APPENDIX 4.3
CASTLE HILL PROJECT TIMELINE, BUDGET HISTORY, AND COST ANALYSIS
(D. McMahan)

CASTLE HILL, BUDGET HISTORY, TIMELINE, AND COST ANALYSIS
(J. David McMahan)

Cost Overview: the Challenge

The Federal Highway Administration (FHWA) and National Transportation Enhancements Clearinghouse (NTEC) have hailed the Castle Hill Archaeological Project as a successful effort in balancing the seemingly conflicting goals of data recovery and construction (NTEC 1999:25). The project, however, was not without costs and frustrations for both the funding and resource agencies. The unexpected discovery of important archaeological features and deposits escalated recovery costs far beyond original estimates (Tables 1 and 2). In 1998, this necessitated the expenditure of funds originally slated for analysis/reporting on additional field efforts. The field season was extended from 84 to 106 workdays and additional crewmembers were added. The additional fieldwork, with broad public support, allowed construction to proceed on schedule but did not include a laboratory budget supplement.

More significantly, the work produced an astounding 300,000 artifacts to be cataloged, conserved, analyzed, and curated. Three times more artifacts were recovered in 1998 than budgeted for, based on the 1997 recovery rate. The artifacts included a large percentage of organic materials (e.g., wood, hair, textiles, ivory, bone, basketry) that required specialized conservation treatments and storage. Early in the laboratory phase of the project, it became apparent that the completion of analysis, conservation, and documentation would present a budgetary challenge. Complicated by the move of OHA to a smaller space in December 1999 and the elimination of a permanent archaeology laboratory, the Castle Hill collection was moved to temporary facilities five times between 1998 and 2000. In March 2000, ADOT amended the reimbursable services agreement to include an additional $41,000 although $101,000 had been requested. This supplemented space rental, continued analysis, conservation, and documentation until funding was depleted in February 2001. Contributions by the Alaska SHPO and the assistance of volunteers has allowed basic report completion.

Table 1. Overall project costs provided by ADOT&PF.

	Original Budget	Final Expenditures
Design & Interpretation	$228,800	$214,900
Archaeology	$123,500	$563,200
Construction Contract	$654,400	$769,500
Contract Administration	$94,000	$99,000
Project Totals	$1,100,700	$1,646,600

Table 2. Breakdown of data recovery costs.

Date	Action	Expenditure
04/28/95	RSA # 24023 (survey & testing)	$30,412
07/02/97	Amendment 2 (data recovery & analysis)	$93,056
08/19/97	Amendment 3 (data recovery & analysis)	$89,700
03/26/98	Amendment 4 (data recovery & analysis)	$309,044
03/23/00	Amendment 5 (analysis & reporting)	$41,000
	Total	$563,212

Cost Analysis

Addressing the Challenge:

Working within the government infrastructure, OHA was able to cut costs substantially through partnering and volunteer labor. In addition to paid employees, OHA recruited long-term volunteers through the Volunteers in Parks (VIP) program administered by the Alaska Division of Parks and Outdoor Recreation. Selected applicants consisted mostly of skilled archaeologists and historians with some field experience. To avoid spending an inordinate amount of time doing site tours for the interested public with paid staff, OHA primarily used volunteer assistance for this purpose. Timothy "Ty" Dilliplane, former Alaska SHPO and a scholar of the archaeology of Russian-American sites, led most site tours. OHA negotiated with the University of Alaska Southeast (Sitka Campus) for discounted housing in exchange for allowing UAS students to participate in the excavations for college credit.

Paid employees, in addition to regular OHA staff, were hired through the Alaska Conservation Corps (ACC) and Student Internship programs. Participants in these programs performed excavation and lab activities at a cost lower than could be obtained from professional archaeological staff. In 1998, for example, the American Cultural Resources Association (ACRA) found that archaeological field technicians generally worked at a pay level similar to the Federal GS-5 to GS-7 range (i.e., $14.85 to $18.40 per hour including Alaska COLA). Field technician pay at Castle Hill for the same time period ranged from about $8/hour to $12/hour (the maximum allowed under the Alaska Conservation Corps program) with no benefits.

To further cut costs, the science laboratory at Mt. Edgecumbe High School was used in lieu of commercial space for processing artifacts during the 1997 and 1998 field seasons. Mt. Edgecumbe allowed use of the lab at no cost. Once the collection was moved to Anchorage, OHA acquired laboratory equipment for artifact processing primarily from State Surplus at no cost.

Cost Comparison:

The total cost for archaeological data recovery was $563,212. OHA had requested a final supplement to bring the total to $623,312 to finish analysis, prepare the collection for curation, and finish a final report. Additionally, OHA requested that ADOT&PF negotiate directly with the University of Alaska Museum, Fairbanks, for permanent curation of the collection (in 1999, estimated by UAF to cost $26,700), bringing the total to $650,012. While this is a significant cost, an informal survey of archaeological contractors nationwide suggests that the price tag for Castle Hill data recovery was around one-half of costs of comparable projects.

1. Alpine Archaeological Consultants recently carried out a project of similar scope (with around 300,000 artifacts) for $2.5 million, and one of smaller scope for around $1.5 million. They believe these figures are in line with other firms working in the Colorado area.

2. A state university (requested to remain anonymous) recently undertook a data recovery project in conjunction with highway reconstruction in California. The cost (with multiple sites and around 500,000 recovered artifacts) was approximately $4.5 million.

3. Louis Berger Associates, a large archaeological consulting company, completed a project in Philadelphia involving the recovery of around 300,000 artifacts in 1996 at a cost of $1.1 million. They recently bid a data recovery project for a prehistoric site at $800,000, and indicate that smaller mitigation projects (with 5-10,000 artifacts) typically cost $200,000 to $300,000. Their curation estimates have ranged to over $200,000.

4. Northern Land Use Research conducted data recovery in conjunction with the Barnette Street reconstruction in Fairbanks, Alaska in 1992-93,. The cost of this project, which lasted two field seasons and produced approximately 74,000 artifacts, was $1.32 million.

Time Line for Data Recovery

1995

4/28/95
Commencement of RSA # 24023 for archaeological testing and analysis at Castle Hill, with a completion date of 9/30/96 ($30,412). Work focused primarily on top of the hill.

4/20/95 to 4/30/95
Ten-day testing program for above RSA.

1996

3/96
Determination of Eligibility (DOE) report issued by OHA (McMahan). Presents results of 1995 testing program and suggests that Castle Hill is eligible for the NRHP under Criterion D (in addition to existing NHL status under NHL Criterion 1).

6/27/96
Amendment 1: Extension of RSA completion date to 6/30/97, allowing for fieldwork during September and October 1996 (fieldwork didn't occur).

1996 (continued)

8/96
Finding of "No Adverse Effect" by SHPO provided that a data recovery plan to mitigate the effects of construction be implemented.

9/96
Concurrence with SHPO by Advisory Council on Historic Preservation (by default).

10/96
Concurrence with ADOT&PF on environmental assessment (EA) by Federal Highway Administration.

1997

2/97
A draft Recovery Plan (prepared by McMahan) is sent to involved agencies and interested parties for comment. The final Recovery Plan is completed in April 1997.

5/12/97 to 8/1/97
Data recovery at Castle Hill. Undisturbed deposits are discovered near the base of the hill in the proximity of proposed trail construction and staging. The field season was extended (see below RSA amendment) due to the discoveries. 52 one-meter squares excavated to an average depth of 0.5m.

7/2/97
Amendment 2: Addition to RSA of $93,056 for data recovery; archival research, and cataloging and analysis of artifacts (total budget = $123,468).

8/19/97
Amendment 3: Addition to RSA of $89,700 to allow for additional data recovery, artifact cataloging, and analysis (total budget = $213,168).

1998

3/26/98
Amendment 4: Addition to RSA of $309,044 and extension of RSA completion date to 12/31/99 to allow for continuing data recovery in footprint and staging area (total budget = $522,212). At the conference that preceded Amendment 4, potential curation fees by UAF are flagged as an issue.

3/98
Due to extensive public interest in the project, a web site is placed on the state server. The web site underwent DNR review prior to uploading. The site was updated in January 1999 with a brief synopsis of findings during the 1998 field season.

1998 (continued)

4/20/98 to 8/12/98
Data recovery continues during project construction phase. This includes monitoring and salvage on the top and slopes of the hill, and intensive excavation beneath and adjacent to the trail footprint near the base of the hill. Significant unexpected discoveries include four Russian period building ruins with associated features, deposits, and artifacts. Public concern that data recovery be finished prior to final trail construction is voiced to the archaeologists, to the Sitka City Council, and through the media. In response, OHA hires extra personnel from the local community, and extends the field season from 84 work-days to 106 work-days. Cooperation between the archaeologists and construction contractor insures that the archaeological materials are removed and construction is not delayed as a result of archaeology.

10/18/98
Governor Knowles dedicates the Baranof Castle State Historical Site renovation, acknowledging the importance of the recovered archaeological data.

1999

5/99
Noow Tlein – Castle Hill Archaeological Project: Spring 1999 Progress Report (ADOT&PF Project #71817/TEA-0003[43]) is distributed to ADOT&PF and interested parties. The report discusses status of project and projects a budget shortfall of $10l.1k.

2000

3/2000
RSA is amended to increase budget by $41k

2001

2/2001
Project funds depleted. Report completion continues through SHPO support.

4/2001
A draft final report is submitted to ADOT&PF and DNR/OHA for review.

7/26/2001
ADOT&PF comments on draft report received

2001

3/2002
Final report produced. Two chapters (Lead Seals and Arms/Munitions) that were not in the draft report added.

Lessons Learned

A more intensive testing phase might have resulted in better knowledge of underlying deposits across the site and fewer inadvertent discoveries during the data recovery phase. This would not have lessened the need for intensive data recovery but would have provided a better cost estimate to facilitate decision making. Under most circumstances, the ten-day testing phase would have been adequate. The presence of unpredicted deeply buried construction debris on top of the hill, however, necessitated excavation of a few deep 1m x 2m pits rather than a broader distribution of small 0.5m x 0.5m pits. Testing focused on top of the hill, where 1995 design plans were firm, rather than along the proposed trail footprint that was still under discussion. The design and footprint of the trail were not firmly established until after the testing phase.

Data recovery at the site was implemented to comply with Section 106 of the National Historic Preservation Act (36 CFR 800). This was accomplished through a finding of **no adverse effect** by application of a special stipulation (i.e., mitigation through implementation of a data recovery plan). This allowed the project to proceed more expeditiously, but without a formal Memorandum of Agreement (MOA). Under the revised 36 CFR 800 regulations, the same undertaking would constitute an **adverse effect** requiring a formal MOA. A formal MOA would have better identified the roles and responsibilities of participants, and would have identified contingencies in the event of inadvertent discoveries.

Public interpretation during data recovery was an important component of the research design. While archaeology eventually accounted for around one-third the overall project cost, there were no provisions to interpret the findings to the public through panels or pamphlets. Future large projects, particularly at NHL sites, might benefit by allowing for interpretation costs in conjunction with recovery.

Data recovery plans must address conservation and curation. This is particularly important when large collections or the recovery of items requiring special treatment are expected. The UAF Museum, through an informal relationship with OHA, curated OHA collections for many years at no cost. With declining revenues and expanding collections, however, UAF and many other institutions now charge curation fees. These were not included in the initial Castle Hill budget because the large size of the collection was not anticipated. A data recovery project is not complete until artifacts are curated in a facility that can provide protection and access.

Finally, the merits of data recovery should not be evaluated solely on the basis of cost. Castle Hill is one of the most important historical sites in Alaska due to its association with many events that shaped State and National history. The site has produced data that will be the focus of scholarly research and public interpretation for many years. The data recovery component of the renovation project is important in and of itself. The FHWA and NTEC wrote that:

> The state transportation agency received more positive exposure than it could ever have purchased outright, and several travel magazines covered the discoveries, spurring increased tourism to the site [NTEC 1999:25].

From 1999 to 2002, artifacts and photos from the data recovery project were incorporated into exhibits throughout the United States, in Japan, and in Moscow's Red Square. OHA recently encapsulated the importance of historical and archaeological properties in a brochure:

These properties tell us about ourselves. They reflect what we value and how we have chosen to live. They add richness and diversity to urban and rural landscapes. They remind us of our past and define our future. Because Alaska's history and traditions are among our greatest cultural and economic assets, and because their unique character makes them irreplaceable, Alaska's historic resources are worth preserving [OHA 2001].