

BUILT ENVIRONMENT RESOURCE METHODS

Section 106 of the National Historic Preservation Act requires federal agencies, and the recipients of federal funds, to consider the effects of their project on historic properties. The Federal Highway Administration (FHWA) has given the Missouri Department of Transportation (MoDOT) the authority to identify historic properties and consult with the State Historic Preservation Office (SHPO) for MoDOT projects to comply with Section 106. This *Built Environment Resource Methods* guide describes how MoDOT will conduct surveys for resources associated with the built environment for projects and the level of information that will be provided for review to the SHPO and to other consulting parties.

The purpose of the built environment resources survey is to identify resources that are eligible for listing on the National Register of Historic Places (NRHP) and to determine what effect, if any, a project may have on those resources. The surveys should identify buildings (houses, barns, commercial buildings, etc.), structures (bridges, fences, gateposts, etc.), objects (monuments, etc.), sites (landscapes—both designed and vernacular), and potential districts within the area of potential effects.

Area of Potential Effects

The area of potential effects (APE) for a project will include consideration of both direct and indirect effects on historic properties as required by the regulations implementing Section 106 of the National Historic Preservation Act, *Protection of Historic Properties*, codified at 36 CFR 800.4(a)(1). The APE for indirect effects will vary depending on the nature and scale of the improvements, local topography, and other relevant factors. The APE used for the project shall be discussed in the Methodology or Investigative Techniques section of the Section 106 Survey Memo or Report. The APE may be modified, in consultation with the SHPO staff, to meet the needs of individual projects. A field check of any project shall be conducted with the SHPO if they request.

As a general rule, the following are used for the architectural APE:

- New right of way and permanent easements, for the consideration of direct effects.
- Temporary easements when and where the project includes sidewalk replacement.
- Temporary easements when they are for the removal of a resource (demolition easements).
- A “buffer zone” for the consideration of indirect effects of 50’ in developed areas and 100’ in rural areas (the distinction between these areas is left to the discretion of the surveyor).

For Corridor Studies the APE on existing or new alignments will be the corridor study limits (the maximum footprint of all alternates being considered) and will include a field check with SHPO staff.

Indirect Effects

Some project types require special consideration for indirect effects, which may be known before or after historic properties are identified.

If sound walls are included in the project, even if they will be constructed within existing right of way, the potential for visual effects on nearby historic properties must be considered and an appropriate survey method devised.

The effects of vibration from blasting or pile driving may need to be considered if there are historic properties near a blast zone or near a bridge location.

The effects of rumble stripes on properties which are significant, in part, for their commemorative and contemplative nature (e.g. national battlefields) need to be considered.

Survey Methods

Any resource that is potentially eligible for listing on the NRHP, even if ultimately recommended as not eligible for listing, should be photographed during the fieldwork!

Architectural Resources

For projects that are included on the Statewide Transportation Improvement Program (STIP) all architectural resources should be surveyed. Resources constructed more than 45 years ago should be photographed, resources constructed less than 45 years ago may be photographed. Resources less than 45 years old that could meet the exceptional significance criteria should be photographed, unless noted below. Properties that are directly impacted by MoDOT projects should be photographed and submitted to the SHPO if they are more than 35 years of age, or if they could meet the exceptional significance criteria.

As a general rule, architectural resources are identified by their right of way parcel number. If there are no right of way numbers assigned, a logical numbering system should be assigned to parcels in the APE, and should be noted in the documentation.

A property more than 45 years old, or possibly exceptionally significant, should be photographed if any feature on the property is located within the APE: gateposts, fencing, entrance gates and old sidewalks (brick, stone, decorative concrete, etc.). See Figure 1 for an example of parcels that should and should not be surveyed based on their relationship to the APE. Every feature on this property, regardless of age, should be photographed—all the buildings and any street furniture. At least one photograph that clearly shows the main façade of the main building should be included. If there are more than three features, they should be keyed to a site plan or project plans (the house, garage, shed combination is considered standard). Photographs that show multiple elements within the property are encouraged to show the relationship between the features (e.g. house and garage, multiple outbuildings, etc.), but the features should be clearly shown and easily identifiable.

For Corridor Studies properties with resources more than 40 years old should be surveyed to provide a longer shelf life for the survey. The cut-off date should be based on the anticipated end-date of the study.

Resources can be dated using a variety of tools including historic topographic maps, aerial photographs, old project plans, and the professional judgment of the architectural historian assigned to the project.

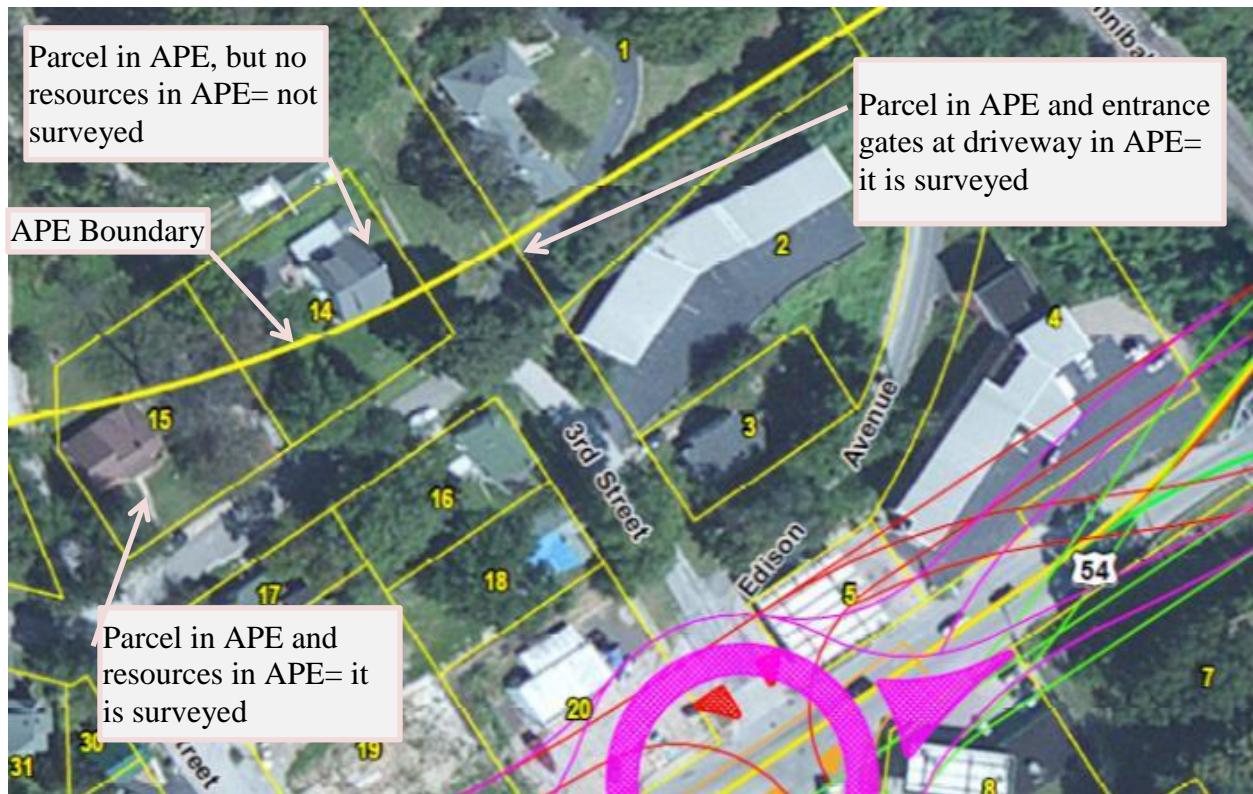


Figure 1: Example of APE

Resources less than 45 years old should be identified and checked in the field and considered for the possibility of eligibility for listing on the NRHP because of exceptional significance in architecture or historic events and associations.

All resources within the APE should be identified on project mapping by resource number, including resources that are less than 45 years old (or 40 years old for Corridor Studies).

Post-World War II Subdivisions (1946-1975)

Projects with direct impacts to architectural resources (buildings) in Post-World War II subdivisions shall have a brief contextual history for the subdivision, identifying the developer, typical building types and plan features. A plat map for the subdivision shall be provided if available, and streetscape photographs showing common property types shall be provided.

Landscapes

The possibility that there may be historic designed landscapes, rural historic landscapes or cultural landscapes within the APE, that could meet eligibility requirements for listing on the NRHP, needs to be considered.

Bridges

Bridge Resources are defined as highway, railroad, and pedestrian bridges, viaducts, and culverts. This definition excludes metal, plastic, and concrete pipes; and most concrete bridges

and culverts under 20 feet in roadway length. Locations of highway bridges can be obtained on a GIS layer for both on-system and off-system bridges.

Previous Surveys & Section 106 to Be Consulted

The *Missouri Historic Bridge Inventory* is a survey of numerous state and local bridges constructed prior to 1951. Not every bridge was given the same level of documentation during the survey and the results are somewhat outdated now.

The *Missouri Historic Bridge List* (updated 2014), is a list of bridges determined eligible through consultation between MoDOT, FHWA and the SHPO in 2003, 2008 and 2014. Bridges that are noted as not eligible or excluded on the *Inventory* may be on the Historic Bridge List, so it should be consulted when making recommendations on bridge eligibility.

In 2005 the Interstate Highway System was exempted from Section 106 Review (*70 Federal Register* 46: 11928-11931), unless specifically identified as historic and excluded from the Interstate exemption. No Missouri resources were excluded. To be considered an Interstate bridge, the bridge must either carry the interstate highway or be part of an interchange. Bridges that carry roads (or railroads, pedestrian crossings, etc.) over the Interstate, but that do not connect to the Interstate, are not covered by the Interstate Exemption.

In 2012 the Advisory Council on Historic Preservation issued a *Program Comment for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* (*77 Federal Register* 222: 68790-68795). Section 106 Review for common concrete and steel bridge types is complete, unless the bridge has been added to a list of bridges that are excluded from the Program Comment or is adjacent to or within a historic district. The list of excluded bridges is located on the FHWA website: http://www.environment.fhwa.dot.gov/histpres/bridges_list.asp.

Programmatic Agreements are being developed for bridges on the State Highway System based on bridge type or historical associations. These Programmatic Agreements should be consulted if appropriate to the bridge type.

Bridge Survey

Projects involving bridges should begin with a query of the Transportation Management System (TMS) to determine the age and type of the bridge. If the bridge is covered by the *Interstate Exemption* or by the *Program Comment*, Section 106 is complete for the bridge and no further work is necessary (however, if there are additional resources that will be submitted to the SHPO it is good to note that the bridge exists and that it is covered by the appropriate exemption).

The TMS system contains photographic coverage of most bridges on the state system. Photographic coverage of bridges should include images that show the superstructure and the substructure of the bridge. Any special features of the bridge should also be identified and included in the photographic coverage. If there is not adequate coverage in the TMS system, the bridge will need to be photographed during the field surveys.

Railroad bridges, and other privately owned bridges, may not be included in the TMS system and will need to be identified and photographed during the field surveys.

Bridges should be identified on project plans and topographic maps in the Section 106 submittal.

Minimum Documentation Requirements for Section 106 submittal to SHPO

The SHPO should be consulted about the eligibility of resources, particularly resources that are marginally eligible, prior to the formal submittal of the project. This consultation can be done informally through e-mail or formally through face-to-face consultation.

Modern architecture shall be defined as buildings, structures (other than bridges and culverts) or objects constructed less than 45 years ago. Modern resources shall be identified on project maps or plan sheets and in tables identifying the parcels and categorizing them by vacant/no resources in APE, or by age.

Modern Resources

For projects with modern resources the following documentation should be included on the Section 106 Survey Memo:

- Brief project description
- Discussion of the APE and Methodology used
- Description of the resources and recommendations on eligibility
- Plan sheets (if available) with resources identified
- Quad map/location map with resources identified by number
- Photographs of resources that are directly impacted by MoDOT projects (all bridges not covered by exemptions, buildings constructed more than 35 years ago)

Ineligible Resources greater than 45 years old

Documentation for large projects or with resources constructed more than 45 years ago shall include the above plus the following additional information:

- Results of Previous Surveys conducted in area/ Literature Review of studies in the area
- Brief description of directly affected resources greater than 45 years of age (see example below)
- Table of resources in APE
- Photographs of directly and indirectly affected resources constructed more than 45 years ago; photographs of directly affected resources constructed more than 35 years ago
- Photographs of bridges within the APE, if not covered by the Interstate Exemption or Program Comment
- Bibliography

Documentation shall include parcel history if there is information from the community or architectural or archaeological reasons to raise questions about eligibility based on the property history (Criteria A or B). A reasonable effort to assess Criterion A and B significance shall be made.

Building descriptions should note alterations in materials, additions or other changes that affect the integrity of a resource.

Example of brief building description:

Architectural Resource (AR) 22.1 is a ca. 1930, two-story, gable front and wing form building with no architectural style. The house has a concrete foundation, Masonite siding, asphalt shingle gable roof and an irregular plan. The building has a gable wing on the rear façade, an addition on the east façade, and a two-story exterior stair addition on the east façade.

A shed (AR 22.2) is located behind the house. It has a concrete foundation, Masonite siding, asphalt shingle pent roof and a square plan.

Resources Recommended as NRHP eligible

Resources recommended as eligible for listing on the NRHP shall include all the above information and the following additional information:

- NRHP Recommendations including
 - Criteria
 - Area(s) of significance
 - Period(s) of significance
 - Boundary
 - Contributing and non-contributing resources within the APE
- Effects Assessment including
 - Site plan showing recommended NRHP boundary and project footprint
- For Architectural Resources a completed SHPO Architectural Inventory Form or SHPO Barn Inventory Form.

For districts recommended as NRHP eligible an overview description of the historic district will be provided, rather than descriptions of each individual building within the district that is within the APE. District boundaries within the APE for the project, and contributing and non-contributing resources within the APE will be shown on project plan sheets or aerial photographs. The effects assessment should assess the project effects on the district, including a discussion of whether the district will still be eligible after the project.

Revised August 2017