



Prepared by the U.S. Geological Survey for publication by the Defense Mapping Agency Hydrographic/Topographic Center, Washington, D.C.
MAP INFORMATION AS OF 1982

LEGEND

ROADS
 Divided highway with median strip
 Primary, all weather, hard surface
 Secondary, all weather, hard surface
 Light duty, all weather, hard or improved surface
 Fair or dry weather, unimproved surface
 Trail
 Route markers: Interstate, Federal, State
 Bridge
 RAILROADS (Standard gauge 1.44m - 4'8 1/2")
 Single track
 Multiple track
 Nonoperating
 Railroad station: Location known; Location unknown
 Car line
 Railroad bridge
 Tunnel: Highway, Railroad

BOUNDARIES
 National, with monument
 State, territory
 County, parish
 Civil township, town
 Incorporated city, village, town
 Reservation: National, State, Military

Other symbols:
 Power transmission line
 Buildings
 Structures
 Church, School
 Power substation
 Windmill, Watermill
 Well, Tank
 Mine shaft
 Open pit mine or quarry
 National control station
 Bench mark, monument
 Bench mark, non-monumental
 Spot elevations in meters
 Leaves, vine, dikes
 Bluffs, cliffs
 Woodland
 Scattered trees: Scrub
 Vineyard, Orchard, plantation
 Intermittent lake: Dam, Earthen, Masonry
 Stream: Perennial, Intermittent
 Marsh, swampy
 Small falls; Large falls
 Small rapids; Large rapids

SCALE 1:50,000
 1:50,000
 1 2 3 4 5 Kilometers
 1 2 3 Statute Miles
 1 2 3 Nautical Miles

ELEVATIONS IN METERS
 CONTOUR INTERVAL 20 METERS

CONVERSION GRAPH
 (1 meter = 3.28 feet)

Meters	Feet
0	0
100	328
200	656
300	984
400	1312
500	1640
600	1968
700	2296
800	2624
900	2952
1000	3280

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SPHEROID
 GEODETIC REFERENCE SYSTEM 80
 GRID
 100-METER UTM ZONE 5 (BLACK NUMBERED LINES)
 500,000-METER STATE GRID TICS (HAWAII EDITION)
 PROJECTION
 TRANSVERSE MERCATOR
 VERTICAL DATUM
 MEAN SEA LEVEL
 HORIZONTAL DATUM
 NORTH AMERICAN DATUM 1983
 CONTROL BY
 USGS AND NOS/NOAA
 PREPARED BY
 U.S. GEOLOGICAL SURVEY
 PUBLISHED BY
 DEMATIC 8-88

GRID CONVERGENCE
 127.176 MILLS
 FOR CENTER OF SHEET

100 METER REFERENCE
 1. Read large numbers labeling the VERTICAL grid line left of point and estimate within 1000 meters from grid line to point. 12 3
 2. Read large numbers labeling the HORIZONTAL grid line below point and estimate within 1000 meters from grid line to point. 45 6
 Example: 123456
 WHEN REPORTING ACROSS A 100,000 METER LINE, PREFIX THE 100,000 METER IDENTIFICATION IN WHICH THE POINT LIES.
 Example: K8123456
 WHEN REPORTING ACROSS THE GRID ZONE DESIGNATION AREA, PREFIX THE GRID ZONE DESIGNATION.
 Example: SQ8123456

BOUNDARIES

ADJOINING SHEETS

ELEVATION GUIDE

SLOPE GUIDE

PERCENTAGE DEGREE

PERCENTAGE	DEGREE
1%	0.57°
2%	1.14°
3%	1.71°
4%	2.29°
5%	2.86°
6%	3.44°
7%	4.01°
8%	4.58°
9%	5.16°
10%	5.73°
11%	6.30°
12%	6.88°
13%	7.45°
14%	8.02°
15%	8.59°
16%	9.16°
17%	9.74°
18%	10.31°
19%	10.88°
20%	11.45°

TO CONVERT A GRID AZIMUTH TO A MAGNETIC AZIMUTH
 ADD G-M ANGLE

TO CONVERT A MAGNETIC AZIMUTH TO A GRID AZIMUTH
 SUBTRACT G-M ANGLE

THIS MAP IS RED-LIGHT READABLE
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