Appendix

Threatened and Endangered Species Consultation

Section 4(F) Mitigation

Cultural Resources Mitigation

Threatened and Endangered Species Consultation [7]

All ODOT projects are planned and designed to comply with the National Environmental Policy Act, Endangered Species Act, Clean Water Act, and Ohio Revised Code, to name a few. The Endangered Species Act and Ohio Revised Code are the specific federal and state legislation that provides for the protection and conservation of plants and animals within Ohio. The rules and regulations associated with these laws dictate that ODOT will build and operate their roadway projects with no or minimal impacts on protected species and their habitats (including potentially unoccupied habitats).

Statewide, Ohio harbors a great diversity of wildlife and plant communities. Many species receiving federal or state protection are tied closely to their habitats. Land-use change has been the most common cause for decline in species range and diversity. Contamination and degradation of natural waters has also contributed to loss of habitat. Loss of wetlands and forests has contributed largely to the federal and/or state listing of over 500 plants and animals within Ohio, including a variety of mammals, birds, reptiles, amphibians, mollusks, insects, fishes, and plants. Of those species, there are less than ten mammals including bobcat, black bear, and the Indiana bat.

During project development, ODOT coordinates with numerous regulatory agencies to determine if protected species are likely to be encountered within the project area. If a threatened or endangered species is suspected of existing within the project area, a specific survey is often undertaken to determine presence.

There are a variety of commitments and mitigation techniques that ODOT utilizes on projects to protect listed species. These differ depending on the habitat and the species that are to be protected. The more common commitments and mitigation ODOT makes regarding protecting federal and state listed species include:

*Restricting the clearing of trees to the period between September 15 and April 15 to avoid potential impacts to roosting Indiana bats.
*Relocation of listed mussel and plant species out of construction areas.
*Prevention of disturbance of Indiana bats from blasting activities near sensitive subterranean areas (primarily in southeastern Ohio).
*Timely removal of carcasses from roadways to minimize the potential of vehicles striking scavenging bald eagles.
*Measures to allow terrestrial species such as bobcat, black bear, timber rattlesnake, etc. to pass unharmed through construction areas.
*Measures to ensure that all equipment is in proper working order to minimize construction noise and reduce the risk of equipment spills and leaks.
*Construction and post construction plan notes are included requiring strict adherence to ODOT's Construction and Material Specifications for Sedimentation and Erosion Control. [7]

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[7] Threatened and Endangered Species Consultation: ODOT, OES/Excerpts from Ecological Guidelines.

Section 4(F) Mitigation[8]

Overview – Section 4(f) of the Department of Transportation Act requires that special effort be made to preserve public park and recreation lands, wildlife and waterfowl refuges, and historic sites. Section 4(f) specifies that federally-funded transportation projects requiring the use of land from a public park, recreation area, wildlife and waterfowl refuge or land of significant historic site can only occur if there is no feasible and prudent alternative. Using Section 4(f) land requires all possible planning to minimize harm.

Ohio has numerous Federal, state and local parks, wildlife and waterfowl refuges, and national registrar historic sites. These sites are important to our communities and heritage. However, at times, transportation projects impact Section 4(f) resources and require specific measures to minimize harm or mitigate the impacts. These activities involve close coordination with the officials who have jurisdiction over the specific resources.

Investigation of Section 4(f) resources and investigation of potential impacts occur throughout ODOT's project development process for individual projects. The intent of evaluating project resources throughout the process helps to guide projects toward practical solutions while minimizing impacts when no feasible and prudent alternative exists. The availability of detail during the PDP on the preferred alternative allows for closer examination of the potential for Section 4(f) impacts and a clearer determination of how impacts should be processed. Once this is known, project sponsors and officials that own the resources can follow a process for mitigation.

Often times, transportation officials are aware of and account for regional Section 4(f) resources that are important for preservation and community cohesion. Other resources may not be as well known, but are afforded the same protection under Section 4(f). Long range planning should account for well known Section 4(f) resources throughout the region that would pose a significant loss if impacted. It is, however, premature to analyze individual projects' Section 4(f) impacts this early in the process.

Measures to Minimize Harm and Mitigation – In cases where projects do have Section 4(f) impacts and there is no feasible and prudent alternatives to avoid use of the resource, the project approval process requires the consideration of "all possible planning to minimize harm". Minimization of harm may entail both alternative design modifications that lessen the impact on 4(f) resources and mitigation measures that compensate for residual impacts. Minimization and mitigation measures should be determined through consultation with the official or the agency owning or administering the resource. Neither the Section 4(f) statute nor regulation requires the replacement of 4(f) resources used for highway projects, but this option is appropriate as a mitigation measure for direct project impacts.

Mitigation measures involving public parks, recreation areas, or wildlife and waterfowl refuges may involve a replacement of land and/or facilities of comparable value and function, or monetary compensation, which could be used to enhance the remaining land. Mitigation of historic sites usually consists of those measures necessary to preserve the historic integrity of the site and is agreed to by FHWA. In any case, the cost of mitigation should be a reasonable public expenditure in light of the severity of the impact on the Section 4(f) resource in accordance with Federal requirements. Mitigation for common Section 4(f) resource impacts may be:

*Improving access or expansion/pavement of parking area
*Landscape or screening of resource

*Installation of beautification enhancements such as park benches, trash receptacles, signage, etc...
*Maintenance of traffic accommodation or rerouting of traffic
*Minimizing construction noise or limiting construction to specific times
*Direct compensation for improvements to on-site resources
*Design refinements [8]

Cultural Resources Mitigation[9]

Overview – Cultural resource reviews for all ODOT projects are planned and designed to comply with the National Environmental Policy Act, the National Historic Preservation Act, the Department of Transportation Act, the Ohio Revised Code, and 36 CFR Part 800 (the implementing regulations for Section 106 of the National Historic Preservation Act). All of these require that cultural resources be considered during the development of all highway projects in Ohio. An element of that consideration involves consulting with various entities, including the FHWA, the State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), City Historic Preservation Offices, local public officials, local organizations, and the public.

Mitigation measures developed through the Section 106 Memorandum of Agreement Consultation Process, provides ways to avoid, minimize, or mitigate adverse effects to historic properties (i.e., those listed on or eligible for listing in the NRHP) impacted by projects. These mitigation measures are carried through as environmental document commitments and must be completed and accounted for with SHPO and FHWA. Furthermore, the MOA is not closed until all stipulations are fulfilled. A failure to meet all stipulations can potentially jeopardize a project sponsor's funding or other agreements or projects.

A plan for mitigating an adverse effect is site/property specific and requires a separate research design or approach for each historic property impacted by the project. It should be based on the context development and refinement through the preceding Phase I and Phase II work.

Mitigation measures may involve a variety of methods including, but not limited to, aesthetic treatments, avoidance, archaeological data recovery, creative mitigation, salvage and re-use of historic materials, informing/educating the public, and Historic American Buildings Survey (HABS)/ Historic American Engineering Record (HAER) documentation. Approaches vary widely depending on the type of historic property, the qualities that enable the property to meet the National Register of Historic Places (NRHP) Criteria of Eligibility, the location of the historic property with respect to the project, etc. Mitigation plans are developed in consultation with ODOT, SHPO, FHWA, consulting parties (i.e., local officials, organizations, public), federally recognized Native American Indian tribes, and on occasion, the ACHP.

HABS/HAER Recordation – HABS/HAER Recordation documents buildings and engineering structures (e.g., bridges), respectively, that are listed in or eligible for listing, in the NRHP. In Ohio the SHPO requires Level 2 documentation for HABS/HAER recordation. Level 2 archival documentation consists of large-format (4'x5') black-and-white negatives and prints, a written historical report, and photographs or photographic reproductions of selected existing drawings.

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[8] Mitigation, Section 4(f): ODOT, OES/Excerpts from Ecological Guidelines.

Documentation must follow the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation:

*HABS/HAER Standards (U.S. Department of the Interior 1993)
*HABS Historical Reports (U.S. Department of the Interior 2000)
*Recording Historic Structures & Sites for the Historic American Engineering Record (U.S. Department of the Interior 1996).

All are available online at http://www.cr.nps.gov/habshaer.

Archaeological Data Recovery – Phase III archaeological data recovery investigations are intended to mitigate the adverse effect to archaeological sites listed in, or eligible for listing in the NRHP. Mitigation is achieved through intensive large scale excavations and through detailed analysis of the resultant cultural remains which were encountered during these excavations. Archaeological data recovery plans are developed in consultation with ODOT's Office of Environmental Services and the SHPO. The results of all data recovery investigations are summarized as a technical report that are reviewed and approved by ODOT-OES and the SHPO. Completion of the fieldwork and the final report of findings are considered an environmental document commitment. Approval of the final report generally fulfills the agency's responsibility for the commitment.

Data recovery plans are developed on a project-by-project basis and are designed to obtain or collect appropriate types of pertinent information related to the context which makes the sites significant. Field investigations and analysis are problem-oriented and are designed to answer specific questions regarding the site and its context. Data recovery plans specifically outline the site context and formulate hypotheses on how site research can address these hypotheses. The plans also outline field procedures and propose methods needed to record a site's physical context and any structural elements related to the resource. Each plan should also outline approaches to better recover data and devise analytical methods to best describe associated artifacts which may be recovered.

The final data recovery mitigation report should include a summary of the approach from the data recovery plan along with the findings of the excavation in order to address how the recovered assemblage relates to the site's historic context. Ways to publicly disseminate the results of data recovery investigations are also considered to be an important part of any mitigation plan. [9]

[9] Cultural Resources: ODOT, OES/Excerpts on Guidelines