

**PART II**  
**CHAPTER 9**  
**Resolving “Adverse Effects”**

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## 9-1.0 Overview

This chapter explains the process by which “adverse effects” are resolved. When there is an “adverse effect,” in consultation with SHPO and other consulting parties, measures are undertaken to minimize and mitigate those effects. As explained in more detail in Chapter 9-2.0, these measures are usually formalized through the execution of a Memorandum of Agreement (MOA). When archaeological sites are adversely affected, typical mitigation consists of Phase III investigations (data recovery). This chapter explains the procedures for completing Phase III investigations as part of mitigation.

## 9-2.0 Procedures for Resolving “Adverse Effects”<sup>1</sup>

Once a finding of “adverse effect” is made, the input of consulting parties should be elicited to identify ways to achieve the project purpose and need while avoiding, minimizing, or mitigating “adverse effects.”

The consultation about mitigation should take into consideration the value of the historic property or district, the parts of the undertaking that are essential to achieving the purpose and need of the project, and the adequacy of planning and of funding to achieve both the project objectives and a satisfactory resolution of “adverse effects.”

Consultation to resolve “adverse effects” usually results in a Memorandum of Agreement (MOA), which outlines agreed-upon measures that the agency will take to avoid, minimize, or mitigate “adverse effects” upon historic properties. The MOA serves as a binding legal document that holds parties responsible to commitments stipulated in the document. First consideration is given to alternative ways of accomplishing the agency’s goals without impacting NRHP-listed or eligible properties. This may include consideration of alternate sites or designs, to evaluate the importance of the undertaking against the severity of its effects. If the consideration of alternatives does not result in a viable alternative solution that would avoid adverse impacts, then a discussion and evaluation of mitigation measures can begin.

Mitigation refers to actions that reduce or compensate for the “adverse effect” an undertaking may have on a NRHP-listed or eligible property, often written as “stipulations” of the MOA.<sup>2</sup> Mitigation may include avoidance, alternative treatments, redesign, relocation, archaeological data recovery, documentation of the historic property, shielding a historic property with noise walls or visual barriers, public education initiatives or interpretive measures. Specific mitigation measures are not prescribed under Section 106, and alternative or creative mitigation measures are encouraged by the ACHP.

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<sup>1</sup> It should be noted that for projects involving “adverse effects” to historic bridges, the procedures outlined in the *Programmatic Agreement Regarding the Management and Preservation of Indiana’s Historic Bridges* shall be implemented.

<sup>1</sup> [36 CFR Section 800.11\(e\)](#).

<sup>2</sup> *American Association of State Highway and Transportation Officials, Consulting Under Section 106 Of The National Historic Preservation Act* <http://environment.transportation.org/pdf/PG06.pdf>

It is recommended that a consulting parties meeting be held to reach consensus on appropriate mitigation measures. In some cases correspondence can satisfactorily be used to reach agreement, but if mitigation stipulations cannot be agreed upon, the project sponsor or their consultant should notify INDOT and FHWA and coordinate a Section 106 consulting parties meeting to resolve the disagreement. On rare occasions, if consultation proves unproductive and the “adverse effect(s)” cannot be resolved, the FHWA, or the SHPO or the ACHP itself, may terminate consultation. If the SHPO terminates consultation, FHWA and the ACHP may conclude an MOA without SHPO involvement; however FHWA will make every effort to resolve “adverse effects”.

Once the mitigation stipulations have been negotiated and agreed upon by the signatories, a draft MOA should be prepared and circulated to the signatories for review and comment. [It should be noted that if a project is not controversial and does not have outstanding issues, a draft MOA may be circulated concurrently with the distribution of the materials specified in 36 CFR § 800.11(e)].

The MOA should follow the template found in PART V FORMS. The version date of the MOA should reflect the date that the MOA is sent to the signatories for review and comment. Depending upon the number of revisions that are required to finalize the terms of the MOA, the version date may change several times. Once the signatories agree to the terms, the version date on the MOA should not change unless additional modifications to the terms are required and agreed to by the signatories.

Mitigation stipulations should be entered into [INDOT’s Project Commitments Database](#) by the consultant or INDOT project manager as directed. The commitments in the Project Commitments Database are carried forward from inception through design to construction. Any questions entering commitments related to cultural resources should be directed towards INDOT-CRO. In addition, mitigation stipulations may also result in development of special provisions in the contract.

### **9-3.0 MOA Signature Process**

For most projects, the applicant or their consultant may coordinate the mitigation stipulations amongst the signatories. Once all signatories are satisfied with the MOA, the applicant or their consultant must obtain signatures from all signatories. Typically, the MOA may be signed by three categories of participants: required signatories; invited signatories; and concurring parties.

Per the Section 106 regulations,<sup>3</sup> the required signatories are the federal agency (FHWA) and the SHPO. INDOT must be invited to be a signatory on all MOAs. For Local Public Agency (LPA) projects, the appropriate representative(s) of the LPA must also be invited to be a signatory. If any other agency or entity has specific responsibilities under the MOA, they too should be an invited signatory. Finally, if the ACHP is involved in consultation, they will also be a required signatory. Concurring parties are agencies or entities that have participated in the consulting

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<sup>3</sup> 36 CFR Section 800.6(c).

process. They are invited to sign to express agreement with the MOA. However, concurring parties do not have the rights of signatories; their approval is not needed to execute, amend or terminate the MOA.

Once the terms of the MOA are finalized, INDOT and FHWA use a concurrent process for obtaining signatures. The applicant or their consultant should provide, in writing, each signatory with a copy of the MOA and each signature page. The MOAs provided to the signatories must be identical, they must contain the terms that the signatories agreed to previously, and they must show the same version date. The written request should ask the signatory to review and sign the signature sheet within 30-days of receiving the documents. Each signatory should only return their signed signature sheet page.

After the applicant or their consultant receives all signature pages back from the signatories (except FHWA), they should forward the completed signature pages to INDOT. INDOT will request FHWA's signature. FHWA is typically the last entity to sign the MOA. After FHWA has signed the MOA and returned the signature page to the project sponsor, the project sponsor will distribute copies of the MOA with all completed signature pages to each signatory and to all consulting parties.

**Remember:**

**If ANY changes are made to the MOA after the signatories have already agreed upon the terms, then the revised MOA must be circulated for review and comment before signatures are obtained.**

The FHWA will submit the MOA to the ACHP, and “cc” INDOT and the project sponsor. The submittal of the MOA to consulting parties and to the ACHP concludes FHWA's procedural requirements under Section 106. The environmental document for the project may not be approved until after the FHWA has filed the MOA with the ACHP.

## **9-4.0 Failure to Agree on the Terms of a MOA**

The applicant or their consultant should forward the documentation set forth in Section 800.11(g) as soon as it is determined that the SHPO is unwilling to sign an MOA. Per 36 CFR § 800.6(b)(1)(v), FHWA should request the ACHP to join the consultation and provide the ACHP with the documentation set forth in Section 800.11(g).

Per Section 800.6(b)(2), if the ACHP decides to participate in the consultation, FHWA and INDOT will consult with the consulting parties and ACHP to seek ways to avoid, minimize or mitigate the “adverse effects.” If FHWA, INDOT, SHPO, and the ACHP agree on how the “adverse effects” will be resolved, they should execute an MOA.

After consulting to resolve “adverse effects” pursuant to Section 800.6(b)(2), FHWA, INDOT, SHPO, and ACHP may determine that further consultation will not be productive and will terminate consultation. Any party that terminates consultation should notify the other consulting parties and provide them the reasons for terminating in writing. Per 36 CFR § 800.7(a)(2), if the SHPO terminates consultation, INDOT, FHWA and the ACHP may execute a MOA. If FHWA

terminates consultation, the FHWA Administrator shall request that the ACHP comment pursuant to 36 CFR § 800.7(c).

## 9-5.0 Amending a MOA

In certain circumstances the stipulations agreed upon in an MOA are not feasible to implement. When it has been determined that the MOA mitigation measures will not be implemented as stipulated, coordination with the MOA signatories must commence. Usually, the signatories agree to new alternative mitigation measures in an amended MOA. Once the signatories agree to amend the MOA, then a draft amended MOA will be circulated for comment. After the amended MOA's terms are agreed upon, the signature process will follow that of any MOA. Please see Part V Forms for amended MOA example.

### Tips for drafting a MOA

- Carefully consider the language in the MOA. The MOA is a legally binding document, so make sure all the terms and definitions are specific and accurate;
- The signatories should carefully consider the mitigation measures to ensure that they will be able and willing to fulfill them;
- Clearly describe which agency or entity will be responsible for which task;
- Always include a "sunset clause" that states a specific deadline by which the stipulations must be fulfilled. When setting a deadline, consider potential project delays so that it may easily be met. For example, set the deadline as "X years after completion of the construction of the project" rather than "by May 5, 2015.";
- Stipulations should clearly outline future obligations, such as archaeological data recovery or noise walls;
- Follow the FHWA MOA template that is provided in this manual (see Chapter 3 and Appendix Q).
- Follow-up from time-to-time to make sure the terms of the MOA have been correctly carried out;
- Include the stipulations of the MOA in the **Environmental Commitments Database**.

## 9-6.0 Phase III Data Recovery Investigations

When archaeological sites are adversely affected, mitigation is usually in the form of Phase III data recovery investigations. While Phase III investigations are commonly used as mitigation of archaeological sites, the [ACHP has stated](#) that data recovery is not always the only--or necessarily the most appropriate--means for mitigating “adverse effects.” Nevertheless, when Phase III mitigation is determined as the preferred mitigation option, the steps for completing the investigations will be outlined in the MOA. Once the Phase III investigations are complete and the Phase III report has been accepted by INDOT-CRO and the SHPO, no additional coordination is necessary regarding the archaeological site unless human remains and/or burial objects are encountered.

The Phase III investigations must proceed according to a plan approved by INDOT-CRO and the DHPA, and be guided by specific research questions. Since every archaeological site is different, every Phase III plan will be tailored to the specific site and the qualities or characteristics that make it eligible. Generally, the DHPA requires a minimum of 25% of the site’s area within proposed right-of-way be excavated during a Phase III, beyond the 10% excavated during Phase II testing (for a total 35% minimum). INDOT-CRO encourages that plans for Phase III investigations adhere to the following guidelines.

### 9-6.1 Phase III Research Questions

By the time a site is recommended as NRHP-eligible, its significant qualities and characteristics will typically have been identified. Since these characteristics will vary from site to site, it is not practical to develop a set of standard research questions for data recovery. Research questions should build off those developed prior to Phase II testing but be dependent upon site particulars and the type of data that has been recovered. An additional goal of every Phase III research design should be the synthesis of the newly recorded information with other relevant information regarding the same culture, time period, region, etc.

### 9-6.2 Standard Work Plan for Phase III Investigations

The research design (work plan) should address research questions related to the national, regional, or local significance of the site and its context, the internal spatial organization of the site, and its social and economic relationships to other sites, with respect to relevant contemporary theoretical developments. The plan must be designed to document the qualities or characteristics that make the site significant. If the site was determined to be significant because of its potential to yield important information, the investigation should attempt to extract the maximum amount of data relevant to specific research questions that are designed to make important contributions to our knowledge of the past. Test implications or expectations should be considered for each research question or hypothesis on which the investigation will focus. Data recovery and analysis should be accomplished in a thorough, efficient manner, using the most cost-effective techniques practicable. Adequate time and funds should be budgeted for fulfillment of the overall plan.

The data recovery strategies, and the questions they are designed to address, will depend in part upon the age, cultural affiliation, type, size, geographic location, and condition of the site, and must be tailored to those and other relevant factors. The plan should build directly upon the results of previous archaeological investigations at the site, especially as they pertain to the nature and distribution of features and cultural deposits. The plan should also be informed by the results of previous investigations of similar scale, in similar environments, or at similar sites.

The plan should detail what types of analysis are planned, such as lithic analysis, faunal analysis, ethnobotanical analysis, radiocarbon dating, geomorphology, or other appropriate techniques. The plan should include arrangements for recovered materials to be maintained in an approved curation facility, as well as for the curation of photographs, slides, negatives, maps, field notes, and other documentary materials generated during the investigations.

The Phase III data recovery plan should provide for reporting and dissemination of results, as well as interpretation of what has been learned, so that it is understandable and accessible to the public. This interpretation may include museum exhibits, signage, posters, pamphlets, websites, and other forms of public education as appropriate.

All Phase III investigations will be carried out in accordance with the [DRAFT Guidebook for Indiana Historic Sites and Structures Inventory – Archaeological Sites](#) [As partially revised by the Division of Historic Preservation and Archaeology in consultation with the Guidebook Committee of the Indiana Archaeology Council in 2008](#) and the INDOT Cultural Resources Manual, and will adhere to the Standard Work Plan for Phase II Investigations (see Chapter 7) with the following additional stipulations:

- A minimum of 35% of the site must be sampled in total (including the portion sampled during Phase II investigations). In some cases, larger areas may be sampled in consultation with INDOT-CRO.
- Additional sampling of the plowzone is not necessary at the Phase III level, since the goal is to recover information from significant intact deposits.
- If a midden or other buried horizon is encountered within a site, the extent of the deposit should be manually delineated and at least 1% of the deposit should be sampled through hand excavation (overlying plowzone may be mechanically removed to facilitate this). An additional 15%-25% of the deposit should be mechanically stripped to allow the identification of underlying features. Identified features should be fully excavated and should be documented as outlined in the Phase III work plan.