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research report

Management Considerations
for Cultural Resources in Virginia
Department of Transportation Rights of Way

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<p>Abstract</p> <p>At present, there are no clear guidelines for identifying and managing the wide variety of cultural resources within the Virginia Department of Transportation (VDOT) highway rights of way. These resources include such elements as archaeological sites; military earthworks; early road beds; buildings; structures; and objects as diverse as 19th century turnpike milestones, Civil War monuments, stone boundary markers, and early waysides.</p> <p>This project identified the types of cultural resources that can be encountered in the VDOT rights of way, identified pertinent governing legislation and management issues, and developed written guidelines for managing these resources. Brief case studies are included of examples of issues involving cultural resources and examples of resolutions of these issues. The guidelines and case studies can be used by cultural resource personnel; administrators; environmental specialists; inspectors; contractors; and crew members associated with local headquarters, residencies, and district and central offices alike. They are applicable not only to historic (i.e., eligible for the National Register of Historic Places) sites and structures but also to items of local importance and interest. It is envisioned that the guidelines, while having obvious statewide application, could have national application.</p> <p>The benefits of this project are the identification and description of the types of cultural resources that can be encountered in VDOT rights of way, their governing legislation, and written guidelines for managing these resources. This descriptive information and guidelines streamline the environmental and cultural planning and management processes while facilitating VDOT personnel and contractors to act as responsible stewards of these cultural resources and to adhere to the legislative and regulatory requirements governing their treatment. Use of the descriptions and guidelines will also help VDOT personnel and contractors to avoid violating state and national statutes and misidentification or unnecessary damage to cultural resources. Avoiding such violations, misidentification, and/or damage will result in minimizing personnel time and costs and avoiding project delays.</p>				

FINAL REPORT

**MANAGEMENT CONSIDERATIONS FOR CULTURAL RESOURCES
IN VIRGINIA DEPARTMENT OF TRANSPORTATION RIGHTS OF WAY**

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Senior Research Scientist

Virginia Transportation Research Council
(A partnership of the Virginia Department of Transportation
and the University of Virginia since 1948)

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ABSTRACT

At present, there are no clear guidelines for identifying and managing the wide variety of cultural resources within the Virginia Department of Transportation (VDOT) highway rights of way. These resources include such elements as archaeological sites; military earthworks; early road beds; buildings; structures; and objects as diverse as 19th century turnpike milestones, Civil War monuments, stone boundary markers, and early waysides.

This project identified the types of cultural resources that can be encountered in the VDOT rights of way, identified pertinent governing legislation and management issues, and developed written guidelines for managing these resources. Brief case studies are included of examples of issues involving cultural resources and examples of resolutions of these issues. The guidelines and case studies can be used by cultural resource personnel; administrators; environmental specialists; inspectors; contractors; and crew members associated with local headquarters, residencies, and district and central offices alike. They are applicable not only to historic (i.e., eligible for the National Register of Historic Places) sites and structures but also to items of local importance and interest. It is envisioned that the guidelines, while having obvious statewide application, could have national application.

The benefits of this project are the identification and description of the types of cultural resources that can be encountered in VDOT rights of way, their governing legislation, and written guidelines for managing these resources. This descriptive information and guidelines streamline the environmental and cultural planning and management processes while facilitating VDOT personnel and contractors to act as responsible stewards of these cultural resources and to adhere to the legislative and regulatory requirements governing their treatment. Use of the descriptions and guidelines will also help VDOT personnel and contractors to avoid violating state and national statutes and misidentification or unnecessary damage to cultural resources. Avoiding such violations, misidentification, and/or damage will result in minimizing personnel time and costs and avoiding project delays.

FINAL REPORT

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Ann B. Miller
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INTRODUCTION

In a number of previous projects by the Virginia Transportation Research Council (VTRC), Virginia's older bridges were identified, surveyed, and evaluated for historic significance (Miller, McGeehan, and Clark, 1996; Miller and Clark, 1997; Miller, Clark, and Grimes, 2000). A management plan for Virginia's historic bridges was also formulated (Miller, Clark, and Grimes, 2001), and research and evaluation of roads for historic significance have been addressed (Miller, 2003). However, as was revealed while these projects were conducted, there is no corresponding process for identifying, evaluating, and managing other cultural resources within the rights of way of the Virginia Department of Transportation (VDOT). Such resources, defined as sites, structures, or objects of cultural and/or historical importance, include a wide range of types, including, but not limited to, archaeological sites, historic or commemorative markers, monuments, early road milestones, military sites (including forts and battlefields), and industrial features. They also have a wide range of significance, ranging from sites and items of local or regional interest to those of greater importance, including those eligible or potentially eligible for listing on the National Register of Historic Places.

Proper identification and management of such items would allow VDOT to be a responsible steward of its cultural resources and, by extension, would allow streamlining of resource management and project planning. The wide variety of these resource types, the historic significance of a number of them, and the absence of a plan to manage them indicated the need for a management plan for these resources.

PURPOSE AND SCOPE

This study had three objectives:

1. Identify and describe the various types of cultural resources that have been identified or are likely to be found within VDOT rights of way.
2. Identify management issues pertaining to the various types of resources.

3. Develop written guidelines for the identification, maintenance, and management of the various types of cultural resources when they are encountered in VDOT rights of way.

METHODOLOGY

The objectives of this research were achieved through the following three tasks:

1. *A literature review.* The literature review examined state department of transportation publications for specific management plans for cultural resources within rights of way. Management practices in selected foreign countries (such as Great Britain) that have active management programs for such cultural resources were also reviewed. Major legislative and regulatory considerations for the management of cultural resources in the United States in general and in Virginia in particular were also identified. The review was conducted through a combination of previously identified VTRC file information, website searches, and polling of VDOT cultural resource personnel.
2. *Identification of the various types of cultural resources within VDOT rights of way and historical research on these resource types.* Existing types of cultural resources within VDOT rights of way were identified, and historical background research on these resource types was undertaken. These tasks were done in concert with members of the Historic Structures Task Group (HSTG), VDOT cultural resource personnel, and other historical researchers.
3. *Identification of potential management issues.* Management issues for the types of resources identified in Task 2 were identified, along with potential best management practices. Such issues included legal guidance; procedural guidance; storage of cultural resource information; physical management of resources; and guidelines for state forces, contractors, and inspectors. These tasks were done in concert with members of the HSTG and VDOT district, residency, and headquarters staff, particularly VDOT cultural resource personnel. Through a series of discussions, interviews, and meetings with VDOT cultural resource staff, potential subjects for case studies, which would illustrate specific management of common issues, were identified and nominated by VDOT cultural resource staff. The cases that had potential broad application throughout Virginia are included in the Appendix.

LITERATURE REVIEW

The literature review revealed no specific guidelines for management of non-bridge, non-roadway historic resources within rights of way, either in other states or in other countries.

Survey projects to identify cultural resources in the vicinity of existing and proposed roadways are reasonably common. However, these survey projects generally are not restricted to rights of way but rather are done within areas of potential effect of maintenance or construction projects with the idea of (1) identifying cultural resources within the area, (2) assessing the potential impacts of the maintenance or construction project on the identified cultural resources, and (3) minimizing the impacts on identified cultural resources.

MAJOR LEGISLATIVE AND REGULATORY FRAMEWORK FOR THE MANAGEMENT OF CULTURAL RESOURCES

A number of state and national statutes bear on the management of cultural resources, including those on state-owned properties such as VDOT rights of way. Nationally, the most significant statute is the National Historic Preservation Act of 1966 (as amended) (16 U.S.C. 470f) and its implementing regulations (36 C.F.R. Part 800). These apply to all federally funded, assisted, or licensed undertakings, including transportation projects using federal funding. The regulating agencies are the Advisory Council on Historic Preservation and the appropriate state historic preservation office (in Virginia, the Department of Historic Resources [DHR]). Responsibility for compliance rests with the sponsoring federal agency or its designee (usually the recipient of the permits or funds). Section 106 review (so-called from the relevant section of the National Historic Preservation Act) is invoked for federal undertakings that have the potential to affect historic resources. This review requires consultation with the state historic preservation office (in Virginia, the DHR) to lessen adverse effects on the resource if possible. The clause from 36 C.F.R. 800.1(a) that defines Section 106 notes: “Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Council a reasonable opportunity to comment on such undertakings.”

A more recent statute that applies specifically to Indian burials is the Native American Grave Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001), a federal law passed in 1990. NAGPRA provides for the return of “human remains, funerary objects, sacred objects and objects of cultural patrimony” to descendants or related tribes.

The most applicable Virginia statutes include:

- *The Appropriations Act (2000 Virginia Acts of Assembly)*. This applies to projects or undertakings that affect state-owned properties listed on the Virginia Landmarks Register. Virtually any cultural resource listed on the National Register will have previously been listed on the Virginia Landmarks Register. The DHR and the Department of General Services are the regulating agencies. The state agency initiating the project is responsible for compliance. The specific provisions for review of rehabilitation and restoration projects are defined in Section 4-4.01(s), Chapter 1073, of the 2000 Virginia Acts of Assembly as follows:

To guarantee that the historical and/or architectural integrity of any state-owned properties listed on the Virginia Landmarks Register and the knowledge to be gained from archaeological sites will not be adversely affected because of inappropriate

changes, the heads of those agencies in charge of such properties are directed to submit all plans for significant alterations, remodeling, redecoration, restoration or repairs that may basically alter the appearance of the structure, landscaping, or demolition to the Department of Historic Resources. Such plans shall be reviewed within thirty days, and the comments of that department shall be submitted to the Governor through the Department of General Services for use in making a final determination.

- *Virginia Antiquities Act (§ 10.1-2300, Code of Virginia)*. This prohibits the damage or removal of “objects of antiquity” from archaeological sites on state-controlled land. In Virginia, the DHR is the regulating agency. The state agency or individual initiating the archaeological field investigation is responsible for compliance. The act does not restrict a state agency from construction or land-disturbing activities on its own land but does prohibit “relic hunting” or any archaeological field investigations without a permit from the DHR.
- *Underwater Historic Property Act (§ 10.1-2214, Code of Virginia)*. This applies to underwater properties on state-owned bottomlands. The Virginia Marine Resources Commission is the regulating agency. A permit from the commission is required for conducting any type of recovery operations involving the removal, destruction, or disturbance of underwater historic property on state-owned subaqueous bottom. The state agency or the individual planning to explore or recover objects underwater is responsible for compliance.
- *“Construction, Removal, or Demolition of Structures on Commonwealth Property” (§ 2.2-2402, Code of Virginia)*. The governor’s approval is required for these actions. The related procedures of the Department of General Services, Division of Engineering and Buildings, for real estate property management by state agencies (DEB Directive No. 1 Revised, June 20, 1984) require coordination with the DHR for these activities.
- *“Violation of sepulture” (§ 18.1-126, Code of Virginia)*. This prohibits disinterring, displacing, or defiling a dead human body. Unlawful disinterment of a dead human body is a Class 4 felony; willful defilement of a body is a Class 6 felony. In related legislation, defacement of a cemetery (part of the legislation forbidding “injuries to churches, church property, cemeteries, burial grounds, etc.” (§ 18.2-127) is a Class 6 felony. A permit (issued by the DHR) is required for archaeological excavation of human remains (§ 10.1-2305).

GENERAL TYPES OF CULTURAL RESOURCES WITHIN VDOT RIGHTS OF WAY AND ASSOCIATED MANAGEMENT ISSUES AND RECOMMENDATIONS

There are three general types of cultural resources, including those that can be expected to be found within VDOT rights of way: (1) resources that are now primarily or entirely below the surface of the ground or water, (2) gravesites, and (3) resources that are primarily above the surface of the ground or water. Each resource has its own associated management issues. Proper

identification of cultural resources (including their type, probable age, and material) and their management issues are vital both to proper management (including preservation planning, maintenance, and management of the resource) and to lessening of the impact of personnel time and costs, as well as delays, on transportation planning and projects.

Below-Ground Resources: Archaeological Sites and Related Elements

Below-ground (i.e., archaeological) resources are primarily subdivided into (1) prehistoric/pre-contact archaeological sites (i.e., sites dating to the period before European exploration and settlement of an area), and (2) historic-period sites (i.e., sites dating to the period after European exploration and settlement of an area). Related to archaeological sites are land features and sites (i.e., in which a land feature or a portion of the land itself is, essentially, the artifact).

Archaeological Sites

Prehistoric/Pre-Contact Archaeological Sites

In Virginia, these sites are related to the Indian (also known as Native American) tribes that occupied the Commonwealth prior to European exploration and colonization. Prehistoric sites include village sites, temporary campsites of varying sizes, extractive sites (i.e., usually quarry sites for the mining of stone for tools, weapons and ornamental purposes), and “lithic reduction sites” (i.e., factory sites where stone tools, such as projectile points, scrapers, cutting tools, and drills, were made).

Prehistoric/pre-contact sites in some areas of Virginia (particularly the Piedmont, the Valley of Virginia, and southwest Virginia) may date later than historic-period sites in eastern Virginia (particularly the Tidewater), which was settled first. For example, the settlement at Jamestown began in 1607, so the pre-contact period for that area is before 1607. European settlement in the Piedmont, the western Southside, and in the Valley of Virginia began in the 1720s and 1730s, so the pre-contact period for those areas is before ca. 1720 to 1730. European settlement in far southwest Virginia dates to the mid-1700s, so the pre-contact period there, accordingly, is before this point.

Archaeological sites and artifacts are often not easily identified by laypersons. Prehistoric sites can be especially hard to distinguish since they are usually marked only by soil stains; charcoal or fire-cracked stones (the remains of heating/cooking fires); fragments of animal bones (from hunting and meal preparation); clay pottery (usually in fragments); stone flakes from the manufacture of stone tools and weapons; and, sometimes, tools and weapons themselves. Metal items are rarely found in prehistoric/pre-contact sites, although these were sometimes acquired through trade. The usual clues to an archaeological site are the associated artifacts. To the untrained eye, these artifacts look like natural elements (i.e., broken stones, slight discolorations in the soil, etc.).

Prehistoric sites will most likely be identified by an archaeological survey in the course of undertaking the environmental clearances for highway construction or maintenance projects. Prehistoric human burial sites are treated later in the “Gravesites” section.

Historic-Period Archaeological Sites

In Virginia, these are related to the period after the advent of European exploration/colonization/settlement. Historic-period sites include the locations of forts, earthworks, campsites relating to various time periods (i.e., exploration, wartime), battlefields, domestic sites (houses and related structures), commercial sites, and industrial sites.

Archaeological sites may or may not include evidence of buildings or other structures. The extent and visibility of these resources vary greatly. In the case of buildings or structures, masonry foundations or collapsed stone or brick walls, nails, and other metal elements may be fairly intact and very noticeable. Wooden elements that have been consistently underwater or buried in wet soil (such as wharf piers, the bases of crib dams, the remains of older wooden culverts, or portions of “corduroy” roads or plank roads) also are frequently found in a state of good preservation. Other evidence of site use/occupation, such as whole or partial ceramics, glassware, metal items, machinery, and other elements, may also be obvious and well preserved. In other sites, little evidence is visible to the untrained eye. As with prehistoric sites, historic-period archaeological sites are often not easily identified by laypersons.

Land Features and Sites

Specific land features and sites that show evidence of human activity can be important cultural resources. These may be distinct from the more usual type of archaeological site in that they often do not yield artifacts. Instead, the land feature or a portion of land itself, essentially, is the artifact. These features can include road traces and elements, railway elements, battlefields, and some battlefield elements (such as earthworks).

Road traces include the routes of early roadways, particularly those that had unpaved or minimally paved roadbeds. These usually appear as long narrow depressions or swales in the ground. Physically, some are easily identifiable and others are nearly indistinguishable from the surrounding ground. The depth can vary from virtually nothing to several yards deep, depending on the type of soil, grade, amount of time the road was in use, volume and kind of traffic it carried, and amount of erosion (and filling) that has occurred along the old route. Road elements include the remains of corduroy roads (those that had poles or rough logs laid across the road surface—usually on an earth or sand bed—and were usually covered with dirt to provide a firm surface over swampy or washed out road sections), plank roads (which had planks, fastened to underlying stringers, forming the road surface), and causeways (raised roadways on a base—typically of some combination of stones, logs, brush, timbers, and earth—and capped with clay for weatherproofing). Other road elements include the remains of early paving—such as wooden elements, broken stone, early concrete or bituminous paving, etc.—drainage structures, small culverts of wood or masonry, etc.

Railway elements include railroad cuts, raised beds, and the remains of supporting structures relating to bridges, culverts, trestles, viaducts, etc.

The most apparent battlefield and related military elements are earthworks. Management options for earthworks have been the subject of considerable study, and the preservation and management of military earthworks have been addressed in several National Park Service publications, and these can provide useful guidance when planning management of such resources (National Park Service, 2006).

Management Issues and Recommended Guidelines for Archaeological Resources (Including Land Features and Sites)

Because of both federal statutes (i.e., the National Historic Preservation Act of 1966) and state statutes (i.e., the Appropriations Act, the Virginia Antiquities Act, and the Underwater Historic Property Act), management options for identified prehistoric and historic-period archaeological sites and artifacts are well established for cultural resources that might be found on state-owned property. For any projects in the right of way, archaeological surveys can determine if sites or resources are present. If sites are present, their nature and extent must be determined. Management for archaeological sites varies. Depending on the circumstances and the agreements formulated by the agencies involved, archaeological sites within a project area may be:

- *Avoided (except for selected testing to determine the type and extent of the site).* The project will be completed with little or no impact to the site. With this option, the location/design of the project may have to be altered to move it away from the site or the site may have to be marked or fenced to prevent impact from maintenance or construction activities.
- *Excavated, and the artifacts removed.* The project will then usually proceed as designed. This option is necessary where construction must occur at the site.
- *Left unexcavated (except for selected testing to determine the type and extent of the site).* The project will be completed as planned with limited or no impact to the site. This option is feasible where no major construction must be done on the site. This option includes the “controlled burial,” in which the site can be protected by installing a geotextile fabric liner for subgrade stabilization, topped by 6 inches to 1 foot of aggregate fill over the surface of the site. This method will protect the site from damage and from impact from construction and vehicles; it also avoids the time and expense of excavation and preserves the site.

To avoid damage to archaeological sites, VDOT district cultural resource personnel should be involved in the planning and specification process for any projects that may impact archaeological sites. Physical impacts to identified archaeological sites by either construction or maintenance projects should be avoided. Heavy equipment should be used with care on or near archaeological sites: the use of heavy equipment on an unprotected site has the potential to damage archaeological resources, particularly those located close to the ground surface.

If vehicular traffic or other equipment must pass over an archaeological site, where feasible, controlled burial of archaeological sites is an excellent tool to provide protection to a site and avoid costly excavation that also results in the destruction of the site (see Case Study: Controlled Burial of an Archaeological Site at Huguenot Bridge in the Appendix).

Artifacts recovered from VDOT rights of way (or any other state property), in accordance with the Virginia Antiquities Act, are usually turned over to the DHR, which decides on their disposition.

Management options for land features and sites may differ slightly. Frequently, the physical evidence of such features as older road traces, railroad cuts, earthworks, etc., is slight and easily destroyed. If the site is not of sufficient importance to justify preservation, it should be documented prior to destruction by VDOT cultural resource personnel. Intact features, such as roadbed profiles; paving samples; and wooden elements, such as corduroy road or plank road sections, should be sampled if possible.

Avoiding impacts to such sites can often be easily, economically, and successfully done in maintenance work since many maintenance projects are not ground-disturbing but instead involve work such as ditch clearing, mowing, etc. In an area with known resources of this sort, impacts can usually be avoided by using a “light touch” with lawnmowers, weed whackers, larger mowers, etc. With known earthworks, VDOT often provides an erosion fence around the site, forming a boundary that crews or contractors should not cross. Railroad cuts are often important cultural resources, and it is important to preserve them. This can be done relatively easily and economically by preserving the existing lines of the railroad cuts (i.e., by cleaning the ditch but not cutting back the contours of the feature).

Where a site or feature must be secured (i.e., with a fence or other barrier), trees and other woody vegetation should be prevented from growing on the site in order to avoid damage to resources from root systems and vegetative growth. This should be undertaken by maintenance staff, following discussion with and planning and specification input from VDOT district cultural resource personnel. Any fences should have lockable gates that are wide enough to allow the passage of mowing equipment (see Case Study: 17th Century Archaeological Site, Hampton Roads District, in the Appendix).

Gravesites

Also below ground but differing from standard archaeological sites are gravesites (i.e., areas of human burials).

Description

Any projects within the right of way that may impact known human burials (or any previously unknown burial revealed in the course of work) are governed by national and state laws regarding human burials. NAGPRA (for Indian burials) and the state statutes regarding violation of sepulture and injuries to cemeteries and gravesites (for all burials) apply.

Management Issues and Recommended Guidelines for Gravesites

Permits are required for exhumation of any burials.

NAGPRA specifically addresses Indian burials (both prehistoric/pre-contact burials, as well as later burials) and provides for the return of human remains and related funerary, sacred, and cultural objects. Special permitting is required for any actions that are likely to uncover Indian burials; the inadvertent discovery of such artifacts is also governed by NAGPRA. Such projects involve consultation with the appropriate tribes (many of whom are members of the Virginia Council on Indians). Although few projects involving the cultural resources in the right of way will involve consultation with tribes, the possibility still exists.

State statutes regarding violation of sepulture and injuries to cemeteries and burial places of any type (§ 18.1-126, *Code of Virginia*) prohibit any actions that result in disinterring, displacing, or defiling of a dead human body and any “Injuries” or defacement of churches or church property, church or public cemeteries, private burial grounds, etc. (§ 18.2-127). This includes impacts on typical cemetery elements such as fences and railings. Any dumping of surplus material or fill on or near burial grounds may also be interpreted as defacement and must be avoided. In some projects, such as the I-66 widening project in Prince William County (UPC [VDOT Unique Project Code] 69113) the Section 106 clearance for the project was awarded at least partly because the project would have no effect on an historic cemetery.

Not all cemeteries or burial places are well marked. In particular, older burials, burials of individuals in lower economic brackets, or burials in rural areas or in family cemeteries often did not have tombstones. Well into the 20th century such graves were often marked with wooden markers, fieldstones, or no markers at all. The lack of cemetery notation on land surveys or topographic maps and/or the absence of tombstones or other common grave markings does not release construction or maintenance crews from responsibility if graves are accidentally uncovered and work continues to proceed. Any possibility that human burials or cemeteries have been uncovered or impacted in any way requires immediate stopping of work and contacting of district cultural resource personnel. Legal mechanisms do exist to allow the moving of human remains (with appropriate permitting), but this is a time-consuming and costly process, often resulting in negative public relations, and should be used only as a last resort.

Above-Ground Resources

The types of above-ground resources that may be encountered in rights of way vary greatly and can range from complete buildings, to other structures (such as bridges or portions of bridges), to various smaller objects. For cultural resource purposes, *building*, *structure*, and *object* are formally defined by the National Park Service, which administers the National Register program (National Park Service, 1997):

- *Building*: a resource created primarily to shelter any form of human activity, such as a house.

- *Structure*: a functional construction made for purposes other than creating shelter, such as a bridge.
- *Object*: a construction primarily artistic in nature and relatively small in scale and simply composed, such as a statue or milestone.

Buildings

Description

Types of buildings include homes, stores and other commercial establishments, factories and other industrial and manufacturing operations, transportation-related buildings (such as taverns, toll booths, etc.), schools and other buildings related to education, agricultural buildings, buildings related to military uses, and others.

Management Issues

The established processes regarding historic significance and the National Register are heavily weighted toward buildings (National Park Service, 1997). Buildings of any sort in areas that may be impacted by transportation projects are routinely surveyed and evaluated for historic significance by or under the auspices of VDOT cultural resource personnel. There is a well-developed mechanism in place to identify, categorize, and evaluate their significance (National Park Service, 1990, 2002).

Structures

Description

Probably the most notable structures in highway rights of way are bridges. Other structures include off-system or abandoned bridges or the remains or ruins of bridge structures. Examples are the remains of older bridge piers that are common throughout the state and such resources as the numerous culverts that once served the Valley Railroad between Staunton and Lexington that can still be seen along such secondary roads as Routes 610 and 778 in Rockbridge County.

The canals and related navigation systems that enjoyed popularity in early and mid-19th century Virginia are also represented by numerous structures, including stone culverts, dams, locks, etc.

Other structures include such resources as the Clifton Furnace (at Rainbow Gap near Clifton Forge) in Allegheny County, a National Register-listed stone masonry structure built in 1846 as a cold-blast charcoal iron furnace. Abandoned since 1877, it now serves as a eye-catching feature along the highway right of way.

Management Issues

The identification and management of historic bridges that are still under VDOT's purview are not included in this report, as these structures were covered in previous publications (Miller, McGeehan, and Clark, 1996; Miller and Clark, 1997; Miller, Clark, and Grimes, 2000, 2001).

With regard to structures associated with canals and related navigation systems, the majority of these have been mapped, and histories have been published by the Virginia Canals and Navigations Society. Many of these resources are National Register-eligible or already listed on the National Register. Management of such resources can be illustrated by the management of a former James River and Kanawha Canal stone culvert located in the right of way of Route 288: VDOT cultural resource staff put specific instructions in the contract to protect this resource, and formwork was erected around the old culvert to protect it during construction (J. Wells, personal communication, 2006).

Objects

Buildings, as well as structures such as bridges, are generally well understood. However, the category of objects includes a number of relatively obscure types of resources. For this reason, objects are frequently associated with identification and management issues. The following describes the majority of object types that may be encountered in the VDOT right of way and notes issues related to their management.

Signboards/Posts of Directions

Description. A Virginia statute of 1738 (which followed similar British legislation) required that all places “where two or more cross roads or highways meet” were to be marked by “a stone or post, with inscriptions thereon, in large letters, directing to the most noted place to which each of the said Joyning roads leads” (Hening, Vol. 5, 1819-1823, 1969). The most typical form of marker was a “post of directions.” Typically these were wooden posts topped with wooden signboards. Specifications for such posts are rare, and few people bothered to leave descriptions of what must have been extremely common, mundane objects. A 1745 Albemarle County court order (Albemarle County Court Order Book 1, 1744-1748) directing that the posts be “at least ten feet from the ground” may have been typical, as this is a convenient height to allow the signboard to be read by a traveler on horseback. Exposed to the weather, these early wooden signboards deteriorated fairly rapidly. Almost none have survived. The use of posts of directions continued through the 19th century and into the early 20th century, when standardized highway signs began to appear. The advent of standard highway signs (after the mid-1920s) did away with wooden directional posts as well as other forms of local road markers. Such posts were replaced by standardized signs after the creation of the primary (1918) and secondary (1932) systems in Virginia.

Representative Examples. The best-known resource of this type is the “White Post” at the crossroads in the village of the same name in Clarke County (Figure 1). The original post was erected during the mid-18th century and provided directions to locations within Lord



Figure 1. “White Post” at White Post, Clarke County (a 20th century recreation of the 18th century original)

Fairfax’s landholdings (the Northern Neck Proprietary). It has been replaced a number of times since, with the design of each post apparently based on its predecessor. The latest post was erected after a 1998 vehicle impact destroyed the previous post. The octagonal post stands approximately 12 feet tall and has four signboards, pointing the ways to Berry’s Ferry, Stephens City, Battletown, and Greenway Court (Lord Fairfax’s local residence).

Only one set of pre-20th century wooden signboards from an early “post of directions” is known to survive in Virginia. The surfaces of the signboards are whittled or routed so that the letters stand raised approximately 1/16 inch. Directions are shown by stylized hands with pointing index fingers. The dimensions of the larger board (inscribed “Era Mills. 1 M[ile]s. / Criglersville. 6. M[ile]s.”) are 50 1/8 inches long by 7 15/16 inches wide by 1 1/4 inches deep. The smaller board (inscribed “Madison. C. H. 3. M[ile]s.”) is 26 15/16 inches long by 7 11/16 inches wide by 1 1/4 inches deep (Figure 2). From mileage and directions on signboards, these signs apparently stood at or close to the intersection of present Routes 638 and 603, west of Route 29 in Madison County. The boards can be dated to the last half of the 19th century, as Era Mills was set up in the mid-19th century and the name was changed to Zeus Mills in 1904. These signboards were discovered in a nearby barn in the 1990s; they apparently survived only because after they were removed from their posts (probably after the Zeus Mills name change) they were salvaged; the boards were reused inside a barn on a nearby farm, where they were kept under shelter. They are now in the property owner’s private collection.



Figure 2. 19th Century Signboard from Madison County

Management Issues and Recommended Guidelines. It is unlikely that any intact early signboards will be discovered in place. However, any that is found should be brought to the attention of the VDOT district cultural resource personnel, who can document and advise on protecting and preserving the resource.

Road Stones (“Sign Rocks”) and Milestones

Description. Although wooden posts of directions and signboards continued in use until the 20th century, by the late 1700s and early 1800s, a number of roads in Virginia featured a more permanent form of marker: directional signs made of stone. Stone highway markers come in two general categories: road stones (or sign rocks), and milestones. The term “sign rock,” as the name implies, refers to the fact that the stone often bears a short message, usually the directions and mileage to a particular place. Milestones are often smaller and often have only a numeral and sometimes a place name (often abbreviated) carved into them to indicate the distance from or to a particular point. In popular usage, though, the names are sometimes interchangeable.

Many 19th century stone markers are irregular and roughly carved; others look like simple tombstones or small obelisks. These stone markers are set so that 18 inches to 4 feet of the marker is visible above ground; usually a greater section of the stone is below ground to provide support to keep the object upright and to prevent it from being easily dislodged or pulled up. Misspelling or abbreviation of words is common, and after a century or two of exposure to the elements, the lettering may be worn or partly destroyed.

The use of sign rocks continued through the late 19th century and into the early 20th century, when standardized highway signs began to appear. Concrete markers apparently replaced stone markers for a period during the early 20th century. The advent of standard highway signs (after the mid-1920s) did away with stone and concrete markers as well as other forms of local road markers. Such markers were replaced by standardized sign posts after the creation of the primary (1918) and secondary (1932) systems in Virginia.

A survey and report regarding Virginia's road stones, milestones, and related objects are currently being done through VTRC.

Representative Examples. Several dozen road stones and milestones are known to survive in Virginia. Not all of these are located in current rights of way. An example remaining within the VDOT right of way is the sign rock at Valentines in Brunswick County. This stone, which according to its inscription dates to 1825, is located at the intersection of Routes 670 and 600 at Wright's Store and is within the right of way and apparently in its original location. It is an irregular stone; its above-ground dimensions are 26 inches high, approximately 28 inches wide, and approximately 7 inches deep. Carved on the stone is the inscription "1825/TO RANDOLPH/ORDANARY/8 MILES" (Randolph's Ordinary was located near the Roanoke River [Neale, 1975]). This stone is unusual in that it is kept whitewashed and the letters of its inscription are painted black (Figure 3). Most surviving stones of this kind are in their natural condition.

Surviving milestones include examples from a number of early turnpikes. Five milestones, erected in the 1830s, survive from the Northwest Turnpike (the predecessor of part of



Figure 3. Road Stone at Valentines, Brunswick County, Dated 1825

Route 50) and are located west of Winchester in Frederick County. Four milestones, dating from the 1820s, remain from the Manchester-Petersburg Turnpike (the predecessor of Route 1 that ran between the old port of Manchester on the James River [now part of Richmond] and Petersburg); one of these milestones is located within what is now the southern portion of the City of Richmond; the other three stones are in Chesterfield County.

The Northwest Turnpike milestones, all of similar design, are rectangular limestone stones. The ranges of the above-ground dimensions are approximately 16 to 18 inches high, approximately 10 to 15 inches wide, and approximately 6 to 8 inches deep. Milestones 38, 36, 35, 33, and 31 survive, indicating the distances to Romney (now in West Virginia). Carved on each stone is the inscription “TO R” and the mileage, i.e., for the first stone “38 M,” with subsequent stones marked “36 M,” “35 M,” etc. The inscription indicates “To Romney 38 [or 36, etc.] miles.” Each of these milestones was reset in a concrete base during the improvements to Route 50 in the mid-20th century (Figure 4). Where construction of a new alignment or other changes prevented the old milestone from remaining in its original location, it was reset as close as possible to the original location and in the same relationship as it originally had to the highway right of way.



Figure 4. Milestone 36 on Northwest Turnpike, Frederick County, Erected in 1830s

The Manchester-Petersburg Turnpike milestones, also all of similar design, are rectangular stones with rounded tops. Whitewash or white paint thickly applied to these stones prevents precise identification of the type of stone used, but all are likely of local granite. The ranges of the above-ground dimensions are approximately 32 to 33 inches high (although one is 26 inches high), approximately 15 to 16 inches wide, and approximately 8 to 11 inches deep. Milestones 1, 6, 7, and 9 survive, indicating the distances to Manchester. Carved on each stone is the inscription “TO MANCH” and the mileage, i.e., for the first stone “1 MILE,” with subsequent stones marked “6 MILES,” “7 MILES,” and “8 MILES” (Figures 5 and 6).



Figure 5. Milestone 7 on Manchester-Petersburg Turnpike, Chesterfield County, Erected in 1820s



Figure 6. Milestone 7 on Manchester-Petersburg Turnpike, Chesterfield County, Erected in 1820s; Showing Location in Right of Way

Management Issues and Recommended Guidelines. Early road stones and milestones remaining in their original locations are considered eligible for the National Register. Given the relatively small numbers of surviving stones of this type, any that is found should be brought to the attention of the VDOT district cultural resource personnel, who can check to see whether the resource has been previously documented, and if not, can document and advise on protecting and preserving the resource.

The stone of these resources may be fragile because of its composition or the action of weather, prior application of caustic or acidic substances, and previous damage. Since these resources can be damaged, broken, or eroded by mechanical impacts, maintenance operations should be done with care around any resource of this type to avoid damage to the object. Avoiding impacts to such sites can often be successfully done in maintenance work since many maintenance projects are not ground-disturbing but instead involve work such as ditch clearing, mowing, etc. In an area with known resources of this sort, impacts can usually be avoided by using a light touch with lawnmowers, weed whackers, larger mowers, etc. Any materials applied near such a resource should not react with stone. The placement of flagging tape or erosion fence around a vulnerable site or resource creates an easily erected and easily noticeable boundary for crews or contractors.

Although a number of early stone highway markers still survive in their original locations, many more have been destroyed by vandals or by individuals who did not recognize (or were not concerned about) their significance, and others have been removed from their

original sites by people seeking building stones, souvenirs, or interesting landscape features for private property or for public landscape projects. Some well-meaning individuals have argued that moving a marker “saves” it from perceived threats. However, removing a marker from its original location not only takes the marker out of its historic context (and often the original location is lost forever), but it also destroys what may be the only surviving evidence of earlier transportation networks. Such actions, such as moving an historic house, should be undertaken only as a last resort, when all other preservation/protection options have been unsuccessful. Any stones on state highway right of way are under VDOT’s administration and moving them, if deemed necessary, is at VDOT’s discretion. The current VDOT practice is to leave such stones in place unless their sites are actively threatened. Any examples found in the course of a maintenance or construction project should be brought to the attention of the appropriate VDOT district cultural resource personnel, who can document and advise on protecting and preserving the resource.

In order to preserve these scarce resources best, the practice noted should be formalized, and early road stones and mile markers should be left in place unless their sites are actively threatened by a construction project. In the case of a threatened site, when it is not possible to retain the stone in its original position, VDOT cultural resource staff will document the stone and its original position; the stone should then be moved and reset as close as possible to the original location and in the same relationship as it originally had to the highway right of way.

Concrete Mile Markers

Description. In the first decade of the 20th century, some regions of Virginia began to erect highway markers made of cast concrete instead of stone. These markers were similar to earlier road stones (sign rocks) or milestones but were rendered in cast concrete.

Representative Examples. The only two such markers currently known to survive date from ca. 1910 and mark the distances between Elon and Lynchburg. These cast concrete markers each stood approximately 50 inches above the ground and were 8½ inches wide and 8½ inches deep. Inscriptions noting the distance are molded into the concrete. Popularly designated as “L1” and “L5” from their inscriptions (i.e., abbreviations indicating 1 mile to Lynchburg and 5 miles to Lynchburg), these are located in Amherst County just north of Lynchburg (Figure 7). Both of these objects were erected by Amherst County as part of county road projects in the period when county roads were under county control, prior to the formation of the secondary system in 1832. Although made of cast concrete, these early markers are similar in shape and appearance to older stone markers; the form of the inscriptions is similar to that of the hand-cut letters and numbers on many 19th century road stones. The L1 marker is still in its original location; the L5 marker, which stood on an abandoned right of way, was moved to the county museum grounds to prevent its destruction.

Management Issues and Recommended Guidelines. Given the very small number of known examples of this type of resource, any that is found should be brought to the attention of the VDOT district cultural resource personnel, who can check to see whether the resource has been previously documented, and if not, can document and advise on protecting and preserving the resource.



Figure 7. “L1” (1 Mile to Lynchburg) Concrete Mile Marker, Erected ca. 1910 by Amherst County, in Madison Heights

The concrete of such resources may be fragile because of its composition, insufficient rebar, the action of weather, the application of substances that are reactive with the concrete, and/or previous damage. Since early concrete structures of this type can be damaged, broken, or eroded by mechanical impacts, maintenance operations should be done with care around any resource of this type to avoid damage to the object. Avoiding impacts to such sites can often be successfully done in maintenance work since many maintenance projects are not ground-disturbing but instead involve work such as ditch clearing, mowing, etc. In an area with known resources of this sort, impacts can usually be avoided by using a light touch with lawnmowers, weed whackers, larger mowers, etc. Any materials applied near such a resource should not react with concrete. The placement of flagging tape or erosion fence around a vulnerable site or resource creates an easily erected and easily noticeable boundary for crews or contractors.

As with the earlier but similar road stones, any concrete mile markers should be left in place unless a definite threat exists. The L1 marker, which is still in its original location, is considered eligible for the National Register; the L5 marker (located on an abandoned right of way), which was threatened with destruction and was moved, is not considered eligible (see Case Study: The L1 and L5 Concrete Mile Markers in the Appendix).

Boundary Markers (Federal, State, County, or Private Property)

Description. Boundary markers, usually made of stone or cast concrete, may mark the bounds of private property, municipalities, counties, federal or state parks, or state lines. A

common early type of marker is an oblong or roughly square stone, which may be either in its natural state or shaped. Carved inscriptions may or may not be present. Perhaps the best-known markers of this type are not found within current Virginia highway rights of way: these are the boundary markers for the District of Columbia (Washington, DC) and the “dividing line” markers between Virginia and North Carolina (from the late 19th century resurvey and re-marking of the original early 18th century survey). Boundary markers have also been placed at various Civil War battlefield parks by the federal government. More typical types of these markers are county boundary stones and private property markers.

Representative Examples. An excellent example of an older county line marker can be seen on the northeast side of Route 50/17 near the intersection with Route 601, approximately 1 mile west of the village of Paris in Fauquier County. This is an irregular stone; its above-ground dimensions are 38 inches high, 13 to 19 inches wide, and approximately 8 inches deep. Carved on the stone is the inscription “1909 / F / 20” (Figure 8). Sometimes mistaken for a road stone,



Figure 8. Stone Boundary Marker for Fauquier County Line, Erected ca. 1909

this object is located at the intersection of Fauquier, Clarke, and Loudoun counties; it was set ca.1909 to replace the large poplar tree that had marked this point from the late 18th century until the tree fell in 1907. The Fauquier Heritage Society in Marshall, Virginia, has a photograph of the poplar; Daniel E. deButts, volunteer at the Fauquier Heritage Society, stated that his grandfather set the stone to replace the fallen poplar; apparently there was no official or monetary participation from the county for the erection of the stone marker (D.E. deButts, personal communication, May 30, 2002). The poplar is also noted in *Landmarks of Old Prince William* (Harrison, 1987).

Upright natural or roughly carved stones have traditionally been used as private property markers in Virginia, and their use continued well into the 20th century in many areas. In modern surveys, the use of natural stones has generally been replaced by the use of concrete monuments or metal markers such as pipe, heavy reinforcing bars, etc.

Concrete posts used as boundary markers, some with an identifying metal plate, are in place at the boundaries of many national and state parks (see Case Study: Petersburg National Military Park Boundary Markers in the Appendix).

Management Issues and Recommended Guidelines. A number of early boundary markers (such as the District of Columbia boundary markers and the Fauquier boundary marker noted previously) are listed on or are considered eligible for the National Register.

Any examples of this type of resource that are found should be brought to the attention of the VDOT district cultural resource personnel, who can check to see whether the resource has been previously documented, and if not, can document and advise on protecting and preserving the resource.

These objects mark survey metes and bounds, either of private property or of a governmental division, and therefore must be left undisturbed. Care should be taken that construction or maintenance work immediately around such markers does not remove, uproot, impact, or otherwise damage the marker.

Maintenance issues are similar to those noted for other items of stone and concrete. Since some of these objects feature bronze or other metal plates, proper management of these metals can be a concern as well: bronze and similar metals are vulnerable to acidic substances. The masonry components may be fragile because of their composition, insufficient rebar, the action of weather, caustic or acidic substances, and previous damage. Since these resources can be damaged, broken, or eroded by mechanical impacts, maintenance operations should be done with care around any resource of this type to avoid damage to the object. Since many maintenance projects are not ground-disturbing but instead involve work such as mowing, ditch clearing, etc., avoiding impacts to resources and sites can often be easily, economically, and successfully done in maintenance work. When work is done around known resources of this sort, impacts can usually be avoided by using a light touch with lawnmowers, weed whackers, larger mowers, etc. Any materials applied near such a resource should not react with the masonry and metals involved. The placement of flagging tape or erosion fence around a vulnerable site or resource creates an easily erected and easily noticeable boundary for crews or

contractors. An example of flagging tape as a simple, economical, and effective marker can be seen in Figure 8.

Concrete State Right-of-way Markers

Description. These are low, square, cast concrete markers set along roads at the edge of the state right of way. They postdate the establishment of the State Highway Commission (1906). Generally, the markers are 6 inches square, protrude a few inches above the surface of the ground (approximately 3 feet of the marker is buried), and are stamped on top with initials. Recent standard markers are stamped “VDOT;” another modern standard design is a smaller marker topped with a small metal disk. Many earlier markers still survive; most were stamped “VDH” (Virginia Department of Highways). The earliest markers were stamped “VHC” (Virginia Highway Commission). In addition, similar “project delineation markers,” triangular rather than square in shape, were placed on many (mostly primary) roads prior to the interstate era. These markers mark the parameters of early construction projects and may still be encountered in and near state rights of way.

Similar concrete right-of-way markers were erected by railroad companies during the 20th century; these are usually stamped with the railroad’s name or initials and the notation that it marks the right of way. Such markers may be found where old railroad rights of way have been acquired by VDOT for highway use.

Representative Examples. These are common features delineating the edge of the state rights of way.

Management Issues and Recommended Guidelines. In the absence of alteration of rights of way or other indications that older rights of way have been superseded, these markers should be treated similarly to survey markers. Care should be taken that construction or maintenance work immediately around such markers does not remove, uproot, impact, or otherwise damage the marker.

Privately Erected Memorial Markers

Description. The erection of an inscribed stone marker (or a wooden marker or a cross) at the scene of a sudden, tragic, and often violent death is an old British and European tradition. Most extant examples date from the 17th through 19th centuries. These originally served several intentions—to memorialize the deceased; to serve as a cautionary text; and, in some cases, superstitiously to identify ground “tainted” by the death and keep the ghost from walking. This custom continued in Virginia into the 20th century. In addition to the older (and more permanent) memorials noted here, the custom was revived to some extent beginning in the late 20th century, when modern roadside memorials marking the site of highway fatalities became increasingly popular.

Representative Examples. The oldest identified surviving memorial stone in Virginia is the S. F. Stone adjoining the Belmead estate on Route 684 in northwestern Powhatan County. Within the right of way and in its original location, this monument consists of carved stones (an

upright and a support stone). Its above-ground dimensions are approximately 46¾ inches high, approximately 18¼ inches wide, and approximately 15 inches deep. Carved on the stone is the inscription “S:F/NOV : 14 1840/MEMENTO/MORI” (Figure 9). According to local tradition, this marks the site of a riding or carriage accident in which a member (or acquaintance, in some



Figure 9. S. F. Stone, an 1840 Roadside Memorial Marker at Belmead Plantation, Route 684, Powhatan County

versions) of the Cocke family of the surrounding Belmead plantation was killed. Several 1953 photographs from a mid-20th century VDH report on waysides (VDH, 1952-1961) refer to this as a monument to “Sally Faulkner.” The deceased was actually Mrs. Sally Faulcon (aunt of Philip St. George Cocke, owner of Belmead), who was killed in a carriage accident on November 14, 1840. Her obituary in the November 24, 1840, issue of the Richmond *Enquirer* reads:

Died, at Belmead, the residence of her nephew, Philip St. George Cocke, in the county of Powhatan, on the 14th instant, Mrs. SALLY FAULCON, in the 66th year of her age. She had set out in a carriage to attend the services of her Church in an adjoining county. In a few moments after leaving the door, the horses took fright, ran off with the carriage, dashed it to pieces, and caused her instantaneous death.

The Cocke family—wealthy, educated, and well traveled—seems to have found the custom of erecting memorial stones appealing and worthy of emulation.

A second, early 20th century, example is the monument to Dr. Robert Llewelyn Powell located near the intersection of Routes 601 and 652 at Granite Springs in eastern Spotsylvania County. Within the right of way and in its original location, the monument consists of a gray granite obelisk on a three-tiered base. It is surrounded by an iron fence on a concrete base measuring 12 feet 10 inches by 8 feet 8½ inches. Dr. Powell, a local physician, died on May 17, 1924, from gunshot wounds after an altercation with another county resident. From the inscription on the monument and from information furnished by Dr. Powell’s great nephew, Thomas Miller of VDOT’s Fredericksburg District Office, the monument was erected by local citizens and marks the site of the location where Dr. Powell received his mortal wounds (T. S. Miller, personal communication, July 8, 2004). On the front of the obelisk is inscribed “Dr. Robert Llewelyn Powell / Aug. 30 1886 / May 17 1924,” flanked by “Faithful in all things unto death / Immortal he lives within our hearts” and “His last words ‘Take care of Mother, God will take care of me.’” On the rear of the obelisk is “[illegible, possibly ‘Erected’] by a grateful public in love and respect to the physician citizen and gentleman [illegible] of faithful service rendered through sunshine darkness and storms and abiding confidence in his high character.”

Management Issues and Recommended Guidelines. In addition to the emotional attachment to memorial markers by family members and/or local residents, early memorial markers such as the S. F. Stone and the Powell monument are likely to have historical or cultural significance and may be considered eligible for the National Register.

Therefore, encroachment on or damage to these resources from construction or maintenance projects should be avoided. Any proposed impact to these resources should be coordinated with VDOT cultural resource personnel, who should document and evaluate the resources and suggest appropriate action.

Given the small numbers of surviving stones of this type, any examples that are found should be brought to the attention of the VDOT district cultural resource personnel, who can check to see whether the resource has been previously documented, and if not, can document and advise on protecting and preserving the resource.

Since such objects are primarily constructed of stone and/or concrete, maintenance issues are similar to those noted previously for road stones and milestones and for concrete mile markers. The stone or concrete may be fragile because of its composition, the actions of weather, caustic or acidic substances, and previous damage. In addition, cast iron fencing, such as that around the Powell monument, is vulnerable to damage from equipment impact. Since these resources can be damaged, broken, or eroded by mechanical impacts, maintenance operations should be done with care around any resource of this type to avoid damage to the object. Since many maintenance projects are not ground-disturbing but instead involve work such as mowing, ditch clearing, etc., avoiding impacts to resources and sites can often be easily, economically, and successfully done in maintenance work. When work around known resources of this sort is done, impacts can usually be avoided by using a light touch with lawnmowers, weed whackers, larger mowers, etc. Any materials applied near such a resource should not react with stone, concrete, and other related substances. The placement of flagging tape or erosion fence around a vulnerable site or resource creates an easily erected and easily noticeable boundary for crews or contractors.

Privately Erected Historical Markers/Monuments

Description. In the late 19th and early 20th centuries, the erection of private roadside historical markers became a popular project for some individuals and organizations. Most of these markers date from the era prior to the establishment of Virginia's primary and secondary road systems, and in most cases they were erected without governmental oversight for subject, design, or inscription. In most cases, they commemorate an historical individual or event that the sponsors considered important. A willing sponsor and a willing landowner were usually the only requirements for the erection of these objects. Materials and design vary greatly, as they were limited only by the funds of the sponsors and the opinion of the landowner. Most of these markers are unique designs and are one of a kind, although a few consist of a series of markers.

Representative Examples. Perhaps the largest single group of markers of this sort comprised the markers memorializing Daniel Boone erected during the early 20th century by North Carolina entrepreneur Joseph Hampton Rich. Rich founded the Boone Trail Highway and Memorial Foundation Association, which was chartered in 1913 by the state of North Carolina. Rich commissioned metal tablets based on the 1861 Alonzo Chappel painting of Daniel Boone (showing Boone seated with his dog and gun and gazing westward). Rich quickly moved beyond the historical areas associated with Boone, and between 1913 and 1938, he erected approximately 358 of these plaques nationwide, in areas ranging from Virginia Beach to San Francisco, California. The plaques were mounted in a variety of bases, ranging from low plinths, locations in the walls of buildings, free-standing stone slabs or concrete bases, to (frequently) mortared stone masonry bases often in the shape of a giant arrowhead. More than 130 plaques, some still in place in their original bases, have been located nationwide to date, including 10 in Virginia (Figure 10).

The placing of historical markers and monuments along roadsides and in waysides was also a popular project for local and patriotic organizations. Such markers may be single or erected in a series. An example of a single marker is the memorial to President James Madison erected by the William Byrd Chapter of the National Society of the Daughters of the American



Figure 10. Boone Trail Highway and Memorial Association Marker on University Avenue on the Grounds of the University of Virginia, Charlottesville

Revolution in 1930 at the intersection of what is now Route 20 and Route 639 in Orange County. The surrounding land is the Montpelier estate, formerly Madison's home. In 1984, the estate became a museum property of the National Trust for Historic Preservation; however, in 1930, Montpelier was still a private estate, and such a monument was seen as a way of honoring an historical figure whose home was not open to the public. The monument is a rough-hewn granite stone; its above-ground dimensions are 59 inches high, approximately 45 inches wide, and approximately 16 inches deep. On it is mounted a bronze memorial plaque 24 inches wide

by 18 inches high, with an image of Madison and the inscription “Near this spot are buried James Madison, ‘Father of the Constitution,’ Fourth President of the United States, 1809-1817, and ‘Dolley’ Madison, his wife.”

In other cases, groupings or a series of historical markers may be erected at various sites along a highway. A notable grouping of markers of various kinds appears along the right of way of Route 1 through Virginia. These include a series of markers erected by the United Daughters of the Confederacy (UDC) in the 1920s and 1930s as an adjunct to the Virginia General Assembly’s designation of Route 1 as the Jefferson Davis Highway in 1922 (Figure 11). The markers were part of a larger commemorative effort by the UDC. Most of the UDC markers closely follow a standard design for Jefferson Davis Highway markers, consisting of a rough-hewn granite stone with above-ground dimensions approximately 36 inches high, 1 foot 8 inches wide, and approximately 11 inches deep, with a slanted top, on which is set a bronze marker (McClane and Hayes, 1999). Similar markers were placed by the UDC along Route 11, designated the Lee Jackson Memorial Highway from Winchester to New Market and designated the Lee Highway from New Market to Bristol by the Virginia General Assembly, also in 1922.

Management Issues and Recommended Guidelines. It is important to determine ownership of historical markers or monuments of this kind, particularly if they might be impacted by projects or if they pose a safety hazard and must be relocated. For many monuments, particularly for those dating after the establishment of the state primary and secondary highway systems, the sponsoring groups erected markers with the agreement that the monuments would then pass into state ownership upon dedication. (The UDC monuments along



Figure 11. Jefferson Davis Highway Marker, Erected in 1933 at Falling Creek Wayside, Chesterfield County

Route 1 are an example.) However, the ownership of many earlier monuments is not clearly defined. In cases where ownership is not well documented, research should be done to resolve any ownership questions. In addition, some later monuments were erected in state rights of way by local groups or individuals without permission or with inadequate permission from VDOT. Such monuments are technically illegal.

In some cases, an organization (either the original sponsoring group or a successor group) is involved or interested in documenting or caring for these monuments. For example, permits have been granted to private individuals and organizations wishing to maintain, restore, and/or refurbish various monuments associated with the Civil War. In addition, the Boone Trail Highway monuments are being surveyed and recorded by a modern interest group that has re-organized J. H. Rich's association. A book detailing the history of the organization and the monuments, along with the ongoing survey and a list of the monuments, was published in 2003 (Marshall, 2003). In addition to the survey and recordation, this interest group has assisted local VDOT offices and other organizations with the preservation of several of these plaques and monuments (Marshall, 2003).

Some early historical markers and monuments may be considered eligible for the National Register. Any examples that are found should be brought to the attention of the VDOT district cultural resource personnel, who can check to see whether the resource has been previously documented, and if not, can document and advise on protecting and preserving the resource.

Maintenance issues are similar to those noted previously for other structures of stone and concrete. In addition, many of these objects also feature mortar and bronze plaques. The stone, concrete, mortar, and other materials may be fragile because of their composition, the action of weather, caustic or acidic substances, and previous damage. Bronze and other sculptural metals are vulnerable to acidic substances. Since these resources can be damaged, broken, or eroded by mechanical impacts, maintenance operations should be done with care around any resource of this type to avoid damage to the object. Since many maintenance projects are not ground-disturbing but instead involve work such as mowing, ditch clearing, etc., avoiding impacts to resources and sites can often be easily, economically, and successfully done in maintenance work. When work around known resources of this sort is done, impacts can usually be avoided by using a light touch with lawnmowers, weed whackers, larger mowers, etc. Any materials applied near such a resource should not react with the materials that make up the resource. The placement of flagging tape or erosion fence around a vulnerable site or resource creates an easily erected and easily noticeable boundary for crews or contractors.

State (Public) Historical Highway Markers

Description. Virginia's historical highway marker program was established in 1927 and is one of the oldest in the United States. All Virginia markers have the same distinctive design: a metal plaque with black raised lettering on a light background, mounted on a metal pole. These markers commemorate people, places, and events of regional, statewide, or national importance (Figure 12). Currently, the program is administered by the DHR. New or replacement markers cost \$1,350; the cost of a marker is no longer covered by state funds and must be paid for by

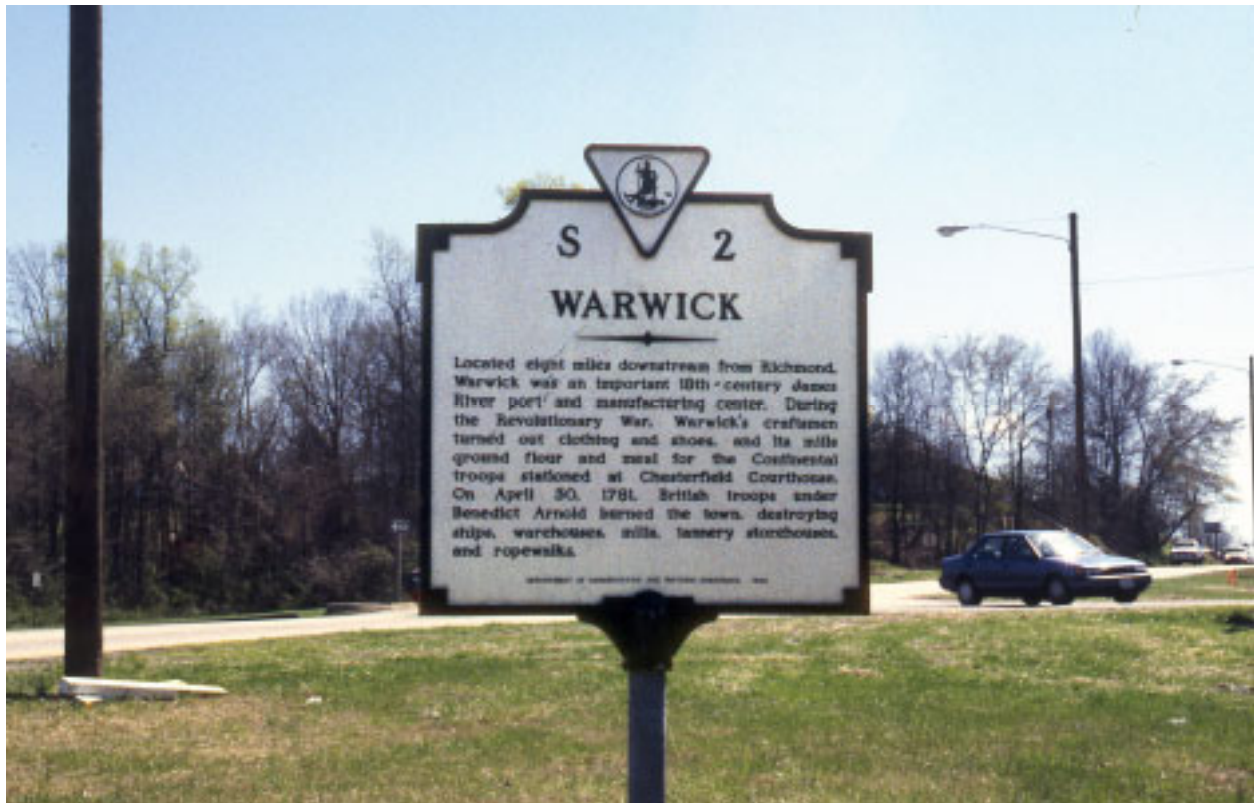


Figure 12. Typical Virginia Historical Highway Marker

sponsors. Local governments, organizations, or private citizens can propose and sponsor markers. The text must be approved by the Virginia Board of Historic Resources. VDOT maintains the markers once they are installed.

Representative Examples. There are more than 2,200 of these markers throughout Virginia. Several guides to the markers have been published over the years, most recently under the auspices of the DHR. The latest of these, *A Guidebook to Virginia's Historical Markers*, was published in 2007 (Arnold, 2007).

Management Issues and Recommended Guidelines. Maintenance of these markers is undertaken by VDOT. The markers should not be moved except by designated VDOT maintenance workers, who may remove signs for maintenance or repair. Damaged markers maybe repaired or replaced as necessary. Missing or damaged markers should be reported to the appropriate VDOT district office or to the DHR Historical Highway Marker Program Manager.

Waysides

Description. First developed in the early 1930s, waysides were popular stopping and resting places for travelers in the second and third quarters of the 20th century, before the proliferation of fast food restaurants and roadside malls. VDH wayside reports from the 1950s and early 1960s (VDH, 1952-1961) detail rustic yet well-equipped waysides, many with picnic shelters; open-air picnic tables; stone fireplaces; running potable water; toilets; and, in many cases, caretakers' cottages. The size of waysides ranged from ¼ to 100 acres. Some of these

waysides were originally acquired and developed by the federal government as part of Depression-era public works projects and were later turned over to the Commonwealth of Virginia. Many of these waysides are still in operation, although such amenities as caretakers' cottages have decreased over the years.

Representative Examples. Locations and designs of waysides vary greatly and are often keyed to their surroundings. For example, the Falling Creek wayside in the median of Route 1 in Chesterfield County consists of a few acres located, as were a number of early waysides, in the median of primary highways.

In contrast, the Goshen Pass wayside, along Route 39 in Rockbridge County, was designed to encompass more than 100 acres, most of which was the 2½ mile strip of land bordering the Maury River, with less than 5 acres devoted to several small parking, resting, and viewing areas overlooking the spectacular vista of the Maury River and Goshen Pass. The remaining acreage, as Department of Highways Landscape Engineer H. J. Neale noted in a 1961 report, "is held to protect and preserve the natural beauty of this entrancing gorge" (VDH, 1952-1961).

Management Issues and Recommended Guidelines. Several waysides in Virginia are eligible for the National Register. Even if the entire wayside is not eligible, some early resources in waysides such as stone walls, monuments, etc., may have historic significance. Impact or damage from construction or maintenance projects should be avoided. Any proposed removal or destruction of resources should be coordinated with VDOT cultural resource personnel, who should document and evaluate the resources and suggest appropriate action.

Stone Walls

Description. Stone walls, usually dry laid (i.e., laid without the use of mortar), were common fencing elements during the 19th and early 20th centuries in areas where native stone was plentiful and a use had to be found for stones cleared from rocky fields. Stone walls were often used to divide pastures, and many survive along secondary roads, especially in the northern and western portions of Virginia. Common heights of these walls were generally in the range of 3 to 4 feet, although taller walls are not uncommon. Landowners and nearby rural residents increasingly consider these walls desirable landscape elements.

Representative Examples. Similar walls are common in many areas of Virginia with plentiful native stone. Such walls survive along many secondary roads in rural areas.

Management Issues and Recommended Guidelines. Although few walls are likely to have individual historic significance, such walls are often considered contributing elements to National Register rural historic districts.

Physical impacts or damage to such walls or proposed removal of these features is often met with anger or resistance by landowners and neighbors, who consider these features to be interesting, attractive, and valuable enhancements to their property or area. Craftspeople who can undertake the repair or rebuilding of these walls are increasingly rare (and expensive) today,

and these walls may represent a considerable monetary value to the property or area. To minimize conflicts, any proposed impacts to stone walls should be discussed with surrounding landowners and compromises reached if possible.

Summary

Table 1 provides a concise version of the recommended guidelines for the management of cultural resources in Virginia.

Table 1. Concise Recommended Guidelines for Management of Cultural Resources

Archaeological Sites	<ul style="list-style-type: none"> • Management of archaeological sites varies; depending on the circumstances, sites in a project area can be avoided, excavated, or left unexcavated. • To avoid damage to archaeological sites, VDOT district cultural resource personnel should be involved in the planning and specification process for any projects that may impact archaeological sites. • Physical impacts to identified archaeological sites by construction or maintenance projects should be avoided; use of heavy equipment on an unprotected site has the potential to damage archaeological resources. If vehicular traffic or other equipment must pass over an archaeological site, where feasible, controlled burial of archaeological sites is an excellent tool to provide protection and avoid costly excavation. Where an archaeological site must be secured (i.e., with a fence or other barrier), trees and other woody vegetation should be prevented from growing on the site to avoid damage to resources from root systems and vegetative growth. This should be undertaken by maintenance staff, following discussion with and planning and specification input from VDOT district cultural resource personnel. Any fences should have lockable gates that are wide enough to allow the passage of mowing equipment.
Land Features and Sites	<ul style="list-style-type: none"> • Maintenance operations should be done with care. In an area with known resources of this sort, a “light touch” should be used with lawnmowers, weed whackers, larger mowers, etc. Flagging tape or an erosion fence on or around a vulnerable site can create a boundary for crews or contractors. In the case of important land features such as railroad cuts, the feature may be cleaned, but the contours of the feature should not be cut back.
Graveyards	<ul style="list-style-type: none"> • A permit is required for exhumation of any burials. Special permitting is required for any actions that are likely to uncover Indian burials; the inadvertent discovery of such artifacts is also governed by NAGPRA. Such projects involve consultation with the appropriate tribes. Virginia statutes prohibit any actions that result in disinterring, displacing, or defiling of a dead human body and any “injuries” or defacement of churches or church property, church or public cemeteries, private burial grounds, etc. • The lack of cemetery notation on land surveys or topographic maps and/or the absence of tombstones or other common grave markings does not release construction or maintenance crews from responsibility if graves are accidentally uncovered and work continues to proceed. Any possibility that human burials or cemeteries have been uncovered or impacted in any way requires immediate stopping of work and contacting of district cultural resource personnel.
Buildings	<ul style="list-style-type: none"> • For buildings, VDOT has a well-developed mechanism to identify, categorize, and evaluate the significance of buildings under its purview. VDOT district cultural resource personnel should undertake these activities.
Structures	<ul style="list-style-type: none"> • For bridges, VDOT has a well-developed process to identify and evaluate the significance of bridges under its purview. VDOT district cultural resource personnel should undertake these activities. <p style="text-align: right;"><i>(continues)</i></p>

	<ul style="list-style-type: none"> • Most canal structures, and some railroad structures, have been mapped. VDOT district cultural resource personnel should be involved in the planning process for any projects that may impact other miscellaneous structures.
Objects	<ul style="list-style-type: none"> • VDOT district cultural resource personnel should be involved in the planning and evaluation for historic significance for potentially historic objects that may be impacted by projects.
Signboards/posts of directions	<ul style="list-style-type: none"> • VDOT district cultural resource personnel can advise on documentation and protection of any such resources.
Road stones (sign rocks, milestones)	<ul style="list-style-type: none"> • Any example found should be brought to the attention of the VDOT district cultural resource personnel, who can check to see whether the resource has been previously documented, and if not, can document and advise on protecting and preserving it. • Maintenance operations should be done with care. Impacts can usually be avoided by using a light touch with lawnmowers, weed whackers, larger mowers, etc. Any materials applied near such a resource should not react with stone. The placement of flagging tape or erosion fence around a vulnerable site or resource creates an easily erected and easily noticeable boundary for crews or contractors. • Any early road stone or mile marker should be left in place unless the site is actively threatened by a construction project. In that case, when it is not possible to retain the stone in its original position, VDOT district cultural resource staff should document the stone and its original position and the stone should then be moved and reset as close as possible to the original location and in the same relationship it originally had to the highway right of way.
Concrete mile markers	<ul style="list-style-type: none"> • Any example found should be brought to the attention of the VDOT district cultural resource personnel, who can document it if necessary and advise on protecting and preserving it. • Maintenance operations should be done with care around any resource of this type. In an area with known resources of this sort, impacts can usually be avoided by using a light touch with lawnmowers, weed whackers, larger mowers, etc. Any materials applied near such a resource should be non-reactive with concrete. The placement of flagging tape or erosion fence around a vulnerable site or resource creates an easily erected and easily noticeable boundary for crews or contractors. • Any concrete mile marker should be left in place unless a definite threat exists. In such a case, when it is not possible to retain the stone in its original position, VDOT district cultural resource staff should be consulted.
Boundary markers	<ul style="list-style-type: none"> • Any boundary marker found should be brought to the attention of the VDOT district cultural resource personnel, who can document it and advise on protecting and preserving it. • Care should be taken that construction or maintenance work immediately around such markers avoids removing, uprooting, impacting, or otherwise damaging them. Maintenance issues are similar to those noted for other items of stone and concrete. Maintenance operations should be done with care around any such resource. When work is done, impacts can usually be avoided by using a light touch with lawnmowers, weed whackers, larger mowers, etc. Any materials applied near such a resource should not react with the masonry and metals involved. The placement of flagging tape or erosion fence around a vulnerable site or resource creates an easily erected and easily noticeable boundary for crews or contractors. <p style="text-align: right;"><i>(continues)</i></p>
Concrete state right-of-way markers	<ul style="list-style-type: none"> • In the absence of alteration of rights of way or other indications that older rights of way have been superseded, these markers should be treated similarly to survey markers. Care should be taken that construction or maintenance work immediately around such markers avoids removing, uprooting, impacting, or otherwise damaging the marker.
Privately erected memorial markers	<ul style="list-style-type: none"> • Encroachment on or damage to these resources from construction or maintenance projects should be avoided. Any proposed impact to these resources should be coordinated with VDOT cultural resource personnel, who should document and evaluate <p style="text-align: right;"><i>(continues)</i></p>

	<p>the resources and suggest appropriate action. Any examples found should be brought to the attention of the VDOT district cultural resource personnel, who can check to see whether the resource has been previously documented, and if not, can document and advise on protecting and preserving the resource.</p> <ul style="list-style-type: none"> • Maintenance issues are similar to those noted for road stones and milestones and for concrete mile markers. When work around known resources of this sort is done, impacts can usually be avoided by using a light touch with lawnmowers, weed whackers, larger mowers, etc. Any materials applied near such a resource should not react with stone, concrete, and other related substances. The placement of flagging tape or erosion fence around a vulnerable site or resource creates an easily erected and easily noticeable boundary for crews or contractors.
Privately erected historical markers/monuments	<ul style="list-style-type: none"> • It is important to determine ownership of historical markers or monuments of this kind. In cases where ownership is not well documented, research should be done to resolve any ownership questions. • In some cases, an organization is involved or interested in documenting or caring for these monuments. • Any example found should be brought to the attention of the VDOT district cultural resource personnel, who can check to see whether the resource has been previously documented, and if not, can document and advise on protecting and preserving it. • Maintenance operations should be done with care around any resource of this type to avoid damage to the object. When work around known resources of this sort is done, impacts can usually be avoided by using a light touch with lawnmowers, weed whackers, larger mowers, etc. Any materials applied near such a resource should not react with the materials that make up the resource. The placement of flagging tape or erosion fence around a vulnerable site or resource creates an easily erected and easily noticeable boundary for crews or contractors.
State (public) highway markers	<ul style="list-style-type: none"> • VDOT maintains these markers. They should not be moved except by designated VDOT maintenance workers, who may remove signs for maintenance or repair. Damaged markers may be repaired or replaced as necessary. Missing or damaged markers should be reported to the appropriate VDOT district office or to the DHR Historical Highway Marker Program Manager.
Waysides	<ul style="list-style-type: none"> • Impact or damage from construction or maintenance projects should be avoided. Any proposed removal or destruction of resources should be coordinated with VDOT cultural resource personnel, who should document and evaluate the resources and suggest appropriate action.
Stone Walls	<ul style="list-style-type: none"> • Physical impacts or damage to such walls or proposed removal of these features is often met with anger or resistance by landowners and neighbors, who consider these features to be interesting, attractive, and valuable enhancements to their property or area. Craftspeople who can undertake the repair or rebuilding of these walls are increasingly rare (and expensive) today, and these walls may represent a considerable monetary value to the property or area. To minimize conflicts, any proposed impacts to stone walls should be discussed with surrounding landowners, and compromises reached if possible.

CURRENT STORAGE OF CULTURAL RESOURCE INFORMATION

In addition to information filed at VDOT offices by VDOT cultural resource personnel, information on cultural resources gathered by VDOT personnel is filed with the DHR. There is overlap of information: although VDOT files are open to the public, VDOT cultural resource record storage is not designed to operate primarily as a public archives; the DHR archives were designed with public access in mind. Currently, information on cultural resources in the files of the DHR, including information relating to resources in rights of way and related project areas and elsewhere, is included on the Data Sharing System (DSS), the DHR's database/data-sharing

system for cultural resources, and on the related DHR maps. Geographic information from the DHR DSS system is incorporated as a “human history” layer in VDOT’s Geographic Information System (GIS) Integrator. In this program, a GIS overlay (from DHR files) will flag cultural resource sites: a symbol (but not a full description) will appear. In the case of maintenance projects, although a full description of the resource is not provided, the symbol will alert VDOT personnel such as residency environmental specialists (RES) to the need to involve VDOT district cultural resource personnel in the project and to request cultural resource review for maintenance projects (this is now standard practice on maintenance projects in a number of VDOT districts). In most cases, the review time is less than 15 minutes and involves minimal expense. Such review is especially cost- and time-effective compared to monetary and time costs if the review is not undertaken and cultural resources are impacted or damaged as a result.

However, because of the DHR’s concerns over looting of cultural resource sites, the data on archaeological sites (including previously excavated sites) posted on DSS are extremely limited. This places much of the burden on VDOT district cultural resource personnel, particularly archaeologists, to serve as the primary institutional memory for such sites. There is currently no mechanism for retrieving and comprehensively recording information on archaeological sites when such personnel change jobs or retire. In addition, there has been no initiative to recapture data from previous cultural resource work that predated the advent of DSS (in the late 1990s) and add them to the current DSS system.

CONCLUSIONS

- A wide variety of cultural resource types are found and are likely to be found in VDOT rights of way.
- There are numerous management issues pertaining to the various types of cultural resources that are found and are likely to be found in VDOT rights of way; some management issues are specific to particular resource types.
- The descriptions and guidelines for management of different types of cultural resources formulated by this study will help VDOT avoid or minimize the potential for misidentification and damage of these resources and the potential for violation of the state and national statutes that bear on the management of cultural resources.

RECOMMENDATIONS

1. *Appropriate VDOT staff and contractors should consistently follow the recommended guidelines for the management of cultural resources in VDOT rights of way.* Depending on the type of project, appropriate staff may include one or more of the following: cultural resource, environmental, right-of-way, structures, maintenance, and construction staff. The

management guidelines are included at length in the body of this report, and in concise form in Table 1.

2. *To avoid or minimize impacts and damage to and to facilitate proper management of cultural resources, VDOT district cultural resource personnel should be involved in the review and, if necessary, the planning and specification process for any projects that may impact cultural resources.*
3. *In order to avoid impacting or damaging cultural resources, VDOT residency environmental specialists should always follow the practice (already standard practice in a number of VDOT districts) of requesting district cultural resource staff review on maintenance projects.*
4. *Because management and maintenance procedures of sites and resources often need to be tailored to what is needed to protect the particular type of resource, VDOT residency environmental specialists or other responsible personnel should undertake prior consultation with VDOT district cultural resource personnel to allow for needed requirements to be put into specifications or contracts.*
5. *VDOT resident administrators should maintain cultural resources within VDOT rights of way in their original locations as feasible within safety and liability concerns.*
6. *If the ownership and/or historic significance of a resource that may or will be impacted by a project is uncertain, it should be established by district right-of-way staff (for ownership) and district cultural resource staff (for historic significance) prior to final planning. In particular, if there is to be any disposition of a resource, the ownership and potential historic significance (i.e., eligibility for the National Register) needs to be established by VDOT district cultural resource personnel as soon as possible to avoid project delays and allow sufficient time for review, discussion, and planning.*
7. *VDOT district cultural resource personnel should record information on the locations of all cultural resources (including below-ground resources and excavated sites) that have been identified in VDOT rights of way and should enter it into DSS. Further, the records should be made available to both DHR and VDOT personnel.*
8. *In order to provide the fullest possible information on previously identified cultural resources, VDOT district cultural resource personnel should recapture previous cultural resource work and enter the information into DSS. Since the time and funds available to VDOT cultural resource staff are finite, this work should be phased on a time-available basis.*

COSTS AND BENEFITS ASSESSMENT

The benefits of this project are (1) the identification and description of the types of cultural resources that can be encountered in VDOT rights of way and their governing legislation, and (2) the development of written guidelines for managing these items. The

information and guidelines are applicable not only to historic (i.e., National Register–eligible) sites and structures but also to items of local importance and interest.

The use of this information and the developed guidelines can streamline the environmental and cultural planning and management processes while facilitating VDOT personnel and contractors to act as responsible stewards of these cultural resources. Use of the guidelines will also help VDOT personnel and contractors to avoid violation of state and national statutes and to avoid misidentification or unnecessary damage to cultural resources. Avoiding such violations, misidentification, and/or damage will minimize personnel time and costs and avoid project delays.

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APPENDIX
SELECTED CASE STUDIES

CASE STUDY: BROOK RUN ARCHAEOLOGICAL SITE

Issue: An extremely significant and extensive prehistoric site was discovered during the archaeological survey for a highway widening project.

In 1998, an archaeological survey was undertaken by VDOT in eastern Culpeper County within the proposed right of way for the expansion of Route 3 to four lanes. During these investigations, the site of a prehistoric jasper quarry was discovered. An extremely large number (more than 700,000 pieces) of artifacts (jasper nodules, cores and core fragments, stone tools used in the mining, and a series of hearths) were found during the excavations. The lack of extensive manufacturing evidence suggests that the jasper was mined at the site and was taken elsewhere to be manufactured into tools. Radiocarbon dates of charcoal from the hearths within the site dated the site to more than 11,000 years before the present, making this not only an unusually large site of its kind, but also one of the earliest Indian sites in the mid-Atlantic region of the United States.

Resolution:

Given the significance of the site, VDOT altered its highway improvement plans to avoid the most significant portions of the site.

CASE STUDY: 17TH CENTURY ARCHAEOLOGICAL SITE, HAMPTON ROADS DISTRICT

Issue: Well-intentioned attempts to secure and protect an archaeological site produced unexpected problems.

Between 1989 and 1991, VDOT partially excavated this site (44SK0194) off Routes 664 and 17, which included the site of a 17th century fortified domestic complex, and then purchased the site. Following excavation, VDOT constructed a 9.5-foot-high chain link fence around the site in order to secure the site. The fence contained a 4-foot-wide gate, which was locked. In addition, a wide and deep drainage ditch is located between the site and the Interstate 664 off ramp. Although the gate in the fence is wide enough for normal lawn mowing equipment, the drainage ditch provides a barrier that allows no direct access from the Interstate 664 off ramp to the site for maintenance personnel or mowing equipment. The site is now overgrown with underbrush and small trees as a result of the access issue. The tree roots are impacting the site.

Resolution:

None to date. The trees on the archaeological site are now more than 2 inches in diameter and, according to district cultural resource personnel, therefore cannot be cut without orders from the governor. Damage has been done to the site, and removing the trees to avoid further impacts and damage to the site will be costly and time-consuming.

CASE STUDY: CIVIL WAR MUSKET FIND

Issue: An archaeological artifact is unexpectedly discovered during a construction project.

As noted, the Virginia Antiquities Act (§ 10.1-2300, *Code of Virginia*) prohibits the damage or removal of “objects of antiquity” from archaeological sites on state-controlled land. A state agency is not prohibited from construction or land-disturbing activities on its own land, but “relic-hunting” or any archaeological field investigations without a permit from the DHR are prohibited.

In 2003 during a construction project in Amelia County (bridge replacement, carrying Route 615 over Sweathouse Creek; UPC 10856, Project No. 0615-004-193, B624, M501), a Civil War musket was found. The musket was not part of an identified archaeological site but was an isolated artifact, possibly lost or discarded by a retreating soldier in the closing days of the war.

Resolution:

Even though members of the construction crew would have liked to have kept this interesting “souvenir” for themselves, they did the right thing: the contractor who found the musket reported it to the VDOT inspector, who notified the district cultural resource office. In accordance with state law, the musket was turned over to the DHR for conservation.

CASE STUDY: CONTROLLED BURIAL OF AN ARCHAEOLOGICAL SITE AT HUGUENOT BRIDGE

Issue: There is a need to avoid damage to an archaeological site while providing a staging area for construction.

A controlled burial of an archaeological site under geotextile fabric and fill is becoming an accepted method to avoid impacting archaeological resources. A recent use of this practice has been in the planning and specifications that will protect a site during the Huguenot Bridge replacement project in the City of Richmond. No construction is planned for the buried site, which had previously been identified through an archaeological survey related to the project, but space is needed for a staging area for construction. Controlled burial made it feasible to propose the site for this purpose.

From the proposed special provision (VDOT, 2006) and specifications for the project, the work is to consist of (1) the controlled burial in place of Site 44HE0967, which is contained within the proposed boundaries of the temporary staging area within the VDOT right of way; (2) the controlled removal of the burial material following construction activities; and (3) the placement of four test trenches following the removal of the burial material to document soil depths and possible soil compaction. The controlled burial is to be accomplished through placement of geotextile fabric and aggregate base material in accordance with the proposed special provision, standards, specifications, and plans. The contractor is required to erect a safety fence around the proposed temporary staging area before the initiation of any construction activities on the project.

Materials provisions require geotextile fabric for subgrade stabilization to conform to the requirements of Section 245.03(d) of VDOT's *Road and Bridge Specifications* (VDOT, 2002) aggregate base material to conform to the requirements for Type I, Size No. 21B, Section 208 of the specifications; and safety fence (no less than 4 feet high, colored bright orange polyethylene web) with specific requirements for tensile yield, ultimate tensile strength, and elongation at break.

Procedures are carefully set out, including installation and stabilization of safety fence and geotextile fabric (including securing and overlap) and placement of aggregate base material.

Resolution:

This project is still in the planning stage. However, the benefits of controlled burial for this site will be similar to the benefits for other sites in which controlled burials have been used. The use of controlled burial and alternate management options for this archaeological site will protect the site, allow use of the surroundings as a construction staging area, and avoid the time and expense of a full archaeological excavation. In the case of the controlled burial for this site, the cost of the controlled burial is estimated at \$25,000; the cost of an archaeological excavation is estimated at over \$200,000.

CASE STUDY: FALLING CREEK BRIDGE

Issue: Because of the near destruction of an historic bridge by a natural disaster, securing the area and cleanup were needed before the structure could be evaluated for feasibility of stabilization and any restoration.

The Stone Bridge at Falling Creek (VDHR Resource No. 020-0135), built in 1823, was listed on the Virginia Landmarks Register (August 28, 1995) and on the National Register of Historic Places (October 12, 1995). It was taken out of vehicular service after the expansion of Route 1 in 1931, and one of the first waysides in Virginia was developed around the old bridge, which was located in the median between the northbound lanes and the southbound lanes of Route 1. Most of the bridge was destroyed by flooding related to Tropical Storm Gaston on August 30, 2004. The ground around the bridge was undermined, very soft, and was covered with waterborne debris such as mud, pieces of wood, etc. The immediate need was to secure the site, then to clean up the debris. Only then could the condition of the remaining structure be assessed and planning for stabilization proceed.

Resolution:

Typical actions and applicable state and federal historic preservation laws that related to this and other projects of this kind are noted here. Other laws, especially regarding water quality, may also apply in such cases.

1. To secure and clean up the site: No state or federal historic preservation laws apply for such actions. A temporary chain link fence with a lockable gate was erected to keep sightseers off the dangerous area around the bridge.

2. To remove displaced stone and other bridge debris from the stream:

- Section 106 of the National Historic Preservation Act of 1966 (as amended) (16 U.S.C. 470f) and its implementing regulations, 36 C.F.R. Part 800: VDOT staff responsible for this action: district cultural resource staff (architectural historian and archaeologist).
- Underwater Historic Property (§ 10.1-2214, *Code of Virginia*): A permit from the Virginia Marine Resources Commission is required for conducting any type of recovery operations involving the removal, destruction, or disturbance of underwater historic property on state-owned subaqueous bottom. VDOT staff responsible for this action: district cultural resource staff (architectural historian and archaeologist).

3. To stabilize, repair, rebuild, and/or demolish the remaining fragments of the bridge:

- Section 106 of the National Historic Preservation Act of 1966 (as amended) (16 U.S.C. 470f) and its implementing regulations, 36 C.F.R. Part 800. VDOT staff

responsible for this action: district cultural resource staff (architectural historian and archaeologist).

- The governor’s approval is required for “Construction, Removal, or Demolition of Structures on Commonwealth Property” (§ 2.2-2402, *Code of Virginia*): The related procedures of the Virginia Department of General Services, Division of Engineering and Buildings, for real estate property management by state agencies (DEB Directive No. 1 Revised, June 20, 1984) require coordination with the DHR for these activities. VDOT staff responsible for this action: district cultural resource staff (architectural historian and archaeologist).
- Underwater Historic Property (§ 10.1-2214, *Code of Virginia*): A permit from the Virginia Marine Resources Commission is required for conducting any type of recovery operations involving the removal, destruction, or disturbance of underwater historic property on state-owned subaqueous bottom. VDOT staff responsible for this action: district cultural resource staff (architectural historian and archaeologist).
- The Appropriations Act (2000 Virginia Acts of Assembly): The specific provisions for review of rehabilitation and restoration projects are defined in the Budget Bill Section 4-4.01(s), 2000 Virginia Acts of Assembly, Chapter 1073: To guarantee that the historical and/or architectural integrity of any state-owned properties listed on the Virginia Landmarks Register and the knowledge to be gained from archaeological sites will not be adversely affected because of inappropriate changes, the heads of those agencies in charge of such properties are directed to submit all plans for significant alterations, remodeling, redecoration, restoration, or repairs that may basically alter the appearance of the structure, landscaping, or demolition to the DHR. Such plans shall be reviewed within 30 days, and the comments of that department shall be submitted to the governor through the Department of General Services for use in making a final determination. VDOT staff responsible for this action: district cultural resource staff (architectural historian and archaeologist).

CASE STUDY: PETERSBURG NATIONAL MILITARY PARK BOUNDARY MARKERS

Issue: Omission of cultural resources in National Register nomination and discovery of a dislocated boundary marker.

During a construction project involving a section of the Boydton Plank Road at the Petersburg National Military Park (Petersburg National Battlefield) in 2004, a dislocated boundary marker for the battlefield was discovered. The find and the entire project's construction limits were within the Civil War Sites Advisory Commission-defined Civil War battlefield, portions of which are listed in the National Register of Historic Places. The found object is not a Civil War resource, but it is part of the National Park Service's measures to identify the battlefield. None of these markers is identified in the draft National Register nomination form: "Petersburg National Battlefield" (Ashley M. Neville and Debra A. McClane, Gray & Pape, Inc., ca. 1996). The recommended period of significance in the nomination report is through 1946, which almost certainly includes the time when the boundary markers were put in place (the enabling legislation for the Park was in 1926; the name "Petersburg National Military Park" was supplanted in 1962 by "Petersburg National Battlefield").

Since the 20th century recognition of the Civil War and the establishment of the park are recognized as significant features of the Petersburg National Battlefield, VDOT, in compliance with 36 C.F.R. 800.13(c), proceeded on the assumption that the property is eligible for the National Register under criterion A, as a contributing element of the Petersburg National Battlefield (VDHR Resource No. 123-0071).

This section of the park was transferred to the City of Petersburg in 1973. The conveyance (City of Petersburg Deed Book 318, p. 79; Jan. 29, 1972), by which the United States of America transferred 41 parcels totaling 257.53 acres to the City of Petersburg, in accordance with Public Law 92-272 (86 Stat. 120), specified that the grantee and assigns covenant with the grantor and assigns that the land will be used for public streets and parks, and that "no new streets, entrance drives, or other developments shall be constructed in such a manner as to adversely affect existing forts, historic earthworks, or other historic features." Some of the parcel descriptions reference park boundary markers and other monuments. Parcels 22, 23, 24, and 25 are on Boydton Plank Road near Dupuy Road; Parcel 24 is west of Dupuy Road to the eastern right of way of the Seaboard Air Line Railway, and it defines the border along Boydton Plank Road only by stakes, with no reference to park monuments.

The location was within the right of way acquired by VDOT for this project.

The marker was not identified in the cultural resource archaeological survey of the project area, which included pedestrian survey and metal detector survey. This is probably because it is located adjacent to the old culvert, which was flooding and collapsing (which is the genesis of the project), and the flooded/swampy area was identified as disturbed ground, with low potential for cultural resources.

The marker, when identified, was on its side, suggesting that it had been displaced. It did not appear to be marking a significant location, since it was upstream of the Rohoic Dam, within the low-lying area inundated by the dam during the Civil War. It is not a unique object: Christopher Calkins of the Petersburg National Battlefield staff stated that such markers are “all over the place” (C. Calkins, personal communication, 2004). Two such markers were found still in place adjacent to Dupuy Road.

The marker consists of a tapering concrete pillar, roughly 25½ inches high, roughly 9 inches square at the base, and 6½ to 7 inches square at the top. Although the marker appeared to have been displaced, other markers of this type are set vertically into the ground, with most of the concrete pillar subsurface. A 3-inch-diameter bronze disk is centered on the top of the pillar, with raised letters: “Petersburg National Military Park/\$5,000 fine for disturbing this mark / Elev. / Cor. No.” Space is provided for unique elevation and corner number inscriptions, but no such numbers are on this marker. Other boundary markers in the area have identical lettering.

Resolution:

By agreement among VDOT, the DHR, and the Advisory Council for Historic Preservation, the marker was removed intact from the construction zone and given to the Petersburg National Battlefield for new placement and/or disposition.

CASE STUDY: A ROUTE 1 MILESTONE

Issue: Citizen concern over a false perceived threat to a cultural resource results in damage to the resource.

Lack of identification and improper management of cultural resources within VDOT rights of way have the potential not only to have serious negative impacts on these resources but also to cause delays and other financial impacts in projects. One recent example is the case of one of the historically significant early 19th century milestones within the Route 1 right of way in the Richmond District. The majority of the district and residency personnel was unaware of the stone's history and therefore did not interfere when a local citizens' group formed an *ad hoc* effort to move the stone. The citizens' group, believing that the milestone was endangered by utility work on a neighboring property, took it upon themselves to remove the stone from its original site and store it for "safekeeping." They apparently were unaware that a considerable portion of such a stone lies below the ground and that this below-ground portion typically weighs many hundreds of pounds. In attempting to pull up the stone, they succeeded instead in breaking this important resource in half. In addition to the time expended by VDOT cultural resource personnel in determining the fate of the stone and locating the fragments, considerably more time, and funds, will have to be expended to determine the feasibility of repairing the stone and, if feasible, to repair and possibly reset this resource in the proper location.

Resolution:

None to date. The broken top portion of the stone has been recovered and remains in protective storage at the Richmond District Office.

CASE STUDY: THE L1 AND L5 CONCRETE MILE MARKERS

Issue: Citizen concern over a threatened cultural resource results in preservation of the resource.

The early 20th century L1 and L5 concrete mile markers in Amherst County are made of what is now common materials but are early examples of this use of concrete, are rare survivors of this type of marker, and are therefore significant.

The information from the *Annual Reports of the State Highway Commissioner to the Governor of Virginia* suggests a likely date of ca. 1907 to 1911 for the L1 (i.e., 1 mile to Lynchburg) marker, based on the dates of improvements to the Lynchburg to Amherst road, and a probable date of ca. 1907 to 1909 for the L5 (i.e., 5 miles to Lynchburg) marker, based on the improvements to the road leading from the Lynchburg to Amherst road to Elon during that time (*Second Annual Report*, 1909, pp.10-11; *Third Annual Report*, 1910, p.11; *Fourth Annual Report*, 1911; *Fifth Annual Report*, 1912, p. 9).

The descriptions of the stones follow.

L1 Marker (Amherst County Concrete Road Marker): Constructed ca. 1907 to 1911, this cast concrete marker stands near the intersection of Main Street and Golf Drive in Madison Heights, north of the City of Lynchburg. The marker is located within the right of way, in its original location. The marker stands 50 inches above the ground and is 8½ inches wide and 8½ inches deep. Molded into concrete is the inscription “L1” (i.e., 1 mile to Lynchburg). This stone was erected as part of the improvement of the Lynchburg to Amherst road, which was undertaken in 1907 to 1911.

L5 Marker (Amherst County Concrete Road Marker): Constructed ca. 1907 to 1909, this cast concrete marker stood 51 inches above the ground in its original location and is 8½ inches wide and 8½ inches deep. Molded into concrete is the inscription “L5” (i.e., 5 miles to Lynchburg). This stone was erected as part of the improvement of the Elon road (an adjunct to the improvement of the Lynchburg to Amherst road). It originally stood on the side of the Elon Road (now Route 130) 1 mile west of the current intersection of Route 130 and Route 29. The road alignment was shifted in the 1930s, leaving the road marker abandoned in a field. By 2002, the marker was deteriorating, cracked, and about to fall; the site was overgrown and was going to be cleared. With the landowner’s permission, a group of private citizens wished to preserve the marker and move it to the Amherst County Museum grounds. The fragile condition of the marker, and the considerable portion of the marker that was below ground, made it questionable whether it would survive the plan to pull it up using a chain hoist.

Resolution:

For the L1 marker, no action is needed. The resource was not and is not threatened but was identified and surveyed as part of the documentation and historic context of the L5 marker.

For the L5 marker: with the cooperation of the local VDOT residency, the Amherst County Museum, and a number of interested private citizens, the marker was carefully removed

from its original location and moved and reset at the Amherst County Museum, 154 South Main Street, Amherst, Virginia, in April 2003. Local citizens worked with VDOT and VTRC to document the history of the stone. This group effort resulted in the preservation and protection of a significant cultural resource.

CASE STUDY: THE STONE BOUNDARY MARKERS AT POWHATAN COURTHOUSE

Issue: Misidentification of historic resources and materials.

The historic core of the town of Powhatan, county seat of Powhatan County, is marked by two tall, upright stone markers with shaped tops. The top of one stone is carved to a peak; a notch is carved into the top of the other. The peak and notch line up in a north/south orientation, although the precise purpose of this is unknown. Both stones are within the right of way, and both are in their original locations.

In 2001, right-of-way surveys for a construction project originally misidentified these stones as concrete posts of modern date and of no significance. The descriptions of the stones follow.

North Boundary Marker Stone at Powhatan Courthouse: The north boundary marker is located at the intersection of Old Buckingham Road (Route 13) and Route 1006 and is within the right of way and in its original location. The traditional date is 1777 (the founding date of the county), but the courthouse boundary stones may be later, possibly mid-19th century, since they closely resemble the stone gateposts, dated 1857, at the Coker family's Belmead plantation some 8 miles to the northwest. This marker stands approximately 66½ inches above the ground and is approximately 14 inches wide and approximately 11 inches deep. No inscription is visible. The stone is carved to a peak on top and lines up with the notch on the south marker. It appears to be the same type of stone as the south marker.

South Boundary Marker Stone at Powhatan Courthouse: The south boundary marker is located along Old Buckingham Road (Route 13) and is within the right of way and in its original location. The traditional date is 1777 (the founding date of the county), but the courthouse boundary stones may be later, possibly mid-19th century, since they closely resemble the stone gateposts, dated 1857, at the Coker family's Belmead plantation some 8 miles to the northwest. This marker stands approximately 52½ inches above the ground and is approximately 14 inches wide and approximately 9½ inches deep. No inscription is visible. A notch is carved into the flat top of the stone is carved to a peak on top, and lines up with the peak on the north marker. It appears to be the same type of stone as the north marker.

Resolution:

Documentary research and field examination by VTRC and Richmond district cultural resource personnel confirmed that these were stone markers, not concrete posts, and that they were of a considerably earlier date than right-of-way records indicated. The records were updated and corrected, and the stones were properly identified as cultural resources that would not be impacted by construction.