

SATALA CEMETERY RESTORATION TREATMENT REPORT RFP -036-2010 June/July 2010
Monument Conservation Collaborative LLC, Norfolk, CT 06058



Satala Cemetery June 21, 2010

David Herdrich, Historic Preservation Officer
c/o American Samoa Historic Preservation Office
Executive Offices of the Governor
American Samoa Government
Pago Pago, AS 96799

Attached is our report describing the conservation and restoration to the Satala Cemetery after the damage caused by the Tsunami of September 29, 2009.

The financial support for this project was provided by your office and we wish to thank you personally for your hospitality, and for the considerable assistance that your office provided to us.

Irving Slavid July 2010

This report has been financed in full with Historic Preservation Funds from the National Park Service Department of Interior.

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Oct 1, 2009, Two days after
the Tsunami.
Photo: David Herdrich



Restored July 2010

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Monuments and fragments were moved into location by hand.

Larger fragments were moved with rollers on planks, sometimes assisted with a mechanical advantage such as a come-along or hydraulic jacks.



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Leveling a large fragment from #15 onto a bed of stone

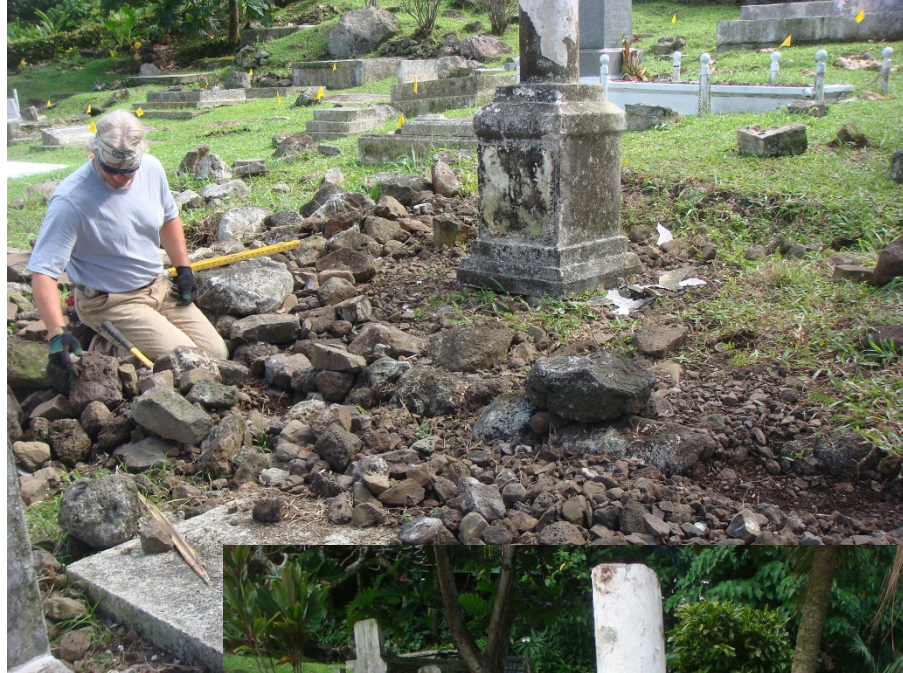


#15 completed

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#18 Before



Typical rebuilding details of some of the loose dry laid stone foundations that were dislocated. We found that a great number of stones were required for proper resetting, usually much more than what the contract descriptions indicated by an approximate number. These extra stones were need for necessary foundations and footings for exposed stones.

#18 After



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With the exception of small missing pieces, which may be buried or have shattered, fragments were eventually located for almost all losses.

#135 to left, #16/44 below



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After cleaning, fragments were dry fitted to ascertain stability and contact points for structural adhesive. Thixotropic adhesive was applied and fragments braced until cured. After partial cure, excess adhesive was removed with hand tools



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On the left, fragments attached but with losses.

Below, filling losses with Jahn M-90 cementitious mortar.

On the right, the filled and shaped areas prior to painting.



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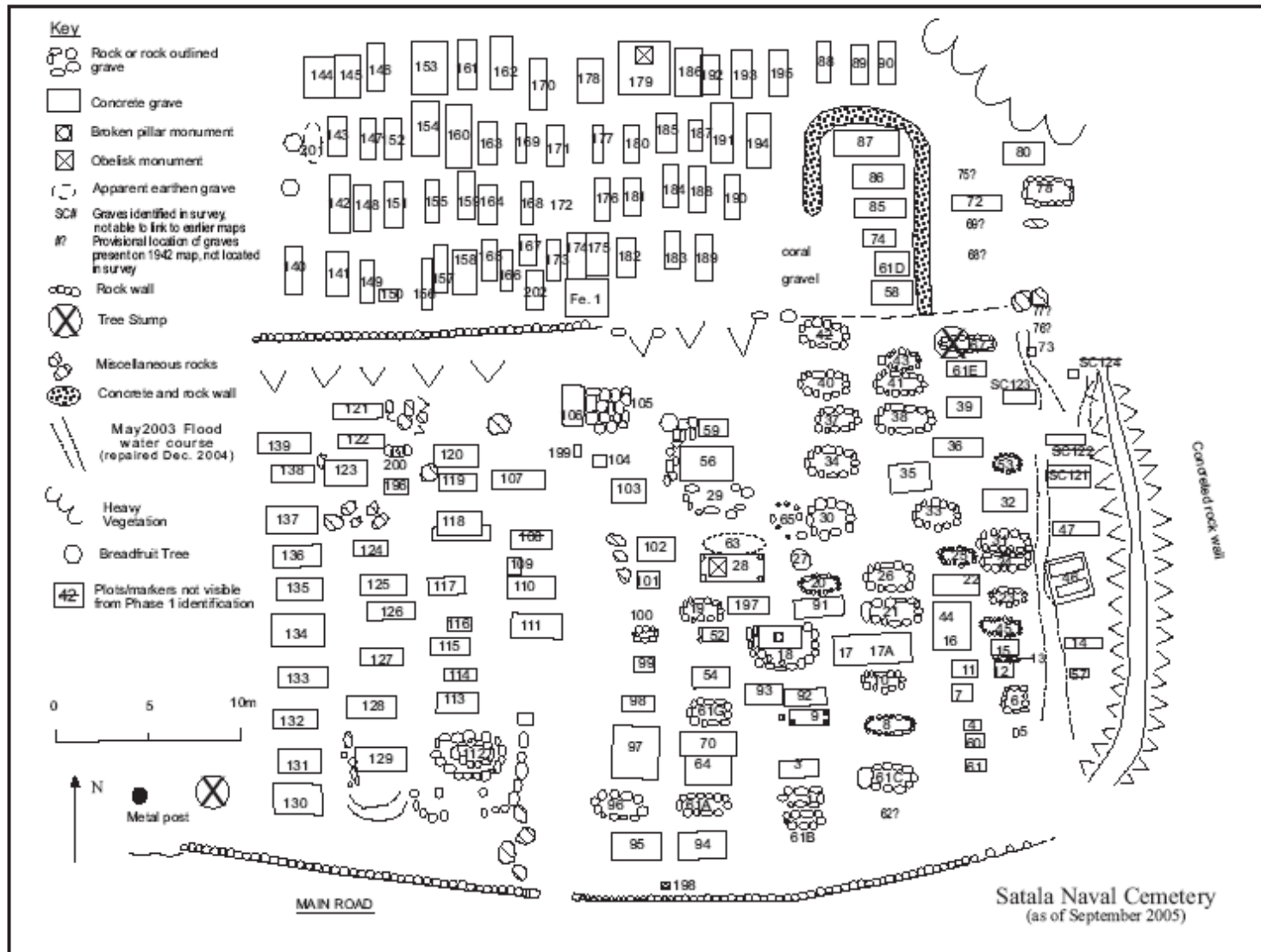


Loose layers of old paint were scraped or peeled off before applying D/2 Biological Solution.



#15 After removing loose layers of paint

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Contract description

#9 A previously broken off pillar was displaced from the baseline angle.

#9 ASHPO Concrete monolith detached from corner of monument
Restore monolith to corner from which it was detached.



#9 Restored



#9 Restored and painted

Treatment description

Pillar relocated to base line. Setting area and base of pillar treated with D/2 Biological Solution. When dry, pillar was re-set with pointing mortar. Loose paint scraped off and monument treated with D/2 Biological Solution prior to painting

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Contract description

#17. **ASPHO** Headstone broken in half



#17 Restored

Treatment description

Intermediate base reset onto large base (#17A) with 000 grout. Marble fragments attached with structural epoxy. Crack filled with Replical crack filler. Because this is a marble monument it was not painted.

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Contract description

109 ASHPO Headstone not securely fastened to base

Secure headstone to base with epoxy



Treatment description

Setting surfaces cleaned with D/2 biological solution. When dry headstone was attached with structural adhesive.

Joints were sealed with 000 grout.

Loose paint was scraped off and headstone treated with D/2 Biological Solution prior to painting.

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Contract description

110 ASHPO Headstone not securely fastened to concrete slab.

Secure headstone to concrete slab with epoxy



Treatment description

Headstone reset plumb on to concrete base with commercial grade white mortar mix.

Loose paint was scraped off headstone and surfaces treated with D/2 Biological Solution prior to painting.

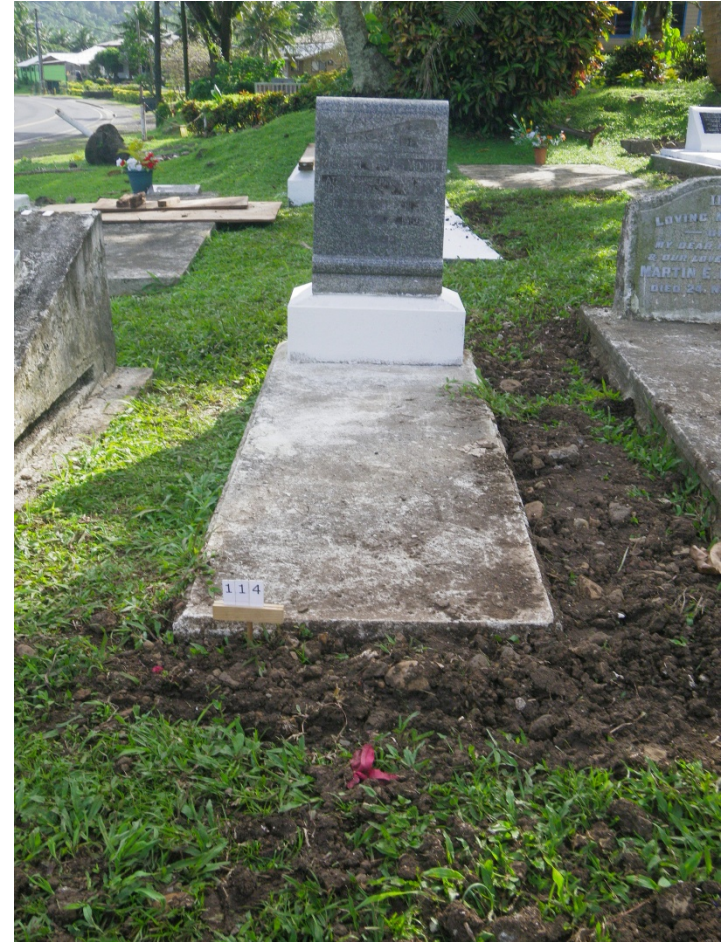
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Contract description

114 Headstone displaced from the base line site.

ASHPO Concrete slab monument is not level, is settling into the ground on one side



Treatment description

Area around concrete slab excavated and slab reset level. Old mortar removed and headstone reset plumb with 000. Loose paint was scraped off base prior to painting.

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Contract description
115 ASHPO Concrete slab monument is not level, is settling into the ground on one side. Level concrete grave monument slab.



Treatment description
Area around concrete slab excavated and slab reset level.

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Contract description
#**127** **ASHPO** Concrete slab is cracked and is not level. It is settling into the ground on one side



#**127** Restored

Treatment description
Fractured concrete slab found to be unsound. New level base poured using Sakrete premixed concrete mix. When cured all surfaces were painted



#**127** Restored and painted

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PRODUCTS/SUPPLIERS

D/2 Biological Solution

M90 Concrete repair mortar for smooth vertical surfaces

Jahn™ Restoration Mortars

Cathedral Stone Products Inc.
7266 Park Circle Drive
Hanover, MD 21076 USA
800 684 0901 fax 800 684 0904

Adhesives

Aboweld 55-22

Abatron Inc
5501 95th Avenue
Kenosha, WI 53144
414 653 2000 fax 414 653 2019

Monument setting compound, light grey

Bicknell Supply Company
Elberton GA, 30635
800-241-7105

000 Grout

A cementitious grout: 3parts white cement, 2 parts high calcium lime, 6 parts 000 sand and 2 parts microballoons

Local products

Glass Block Commercial Grade Mortar Mix

Quickcrete.

Pre mixed concrete mix

Sakrete

Flat white exterior paint