



United States Department of the Interior
NATIONAL PARK SERVICE
Bandelier National Monument
15 Entrance Road
Los Alamos, New Mexico 87544-9701



IN REPLY REFER
H4217 (BAND)

JUL 13 2015

Jeff Pappas, Ph.D.
State Historic Preservation Officer
Department of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, New Mexico 87501

Re: Mitigation Implementation, *Re-open Upper Alcove House Trail* (PEPC 49492).

Dear Dr. Pappas:

We greatly appreciate the constructive and practical recommendations in your May 6, 2015 response to re-open the Upper Alcove House Trail. I consider this project to be extremely important to the health and life safety of our visitors and Park staff. While protecting visitors from imminent flash flood events by shifting traffic to Alcove House above the Frijoles Creek floodplain is of serious concern, Bandelier National Monument places a comparable level of concern with the protection of the cultural resources we are charged with protecting.

In keeping with our responsibilities to resource protection, BAND will initiate the approach specified by your office. We will institute a monitoring program to assess impacts to cultural resources and verify the number of visitors the trail receives on a monthly basis. BAND staff will also install appropriate signage informing visitors of the sensitive nature of cultural resources along the trail. Signage will also explain the importance of these resources held by the scientific and descendant Pueblo communities.

In monitoring the potential impacts to archeological sites, BAND will sample 10% of the 352 recorded cavates along the trail (see enclosed list for specific cavates). Five percent were selected randomly using a computer generated random sampler (randomizer) and the other five percent were selected strategically based on unique archeological features and sensitivity to impacts from increased visitation due to location (proximity to trail) or structural fragility.

Monitoring will be initiated one month prior to the re-opening of the Upper Alcove House Trail to gather baseline data. Graffiti and artifact removal constitute the most frequent occurrences of human-related impact to archeological sites at Bandelier, especially cavate



sites. Baseline data will include assessing all existing graffiti in selected cavates, noting location, type, and relative age (based on past documentation). In addition to collecting data on extant graffiti, monitors will record and map surface artifacts present within the 10% cavate sample. Recording extant graffiti and documenting surface artifacts prior to the trail opening will allow BAND monitors to confirm occurrences of all new graffiti, artifact migration or removal.

Following the collection of baseline data, monitoring will continue after the opening of the trail to assess visitation, as well as impacts due to increased accessibility to nearby archeological sites. Monitoring will occur every month for the first six months with results reported to the Superintendent and the Park Management Team. Additionally, this information will be made available each reporting cycle to your office and our affiliated pueblos by formal letter (phone or email regarding situations needing immediate attention). After the initial six-month monitoring period, a review of the results and consultation with your office will determine the monitoring schedule for the next 12 months.

Bandelier will measure impact severity on a case by case basis. Once the trail is open, all 352 cavates will be monitored for impacts, however, not to the same extent as the 36 cavates represented in the sample population. Major impacts will be reported no matter the cavate, though the sample population will be documented using actual quantifiable data referenced to initial baseline data and data from previous monitoring episodes. Artifact migration and removal will be measured through time and quantified in percent. For example, baseline data indicate 10 sherds on the surface of Cavate X-1, two sherds are removed by visitors one month after the trail opens, thus, we have a 20% loss of surface artifacts in the first month. After six months of monitoring, we find that one additional sherd was removed, we then have a 30% loss in 6 months.

Graffiti will be measured by occurrence and percentage of surface area affected (see enclosed monitoring form; photos will also be annotated with each monitoring episode). There may be one occurrence, but the inscription was applied to a large area. On the other hand, we may see multiple inscriptions in a very small segment of the cavate. Recording both aspects of frequency and size will allow for sounder management in response to documented impacts.

Visitation will be recorded at the beginning and end of the trail to get an accurate count of the number of visitors the trail is receiving. The counter is a small electronic device that sends a laser across the trail. We plan to mount these devices to the previously mentioned signage at each end of the trail. This data will be included in the report culminating each monitoring session.

Bandelier National Monument remains vigilant to the potential for adverse effects and the need for future resolution of adverse effects as a result of this project. Mitigation measures listed in your May 6th response cover monitoring, signage, resolving impacts by opening a proposed re-route (Alternative #3), and installing railing. For the moment, we will not install railing along portions of the trail. During consultation with our affiliated tribes, we were directed to restrain from installing a railing system immediately adjacent to cavate structures if at all possible. The THPO for Santa Clara Pueblo indicated that a railing system would take away from the ancestral feel of the area. Railing will only be installed if the need for this mitigation arises based on data obtained during monitoring and additional consultation.

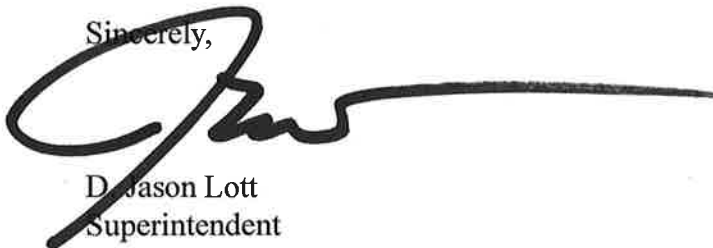
Other mitigations may include the addition of sterile fill material to protect exposed floor features, limiting visitor access to the trail to certain times of the year when flood risk is at its highest, ranger-led hikes, and collection and long-term storage of certain artifacts. To mitigate the damage of increased foot traffic to the historic steps, we propose a protective casing over the stone steps. We have seen success in the past with placing a protective cover over historic stone tuff steps along the Long House Trail. The Long House trail receives as much, if not more visitor traffic than what we are expecting for the Upper Alcove House Trail. Although cement is harder than the tuff, the hardness of the cement-based coating present at the Long House Trail steps appears to have allowed for significantly less damage to occur to the original fabric over the past three decades in comparison with what could have been expected from unrestrained foot traffic. As we move forward, we will continue to develop and consider options available to us in mitigating impacts through the consultation process. Ultimately, if mitigations fail, then re-closure of the trail will be implemented.

We fully understand and expect there to be some level of impact as a result of re-opening the trail, especially given that we have already been experiencing unauthorized visitation and impacts originating from visitors wandering from the Lower Alcove House Trail. We are, however, optimistic that the mitigation measures outlined above, along with further recommendations from your office and our colleagues in the NPS Regional office will continue to reduce and/or eliminate impacts.

Based on our design criteria for this project, we are requesting a determination of No Adverse Effect with the stipulation that a Memorandum of Agreement may be required if our initial mitigations fail to provide adequate protection for cultural resources within the APE. We hope that you concur with this determination and the project approach to mitigate potential adverse effects. For your convenience, I have provided a concurrence line to sign and date below.

If you have further questions or concerns, please contact J.T. Stark, Section 106 Coordinator, at (505) 672-3861 x308 or jonathan_stark@nps.gov; or me personally at (505) 672-3861 x501 or jason_lott@nps.gov.

Sincerely,



Jason Lott
Superintendent



Enclosures:

List of selected cavates to be included in the sample population
Cavate Monitoring Form

I concur with the above-stated recommendations to minimize or mitigate the potential for adverse effects regarding the proposed project, *Re-open Upper Alcove House Trail* (PEPC 49492).

New Mexico State Historic Preservation Officer

Date

CCC TRAILS. CAVATES IN GROUPS A, B, AND C SELECTED FOR MONITORING

RANDOMLY SELECTED

A 022	
A 024	
A 029	
A 050	embelish
A 071	firepit
A 080	
A 081	
A 146	
A 150	
B 005	floor ridge
B 006	
B 038	firepit
B 049	
B 079	
B 133	
B 143	
B 159	
C 021	
C 13-01	

SELECTED BASED ON ARCHAEOLOGICAL SIGNIFICANCE

A 013	metate rest	embelish
A 034	floor ridge	firepit
A 076	floor ridge	embelish
A 092	floor ridge	embelish
A 099	floor ridge	embelish
A 105	floor ridge	embelish
A 112	floor ridge	embelish
A 116	wood metate rest	
B 002		masonry safety
B 012	floor ridge	embelish
B 016	floor ridge	
B 065	metate rest	floor ridge
B 068	metate rest	
B 083	wood	embelish safety
B 096	wood metate rest	
B 118	floor ridge	firepit embelish
C 011	floor ridge	firepit
C 018		firepit
C 020		firepit

There are 352 cavates in Groups A, B, and C. 10% of the cavates will be used as a baseline for monitoring. Half of the cavates were randomly selected, the other were selected based on archaeological significance (unusual features.) There are 36 cavates in total.

Cavate Monitoring Form - Baseline Data

Project: Re-open Upper Alcove House Trail

Frijoles Canyon Cavates

Group: _____ Cavate # _____ Date: _____

National Park Service

U.S. Department of the Interior

Preservation Program

Division of Facilities Management and Preservation

Bandelier National Monument - Los Alamos, New Mexico



Recorder(s): _____

Graffiti # _____: Type (circle one): Etched Overlay Smeared

Measurement: _____ cm. X _____ cm. X _____ cm.

Sketch:

Graffiti # _____: Type (circle one): Etched Overlay Smeared

Measurement: _____ cm. X _____ cm. X _____ cm.

Sketch:

Wall (circle one): N S E W NE NW SE SW

(circle one) Exterior Interior

Location (circle one): Soot Plaster Tuff

Panel (?): Y or N Panel Size: _____ cm. X _____ cm.

Approximate Appearance Date: ____ / ____ / ____

Wall (circle one): N S E W NE NW SE SW

(circle one) Exterior Interior

Location (circle one): Soot Plaster Tuff

Panel (?): Y or N Panel Size: _____ cm. X _____ cm.

Approximate Appearance Date: ____ / ____ / ____

Graffiti # _____: Type (circle one): Etched Overlay Smeared

Measurement: _____ cm. X _____ cm. X _____ cm.

Sketch:

Graffiti # _____: Type (circle one): Etched Overlay Smeared

Measurement: _____ cm. X _____ cm. X _____ cm.

Sketch:

Wall (circle one): N S E W NE NW SE SW

(circle one) Exterior Interior

Location (circle one): Soot Plaster Tuff

Panel (?): Y or N Panel Size: _____ cm. X _____ cm.

Approximate Appearance Date: ____ / ____ / ____

Wall (circle one): N S E W NE NW SE SW

(circle one) Exterior Interior

Location (circle one): Soot Plaster Tuff

Panel (?): Y or N Panel Size: _____ cm. X _____ cm.

Approximate Appearance Date: ____ / ____ / ____

Graffiti # _____: Type (circle one): Etched Overlay Smeared

Measurement: _____ cm. X _____ cm. X _____ cm.

Sketch:

Graffiti # _____: Type (circle one): Etched Overlay Smeared

Measurement: _____ cm. X _____ cm. X _____ cm.

Sketch:

Wall (circle one): N S E W NE NW SE SW

(circle one) Exterior Interior

Location (circle one): Soot Plaster Tuff

Panel (?): Y or N Panel Size: _____ cm. X _____ cm.

Approximate Appearance Date: ____ / ____ / ____

Wall (circle one): N S E W NE NW SE SW

(circle one) Exterior Interior

Location (circle one): Soot Plaster Tuff

Panel (?): Y or N Panel Size: _____ cm. X _____ cm.

Approximate Appearance Date: ____ / ____ / ____

NOTES: _____

Surface Artifacts (attach map and scaled photo to form):

Description

Description

Description

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Plaster Narrative: _____

NOTES: _____

