

PART II

CHAPTER 7

**Historic Property Identification and Evaluation-
Archaeology**

March 2014

Contents

7-1.0 Background	3
7-2.0 Phase I Investigations	4
7-2.1 Phase Ia Records Check/Literature Review.....	5
7-2.2.1 Notices of Entry.....	6
7-2.2.2 Archaeological Permits.....	6
7-2.2.3 Standard Methodologies	7
7-2.3 Phase Ib Intensive Survey	8
7-2.4 Phase Ic Subsurface Reconnaissance.....	8
7-2.5 Key aspects of Phase I Identification.....	9
7-2.5.1 Site Boundaries	9
7-2.5.2 Site Type/Function	9
7-2.5.3 Resurvey of a Previously Identified Site	9
7-2.6 Phase I-National Register Eligibility Evaluation	9
7-2.6.1 Context	10
7-2.6.2 Significance	11
7-2.6.3 Integrity.....	13
7-2.6.4 Recommendations	15
7-2.7 Report Review and Distribution.....	16
7-3.0 Phase I Report Guidelines	17
7-3.1 Indiana Archaeological Short Report	17
7-3.2 Indiana Archaeological Phase I Full Report.....	18
7-4.0 Phase II Investigations	25
7-4.1 Prehistoric Phase II Research Questions.....	25
7-4.2 Historical Phase II Research Questions	26
7-4.3 Standard Work Plan for Phase II Investigations	28
7-4.4 Report Review and Distribution.....	29
7-5.0 Phase II Report Guidelines	31
APPENDIX A- Guidance for Historical Archaeological Sites	37
APPENDIX B- Guidance for Prehistoric Archaeological Sites	43
APPENDIX C- Geophysical Survey Guidelines	46
APPENDIX D- Curation and Sampling Guidelines	48
APPENDIX E- Blanket Permit for INDOT Property	51

7-1.0 Background

The Section 106 process, [36 CFR 800.4](#), requires a “reasonable and good faith effort” to identify historic properties within a project’s area of potential effects (APE). For the purposes of Section 106, historic properties are defined as those properties listed in or eligible for listing in the [National Register of Historic Places](#) (NRHP). As a general guideline, to be considered for listing in the NRHP, a resource should be at least 50-years old. Historic properties include both above-ground and archaeological resources. The identification phase of Section 106 consists of locating properties to determine if they are eligible for NRHP listing.

FHWA and INDOT rely on qualified professional consultants to provide clear, detailed and honest information when identifying historic properties to ensure a reasonable and good faith effort. Without a proper identification effort, FHWA/INDOT is unable to make an assessment of “adverse effect.” Therefore, this chapter provides guidance for completing the identification of archaeological resources, including survey, evaluation and reporting. Please also refer to Chapter 9 Resolving Adverse Effects for procedures for conducting data recovery as mitigation for adverse effects to archeological sites. Chapter 6 details the steps for completing above-ground identification and evaluation.

The purpose of archaeology in the context of transportation is to satisfy federal and state legislation, specifically the [National Historic Preservation Act](#) (NHPA), and the [Indiana Historic Preservation and Archaeology Act](#) (IC 14-21). FHWA must adhere to the regulations set forth in the NHPA and [National Environmental Policy Act](#) (NEPA), while IC 14-21 governs the actions of INDOT. Because INDOT projects are funded by a combination of local, state, and federal monies, the agency is required to follow all regulations authorized by these statutes. Discussions of the relevant laws can be found in PART III of this manual. Archaeological investigations are also conducted for borrow and waste areas under [INDOT’s Standard Specifications Manual](#) and for INDOT excess parcels under IC-14-21-1-14.

For any FHWA/INDOT project involving federal or state funding that has the potential to directly or indirectly impact archaeological resources, some level of investigation and documentation is required.

Prior to initiating an archaeological investigation, the archaeological consultant must be provided sufficient information to define the undertaking. The entire undertaking must be considered in the archaeological investigation and summarized in the report of investigation. This information can be obtained through scoping and engineer’s reports, project plans, maps, etc. and must be provided to the project archaeologist to aid in developing scopes of work and cost estimates.

7-2.0 Phase I Investigations

All investigations conducted for INDOT will apply the methodologies outlined in the [Draft Guidebook for Indiana Historic Sites and Structures Inventory—Archaeological Sites \(Guidelines\)](#) as minimum standards for the field reconnaissance. If archaeological sites are located during any type of Phase I investigation, the archaeological report must include a recommendation of the sites' significance and potential eligibility for listing on state and national registers. To this end, INDOT-CRO requires a written description of the site including stratigraphic information. To obtain this information shovel testing or other subsurface tests sufficient to evaluate the site must be completed. If a site is assessed as potentially eligible then a Phase II investigation will be required or else the site must be completely avoided.

The process for the identification, documentation and evaluation of an archaeological property during a Phase I investigation is based within the framework of the criteria set forth in the National Register of Historic Places (NRHP), Indiana State Law (IC-14-21 and 312-IAC-21) and the Indiana State Archaeological Guidelines (2008).

This process includes:

1. Identification of the archaeological resource (reasonable and good faith effort);
2. Defining the extent, type and function of the archaeological resource (categorize);
3. Determine which historic context(s) the resource represents, which includes associated temporal period (period[s] of potential significance) and theme (refine type and/or function of property if necessary);
4. Determine whether the resource is significant under the National Register Criteria within the framework of the appropriate historic context;
5. Determine if the archaeological resource retains integrity;
6. Provide a clear eligibility recommendation that is grounded in this process that addresses both significance and integrity (significance + integrity = eligibility).

The proper identification of an archaeological resource serves as the foundation for evaluation and may entail a combination of informational resources as part of this process, such as written documents, maps, oral testimony, geophysics, the presence of surviving buildings, structures, landscapes, objects and the archaeological record.¹ Data should include “horizontal and vertical extent of the site, chronology or periods of occupation/use, site type, site function, and internal

Remember:

INDOT-CRO will only accept archaeological reports prepared by INDOT prequalified consultants meeting the [Secretary of Interior's Professional Qualification Standards](#) and listed on the [DHPA's Qualified Professionals Roster](#).

¹ Little, Barbara, Erika Martin Seibert, Jan Townsend, John H. Sprinkle, Jr., and John Knoerl 2000 National Register Bulletin: Guidelines for Evaluating and Registering Archaeological Properties. U.S. Department of the Interior, National Park Service. See <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb36.pdf>

configuration.”² Please refer to the following subchapters to follow the appropriate steps in completing identification through the Phase I investigations.

7-2.1 Phase Ia Records Check/Literature Review

All INDOT/FHWA funded archaeological projects should begin with a Records Check/Literature Review. This is the foundation of all archaeological identification. The Records Check/Literature Review utilizes site records, maps, reports, and other materials on file at DHPA and other private institutions as well as information from the State Historic Architectural and Archaeological Research Database (SHAARD). The purpose of the records check is to locate, identify, and evaluate known and expected cultural resources that might be affected by an undertaking. A thorough knowledge of previously recorded cultural resources as well as the environmental characteristics of a region or project area allows the researcher to formulate predictions for the types of archaeological sites that might be encountered during fieldwork.

If during the records check, it is determined that the current project area was the subject of an archaeological reconnaissance in the past and the methods used were sufficient to meet both the reasonable and good faith effort standard and the methodology specified in the current Guidelines, it may be determined, in consultation with INDOT-CRO, that no additional archaeological investigations are necessary.

On occasion, it may be determined by the Qualified Professional archaeologist through aerial photography, photographs, project plans, soil descriptions or other documentation, and/or by an onsite inspection that land within a project area has been altered to the extent that any potential archaeological site has been destroyed. When the project area has been disturbed to this extent, thorough documentation of the disturbance takes the place of systematic field investigations. The archaeological report will be complete after the required background information and sufficient documentation to show that the reasonable and good faith effort standard has been met. The Archaeological Short Report may be used to convey the results of the records check. Please note that:

- Agricultural activity (i.e. plowing/disking) does not constitute a severe level of disturbance.
- Residential properties (i.e. lawns) cannot be assumed to be disturbed. Suspected disturbance by grading/filling or landscaping must be verified by subsurface testing.
- Right-of-way cannot be assumed to be disturbed.
- Fill is not a disturbance; an attempt must be made to penetrate and test beneath fill.
- Soil map units should be used with care when used to determine disturbance (i.e. Urban land complex soils are typically comprised of 40-60% Urban land or disturbed soil, but the remaining soil may not be disturbed).

² Ibid, 17

7-2.2 Phase Ia Field Reconnaissance

For most FHWA/INDOT undertakings, a systematic and detailed field inspection that seeks to locate, identify, and evaluate archaeological resources within a project area is conducted. The Archaeological APE includes proposed permanent and temporary right-of-way, as well as any undisturbed existing right-of-way, of the preferred alternative and is considered the “project area” or “survey area”. If archaeological resources are present, the Phase Ia survey also seeks to define the horizontal and vertical extent of those resources, as well as the cultural affiliation and integrity of the deposits in order to determine if the site(s) are eligible for listing in the NRHP.

Remember before conducting fieldwork the following two requirements:

7-2.2.1 Notices of Entry

Per [IC 8-23-7-26](#), Notices of Entry (NOEs) are letters informing landowners whose property might be impacted by an INDOT project of the need to conduct environmental surveys on their property. Landowners are to receive NOEs at least five days in advance of archaeological fieldwork. A NOE template is available in Appendix H of the [INDOT CE Manual](#) and is to be sent to all property owners potentially impacted by the project.

Archaeologist’s Responsibility:

- 1.) Ensure that NOEs have been sent to all landowners in the project area;
- 2.) Request copies of NOEs from clients if not received prior to fieldwork; and
- 3.) Carry NOEs in the field.

INDOT Expectations:

- 1.) Archaeologists are expected to make an effort to identify themselves to landowners if they are available before entering private property.
- 2.) Bright colored safety vests or shirts are to be worn at all times when conducting work on behalf of INDOT.

7-2.2.2 Archaeological Permits

[IC 14-21-1-16](#) requires a permit for archaeological fieldwork conducted on state-owned property. Permit requests are to be submitted to DHPA with INDOT-CRO receiving a copy for its project files. Requests are to include written permission from the property owner and an outline of general field methodologies. DHPA will provide authorization to conduct archaeological field investigations on state property and issue a permit number upon their review. A copy of this authorization is to be carried by archaeologists in the field. The permit number is to be referenced in subsequent archaeological reports.

A permit is not required when conducting work on state property owned by INDOT, such as right-of-way. INDOT has obtained an approved permit for Phase Ia field investigations on INDOT properties (Permit #2009032) (See Part V Forms). A copy of this permit should be carried by archaeologists working on INDOT projects.

In addition, the [Archaeological Resources Protection Act](http://www.nps.gov/archeology/sites/permits.htm) (ARPA) requires a permit for Archaeological Investigation (Permit) for investigations conducted on Federal lands. Since INDOT maintains state and US highways that cross Federal lands, archaeologists must be aware of their presence in relation to their project areas and if needed, apply for a permit through the proper Federal land manager or agency. Instructions on how to apply for an ARPA permit and the permit application can be found at the National Park Service website: <http://www.nps.gov/archeology/sites/permits.htm>

A map showing the Federal lands in Indiana and the managing agencies can be found at:

<http://nationalatlas.gov/printable/images/pdf/fedlands/IN.pdf>

INDOT-CRO does not need to review the application but does ask that a copy of the application and agency approval letter be provided for our project file.

7-2.2.3 Standard Methodologies

Different field conditions call for different methodologies. If ground surface visibility is greater than 30% *and* survey conditions are adequate for detecting archaeological sites (i.e., there is a reasonable expectation that artifacts would be readily exposed on the surface such as a rainwashed plowed fields), a pedestrian surface survey not to exceed 10 m intervals may be conducted. No-till agriculture fields and wooded areas do not constitute survey conditions adequate for detecting archaeological sites regardless of the amount of surface visibility. In addition, archaeological survey should not be conducted if the ground is frozen or covered in snow.

Once artifacts are identified on the ground surface, or if surveying on a known or reported site, spacing is to be reduced to 5 meters. On sites investigated by pedestrian surface survey, one or more shovel tests should be excavated in order to characterize the vertical extent and integrity of subsurface deposits. The number of shovel tests needed is dependent on the site's size and setting.

Areas with slopes greater than 20% or 11° may be investigated by a walkover visual survey at 30 meter intervals. However, if areas with potential for archaeological resources are identified (such as caves, sinkholes, rock shelters, rock ledges, chert outcrops, etc.) they should be investigated using standard survey methodologies (shovel testing in rockshelters should be minimized to avoid damaging fragile deposits).

If ground surface visibility is less than 30% and the slope is less than 20% or 11°, shovel probing is required. In addition, shovel probes are required in any settings where artifacts would not be expected to be readily exposed on the surface (e.g. no-till agricultural fields, freshly plowed or un-rainwashed, fields, some alluvial settings, forest with thick humus layers, etc.). Shovel probing shall occur at intervals not to exceed 15 m. If the project area is located in an area with a high potential for archaeological sites, a smaller interval should be considered. Shovel probes must be at least 30 cm in diameter and excavated into subsoil or to a depth of 50 cm, whichever comes first. Soil excavated from shovel tests must be screened through a ¼" wire mesh. All probes must be backfilled and returned to their original condition as much as possible.

Once artifacts are recovered or if shovel probing on a known or reported site, the shovel test interval is to be reduced to 5 meters near the periphery of the site and continued until two sequential negative probes are excavated in order to determine the site boundaries. Additional radial probes must be excavated around positive radial probes in order to properly delineate the site boundaries.

Artifacts are to be collected and bagged by shovel probe location and placed in appropriately identified bags. Artifacts recovered must be recorded as to the general depth of occurrence or minimally "above" or "below plowzone" if observable. Soil profile information from positive shovel tests must be noted and representative examples generally described in the report.

The location of all sites should be recorded by GPS. For each archaeological site located, an Indiana State Site Form must be submitted to the DHPA through [SHAARD](#). A state site number may be acquired from the DHPA. In addition, if a recorded site is resurveyed and not relocated, a new site form must be completed indicating that no evidence of the site was found.

Augering or probing during the Phase Ia may be used to confirm the presence of alluvial, colluvial, or aeolian soils, which may contain buried archaeological deposits, requiring a Phase Ic.

7-2.3 Phase Ib Intensive Survey

The Phase Ib intensive survey is designed to build upon the Phase Ia investigations when additional information is required to better evaluate a site when its integrity and potential eligibility cannot be determined through standard Phase Ia methods. . INDOT considers intensive shovel probing, piece plotting, and controlled surface collection strategies part of Phase Ia investigations that may be conducted without submitting a plan to DHPA for approval. For historical sites, in depth historical research may be useful to determine significance and may be conducted without an approved work plan. On occasion, INDOT-CRO may not agree with a consultant's eligibility determination of a site and ask that a Phase Ib intensive survey be conducted to gather additional information about the site's integrity. In all cases where a Phase Ib is recommended, please consult INDOT-CRO in developing a sampling strategy for the investigation. If limited subsurface testing is recommended, a plan for Phase Ib investigations will need the approval of INDOT and DHPA.

7-2.4 Phase Ic Subsurface Reconnaissance

A Phase Ic subsurface reconnaissance is required in areas where archaeological deposits are likely to be buried in alluvial, colluvial, or aeolian soils. Phase Ic investigations may also be appropriate in urban settings where cultural deposits may be buried under layers of fill. The Phase Ic may require the use of augers, soil coring, trenches, or test units to locate and assess the nature of buried deposits. DHPA guidelines require that 1-3% of land areas favorable for the presence of buried deposits within a project area be sampled by the Phase Ic investigation. Please see the [Guidelines](#) for specific guidance in conducting Phase Ic investigations. Plans for Phase Ic investigations are to be approved by INDOT-CRO prior to submittal to DHPA.

7-2.5 Key aspects of Phase I Identification

7-2.5.1 Site Boundaries

The level of effort to define site boundaries should be an explicit part of research designs for archeological surveys designed to identify potentially National Register-eligible sites. In addition, the principles for demarcating the limits of archeological sites should also be explicitly stated in the survey methodology. “Once defined, this methodology should be consistently applied to each potential archeological site identified in a survey.”³ Sites identified in the project limits should be discussed as a whole (including areas extending outside of the project limits), although only the portion within the project limits is subject to an eligibility evaluation. Note any pertinent information regarding the portion of the site which lies outside the project limits in order to better define the site boundaries, such as topography, historical land use patterns, and details extracted from both historical and current maps as well as relevant historical documents.

7-2.5.2 Site Type/Function

An archaeological site is defined on the basis of all relevant information that addresses the nature and function of the resource, which in turn allows for the evaluation of the resource within the scope of a historic context. The process of defining a site type is based upon relevant criteria, which includes data from field investigations (both in and outside the project area), historical documents, and comparative site information for the area.

7-2.5.3 Resurvey of a Previously Identified Site

All known and reported sites within a project area are to be examined, information on them updated, and their data included in the analysis and interpretation. If a previously recorded site is resurveyed and not relocated, a new site form must be completed indicating that no evidence of the site was re-identified. An Indiana Archaeological Short Report (State Form 54566 [1-11]) may be prepared “where the archaeological investigation does not produce evidence for archaeological resources or where alteration or disturbance precludes the survival of any archaeological sites” (312 IAC 21-3-8).

7-2.6 Phase I-National Register Eligibility Evaluation

The two considerations for assessing whether an archaeological site is eligible for the NRHP are significance and integrity. In order for an archaeological site to be NRHP-eligible it must be significant within an established context(s) *and* it must retain sufficient integrity to convey its significance.

³ Seifert, Donna J., Barbara J. Little, Beth L. Savage, and John H. Sprinkle, Jr. 1997 National Register Bulletin: Defining Boundaries for National Register Properties. U.S. Department of the Interior, National Park Service. See <http://www.nps.gov/nr/publications/bulletins/pdfs/Boundary.pdf>

In most cases, the archaeologist should be able to make an informed recommendation for a site at the Phase I level. If not, additional work may be necessary beyond what is required in the Guidelines in order to make an adequate evaluation. If there is still insufficient data to evaluate the site, explicitly state the reasoning as to why adequate information is lacking and what is required to make a defensible significance determination. Foremost, the evaluation of the archaeological resource should not be assessed in vacuity, but in relation to all available yet relevant data.

Remember:

Significance + Integrity = NRHP Eligibility.

7-2.6.1 Context

The purpose of a historic context is to provide an interpretive framework to assess the potential significance of an archaeological resource at local, state and national levels. The context ties the resource to thematically, geographically and temporally linked information that provides avenues to address particular research questions – “Historic contexts are those patterns, themes, or trends in history by which a specific occurrence, property, or site is understood and its historic meaning (and ultimately its significance) is made clear”⁴. The lack of an applicable context greatly diminishes the ability to adequately evaluate the significance of a particular archaeological resource. This information may also include broadened comparative site data (based upon similar site types), a relevant literature review and an examination of primary historical documents; however, the depth and complexity of the context should reflect the nature of the site and will vary in scope based upon an assessment of available information.

The procedures for developing a historic context once a site has been identified and defined by type and function are:

1. Define the period(s) of significance for the site;
2. Define the geographic limits (local, state, national);
3. Define the theme(s) with respect to defined period(s) of significance and geographic limits;
4. Assemble existing information about the historic context based upon preceding steps;
5. Synthesize the information from the context and relate to the historic property - refine the site type/function if necessary.

The cultural history and records check sections within a report do not necessarily replace the need for a context once a site has been identified. The objectives of the cultural history/records check and context differ and one cannot usually serve both aims. Due to these separate and distinct goals, the author should be clear as to the intended purpose and use as appropriate. Specifically, the cultural history/records check provides an outline of the overall setting and the types of cultural resources one would expect to encounter during the reconnaissance as outlined

⁴ Little, Barbara, Erika Martin Seibert, Jan Townsend, John H. Sprinkle, Jr., and John Knoerl 2000 National Register Bulletin: Guidelines for Evaluating and Registering Archaeological Properties. U.S. Department of the Interior, National Park Service. See <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb36.pdf>

in the Guidelines. This background is typically too broad to be useful as a context in which to evaluate a site for the NRHP. It is written prior to the survey and is meant as a planning tool to provide the reader (and investigator) a general introduction to the project area; not as an evaluation tool for a specific historic property. The defined site type will dictate the theme, temporal period and geographic limits of the context; therefore, writing the context prior to the identification of an archaeological property is most likely ineffective. However, once a context has been developed in response to the initial defining attributes of a property, these defining parameters can be adjusted as additional contextual information is gathered and synthesized.

7-2.6.2 Significance

The basis for evaluating the significance of an archaeological site is its assessment within the framework of an applicable historic context, which is then applied to the National Register criteria, most likely Criterion D, although any of the four may pertain to an archaeological property:

Criterion A: Associated with events that have made a significant contribution to the broad patterns of our history (*typically contains ruins or extant buildings/structures with associated archaeological deposits which are “needed to convey, illustrate or help interpret the historical event or pattern”*)⁵; or

Criterion B: Associated with the lives of persons significant in our past (*archaeological deposits are “needed to convey, illustrate or interpret a historic property that is strongly associated with the career or life of an important person”*)⁶; or

Criterion C: 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 (*archaeological deposits are “needed to convey, illustrate, or interpret an historic property containing strongly associated architectural or related attributes that reflect a particular pattern, style or type”*)⁷; or

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history.

Under Criteria A, B, and C the archaeological property must have demonstrated its ability to convey its significance, as opposed to sites eligible under D, where only the potential to yield important information is required. Therefore, archaeological sites are most often significant under Criterion D for their information potential. “Criterion D most commonly applies to properties that contain or are likely to contain information bearing on an important archeological research question. The property must have characteristics suggesting the likelihood that it possesses configurations of artifacts, soil strata, structural remains, or other natural or cultural features that make it possible to do the following:

⁵ Donald L. Hardesty and Barbara J. Little
2000 Assessing Site Significance. AltaMira Press. Pg. 33.

⁶ Ibid, 34

⁷ Ibid, 36

- Test a hypothesis or hypotheses about events, groups, or processes in the past that bear on important research questions in the social or natural sciences or the humanities; or
- Corroborate or amplify currently available information suggesting that a hypothesis is either true or false; or
- Reconstruct the sequence of archeological cultures for the purpose of identifying and explaining continuities and discontinuities in the archeological record for a particular area.”⁸

Significance under Criterion D means that a site must be likely to produce information that contributes to our understanding of history or prehistory, *and* this information must be considered important (e.g., it fills a gap in our knowledge or understanding or it can be used to develop new theory). An archaeological site must satisfy both of these requirements to be considered significant under Criterion D.

“Under the first of these requirements, a property is eligible if it has been used as a source of data and contains more as-yet unretrieved data. Under the second requirement, the information must be carefully evaluated within an appropriate context to determine its importance. Information is considered ‘important’ when it is shown to have a significant bearing on a research design that addresses such areas as: 1) current data gaps or alternative theories that challenge existing ones or 2) priority areas identified under a State or Federal agency management plan.”⁹

Information potential (and therefore Criterion D significance) must be evaluated in the context of our current state of knowledge and theoretical development. Sites that can provide information from poorly understood or poorly documented cultures or time periods (such as Paleoindian, Middle Archaic, contact period, pioneer era, early African American sites, or immigrant community sites) may have a lower threshold for significance. Types of sites that have typically been understudied (such as small, limited activity prehistoric sites) may not be clearly significant in isolation; however, such sites may contribute significant information in the context of reconstructing settlement patterns, landscape usage, diachronic changes in resource exploitation, or other research questions. Similarly, a tendency to equate significance with large, diverse historical scatters yielding great numbers of artifacts and containing durable architectural materials may lead to a bias toward recovering information about affluent landowners at the expense of lower socioeconomic status people, whose habitation sites may yield only meager amounts of materials. “Overlooking the significance of small sites may skew our understanding of past lifeways as those sites not only receive less research attention, but also are destroyed without being recorded thoroughly because they are ‘written off’ as ineligible for listing in the National Register. Such losses point to the need to continuously reexamine historic contexts and allow new discoveries to challenge our ideas about the past.”¹⁰

⁸ U.S. Department of the Interior, National Park Service
1997 National Register Bulletin- How to Apply the National Register Criteria: 21. See
<http://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf>

⁹ Ibid, 21

¹⁰ Little, Barbara, Erika Martin Seibert, Jan Townsend, John H. Sprinkle, Jr., and John Knoerl
2000 National Register Bulletin: Guidelines for Evaluating and Registering Archaeological Properties. U.S.
Department of the Interior, National Park Service: 21. See
<http://www.nps.gov/nr/publications/bulletins/pdfs/nrb36.pdf>

In order to justify a site as significant under Criterion D, a greater level of analysis is required at the Phase I level. A statement of significance should be included in the Phase I report that constitutes a reasoned, well developed argument, within the framework of the appropriate context(s) that will result in providing the basis for the significance evaluation of the historic property.

7-2.6.3 Integrity

Integrity is the ability of a property to convey its significance. Properties eligible under Criterion D convey their significance through the information that they contain. A site that lacks integrity will not be considered eligible. Conversely, a site that lacks important information will not be significant even if it retains excellent integrity. The assessment of integrity is the final step in the evaluation process and should not be used as an initial screening mechanism.

Historic properties either retain integrity (that is, convey their significance) or they do not. Within the concept of integrity, the National Register criteria recognize seven aspects or qualities that, in various combinations, define integrity. To assess integrity, first define the essential physical qualities that must be present for the property to represent its significance.

Location: **Location is the place where the historic property was constructed or the place where the historic event occurred.** “The location of a property often helps explain its importance. Archeological sites and districts almost always have integrity of location. Integrity of location is closely linked to integrity of association, which is discussed below. Integrity of location would not necessarily preclude the eligibility of secondary or re-deposited deposits in an archeological property. Integrity depends upon the significance argued for the property.”¹¹

Design: **Design is the combination of elements that create the form, plan, space, structure, and style of a property.** It results from conscious decisions made during the original conception and planning of a property (or its significant alteration through use) and includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials. “Under Criterion D, integrity of design for archeological sites most closely approximates intra-site artifact and feature patterning. For districts, inter-site patterning can be used to illustrate integrity of design.”¹²

Setting: “**Setting is the physical environment of a historic property.** Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the *character* of the place in which the property played its historical role.”¹³ Archeological sites that lack integrity of setting may still be nominated under Criterion D if they have important information potential.”

Materials: “**Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic**

¹¹ Ibid, 38

¹² Ibid, 39

¹³U.S. Department of the Interior, National Park Service
1997 National Register Bulletin- How to Apply the National Register Criteria: 45. See
<http://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf>

property. The choice and combination of materials reveal the preferences of those who created the property and indicate the availability of particular types of materials and technology.”¹⁴ “Under Criterion D, integrity of materials is usually described in terms of the presence of intrusive artifacts/ features, the completeness of the artifact/feature assemblage, or the quality of artifact or feature preservation.”¹⁵

Workmanship: “**Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.** It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site. Workmanship can apply to the property as a whole or to its individual components.”¹⁶ “Under Criterion D, workmanship usually is addressed indirectly in terms of the quality of the artifacts or architectural features. The skill needed to produce the artifact or construct the architectural feature is also an indication of workmanship. The importance of workmanship is dependent on the nature of the site and its research importance.”¹⁷

Feeling: “**Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.** It results from the presence of physical features that, taken together, convey the property's historic character.”¹⁸ Archeological sites that lack integrity of feeling may still be nominated under Criterion D if they have important information potential.

Association: “**Association is the direct link between an important historic event or person and a historic property.**”¹⁹ Under Criterion D, integrity of association may refer to the physical association of features and materials (or the site itself) with diagnostic artifacts or datable artifacts such as carbon that provide context for interpretation. Integrity of association may also be measured in terms of the strength of the relationship between the site's data or information and the important research questions. In this sense, a site that contains extremely important information may retain its integrity of association and therefore significance even if the site has been extensively disturbed.

“Generally, integrity cannot be thought of as a finite quality of a property. Integrity is relative to the specific significance which the property conveys. Although it is possible to correlate the seven aspects of integrity with standard archeological site characteristics, those aspects are often unclear for evaluating the ability of an archeological property to convey significance under Criterion D. The integrity of archeological properties under Criterion D is judged according to important information potential. Archeological sites may contain a great deal of important information and yet have had some disturbance or extensive excavation (and, thereby, destruction). For example, sites that have been plowed may be eligible if it is demonstrated that

¹⁴ Ibid, 45

¹⁵ Little, Barbara, Erika Martin Seibert, Jan Townsend, John H. Sprinkle, Jr., and John Knoerl 2000 National Register Bulletin: Guidelines for Evaluating and Registering Archaeological Properties. U.S. Department of the Interior, National Park Service: 40. See <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb36.pdf>

¹⁶ U.S. Department of the Interior, National Park Service 1997 National Register Bulletin- How to Apply the National Register Criteria: 41

¹⁷ Ibid: 45

¹⁸ Ibid, 45

¹⁹ Ibid, 45

the disturbance caused by plowing does not destroy the important information that the site holds.”²⁰ Evaluation of integrity for archaeological sites significant under Criterion D will most often focus upon *Location, Materials, Association, and Design*. Other aspects of integrity, such as *Workmanship*, may also be relevant in certain cases.

7-2.6.4 Recommendations

The recommendation should provide a clear yet concise rationale of how the eligibility determination was attained within the framework of the evaluation process and whether the property was found eligible or ineligible. The recommendation should synthesize the eligibility or potential eligibility of the archaeological site on the basis of a well grounded argument for or against significance and the ability to convey or not convey integrity. A recommendation should not consist of open-ended, inadequate or unsupported statements.

While all archaeological sites have the potential to convey information, that information is not always important with respect to furthering our understanding of past lifeways, cultural processes and change. It is therefore necessary to state what is important and why. If additional work is recommended, a basic level of guidance also needs to be provided for subsequent investigations. If this guidance is lacking, additional work at the Phase I level may be necessary rather than shifting this responsibility to future fieldwork. Limit recommendations to the areas of the site that were investigated within proposed right-of-way and address all potential impacts to the site as a result of the project. If the archaeological site will not be impacted by the project, explicitly state this. Every recommendation should contain the following information, as applicable:

- **Statement of Significance**
 - Not significant
 - Supporting information summary
 - Potentially Significant
 - Specify which National Register criteria
 - Supporting information summary
 - Significant
 - Specify which National Register criteria
 - Supporting information summary
- **Statement of Integrity** (only if site is determined significant or potentially significant)
 - Supporting information summary
- **Eligibility for the NRHP Statement**
 - Ineligible (if property is determined not significant)
 - Potentially Eligible (unclear significance and/or integrity - specify)

²⁰ Little, Barbara, Erika Martin Seibert, Jan Townsend, John H. Sprinkle, Jr., and John Knoerl 2000 National Register Bulletin: Guidelines for Evaluating and Registering Archaeological Properties. U.S. Department of the Interior, National Park Service: 37-38. See <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb36.pdf>

- Eligible (clear significance and sound integrity)
- **Recommendation Statement**
 - Further work or avoidance
 - Summarize type and guidance for further work
 - No further work

7-2.7 Report Review and Distribution

Before distribution to the SHPO, one electronic copy of the archaeology report should be forwarded to INDOT-CRO for review. If the report is too large to send via email, a CD or access to a FTP site is acceptable. After all comments from INDOT are satisfactorily addressed, the archaeology report may be distributed to SHPO for review and comment as part of the Section 106 process. The transmittal letter should indicate that the INDOT Cultural Resources Office has reviewed and accepted the document. CRO should be electronically copied on the transmittal letter and should receive an electronic copy of the final report for INDOT's files. A bound hard copy should also be provided to CRO for reports over 60 pages (single sided) in length or for reports containing fold-out illustrations.

7-3.0 Phase I Report Guidelines

These guidelines were created in order to increase the consistency and quality of archaeological reports, as well as streamline the review process. These guidelines are largely based on the DHPA's *Guidebook for Indiana Historic Sites and Structures Inventory - Archaeological Sites* and Indiana state law IAC 21-3-8.

In Indiana, accepted archaeological reports include both short and full report formats. The Indiana Archaeological Short Report can be used for Phase Ia reconnaissance surveys when:

1. there is no potential to impact archaeological resources;
2. field survey found previously recorded archaeological sites to be completely destroyed or;
3. field survey identified no archaeological sites within the project area.

In all other instances a full archaeological report must be completed. The short report is available in both Microsoft Word and PDF formats and can be accessed through [DHPA's website](#).

7-3.1 Indiana Archaeological Short Report

The purpose of the short report is to establish an abbreviated, standard report format for surveys meeting the conditions listed above, while ensuring that information is adequate to make a determination that no sites are present. INDOT requires the use of the [short report](#) when applicable. INDOT-CRO will review reports to determine if the minimum content is present. The final report should be as complete and concise as possible while still providing the necessary information to demonstrate the reasonable and good faith effort standard. An attempt should be made to fill in all appropriate boxes. Additional expectations for INDOT projects are included below:

- The date should reflect the latest version of the report, i.e. if there are revisions the date should be changed as well.
- The project description should fully describe the nature and scope of the project, the limits of the project area, and the type and extent of land disturbing activities, including all associated impacts, anticipated by the undertaking.
- The project area (archaeological APE) should be clearly described and depicted on quality maps.
- For a project's legal location or dimensions, the available boxes may not be appropriate. In such cases, use the comment box below to give the location; e.g. if the project is best described as being on the common line between the NW ¼ and the NE ¼ of Section 6 or segment 1 is 100 m x 30 m and segment 2 is 300 m x 30 m, etc.
- The property owner box should, at a minimum, distinguish between public and private ownership, including existing INDOT right-of-way. Public ownership may require obtaining additional permission or permits prior to fieldwork.
- Project length and width should be given as maximum length and maximum width.
- Expectations for figures and tables are the same for both short and full report formats.
- Use the comment box under Results to describe the survey, including specific methodologies, visibility, etc. (should be consistent with survey map). Explain the

reconnaissance in detail including observed soil profiles, number and orientation of transects, and any areas found to be disturbed.

7-3.2 Indiana Archaeological Phase I Full Report

*These guidelines are meant to **drive** the content of the reports. Format and structure of the reports can vary based on what the authoring archaeologist feels is appropriate, as long as the pertinent information is present. (Note that the metric system is required for all measurements in documentation submitted to FHWA/INDOT.)*

The purpose of a Phase Ia archaeological reconnaissance and report is to comply with state and federal law. To this end FHWA/INDOT and consultants working on their behalf must make a “reasonable and good faith effort” to identify cultural resources within the area of potential effect, typically the project footprint (INDOT right-of-way and proposed right-of-way) for archaeological resources. The Phase Ia survey also seeks to define the horizontal and vertical extent of archaeological resources, as well as the cultural affiliation and integrity of the deposit in order to decide if the site(s) are eligible for listing in the NRHP.

Archaeological reports are simply one element of Section 106 documentation and the NEPA documentation, all of which are legal documents that are often scrutinized by professionals and the public. INDOT-CRO has received requests by consulting parties and the interested public (including other professional archaeologists) to review archaeological reports. Transportation projects, both large and small in scope, often become controversial, and it is INDOT’s responsibility to ensure that all aspects of our NEPA/Section 106 documentation, including archaeological reports, are of the highest quality and accuracy. Please refer to the Society for American Archaeology’s [Editorial Policy, Information for Authors, & Style Guide](#) when writing or editing an archaeological report. The following are the required elements of a Phase I Reconnaissance Report:

Title Page

- INDOT Designation Number
- Title (including description, location, and county of the project)
- Author(s), name of the Principal Investigator, company/organization/institution, address, and telephone number
- Signature of the Principal Investigator
- Client for whom the report is prepared, contact person, address, and telephone number
- Lead Agency or Funding Agency
- Date

Management Summary

The Management Summary summarizes the nature of the project and its conclusions. It should include:

- The INDOT designation number, the nature of the undertaking, and the size (length, width, and area) of the project area.

- A brief statement of project goals and objectives should also be expressed (e.g. to identify archaeological resources within the project area and assess their significance in terms of meeting the criteria for listing in the IRHSS and NRHP).
- Project results and recommendations for further investigations, no further investigations, site avoidance, etc. with specific references to sites fitting each category.
- A statement confirming that all archaeological work was carried out in accordance with state and federal guidelines and that personnel conducting field and lab work meet professional qualifications..

Many of the readers of the archaeological reports submitted to INDOT are not archaeologists; they are project managers, project engineers, and environmental specialists. The Management Summary is included in all INDOT archaeological reports so that these readers can quickly ascertain eligibility determinations and recommendations that are summarized in the larger NEPA environmental documentation.

Introduction

- The Introduction must include the name of the agency for which the archaeological work was completed, the name and designation number of the project, the location and size (length, width, and area) of the project, and what kind of impact activity is planned. The specifications of the undertaking and scope of work need to be included. The location of the project is to be given in quarter sections, township and range numbers, civil township, and topographic map title.
- Two figures should be referenced in the Introduction; the first showing the exact location(s) of the project on USGS 7.5' series topographic quadrangles preferably at a 1:24,000 scale and the second an aerial image of the project areas showing current land use. USGS topographic maps and high-quality 2005 aerial photographs are available free of charge (and without copyright restrictions) at [IndianaMap](#). The limits of the project area (archaeological APE) should be clearly depicted on the maps. Maps from Google or other web sites cannot be used in reports fully or partially funded by INDOT unless a commercial license has been purchased by the consultant. The names of the archaeologists who performed the survey and the dates of fieldwork.

Environmental Setting

A basic understanding of the environmental and cultural history of the project area and immediate region is a necessary component to fieldwork. This section briefly summarizes the natural environment of the project area. The most important aspect of this section is the probability of the project area to contain intact cultural resources.

If a project area appears disturbed, it is required that the disturbance be documented. It may be helpful to furnish evidence of that disturbance in the form of field photographs, construction plans, soil descriptions, and aerial photographs.

The environmental setting will not be complete unless all of the following information is included:

- Soil Association and specific soil delineations (county soil survey reports are available online at <http://soils.usda.gov/survey/>).
- Physiographic region
- Watershed
- Geology
- Proximity of nearest chert sources
- Modern environmental setting
- Current land use pattern in project area
- Natural Region
- Topography
- Regional/local Pleistocene and Holocene environmental overview (if appropriate);

This information is largely available as layers in [IndianaMap](#).

Cultural Background and Previous Investigations

The Cultural Background summarizes the prehistory and history of the *county* or *region*, emphasizing the results of particularly large-scale archaeological surveys or excavations and describing significant sites. This section should define the archaeological context of the project area within a regional perspective. The goal of this phase of the background investigations is not the production of culture histories *per se*, but to provide a summary of previously established archaeological resource distributions which can, in turn, be used to predict the likely distribution of archaeological resources within the project area. The length and detail of the Cultural Background will reflect the nature and location of the project. For example, the Cultural Background section for a 0.5 acre small structure replacement will be much briefer than the Background section for a 15 mile long highway corridor.

This section should include a brief historical background as well, particularly if the project is located in an urban area or historic district, or if historical archaeological sites have been found in the region.

The Previous Investigations section gives special reference to the project area and summarizes previous investigations conducted in and within one-mile of the project area. This section also provides information regarding Historic Sites and Structures (particularly in urban areas) and historical cemeteries in or near the project area. In addition, this section should discuss all archaeological sites within one mile of the project area, including site number, cultural affiliation, site type, and eligibility. If numerous sites exist in or near the project area, a table may be used to list and describe them.

For many projects, the Cultural Background and Previous Investigations sections can be combined into several brief paragraphs. The point of these sections is to synthesize relevant information specific to the project area and vicinity, and make predictive statements about the potential for archaeological sites within a given project area, not to present lengthy boilerplate culture histories.

Your archaeological records check will not be complete unless all of the following materials and sources available in the DHPA office (or other institution) are reviewed:

- [The Indiana State Historic Architectural and Archaeological Research Database for archaeological site, archaeological reports, and cemeteries \(SHAARD\)](#)
- [The Indiana State Historic Architectural and Archaeological Research Database Geographical Information System](#) (SHAARD GIS).
- Cultural resource management and other research and grant reports on file at DHPA.
- County Interim Reports. Indiana Landmarks, through DHPA grants, conducted surveys of historic structures in most of the Indiana counties. These reports are especially helpful in urban settings. County Interim reports also include helpful historic summaries on counties, townships, and towns.
- McGregor Industrial Site Records. These are special files for only a few counties. They represent the McGregor survey of historical/industrial structures and archaeological sites.
- [Sanborn Fire Insurance Maps](#) when in urban settings.

Additional useful records check may include, but are not limited to the following:

- historical maps and atlases (often available on-line),
historical plat maps,
early editions of the U.S. Geological Survey topographic maps;
- county histories (often available on-line);
- historical aerial photographs;
- GLO records.

Methodology

This section should be presented so that reviewers and future researchers may reconstruct what was done and why. This section is split in two categories: Field Methods and Laboratory Methods.

The Field Methods section summarizes the survey techniques utilized and specifies any variations in techniques due to varying field conditions. It also explains the intensity of the survey with specific attention to pedestrian and shovel probe transect intervals and size and depth of shovel probes. Survey methods should be carefully explained so that others using the gathered information can understand how it was obtained and what its possible limitations or biases are. Any conditions including that of the ground surface or subsurface, weather, etc. that may have affected survey results should be described. Note anything that may have obscured visibility. Specific percentages of ground surface visibility must be provided. Accompanying photographs and maps must also be referenced.

If any areas were not examined, or were examined on a scale different than a normal interval (for example, if a disturbed area was shovel tested on a 40 m interval), those areas must be described and justifications for any deviations from standard methodologies provided. Generally, all project areas undergoing 106 review are expected to be surveyed unless access is denied. Any access problems should be discussed and resolved directly with INDOT-CRO.

Please note that:

- Agricultural activity (i.e. plowing/disking) does not normally constitute a severe level of disturbance to an archaeological site and does not provide sufficient justification for a recommendation of no additional investigation.
- Residential properties (i.e. lawns) cannot be assumed to be disturbed.
- Right-of-way cannot be assumed to be disturbed.
- Fill is not a disturbance and every effort should be made to penetrate past fill deposits into natural soils.
- Any deviations from standard methodologies must be approved by INDOT-CRO and DHPA prior to fieldwork .

The Laboratory Methods section includes a prehistoric and/or historical artifact typology, presents a summary of how cultural materials were processed, and states where materials and project documentation will be curated.

Results

This section presents the details of the field reconnaissance. This section must include a clear statement of how many new sites and/or previously recorded sites were documented during the reconnaissance. The description of sites should be as follows:

12-Xy-0001

UTM coordinates:

Cultural period:

Site dimensions:

Topographic setting:

Elevation:

Soil type:

Watershed:

Nearest water source:

Distance and direction to nearest water source:

Site 12-Xy-0001 is located in the NE ¼ of the SW ¼ of the NW ¼ of the SE ¼ of Section 2, Township 3 South, Range 4 West, as shown on the USGS 7.5' series Miami, Indiana topographic quadrangle (Figure #). The site consists of a (prehistoric lithic scatter, camp, historical scatter, etc.) discovered during (visual pedestrian reconnaissance or shovel probe testing) of an (topographic setting) consisting of (land-use) with (percent of visibility). The size of the site is 10m x 10m. The soil on which the site is located is (specific soil type and description). The following artifacts were recovered from site 12-Xy-0001:

Count	Artifact Description	Weight
1	Core (Holland Chert)	58.8 g
2	Broken flakes (Wyandotte Chert)	7.4 g

This format should be repeated for each site recorded. Sites located through systematic shovel probe survey should include a site map showing positive and negative shovel probes.

State whether alluvial floodplain areas or colluvial areas were encountered during the reconnaissance. Also, state whether any areas were subjected to Oakfield probing or auger coring. Use a map to show these locations.

The end of this section may include any statistical analyses used to make archaeological inferences (i.e. preference of raw material; site locations with regards to soil characteristics, topography, or distance to water; site densities; etc.)

Conclusion and Recommendations

This section summarizes the information in the Results section and establishes a framework for evaluating the significance of the sites located during the reconnaissance.

A statement of how many sites were found, including the state site number, the cultural period and site type, and significance/recommendation for each site, must be included (use a table if necessary). Each site identified during the survey must be evaluated according to the criteria for inclusion in the National Register. It is insufficient to merely state that a site is or is not significant - significance evaluations must be presented with specific reference to criteria for eligibility for inclusion in the NRHP.

The significance of a site is usually determined by the amount and quality of the information that is present on a site – Criterion D. This data must have the potential to address the criteria for eligibility and the site must have the potential to contribute to specific research questions that will add to our present knowledge about the past. The ability to characterize a site based on its size, age, artifact variability, function, integrity (lack of disturbance of soils containing artifacts), and context (regional, chronological, functional) forms the core of assessing significance. Evidence for relatively intact subsurface archaeological deposits, density of fire-cracked rock, and the level of disturbance on a site, are commonly considered factors when making eligibility determinations.

Recommendations should also be phrased in terms of “further work,” “no further work,” or “avoidance.” If data generated during a Phase I investigation clearly documents the absence of archaeological resources, or if identified sites do not meet the criteria for eligibility to the NRHP, then a recommendation of no additional work is appropriate. If the research potential for a particular site has not been exhausted at the Phase I level, further archaeological investigations may be necessary. A number of factors and questions may be considered at this point, including site integrity, presence/absence of intact stratigraphic deposits, subsurface features and/or ecofactual materials, site location, and topographic setting.

If further work is recommended, specify what the work is (i.e. Phase Ib Intensive Survey, Phase Ic Subsurface Reconnaissance, Phase II Archaeological Testing, etc.).

References

Check to make sure that sources cited in the body of the report are listed in this section. Generally, archaeological reports are expected to conform to the Society for American Archaeology's [Editorial Policy, Information for Authors, & Style Guide](#).

Appendices

Appendices can be used for artifact photographs, site forms, the artifact catalog or, if available, project plans and/or scope of work.

Figures

- All topographic maps should be at a 1:24,000 scale (include scale on map) and have a north arrow and legend. The caption of the topographic map should be properly titled, for example; "Portion of the USGS 7.5' series Miami, Indiana topographic quadrangle showing the location of the project area."
- If an archaeological site has been located, a site map should be included illustrating site boundaries, positive and negative shovel tests (if applicable), and topographic, natural, and man-made features. All Phase Ib shovel probes and/or units and Phase Ic deep trenching locations should be illustrated on a map.
- If a project area includes different ground cover conditions, or contains large disturbed areas, a map should be included that clearly illustrates those areas.
- All maps should include a scale, a north arrow, and legend.
- Project areas and site locations must be clearly presented.
- Aerial photographs must include the date of aerial photos in the caption, a scale, a north arrow, and legend. For example, "A 1998 aerial photograph showing the project location and land use."
- Artifact photographs should include a scale and a brief description. Diagnostic and unique artifacts should be photographed and included in report.
- Make sure the figure numbers discussed in the report match the actual figures.

Tables

- Make sure the numbers in tables match the numbers discussed in the report.
- Tables must have Table Numbers and Titles.

7-4.0 Phase II Investigations

Phase II investigations are intended to assess the eligibility of an archaeological site whose eligibility could not be determined at the Phase I level of investigation, and to assess the effects of an undertaking upon a site that is found to be NRHP eligible. Therefore, the underlying research questions should focus on identifying issues of significance (what information might the site contain, and why is it important or not?) and evaluating integrity with respect to the identified contexts of significance. The Phase II investigation should result in evaluations of a site's integrity, potential for additional archaeological deposits, significance, and eligibility for listing on state and national historic registers.

A variety of field methods and techniques may be implemented during Phase II investigations. These include controlled surface collection, systematic shovel probing, mechanical augering, hand-excavated test units, mechanical removal of the plowzone, and use of remote sensing and geophysical techniques.

In some cases, specialized artifact analysis methods may be necessary, such as radiocarbon dating, botanical analysis, residue analysis, or lithic use-wear studies.

The Phase II investigation must proceed according to a plan approved by the DHPA and INDOT-CRO, and should be guided by specific research questions. Generally, the DHPA requires 10% of the site's area to be excavated, and in practice this is usually broken into 1% test unit excavation and 9% mechanical excavation. However, the amount of testing and hand excavation can be adjusted in consultation with INDOT-CRO and the DHPA. INDOT-CRO encourages that plans for Phase II investigations incorporate the following standard research questions into Phase II work plans as appropriate.

The following are examples of research questions that are often stated to guide Phase II investigations at historical and prehistoric sites. This list is not exhaustive, and other relevant research questions may be identified. The research questions should be tailored to the site *being evaluated, and must be designed to help determine the eligibility of the site (typically under Criterion D, as described above)*. More specific research goals related to a specific site should also be included as appropriate.

7-4.1 Prehistoric Phase II Research Questions

Does the site contain components relating to poorly documented or poorly understood aspects of prehistory? (Significance)

Are the archaeological deposits suitable to addressing questions regarding the use of space and the manner in which that changed through time? (Significance)

What is the range and kind of activities carried out at the site as indicated by the assemblage composition, the lithic reduction system, and raw material usage patterns? (Significance)

Do the data reveal settlement and/or subsistence information that helps us to understand the role(s) of the site within its natural and physiographic setting? (Significance)

How is the site related to similar sites in the region? What information can the site provide regarding settlement, subsistence, or chronology and cultural change with respect to results from other sites in the region? (Significance)

Are sub-plowzone archaeological deposits preserved at the site? What are their vertical and horizontal distributions? (Integrity of Location)

Archeological sites “do not exist today exactly as they were formed. There are always cultural and natural processes that alter the deposited materials and their spatial relationships.”²¹ Can the site formation processes and post-depositional processes affecting the deposits be determined and, if so, how have they transformed the archaeological deposits? (Integrity of Location, Design, and Association)

What identifiable components are present at the site? (Integrity of Association)

Is the site a single component? If the site is multicomponent, is there horizontal or vertical separation of the components? (Integrity of Location and Association)

Are discrete activity/occupation areas preserved at the site? (Integrity of Location, Association, and Design)

Are patterns of artifact and feature distribution discernable within the site? (Integrity of Design)

Are cultural materials such as identifiable floral or faunal remains preserved in context with culturally diagnostic artifacts (such as ceramics or projectile points) or datable materials (such as charcoal)? (Integrity of Materials and Association)²²

7-4.2 Historical Phase II Research Questions

Does the documentary record (deeds, census data, tax rolls) provide a record of the occupants and occupational history of the site? ²³ Information from a site for which the occupants can be identified is often more likely to be considered significant. (Significance)

Does the documentary record provide an interpretive framework to aid in evaluating the significance of the archaeological component within a local, regional, or national context? ²⁴ (Significance)

²¹ National Register Bulletin 15, Section 8, “How to Evaluate the Integrity of a Property” (http://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_8.htm)

²² National Register Bulletin 15, Section 8, “How to Evaluate the Integrity of a Property” (http://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_8.htm)

²³ Barile, Kerri S. (2004) Race, the National Register, and Cultural Resource Management: Creating an Historic Context of Postbellum Sites. *Historical Archaeology* 38(1):90-100.

What can the artifact assemblage, any intact deposits, or use of space within the site reveal about market access and the socioeconomic status and cultural background of the inhabitants? (Significance)

Domestic sites with the best research potential will typically be single-family occupations (particularly if the occupation was of short duration).²⁵ This is best determined in advance of fieldwork through archival research. (Significance)

For longer duration or multi-occupant sites, spatially and temporally distinct archaeological deposits or features should be present to allow deposits to be associated with particular occupants, or to reflect socioeconomic changes over time.²⁶ (Significance and Integrity of Location, Materials, and Association)

For homesteads and farmsteads, is there evidence for a planned arrangement of the landscape? (Significance and Integrity of Design)

What were the function(s) of the structures and features at the site, and did these functions change over time? Can the chronology of construction episodes and changes in land use be reconstructed? (Significance and Integrity of Association and Design)

For domestic structures, can the initial date of construction and the chronology and functions of additions be reconstructed? Are changes in architectural style over time apparent? (Significance and Integrity of Design)

Was the site abandoned and left to deteriorate, calamitously destroyed, or intentionally demolished? (Intentionally demolished sites often have very little context or information preserved.)²⁷ (Integrity of Materials and Association)

Are subsurface/sub-plowzone archaeological deposits preserved at the site? What are their vertical and horizontal distributions? (Integrity of Location)

Do intact subsurface features such as kitchen middens, privy shafts, building foundations, builders trenches, cellars, cisterns, or wells persist? To what degree has modern disturbance affected site integrity? (Integrity of Location)

²⁴ Documentary research of this type has often been reserved until after a significance recommendation has been made based upon the results of Phase II excavations. However, this research is often critical in interpreting the significance of the archaeological deposits documented during Phase II investigations and therefore the logical time to conduct it is in advance of fieldwork. The expedited transition from Phase II to Phase III allowed by the Archaeology Streamlining PA dictates that the Phase II level, prior to fieldwork, is the appropriate time for archival research.

²⁵ Wilson, John S. (1990) We've Got Thousands of These! What Makes an Historic Farmstead Significant? *Historical Archaeology* 24(2):23-33.

²⁶ Ibid

²⁷ Ibid

Are there any cultural deposits associated with the structure foundations (if present)? (Integrity of Location and Association)

For late 19th and 20th century domestic sites, a phased approach should be taken that starts with archival research prior to fieldwork. If archival research indicates that the site was inhabited by ten different occupants over a period of sixty years, the site may be considered to have limited research potential, or field investigations may be targeted toward identifying deposits related to a particular occupation. If the background research can identify the site's occupants and demonstrate a well-defined single period of occupation, or an occupation that brackets an important period of local, state, or national history, then it is likely that the site will be considered significant if it can be demonstrated to retain any reasonable degree of integrity.

7-4.3 Standard Work Plan for Phase II Investigations

- All investigations must be directly supervised in the field and laboratory at all times by a qualified professional archaeologist meeting the supervisory qualifications in the "Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation" (48 F.R. 44716) or 312 IAC 21-3-4 (as applicable).
- All work will be carried out in accordance with the INDOT Cultural Resources Manual, the most recent DHPA Draft Guidebook, and relevant state laws including IC 14-21-1 and 312 IAC 21 (as applicable).
- Phase II field investigations should test at least 10% of the portion of the site located within the project area and containing significant deposits. Portions of the site may be excluded from this total due to lack of integrity, location outside of the project area, or other relevant factors in coordination with INDOT-CRO. This exclusion must be described and justified in the prospectus.
- Of this area, a minimum of 0.5%-1.0% of that total should be hand excavated, depending upon the nature and integrity of the site; in a plowzone context, hand excavation may be limited to 0.25-0.5% of the site area. At least 25% of plowzone from hand excavated units should be screened through quarter-inch mesh. All intact subplowzone soils must be screened through quarter-inch mesh.
- A portion of the hand excavation total may consist of intensive shovel probing at 5m intervals across the site to systematically sample the plowzone, determine whether intact buried deposits or artifact concentrations are present, and to guide the placement of excavation units. All soils excavated from shovel probes must be screened through quarter-inch mesh.
- INDOT-CRO advises that an appropriate time to conduct an intensive shovel probe survey is at the point during the Phase Ia investigations when the potential significance of the site is recognized. Otherwise, it should be undertaken as the initial phase of the Phase II investigations.

- If a geophysical survey is planned, it should be conducted prior to the initiation of hand-excavated units.
- Mechanical excavation will be conducted using a smooth-edged bucket, and will be monitored at all times by a qualified professional. Mechanically exposed surfaces will be visually inspected for the presence of features or other archaeological deposits, and will be shovel- or trowel-scraped as necessary to facilitate identification. The locations of features within trenches will be recorded, and the locations of features and trenches will be recorded on a plan map of the site. Representative profiles of trenches will be drawn and photographed.
- Features should be completely excavated following the requirements of the DHPA Draft Guidebook and INDOT CR Manual. Additional excavation units may be placed adjacent to trenches or hand excavated units to fully expose partially exposed features or to expose features observed in the wall profile. If a large number of features are exposed during Phase II investigations on an eligible site, a sample of features may be excavated at the Phase II level (in consultation with INDOT and DHPA), with the remainder excavated during Phase III data recovery.
- At least two walls (one E-W and one N-S) of each excavation unit should be photographed and mapped in profile. Photographs must include a scale.
- Features should be photographed and mapped in plan view. Feature bisect profiles should be photographed and mapped. Photographs must include a scale.
- Any amendments to or deviations from the standard work plan must be coordinated with INDOT-CRO and must be submitted in writing to DHPA for approval in advance of implementation
- Requests for extension of the standard work plan for a project must be approved in advance by INDOT-CRO and must be submitted in writing to DHPA for approval.
- If complex deposits or human remains are present, additional consultation with DHPA and INDOT-CRO will be necessary, and preparation of a written work plan may be required.
- If any human remains dating before January 1, 1940 are encountered, the discovery must be reported to the Indiana Department of Natural Resources and INDOT-CRO within two (2) business days. If human remains or burials that are not subject to NAGPRA are discovered, then relevant state statutes, including IC 23-14 and IC 14-21-1, will be adhered to.

7-4.4 Report Review and Distribution

Before distribution to the SHPO, one electronic copy of the archaeology report should be forwarded to INDOT-CRO for review. If the report is too large to send via email, a CD or access

to a FTP site is acceptable. After any comments from INDOT are satisfactorily addressed, the archaeology report may be distributed to SHPO for review and comment as part of the Section 106 process. The transmittal letter should indicate that the INDOT Cultural Resources Office has reviewed the document. CRO should be electronically copied on the transmittal letter and should receive an electronic copy of the final report for INDOT's files. A bound hard copy should also be provided to CRO for reports over 60 pages (single sided) in length or for reports containing fold-out illustrations.

7-5.0 Phase II Report Guidelines

These guidelines are meant to guide the content of the reports. The format and structure of the reports can vary based on what the authoring archaeologist feels is appropriate, as long as all of the necessary and pertinent information is present. All measurements should be taken and reported in metric units (English equivalents may also be given when appropriate). Scales for all maps, photographs, and plan and profile drawings should be in metric units.

Title Page

- INDOT Designation Number
- Title (including description, location, and county of the project)
- Author(s), name of the Principal Investigator, company/organization/institution, address, and telephone number
- Signature of the Principal Investigator
- Client for whom the report is prepared, contact person, address, and telephone number
- Lead Agency or Funding Agency
- Date

Management Summary

The Management Summary summarizes the nature of the project and its conclusions and is required for all reports. It must include:

- The project title and designation number, and the nature of the undertaking.
- A brief statement of project goals and objectives should also be expressed (e.g. to evaluate the significance of an archaeological resource in terms of meeting the criteria for listing in the IRHSS and NRHP).
- A statement confirming that the archaeological work was carried out in accordance with state and federal guidelines.
- A brief description of the Phase II methodology.
- Determinations of significance and eligibility and site recommendations for avoidance, further work, or no further work.

Figures

- Figures must have figure numbers, titles and proper citations.
- All topographic maps should be reproduced at a 1:24,000 scale and should be properly titled in the caption (for example: “Portion of the USGS 7.5’ series Rexville, Indiana topographic quadrangle showing the location of the project area”).
- All maps and aerial photographs should include a metric scale and north arrow. A legend should be included if appropriate.
- Aerial photographs must include the date of aerial photos in the caption, a scale, a north arrow, and a legend (if appropriate). For example, “A 2005 aerial photograph showing the project location.”

- Artifact photographs should include a Figure Number (referenced in the text), a scale, and a brief description.
- Make sure the Figure Numbers discussed in the report match the actual figures.

Tables

- Tables must have Table Numbers and Titles.
- For quantities such as artifact counts, make sure the numbers in tables match the numbers discussed in the report.
- Tables must include totals when appropriate (e.g., artifacts by material or by unit and level).

Introduction

- The Introduction must include the name of the agency for which the archaeological work was completed, the name and designation number of the project, the location and size (length, width, and area) of the project, and what kind of impact activity is planned. It is requested that the specifications of the undertaking and scope of work be included. The location of the project is to be given in quarter sections, township and range numbers, civil township, and topographic map title.
- Two figures should be referenced in the Introduction; the first showing the exact location(s) of the sites investigated within the project area on USGS 7.5' series topographic quadrangles preferably at a 1:24,000 scale and the second an aerial image of the project areas showing current land use. USGS topographic maps and high-quality 2005 aerial photographs are available free of charge (and without copyright restrictions) at [IndianaMap](#).
- The names of the archaeologists who performed the survey and the dates of fieldwork.

Environmental Setting

This section briefly summarizes the physical environment of the site and includes a description of its geology, topography, physiography, vegetation, hydrology, soils, and chert resources. At a minimum the following information should be included:

- Physiographic setting and local features of the landscape, including discussions of drainage, soils, hydrology, geomorphology, and geology (these layers are available at [IndianaMap](#);
- Regional/local Pleistocene and Holocene environmental overview (if appropriate);
- Modern environmental setting (historical and current environment and land use patterns, etc)

Cultural Background

The Phase II Cultural Background should not be a generic prehistoric and historical overview, but should be customized to focus upon the site(s) investigated. For example, it would not be necessary to discuss prehistoric cultural history in a report of investigations at a mid-nineteenth-century farmstead. Instead, the background section should provide a context for evaluating the information potential and significance of the site(s) being tested. Therefore, the section should

focus upon what is known about other sites that are similar in cultural affiliation, age, function, setting, etc. and should provide an overview of relevant theoretical questions (or gaps in archaeological knowledge) that information from the site may be able to address. Results of investigations at similar or relevant sites from the area, county, state, or surrounding regions should be discussed as appropriate. If similar or related sites are under investigation for the same project, these should be discussed as well.

Previous Investigations

This section should provide a summary of previous investigations at the site, including the projects for which the site was investigated, the results of the investigations, and the recommendations made. The results of previous investigations should be considered in developing a Phase II research plan and in making an eligibility recommendation for the site following the Phase II investigations.

Methodology

This section should be presented so that reviewers and future researchers may reconstruct what was done and why. Investigation methods should be carefully explained so that others using the gathered information can understand how it was obtained and what its possible limitations or biases are. This section should include (if applicable):

- Description of surface collection techniques.
- Description of test unit excavation, locations of test units, and percentage of site area sampled through test unit excavation.
- Description of mechanical excavation, locations of trenches or blocks, and percentage of site area sampled through trenches.
- Specialized techniques (such as geophysical survey) must be described and discussed. Refer to Appendix B for geophysical survey guidelines.
- Feature excavation techniques.
- Description of site mapping.
- Discussion of datum points and establishment of site grid.

A summary of the laboratory analysis; at a minimum, this section should include:

- Detailed description of all laboratory metric and nonmetric techniques employed.
- Typological or classificatory schemes chosen for analysis must be explained and justified, and analytical units (e.g., uniface, edge scraper, tertiary flake) must be defined.
- Relative or chronometric techniques used to associate dates or ages with artifacts or assemblages must be discussed.
- Any statistical tests or procedures used in analysis should be explained and justified.
- Specialized analyses (such as lithic use-wear, radiocarbon dating, botanical analysis, faunal analysis, etc.) must be described and discussed. If a report is provided by a specialist it should be included as an appendix.
- The plan for curation of artifacts and documentary materials such as field notes and photographs must be discussed.

Results of Field Investigations

This section presents in detail the results of the Phase II field investigations. This section must include a scaled and keyed site map depicting site boundaries, datum(s), site grid, test units and mechanically excavated blocks or trenches, as well as relevant natural and cultural characteristics. At least two walls of each test unit should be depicted in profile (N-S profile and E-W profile). Every feature should be graphically depicted and photographed in both plan view and profile. The functions of subsurface features should be identified, if possible. Subsections should include:

- Surface collection or intensive shovel probing (if applicable).
- Specialized techniques such as geophysical survey. If a report is provided by a specialist it should be included as an appendix. Refer to Appendix B for geophysical survey guidelines.
- Test Unit Excavation and Stratigraphy
- Mechanical Excavation and Stratigraphy
- Subsurface Feature Descriptions
- Distribution and density of artifacts encountered
- Site Summary
 - Horizontal and Vertical Extent of Cultural Deposits
 - Site Integrity
 - Presence of Subsurface Features
 - Site Function and Cultural Affiliation

Artifact Analysis

- Photographs or drawings of diagnostic, unusual, and other selected or representative artifacts, including metric scale.
- A complete inventory of artifacts by provenience and class (may be included as an appendix if appropriate).
- Graphs, tables, or other summary information as appropriate.
- Specialized analyses (such as lithic use-wear, radiocarbon dating, botanical analysis, faunal analysis, etc.) should be summarized and discussed. If a report is provided by a specialist it should be included as an appendix.
- Radiocarbon Results. When reporting published radiocarbon dates cite the reference with the page number. New or unpublished radiocarbon dates should be reported using the following guidelines:
 - Report uncalibrated dates and error.
 - Present the dates as years followed by one sigma or standard error.
 - State the material dated and if the sample is corrected for isotopic fractionation.
 - If calibrated dates are also presented use cal A.D. or cal B.C.
 - Identify the calibration and 1 or 2 sigma.

Consult the Society for American Archaeology's [Editorial Policy, Information for Authors, & Style Guide](#) for further information regarding the reporting of radiocarbon results.

Conclusion and Recommendations

This section summarizes the information in the Results and Analysis sections and establishes a framework for evaluating the significance of the site(s) tested. This section should include a discussion and interpretation of the results in terms of the background cultural context, research design and goals, and stated research problems.

Were the research goals met? If not, why not?

- Did the selected methodology prove to be appropriate, and how did the constraints affect the reliability of the data collected?
- How do the results of the investigation bear upon the hypotheses being tested, the research questions being asked, or the predicted results?
- What new knowledge or understanding has been gained as a result of the investigation, and what are its theoretical implications?
- How does the site fit into a regional prehistoric or historic context?
- What future research problems may be identified based on the results and conclusions of the Phase II study?
- Each site investigated during the Phase II should be evaluated according to the criteria for inclusion in the National Register and justified. It is insufficient to merely state that a site is or is not significant - significance evaluations must be presented with specific reference to criteria for eligibility for inclusion in the NRHP (see Section 2.6.1).
- An assessment of the project impacts on each eligible site should be provided, along with recommendations phrased in terms of “further work,” “no further work,” or “avoidance.”
- If further work is recommended at a site, then recommendations for specific Phase III (data recovery) research questions and methods should be included.

References Cited

This section must conform to the Society for American Archaeology’s [Editorial Policy, Information for Authors, & Style Guide](#). Check to make sure that sources cited in the body of the report are listed in this section, and that all bibliographic entries are cited in the report.

Appendices

Appendices can be used for artifact photographs not discussed in the text, analytical reports of specialized analyses, artifact catalogs, etc.

REFERENCES

Barile, Kerri S.

2004 Race, the National Register, and Cultural Resource Management: Creating an Historic Context of Postbellum Sites. *Historical Archaeology* 38(1):90-100.

Binzen, Timothy L.

2008 Where There's Smoke, There's Fire: Criteria for Evaluation of Small Lithic Sites in the Northeast. In *Current Approaches to the Analysis and Interpretation of Small Lithic Sites in the Northeast*, edited by Christina B. Rieth, pp. 37-39. New York State Museum Bulletin Series 508, New York State Education Department, Albany.

Curtin Edward V., Kerry L. Nelson and Jessica E. Schreyer

2008 Strategies for Investigating and Interpreting Small Prehistoric Sites and Low Density Artifact Distributions: Examples from the Hudson Drainage. In *Current Approaches to the Analysis and Interpretation of Small Lithic Sites in the Northeast*, edited by Christina B. Rieth, pp. 41-61. New York State Museum Bulletin Series 508, New York State Education Department, Albany.

Hardesty, Donald L., and Barbara J, Little

2000 *Assessing Site Significance A Guide for Archaeologist and Historians*. Alta Mira Press.

Perazio, Philip A.

2008 In Small Things Too Frequently Overlooked - Prehistoric Sites in the Pocono Uplands. In *Current Approaches to the Analysis and Interpretation of Small Lithic Sites in the Northeast*, edited by Christina B. Rieth, pp. 89-99. New York State Museum Bulletin Series 508, New York State Education Department, Albany.

Rieth, Christina B.

2008 Introduction. In *Current Approaches to the Analysis and Interpretation of Small Lithic Sites in the Northeast*, edited by Christina B. Rieth, pp. 1-7. New York State Museum Bulletin Series 508, New York State Education Department, Albany.

Wilson, John S.

1990 We've Got Thousands of These! What Makes an Historic Farmstead Significant? *Historical Archaeology* 24(2):23-33.

APPENDIX A- Guidance for Historical Archaeological Sites

Based on consultation with SHPO and consulting parties, this Appendix includes special guidance for completing identification and evaluation for resources that require special consideration or where consultation has resulted in specific procedures. This Appendix will be enhanced and added to as new procedures or guidance is developed.

Historical Sites

Historical sites can be divided into types based on recovered field reconnaissance data and historical research. Probably the most prevalent type of historical site encountered in Indiana consists of farmsteads and rural households. There are, however, many other types of historical sites recorded in Indiana, such as one-room schoolhouses; industrial or mining sites (e.g., brick kiln, mill, blacksmith shop, slope mine); rural communities; inns/taverns; transportation corridors or sites (e.g., trail, stagecoach stop, railroad station); forts and blockhouses; and discard/disposal sites.

The composition of the artifact assemblage plays a key role in determining site type. A farmstead or rural household is likely to be characterized by a density and diversity of a variety of artifacts, including domestic household ceramic and glasswares, personal items, structural materials, tools, fencing, and furnishings. In many cases, “archaeological properties include standing or intact buildings or structures that have direct historical association with below-ground archaeological remains”²⁸ and should be included as part of the site documentation and evaluation process.

Farmsteads/Rural Domestic Sites

Rural, agricultural and domestic archaeological sites in Indiana have remained a problematic resource to define, document and assess in a consistent manner, particularly with relation to the criteria of the NRHP. These inconsistencies have resulted in limiting the effectiveness of Section 106 compliance. The basis for this dilemma stems from a lack of uniformity with respect to operational definitions, limited or absent contextual assessment, as well as inconsistent and inadequate evaluation methods. The inability to examine similar site types within a cohesive and contextualized framework that clearly outlines chronological, developmental, and geographic considerations has resulted in the evaluation of sites on an individual basis. These idiosyncratic assessments have promoted the false perception that these types of historical resources are ubiquitous (and therefore infinite), too recent, and/or too mundane for considerations of significance with respect to the criteria of the NRHP. In reality, few historical sites in Indiana are identified as farmsteads, accounting for approximately 15 percent of all of the historic sites recorded in the state as of 2010 (IDNR, DHPA 2010). Of these, less than 1 percent were found eligible for the NRHP and recommended for additional investigation and at least 13 Indiana counties have no farmstead sites listed as part of the site inventory (IDNR, 2010). These low numbers most likely reflect poorly defined site types, but nevertheless illustrate the paucity of

²⁸ Wilson, John S. (1990) We've Got Thousands of These! What Makes an Historic Farmstead Significant? *Historical Archaeology* 24(2):23-33.

data that has been collected throughout the state over the last few decades, countering assertions of over-representation in the archaeological record.

Define Site Type/Function

It is important to categorize the property as accurately as possible at the Phase I level. It may require utilizing a variety of sources in order to refine the chronology, type and function of the property. The aim is to avoid inaccurately categorizing the resource, such as labeling a farmstead or domestic house as a historic scatter or dump. The results of the property classification provide the subsequent framework for evaluation, which if done incorrectly, greatly hampers the evaluation process. Under-defined deposits (scatters, isolates and dumps) limit the ability to make meaningful correlations to questions of significance. This process should include:

- The consultation of historical documents, such as township plat maps that may show a farmhouse in the location of a field scatter, which should be considered when defining the site.
- Proper analysis of the archaeological data:
 - Is there a preponderance of structural materials that would suggest the presence of buildings or other structures in the vicinity (brick, window glass, mortar, framing/roofing nails, or slate shingles)?
 - Acknowledge the potential relationship between the archaeological deposits and extant buildings and structures outside the project limits. For instance, if a historic artifact scatter is identified within the project limits and a farmhouse is visible 20m to the south, yet outside the project limits, include the farmhouse as part of site classification, documentation and evaluation.
- Use SHAARD Site Types in defining site:
 - Rural Domestic
 - Cabin
 - House
 - Dump
 - Isolate
 - Scatter
 - Other (sheet midden, domestic structure, domestic outbuilding, etc.)
 - Agriculture
 - Agricultural Field
 - Agricultural Outbuilding
 - Agricultural Settlement
 - Agricultural Structure
 - Farmstead (includes farmhouse, outbuildings and landscape features [fences, well, cisterns, etc.]
 - Other

Define Context

- Based upon geographic parameters (Local, State and National)
 - Theme and Period of Significance
 - Frontier/Subsistence (1700-1790)
 - Initial Large Scale Settlement (1790-1820)
 - Improved Transportation Routes (1820-1850)
 - Railways & Improving Agricultural Technology (1850-1900)
 - Golden Age (1900-1920)
 - Depression and War Era (1920-1945)
 - Post War Era (1945-1960)
- (Examples adapted from McMahan [1991²⁹] for local and state general historic contexts)*

Significance and Integrity Evaluations

- Include comparative site data (via SHAARD) based upon similar site type, geography and context.
 - Is this a type of site lacking investigation within the context and geographic parameters? What work has been done?
 - Consult historical documents in order to establish where the property fits within the historic context.
- Archaeological Data
 - Are the deposits discrete or have no discernible pattern? If discrete, discuss possible associations and interpretations.
 - Are deposits in plowed or unplowed settings?
 - Discuss the depth and nature of plowzone across site (mold-board vs. no till). Is there plowzone directly over subsoil or is a remnant A horizon present?
 - Is there evidence of razing or demolition disturbance?
 - What is the nature of the disturbance (discuss depth and horizontal extent)?
 - Is there evidence of fire or another event that caused the abrupt end to the occupation (which increases the likelihood for intact/sealed deposits)?
 - Provide an artifact assessment that includes:
 - Type (domestic, commercial, structural or within a described functional classification scheme);
 - Temporal period(s)
 - Are the deposits well defined chronologically? If so what are the time frames (well defined early, well defined late, extend over long time period encompassing multiple occupations)?

²⁹ McMahan Jerry (1991) Indiana Round and Polygonal Barns, 1850-1936. Agricultural History of Indiana, 1730 to 1940. In the *National Register of Historic Places Multiple Property Documentation Form*, Round and Polygonal Barns of Indiana. Electronic document.
https://secure.in.gov/apps/dnr/shaard/r/4cd9d/N/Round_and_Polygonal_Barns_of_Indiana.pdf.

- Amount (limited quantities associated with discrete temporal periods may reflect a single short-term occupation creating a lower threshold for significance) – use minimum number of objects, which is better for illustrating variety.
 - Additional fieldwork may be required to establish the level of integrity through shovel testing, particularly for sites identified through surface deposits. Without some level of shovel testing, a general understanding of the nature of the subsurface across the site will be lacking; a single shovel test may not accomplish this task, particularly if considered potentially eligible and will be necessary to guide subsequent investigations.
 - Historical Documentation
 - Need to have at least cursory knowledge of occupants and occupational time frames in order to assess potential significance of the site. These resources may include:
 - Historical plats
 - Post Office Rural Delivery Route Maps
 - GLO land grants
 - Census Records
 - County histories
 - Property deeds
 - Probate records

Linear Resources

Linear resources are commonly associated with transportation facilities, such as roads, railroad lines, interurban lines, canals, and brick pavers. Typically, the entirety of a linear resource is not individually eligible for the NRHP. However, distinct elements of the resource may be individually eligible such as a train depot or canal lock. In coordination with SHPO, FHWA/INDOT has developed general procedures for treatment of linear resources as described below. However, specific procedures will be coordinated between INDOT-CRO and SHPO as it pertains to individual project situations.

When linear resources are partially or fully exposed within a listed or eligible National Register historic district they are likely to be evaluated as contributing resources, potentially under Criterion A, B and C. When linear resources are known to be buried, they will be assessed under Criterion D. If research reveals plans, photographs, or other materials depicting or describing the resource, they will likely be considered not eligible as the information potential is minimal.

When documenting linear resources:

- Define site boundaries by the extent of the resource that was investigated;
- Document the nature of construction through profiles and photographs and compare to standard specifications for the period (to show if adherence to standardization was applied).

In cases where information is not available concerning a buried linear resource, it may be recommended that the resource be treated as an accidental discovery during construction. A plan for documentation of the resource shall be included in the project commitments and contract documents.

When a linear resource is discovered during construction, whether expected or not, it will be treated as an accidental discovery. The treatment plan will likely include a qualified professional archaeologist documenting the discovery with photography, profile drawing, and written description of materials and design. Once the information is gathered, construction can commence. A formal report will be submitted to SHPO. This will likely preclude the need for additional monitoring.

Urban Sites

Urban sites represent the historical settlement, development, industrialization and economic choices of municipalities and residents. Resources related to these important topics may not be readily evident in areas presently covered by roads, curbs, sidewalks, parking lots, driveways, city lots, or residential neighborhoods. Features associated with early industry and manufacturing as well as residential lots (i.e. privies and wells) are often overlooked archaeologically because evidence for their presence is not sought or the context in which they may exist is dismissed as previously disturbed. Acknowledging the fact that historical resources exist in urban settings, INDOT- CRO requires the use of Sanborn Fire Insurance maps to identify past features that might be present within existing or proposed r/w in urban environments. [Sanborn maps](#) are freely available on-line for many Indiana cities and towns for the period between 1883 and 1966. Where possible, identified features should be targeted during the Phase Ia reconnaissance to establish their presence and assess their integrity and eligibility. When identified features are inaccessible, their description, location, and significance should be documented within the report of investigations.

- Additional fieldwork may be required to establish the level of integrity through shovel testing or augers, particularly for sites containing fill, which does not always equate into disturbance. Without data from shovel testing, a general understanding of the nature of the subsurface (including the depth and nature of the fill as well as the sub-fill surface) across the site will be lacking. The potential for buried and intact deposits within these settings are great since fill was typically added atop previous ground surfaces.
- Questions of integrity to address:
 - Depth of disturbance (fill does not automatically equate into disturbance)
 - Depth of fill
 - Nature of the fill (e.g. stratified with multiple episodes of filling or homogenous - a single episode)
 - Be wary of secondary deposits that may have been added as part of the fill from another location. In other instances, materials may have associations with the site, but have been mixed if there were previous episodes of demolition –note which, if possible
 - Nature of the sub-fill surface

- If unable to penetrate fill, may need to consider alternate methods, if eligibility remains unclear
- Sanborn maps should have been consulted *prior* to the field reconnaissance, to help guide the investigation and site evaluation
Consult City Directories, if applicable

APPENDIX B- Guidance for Prehistoric Archaeological Sites

Based on consultation with SHPO and consulting parties, this Appendix includes special guidance for completing identification and evaluation for resources that require special consideration or where consultation has resulted in specific procedures. This Appendix will be enhanced and added to as new procedures or guidance is developed.

Lithic Scatters

With respect to Criterion D, an archaeological site is significant if it has contributed to or has the potential to contribute to archaeological research; the size of the site is not a deciding factor.³⁰ Small lithic scatters are often assumed to be ineligible simply based upon their small size or low artifact density, while large scatters with high artifact densities are considered potentially eligible. While large, dense scatters may contain important information, they are frequently palimpsests of information from multiple components and frequently contain mixed deposits that intrude into one another.

Small lithic scatters, in contrast, may represent single component activity areas and thus provide important information about specific activities taking place in a specific context. These sites may “represent single occupations or tasks that are less easily discerned within large, multi-component archaeological sites.”³¹ Small scatters are often functionally different than large sites and are likely to reflect different activities and behaviors than took place at larger sites.³² Since small scatters are typically poorly studied, little information about these activities and behaviors may have been systematically recovered in the past. In addition, such sites may “have the ability to provide information about the range of resources exploited within a particular area as well as the use of prehistoric landscapes across both space and time.”³³

One criterion frequently used for assessing the significance of prehistoric sites is the recovery of diagnostic artifacts and types of identifiable chert present. Such artifacts provide context for interpreting the site at the Phase Ia level and may indicate that the site retains integrity of association. However, due to the lower artifact mass of small scatters, diagnostic artifacts (even

³⁰ Perazio, Philip A. (2008:89) In Small Things Too Frequently Overlooked - Prehistoric Sites in the Pocono Uplands. In *Current Approaches to the Analysis and Interpretation of Small Lithic Sites in the Northeast*, edited by Christina B. Rieth, pp. 89-99. New York State Museum Bulletin Series 508, New York State Education Department, Albany.

³¹ Binzen, Timothy L. (2008:39) Where There’s Smoke, There’s Fire: Criteria for Evaluation of Small Lithic Sites in the Northeast. In *Current Approaches to the Analysis and Interpretation of Small Lithic Sites in the Northeast*, edited by Christina B. Rieth, pp. 37-39. New York State Museum Bulletin Series 508, New York State Education Department, Albany.

³² Curtin Edward V., Kerry L. Nelson and Jessica E. Schreyer (2008:41) Strategies for Investigating and Interpreting Small Prehistoric Sites and Low Density Artifact Distributions: Examples from the Hudson Drainage. In *Current Approaches to the Analysis and Interpretation of Small Lithic Sites in the Northeast*, edited by Christina B. Rieth, pp. 41-61. New York State Museum Bulletin Series 508, New York State Education Department, Albany.

³³ Rieth, Christina B. (2008:5) Introduction. In *Current Approaches to the Analysis and Interpretation of Small Lithic Sites in the Northeast*, edited by Christina B. Rieth, pp. 1-7. New York State Museum Bulletin Series 508, New York State Education Department, Albany.

if present) may not be recovered during Phase I investigations. The failure to recover diagnostic artifacts during a Phase I reconnaissance survey does not mean that no diagnostic artifacts (or datable materials contained within features) are present below the surface, either within the plowzone or within sealed deposits. Therefore, nonrecovery of diagnostic artifacts during a single Phase Ia survey is not a reliable indicator that a site lacks information potential, particularly if testing consisted of only a single methodology (e.g., surface collection with no shovel probing).

So that sites are consistently evaluated from project to project, CRO recommends that Phase Ia studies should consider whether a lithic scatter meets more than one of the following criteria in order to help assess whether a site may be potentially eligible:³⁴

- 1) the presence of a diagnostic artifact, such as a projectile point, to place the site in a chronological or cultural context;
- 2) the excavation of multiple positive shovel probes;
- 3) the recovery of two or more artifacts from a single shovel probe;
- 4) the recovery of artifacts from undisturbed soil or from beneath the plowzone;
- 5) the recovery of more than one artifact type (such as debitage, chipped stone tools, ground stone tools, ceramics, etc.);
- 6) the type(s) of chert present;
- 7) the potential for subsurface features or deposits, which may contain diagnostic or datable materials (a clear description of the subsurface and a statement addressing the potential for such deposits must be provided);
- 8) the presence of FCR, which strongly suggests a potential for thermal features that may contain datable organic materials;
- 9) the recovery of exotic materials (such as obsidian or copper) or of craft items (such as stone pipe fragments or shell beads);
- 10) the existence of significant prehistoric archaeological sites (mounds, habitations, etc.) in the vicinity (such sites are often surrounded by small special purpose satellite sites whose significance may be easily overlooked out of the context of the cultural landscape).

If a site is believed likely to contain significant information, additional fieldwork may be required to establish the level of integrity through shovel testing, particularly for sites identified through surface deposits. Without some level of shovel testing, a general understanding of the nature of the subsurface across the site will be lacking. A single shovel test may not be adequate to accomplish this.

³⁴ Binzen, Timothy L. (2008:37) Where There's Smoke, There's Fire: Criteria for Evaluation of Small Lithic Sites in the Northeast. In *Current Approaches to the Analysis and Interpretation of Small Lithic Sites in the Northeast*, edited by Christina B. Rieth, pp. 37-39. New York State Museum Bulletin Series 508, New York State Education Department, Albany.

Isolated Finds

A single recovered artifact is classified as an isolated find. While some artifact types, such as projectile points, may have commonly been lost or discarded in isolation, it is likely that many “isolated” artifacts actually represent lithic scatters that are too small or low density to be identified by standard Phase Ia methodologies. Since such sites are likely the result of a single brief event (such as pausing to rejuvenate a tool), they will typically lack the potential to contain important information. However, some apparently isolated artifacts may warrant additional investigation if they reflect a culture or time period that is very poorly documented or understood (e.g., a Paleoindian projectile point) or if they suggest that more substantial deposits may be present that cannot be identified through Phase Ia testing (e.g., a sherd of prehistoric pottery).

APPENDIX C- Geophysical Survey Guidelines

Geophysical survey techniques can provide a relatively quick, nondestructive means of obtaining information about the subsurface structure of archaeological sites. Under good conditions, geophysical techniques may be useful for the interpretation of sites such as lithic and historic scatters, where documenting the presence of intact subsurface cultural deposits is crucial for evaluating the site's information potential. Geophysical survey results may also be useful for guiding the design and implementation of Phase II investigations.

The quality of geophysical data depends upon the selection of the appropriate techniques (as determined by experienced practitioners), upon the selection of an appropriate sampling density for data collection, and upon the spatial accuracy of the resulting data. In order to ensure sufficient spatial accuracy, geophysical survey grids should be laid out to survey quality specifications (≤ 0.1 m accuracy). Since there is a tradeoff between sampling density (and therefore data resolution) and time (and therefore expense), wider sampling intervals are sometimes used for initial site evaluations. Typically, 0.5 m traverse and 0.5 m measurement intervals for resistivity and 0.5 m traverse and 0.125 m measurement intervals for magnetometry are considered the minimum acceptable sampling intervals. In some instances, the cost of initially sampling at a higher density may be offset by the necessity of surveying the site area only once.

The usefulness of geophysical data depends not only upon their quality and their proper interpretation by experienced practitioners, but also upon the ability to precisely locate geophysical anomalies for additional investigations (such as high density resurveys to delineate small features, additional surveys using complementary geophysical techniques, or archaeological test excavations). A detailed data image with cultural anomalies clearly marked is not useful if archaeologists cannot determine where on the ground to place excavation units to investigate those anomalies.

Therefore, it must be possible to accurately relocate or reconstruct the geophysics grid. If the geophysical survey is conducted during Phase I investigations, the grid must be reproducible to allow anomalies to be accurately located in the field during subsequent investigations and to allow the geophysical grid to be tied into the archaeological grid system. This may be accomplished by marking grid corners with laths and stakes (if additional archaeological investigations will follow shortly after the geophysical survey) or with permanent datum points (these should be non-ferrous if additional magnetic or EM survey is likely to be undertaken at the site). In addition, the grid corners must be tied into existing permanent control points using a total station, or else the coordinates of the grid corners must be recorded using a survey quality (sub-decimeter accuracy) GPS receiver. If geophysical survey is performed in conjunction with Phase II or III investigations, it should be directly tied to the excavation grid system.

To ensure proper interpretability of geophysical data presented in archaeological reports, INDOT-CRO requires that the following information be provided:

- pedological and geological setting of survey area
- types, manufacturers, and models of instruments used
- dates of data collection and names of operators
- description of survey conditions

- traverse and sampling intervals
- probe configuration and mobile probe spacing (for resistance surveys)
- center frequency of antenna (for GPR)
- sensor type and configuration (for magnetic surveys)
- coil separation and frequency (for EM/conductivity surveys)
- traverse direction (parallel or zigzag)
- total area surveyed

In addition, the survey grid layout must be accurately described and illustrated. Images of processed data must be accompanied by full details of the processing history (a list of all procedures, filters, and algorithms applied and the processing software package used); this may be given in the figure caption or in the accompanying text. An image should also be provided of the raw, unprocessed or minimally processed (e.g., despiked only) data. If markups showing anomalies of interest or other explanatory or interpretive information are included, these should be provided after (or side by side with) an unmarked image of the same data at the same spatial scale and extent.

Survey maps and images of data must include a north arrow and a metric scale bar, as well as a scale in the appropriate units (e.g., ohms, mS/m, nT) indicating the range of the data presented. Resistivity pseudosections and ground penetrating radar profiles should include both a horizontal metric scale and a vertical time scale. A scale of estimated depth may also be included if appropriate. Topographic correction should be considered for areas of significant relief.

If a technical report is provided to the archaeologist by a geophysical consultant, this should be included with the archaeological report as an appendix. Please refer to the [English Heritage Geophysical Survey in Archaeological Field Evaluation guidelines](#) for more detailed information regarding geophysical survey methods, practice, and reporting.

APPENDIX D- Curation and Sampling Guidelines

Archaeological curation refers to the storage, management, care, conservation, and preservation of materials and associated records. Under Title 23, United States Code, for federal-aid highway projects the state DOTs are the responsible agencies for all aspects of project development, including environmental review and archeological survey work before and during construction. State DOTs are also responsible for the long-term curation of archeological materials recovered from federal-aid transportation projects. Federal and state regulations require that materials recovered by archaeological work for FHWA/INDOT projects, and the records, photographs, maps, and other documents resulting from and pertaining to the work be curated, unless a landowner chooses to keep the artifacts. If the landowner decides to keep artifacts, further analysis may be necessary in consultation with INDOT-CRO and DHPA. For federal aid projects, the curation facility must be a qualified curatorial facility (QCF).

A QCF is a facility that meets the standards identified in 36 CFR 79.9. The facility must be in Indiana and have the physical capacity, capabilities, resources, and professional staff to curate on a long-term basis in a professional and acceptable way. Qualified curatorial facilities exist at some universities and at the Indiana State Museum. CRO should be contacted for further information about curatorial facilities.

Archaeological reports are to state where materials are or will be curated. Materials collected by archaeological consultants having a QCF are to be curated at that facility unless otherwise directed by INDOT. Materials collected by archaeological consultants that do not have a QCF are to be curated at a QCF under an agreement between the consultant and the facility. Curation will be at that facility unless otherwise directed by INDOT. For INDOT administered projects, copies of relevant curation documents are to be sent to CRO.

Curation of materials recovered for INDOT projects that are 100% state funded are subject to state regulations. The regulations are very similar to the federal requirements except that a QCF is not specified (**312 IAC 21-3-7**).

INDOT has the right to determine and/or approve where materials from INDOT administered projects are curated.

INDOT-CRO recognizes that curation space is increasingly limited at most facilities, and that not all artifact types have sufficient research potential to warrant permanent curation. The following guidelines should be used in determining what materials from a collection should be retained for curation. Before applying these guidelines, consultation should occur with INDOT-CRO and DHPA to determine any exceptions based on specific site characteristics. Please note that a record of all discarded materials (including description, count, weight, and any other required measurements) must be included with the curated collection.

Discard

unidentified corroded metal pieces

sheet metal fragments

melted metal

melted glass

completely exfoliated ceramics

burnt or heavily fire damaged undecorated/unmarked ceramics

fragmentary cut and wire nails

unidentifiable corroded nails (complete nails must be measured for length/pennyweight)

screws/bolts/nuts/washers/staples/etc.

wire

20th century brick (unmarked), mortar, plaster

architectural stone

concrete, cement, and asphalt

coal and coal slag/cinders

20th century flat glass

asphalt shingles

linoleum

electrical wiring, fuses, and fixtures

unidentifiable plastic fragments

late 19th-20th century mass-produced or machine-made tools (hammers, screwdrivers, crowbars, files, chisels, wrenches, shovels, etc.) from nonindustrial contexts

FCR (must be sorted by material, counted, and weighed prior to discard)

Representative Sample¹

undecorated plain whiteware and ironstone body sherds

undecorated yellowware body sherds

stoneware body sherds

unidentifiable/unmarked glass container fragments

unmarked bottles, bases, and finishes (machine made)

lamp chimney glass

19th century flat glass from most contexts ²

complete machine cut and wire nails (discarded complete nails must be measured for length/pennyweight)

19th century brick, mortar, plaster

marked 20th century brick

Keep

diagnostic artifacts

decorated/marked ceramics (all types)

ceramic footers and rims (all types)

marked bottles and bases (machine made)³

bottles, bases, and finishes (non-machine made)

marked/embossed glass container fragments

all flat glass from short-duration 19th century sites or from pre-20th century feature contexts

early 19th century cut nails

wrought nails

all artifacts from early to mid-19th century historical sites other than coal, coal slag/cinders, and unidentifiable corroded metal artifacts (in consultation with INDOT-CRO)

¹ Generally a 10% sample. The sample should be representative of the spectrum of features and other contexts present at the site. The retained sample should include at least one example of each variety within a type (e.g., each glaze/slip combination on stoneware, each pennyweight of nail, each type or manufacturing method of bottle). For some collections this may require retaining a greater than 10% sample. For large assemblages (N>100), a reduced percentage sample may be determined in consultation with INDOT-CRO if necessary.

² Color, count, and thickness of all pieces should be recorded prior to sample retention and discard. Color, count, and thickness MUST be recorded for all pieces discarded. For very large assemblages (N>500), thickness may be measured on a percentage of discarded pieces in consultation with INDOT-CRO.

³ If multiple identical artifacts are present, one example of each may be retained and the remainder discarded.

APPENDIX E- Blanket Permit for INDOT Property



June 8, 2009

Staffan Peterson
Cultural Resources Section
Office of Environmental Services
Indiana Department of Transportation
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204

Re: Request for approved permit for Phase Ia field investigations on Indiana Department of Transportation (“INDOT”) properties.

Dear Mr. Peterson:

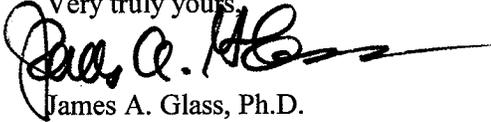
The Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (IDNR-DHPA) has reviewed the plan submitted by Shaun Miller of your staff for personnel to conduct Phase Ia field investigations on INDOT properties under Indiana Code (IC) 14-21-1-16. The plan is acceptable for all personnel currently on the Qualified Professionals Roster for Archaeology who are INDOT personnel, personnel with archaeological firms under contract to INDOT, and personnel with sub-consultants contracted by engineering/environmental firms, with the following conditions:

1. The methods and techniques for Phase 1 archaeology in the most current *Guidebook for Indiana Historic Sites and Structures Inventory—Archaeological Sites* will be adhered to for all projects under this approved plan.
2. This plan is for INDOT properties only.
3. All projects must be directly supervised in the field and laboratory by a qualified archaeologist meeting the supervisory criteria of 312 IAC 21. This plan is non-transferrable.
4. This authorization does not apply to areas where known, large multicomponent, and/or significant archaeological sites are present; earthworks and/or mound sites are present, anticipated, or encountered; burial grounds, cemeteries, and/or sites with human remains present, anticipated, or encountered; and unique sites or cultural landscape areas (e.g., Wabash and Erie Canal sites) are present, anticipated, and/or encountered. In such cases, if there is to be any disturbance of the ground, a plan for archaeological investigations must be submitted to the Indiana Department of Natural Resources for approval in advance of fieldwork activities.
5. The IDNR-DHPA must receive notification of the survey and maps with locations and a description of the nature of the project and the project area(s) prior to the fieldwork activities. Depending upon the nature of the project, project area, and other considerations, the IDNR-DHPA may require a more detailed plan or different methodology in certain cases.
6. Archaeological records checks for all projects must be completed in advance of field investigation.
7. If human remains dating on or before December 31, 1939 are encountered, the discovery must be treated in accordance with IC 14-21-1 and 312 IAC 22. In that event, please call (317) 232-1646.
8. Any proposed revision of standard reconnaissance methodology must be submitted to our office, in writing, for review and comment prior to implementation.

With these conditions, the plan for scientific investigations is approved (#2009032). A copy of this letter, along with proper identification, should be carried by archaeologists in the field. This will ensure minimal confusion should they be requested to produce proper identification in the field by law enforcement personnel.

If you have any questions regarding this authorization, please contact Dr. Rick Jones at 317/232-1646.

Very truly yours,

A handwritten signature in black ink, appearing to read "James A. Glass", with a long horizontal flourish extending to the right.

James A. Glass, Ph.D.

Director, Division of Historic Preservation and Archaeology

JAG:JRJ:jj