



- EXPLANATION
- d Debris-apron deposits, locally may include outcrops of bedrock
  - a Alluvium and lacustrine deposits
  - h Honolulu Volcanics--basalt flows from Sugarloaf
  - k Koolau Basalt--interbedded flows of aa and pahoehoe, locally covered by residuum or colluvium
  - Contact, approximately located
  - Edge of distinct fan within debris apron
  - Approximate outline of the Alani-Paty landslide
  - Drainage channel

Fans and contacts between debris-apron deposits and adjacent units identified using stereoscopic viewing of aerial photographs (frames M 53.65 and M 53.66, photographed 1941, obtained from the National Archives, and frames 893-12 and 893-13, photographed Sept. 20, 1952, by R.M. Towill Corp., Honolulu, Hawaii). Bedrock units from Stearns (1939).

Base from sheet 46 of "Photo Contour Map of Portions of City of Honolulu, Oahu, Hawaii", 1952 by R.M. Towill Corp.

Origin of coordinates: Punchbowl

North



0 1000 2000 FEET

CONTOUR INTERVAL 10 FEET  
DATUM IS MEAN SEA LEVEL

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards.

GEOMORPHIC MAP OF PART OF MANOA VALLEY AND WAAHILA RIDGE, HONOLULU, HAWAII

By

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1992