

Chapter 7

ASSESSMENT OF EFFECT

The proposed project action (construction of Ramps A and B) will have an adverse effect on a substantial part of both the prehistoric and historical archaeological components of Archaeological Site 7S-C-100. The currently proposed right-of-way includes within its limits the greater part of the one significant prehistoric locus within the site, the northern and western portions of the early/mid-18th-century house site, most of the mid-18th-century locus, the southern section of the late 17th/early 18th-century house site and the northern part of the brick clamp. A realignment of the proposed ramps some 400 feet to the north would avoid most if not all of these immediate direct effects from the highway construction *per se*, but this is not considered to fully address the issues of effect in this case.

It is clear that the construction of Ramps A and B is linked to currently planned and proposed private developments in the immediately surrounding area, which are understood to be going through local permitting processes. This is an example of an “induced” land-use change (Legard 2007). Such developments, unless regulated through some mechanism to avoid the National Register-eligible archaeological property, will in all probability destroy its integrity through the grading and other ground disturbance inevitably required by modern construction.

Whatever the ultimate alignment selected for Ramps A and B, highway- and highway-related development will, in this consultant’s opinion, result in the loss of integrity and significance of most, if not all, of the main archaeological resources associated with site 7S-C-100. There is a developing body of research and policy on this issue of indirect effect and cumulative

impact (ICF Consulting 2005; Legard 2009). These are defined as follows (as cited in ICF Consulting 2005:6):

Indirect Effects. Those effects caused by the action and occurring later in time or farther removed in distance, but still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems [40 CFR 1508.8].

Cumulative Impacts. Those impacts on the environment, which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time [40 CFR 1508.7].

Applying these definitions to the current undertaking indicates, in this consultant’s professional judgment, that there is an Indirect and Cumulative Impact and Adverse Effect on the whole of 7S-C-100 (not just the portion immediately affected by the ramps).