

**O & M INSPECTION REPORT
FOR NAVIGATION AND SHORE PROTECTION PROJECTS**

1. Project Name: Aunu'u SBH
2. Date of Inspection: March 11, 2005
3. Inspection Personnel:

	<u>Name</u>	<u>Agency/Office</u>	<u>Telephone No.</u>
a.	<u>Dan Meyers</u>	<u>COE</u>	<u>438-8875</u>
b.	<u>Jessica Hays</u>	<u>COE</u>	<u>438-1680</u>

4. Discussion:

South Revetted Mole:

Station	Reach	Comments
0+00 to 2+20	#1	0+23 at I Beam

Stub Breakwater:

0+00 to 0+90	#2	Head
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Wave Absorber:

0+00 to 2+00		0+00 at Tie Back 0+50 at Boat Ramp Corner 2+00 at North Rev Mole
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North Revetted Mole:

0+00 to 1+03	#1	Root (0+00 @ coconut tree, OS)
1+03		Trunk Trans 10' - 12' Elev
1+03 to 1+65	#3	Trunk to Tribar section
1+65 to 2+25	#4	Head

Note: All photos were taken in 2005 unless stated otherwise.

The major deficiencies were as follows:

South Revetted Mole & Stub Breakwater:



a. Sta. 0+23, Overview, Notice encroachments - Fale and sign. Station 0+23 is measured at the I-beam.



b. Sta. 1+00, OS, Monitor lea. Dislodged armor stone at the toe, no obvious void.



c. Sta. 1+00, HS, Overview of harborside root, no damage noted.



d. Sta. 1+23, OS, 1 ea. Irregular small stone on crest.



e. Sta. 1+82, HS, Cracked armor stone at crest.



f. Sta 1+82, OS, 2 grout bags on oceanside slope.



g. Overview of harborside of revetted mole from Sta 2+00.

Breakwater:



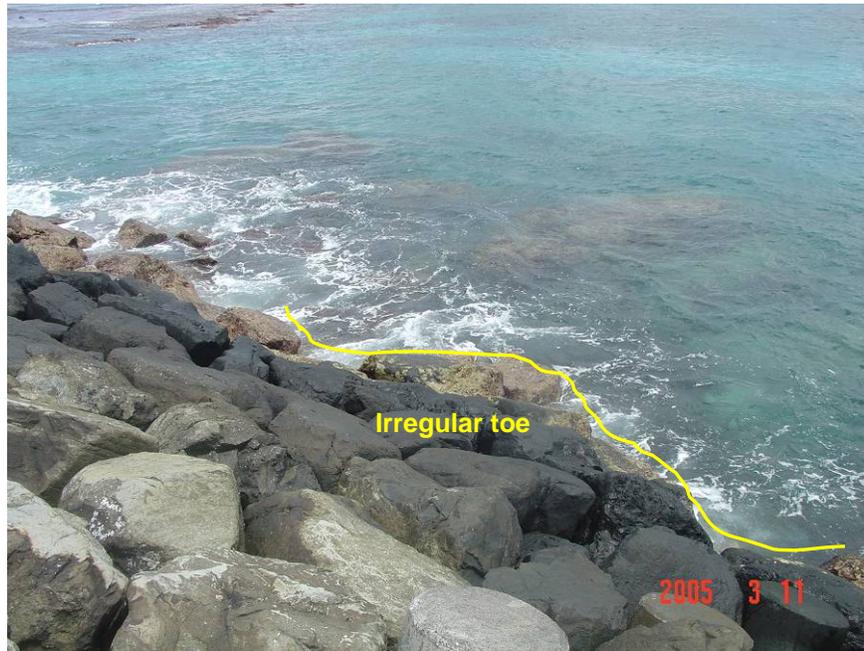
h. Photo of stone used as turning point between revetted mole and breakwater, approx. Sta. 2+12 of mole and Sta. 0+00 of breakwater.



i. Sta. 0+10, OS, At high tide appears to be a void, but view at low tide shows no void, armor stones at toe are intact (2002 PHOTO).



j. Sta. 0+22, OS Sideslope, Monitor slight depression 15' long x 10' wide.



k. Sta. 0+20 to 0+48, OS, Monitor irregular toe including dislodged stones. Beginning of tribars at Sta. 0+48.



l. Sta. 0+90, Head of breakwater is in good condition, no deficiencies noted.



m. View of revetted mole and breakwater.

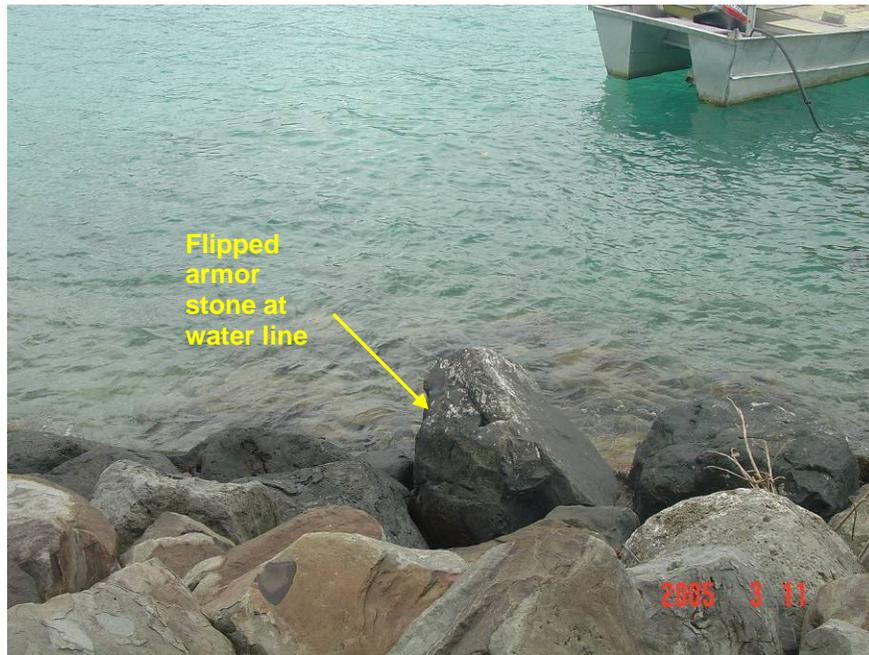
Wave Absorber:



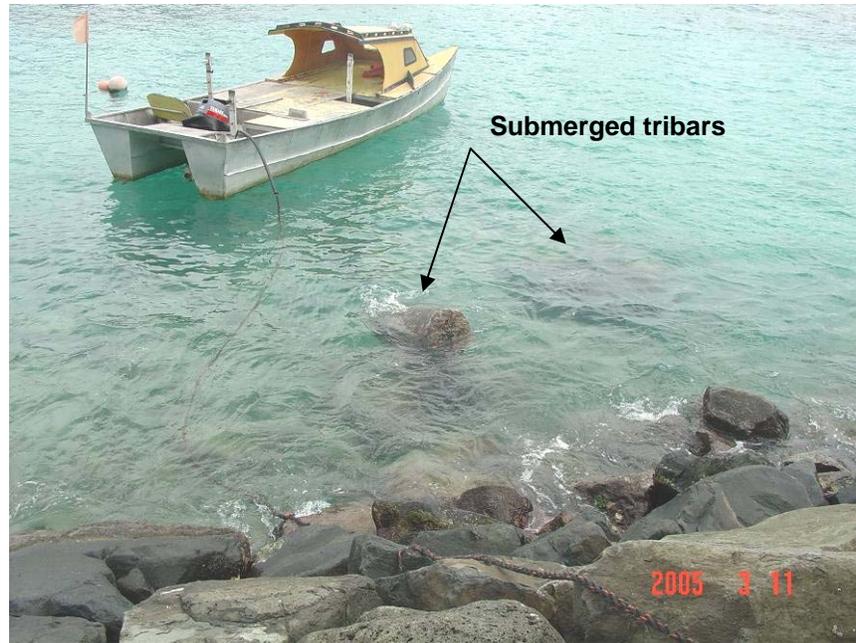
a. Sta. 0+00 to 0+50 of wave absorber adjacent to boat ramp, with interior of south revetted mole and breakwater in the background.



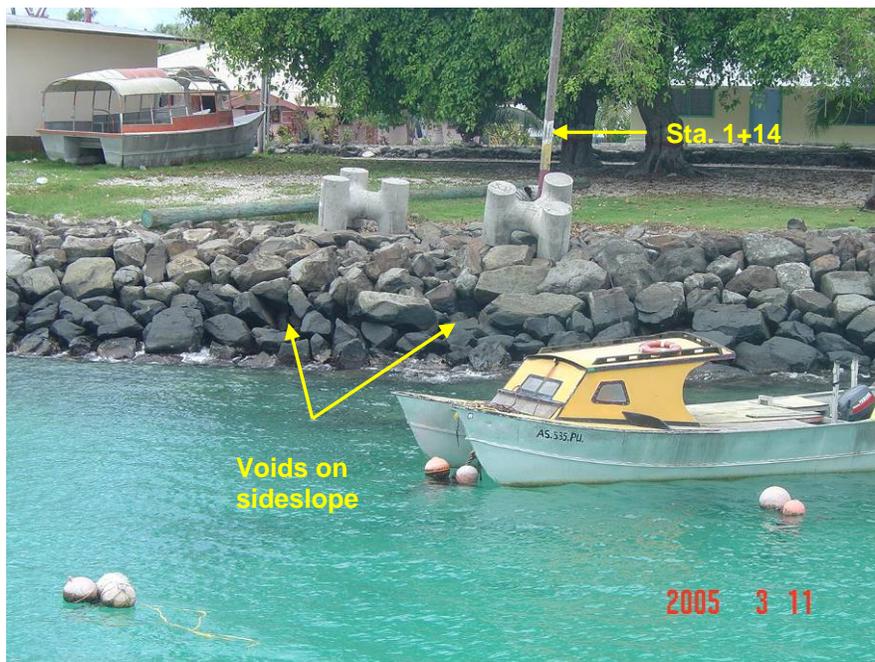
b. Sta. 0+50 to 2+00, crest is erratic with displaced armor stones and poor contact of armor stones.



c. Sta. 0+77, Monitor sideslope depression, flipped armor stone at water line.



d. Sta. 1+02, 2 tribars underwater, first noted this inspection, monitor the location of tribars in future inspections.



e. Sta. 1+14, Telephone pole at Sta. 1+14 for reference, and voids on sideslope at 1+12 and 1+15, between first 2 tribars resting on structure crest used as moorings.



f. Sta. 1+49, Void on sideslope with underlayer exposed, no dislodged stones visible.



g. Sta. 2+15 to 2+30, Monitor changes @ 10' diameter x 5' deep void, and 4'x4' void on the sideslope, UL exposed.



h. Harbor surge and overtopping at joint between wave absorber and North Revetted Mole (2004 Photo).

North Revetted Mole:



a. Sta. 0+00, OS, Coconut tree marks beginning of North Revetted Mole.



b. Sta. 0+65, HS, Reference rock with hole for stationing.



c. Sta. 1+65, HS, Tribar begins on harborside, noted for stationing reference.



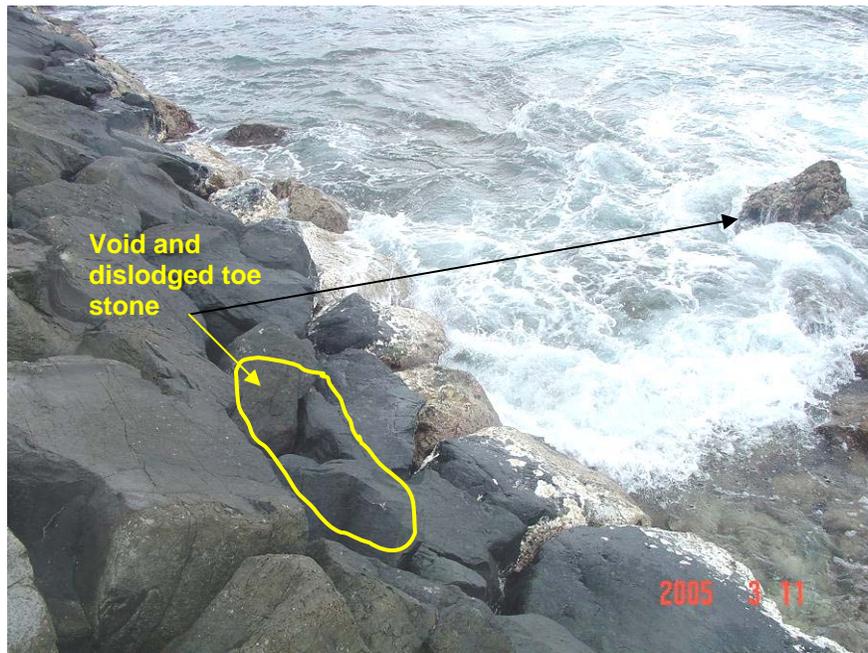
d. Sta. 1+83, HS, Chipped tribar #184.



e. Sta. 2+25, Tribar #39 is at centerline of head. Head is in good condition with no damages noted.



f. Sta. 1+74, OS, Cracked armor stone on crest.



g. Sta. 1+54, OS, Monitor void and dislodged toe stone.



h. Sta. 1+03, OS, Elevation transitions from 10' to 12'.



i. Sta. 1+03, Overview of OS of mole looking landward.



j. OS, 3 ea. Armor stones resting landward of oceanside crest on mole. (No station measured).



k. View of head of North Revetted Mole.

5. Findings/Conclusions:

The South Revetted Mole (220LF) + Stub Breakwater (90LF) are evaluated as one structure. These structure function primarily as 1 breakwater and for rehabilitation purposes, as they are connected, any impact to one structure will affect all. This structure is in GOOD condition. The ongoing item of concern noted during this and previous inspections is the damage being caused to the wave absorber at its joint with the North Revetted Mole, due to wave surge. This surge problem will continue to affect the integrity of the structures and the useability of the harbor. The overall condition of the project is FAIR.

Signed: _____
Jessica Hays, CEPOH-EC-T

Signed: _____
Jim Pennaz P.E., Ch, CEPOH-EC-T

Attached:
Additional Photos
Project Index Map



AUNUU SMALL BOAT HARBOR, AMERICAN SAMOA

CONDITION OF IMPROVEMENT 30 SEPTEMBER 1993

PREVIOUS PROJECTS: None.

EXISTING PROJECT: Authorized for construction on 7 June 1976 under Section 107 of the River and Harbor Act of 1960, as amended. Provides for an entrance channel 175 feet long, 70 feet wide and 14 feet deep; a turning area of 7,500 square feet and 14 feet deep; northern revetted mole 300 feet long; wave absorber 200 feet long; stub breakwater 90 feet long; southern revetted mole 220 feet long; a mooring area 13,500 square feet and 8 feet deep; and appurtenant aids to navigation.

PROGRESS OF WORK

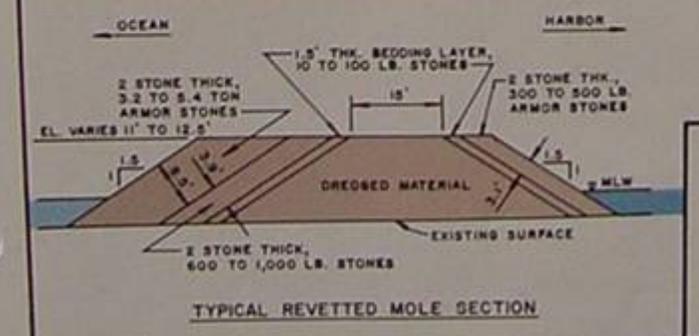
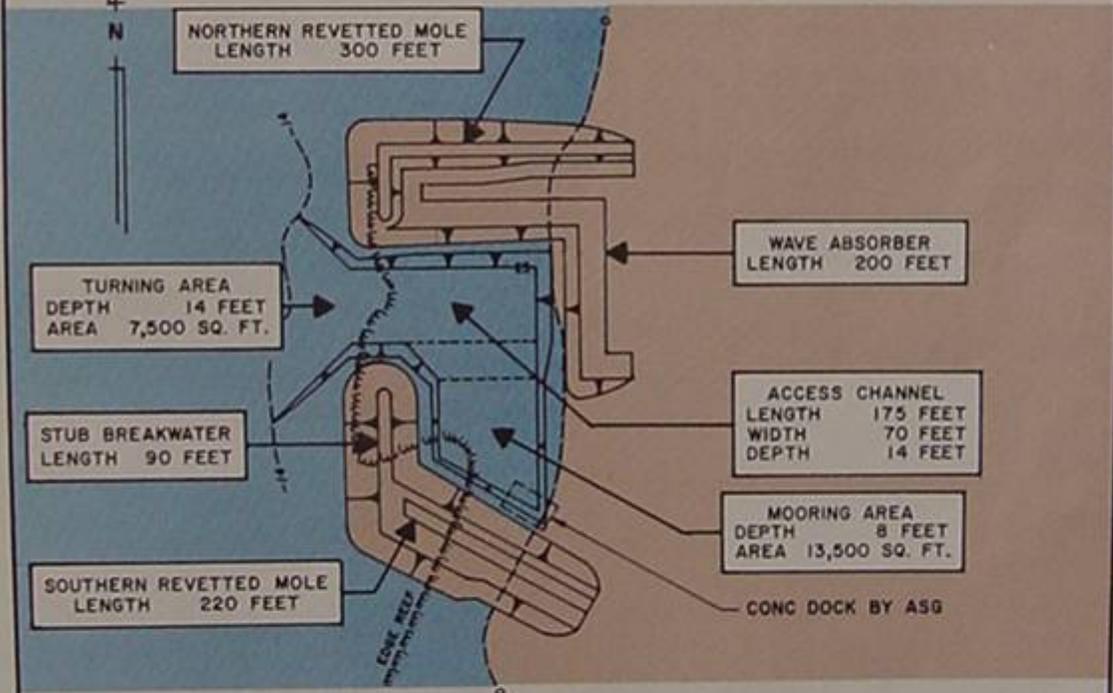
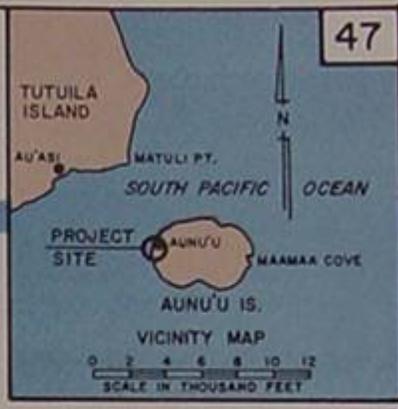
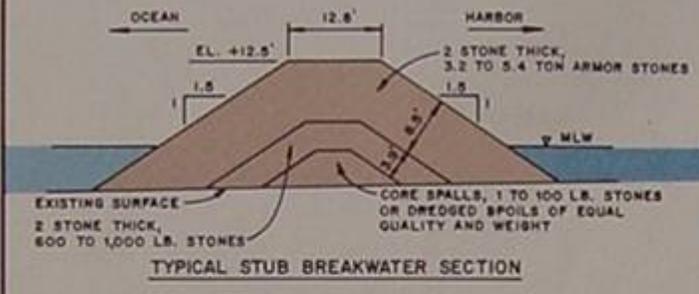
Completed and Under Maintenance: The project was completed in March 1981. Repair work to damaged revetted mole and wave absorber sections was completed in January 1985. A contract to repair damaged revetted mole and wave absorbers noted during an annual inspection of the harbor in September 1986 was completed in February 1989 for \$111,000.

Work Remaining: A single contract to repair damages to public facilities caused by Hurricane Ofa in February 1990 at Aunuu Harbor and to repair damages to breakwaters caused by Hurricane Val in December 1991 at Aunuu and Auasi Small Boat Harbor was awarded in August 1992 for \$415,000 of which \$395,000 was for Aunuu Harbor. Auasi Small Boat Harbor repair work was completed in February 1993 and Aunuu Harbor is scheduled for completion in June 1994.

COST OF CONSTRUCTION:

	<u>New Work</u>	<u>Maintenance</u>	<u>Total</u>
<u>Completed Works:</u>			
United States Funds			
Corps of Engineers	\$1,703,000	\$221,598	\$1,924,598
Coast Guard	10,446	0	10,446
Contributed Funds			
Required	<u>224,848</u>	<u>0</u>	<u>224,848</u>
Total Costs	\$1,938,294	\$221,598	\$2,159,892
<u>Uncompleted Works:</u>			
United States Funds		<u>\$667,500</u>	<u>\$667,500</u>
Total Estimated Costs		\$667,500	\$667,500

RANGE OF TIDES: The range of tide between mean low water and mean high water is 2.5 feet.



AUNU'U SMALL BOAT HARBOR
AUNU'U ISLAND, AMERICAN SAMOA
REVISED 30 SEPTEMBER 1981

100 50 0 100

SCALE IN FEET

U. S. ARMY
ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS