May 9, 2016

Mr. Ryan D. Brennan, P.E.
Assistant Engineer
County Engineer’s Department
Black Hawk County Courthouse
316 East Fifth Street, Room 211
Waterloo, IA  50703-7232

Re: Cedar Wapsi Road (C57) Bridge, Cultural Resources Evaluation
Black Hawk County
Local Systems
Technical Report 324

Dear Mr. Brennan:

On April 25, 2016, you (Brennan 2016) requested that I review the above referenced project to determine whether an archaeological survey would be warranted. The project proposes replacing the existing, 1961, 651 x 24 ft (198.4 x 7.3 m) six span continuous steel I-beam bridge over the Cedar River on Cedar Wapsi Road (County C57) (Figure 1). The existing bridge (FHWA No. 076820) is over 50 years old, but is of a standard design and is not eligible for the National Register of Historic Places on design criteria. The project is located just south of the north section lines of Sections 15 and 16, T90N-R14W, Washington and Union Townships, Black Hawk County (Figure 2). Two alternate replacement bridge plans are under consideration for the project. Alternate 1 proposes replacing the existing bridge with a 7 span, 677 x 40 ft (206.3 x 12.2 m) pretensioned, prestressed concrete beam bridge on the existing alignment of Cedar Wapsi Road with an elevated vertical profile. It is anticipated that all additional grading required for approach sections and entrance locations can be confined to the existing alignment in this option, however, it is estimated that an area of 1.8 ac (.7 ha) of temporary construction easement will be required, equally divided between the two sides of Cedar Wapsi Road. Alternate 2 proposes replacing the existing bridge with a 6 span, 690 x 40 ft (210.3 x 12.2 m) pretensioned, prestressed concrete beam bridge with a shifted horizontal alignment approximately 55 ft (16.8 m) downstream from the existing bridge, also with an elevated vertical profile. This option would require the acquisition of 3.62 ac (1.5 ha) of new permanent right-of-way on the south side of Cedar Wapsi Road, as well as 1.55 ac (.6 ha) of temporary construction easement, also on the south side of Cedar Wapsi Road. Under this alternate, a maximum of 5.2 ac (2.1 ha) outside of the existing right-of-way of Cedar Wapsi Road will be affected. Alternate 1 would extend for 1,950 ft (594.4 m), and Alternate 2 would extend for 3,385 ft (1,031.7 m). Figure 2 illustrates the difference in lengths of the two project alternates. The maximum area to be affected outside the existing right-of-way of Cedar Wapsi Road would be 1.8 ac (.7 ha) should Alternate 1 be selected, or 5.2 ac (2.1 ha) should Alternate 2 be selected.

The proposed project is located within the Iowa landform region known as the Iowan Surface (Figure 1, inset). This terrain was formed during the Wisconsinan period by intense cold-climate weathering and erosion on Pre-Illinoian landscapes, and is characterized by low relief, dendritic drainage systems, stepped hillslopes, and the widespread distribution of erratic boulders. Loess thickness is variable on the highly weathered erosional landscape. In northern sections, rock outcrops and karst topography are common surface features. Prominent elongated ridges and isolated elliptical hills called paha, oriented...
northwest-southeast parallel to river valleys, are scattered across the southern third of the region. The paha are erosional remnants of the Pre-Illinoian landscape on which thick strata of Wisconsinan loess and sand accumulated. These aeolian deposits are underlain by gray Yarmouth-Sangamon or reddish Late Sangamon paleosols developed in Pre-Illinoian till (Prior 1991:69–73).

Holocene alluvial valley fills in Iowa are subdivided on the basis of lithology and stratigraphic relationships into the Gunder, Corrington, Roberts Creek, and Camp Creek members of the DeForest Formation (Bettis and Littke 1987). Gunder Member alluvium and Corrington Member alluvial fans may contain Paleo-Indian through Woodland components; Roberts Creek Member deposits may contain Late Archaic through early historic components; and Camp Creek Member alluvium may contain buried and unburied historic archaeological components, and may bury older surfaces.

The project area itself occupies floodplain and terrace deposits of the Cedar River just downstream from its confluence with West Fork Cedar River. Soils of the vast majority of the project area are mapped as the Spillville-Coland-channeled Aquolls ponded complex, frequently flooded. Such poorly drained and frequently flooded areas would have been less than ideal for precontact human habitation. A few small portions of the project area are mapped as Saude Loam, Finchford Loamy Sand, and the Spillville-Coland Complex (Steckly 2006). Spillville soils are classified as Cumulic Hapludolls; accumulating, typical humid climate Mollisols, or prairie soils (USDA, NRCS 2016). They are very deep, moderately well drained soils that formed in accumulating alluvium on floodplains under prairie vegetation, and exhibit A1/A2/A3/C profiles. Spillville soils are characteristic of the Roberts Creek Member of the DeForest Formation (Artz 2005). Coland soils are classified as Cumulic Endoaquolls; accumulating, groundwater saturated Mollisols. They are very deep, poorly drained soils that formed in accumulating alluvium on floodplains under water-tolerant prairie vegetation, and exhibit Ap/A1/A2/AB/Bg1/Bg2/Cg profiles. Their poorly drained nature would have made them less than ideal for precontact human habitation. Coland soils are characteristic of the Roberts Creek or Gunder Members of the DeForest Formation. Saude soils are classified as Typic Hapludolls; typical humid climate Mollisols. They are very deep, well drained soils that formed in loamy alluvium overlying sand and gravel terraces in river valleys under prairie vegetation, and exhibit Ap/A/BA/Bw1/Bw2/2BC/2C1/2C2 profiles. Artz (2005) characterizes them as glaciofluvial soils. Finchford soils are classified as Entic Hapludolls; relatively recent, typical humid climate Mollisols. They are very deep, excessively drained soils that formed in coarse alluvium and glacial outwash on river valley terraces under prairie vegetation, and exhibit Ap/A1/A2/C1/C2/C3 profiles. They are also characterized as glaciofluvial soils.

No National Register of Historic Places properties are located near the project area. The Iowa Site File at the Office of the State Archaeologist revealed six recorded archaeological sites located within 2 mi (3.2 km) of the project area, sites 13BH17, 13BH19, 13BH22, 13BH23, 13BH138 and 13BH172. Site 13BH17 was recorded by a Norman Meader in 1974 and is described as a Woodland village site that yielded a chert knife and scraper as well as debitage. The site form notes that a Russ Jacobson, of Hampton, has more material from the site, including “typical Hopewell dart point.” It is located downstream from the project area at the base of the uplands as they descend into the Cedar River Valley. Site 13BH19 was recorded by John Hotopp, of the Office of the State Archaeologist in 1976, possibly during a preliminary archaeological reconnaissance for the Avenue of the Saints project. It is recorded as a possible precontact village site which yielded lithic debitage as well as retouched chert flakes, a beaver mandible, and both grit and shell tempered ceramic sherds. It is located on a high terrace remnant overlooking the West Fork Cedar/Shell Rock River valley. Site 13BH22 was recorded by Dave Cook, of the Office of the State Archaeologist, also in 1976, and also possibly during a preliminary archaeological reconnaissance for the Avenue of the Saints project. It is recorded as a possible precontact village site which yielded lithic debitage as well as retouched chert flakes, a beaver mandible, and both grit and shell tempered ceramic sherds. It is located on a high terrace remnant overlooking the West Fork Cedar/Shell Rock River valley. Site 13BH23 was also recorded by Dave Cook, possibly during archaeological reconnaissance for the Avenue of the Saints, in 1976. The site is described as a prehistoric burial with associated jewelry. It is located on a slightly lower portion of the terrace remnant occupied by site 13BH19, overlooking the West Fork Cedar/Shell Rock river valley. Site 13BH138 was recorded by Matthew Hill, Erik Otarola-Castillo, and Adam
Holven (Otarola-Castillo and Holven 2004), of the Iowa State University Archaeological Laboratory, during an archaeological survey for a bridge replacement project over West Fork Cedar River located 1 mi (1.6 km) north of the project area. It is recorded as a Late Archaic lithic scatter based upon the recovery of a Durst projectile point from the site. The site also yielded debitage and fire-cracked rock. It was reported to have been heavily collected by unknown individuals. Subsequent testing of the site (Otarola-Castillo 2005) determined that the site was eligible for the National Register of Historic Places, and avoidance was recommended for the site during bridge replacement activities. The site appears to occupy a terrace landform similar to those in the eastern portion of the project area that would be impacted by Alternate 2. Site 13BH172 represents an early Euro-American farmstead site recorded by Kayla Resnick, of the Office of the State Archaeologist in 2009 based upon its appearance on the 1849 General Land Office original survey plat for T90N-R14W (Office of Secretary of State 1979 [1849]). The site was subsequently field checked by Branden Scott (2011), of Bear Creek Archeology. Scott discovered that the site was currently occupied by a modern, active farmstead. It was Scott’s determination that any possible archaeological remains of the original farmstead had likely long ago been destroyed by activities involved with the continuous occupation of the farmstead, and no further investigations were recommended for the site. Other professional archaeological surveys conducted near the project area (Billeck 1985; Blikre et al. 2007; Perry 1990; Stevens 1976) encountered no archaeological materials or features near the project area.

The 1849 General Land Office original survey plat for T90N-R14W (Office of Secretary of State 1979 [1849]) showed the Cedar River flowing through the project area near its current location, with no structures, fields or trails located nearby. Andreas (1970:19) and Sedgewick Brothers and Stilson (1887) showed the same. All other historic maps consulted (Anderson 1926; Hixson and Company 1930; Huebinger 1904:41; Iowa Publishing Company 1910; Kace Publishing Company 1896) showed the Cedar River flowing through the project area and the road that would become Cedar Wapsi Road passing through it on its current alignment, with no structures located within the project area. County histories consulted (Hartman 1915; Inter-State Publishing Company 1886; Van Metre 1904; Western Historical Company 1878) revealed no historically significant people, events or structures associated with the project area.

Due to the small size of Alternate 1, its relatively low potential for containing precontact archaeological deposits and its lack of documented post-contact structures, it is recommended that no archaeological survey be required for it should it be the selected alternate, and that it be allowed to proceed. However, should any archaeological materials or features be encountered during construction activities, the Iowa Department of Transportation, Office of Location and Environment, most be notified immediately.

Due to the larger size of Alternate 2, as well as its extension into landforms similar to those that have been found to contain archaeological deposits nearby, including a human burial, it is recommended that a Phase I archaeological survey be conducted on its project area should it be the selected alternate. To assist you in finding a qualified archaeological consultant, the Association of Iowa Archaeologist’s consultants list can be found at: http://aiarchaeologist.org/consultants-list-1/. This link is for informational purposes only, and any archaeologist who meets the Secretary of the Interior’s Guidelines would be qualified to perform the survey, and does not need to be on this list.
Sincerely,

Blane H. Nansel, RPA
Cultural Resources Specialist
Office of the State Archaeologist
The University of Iowa
(319) 384-0729
blane-nansel@uiowa.edu

cc: Brennan Dolan, Office of Location and Environment, Iowa Department of Transportation
    Robert Welper, District 2, Iowa Department of Transportation
References Cited

Anderson, G. W.

Andreas, Alfred T.

Artz, Joe A.

Bettis, E. Arthur III, and John P. Littke

Billeck, William T.

Blikre, Lowell, Derek V. Lee, and Art Hoppin

Brennan, Ryan D.
2016 E-mail of April 25, 2016, to Blane H. Nansel, Cultural Resources Specialist, Office of the State Archaeologist, The University of Iowa. Copy on file, Office of the State Archaeologist, The University of Iowa, Iowa City, Iowa.

Hartman, John C.

Hixson, W. W., and Company

Huebinger, Melchior

Inter-State Publishing Company
1886 *Historical and Biographical Record of Black Hawk County, Iowa.* Inter-State Publishing Company, Chicago, Illinois.

Iowa Publishing Company

Kace Publishing Company

Perry, Michael J.

Office of Secretary of State

Otarola-Castillo, Erik
2005 Extended Phase I Archaeological Survey of the Proposed Bridge Replacement (FHWA #076790; BROS-CO07(34)--5F-07) Section 9, T90N-R14W, Winslow Road, Black Hawk County, Iowa. *Project Report 85*, Iowa State University Archaeological Laboratory, Ames, Iowa.
Otarola-Castillo, Erik, and Adam C. Holven
2004 Phase I Archaeological Survey of the Proposed Bridge Replacement (FHWA #076790) Section 09, T90N-R14W, Winslow Road, Black Hawk County, Iowa. Project Report 58, Iowa State University Archaeological Laboratory, Ames, Iowa.

Prior, Jean C.

Scott, Branden K.
2011 Phase IA Archaeological Field Reconnaissance of Approximately 2.1 km (1.3 mi) of Electrical Line Retrofits in Black Hawk and Grundy Counties, Iowa. BCA 1809, Bear Creek Archeology, Inc., Cresco, Iowa.

Steckly, Sam R.

Stevens, J. Sanderson

United States Department of Agriculture, Natural Resources Conservation Service

Van Metre, Isaiah

Western Historical Company
1878 The History of Black Hawk County, Iowa. Western Historical Company, Chicago, Illinois.
Figure 1. Project location (from General Highway and Transportation Map, Black Hawk County, 2003; inset from Prior 1991).
Figure 2. Project location in relation to surrounding topography (from USGS Cedar Falls, Iowa, 1963 [photorevised 1972 and 1980], 7.5' series quadrangle map). Scale = 1:24,000.
1. R and C #: ____________________________________________

2. Author: Blane H. Nansel
   Year of Publication: 2016

3. Title: Cedar Wapsi Road (C57) Bridge, Cultural Resources Evaluation, Black Hawk County, Local Systems

   Volume #: Report #: NTIS: ______
   Publisher: Office of the State Archaeologist, The University of Iowa
   Place: Iowa City, Iowa

5. Unpublished:
   Sent From: ____________________________________________
   Sent To: ____________________________________________
   Contract #: ____________________________________________

6. Federal Agency: FHWA

7. State: Iowa
   County: Black Hawk
   Town: ____________________________________________

8. Work Type: 35

9. Keyword: 0 – Types of Resources / Features
   1 – Generic Terms / Research Questions
   2 – Taxonomic Names
   3 – Artifact Types / Material Classes
   4 – Geographic Names / Locations
   5 – Time Periods
   6 – Project Names / Study Unit
   7 – Other Key Words
   Iowan Surface [4] [ ]
   Iowa/Cedar Rivers Basin [4] [ ]
   5.2 acres [7] [ ]
   No Resources [0] [ ]
   [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
   [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
   [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
   [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

10. UTM Zone: 15 Easting: __________ Northing: __________
    15 Easting: __________ Northing: __________
    15 Easting: __________ Northing: __________
    15 Easting: __________ Northing: __________

11. Township: 90N
    Range: 14W __________
12. Monograph:
   Name: 
   Place: 

13. Chapter: In: First: Last: 

14. Journal Volume: Issue: First: Last: 

15. Dissertation:
   Degree: Ph.D. LL.D. M.A. M.S. B.A. B.S. 
   Institute: 

16. Paper: Meeting: 
   Place: 
   Date: 

17. Other:
   Reference Line: 

18. Site #:

19. Quad Map:
   Name: Cedar Falls, Iowa 
   Date: 1980