

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

Scale 1:50,000



**LEGEND**

MAP INFORMATION AS OF 1977  
ON THIS MAP, A LANE IS GENERALLY CONSIDERED AS BEING A MINIMUM OF 2.5 METERS (8 FEET) IN WIDTH IN DEVELOPED AREAS, ONLY THROUGH ROADS ARE CLASSIFIED

	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, With superstructure, Without superstructure
	RAILROADS (Standard gauge 1.44m - 4'8 1/2")
	Single track
	Multiple track
	Nonoperating
	Railroad station, location known, location unknown
	Car line
	Railroad bridge, With superstructure, Without superstructure
	Tunnel, Highway, Railroad
	ROADWAYS
	National, with monument
	State, territory
	County, parish
	Civil township, town
	Incorporated city, village, town
	Reservation: National, State, Military
	Power transmission line
	Buildings
	Church, School
	Power substation
	Windmill, Watermill
	Well, Tank
	Mine shaft
	Open pit mine or quarry
	Horizontal control station
	Bench mark, monument
	Bench mark, non-monumented
	Spot elevations in meters
	Levee, rim, dike
	Bluffs, cliffs
	Woodland
	Scattered trees, Scrub
	Vineyard, Orchard, plantation
	Intermittent lake, Dam, Earth, Masonry
	Stream, Perennial, Intermittent
	Marsh, Inland
	Small rapids, Small falls
	Large rapids, Large falls

**ELEVATIONS IN METERS**

**CONTOUR INTERVAL 10 METERS**

**SPHEROID**..... 100,000 METER UTM ZONE 18 (BLACK NUMBERED LINES)  
 100,000 METER UTM ZONE 17 (BLUE NUMBERED LINES)

**PROJECTION**..... 10,000 FOOT STATE GRID TICKS, VIRGINIA (NORTH ZONE)  
 NATIONAL GEODESIC VERTICAL DATUM OF 1929  
 HORIZONTAL DATUM..... 1927 NORTH AMERICAN DATUM  
 PREPARED BY..... U.S. GEOLOGICAL SURVEY  
 PRINTED BY..... DIAMANTIC 379

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**100 METER REFERENCE**

1. Read large numbers labeling the VERTICAL grid (back of point and contour marks (100 meters) from grid line to point. 12 3

2. Read large numbers labeling the HORIZONTAL grid line below point and estimate (100 meters) from grid line to point. 45 0

Example: 1234.56

**WHEN REPORTING OUTSIDE THE 100,000 METER SQUARE AREA IN WHICH THE POINT LIES, PREFIX THE 100,000 METER SQUARE IDENTIFICATION. Example: 123456**

**WHEN REPORTING OUTSIDE THE GRID ZONE DESIGNATION AREA IN WHICH THE POINT LIES, PREFIX THE GRID ZONE DESIGNATION. Example: 18T123456**

**UTM ZONE 18**

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

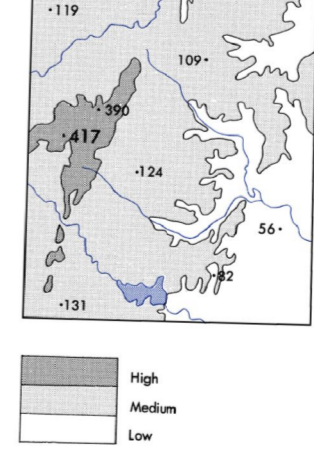
**UTM ZONE 17**

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

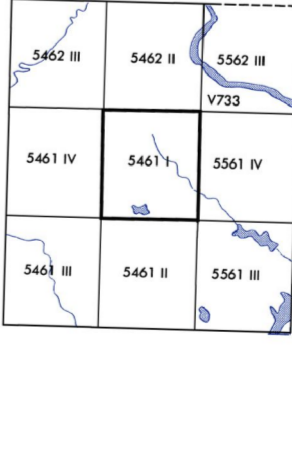
GRID CONVERGENCE 1°39' (29 MAS) FOR CENTER OF SHEET

GRID CONVERGENCE 1°07' (107 MAS) FOR CENTER OF SHEET

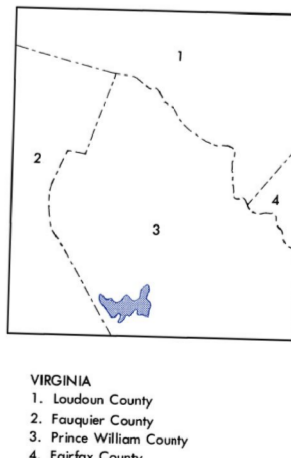
**ELEVATION GUIDE**



**ADJOINING SHEETS**



**BOUNDARIES**



THIS MAP IS RED-LIGHT READABLE

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USERS SHOULD REFER TO CORRECTIONS, ADDITIONS, AND COMMENTS TO THE NGA OPERATIONAL HELP DISK: 1-800-455-8888, COMMERCIAL 314-263-4864, DSN 860-4864 OR WRITE TO DIRECTOR, NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY, ATTN: LES, MAIL STOP 1-48, 4600 SANGAMORE ROAD, BETHESDA, MD 20815-6003.