Geological Survey Division of Archeology assists the

Maryland Highway Administration (MHA) throughout the review process by performing the initial assessment of the proposed project and by performing surveys and tests as contracted for by the MHA.

The Section 106 Review Process

The Section 106 review process does vary from state to state, but the programs of the states surveyed are remarkably similar because none of the five states has substituted a state review program in place of the federal review program as permitted by 36 C.F.R. § 800.7. Most differences arise because of the guidelines and requirements of the SHPO's office and the discretion of individual investigators. However, even the SHPOs' requirements are similar because of their reliance on standards and guidelines promulgated by the Department of the Interior, National Park Service. See Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines, 48 Fed. Reg. 44716 (1983). Before examining the procedures of each state, it may be helpful to discuss the federal procedure as outlined in 36 C.F.R. §§ 800.1-800.15 (1987). (A portion of the text of 36 C.F.R. Part 800 is in Appendix D.)

The first step of the review process is an assessment of information needs. See 36 C.F.R. § 800.4. The FHWA, or another delegated the responsibility, reviews available information regarding the existence and the likelihood of the existence of significant sites and determines the need for additional surveys and testing of the project area to identify properties within the project area that are in or eligible for inclusion in the National Register. This assessment provides the first opportunity to develop an idea of what the project area might yield, what research value any discovered site might have, and what will be necessary to locate and evaluate it.*

After this initial step, the review proceeds in one of four ways:

1. If there is a known site that is in the National Register, the FHWA and the SHPO determine whether the project will affect the property by applying the "criteria of effect." See 36 C.F.R. § 800.5(a).

*The background research can be performed in several ways including examination of documents (results of previous archeological surveys, historic maps, topographic maps, soils maps, local histories, etc.), interviews with current or previous area residents, examination of present and past land uses and structures, remote sensing techniques, and predictive modeling.

An undertaking has an effect on a historic property when the undertaking may alter the characteristics of the property that may qualify the property for inclusion in the National Register. For the purpose of determining effect, alteration to features of the property's location, setting, or use may be relevant depending on a property's significant characteristics and should be considered.

36 C.F.R. § 800.9(a). If there will be no effect, the Section 106 review is complete upon approval by the SHPO, and the project is cleared from the standpoint of archeological and historic impacts. See 36 C.F.R. § 800.5(b).

If the project is found likely to have an effect on the property, then the "criteria of adverse effect" are applied. See 36 C.F.R. § 800.5(c). "An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." 36 C.F.R. § 800.9(b). If the effect will not be adverse, then the Section 106 review can be completed in one of two ways. The FHWA can either obtain the approval of the SHPO and submit summary documentation to the Council or submit the necessary documentation to the Council for a 30-day review and notify the SHPO. The documentation necessary following a finding of no adverse effect is detailed in 36 C.F.R. § 800.8(a). If the effect will be adverse, then mitigation planning involving the FHWA and the SHPO would begin. In practice, when a significant archeological property is involved, a mitigation plan is usually developed after a determination that the project will have an effect on the site; thus a finding of adverse effect is avoided. An agreement regarding how the project's impact upon the site will be lessened is included in the documentation of the finding of no adverse effect. Either way, mitigation is the next step. (This is discussed in the next section.)

2. If, after the initial information assessment step, it is determined that there are no known sites already listed in the National Register but there is a known site that may be eligible for inclusion, then the site must be evaluated for eligibility for inclusion. See 36 C.F.R. § 800.4(c). If the site is determined not to be eligible by the SHPO and the FHWA, then the Section 106 review is complete. If the site is determined to be eligible, then the review process proceeds as outlined above (when there is a known National Register site). If the SHPO and the FHWA disagree about the eligibility of a site, the Secretary of the Interior is to be consulted for his or her opinion.

3. If, after the initial assessment, it is determined that there are no known sites but previous surveys in the area were inadequate or there is a high likelihood that a significant site may exist, additional surveys and testing may be required by the SHPO. See 36 C.F.R. § 800.4(a)(2). This additional work is performed by either the FHWA or another contracted to do the work by the FHWA. (In practice the state DOT performs the work.) If no significant archeological or historic properties are found, then the Section 106 review is complete upon approval by the SHPO. If potentially significant

properties are found, then the site must be evaluated for inclusion in the National Register. The review process then continues as outlined above.

4. If the initial assessment shows no known sites that may be eligible for inclusion in the National Register and no additional surveys or testing will be necessary, then the review process is complete upon approval by the SHPO.

Mitigation

Mitigation planning and execution are the final aspects of Section 106 compliance and entail the development of ways to avoid or reduce the adverse effects the project will have on the archeological site. See 36 C.F.R. § 800.5(4)-(6). Mitigation planning can often be very time-consuming, as options and alternatives are considered.

If a determination of adverse effect is reached, interested persons including the head of a local government and the representative of an Indian tribe are to be invited to participate in the planning process as consulting parties if they so request. A memorandum of agreement (MOA) detailing what will be done to minimize the project's adverse effect is developed by the SHPO and the FHWA. The Council may also participate in the drafting of the MOA and always has the opportunity to review it. See 36 C.F.R. § 800.6. If an MOA is agreed upon by the FHWA, the SHPO, and the Council, then the Section 106 review process is complete and federal funds or permits can be authorized. When an MOA is final, the project construction is to comply with its terms. Should an EIS be necessary for the project, the MOA or Council comments and the intended response to the comments are to be included in the final EIS. Federal-Aid Highway Program Manual, vol. 7, ch. 7, 22(19)(n)(3) (1974). If a determination of no adverse effect is reached but is conditioned upon proposed mitigation, then an MOA is not necessary, but the plan developed and agreed upon must be complied with.

The most common mitigation methods are avoidance and data recovery. Technically, avoidance is not always considered to be mitigation since it eliminates the project's impact on the site and the necessity for further mitigation planning through selection of an alternative location or through design or construction site modifications. Avoidance, in the sense of rerouting, is often chosen well before a Section 106 investigation is complete when it becomes likely that the project will impact a significant historic site.

Data recovery is appropriate and most commonly used when the site cannot be avoided and contains valuable research information that will be lost during construction. Data recoveries may include an archeological "dig," chemical analysis of soils and other findings, and curation of materials. Because the location, type, and extent of a site vary from project to project, so does the

information obtained through data recovery and the method used to obtain it. It is not likely that all data from a particular site will be recovered. For these reasons, research questions that address the type of knowledge that the recovery project should provide are formulated. They are essential in planning an appropriate recovery and are therefore specific in many cases. They are designed to facilitate the collection of data needed to fill in the gaps in our knowledge of history and prehistory. The research questions tell the consultant (or whomever is performing the work) what type of information is likely to be gained and what to look for during the recovery.

Another mitigation method employed by highway departments to lessen a project's impact on an archeological site is burial under fill. This entails burying the site so that it is preserved for the future while for the present the highway may pass through. This is not commonly used as there is concern that leachate from the fill soil placed over the site will disturb and perhaps destroy the information to be obtained in the future.

Programmatic Agreement

The FHWA may decide to fulfill its Section 106 responsibilities for a program, large project, or class of undertakings that might require several individual requests for comments from the Council by preparing a programmatic agreement. See 36 C.F.R. § 800.13. A programmatic agreement is appropriate when the project's effects on historic properties will be similar and repetitive or when the effects on historic properties cannot be fully determined before approval of the project. Programmatic agreements require the participation of the Council and SHPO. Once a programmatic agreement is approved, individual undertakings of the project must comply with its terms. If the terms are not followed, the Section 106 process is to be individually completed as outlined above.

Discoveries During Construction

The FHWA is encouraged to develop and include in documentation a plan for the handling of properties discovered during construction if it appears after the initial assessment that this will likely be needed. See 36 C.F.R. § 800.11. Otherwise, when a previously unidentified property that may be eligible for inclusion in the National Register is encountered after construction begins, work may proceed, but the FHWA is encouraged to take immediate steps to minimize or avoid impact on the property. Furthermore, the FHWA must develop an MOA or similar plan of action incorporating Council and SHPO comments. Properties discovered during construction may be considered eligible for inclusion in the National Register, thus eliminating the need to gather preliminary data and determine eligibility. One other

alternative at this point would be to comply with the Archeological and Historic Preservation Act, 16 U.S.C. § 469a-469c, rather than Section 106, if a finding is primarily of archeological value and subject to the Act, which provides for surveys, investigation, and recovery of archeological data that would be destroyed during construction.

Archeological Reports

An aspect of archeological review and investigation common to all states surveyed for this study is the need to prepare reports at the conclusion of investigative work. The reports can be lengthy and detailed depending on the project and the level of inquiry required by the SHPO. Each state surveyed has guidelines for the preparation of archeological reports. They are modeled after the guidelines of the National Park Service and can be obtained from the SHPO's office. A copy of Virginia's report guidelines are in Appendix E. These also give an account of the type of information required by the other states. Generally, the report must reflect the extent of the investigation carried out, the methodology employed, what was anticipated to be found, what was actually found, the conclusions reached, the recommendations given, and the justifications for the conclusions and recommendations.

INDIVIDUAL STATE COMPLIANCE

Introduction

The procedures followed by each state to comply with Section 106 of the NHPA are similar because of regulation by the same federal laws, standards, and guidelines. There are slight differences in procedure attributable to the perceptions, preferences, and discretion of the SHPO and investigators and departmental capabilities and limitations. Each DOT also has discretion in the extent and thoroughness of the investigation carried out. The minimum requirements are set by the National Park Service and the SHPO.

This section examines the Section 106 compliance procedure of Virginia, Delaware, Maryland, North Carolina, and Pennsylvania, and provisions employed by each to expedite the process. The DOT in each of these five states responded to a survey questionnaire designed to obtain information about several aspects of its archeological review and investigation process including money expenditures, time allocation, division of work between staff and consultants, number of projects requiring archeological investigation, field

methodology, and findings. Information not sought included procedures followed when human remains are discovered during construction. There were problems in acquiring this information because of the inaccessibility of some information. Certain records are not generally kept. For example, the VDOT had difficulty arriving at the number of sites that were determined to be eligible for inclusion in the National Register in 1985 and 1986. Despite these shortcomings, estimates were provided. Variation in money and time expenditures is inevitable because, in addition to federal mandates, each state's DOT must comply with state historic preservation legislation. For this reason, a discussion of state laws is included for each state: Maryland and Pennsylvania appear to have the most demanding.

Comparison

Overall Expenditures

State officials involved in compliance with historic preservation laws are uniformly hesitant to provide specific cost and time data regarding their state's archeological review process for two primary reasons. First, it is a difficult task to differentiate the time and expense allocated to archeological investigation from that allocated to other duties. Second, and most important, those involved in archeological investigation underscore the variability from year to year and from project to project in the time and money spent on archeological investigation. The resources expended by state highway officials on archeology in a given year are a function of several factors including (1) the general highway building activity, (2) the percentage of projects that are federally funded, (3) the particular sites under investigation, and (4) the extent of or need for mitigation. (For example, of the \$1,582,000 spent by the MHA in 1985, \$1,344,000 was for phase III on one project.)

It is difficult to predict what of archeological significance will be found in any given year, what will be necessary to understand fully the extent of the find, and what will be necessary to mitigate a project's impact on any sites. State officials cite this variability and hesitate to generalize. Nonetheless, the survey responses of Virginia, Delaware, and Maryland included a best estimate of expenditures arrived at through an examination of departmental records. North Carolina and Pennsylvania could not provide this information because of the impossibility of extracting the data from other planning and design expenditures. This also proved to be a formidable task for Virginia officials. Table 1 shows the number of projects in 1985 and 1986 that required some level of archeological investigation, the number of projects that were federally assisted and therefore required compliance with Section 106 of the NHPA, and the overall money expenditures for archeological investigation for both federal and state projects.

TABLE 1

Number of Projects Requiring and Total Expenditures for
Archeological Investigation in 1985 and 1986

| | <u>VA</u> | <u>DE</u> | <u>MD</u> | <u>NC</u> | <u>PA</u> | <u>Year</u> |
|-------------------|-------------|-----------|-------------|-----------|-----------|-------------|
| Total | 130 | 22 | 43 | * | * | 1985 |
| projects | 141 | 13 | 55 | 64 | * | 1986 |
| Number of | 130 | 22 | 41 | * | * | 1985 |
| federal | 141 | 13 | 52 | 62 | * | 1986 |
| Total | \$638,000 | \$570,016 | \$1,582,000 | * | * | 1985 |
| expendi- tures | \$1,015,000 | \$482,132 | \$344,000 | * | * | 1986 |

*Data not available.

Extent of Investigation

Virginia, Delaware, Maryland, and Pennsylvania follow a three-phase investigation process if the initial evaluation of a project shows that additional survey work is necessary because of a moderate to high probability for the existence of significant sites. On paper, North Carolina does not follow the three-phase approach, but the actual investigation can be translated into such. However, the data obtained are difficult to separate into comparable components. In the three-phase approach, the phases do overlap; but generally, the purpose of phase I is to locate and roughly delineate the boundaries of any possibly significant sites within the project area. The purpose of phase II is to evaluate any site(s) within the project area for inclusion in the National Register, assess the project's impacts on the site(s), and gather information for a mitigation plan should it become necessary to develop one. Phase III is the actual mitigation planning and follow through.

Table 2 shows the number of federal projects that required archeological review in 1985 and 1986 and the level of investigation executed.

Table 3 shows the number of new sites discovered, the number of sites determined to be eligible for inclusion in the National Register, and the method used to mitigate a project's impact on the site.

TABLE 2

Level of Archeological Investigation Required for Federal
Projects in 1985 and 1986

| <u>Number</u> | <u>VA</u> | <u>DE</u> | <u>MD</u> | <u>NC</u> | <u>PA</u> | <u>Year</u> |
|-------------------------------|-----------|-----------|-----------|-----------------|-----------|-------------|
| Federal projects | 130 | 22 | 41 | * | * | 1985 |
| | 141 | 13 | 52 | 62 | * | 1986 |
| Phase I | 85 | 22 | 40 | * | * | 1985 |
| | 94 | 13 | 52 | 60 ^a | * | 1986 |
| Phase II | 35 | 22 | 18 | * | * | 1985 |
| | 35 | 13 | 22 | 4 ^a | * | 1986 |
| Phase III | 3 | 2 | 2 | * | * | 1985 |
| | 5 | 1 | 0 | 0 ^a | * | 1986 |
| Discovery during construction | 0 | 0 | * | * | * | 1985 |
| | 1 | 0 | * | 1 | * | 1986 |

*Data not available.

^aNorth Carolina does not explicitly follow the three-phase approach.

TABLE 3

New Sites Discovered and Projects Requiring Mitigation

| <u>Number</u> | <u>VA</u> | <u>DE</u> | <u>MD</u> | <u>NC</u> | <u>PA</u> | <u>Year</u> |
|------------------------------|-----------|----------------|-----------|-----------|-----------|-------------|
| New sites | 300 | 496 | * | * | * | 1985 |
| | 350 | 152 | * | 61 | * | 1986 |
| Eligible for N.R. | 7 | 20 | 7 | * | * | 1985 |
| | 10 | 10 | 9 | 2 | * | 1986 |
| Effect | 3 | 4 | 3 | * | * | 1985 |
| | 5 | 16 | 5 | 0 | * | 1986 |
| Avoidance | 1 | 2 ^a | 1 | * | * | 1985 |
| | 0 | 1 ^a | 5 | 0 | * | 1986 |
| Data recovery projects | 3 | * | 2 | * | * | 1985 |
| | 5 | * | 0 | 0 | * | 1986 |
| Data recovery sites | 6 | 2 | 2 | * | * | 1985 |
| | 10 | 1 | 0 | 0 | * | 1986 |
| Other | 0 | 0 | 2 | * | * | 1985 |
| | 0 | 0 | 0 | 0 | * | 1986 |

*Data not available.

^aRequired partial mitigation.

Virginia

SHPO: Director of the Division of Historic Landmarks, Department of Conservation and Historic Resources

VDOT: Virginia Department of Transportation, Environmental Division

Initial Assessment

In Virginia, the VDOT does the initial in-house evaluation of a proposed project to determine if any portion of the project passes through or near a previously recorded site or an area where there is a high probability that a significant site may exist. For projects such as secondary road widening, bridge replacements, and construction of short turn lanes, which are all at the categorical exclusion level (no environmental impacts are anticipated), this initial evaluation involves a check of previously recorded archeological sites and standing structures and an examination of topographic maps to determine the potential for prehistoric sites. When a project such as a major highway widening or new alignment requires an environmental assessment or an EIS, additional research is done. Historic maps of the local area and county are examined along with the results of previous archeological investigations performed in the project area. Most projects requiring an environmental assessment and all projects requiring an EIS are handled by consultants rather than the department itself. The department does however take an active supervisory role. If no known sites are determined to be within the project boundaries and the area is not likely to contain any significant sites, then upon approval by the SHPO, no further background or archeological research is necessary. Otherwise, a survey is conducted to determine the presence of a site (phase I), or further work is recommended to evaluate the significance of a site (phase II). On the average, this evaluation, including the background research, takes two hours. Obviously, some projects can be evaluated in less time and others may take considerably more time. The availability and thoroughness of existing records affect the time necessary to complete this evaluation.

Phase I

When the initial evaluation shows that a project will not affect any known sites but is in an area where insufficient previous survey work has been conducted and where there is a high probability that significant sites will be found, a phase I archeological survey is conducted. Its purpose is to locate and, when possible, determine the boundaries of all sites in the project area. Sixty-five percent of the federal projects in 1985 and 67 percent in 1986 required a phase I survey. The VDOT performs most of these surveys in-house: in 1985, 65 percent, and in 1986, 81 percent. The VDOT maintains statewide contracts with James Madison University and Virginia Commonwealth University

to perform data recoveries, survey work, and research that cannot be completed by VDOT staff.

Phase I surveys primarily involve pedestrian walkover land surface inspections and some subsurface testing where there is minimum surface visibility, such as in a wooded area. Subsurface testing involves the excavation of shovel-cut test pits (50 cm x 50 cm) to the depth of subsoil. In an area for which there is a moderate to high probability that significant archeological sites exist, the pits are cut at intervals less than or equal to 25 m. The intervals vary with the terrain. For example, steep slopes tend to have a low probability for the existence of significant sites. Therefore, the intervals are greater than those in an area of high probability. The depth of the test pits also varies since the pit is generally cut until the subsoil, which is culturally sterile, is reached. This can be a considerable undertaking on a flood plain, which, because of siltation, may have very deep layers of overburden on top of the subsoil.

A phase I survey for archeological properties in an urban area is different from that conducted in a rural area. Generally, no test units are excavated, but there is more extensive background research, sometimes including deed, title, and tax searches.

At the conclusion of a phase I survey, a report detailing the methodology employed and the results of the survey is drafted by the project archeologist. This report goes to the SHPO for concurrence in the findings. The VDOT makes its recommendations to the SHPO, who ultimately decides whether additional archeological research is necessary. VDOT archeologists inform the appropriate VDOT district office whether the project may proceed or whether a phase II survey must be completed.

Phase I surveys and documentation account for approximately 30 percent of the VDOT in-house staff time. This is the phase in which most in-house staff time is expended. However, a new procedure has been implemented through a programmatic agreement entitled "Expedited Archeological Procedure for VDOT Categorical Exclusion Projects," which has reduced and will continue to reduce the time traditionally necessary to document phase I. For a project at the categorical exclusion level and where no sites are found as a result of a phase I investigation, a "form letter" with project information attached is accepted by the SHPO in lieu of a phase I report. If a site is found during phase I, then the form letter is not used, and a phase I report is completed. Consultants performing a phase I investigation for the VDOT follow a similar procedure. The reports required at the conclusion of any phase of archeological investigation can be rather lengthy, so having a means by which unnecessary documentation can be eliminated is quite advantageous.

Phase II

When the review process or a phase I survey indicates that a site does exist in a project area but a determination of the site's significance on the basis of existing information cannot be made, a phase II survey is undertaken. The goals of phase II work are to determine the site's eligibility for inclusion in the National Register and to gather enough information to be able to develop a mitigation plan if the site is found to be eligible. Phase II investigations include more intensive preparatory research and field testing than in phase I. A grid is developed for the area, and digging is done at specified intervals that vary with the project. The excavation units are larger than those cut in phase I, and the material is screened through 1/4-in mesh. Most phase II surveys in Virginia are done by consultants: 92 percent in 1985, and 86 percent in 1986. The VDOT or the consultant prepares the necessary report and makes recommendations regarding the site's eligibility for inclusion in the National Register to the SHPO, who will either concur or not. The SHPO via the VDOT passes this decision on to the FHWA. Seven sites in 1985 and 10 sites in 1986 were determined to be eligible for inclusion in the National Register.

If the SHPO determines that the site is eligible for inclusion in the National Register, it is during phase II that the FHWA through the VDOT applies the criteria of effect and adverse effect to the property, following the guidelines of 36 C.F.R. § 800.5. The SHPO reviews the recommendations and communicates with the FHWA. In 1985, it was determined that three projects would affect a National Register or National Register-eligible site, and in 1986, five projects. Most states do not proceed to a finding of adverse effect but rather move into phase III mitigation to avoid a determination of adverse effect when the historic property in question is an archeological site. Virginia follows this procedure. This accepted provision avoids the necessity of preparing an MOA and the attendant problems and delay of Council approval of an MOA.

Phase III

If the initial evaluation or phase I and II surveys show that there is a site in or eligible for inclusion in the National Register within the project area and that there will be an effect on the property, phase III planning begins. The consultant and the VDOT work to develop a plan detailing the type and extent of mitigation efforts that will be implemented to lessen the project's impact on the site. The plan is then reviewed by the SHPO. Acceptable mitigation plans generally involve avoidance through shifting the location of the project or performing data recovery. Three 1985 projects and five 1986 projects required the development of a mitigation plan.

Avoidance is not common in Virginia but is most likely to be considered in a small project where data recovery would be too expensive relative to the

project's budget. Only one project in 1985 and none in 1986 resulted in avoidance of an archeological site, and this one decision to opt for avoidance preceded phase III.

Six data recoveries in 1985 and 10 in 1986 were included in project mitigation plans. All data recoveries were contracted out, with the party actually performing the recovery preparing the scope of work that set forth the extent of the work to be completed.

Report Requirements

Generally, whoever does the background research and field work prepares the necessary documentation according to guidelines developed by the Virginia Historic Landmarks Commission. Having the same person who does the field work prepare the report allows for continuity and accuracy. The Virginia SHPO reviews all documentation and asks for FHWA approval and for Council approval when necessary. To complete a phase III report, the data obtained must be analyzed and the results must be included in the final documentation.

The VDOT (as an agent of the FHWA) is also responsible for having artifacts, soil samples, and other materials from an investigation catalogued and curated in a manner approved by the SHPO.

District Office Involvement in Investigations

During phase I, II, and III investigations, the district office plays a facilitative role to ensure that a minimum number of problems are encountered by the archeologists. The district office places flags indicating where the proposed right of way or modification is to be located. It frequently contacts property owners and the sheriff to let them know what is going on and to secure permission when necessary. It also provides heavy equipment for some contractors when the investigative work requires it.

State Law

The primary state law applicable to the VDOT and other state agencies when a state-funded project may disturb archeological and other historic resources is 1986 Va. Acts, ch. 643 § 4-4.01(p) (Appropriations Act). This Act requires the VDOT to account for adverse effects the project will have on state-owned properties listed in the Virginia Landmarks Register. The VDOT is directed to submit plans to the Department of Conservation and Historic Resources, which is to review the plans, comment, and forward them to the Governor through the Department of General Services for a final determination.

It is a straightforward task to determine whether this law is applicable to a particular project. All state-owned properties in the Virginia Landmarks Register can be quickly and accurately identified by either the VDOT or the SHPO. The VDOT has to consider only state-owned properties listed in the Virginia Landmarks Register at the time of the project. This law has yet to be confronted by the VDOT beyond an initial assessment of projects; therefore, the reaction of the SHPO and the Governor is unknown; that is, what a "final determination" entails is unknown.

The Virginia Antiquities Act, Va. Code § 10-150.1 to 10-150.10 (1985), also requires consideration of historic properties on state-controlled lands. The SHPO's concern under the Antiquities Act (whether it is a state or federal project) is with properties in the National Register or the Virginia Landmarks Register. Therefore, the Antiquities Act overlaps Section 106 of the NHPA and the Appropriations Act.

Virginia's Road and Bridge Specifications § 107.15(d) (1987) requires the contractor on a construction project to suspend work when prehistoric ruins, Indian or early settler sites, burial grounds, relics, fossils, or other articles of archeological or paleontological interest are discovered during construction. The section provides for protecting, mapping, and removing the findings if determined to be necessary. Because it is preferable not to halt construction once underway, VDOT archeologists may be requested to determine whether the project area has the potential for the existence of such sites before construction begins.

Delaware

SHPO: Director of the Bureau of Archeology and Historic Preservation in the Division of Historic and Cultural Affairs of the Department of State

DelDOT: Delaware Department of Transportation, Division of Highways

Initial Assessment

In Delaware, the DelDOT does the initial evaluation of a proposed project to assess the likelihood that the project will impact on significant archeological sites. Using historic maps, the results of previous surveys, and other documentation, the DelDOT determines the presence of known sites within the project area and determines the potential for the existence of unknown significant sites. The DelDOT prepares the necessary documentation of this initial assessment and seeks the concurrence of the SHPO with regard to whether to proceed with the archeological investigation. After this evaluation, a three-phase review and investigation procedure is carried out when necessary.

Phase I

The purpose of a phase I survey is to locate all potentially significant prehistoric and historic sites so that areas needing further investigative work will be identified. The investigator also formulates an opinion as to the extent and type of data the project area might yield. The actual investigation involves a pedestrian walkover inspection and the making of shovel-cut test pits at regular intervals.

All 1985 and 1986 federal projects required a phase I investigation. Though the DelDOT has done phase I surveys in-house, all phase I surveys in 1985 and 1986 were done by consultants. The DelDOT maintains contracts with the University of Delaware and several private consultants to perform archeological investigations that cannot be done in-house. Documentation of phase I results is prepared by whomever conducted the phase I survey and research and is then submitted to the SHPO for concurrence. If a site is located, then a phase II survey is the next step.

Phase II

All 1985 and 1986 federal projects also required a phase II survey, and all were done by consultants. A phase II survey is much more intensive and systematic than a phase I survey. Additional background archival research is completed, and surface and subsurface testing is carried out in an effort to determine the extent and integrity of any discovered site(s) so that an assessment of National Register eligibility can be made. The DelDOT or the principal investigator turns the information over to the SHPO, who makes the actual determination of the site's eligibility and also determines the project's effect and adverse effect upon the site if it is found to be eligible. In 1985, 496 sites, and in 1986, 152 sites were discovered. Thirty were determined to be eligible for inclusion in the National Register, and it was determined that 4 significant archeological sites in 1985 and 16 in 1986 would be affected by a DelDOT project. These figures underscore the yearly variability. If an adverse effect is anticipated, phase III planning and implementation will begin.

Phase III

Phase III investigative work provides the DelDOT with the information necessary to determine the type of mitigation that should be carried out. The DelDOT works with the SHPO and the consultant to prepare an acceptable plan, but it is the DelDOT that takes care of the necessary documentation detailing what mitigation activity will be undertaken. Once the agreement is approved by the SHPO and the FHWA, summary documentation is sent to the Council.

Generally, data recovery is performed, almost exclusively by a consultant. In 1985 and 1986, three mitigation plans included data recovery, and all were conducted by a consultant. The consultant is responsible for preparing the final report after the recovery and analyses are complete. The three mitigation plans also entailed partial avoidance of significant sites.

Programmatic Agreements

The DelDOT has fully utilized the federal provision permitting the use of programmatic agreements. One such agreement outlines types of projects categorically considered to have no effect on historic resources. Through the agreement, these projects are exempt from certain documentation requirements and coordination under federal regulations. The types of projects include construction of bicycle and pedestrian paths and other facilities located within the existing right of way, certain emergency repairs necessary as the result of a natural disaster, and certain engineering and planning activities.

State Law

There is one broad state law relating to archeological sites that affects the DelDOT construction activities, Del. Code Ann. tit. 7, § 5301 (1983). This law forbids anyone to survey, excavate, injure, or destroy archeological resources situated on state-owned or controlled lands without the permission of the Governor or another charged with the responsibility. This law carries no specific mandate regarding the extent of the investigation the DelDOT must undertake.

Generally, when there is a known site on state lands, the DelDOT must contact the SHPO to obtain a permit to excavate. To acquire the permit, the DelDOT must tell the SHPO the extent of the investigation anticipated, the methodology, and the expectations. The same procedure is to be followed when a site is discovered during construction. A DelDOT state project requiring compliance with this law has yet to be encountered.

However, when the project is a state project, the DelDOT undertakes a review and investigation similar to those done for compliance with Section 106 when a project is federally assisted. The DelDOT makes an effort to locate, evaluate, and obtain information from archeological sites.

Maryland

SHPO: Director of the Maryland Historic Trust
MHA: Maryland State Highway Administration

Special Studies

Special studies of proposed projects are occasionally conducted in-house well in advance of the final project planning to identify any known significant historic sites or areas with the potential for significant sites. This information is taken into account during early stages of planning. When a project entails the development of a new location for highway use, the planning phase addresses the environmental impacts the project would have if it were developed to the "ultimate width"; that is, planning and design determine the width of the right of way future needs are likely to require. If planning and design determine that four lanes will eventually be needed even though only two are currently scheduled to be built, then, during the early stages of the archeological review process, properties that may be found within the area necessary for the construction of four lanes will be considered. This increases the amount of work initially necessary but will eliminate repetition in inquiry when the road is actually brought to the "ultimate width." Several recent highway widening projects have taken advantage of work done when the highway was initially constructed.

Initial Assessment

When a project is actually going to be undertaken, the MHA sends information regarding the project, including the alternatives, to the Maryland Geological Survey, Division of Archeology (MGSDA) for an initial assessment of the project's impact on significant historic sites. The MGSDA uses historic maps, previous survey records, and other library information to determine the presence of a known site and to determine the potential for the existence of unknown significant sites. If further investigation is necessary, the MHA follows a three-phase procedure similar to that of Virginia, Delaware, and Pennsylvania. Phase I surveys locate sites, phase II investigations evaluate them, and phase III planning and execution mitigate the project's impact on the site(s).

Phase I

The MHA tends to wait until a particular route location or project design is selected before executing the recommended phase I survey and research. Ninety-eight percent of federal projects in 1985 and 100 percent in 1986 required a phase I investigation. Occasionally, a small phase I survey is conducted in-house, but usually the MHA asks the MGSDA to do the survey or the MHA contracts with another consultant. In 1985 and 1986, all phase I surveys were done by the MGSDA or by other consultants. An executive summary of phase I results is prepared by whomever conducted the phase I survey and research. The summary is sent to the SHPO for concurrence.

Phase II

Phase II is not undertaken until the route location is final. Phase II surveys and research are not generally done in-house by the MHA. The MGSDA or another consultant is contracted to perform the investigation. The SHPO determines the site's eligibility and applies the criteria of effect and adverse effect to assess the project's impact on the site if it is found to be significant. Seven sites discovered through the efforts of the MHA in 1985 and nine sites in 1986 were determined to be eligible for inclusion in the National Register. Three 1985 projects and five 1986 projects were determined to have an effect on a National Register or National Register-eligible site. All of these projects required the MHA to proceed to phase III; thus a finding of adverse effect was avoided. The actual determination was no adverse effect conditioned on data recovery or avoidance.

Phase III

If the initial assessment or phase I and II surveys determine that mitigation will be necessary to lessen the project's impact on a site in or eligible for inclusion in the National Register, the MHA and the SHPO work to develop an acceptable mitigation plan. The MHA prepares the necessary documentation, which is then sent to the SHPO for approval. If necessary, the SHPO forwards the documentation to the FHWA for concurrence and Council review. Often when a site can be avoided, a full mitigation plan is not necessary. Rather, a letter accompanying the phase II report to the SHPO will suffice. The letter explains how the project's impact will avoid the site. For example, a once-planned access road that would affect a site may have been dropped from the project, or if the site was adjacent to the main project corridor, fencing the site would avoid otherwise destructive construction impacts.

If the plan includes a data recovery plan, the MHA typically will not perform the work in-house. In 1985, both data recoveries were performed by consultants. There were no newly initiated data recoveries in 1986.

When contractors are used to carry out investigative surveys and research, they prepare the necessary documentation, which is forwarded to the SHPO and the FHWA. The MHA does of course have the opportunity to review the documentation first.

State Law

There are two state laws regarding historic properties that relate to the efforts of the MHA: the Maryland Environmental Policy Act (MEPA), Md. Nat. Res. Code Ann. §§ 1-301 to 305 (Supp. 1987), and Md. Ann. Code art. 41B, §§ 5-615 to 619 (Supp. 1987). The MEPA requires state agencies to account for

the adverse effects a project will have on historic resources listed in the Maryland Inventory of Historic Properties, which, according to art. 41B, § 5-615(a), includes "districts, sites, buildings, structures, and objects of known or potential value to the prehistory, history, upland and underwater archeology, architecture, engineering, and culture of the State." All properties listed in the Maryland Inventory of Historic Properties are not included in the National Register, but the inquiry is still straightforward. A project's impact on such a property can be easily determined, and mitigation planning can begin early. The law does not expressly require mitigation but does encourage the inclusion of the evaluation of impact on historic properties in the decision-making process so that adverse effects can be anticipated, minimized, and perhaps eliminated. This has yet to be required of a state highway project.

Art. 41B, § 5-615(b) calls for the establishment of a Maryland Register of Historic Properties, which is to include all properties listed in or determined to be eligible for inclusion in the National Register by the Director of the Maryland Historic Trust. State-funded projects and those requiring permits from state agencies must undergo an archeological review process similar to the Section 106 process of the NHPA. Because this law includes projects that require permits from state agencies, the MHA has been involved in some unexpected investigations of historic properties. An example was the proposed building by a private developer of a skywalk over a highway.

The MHA is to consult with the SHPO to identify, evaluate, and manage properties in or eligible for inclusion in the Maryland Register. The SHPO has 30 days to determine whether a project will adversely affect such a property. If an adverse effect is anticipated, the MHA and the SHPO are to determine if a "feasible and practicable means to avoid, mitigate, or satisfactorily reduce the adverse effect exists." Art. 41B, § 5-617(b). A State Advisory Council on Historic Preservation was also created to resolve disputes between the SHPO and a "state unit" such as the MHA. See Art. 41B, § 5-616. However, the MHA does not have to comply with the council's recommendations but must explain why it chose not to, and it must refrain from continuing with the project until at least 10 working days after its response to the council. Art. 41B, § 5-617(e)(2)(i)-(ii). Rules and regulations are currently being promulgated by the Maryland Historic Trust to direct the extent of consideration that must be afforded properties listed in the Maryland Register.

To this point, no MHA projects have required the council's review, but the MHA is treating state projects the same as federally assisted projects by completing the Section 106 identification and evaluation process.

North Carolina

SHPO: Director of the Division of Archives and History in the Department of Cultural Resources
 NCDOT: North Carolina Department of Transportation, Division of Highways

Initial Assessment

The NCDOT enjoys a strong working relationship with the Division of Archives and History, which is reputed to be one of the most organized and efficient SHPO offices in the United States. The NCDOT submits the proposed projects and often several alternatives to the SHPO for a ranking of alternatives and an evaluation. The Historic Preservation Office, acting as the staff of the SHPO, evaluates the project by determining known archeological sites within the project boundaries; examining historic maps and documents, previous survey results in the project area or in an area considered to be similar, previous and current land uses, topography, and hydrology; and utilizing predictive models. Within two weeks, the staff completes the evaluation, and the SHPO makes recommendations to the NCDOT. The NCDOT does not follow the three-phase approach as do the other states surveyed.

The SHPO's recommendations fall into five categories:

1. Clearance: The project area is unlikely to contain significant sites; therefore the project may proceed without further investigation.
2. Survey: A significant site is likely, but there is no record of a systematic survey of the area. A survey is recommended to determine the presence and significance of any sites (comparable to phase I and phase II when evaluation is necessary).
3. Testing: There is a known site within the project boundaries. Archeological testing is recommended to determine significance (comparable to phase II).
4. Survey and testing: There is a known site within the project boundaries, but the area has not been completely surveyed. Testing is recommended to determine the significance of the known site, and a survey is recommended for the remaining project area where there is likelihood of a site (comparable to phase I and phase II).
5. Avoidance: There is a known site that is in or is eligible for inclusion in the National Register. Adjustment of the project is recommended. New project locations will have to be reviewed.

After receiving the SHPO's recommendations, the NCDOT selects a project alternative and complies with the SHPO's recommendations.

Investigation

Close to 100 percent of the sixty-two 1986 federal projects reviewed by the SHPO required additional survey work, which was carried out in-house by the NCDOT staff. The additional survey work is often a combination of what would be a phase I and a phase II investigation in Virginia. Because the two levels of survey work are completed together (either consecutively or concurrently), it is difficult to compare the level of work completed for each survey. The initial survey work done after the SHPO's assessment involves pedestrian walkovers and subsurface testing in areas of low surface visibility. The subsurface testing generally involves shovel-cut test pits (30 to 50 cm) excavated to the culturally sterile subsoil. Areas that have a low probability for the existence of sites are excluded. Though the search is for National Register-eligible sites, all discovered sites are recorded, and data are collected. The working definition of site is a place where there is reasonable evidence of human activities; normally, at least three artifacts are needed to distinguish a site from an isolated find.

Reports of work completed, findings, and conclusions are prepared by the NCDOT according to guidelines developed by the SHPO. The SHPO reviews the report and approves it or recommends additional work. If it has been determined through either the SHPO's initial evaluation or subsequent surveys and testing that there is a site within the project boundaries that is in or eligible for inclusion in the National Register, the NCDOT and the SHPO apply the criteria of effect and adverse effect to the property, following the guidelines set forth in 36 C.F.R. Part 800.

In 1986, two sites were determined to be eligible for inclusion in the National Register. However, because the NCDOT often completes field work early in the project's planning, several other sites discovered that year had yet to be officially determined to be eligible at the time the NCDOT responded to the survey for this report. Therefore, the criteria of effect and adverse effect had not been applied, and mitigation plans had not been worked out. No projects in 1986 were determined to have an effect on a National Register-eligible site.

However, if it is determined that mitigation will be necessary, the SHPO and the NCDOT work to develop an agreement setting forth the type and extent of mitigation measures to be implemented. The NCDOT prepares the necessary documentation of no adverse effect, which is then sent to the SHPO for approval, and the SHPO forwards the document to the FHWA for Council review.

If the proposed mitigation measures include a recovery plan, which is rare, the NCDOT determines whether the recovery can be done in-house. Though the NCDOT can perform a very small recovery in-house, such an undertaking will typically be contracted out, with the NCDOT preparing the scope of work detailing the extent of the investigation that must be completed to gather data to address the formulated research questions. When evidence of an

archeological site is discovered during construction, the NCDOT investigates after notifying the state archeologist, who may also send a representative to investigate.

The NCDOT prepares all reports and documentation necessary throughout the review unless a contractor's scope of work includes the preparation. The SHPO approves all documentation and asks the FHWA for its approval and, if necessary, for Council approval.

State Law

The primary statute regarding archeological and other historic properties applicable to state-funded highway construction projects is N.C. Gen. Stat. § 121-12(a) (1986), entitled "North Carolina Historical Commission." The statute requires the NCDOT to take into account the effect the undertaking will have on any district, site, building, structure, or object listed in the National Register. If there will be an effect on such a property, the Commission is to be given the opportunity to comment on the undertaking.

As with Virginia's Appropriations Act, this statute is rather straightforward, and it is easily determined whether the statute is applicable to a particular project. All properties included in the National Register will be quickly and accurately identified by the SHPO. The NCDOT does not have to consider properties that may be eligible for inclusion, only those listed at the time of the project. However, N.C. Gen. Stat. § 136-42.1 (1986), "Archeological Objects on Highway Right-of-Way," does authorize the expenditure of highway funds for "reconnaissance surveys, preliminary site examinations and salvage work necessary to retrieve and record data and the preservation of archeological and paleontological objects of value which are located within the right-of-way acquired for highway construction." Id. The statute seems to qualify this investigation by limiting it to sites "of sufficient importance to be preserved for the inspiration and benefit of the people of North Carolina." Id.

Pennsylvania*

SHPO: Director of the Bureau of Historic Preservation of the Pennsylvania Historical Museum Commission

PennDOT: Pennsylvania Department of Transportation

*PennDOT archeologists were unable to respond to the survey questionnaire designed for this report. Therefore, this section is only descriptive.

Initial Assessment

In Pennsylvania, PennDOT district offices are more directly involved in Section 106 compliance than in the other states surveyed. PennDOT archeologists in the Bureau of Design act as consultants and play a facilitative role. The district office submits a preliminary archeological review form along with a U.S. Geological Survey map of the area to be studied to the SHPO. The project is reviewed for possible impacts on known sites or areas with potential for the existence of significant sites. There is no standard turnaround time before the SHPO responds to the district office, and it is not unusual for the PennDOT to receive a response several months after submitting the review form.

Once it is determined that additional investigative work is necessary, the PennDOT follows a three-phase procedure of surveys and review. The district office is responsible for securing a contractor, most often a private contractor, to perform the necessary archeological work. Very little field survey work is done in-house by PennDOT archeologists. Certain categories of projects are exempt from archeological investigation but do require a review to locate known properties included in the National Register or in the Pennsylvania Archeological Site Survey. In the event there is such a property in the project area, the usual Section 106 procedures apply. However, if such a property is not located in the project area, then the exemption applies. The categories of projects that are exempt are those that require little or no additional new right of way or those that require little or no excavation. Many rehabilitation, reconstruction, and maintenance projects are thus exempted.

Phase I

The purpose of phase I investigation is to locate all surface and stratified sites in the project area. The district office prepares a phase I work plan in accordance with the SHPO's guidelines. At minimum, the work includes informant interviews and field testing. All field testing includes the cutting of test pits (1 m x 1 m) dug to subsoil (or depth of project disturbance) in each potentially stratified location. The excavated material is screened using 1/4-in mesh. The surveys also include either a controlled surface collection where surface visibility is good or subsurface testing at 15-m intervals. These subsurface test units are shovel-cut pits (50 cm x 50 cm) down to the subsoil. Here, too, the material excavated is screened using 1/4-in mesh. In an area not likely to contain significant sites, the intervals may be greater.

When phase I is complete and the conclusion is that there are no potentially significant sites, then the district office oversees the preparation of a full phase I report detailing findings, conclusions, and recommendations. If a phase II investigation is to be undertaken, then no report is necessary at

that point. If potentially significant archeological sources are identified, then a written summary of findings is prepared and forwarded to the SHPO.

Phase II

A phase II survey is required when there are potentially significant archeological resources located within the project boundaries. With input from the Bureau of Design, the district office coordinates the preparation of a phase II work plan including details of the survey methodology and research questions. The phase II inquiry focuses on delineating the boundaries of any previously known or newly discovered sites and gathering enough information to be able to determine the site's eligibility for inclusion in the National Register. Phase II investigations involve additional documentary research and more intensive field work than that conducted during phase I. As in all of the states surveyed, each phase II survey is worked out according to the anticipated knowledge to be gained from the particular site(s).

The consultant, under the supervision of the district office, prepares a phase II report and submits it to the SHPO when it appears that no National Register-eligible properties are within the project's boundaries. The SHPO and the FHWA evaluate the report information. If it appears that there is one or more eligible properties within the boundaries, then a summary of findings is prepared by the district office and forwarded to the SHPO.

It is also at the end of this phase that the criteria of effect and adverse effect are applied by the district office and the project archeologist and submitted to the SHPO. When it is determined that a project will affect a National Register or National Register-eligible archeological site, a mitigation plan is developed to avoid a finding of adverse effect.

Phase III

The PennDOT, the consultant, and the SHPO work to develop a mitigation plan, and the PennDOT prepares the necessary documentation. Acceptable mitigation plans generally involve data recovery rather than avoidance, as recovery is considered to be the less costly alternative.

State Law

Two state laws regulate highway construction when there is a chance that the project will impact on an archeological site: Pa. Stat. Ann. tit. 71, § 512 (Purdon Supp. 1988) and Pa. Stat. Ann. tit. 71, § 1047.1a-1047.1o (Purdon Supp. 1988), which is known as the Historic Preservation Act. The Historic Preservation Act requires the PennDOT to notify the SHPO whenever a state-assisted, licensed, or contracted project may affect an archeological site.

The SHPO is to review the project and determine what must be done to recover, preserve, or protect information from the site. The PennDOT follows basically the same procedures to comply with this law as it does to comply with Section 106 of the NHPA.

Tit. 71, § 512 is very similar to Section 4(f) of the Department of Transportation Act. The state law forbids a highway to be built or expanded such that it uses any land belonging to a historic site unless there is no prudent or feasible alternative and planning to minimize negative impacts to the area is undertaken.

RECOMMENDATIONS

The VDOT's procedures for complying with federal historic preservation laws are comparable to those of the other states surveyed for this report. With the possible exception of North Carolina, the VDOT's procedures are apparently at least as efficient as those of the other states. Compared to Pennsylvania, the extent of investigation carried out in Virginia is somewhat moderate yet thorough enough to have enabled the VDOT to discover approximately 650 new sites in a two-year period, 17 of which were determined to be eligible for inclusion in the National Register. Several of the recommendations included in this section require the coordination of the VDOT and the Virginia SHPO. Only the recommendations that concern in-house procedures do not mandate consultation with the SHPO.

Advance Planning

The earlier the initial phases of archeological investigation take place, the better, since there will be fewer surprises and hence delay in the project. This presents the opportunity for several alternatives to be assessed (as is done in North Carolina) while there is still time to select a design or to perform an archeological investigation without putting the project behind schedule. Early coordination also facilitates environmental document preparation.

The "ultimate width" concept followed in Maryland deserves consideration in Virginia but should be limited to projects about which future needs are fairly certain. In most circumstances, archeological investigation in the areas of anticipated future right of way should proceed only through phase I. This would at least give the VDOT an indication of what prehistoric or historic properties were in the area and what would be necessary if the highway were widened in the future. If a phase II survey were performed, it

might have to be redone because of new techniques and innovations in archeological investigation developed after the original survey.

With early planning, a larger area than the project encompasses should be surveyed at a reconnaissance or phase I level so that minor project changes can be accounted for without workers going back into the field.

Exemptions

Certain VDOT construction activities are not likely to pose a threat to archeological sites; therefore, if there are no known sites in the project area, consideration should be given to exempting the site from archeological investigation beyond the initial assessment. The categories of activities that should be exempted are those that require little or no new right of way development. Pennsylvania permits a number of project exemptions including rehabilitation (e.g., pavement overlays, curve flattening, turning lanes, shoulder improvements, and bridge repair), reconstruction, and limited types of new construction such as bicycle paths. Delaware also exempts similar projects. In Virginia, most of these undertakings would be at the categorical exclusion level and would be the type of project for which a phase I survey could most easily be done in-house. If exempted, the projects would proceed more quickly, and in-house staff would be freed up for other projects that require more intensive investigation or for a phase I survey that would otherwise be done by a consultant. There is general agreement in Virginia that surveys done by a consultant are more costly and proceed more slowly than those done in-house.

A review of projects of this type will show how much staff time would be saved. It may not be a substantial amount as the types of projects that would be exempt are likely to be those that are cleared after the initial assessment or that no longer require a full phase I report. This provision regarding exemptions would have to be worked out with the SHPO.

Archeological Records and Reports

Another recommendation that involves the VDOT and the Division of Historic Landmarks is to upgrade the system by which historic properties and survey results are catalogued. VDOT archeologists have expressed concern that there is no systematic method of studying a project area before they enter the field. Standardizing report findings and cataloguing sites would facilitate the initial assessment and the preparation of a scope of work. It has been suggested that a data base of archeological sites in Virginia would be useful

for cataloguing purposes. This is actually the responsibility of the Division of Historic Landmarks; however, the VDOT and other state agencies would benefit. A standardized report format (in addition to the SHPO's report guidelines) would enhance accessibility to information in the reports filed. This, in turn, would afford a means through which a more accurate determination of an area's potential could be formulated, and repetitive field investigation could be avoided.

Another possibility would be to withhold report preparation until all investigative work is completed and to substitute summaries at the conclusion of the various phases. This is an acceptable approach that Pennsylvania explicitly follows. In North Carolina, where there is no distinct phase arrangement, only one report is submitted for work comparable to a phase I and a phase II investigation in Virginia.

The reports required by the SHPO are important to furthering archeological information in Virginia. However, when a full report is not really necessary, as in the case of a phase I survey that did not locate any historic properties, one should not be required. Rather, a shorter form of a report should be substituted. This provision has been implemented in Virginia through a programmatic agreement and should continue.

In-House Record Keeping

The VDOT should also consider developing a more efficient method of maintaining in-house records of its own undertakings, investigations actually carried out, and the findings of such investigations. This in-house tracking would also aid in the evaluation of future projects and would permit easier comparisons from year to year.

APPENDIX A

Definitions and National Register Criteria as Appearing
in the Code of Federal Regulations

36 C.F.R. Part 60 (1987) - National Register of Historic Places

sec. 60.1 Authorization and expansion of the National Register.

(a) The National Historic Preservation Act of 1966, 80 Stat. 915, 16 U.S.C. 470 et seq., as amended, authorizes the Secretary of the Interior to expand and maintain a National Register of districts, sites, buildings, structures and objects significant in American history, architecture, archeology, engineering and culture. The regulations herein set forth the procedural requirements for listing properties on the National Register.

sec. 60.3 Definitions.

(a) Building. A building is a structure created to shelter any form of human activity, such as a house, barn, church, hotel, or similar structure. Building may refer to a historically related complex such as a courthouse and jail or a house and barn.

(c) Determination of Eligibility. A determination of eligibility is a decision by the Department of the Interior that a district, site, building, structure or object meets the National Register criteria for evaluation although the property is not formally listed in the National Register. A determination of eligibility does not make the property eligible for such benefits as grants, loans, or tax incentives that have listing on the National Register as a prerequisite.

(d) District. A district is a geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development. A district may also comprise individual elements separated geographically but linked by association or history.

(j) Object. An object is a material thing of functional, aesthetic, cultural, historical or scientific value that may be, by nature or design, movable yet related to a specific setting or environment.

(l) Site. A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself maintains historical or archeological value regardless of the value of any existing structure.

(m) State Historic Preservation Officer [SHPO]. The State Historic Preservation Officer is the person who has been designated by the Governor or chief executive or by State statute in each State to administer the State Historic Preservation Program,

including nominating eligible properties to the National Register and otherwise administering applications for listing historic properties in the National Register.

(p) Structure. A structure is a work made up of interdependent and interrelated parts in a definite pattern of organization. Constructed by man, it is often an engineering project in large scale.

sec. 60.4 Criteria for evaluation.

The criteria applied to evaluate properties (other than areas of the National Park System and National Historic Landmarks) for the National Register are listed below. These criteria are worded in a manner to provide for a wide diversity of resources. The following criteria shall be used in evaluating properties for nomination to the National Register, by NPS [National Park Service] in evaluating National Register eligibility of properties. Guidance in applying the criteria is further discussed in the "How To" publications, Standards & Guidelines sheets of the National Register. Such materials as available upon request.

National Register criteria for evaluation. The quality of significance in American history, architecture, archeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) that are associated with the lives of persons significant in our past; or

(c) that embody the significant characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) that have yielded, or may be likely to yield, information important in prehistory or history.

Criteria considerations. Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories.

(a) A religious property deriving primary significance from architectural or artistic distinction or historical importance; or

(b) A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

(c) A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life.

(d) A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

(e) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

(f) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

(g) A property achieving significance within the past 50 years if it is of exceptional importance.

APPENDIX B

Virginia Guidelines for the Preparation of
Architectural/Historic Resource Management Reports

Following are the varying levels of documentation that will be required by the Virginia Division of Historic Landmarks (VDHL) in their review of standing structures in accordance with Section 106 of the National Historic Preservation Act.

PRELIMINARY FIELD INSPECTION - This is the minimum level of documentation that will be accepted so that an assessment can be made of the existence of potentially significant structures within the impact area of a project. This type of documentation is generally appropriate for the following types of projects: individual rehabilitation projects; minor road improvements such as the design of intersections, minor road widening, bridge replacements; small scale local development projects; suburban projects in which a small number of structures will be affected; and individual demolition requests.

The following information is required for preliminary field inspection documentation:

1. A USGS map showing the project location and locating all structures to be affected.
2. A list of structures to be affected and their addresses. Structures on the list should be keyed to the USGS map. Addresses should include a street address if known and route number, city or town and county.
3. Photographs - 35 mm, 3" x 5", black and white, glossy prints of the front and side elevations of all structures that are 50 years old or older. An explanation should be made for any buildings in the project area that have not been photographed. Each photograph should be labelled with the historic name of the building, if known, and its address.
4. The approximate date of each structure, if known.
5. Potential impacts on the structure(s).

PHASE I INVESTIGATION - This type of survey should provide the same level of information as a Phase I archaeological survey. See the VDHL "Guidelines for Preparing Archaeological Resource Management Reports." This level of documentation is required for projects that will affect large numbers of buildings such

as: large scale highway projects that consider several alternative routes or locations, regional facilities, and city-wide improvement programs.

The following information is required for a Phase I investigation:

1. A description of the survey method.
2. A USGS map showing the project location and locating all structures to be affected.
3. Completed VDHL/Brief Survey Forms for each structure that is 50 years old or older. Forms should be completed as described in the "VDHL Survey Guide." The original forms are to be submitted separate from the report. Site numbers will be assigned by the VDHL staff upon receipt of the site inventory forms.
4. Black and white, 3" x 5" photographs of streetscapes, in addition to the 35mm, 3" x 5", black and white glossy prints of individual buildings that are required as part of the survey form. Streetscapes will be used by VDHL staff to determine if there are potential historic districts in the project area. Streetscape photographs should also be taken of blocks of buildings that are not yet 50 years old for which no survey forms are completed.
5. General historical information about the areas to be affected including any significant events, periods of settlement and economic development and significant personages or families associated with the area.
6. A brief architectural overview describing the range of dates, styles, and building types included in the survey. Notable buildings and potential historic districts should be identified.
7. Potential impacts of project to structures in the inventory.
8. Preliminary assessment of the necessity for a Phase II significance evaluation to determine the National Register eligibility of any structure(s) within the project impact area.

PHASE II INVESTIGATION - This level of documentation is required for any structure or historic districts that are identified as potentially significant in a Phase I investigation. The purpose of a Phase II investigation is to obtain and analyze sufficient

background and field data to make definitive statements concerning the historical and architectural significance of all identified structures and their eligibility for inclusion in the National Register of Historic Places. Refer to The Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation, issued by the National Park Service on September 29, 1983, for information about the level of documentation required to make determinations of eligibility. The report should also contain data on project impacts and potential mitigative measures planned to counter such impacts. This phase is to be coordinated with the VDHL Review and Compliance architectural historian.

PHASE III INVESTIGATIONS - A Phase III investigation involves consideration of mitigative options for any adverse effect(s) to structures listed in or eligible for listing in the National Register. For the development of mitigative options, please refer to 106 update #3, issued by the Advisory Council on Historic Preservation on October 12, 1982, entitled Manual of Mitigation Measures (MOMM). Phase III investigations should be done in consultation with the Review and Compliance architectural historian at the VDHL.

APPENDIX C

Nationwide Section 4(f) Evaluations and Approvals for Federally-Aided Highway Projects With Minor Involvement With Public Parks, Recreation Lands, Wildlife and Waterfowl Refuges, and Historic Sites. 52 Fed. Reg. 31111-31119 (1987)

Final Nationwide Section 4(F) Evaluation and Approval for Federally-Aided Highway Projects With Minor Involvements With Historic Sites.

Applicability [52 Fed. Reg. 31118 (1987)]

This programmatic Section 4(f) evaluation may be applied by FHWA only to projects meeting the following criteria:

1. The proposed project is designed to improve the operational characteristics, safety, and/or physical condition of existing highway facilities on essentially the same alignment. This includes "4R" work (resurfacing, restoration, rehabilitation, and reconstruction); safety improvements, such as shoulder widening and the correction of substandard curves and intersections; traffic operation movements, such as signalization, channelization, and turning or climbing lanes; bicycle and pedestrian facilities; bridge replacements on essentially the same alignment; and the construction of additional lanes. This programmatic Section 4(f) evaluation does not apply to the construction of a highway on a new location.

2. The historic site involved is located adjacent to the existing highway.

3. The project does not require the removal or alteration of historic buildings, structures or objects on the historic site.

4. The project does not require the disturbance or removal of archeological resources that are important to preserve in place rather than to recover for archeological research. The determination of the importance to preserve in place will be based on consultation with the State Historic Preservation Officer (SHPO) and, if appropriate, the Advisory Council on Historic Preservation (ACHP).

5. The impact on the Section 4(f) site resulting from the use of the land must be considered minor. The word minor is narrowly defined as having either a "no effect" or "no adverse effect" (when applying the requirements of section 106 of the National Historic Preservation Act and 36 CFR Part 800) on the qualities which qualified the site for listing or eligibility on the National Register of Historic Places. The ACHP must not object to the determination of "no adverse effect."

6. The SHPO must agree, in writing, with the assessment of the impacts of the proposed project on and the proposed mitigation for the historic sites.

7. This programmatic evaluation does not apply to projects for which an environmental impact statement (EIS) is prepared, unless the use of Section 4(f) lands is discovered after approval of the final EIS.

Should any of the above criteria not be met, this programmatic Section 4(f) evaluation cannot be used and an individual Section 4(f) evaluation must be prepared.

APPENDIX D

36 C.F.R. Part 800 (1987): Protection of Historic Properties

SubPart B - The Section 106 Process**800.3 General**

(a) **Scope.** The procedure in this subpart guides Agency Officials, State Historic Preservation Officers, and the Council in the conduct of the Section 106 process. Alternative methods of meeting Section 106 obligations are found in Section 800.7, governing review of undertakings in States that have entered into agreements with the Council for Section 106 purposes, and Section 800.13, governing Programmatic Agreements with Federal agencies that pertain to specific programs or activities. Under each of these methods, the Council encourages Federal agencies to reach agreement on developing alternatives or measures to avoid or reduce effects on historic properties that meet both the needs of the undertaking and preservation concerns.

(b) **Flexible application.** The Council recognizes that the procedures for the Agency Official set forth in these regulations may be implemented by the Agency Official in a flexible manner reflecting differing program requirements, as long as the purposes of Section 106 of the Act and these regulations are met.

(c) **Timing.** Section 106 requires the Agency Official to complete the Section 106 process prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license or permit. The Council does not interpret this language to bar an Agency Official from expending funds on or authorizing nondestructive planning activities preparatory to an undertaking before complying with Section 106, or to prohibit phased compliance at different stages in planning. The Agency Official should ensure that the Section 106 process is initiated early in the planning stages of the undertaking, when the widest feasible range of alternatives is open for consideration. The Agency Official should establish a schedule for completing the Section 106 process that is consistent with the planning and approval schedule for the undertaking.

800.4 Identifying historic properties.**(a) Assessing information needs.**

(1) Following a determination by the Agency Official that a

proposed project, activity, or program constitutes an undertaking and after establishing the undertaking's area of potential effects, the Agency Official shall:

(i) Review existing information on historic properties potentially affected by the undertaking, including any data concerning the likelihood that unidentified historic properties exist in the area of potential effects;

(ii) Request the views of the State Historic Preservation Officer on further actions to identify historic properties that may be effected; and

(iii) Seek information in accordance with agency planning processes from local governments, Indian tribes, public and private organizations, and other parties likely to have knowledge of or concerns with historic properties in the area.

(2) Based on this assessment, the Agency Official should determine any need for further actions, such as field surveys and predictive modeling, to identify historic properties.

(b) **Locating historic properties.** In consultation with the State Historic Preservation Officer, the Agency Official shall make a reasonable and good faith effort to identify historic properties that may be affected by the undertaking and gather sufficient information to evaluate the eligibility of these properties for the National Register. Efforts to identify historic properties should follow the Secretary's "Standards and Guidelines for Archeology and Historic Preservation" (48 FR 44716) and agency programs to meet the requirements of Section 110(a)(2) of the Act.

(c) **Evaluating historical significance.**

(1) In consultation with the State Historic Preservation Officer and following the Secretary's Standards and Guidelines for Evaluation, the Agency Official shall apply the National Register Criteria to properties that may be affected by the undertaking and that have not been previously evaluated for National Register eligibility. The passage of time or changing perceptions of significance may justify reevaluation of properties that were previously determined to be eligible or ineligible.

(2) If the Agency Official and the State Historic Preservation Officer agree that a property is eligible under the criteria, the property shall be considered eligible for the National Register for Section 106 purposes.

(3) If the Agency Official and the State Historic Preservation Officer agree that the criteria are not met, the property shall be considered not eligible for the National Register for Section 106 purposes.

(4) If the Agency Official and the State Historic Preservation Officer do not agree, or if the Council or the

Secretary so request, the Agency Official shall obtain a determination from the Secretary of the Interior pursuant to applicable National Park Service Regulations.

(5) If the State Historic Preservation Officer does not provide views, then the State Historic Preservation Officer is presumed to agree with the Agency Official's determination for the purposes of this subsection

(d) **When no historic properties are found.** If the Agency Official determines in accordance with Section 800.4 paragraphs (a) through (c) that there are no historic properties that may be affected by the undertaking, the Agency Official shall provide documentation of this finding to the State Historic Preservation Officer. The Agency official should notify interested persons and parties known to be interested in the undertaking and its possible effects on historic properties and make the documentation available to the public. In these circumstances, the Agency Official is not required to take further steps in the Section 106 process.

(e) **When historic properties are found.** If there are historic properties that the undertaking may affect, the Agency Official shall assess the effects in accordance with Section 800.5.

800.5 Assessing effects.

(a) **Applying the Criteria of Effect.** In consultation with the State Historic Preservation Officer, the Agency Official shall apply the Criteria of Effect (section 800.9(a)) to historic properties that may be affected, giving consideration to the views, if any, of interested persons.

(b) **When no effect is found.** If the Agency Official finds the undertaking will have no effect on historic properties, the Agency Official shall notify the State Historic Preservation Officer and interested persons who have made their concerns known to the Agency Official and document the finding, which shall be available for public inspection. Unless the State Historic Preservation Officer objects within 15 days of receiving such notice, the Agency Official is not required to take any further steps in the Section 106 process. If the State Historic Preservation Officer files a timely objection, then the procedures described in Section 800.5(c) are followed.

(c) **When an effect is found.** If an effect on historic properties is found, the Agency Official, in consultation with the State Historic Preservation officer, shall apply the Criteria of Adverse Effect (Section 800.9(b) to determine whether the effect of the undertaking should be considered adverse.

(d) When the effect is not considered adverse.

(1) If the Agency Official finds the effect is not adverse, the Agency Official shall:

(i) Obtain the State Historic Preservation Officer's concurrence with the finding and submit summary documentation, which shall be available for public inspection; or

(ii) Submit the finding with the necessary documentation (Section 800.8(a) to the Council for a 30-day review period and notify the State Historic Preservation Officer.

(2) If the Council does not object to the finding of the Agency Official within 30 days of receipt of notice, or if the Council objects but proposes changes that the Agency Official accepts, the Agency Official is not required to take any further steps in the Section 106 process other than to comply with any agreement with the State Historic Preservation Officer of Council concerning the undertaking. If the Council objects and the Agency Official does not agree with changes proposed by the Council, then the effect shall be considered adverse.

(e) When the effect is adverse. If an adverse effect on historic properties is found, the Agency Official shall notify the Council and shall consult with the State Historic Preservation Officer to seek ways to avoid or reduce the effects on historic properties. Either the Agency Official or the State Historic Preservation Officer may request the Council to participate. The Council may participate in the consultation without such a request.

(1) Involving interested persons. Interested persons shall be invited to participate as consulting parties as follows when they so request:

(i) The head of a local government when the undertaking may affect historic properties within the local government's jurisdiction;

(ii) The representative of an Indian tribe in accordance with Section 800.1(c)(2)(iii);

(iii) Applicants or holders of grants, permits, or licenses and owners of affected lands; and

(iv) Other interested persons when jointly determined appropriate by the Agency Official, the State Historic Preservation Officer, and the Council, if participating.

(2) Documentation. The Agency Official shall provide each of the consulting parties with the documentation set forth in Section 800.8(b) and such other documentation as may be developed in the course of consultation.

(3) Informing the public. The Agency Official shall provide an adequate opportunity for members of the public to receive information and express their views. The Agency Official is

encouraged to use existing agency public involvement procedures to provide this opportunity. The Agency Official, State Historic Preservation Officer, or the Council may meet with interested members of the public or conduct a public information meeting for this purpose.

(4) Agreement. If the Agency Official and the State Historic Preservation Officer agree on how the effects will be taken into account, they shall execute a Memorandum of Agreement [MOA]. When the Council participates in the consultation, it shall execute the Memorandum of Agreement along with the Agency Official and the State Historic Preservation Officer. When the Council has not participated in the consultation, the Memorandum of Agreement shall be submitted to the Council for comment in accordance with Section 800.6(a). As appropriate, the Agency Official, the State Historic Preservation Officer, and the Council, if participating, may agree to invite other consulting parties to concur in the agreement.

(5) Amendments. The Agency Official, the State Historic Preservation Officer, and the Council, if it was a signatory to the original agreement, may subsequently agree to an amendment to the Memorandum of Agreement. When the Council is not a party to the Memorandum of Agreement, or the Agency Official and the State Historic Preservation Officer cannot agree on proposed changes to the Memorandum of Agreement, the proposed changes shall be submitted to the Council for comment in accordance with Section 800.6.

(6) Ending consultation. The Council encourages Agency Official and State Historic Preservation Officers to utilize the consultation process to the fullest extent practicable. After initiating consultation to seek ways to reduce or avoid effects on historic properties, the State Historic Preservation Officer, the Agency Official, or the Council, at its discretion, may state that further consultation will not be productive and thereby terminate the consultation process. The Agency Official shall then request the Council's comments in accordance with Section 800.6(b) and notify all other consulting parties of its requests.

800.6 Affording the Council an opportunity to comment.

(a) Review of a Memorandum of Agreement.

(1) When an Agency Official submits a Memorandum of Agreement accompanied by the documentation specified in Section 800.8(b) and (c), the Council shall have 30 days from receipt to review it. Before this review period ends, the Council shall:

- (i) Accept the Memorandum of Agreement, which concludes the Section 106 process, and inform all consulting parties; or
- (ii) Advise the Agency Official of changes to the Memorandum of Agreement that would make it acceptable;

subsequent agreement by the Agency Official, the State Historic Preservation Officer, and the Council concludes the Section 106 process; or

(iii) Decide to comment on the undertaking, in which case the Council shall provide its comments within 60 days of receiving the Agency Official's submission, unless the Agency Official agrees otherwise.

(2) If the Agency Official, the State Historic Preservation Officer, and the Council do not reach agreement in accordance with Section 800.6(a)(1)(ii), the Agency Official shall notify the Council which shall provide its comments within 30 days of receipt of notice.

(b) Comment when there is no agreement.

(1) When no Memorandum of Agreement is submitted, the Agency Official shall request Council comment and provide documentation specified in Section 800.8(d). When requested by the Agency Official, the Council shall provide its comments within 60 days of receipt of the Agency Official's request and the specified documentation.

(2) The Agency Official shall make a good faith effort to provide reasonably available additional information concerning the undertaking and shall assist the Council in arranging an onsite inspection and public meeting when requested by the Council.

(3) The Council shall provide its comments to the head of the agency requesting comment. Copies shall be provided to the State Historic Preservation Officer, interested persons, and others as appropriate.

(c) Response to Council Comment.

(1) When a Memorandum of Agreement becomes final in accordance with Section 800.6(a)(1)(i) or (ii), the Agency Official shall carry out the undertaking in accordance with the terms of the agreement. This evidences fulfillment of the agency's Section 106 responsibilities. Failure to carry out the terms of a Memorandum of Agreement requires the Agency Official to resubmit the undertaking to the Council for comment in accordance with Section 800.6.

(2) When the Council has commented pursuant to Section 800.6(b), the Agency Official shall consider the Council's comments in reaching a final decision on the proposed undertaking. The Agency Official shall report the decision to the Council, and if possible, should do so prior to the undertaking.

(d) **Foreclosure of the Council's opportunity to comment.**

(1) The Council may advise an Agency Official that it considers the agency has not provided the Council a reasonable opportunity to comment. The decision to so advise the Agency Official will be reached by a majority vote of the Council or by a majority vote of a panel consisting of three or more Council members with the concurrence of the Chairman

(2) The Agency Official will be given notice and a reasonable opportunity to respond prior to a proposed Council determination that the agency has foreclosed the Council's opportunity to comment.

(e) **Public requests to the Council.**

(1) When requested by any person, the Council shall consider an Agency Official's finding under Sections 800.4(b), 800.4(c), 800.4(d), or 800.5(b) and, within 30 days of receipt of the request, advise the Agency Official, the State Historic Preservation Officer, and the person making the request of its views of the Agency Official's finding.

(2) In light of the Council views, the Agency Official should reconsider the finding. However an inquiry to the Council will not suspend action on the undertaking.

(3) When the finding concerns the eligibility of a property for the National Register, the Council shall refer the matter to the Secretary.

800.7 Agreements with States for Section 106 reviews.

(a) **Establishment of State agreements.**

(1) Any State Historic Preservation Officer may enter into an agreement with the Council to substitute a State review process for the procedures set forth in these regulations, provided that:

(i) The State historic preservation program has been approved by the Secretary pursuant to Section 101(b)(1) of the Act; and

(ii) The Council, after analysis of the State's review process and consideration of the views of Federal and State agencies, local governments, Indian tribes, and the public, determines that the State review process is at least as effective as, and no more burdensome than, the procedures set forth in these regulations in meeting the requirements of Section 106.

(2) The Council, in analyzing a State' review process pursuant to Section 800.7(a)(1)(ii), shall:

(i) Review relevant State laws, Executive Orders, internal

directives, standards, and guidelines

(ii) Review the organization of the State's review process;

(iii) Solicit and consider comments of Federal and State agencies, local governments, Indian tribes, and the public;

(iv) Review the results of program reviews carried out by the Secretary; and

(v) Review the record of State participation in the Section 106 process.

(3) The Council will enter into an agreement with a State under this section only upon determining, at minimum, that the State has a demonstrated record of performance in the Section 106 process and the capability to administer a comparable process at the State level.

(4) A State agreement shall be developed through consultation between the State Historic Preservation Officer and the Council and concurred in by the Secretary before submission to the Council for approval. The Council may invite affected Federal and State agencies, local governments, Indian tribes, and other interested persons to participate in this consultation. The agreement shall:

(i) Specify the historic preservation review process employed in the State, showing that this process is at least as effective as, and no burdensome than, that set forth in these regulations;

(ii) Establish special provisions for participation of local governments or Indian tribes in the review of the undertakings falling within their jurisdiction, when appropriate;

(iii) Establish procedures for public participation in the State review process;

(iv) Provide for Council review of actions taken under its terms, and for appeal of such actions to the Council; and

(v) Be certified by the Secretary as consistent with the Secretary's "Standards and Guidelines for Archeology and Historic Preservation."

(5) Upon concluding a State agreement, the Council shall publish notice of its execution in the Federal Register and make copies of the State agreement available to all Federal agencies.

(b) Review of undertakings when a State agreement is in effect.

(1) When a State agreement under Section 800.7(a) is in effect, an Agency Official may elect to comply with the State review process in lieu of compliance with these regulations.

(2) At any time during review of an undertaking under a State agreement, an Agency Official may terminate such review and comply instead with Sections 800.4 through 800.6 of these regulations.

(3) At any time during review of an undertaking under a State

agreement, the Council may participate. Participants are encouraged to draw upon the Council's expertise as appropriate.

(c) **Monitoring and termination of State agreements.**

(1) The Council shall monitor activities carried out under State agreements, in coordination with the Secretary of the Interior's approval of State programs under Section 101(b)(1) of the Act. The Council may request that the Secretary monitor such activities on its behalf.

(2) The Council may terminate a State agreement after consultation with the State Historic Preservation Officer and the Secretary.

(3) An agreement may be terminated by the State Historic Preservation Officer.

(4) When a State agreement is terminated pursuant to Section 800.7(c)(2) and (3), such termination shall have no effect on undertakings for which review under the agreement was complete or in progress at the time the termination occurred.

800.8 Documentation requirements.

(a) **Finding of no adverse effect.** The purpose of this documentation is to provide sufficient information to explain how the Agency reached the finding of no adverse effect. The required documentation is as follows:

(1) A description of the undertaking, including photographs, maps, and drawings, as necessary;

(2) A description of historic properties that may be affected by the undertaking;

(3) A description of the efforts used to identify historic properties;

(4) A statement of how and why the Criteria of Adverse Effect were found inapplicable;

(5) The views of the State Historic Preservation Officer, affected local governments, Indian tribes, Federal agencies, and the public, if any were provided, as well as a description of the means employed to solicit those views.

(b) **Finding of adverse effect.** The required documentation is as follows:

(1) A description of the undertaking, including photographs, maps, and drawings, as necessary;

(2) A description of the efforts to identify historic properties;

(3) A description of the affected historic properties, using materials already compiled during the evaluation of

significance, as appropriate; and

(4) A description of the undertaking's effects on historic properties.

(c) **Memorandum of Agreement.** When a memorandum is submitted for review in accordance with Section 800.5(a)(1), the documentation, in addition to that specified in Section 800.8(b), shall also include a description and evaluation of any proposed mitigation measures or alternatives that were considered to deal with the undertaking's effects and a summary of the views of the State Historic Preservation Officer and any interested persons.

(d) **Requests for comment when there is no agreement.** The purpose of this documentation is to provide the Council with sufficient information to make an independent review of the undertaking's effects on historic properties as the basis for informed and meaningful comments to the Agency Official. The required documentation is as follows:

(1) A description of the undertaking, with photographs, maps, and drawings, as necessary;

(2) A description of the efforts to identify historic properties;

(3) A description of the affected historic properties, with information on the significant characteristics of each property;

(4) A description of the effects of the undertaking on historic properties and the basis for the determinations;

(5) A description and evaluation of any alternatives or mitigation measures that the Agency Official proposes for dealing with the undertaking's effects;

(6) A description of any alternatives or mitigation measures that were considered but not chosen and the reasons for their rejection;

(7) Documentation of consultation with the State Historic Preservation Officer regarding the identification and evaluation of historic properties, assessment of effect, and any consideration of alternatives or mitigation measures;

(8) A description of the Agency Official's efforts to obtain and consider the views of affected local governments, Indian tribes, and other interested persons;

(9) The planning and approval schedule for the undertaking; and

(10) Copies or summaries of any written views submitted to the Agency Official concerning effects of the undertaking on historic properties and alternatives to reduce or avoid those effects.

800.9 Criteria of Effect and Adverse Effect.

(a) An undertaking has an effect on a historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the National Register. For the purpose of determining effect, alteration to features of the property's location, setting, or use may be relevant depending on a property's significant characteristics and should be considered.

(b) An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to:

(1) Physical destruction, damage, or alteration of all or part of the property;

(2) Isolation of the property from or alteration of the character of the property's setting when that character contributes to the property's qualification for the National Register;

(3) Introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting;

(4) Neglect of a property resulting in its deterioration or destruction; and

(5) Transfer, lease, or sale of the property.

(c) Effects of an undertaking that would otherwise be found to be adverse may be considered as being not adverse for the purpose of these regulations:

(1) When the historic property is of value only for its potential contribution to archeological, historical, or architectural research, and when such value can be substantially preserved through the conduct of appropriate research, and such research is conducted in accordance with applicable professional standards and guidelines;

(2) When the undertaking is limited to the rehabilitation of buildings and structures and is conducted in a manner that preserves the historical and architectural value of affected historic property through conformance with the Secretary's "Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings"; or

(3) When the undertaking is limited to the transfer, lease, or sale of a historic property, and adequate restrictions or conditions are included to ensure preservation of the property's significant historic features.

APPENDIX E

Guidelines for Preparing Archaeological Resource
Management Reports

Prepared by the Division of Historic Landmarks, November 1986

Archaeological resource management reports for differing stages of project development should reflect adequately the level of investigation completed. Obviously, variations will exist for different levels of investigation. The following report format outline is intended to serve as a guide to the types of information which should be included in archeological resource management reports. Certain minimum data requirements are essential for the VRCA to properly review such reports. These typically include the following sections: Title Page; Abstract; Table of Contents; Introduction; Environmental Setting; Archaeological and Historical Background Data; General Research Design; Field Techniques; Laboratory Analysis and Artifact Curation; Inventory of Resources; Evaluation of Research; Recommendations; References; Appendices; and Report Documentation Page.

Each of the above sections is discussed in further detail below. Not every point of this outline is applicable to every report, nor does the scope of investigation have to be limited to these items. When questions exist, the project sponsor and/or consulting archaeologist is strongly recommended to contact the VCRA. Any archaeological resource management report which does not provide sufficient documentation in accordance with these guidelines or adequate justification for omission of certain sections will be returned to the principal investigator for additional data, resulting in a review delay of the proposed project.

- I. Title Page - Provide the following project identification information:
 - A. Title of report including name and location of project;
 - B. Author(s)/principal investigator(s), organizational affiliation, address, and phone number;
 - C. Name, address, and phone number of client for whom report was prepared;
 - D. Lead state/federal agency and contract/permit number(s);
 - E. Date of report.

- II. Abstract - This should not exceed one page. Information needed includes:
- A. Type of project and purpose of investigation;
 - B. Concise summation of report's contents including research orientation, methodology, conclusion, and any new information that may have resulted from this work;
 - C. Brief statement of significance and National Register eligibility (in opinion of principal investigator) of site(s) investigated, nature and degree of potential impacts to site(s), and recommendations.
- III. Table of Contents - Provide for all reports exceeding 25 pages in length. Besides being appropriately arranged and paginated, it should include a list of tables, maps, and figures.
- IV. Introduction - The following minimal data requirements are needed for this section:
- A. Project sponsor, contract/permit number(s), and other appropriate agency specific information;
 - B. Project description including geographical limits of project area and potential project impacts;
 - C. Purpose of report and discussion of scope of work;
 - D. Dates of investigation and staff composition;
 - E. Disposition (temporary and final) of field notes, artifacts, and other materials.
- V. Environmental Setting - This should be a detailed environmental description of the project area directed towards its resource utilization potential and factors affecting the preservation of archaeological sites. For example, are soils in the project area favorable for agriculture, and how may have available fauna and flora affected local settlement pattern distribution? Similarly, are deeply buried sites likely to exist in the project area, and what portions of the project area have been exposed to severe erosion? Specific information needed includes:
- A. Physiographic province and local physical factors such as topography, drainage, soil types (should reflect USDA Soil Conservation Service soil survey data if available), and geomorphology;

- B. Climatic history;
 - C. Exploitable fauna and flora;
 - D. Past and present land use patterns (commercial, industrial, residential, agricultural, etc.);
 - E. Condition of land in project area with emphasis on soil alterations resulting from past and present land use patterns;
 - F. Resource utilization potential summary.
- VI. Archaeological and Historical Background Data - This should be a comprehensive and detailed review of past and current investigations of the project area and surrounding region. Minimally, provide the following information:
- A. Previous research including names of investigators or institutions, dates of work, and research purposes, methodology, and results;
 - B. Location and nature of any publications, unpublished manuscripts, field notes, and collected materials;
 - C. Informants and their addresses (amateur and professional) as well as procedures used to locate these persons and results from interviews;
 - D. Documents and record checked (for example, records and files of federal, state, and local governmental agencies, research institution files, historical maps, published material, historical archival data, etc.);
 - E. Listing of all known archaeological sites including National Register properties in the immediate vicinity of the project area;
 - F. Concise synopsis of the prehistoric and historic cultural record for the project area and surrounding region based on the above data.
- VII. General Research Design - Depending on level of investigation (Phase I, II, or III) and appropriate regional research questions, research design will vary considerably. Minimally, the following topics should be discussed:
- A. Expected archaeological potential for area based on data in Sections V and VI;

- B. Research objectives and theoretical orientations of investigation;
- C. Discussion of survey and/or testing methodology rationale for approach employed and expected results;
- D. Hypothesis to be tested, test implications, and archaeological techniques required to test hypothesis;
- E. Relation of investigation to regional archaeological studies;
- F. Anticipated research limitations.

VIII. Field Techniques - In order to assess the adequacy of an investigation of archaeological resources within a project area, an extensive review of field techniques utilized is necessary. Description of techniques should be done in such a way as to allow future researchers to reconstruct what was done and why as well as what was observed. Techniques used also should take into account that future researchers likely will need to use the recovered data to address problems not recognized at the time the data originally were obtained. Specific information needed is listed below:

- A. Present a detailed summation and evaluation of field techniques employed. This should include types of data collected (artifacts, soil and C-14 samples, etc.), sampling techniques (complete, systematic, or specific form of random sampling), and artifact retrieval and provenience recording procedures. If total artifact collections are not attained for preliminary surveys, explain rationale for selecting some artifacts and not others.

- 1. Surface Survey Techniques - Describe and justify in detail techniques used both in the general project area and on specific sites. Note locations examined, intervals between crew members, and surface visibility locations. For Phase I identification studies, the maximum interval between crew members should not exceed 20 to 25 meters even under conditions of excellent surface visibility. Surface collections, especially for Phase I and Phase II investigations, should be obtained in such a fashion that resulting data can be used for making intrasite and intersite artifact density comparisons.

2. Subsurface Testing Techniques - Describe and justify in detail techniques used both in the general project area and on specific sites. For each test unit give location, size, depth, types of levels used, and soil profile description. Indicate mesh size of screens used. For Phase I identification studies in areas of poor surface visibility, the maximum interval between subsurface tests typically should not exceed 20 to 25 meters. The VRCA should be contacted if the principal investigator anticipates less intensive coverage of areas requiring subsurface tests. Under circumstances where small sites are likely to be located, a closer interval than 20 to 25 meters will be necessary. Subsurface testing procedures for Phase II and Phase III investigations should be discussed with the VRCA as they are likely to vary substantially from site to site. Use of a backhoe, road grader, or other power equipment should be avoided on an archaeological site until the site has been adequately sampled by hand or unless removal of sterile overburden is required. If use of such equipment is anticipated, the VRCA should be contacted.
 3. Remote Sensing Techniques - Treat the description and justification of such techniques, if used, in the same fashion as the above two categories.
- B. Note all constraints on the investigation (limitation of access, poor ground visibility, or adverse weather conditions, etc.). Also provide justification for any in-field modifications of research strategy. If specific portions of the project area are not examined, explain why.
- C. For a listing of necessary maps, see Appendices section.
- IX. Laboratory Analysis and Artifact Curation - Minimal information needed on laboratory analysis techniques and artifact curation are discussed below. Site specific data on artifact assemblages, illustrations, and distribution tables are discussed in the next section on Inventory of Resources.
- A. Laboratory Analysis
1. Describe classificatory/typological schemes used in artifact description and analysis and give rationale for decisions.

2. Note means of chronological determination for artifact assemblages.
 3. Discuss any special analytical techniques used for artifact studies (e.g., functional analysis of lithic tools through edge angle studies).
 4. Indicate techniques used in analysis of any recovered paleoecological data.
- B. Artifact Curation - All artifacts, soil and C-14 samples, field notes, photographic documentation, and other materials from an investigation are to be properly catalogued and curated at an agency or institution with adequate facilities. Costs for necessary conservation of organic, metallic, and other materials is the responsibility of the principal investigator and project sponsor. The VCRA must be notified of the proposed depository to be used. The depository and related data are to be open for inspection by the VRCA to ensure adequate curation. If the principal investigator or project sponsor wishes to use depository facilities at the VRCA or one of its regional preservation offices, the appropriate office must be contacted for instructions prior to the initiation of the archaeological investigation. These offices have specific curation and storage standards which must be met before collections can be accepted.
- X. Inventory of Resources - All archaeological sites greater than 50 years old should be reported and described as fully as possible (see below). More recent archaeological sites need only to be noted in the report. If the principal investigator questions the applicability of the above reporting requirements for a specific site, the VCRA should be contacted for instructions. All pre-twentieth century isolated finds should be noted with precise locations given. Neglect in reporting any of the above-noted archaeological resources is a serious lack of responsibility on the part of the principal investigator since it is the role of the VRCA in conjunction with other governmental agencies to evaluate the significance of all resources within a project area. The following minimal data requirements apply to phase II investigations. It is essential that this information be provided so that sufficient data will exist to evaluate a site's eligibility for inclusion in the National Register of Historic Places. Usually, this level of detail will not be available from a Phase I investigation. The principal

investigator, nevertheless, should provide in a Phase I investigation report the most accurate information available. Points listed below should be used in describing a Phase III investigation, although discussion will need to be more detailed than that for a less intensive Phase II investigation.

A. For all archaeological sites provide the following information (if isolated finds noted, merely give material collected and location):

1. Site number (use official state site number if one has been assigned; temporary numbers can be used but they should not be easily confused with state number's format);
2. Site size and boundaries (including how determined), UTM location, and depth;
3. Pertinent environmental data relating to site location;
4. Date(s) of occupation;
5. Locational data and descriptive summaries for individual surface collections as well as all excavated test units (including, but not limited to, types of levels excavated, soil descriptions, presence or absence of cultural features and/or living floors, etc.);
6. Inventories of all recovered artifacts and other materials with appropriate provenience data;
7. Intrasite variations in artifact and feature densities;
8. Site function(s) in the regional settlement system;
9. Known or suspected alterations which have disturbed the site and the effects such actions may have on the interpretation of results;
10. Other known or suspected limitations on data recovery;
11. Overall estimate of site integrity;
12. Potential project impacts on the site;

13. Appropriate photographs of site showing adjacent environment as well as photographs/drawings of representative excavation profiles, features, and artifacts with accompanying scales and other necessary interpretive data (see Appendices section for listing of necessary maps).

- B. Official state archaeological numbers are assigned by the VRCA. Application for a state number is made by filling out a VRCA site survey form and submitting the completed form and a site location map (using appropriate section of a USGS 7.5' topographic map) to the VRCA. An original form should not be bound with the report since the form will be placed in the VRCA site survey file. The VRCA does not issue blocks of numbers for use at the discretion of the principal investigator. It is the responsibility of the principal investigator to submit a completed VRCA site survey form and site location map for each site located if not previously recorded with the VRCA. The review of an archaeological investigation report will not be completed until such forms have been submitted to and accepted by the VRCA.

- C. The principal investigator may request or be requested to place all archaeological site locational data (including written descriptions and maps) in an appendix that will not be made available to the public. This action will be taken if there is good reason to believe that such information will encourage looting activities on reported archaeological sites.

- XI. Evaluation of Research - Provide information on the reliability of data from the investigation and the relation of analysis results to current archaeological research. Specific items that should be addressed include:
 - A. Data reliability - possibility of potential for unlocated or unidentified archaeological resources within project area as well as other potential biases in data obtained;
 - B. Relation of analysis results to stated goals;
 - C. Synthesis and comparison of analysis results;
 - D. Integration of ancillary data;
 - E. Identification and discussion of perceived patterns and relevant processes;

- F. Contributions of the investigation to local and regional archaeological research as well as other theoretical and substantive concerns.
- XII. Recommendations - For Phase II investigations provide on a site by site basis data regarding project impacts and recommendations on eligibility for inclusion in the National Register of Historic Places, mitigation alternatives to counter adverse project impacts, and the need, when applicable, for further work. Unlike Phase II, Phase I investigations typically do not provide sufficient data to fully address all of the above points; nevertheless, the most accurate information available should be presented. Recommendations in a Phase III investigation report usually are limited to comments on reducing or eliminating future adverse impact on remaining portions of an archaeological site(s) that have not been adequately tested. Further details for Phase I and II investigations are given below.
- A. National Register Eligibility - The following criteria have been established by the U.S. Department of the Interior to guide state and federal agencies in evaluating potential entries for the National Register of Historic Places (cf. 36 CFR 60):

"The quality of significance in American history, architecture, [archeology], and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

- (a) That are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) That are associated with the lives of persons significant in our past; or
- (c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) That have yielded, or may be likely to yield, information important in prehistory or history."

For each archaeological site tested, provide an explicit statement concerning eligibility for inclusion in the National Register of Historic Places. This information should be based on the above criteria in

conjunction with data obtained during the investigation (see particularly Inventory of Resources section). If a site is viewed as eligible for inclusion in the National Register of Historic Places, provide a succinct statement of significance with explicit supportive justification. A simple statement that in one's professional opinion an archaeological site is significant by meeting one or more of the National Register criteria is inadequate for review purposes. In documenting the significance of an archaeological site the following points should be considered:

- What kinds of data are known or thought likely to be present that might be recovered if the site were thoroughly investigated? Some categories of information will be directly observable; others can be inferred based on knowledge of similar properties that have been extensively investigated. Reasons for believing that given categories of information are present and have been preserved should be given.

- What relationships exist between the data known or believed to be present at the site and research topics that might be studied there? Has the site contributed or does it have potential to contribute useful information regarding culture history, human ecology, culture process, or other areas of anthropological/historical research? Evidence supporting evaluations of research significance should be provided, including references to specific scholarly investigations.

- Does the site possess historical, social, and/or ethnic value? For example, is the site associated with a specific historical individual or event of significance or does it have potential for providing a typical or well preserved example of a prehistoric or historic society, period of time, or category of human activity; what, if any, interpretive value does the site possess; does the site have ethnic importance to any groups?

- Have past surface and subsurface alterations affected the integrity of the site? If so, describe in detail such site disturbances.

Archaeological sites not considered eligible for inclusion in the National Register of Historic Places should be treated in a similar fashion by providing a

documented statement outlining the rationale for one's evaluation.

If sufficient data exist to provide a recommendation on National Register eligibility, then this should be explicitly stated. For further information on National Register evaluations, see Guidelines for Local Surveys: A Basis for Preservation Planning (1977) and "Archaeological Property Nominations" (11593, 1976. 1(2): 204), both by staff of the U.S. Department of the Interior.

- B. **Assessment of Impact** - For each archaeological site describe known and/or potential impacts. Specify types of impact and portions of each site to be impacted. If a site will not be impacted by project activities, this also should be noted. The principal investigator also should consult with the project sponsor and report on any known and/or potential indirect impacts on archaeological resources within the general project area.
- C. **Mitigation Alternatives** - If a project will have no impact on archaeological resources, this should be documented followed by a recommendation that no further archaeological work be required. When additional work is necessary to obtain sufficient data for National Register eligibility, this should be noted unless the project sponsor can modify plans and document that the archaeological site(s) in question will not be adversely impacted. For sites already listed on or which in the opinion of the principal investigator are eligible for inclusion in the National Register of Historic Places, mitigation recommendations based on current data should be provided. Project modifications ensuring in situ preservation (site avoidance) are typically encouraged. In other cases, mitigation is achieved through intensive data recovery. As earlier noted, archaeological sites not eligible for inclusion in the National Register of Historic Places do not require mitigative actions, although the VRCA strongly encourages the preservation of such sites by project sponsors when construction plans can be modified to avoid adverse impacts. If the VRCA does not concur with the principal investigator that a particular archaeological site(s) is not eligible for inclusion in the National Register of Historic Places, the the principal investigator may be requested to prepare additional mitigation recommendations.

- XIII. References - List all references and personal communications cited in the report. Use of the American Antiquity format is recommended.
- XIV. Appendices - Provide appendices including all important data not found elsewhere in the report.
- A. Include scope of work (as approved by sponsoring agency), project related correspondence, ancillary studies, and other supporting data.
 - B. Adequate map documentation is particularly important. Each map should be clear and legible and include a scale, north arrow, and legend. Crude sketch maps are not acceptable. Appropriate sections of USGS 7.5' topographic maps are essential. Other more detailed maps should be used as needed. These should show (1) project boundaries and areas to be impacted, (2) areas investigated and field conditions, (3) locations of all archaeological sites and isolated finds in the immediate vicinity of the project area, and (4) other locational data for test pits, core samples, features, etc. If historic maps are of value in documenting possible archaeological sites within the project area, attach copies of relevant sections of such maps.
- XV. Report Documentation Page - Submit with each report a detachable report documentation page. The completed report documentation page will be filed by county(s)/city(s) wherein the archaeological investigation took place. These files will be available for inspection by agencies or professional researchers needing a listing of unpublished archaeological resource management reports within specific areas of Virginia. The following information should be included on the report documentation page (single spaced):
- A. Title;
 - B. Author(s), organizational affiliation, and address;
 - C. Date of report;
 - D. Total number of pages in report;
 - E. Project description and sponsor (not to exceed 200 words);
 - F. County(s) and/or city(s) where project is located;
 - G. Listing of archaeological sites at project location (use state site numbers if available and divide into historic and prehistoric categories);
 - H. Abstract (not to exceed 200 words).