1. Project Name: Pohoiki Bay Navigational Improvements

2. Date of Inspection: May 4, 2005

3. Inspection Personnel:

	Name	Agency/Office	Telephone No.
a.	Dan Meyers	COE	438-8875

4. General Note:

Overall, the head and oceanside of the structure are experiencing some settling.

5. Discussion:

The inspected portion of the project consists of 90 linear feet (LF) of concrete armor unit breakwater. There has been minor additional dislodgment or loss of armor stones in the center void between the rib-cap ties and ribs.

Project Sign, Overview of Root and Cinder Reference Photo

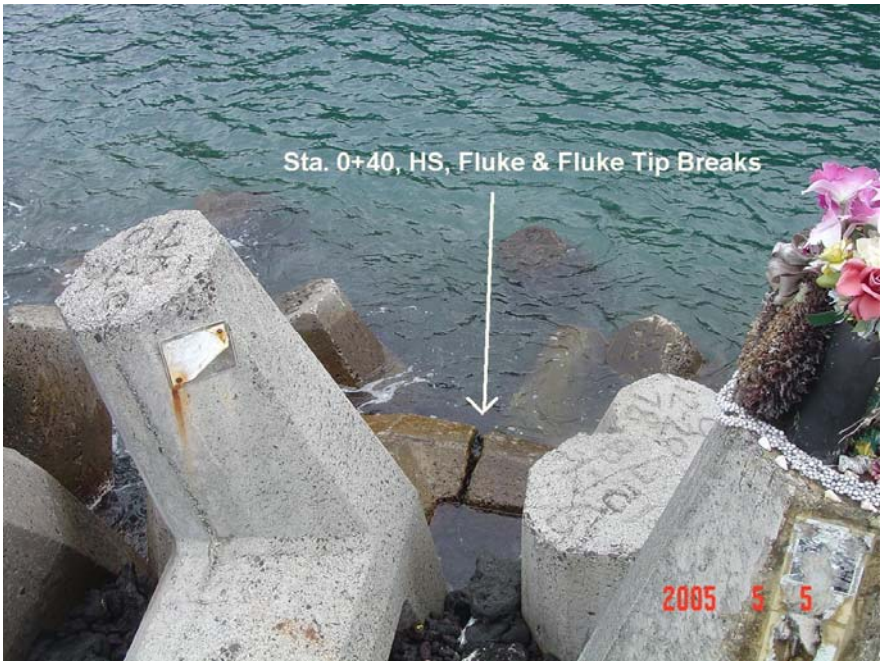
The following are reference photos and deficiencies noted during the inspection at high tide.

a. Sta. 0+00, OS, Overview of ribcap / dolos.

b. Sta. 0+00, HS, Overview of ribcap / dolos.

c. Sta. 0+36, OS, Overview of ribcap/dolos.

d. Sta. 0+36, HS, dolo # $\frac{11-28}{78}$, fluke shank break (old).



e. Sta. 0+40, HS, dolo # $\frac{11-30}{78}$, fluke tip break (old). Unchanged since 2004 Inspection.

f. Sta. 0+50, HS, Typical of washed-up cinders from oceanside.

g. Sta. 0+60 to head, possible loss and movement of underlayer below the ribcap. Continue to monitor.

h. Sta. 0+60, OS, Settling of dolos on Oceanside. Continue to monitor.

i. Sta. 0+66, HS, fluke shank break.

j. Sta. 0+72 (+/-),OS, Possible underlayer washed out, core material visible. (2003 Photo) could not verify due to surf.

k. Sta. 0+72, cracks in both longitudinal ribcap beams.

l. Sta. 0+85, OS, possible washout of underlayer, void noted. 9th opening in Ribcap.

m. Sta. 0+90, at 0 deg off center from the BW head, “rocking dolo”, minor change noted during this inspection.

n. Sta. 0+90, at 90 deg HS from the BW head, no change noted during this inspection.

o. Sta. 0+90, at 90 deg OS from the BW head, no change noted during this inspection.

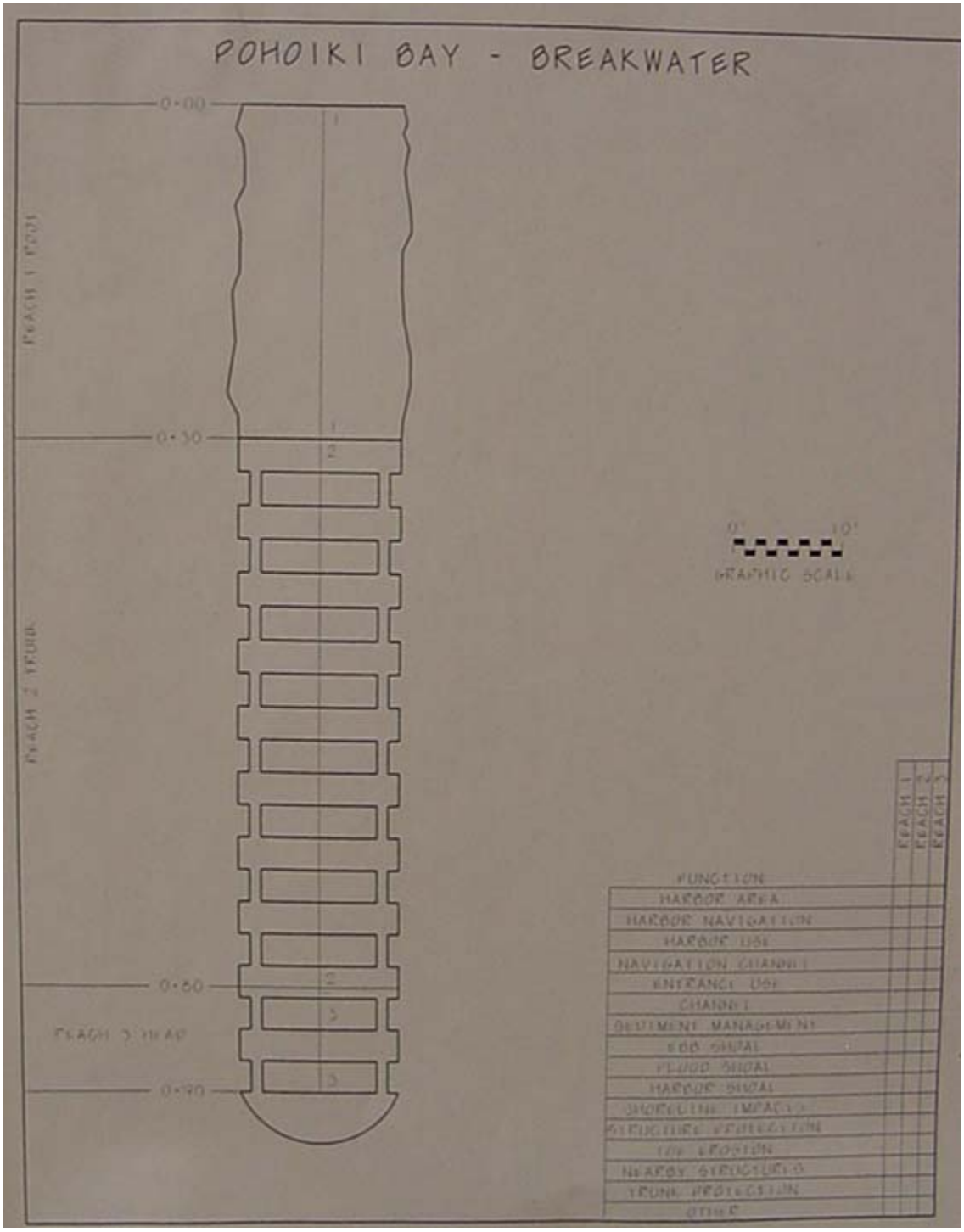
5. Conclusion:

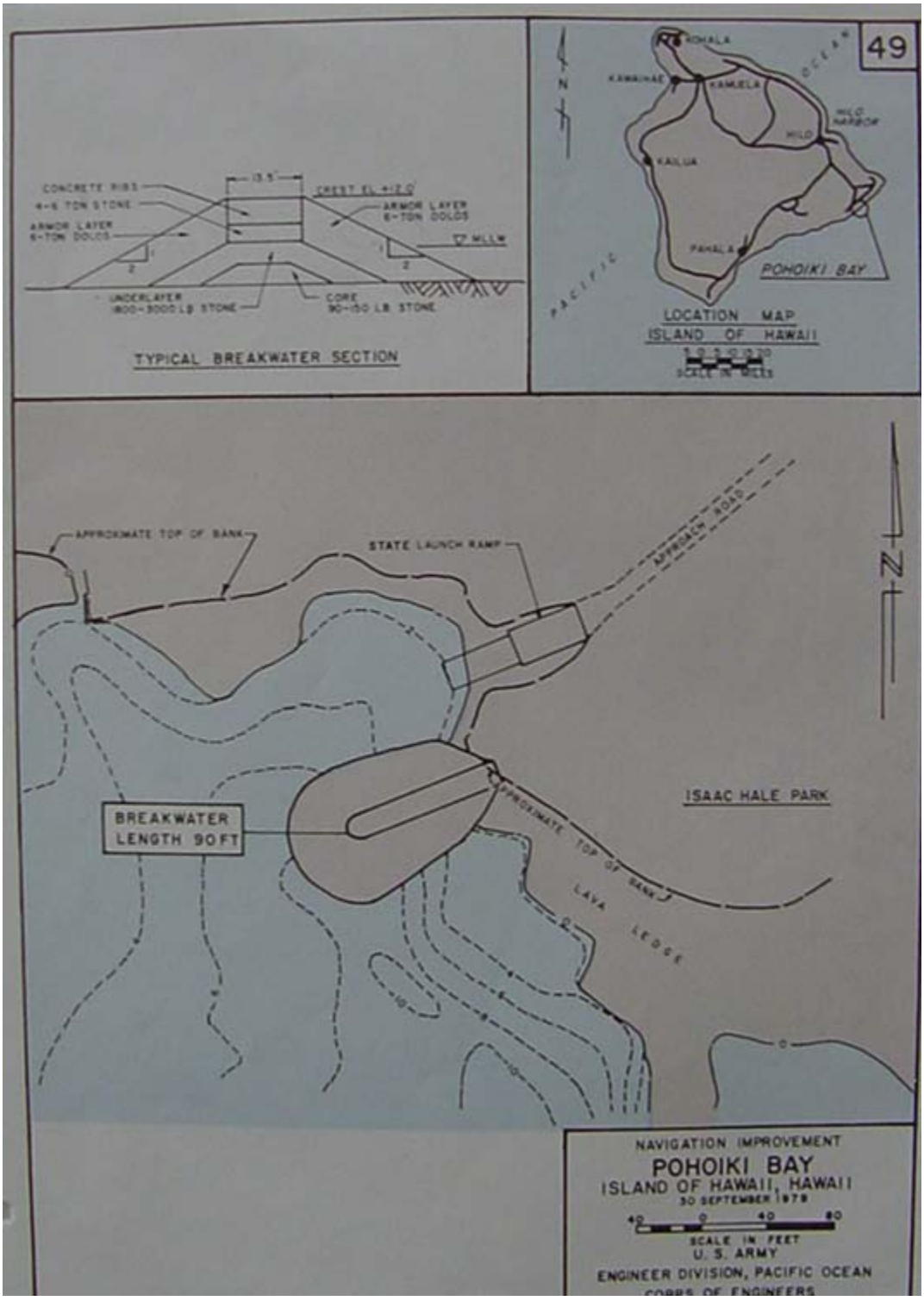
The breakwater structure is in MARGINAL condition, and should be monitored closely. The center cells of the ribcaps 1-4 (starting at the root) are filling in up to 50%; all other cells have no cinders. Settling of dolos noted primarily on oceanside of the structure.

Signed: _____
Dan Meyers, CEPOH-EC-T

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

Attached:
BW Reach Plan
Project Index Map
Additional Reference Photos


POHOIKI BAY - BREAKWATER
0+00
0+30
0+60
0+90
REACH 1 TRUNK
REACH 2 TRUNK
REACH 3 HEAD
1
2
3
0'
10'
GRAPHIC SCALE
REACH 1
REACH 2
REACH 3
FUNCTION
HARBOR AREA
HARBOR NAVIGATION
HARBOR USE
NAVIGATION CHANNEL
ENTRANCE USE
CHANNEL
SEDIMENT MANAGEMENT
LOCAL COASTAL
FLOOD TIDAL
HARBOR TIDAL
SHORELINE IMPACTS
STRUCTURE PROTECTION
TOE EROSION
NEARBY STRUCTURES
TRUNK PROTECTION
OTHER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TYPICAL BREAKWATER SECTION
CONCRETE RIBS
4-6 TON STONE
ARMOR LAYER 6-TON DOLOS
CREST EL +12.0
MLLW
UNDERLAYER 800-3000 LB STONE
CORE 90-150 LB STONE
LOCATION MAP
ISLAND OF HAWAII
POHOIKI BAY
KAMUELA
HILO
KAILUA
PAHALA
PACIFIC OCEAN
APPROXIMATE TOP OF BANK
STATE LAUNCH RAMP
APPROACH ROAD
BREAKWATER LENGTH 90FT
ISAAC HALE PARK
LAVA LEDGE
NAVIGATION IMPROVEMENT
POHOIKI BAY
ISLAND OF HAWAII, HAWAII
30 SEPTEMBER 1979
SCALE IN FEET
U. S. ARMY
ENGINEER DIVISION, PACIFIC OCEAN
CORPS OF ENGINEERS

POHOIKI BAY NAVIGATION IMPROVEMENT, HAWAII, HAWAII

CONDITION OF IMPROVEMENT 30 SEPTEMBER 1989

PREVIOUS PROJECTS: None.

EXISTING PROJECT: Authorized in June 1978 under Section 107 of the River and Harbor Act of 1960, as amended. Provides for a 90-foot long breakwater.

PROGRESS OF WORK

Completed and Under Maintenance: The project was completed in June 1979.

Work Remaining: None.

COST OF CONSTRUCTION:

Completed Works:	New Work
United States Funds	$383,276
Total Costs	$383,276

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

Overview of BW from root on Oceanside

(2003 Photo)

2005 Photo