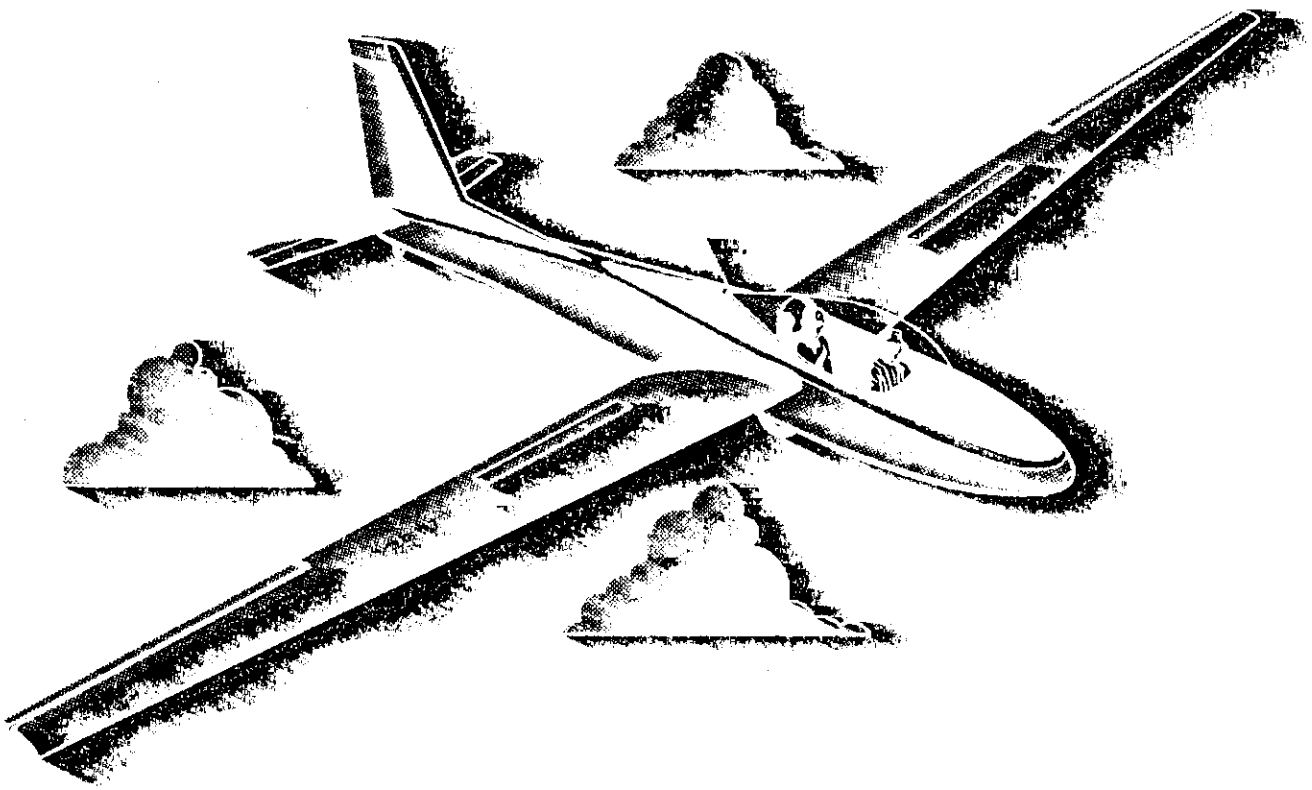
Reference Only

AC 61-81

PRIVATE and COMMERCIAL PILOT

GLIDER

WRITTEN TEST GUIDE



U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

PRIVATE AND COMMERCIAL PILOT—GLIDER WRITTEN TEST GUIDE

AC 61-81

1976

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE

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Preface

The Flight Standards Service of the Federal Aviation Administration has developed this guide to assist applicants who are preparing for the Private or Commercial Pilot Certificate with a Glider Rating.

This guide contains a comprehensive study outline and a list of recommended study materials, and explains how these publications can be obtained. It includes study questions and illustrations pertinent to the subject of glider flying.

This guide is issued as Advisory Circular 61–81 and should be used by those persons pursuing the certificate under the provisions of FAR 61, which became effective November 1, 1973.

Comments regarding this publication should be directed to the U.S. Department of Transportation, Federal Aviation Administration, Flight Standards Technical Division, P.O. Box 25082, Oklahoma City, Oklahoma 73125.

Contents

PRIVATE AND COMMERCIAL PILOT-GLIDER WRITTEN TEST GUIDE

Introduction

What is required to become a skilled glider pilot? Although some persons possess a greater degree of desirable skills than others, no one is born a natural pilot. Good glider pilots become so through study, experience, and hard work. Probably more than any other single factor, the pilot's own attitude toward the operation of a glider determines to a large extent the ability of the pilot.

After the prospective glider pilot has acquired a certificate, it is imperative that a continuous effort is made to stay abreast of the latest trends in soaring, regulations, and practices. This is extremely important for the glider pilot, because glider operation, as in other fields of aviation, is not static; it is dynamic and changing, and what holds true today may not necessarily apply tomorrow. The glider pilot must keep informed about new techniques, new equipment, new procedures, and regulatory changes.

Knowledge and understanding are seldom gained quickly or easily. There can be no substitute for diligent study to attain basic knowledge, unremitting effort to develop competence, and continuous review to remain current in the many areas where technological change is the rule rather than the exception.

The purpose of this guide is to provide guidance for the applicant by outlining the scope of knowledge required. By using this guide, the applicant is better able to intelligently plan a course of study. There is a direct relationship between FAA written study guides and FAA written tests, because both are developed by the same personnel.

Certification Requirements

To be eligible for a Private or Commercial Certificate with a Glider category rating, the certification process requires that the applicant show evidence that instruction has been received or that a home study course has been completed prior to being administered the written test. The applicant must pass a written test on the aeronautical knowledge appropriate to the certificate and rating sought. However, if the applicant already holds a Private or Commercial Certificate with a category rating in powered aircraft, it is not required that a written test be taken when adding a glider category rating to the certificate held. The certification process requires in all cases that the applicant pass a practical test in which competency as a glider pilot must be demonstrated.

For *specific* information pertaining to glider pilot certification, review the applicable sections of Federal Aviation Regulations, Part 61, which became effective November 1, 1973.

Written Tests

The Private and Commercial Pilot-Glider Written Tests are very comprehensive because, to be effective, they must test an applicant's knowledge in many subject areas. These areas include all subjects in which ground instruction is required for the glider pilot category rating. These subject areas are incorporated in the appropriate written tests, and also prescribed in FAR 61: Certification of Pilots and Flight Instructors.

The Private Pilot-Glider Written Tests may contain as many as 50 test items, and three hours and 30 minutes are allowed for taking each test. The Commercial Pilot-Glider Written Tests contain 60 test items, and three hours and 30 minutes are allowed for taking each test.

All test items are the objective, multiple-choice type, and can be answered by the selection of a single response. This type of test conserves the applicant's time when taking the test, permits greater coverage of subject matter, lessens the time required for scoring, and eliminates subjective judgment in determining grades.

Each item is independent of every other test item. That is, a correct response to one test item does not depend upon, or influence, the correct response to another test item.

After completing the test, the applicant's answer sheet is forwarded to the FAA Aeronautical Center for scoring by ADP computers. Shortly thereafter, the applicant will receive an Airman Written Test Report, which not only includes the score but lists, in code, the subject areas in which difficulty is experienced. Those subject areas can be determined by reference to the Subject Matter Outline which accompanies the report. This method provides an

essential feedback to the applicant and can be effectively used to strengthen knowledge in weak areas.

Taking the Tests

Communication between individuals, through the use of words, is a complicated process. Since tests involve the use of written language, communication between the test writers and the persons being tested becomes a problem if care is not exercised. Considerable effort is expended to write each test item in a clear, concise manner. Therefore, applicants should carefully read the information and instructions given in the tests, as well as in each test item.

Always remember the following when taking the test:

1. There are no "trick" questions. Each statement means exactly what it says. Do not look for hidden meanings. The statement does not concern exceptions to the rule; it refers to the general rule.

2. Carefully read the entire test item, statement, or question before looking at the answers below it. Skimming and hasty assumptions can lead to a completely erroneous approach to the problem because of failure to consider vital words. Look through the list of alternative answers or phrases and select the one that answers the question fully and correctly.

3. Only one of the alternative answers given is completely correct. The other alternatives may be the result of using incorrect procedures to solve problems, common misconceptions, or incomplete knowledge of the subject, and may appear to be correct to individuals who have not mastered the subject. If the subject matter is understood correctly, answering the questions should not be difficult.

4. If considerable difficulty is experienced with a particular test item, do not spend too much time on it, but continue on with other items which are considered less difficult. When easier items are completed, go back and complete the items which are found to be more difficult. This procedure will enable the applicant to use the total time available to maximum advantage in demonstrating knowledge and understanding of the subject.

Recommended Study Materials

Professionalism in piloting any aircraft is as important as it is in any field classified as a profession. To enhance professionalism in the field of aviation, the prospective pilot should establish and maintain a current technical library. By obtaining study materials that are beneficial and appropriate to preparing for certification, the prospective pilot will be starting an aeronautical library for career use. The following lists essential reference materials but does not include all the useful material that is available. Other excellent textbooks, audiovisual training aids, and instructional materials produced commercially may be obtained from various bookstores and fixed-base operators engaged in flight training.

1. *Federal Aviation Regulations.* Suggested Parts for study are: Part 1, Definitions and Abbreviations. Available from Government Printing Office (GPO). Part 61, Certification: Pilots and Flight Instructors (GPO). Part 91, General Operating and Flight Rules (GPO).

2. *National Transportation Safety Board Procedural Regulation, Part 830.* This publication deals with required notification and reporting procedures relating to aircraft accidents and lost or overdue aircraft in the United States, its territories, and possessions. It is free of charge upon request from the National Transportation Safety Board, Publications Section, Washington, D.C. 20594.

3. *Pilot's Handbook of Aeronautical Knowledge, AC 61-23A.* (GPO) Contains essential authoritative information used in training and guiding private and commercial pilots. It is designed primarily for the airplane pilot. However, much of the material is applicable to private and commercial glider pilot applicants.

4. *Aviation Weather, AC 00-6A.* (GPO) Contains information on weather phenomena for pilots and other flight operations personnel whose interest in meteorology is primarily in its application to flying. It includes material on present aviation weather services, glossary of meteorological terms, a chapter devoted to soaring weather, and many pertinent illustrations.

5. *Aviation Weather Services, AC 00-45.* (GPO) This is a supplement to AC 00-6A, which is periodically updated to reflect changes brought about by the latest technical capabilities and service demands. It explains current weather services and the uses of weather charts and printed weather messages in detail, and is an excellent source of study for pilot certification examinations.

6. *The American Soaring Handbook.* Published by the Soaring Society of America, this handbook represents the combined efforts of many veteran soaring pilots. Each chapter is a separate booklet.

a. The American Soaring Handbook, Chapter 2, Training.

b. The American Soaring Handbook, Chapter 3, Ground Launch.

c. The American Soaring Handbook, Chapter 4, Airplane Tow.

d. The American Soaring Handbook, Chapter 5, Meteorology.

e. The American Soaring Handbook, Chapter 6, Cross-Country and Wave Soaring.

f. The American Soaring Handbook, Chapter 7, Equipment I, Instruments and Oxygen.

g. The American Soaring Handbook, Chapter 8, Equipment II, Radio, Rope, and Wire.

7. *The Joy of Soaring.* A training manual that is the latest in a series of publications by the Soaring Society of America, designed to promote not only enjoyment, but proficiency and safety in soaring activities. This publication is comprehensive in its authoritative description of training techniques and is useful to both the beginner and the experienced pilot.

The American Soaring Handbook and *The Joy of Soaring* may be obtained from bookstores, sailplane operators, or ordered from:

The Soaring Society of America
Box 66071
Los Angeles, California 90066

8. *Airman's Information Manual (AIM).* Presents, in five parts, information necessary for planning and conducting flights within the National Airspace System. It provides frequently updated airport and NAVAID data, and includes instructional and procedural information pertinent to flight operations. Each part is available on a separate annual subscription to better serve the needs of the individual pilot.

Part 1—Basic Flight Manual and ATC Procedures. (GPO.) Issued quarterly.

Part 2—Airport Directory. (GPO.) Issued semiannually.

Part 3—Operational Data. (GPO.) Issued every 56 days.

Part 3A—Notices to Airmen. (GPO.) Issued every 14 days.

NOTE: As of April 1975, Part 3A became a separate Part, which must be ordered and paid for separately. It will no longer be received automatically as an item with Part 3.

Part 4 — Graphic Notices — Supplemental Data. (GPO.) Issued quarterly.

For additional information on AIM, see Study Outline, page —. Sample excerpts from the various AIMs may be found in the Appendix.

9. *Wake Turbulence, AC 90–23D.* Presents information on the subject of wake turbulence and suggests techniques that may help pilots avoid the hazards associated with wingtip vortex turbulence. This publication is free of charge upon request from the Department of Transportation, Distribution Unit, TAD 443.1, Washington, D.C. 20590.

10. *Advisory Circulars.* The FAA issues Advisory Circulars to inform the aviation public in a systematic way of nonregulatory material of interest. Advisory Circulars in the following subject areas are recommended and most of these can also be obtained free of charge from the Distribution Unit of the Department of Transportation, Washington, D.C.

Subject Number	*Subject Matter*
00	General
20	Aircraft
60	Airmen
70	Airspace
90	Air Traffic Control and General Operations

11. *Aeronautical Charts.* The National Ocean Survey publishes and distributes aeronautical charts covering the United States. A "Catalog of Aeronautical Charts and Related Publications" which lists prices and information regarding distribution services may be obtained free of charge from:

Distribution Division (C44)
National Ocean Survey
Riverdale, Maryland 20840

Orders for specific charts or publications made to the address given above should be accompanied by a check or money order made payable to, "NOS, Dept. of Commerce."

12. *VFR and IFR Exam-O-Grams.* Brief, timely, and graphic articles developed and published on a continuing basis. They are nondirective in nature and are issued as an information service, particularly to individuals interested in FAA Airman Written Tests. They relate to concepts, practices, and procedures critical to aviation safety, and assist in giving safety-oriented information to airman applicants and practicing airmen. Exam-O-Grams are available free of charge but are limited to a single copy per request. Requests for placement on the mailing list should be addressed to:

FAA Aeronautical Center
Flight Standards Technical Division
Operations Branch, AAC–240
P.O. Box 25082
Oklahoma City, Oklahoma 73125

13. *Glider/Sailplane Flight Manuals and Owner's Manuals.* Aircraft manufacturers issue manuals for each aircraft model. They may be obtained from individual aircraft manufacturing companies or from local dealers and distributors.

How to Obtain GPO Publications

1. Order blanks are free and may be ordered from:

Superintendent of Documents
Government Printing Office
Washington, D.C. 20402

2. If an order blank is not available, a letter may be used to request publication. In this case, be sure to enclose a self-addressed mailing label.

3. All prices are subject to change. Consult AC 00–2, "Advisory Circular Checklist and Status of Federal Aviation Regulations," for the current price of publications. It is very important that the *correct* amount be enclosed with the order.

In addition to the mail-order service provided by the Office of the Superintendent of Documents, several retail bookstores have been established throughout the country which constitute a part of the operations of the Superintendent of Documents. The public is encouraged to use the services offered by these facilities, as many of the more popular publications are stocked in these bookstores. These retail outlets are located in major cities throughout the country.

STUDY OUTLINE

PRIVATE AND COMMERCIAL PILOT-GLIDER

Aeronautical Knowledge Areas

I. FEDERAL AVIATION REGULATIONS

A. Parts 1; 71: Definitions/Controlled Airspace

1. Air commerce
2. Airport traffic area
3. Ceiling
4. Commercial operator
5. Flight level
6. Flight visibility
7. Major alteration
8. Major repair
9. Pilot in command
10. Second in command
11. Federal Airway
12. Control area
13. Continental control area
14. Control zone
15. Terminal control area
16. Positive control area

B. Part 61: Certification: Pilots/Flight Instructors

1. Required certificates/ratings
2. Certificates and ratings issued
3. Expired pilot certificates/reissuance
4. Offenses involving narcotic drugs/marihuana
5. Duration of pilot certificates
6. Medical certificates
7. General limitations
8. Pilot logbooks
9. Recent experience: Pilot in command
10. Pilot in command proficiency check
11. Glider towing: Experience/instruction
12. Private pilot privileges/limitations
13. Commercial pilot privileges/limitations

C. Part 91: General Operating Rules—Subpart A

1. Responsibility of pilot in command
2. Preflight action
3. Careless or reckless operation
4. Liquor and drugs
5. Dropping objects
6. Fastening of safety belts
7. Parachutes and parachuting
8. Towing gliders: Safety links/waivers
9. Civil aircraft: Certificates required
10. Aircraft airworthiness
11. Aircraft operating limitations/markings
12. Supplemental oxygen
13. Limited/restricted aircraft limitations

D. Part 91: General Flight Rules—Subpart B

1. Waivers
2. Operating near other aircraft
3. Right-of-way rules
4. Acrobatic flight
5. Aircraft lights
6. ATC light signals
7. Minimum safe altitudes; general
8. Altimeter settings
9. Flight plan; information required
10. Operation—in vicinity of airport
11. Operation—airport with control tower
12. Operation—airport without control tower
13. Flight in terminal control areas
14. Temporary flight restrictions
15. Restricted and prohibited areas
16. Positive control areas
17. Basic VFR weather minimums
18. Special VFR weather minimums

E. Part 91: Maintenance, Preventive Maintenance, and Alterations—Subpart C

1. General maintenance and alterations
2. Maintenance required
3. Carrying persons after repair/alteration
4. Inspections/progressive inspections
5. Maintenance records/transfer of records

II. NATIONAL TRANSPORTATION SAFETY BOARD PROCEDURAL REGULATION—PART 830

A. General

B. Initial Notification of Aircraft Accidents, Incidents, and Overdue Aircraft

C. Preservation of Aircraft Wreckage, Mail, Cargo, and Records

D. Reporting of Aircraft Accidents, Incidents and Overdue Aircraft

III. FAA ADVISORY CIRCULARS

A. Series 00—General
B. Series 20—Aircraft
C. Series 60—Airmen
D. Series 70—Airspace
E. Series 90—Air Traffic Control and General Operations
F. Series 150—Airports

IV. AIRMAN'S INFORMATION MANUAL

A. Part 1: Basic Flight Manual and ATC Procedures
   1. Glossary of aeronautical terms
   2. Airport lighting/marking/aids
   3. Air navigation radio aids
   4. Controlled/uncontrolled airspace
   5. Operations at nontower airports
   6. Special use airspace—prohibited, restricted, ISJTA, alert areas
   7. Automatic terminal information service (ATIS)
   8. Aeronautical advisory stations (UNICOM)
   9. Radiotelephone phraseology/technique
   10. Traffic/wind direction indicators
   11. Weather information/briefing
   12. Flight plans
   13. Wake turbulence
   14. ADIZ and designated mountainous areas
   15. Medical facts for pilots
   16. Good operating practices

B. Part 2: Airport Directory
   1. Airport data
   2. FSS/weather service telephone numbers

C. Part 3: Operational Data
   1. Radio facility/FSS data
   2. Special notices/special operations
   3. Notices to airmen (NOTAMS)

D. Part 3A: Notices to Airmen

E. Part 4: Graphic Notices and Supplemental Data
   1. Terminal area graphic notices
   2. Restrictions to en route navigation aids
   3. VOR receiver checkpoints
   4. Parachuting jumping areas
   5. Heavy wagon and olive branch routes

V. WEATHER

A. The Earth's Atmosphere
   1. Composition
   2. Vertical structure
   3. The standard atmosphere
   4. Density

B. Temperature
   1. Temperature measurement
   2. Heat and temperature
   3. Temperature aloft
   4. Temperature variation

C. Atmospheric Pressure and Altimetry
   1. Atmospheric pressure measurements
   2. Sea level pressure
   3. Station pressure
   4. Pressure variations
   5. Pressure systems
   6. Altimeters

D. Wind
   1. Basic theory of general circulation
   2. Convection
   3. Pressure gradient force
   4. Coriolis force
   5. Friction
   6. The jet stream
   7. Local and small scale winds
   8. Large wind system
   9. Wind, pressure systems, and weather
   10. Wind shear

E. Moisture
   1. Measurements
      a. Relative humidity
      b. Dewpoint
   2. Change of state
   3. Condensation and sublimation products

F. Stability and Instability
   1. Adiabatic process
   2. Lapse rates
   3. Stability determinations
   4. Effects of stability or instability

G. Clouds
   1. Composition
   2. Formation and structure
   3. Types
   4. Recognition

H. Air Masses
   1. Source regions
   2. Classification of air masses
   3. Air mass modification
   4. Summer and winter air mass weather

I. Fronts
   1. Structure of fronts
   2. Types of fronts
   3. Frontal waves and occlusions
   4. Frontolysis and frontogenesis
   5. Associated weather

J. Turbulence
   1. Convective currents
   2. Obstructions to wind flow

3. Wind shear
4. Clear air turbulence
5. Categories of turbulence intensities
6. Wake turbulence

K. Icing
1. Structural ice formation
2. Ice producing cloud types
3. Accretion rate of inflight structural icing
4. Types and intensities of inflight structural icing
5. Effects of inflight structural icing
6. Structural aircraft icing and frost on the ground

L. Thunderstorms
1. Conditions necessary for thunderstorm formation
2. Thunderstorm structure
3. Classification of thunderstorms
4. Thunderstorm hazards
5. Thunderstorm information from radar
6. Tornadoes

M. Obstructions to Vision
1. Fog
2. Low stratus clouds
3. Haze and smoke
4. Blowing obstructions to vision
5. Precipitation
6. Obscured or partially obscured sky

N. The Nation's Aviation Weather System

O. Weather Observations
1. Surface weather observations
2. Pilot weather reports (PIREPS)
3. Weather radar observations
4. Upper air observations

P. Weather Charts
1. Weather depiction charts
2. Surface weather charts
3. Constant pressure charts
4. Winds aloft charts
5. Radar summary charts
6. Prognostic surface and prognostic constant pressure charts
7. Prognostic significant weather charts

Q. Aviation Weather Forecasts
1. Terminal forecasts
2. Area forecasts
3. Route forecasts
4. Winds aloft forecasts
5. Inflight weather advisories
6. Severe weather outlooks
7. Severe weather forecasts
8. Surface analyses and prognoses

R. Services to Pilot
1. FSS briefing
2. En route flight advisory service
3. Transcribed weather broadcasts (TWEB)
4. Pilots automatic telephone weather answering service (PATWAS)

S. Determining Cloud-Height From Reports

T. Information in a Weather Briefing

U. Mountain effects
1. Turbulence
2. Weather

V. Soaring Weather
1. Thermals
2. Ridge lift
3. Mountain waves

VI. NAVIGATION

A. General
1. Sectional chart interpretation
2. Relating chart symbols to FAR
3. Pilotage/recognition of landmarks
4. Determining courses/distances on charts
5. Planning traffic pattern
6. Navigation computer principles
7. Computing headings/courses
8. Computing time, distance, speed
9. Computing rates-of-climb/descent

B. Radio Navigation
1. Characteristics of VOR facilities
2. Tuning VOR receivers
3. Identifying VOR stations
4. VOR interpretation/orientation
5. Intercepting VOR radials
6. Groundspeed checks using VOR radials
7. VOR frequency interference
8. VOR test signals/VOR receiver checks

C. Radio Communications
1. VHF radio communications/phraseology
2. Position reporting procedures
3. Tower/FSS/en route advisories/instructions
4. FSS communications procedures
5. Obtaining emergency assistance
6. Use of proper communications frequencies

VII. AERODYNAMICS AND PRINCIPLES OF FLIGHT

A. Laws of Motion

B. Functions of the Flight Controls

C. Principles of Airfoils

D. Wing Planform
   1. Area/span/chord
   2. Aspect ratio/taper/sweepback
   3. Effect of planform on stall patterns
E. Forces Acting on the Aircraft
F. Flight Controls/Axes of the Aircraft
G. Lift/Drag During Turns
H. Lift Versus Angle of Attack
I. Lift Versus Air Density
J. Types of Flaps, Spoilers, Divebrakes
K. Effect of Flaps, Spoilers, Divebrakes
L. Effect of Ice/Snow/Frost on Airfoils
M. Aileron Drag
N. Slipping/Skidding Turns
O. Types and Effect of Drag/Induced/Parasite/Profile
P. Ground Effect
Q. Loads/Load Factors
R. Stability/Static and Dynamic/Longitudinal/Lateral/Directional
S. Stalls/Spins
T. Relative Wind/Angle of Attack
U. Effect of Wing During Turns

VIII. GLIDER/SAILPLANE OPERATION

A. General
   1. Preflight/postflight safety practices
   2. Wake turbulence-causes/precautions
   3. Crosswind takeoff/landing
   4. Proper loading of the aircraft
   5. Use of oxygen and oxygen equipment
   6. Midair collision avoidance precautions
   7. Procedures of assembly and disassembly
   8. Towrope/cables/hooks/releases
   9. Standard visual signals
   10. Aero towing procedures
   11. Ground towing procedures (auto)
   12. Ground towing procedures (winch)
   13. Traffic pattern/landing
   14. Use of speed-limiting devices
   15. Strange field (cross-country) landings
   16. Sharing thermals
   17. Sharing ridge lift
   18. Cross-country procedures
   19. Emergencies-rope break, towplane power failure, etc.
   20. Downwind landing
   21. Rate of descent in still air chart
   22. Slack in towline
   23. Accidental stall recoveries
   24. Inspection of launch equipment
   25. Aircraft documents and records

B. Performance
   1. Performance charts
   2. Flying through or around the wake
   3. Calculating speeds-to-fly
   4. Tow speeds
   5. Computing density/pressure altitudes
   6. Effect of density altitude on performance
   7. Effect of weight/balance on performance
   8. Critical performance speeds
   9. Effect of wind on aircraft performance
   10. Bank/speed versus rate/radius of turn
   11. Stall speed versus altitude or attitude
   12. Stall speed versus indicated/true airspeed
   13. Computation of gross weight/useful load/ballast
   14. Minimum sink speed
   15. Glide ratio—L/D
   16. Speed-to-fly
   17. Best-glide-speed
   18. Glider performance curves
   19. Airspeed to use when searching for lift
   20. Flight at critically slow airspeeds
   21. Ridge and mountain soaring/thermaling

IX. INSTRUMENTS AND SYSTEMS

A. Altimeter Operation/Errors
B. Altimeter Setting Procedures/Significance
C. Obtaining Pressure Altitude
D. Pitot-Static Systems/Instruments
E. Magnetic Compass Operation/Errors
F. Airspeed Indicator Operation/Errors
G. Variometer and Audio Device, Function and Adjustment
H. Oxygen Supply and Pressure Gauge
I. Turn Indicator/Coordinator
J. Radio Equipment (Communications/Navigation)

X. PHYSIOLOGICAL FACTORS RELATED TO FLIGHT

A. Adjustment to the Flight Environment
   1. Ground habits vs. flight habits
   2. Individual differences in pilots

B. Reaction of the Body to Changes in Atmospheric Pressure
   1. Changes in altitude
   2. Aerosinusitis

C. Reaction of the Body to Changes in Oxygen Partial Pressure
   1. Hypoxia
   2. Hyperventilation

D. Self-Imposed Stress
   1. Fatigue and its effect on the body during flight
   2. Alcohol and its effect on the body during flight
   3. Drugs and their effects on the body during flight
   4. Scuba diving and its effect on the body during flight
   5. Panic causes and prevention

E. Sensations of Flight
   1. Body sensory systems involved in equilibrium
      a. Eyes
      b. Inner ear
      c. Skeletal muscles
   2. Sensory illusions in flight—vertigo—spatial disorientation

F. Oxygen Equipment
   1. Requirements
   2. Types of oxygen
   3. Storage of oxygen
   4. Regulators and masks
   5. Use of oxygen equipment

SAMPLE TEST ITEMS WITH ANSWERS AND EXPLANATIONS

The sample test items are included in this publication to familiarize applicants with the *type* of questions that may be found on the written tests required for a Private or Commercial Pilot Certificate with a Glider Rating. Keep in mind that these sample items contain only a few of the topics found on the FAA written test. Concentration should be placed on subject areas found in the study outline "Private and Commercial Pilot-Glider Aeronautical Knowledge Areas." A knowledge of all the topics in this outline is essential, not only to meet the aeronautical knowledge standards required for certification, but to safely operate a glider.

1. Rules and procedures pertaining to the notification and reporting of aircraft accidents can be found in

   1—Federal Aviation Regulations, Part 61.
   2—Federal Aviation Regulations, Part 91.
   3—Federal Aviation Regulations, Part 63.
   4—National Transportation Safety Board Regulation, Part 830.

Answer 4 is correct. See NTSB Regulation, Part 830. All pilots should be familiar with rules pertaining to aircraft accidents, inflight hazards, overdue aircraft, and safety investigation.

2. Aircraft documents which are required by Federal Aviation Regulations to be on board a civil aircraft during flight are the

   1—logbook and Registration Certificate.
   2—owner's handbook and Registration Certificate.
   3—logbook and Airworthiness Certificate.
   4—Registration and Airworthiness Certificates.

Answer 4 is correct. Refer to Federal Aviation Regulations, Part 91.27, Civil Aircraft: Certificates required, which states, in part: ". . . no person may operate a civil aircraft unless it has within it the following: (1) an appropriate and current Airworthiness Certificate . . . (2) a Registration Certificate issued to its owner. . . ."

3. An aircraft towing a glider has the right-of-way over all

   1—other aircraft.
   2—other engine-driven aircraft.
   3—airships and balloons.
   4—gliders in free flight.

Answer 2 is correct. Refer to Federal Aviation Regulations, Part 91.67, Right-of-Way Rules, which states, in part: ". . . an aircraft towing or refueling other aircraft has the right-of-way over all other engine-driven aircraft."

4. If the field elevation at an airport in controlled airspace is 1,900 feet, and the sky condition at this airport is reported as 2Ø SCT M5Ø OVC, the highest altitude at which a glider could be operated beneath the ceiling to remain in VFR conditions would be approximately.

   1—6,400 feet MSL.
   2—3,400 feet MSL.
   3—4,500 feet MSL.
   4—1,500 feet MSL.

Answer 1 is correct. Cloud heights are measured from the surface at the point of observation to the base of the clouds. Since the elevation of the surface at this airport is 1,900 feet MSL and the reported ceiling is 5,000 feet above the surface, the base of the clouds above mean sea level would be 1900+5000 or 6900 feet MSL. To conform with regulations, VFR flight must be maintained 500 feet below the clouds. In this case, it would be approximately 6,900 feet minus 500 feet or 6,400 feet MSL.

5. The intensity of vortices associated with the wake turbulence created by large airplanes is greatest when such airplanes are operating at

   1—low airspeeds and high gross weights.
   2—high airspeeds and high gross weights.
   3—high airspeeds and low gross weights.
   4—low airspeeds and low gross weights.

Answer 1 is correct. Airman's Information Manual, Part 1, states, in part: "The strength of a vortex is governed primarily by the weight, speed, and shape of the wing of the generating aircraft. The basic factor is weight, and the vortex strength increases with increases in weight and span loading. The greatest vortex strength occurs when the generating aircraft is HEAVY—CLEAN—SLOW."

Additional Questions For Study

Answers and explanations are not included with the following questions. These questions are intended to direct study to selected areas, but by no means cover all subject areas.

1. How often is an inspection required for a sailplane which is used for hire?
2. What certificates are required to be in the possession of a pilot when flying solo in a sailplane?
3. What are the right-of-way rules which apply to glider operation?
4. What "recent experience" is required to act as pilot in command of a glider for solo flight? for carrying passengers?
5. Describe the general safety rules which apply to the use of oxygen.
6. According to regulations, what are the differences in preparing for a cross-country flight as opposed to a flight in the vicinity of the departure airport?
7. Differentiate between an airport traffic area and a control zone.
8. What information, which would be useful to a sailplane pilot, can be found in the Airman's Information Manual, Part II?
9. What are the magnetic compass errors, and how are these errors compensated?
10. As used in navigation, what is the difference between a true course and a magnetic course?
11. If a sailplane covered a distance of 62 nautical miles in 1 hour 23 minutes, what was the average groundspeed of this sailplane?
12. Draw a profile of a proposed cross-country flight for a sailplane, including altitudes at "go ahead" points considering winds.
13. What is the basic purpose of applying weather reports and forecasts to a proposed flight and analyzing the weather as the flight progresses?
14. If atmospheric instability exists, what weather conditions can be expected?
15. What effect does a change in air density have on the operation of a sailplane?
16. List the requirements for the occurrence of standing waves with appreciable vertical currents.
17. What effect does the ridge shape and size have on the strength of the lee waves produced?
18. What is the effect of wind and wind shear on thermals?
19. The maximum strength of both the thermals and the downdrafts depends mainly upon what atmospheric phenomena?
20. How is lift generated by a sailplane wing?
21. If a rope break occurred at an altitude below 200 feet above ground level, what would be the recommended course of action?
22. What is the recommended procedure if it becomes necessary to land the sailplane while being towed by the towplane?
23. What is the recommended procedure to use during landing with the towrope attached to the sailplane?
24. Explain the meaning of glide ratio or L/D. What effect does airspeed and wind have on glide ratio?
25. If too low on final approach, what is the recommended procedure? If too high on final approach?
26. At what altitude is supplemental oxygen required?
27. How is the maximum speed for an auto or a winch tow determined?
28. What is the recommended procedure to use during an auto or a winch tow if the tow cable cannot be released from the sailplane?
29. What is the recommended normal procedure for releasing from a winch tow? An airplane tow?
30. During a winch tow, how is the airspeed of the sailplane increased or decreased?

APPENDIX

The appendix contains selected illustrations to familiarize applicants with certain material pertaining to glider operation, and to encourage further study in these subject areas. Because certain data may become obsolete, *under no circumstances* should any information contained herein be used for operational purposes.

DESIGN DATA

Wing Span	51′	Empty Weight	600 lbs.
Length	25′9″	Gross Weight	1,040 lbs.
Height	9′ 3-½″	Wing Area	219.5 sq. ft.
Aspect Ratio	11.85	Wing Loading	4.74 psf

PERFORMANCE

Max. Speed	98 mph	Stall (Dual)	35 mph
Airplane Tow	98 mph	L/D mph Solo	22.25 to 1 at 45
Auto Winch	69 mph	L/D mph Dual	22.25 to 1 at 52
Dive Brake			
Extend. Max.	98 mph	Sink Speed Solo	2.6 fps at 38
Stall (solo)	31 mph	Sink Speed Dual	3.1 fps at 42

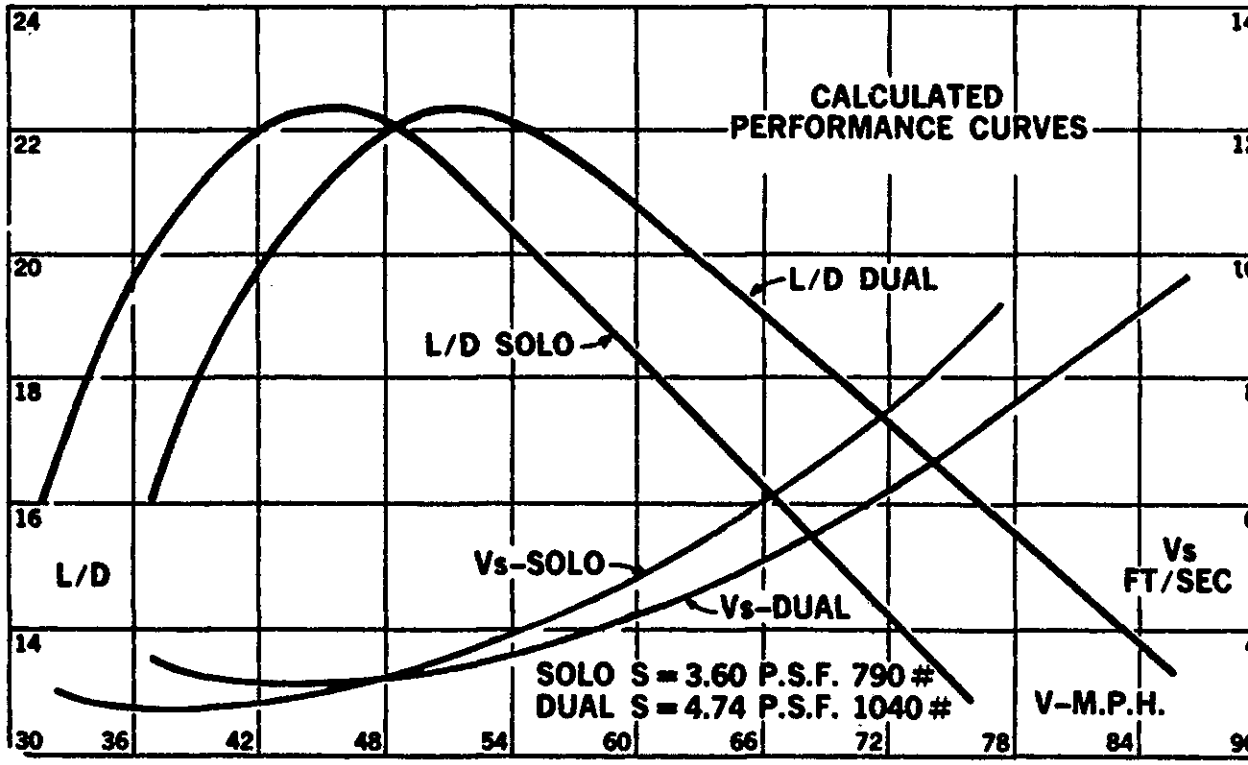
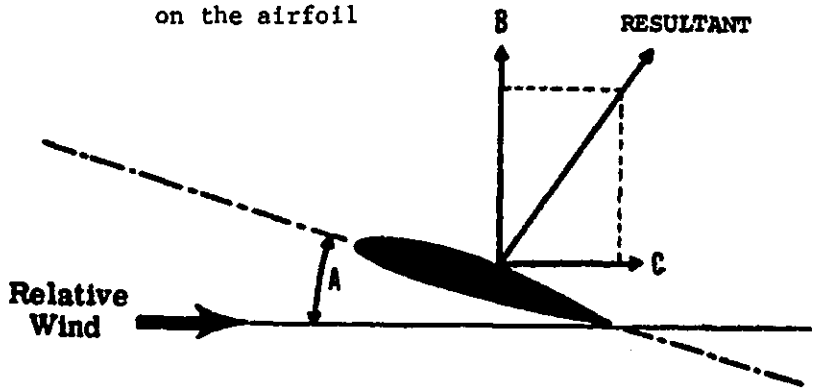


FIGURE 1

Forces
on the airfoil

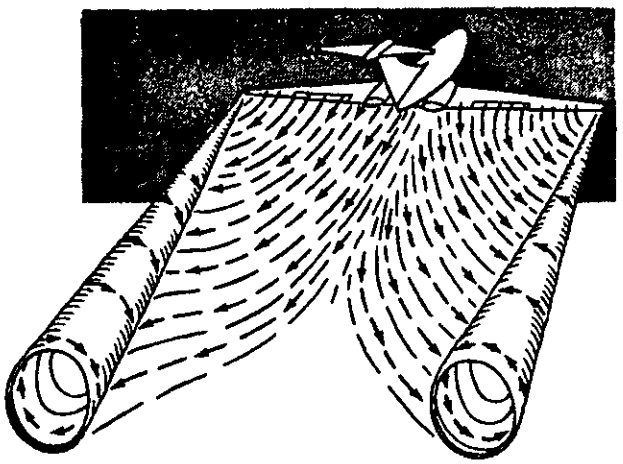


A = Angle of attack.

B = Vertical component of lift.

C = Drag.

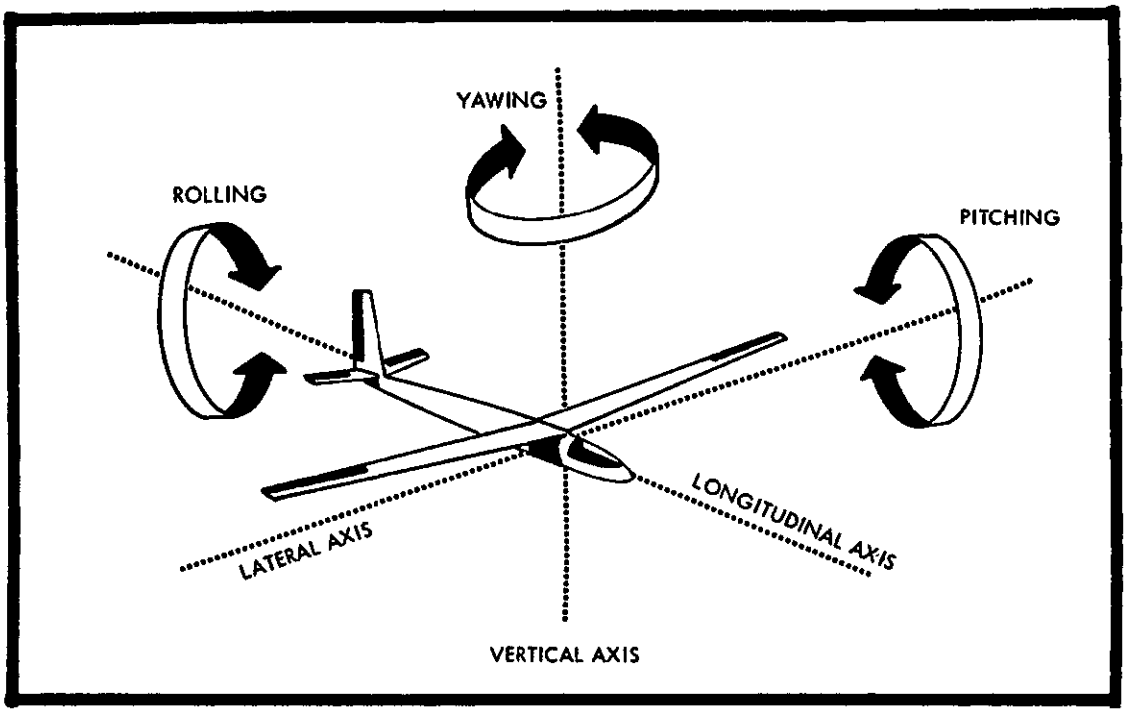
Vortex
behavior

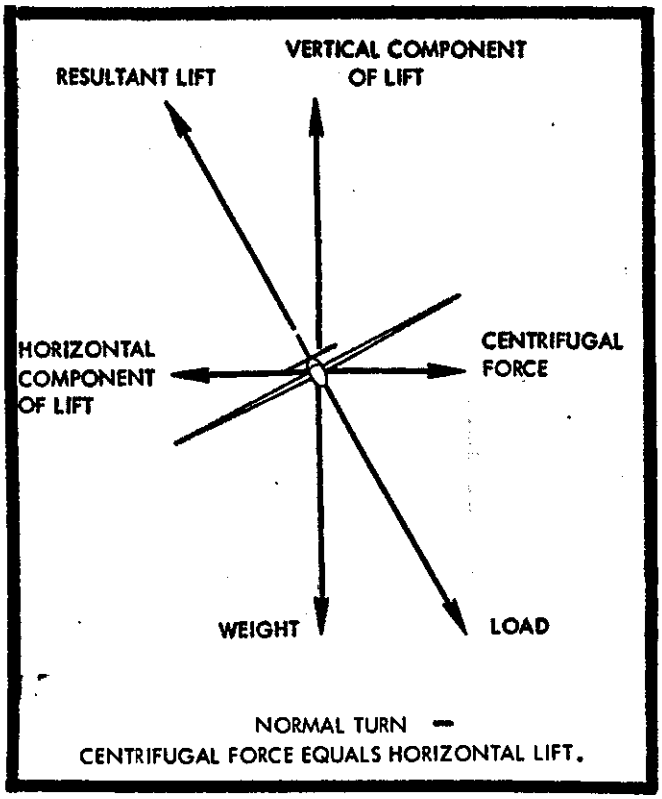


DANGERS OF WINGTIP VORTICES

FIGURE 2. AERODYNAMICS

Axes of a glider.





Vectors in a turn.

FIGURE 3. AERODYNAMICS

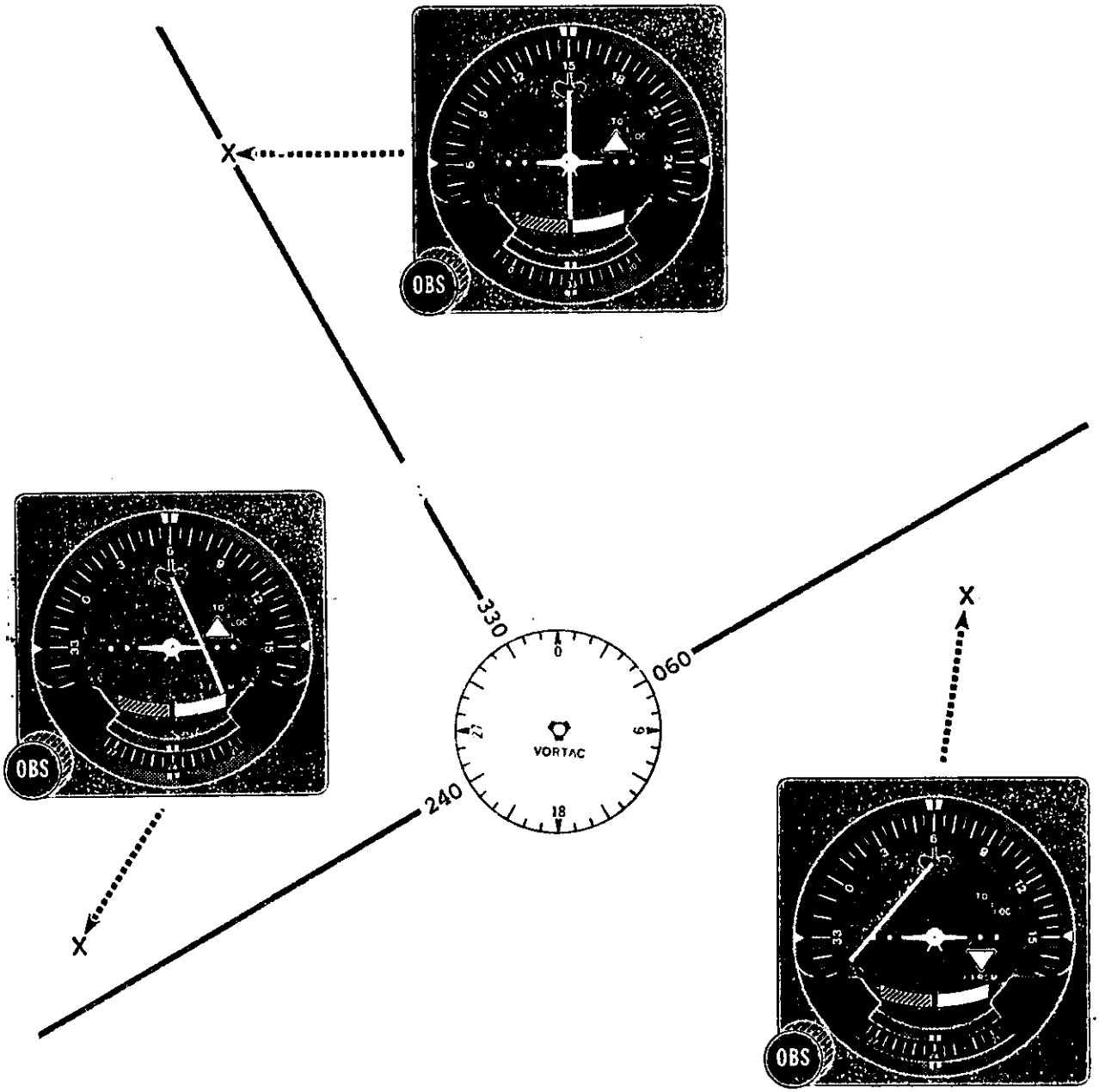


FIGURE 4. VOR ORIENTATION

EXCERPTS FROM SLC AREA FORECAST

```
SLC FA 171240
13Z THU - 07Z FRI
OTLK 07Z FRI - 19Z FRI

NEV IDA ARIZ CALIF

HGTS ASL UNLESS NOTED

SYN... LO PRES OVR SRN CALIF WL RMN STNRY. WK COLD FNT
SRN NEV WL MOV INTO NW ARIZ AND DSIPT BY 01Z.

SIGCLD AND WX...
ARIZ...
CLR UNTIL SCTD CU AND CB DVLP OVR MTNS DURG AFTN.  SCTD
TSTMS AND SHWRS DCRG AFT 23Z.  HIR MTNS AND PKS OCNLY
OBSCD IN SHWRS AND TSTMS.  OTLK. VFR.

ICG... MDT IN TCU/CB TOPS ABV FRZLVL 120/140
```

SELECTED TERMINAL FORECASTS

```
FT 170940

ARIZONA
INW 171010 CLR. 21Z 100SCT 1714G30 ISOLD CB VCNTY AFTN.
   23Z 120SCT. 04Z VFR.
PRC 171010 80SCT ISOLD CB VCNTY AFTN. 23Z 120SCT 0214.
   04Z VFR..
FLG 171010 CLR. 19Z 140SCT ISOLD CB VCNTY. 01Z CLR.
   04Z VFR..

NEW MEXICO
FMN 171010 CLR. 20Z 90SCT BRF C 70BKN TRW- G30 LATE AFTN.
   04Z VFR..
ABQ 171010 90SCT ISOLD CB VCNTY AFTN AND EVE. 01Z 120SCT
   04Z VFR..
```

WINDS ALOFT FORECASTS (FD)

1000Z - 2200Z (0300 MST - 1500 MST)

FT	3000	6000	9000	12000	18000
ABQ			0315+12	0310+06	0412-03
FMN			0720+11	0925+04	1025-10
PRC			1210+14	1321+06	1527-10
BLD		1314+13	1512+10	1625+02	1730-13
BCE			1517	1723-01	1826-17

FIGURE 5. WEATHER FORECASTS

SELECTED AVIATION WEATHER REPORTS
1300 MST

SA 172000

ARIZ ONA
PRC 80SCT E140BKN 250-BKN 60 074/89/46/0706/990/ CB SW TCU NW-NE
FLG CLR 15 072/92/62/1610/985/ FEW CI TCU CB SW
INW 90SCT 15 071/92/68/1712G20/988
PHX 80SCT 160SCT 70 078/90/47/1405/995/ CB TCU NW FEW ACSL S-E
TUS 85SCT 160SCT 100 098/87/41/0708/001/ TCU OVR MTS→TUS↘9/6
→TUS 9/6 TUS VOR OTS

1400 MST

SA 172100

ARIZONA
PRC 80SCT 130SCT 40 080/83/51/0214/991/ CB SCTD ALQDS
FLG CLR 15 056/96/59/1608/981/ FEW CU CI TCU W-N
INW 120-SCT 15 068/96/69/1820G25/985/ FEW CU
PHX 80SCT 160SCT 70 073/90/46/0503/993/ TCU-CB ALQDS RWU SW FEW CU
TUS E85BKN 160OVC 65 095/84/47/0507/000/ CB DSNT S TCU ALQDS RWU W BINOVC→TUS↘9/6
→TUS 9/6 TUS VOR OTS

PILOT REPORTS

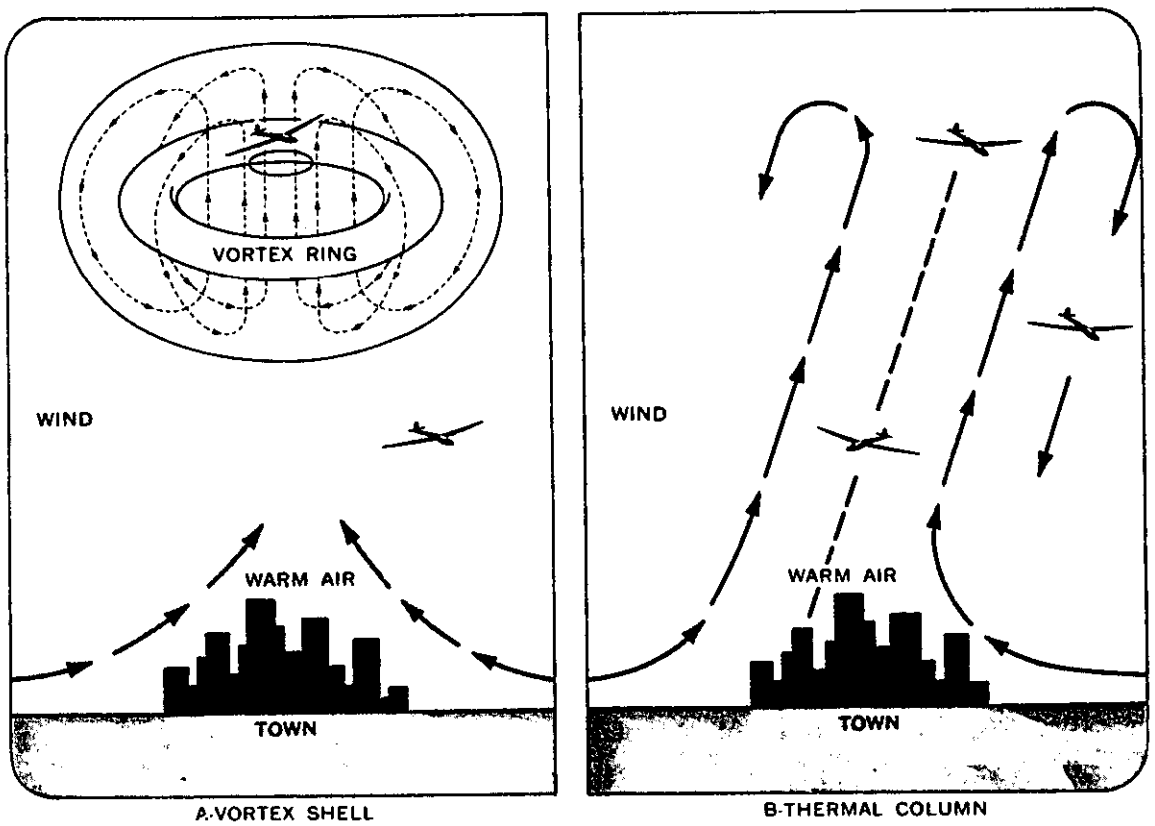
UA 171600Z

ARIZ
40E PRC LGT-MDT TURBC 115 PA34
ZUN-INW MDT TURBC 95 C210
INW-PRC MDT OCNLY SVR TURBC 105 PA22

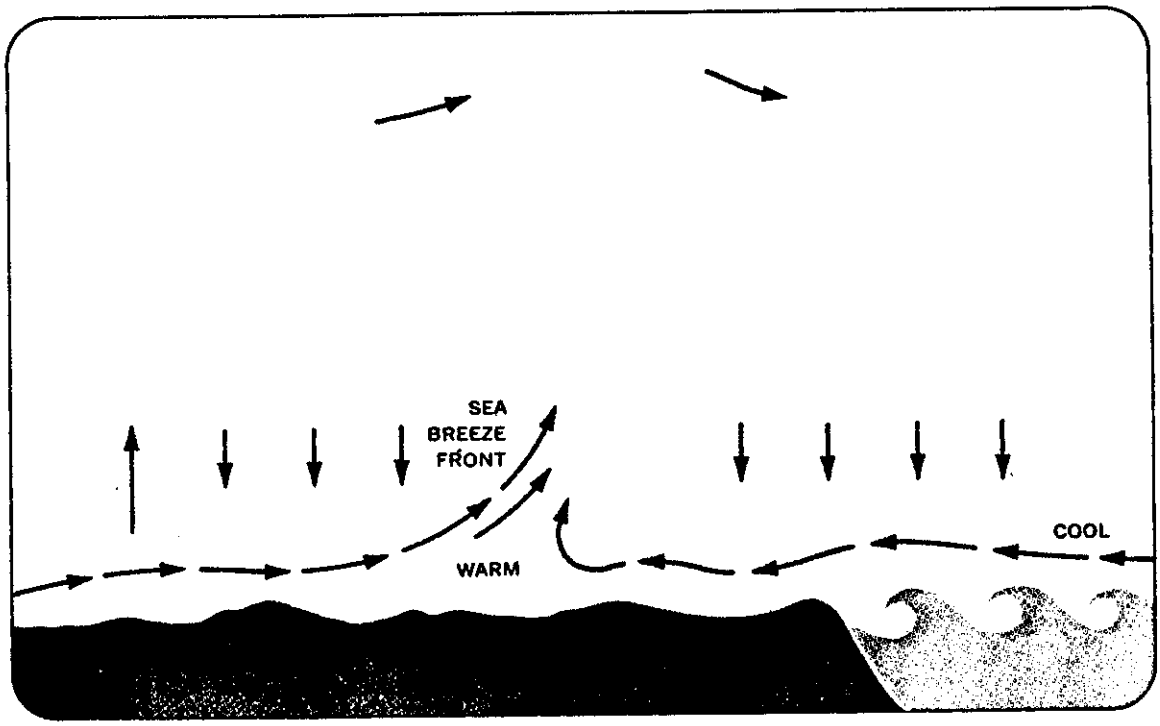
IN-FLIGHT ADVISORIES

SLC WAC 171800
171800-UFN
AIRMET ALPHA 1. FLT PRCTN WCNTRL AND CNTRL ARIZ MDT OCNLY SVR TURBC BLO 150 DCRG TO LGT BY 01Z

FIGURE 6. WEATHER REPORTS

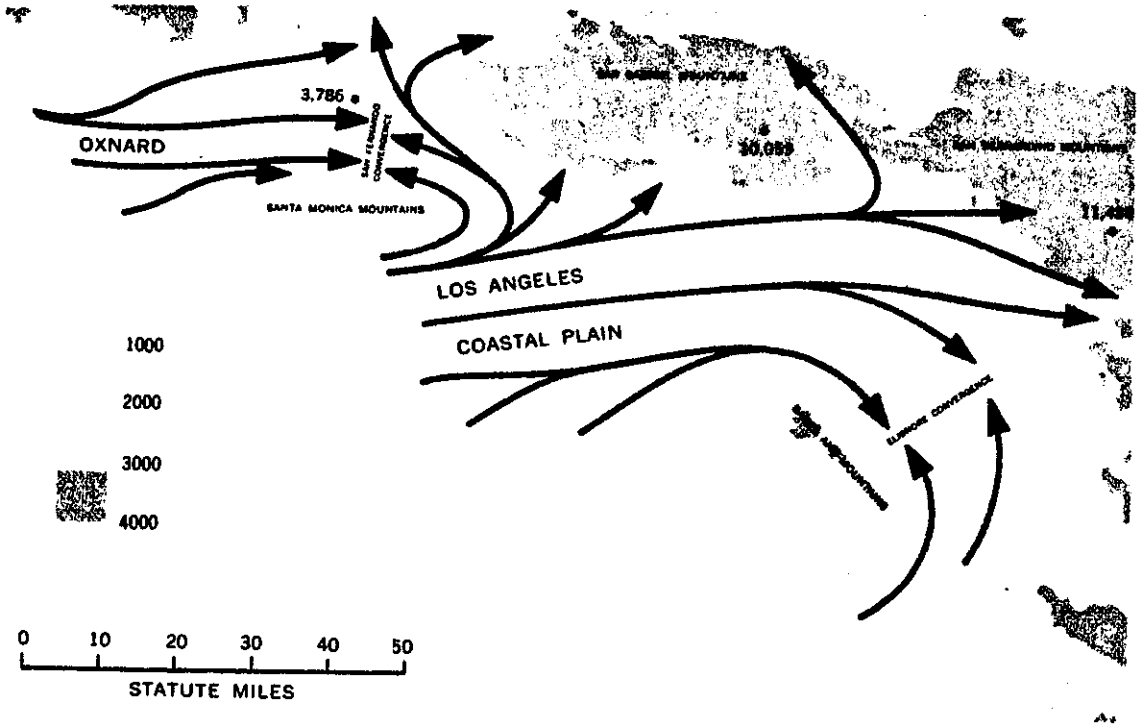


Examples of favored thermal structures—the vortex shell and the thermal column.

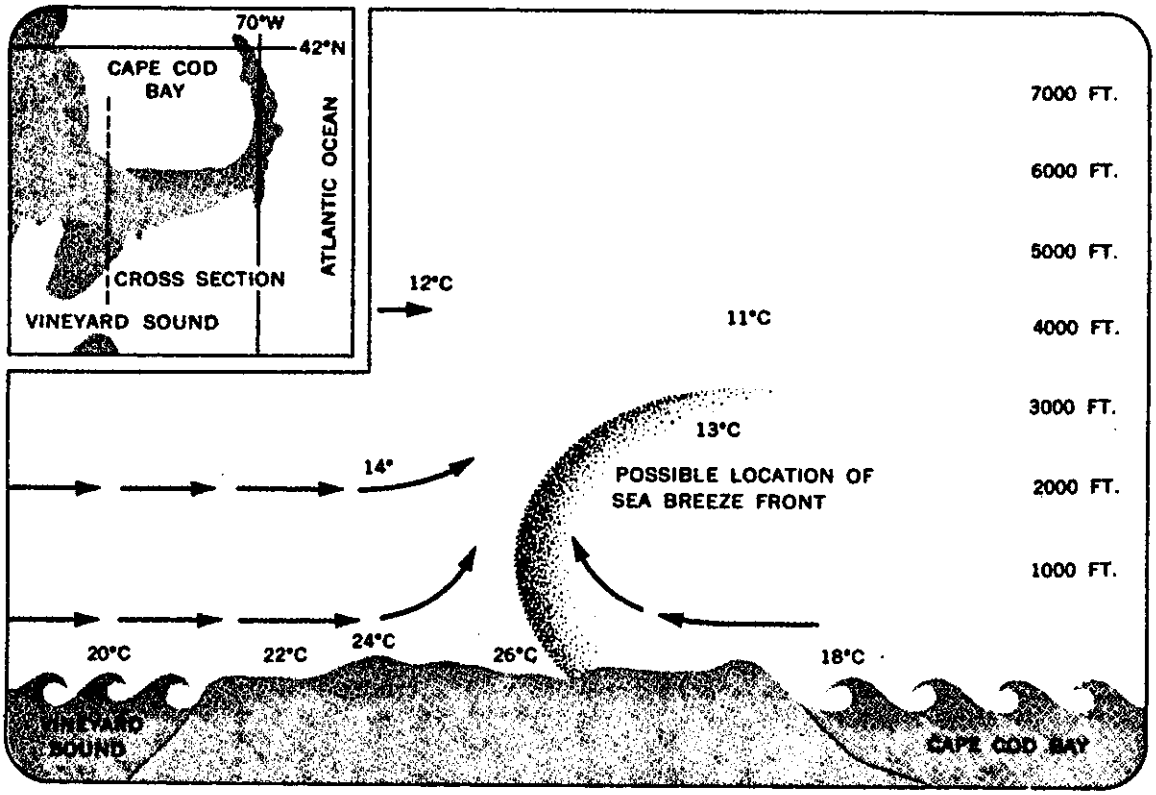


Schematic cross section through sea breeze front.

FIGURE 7

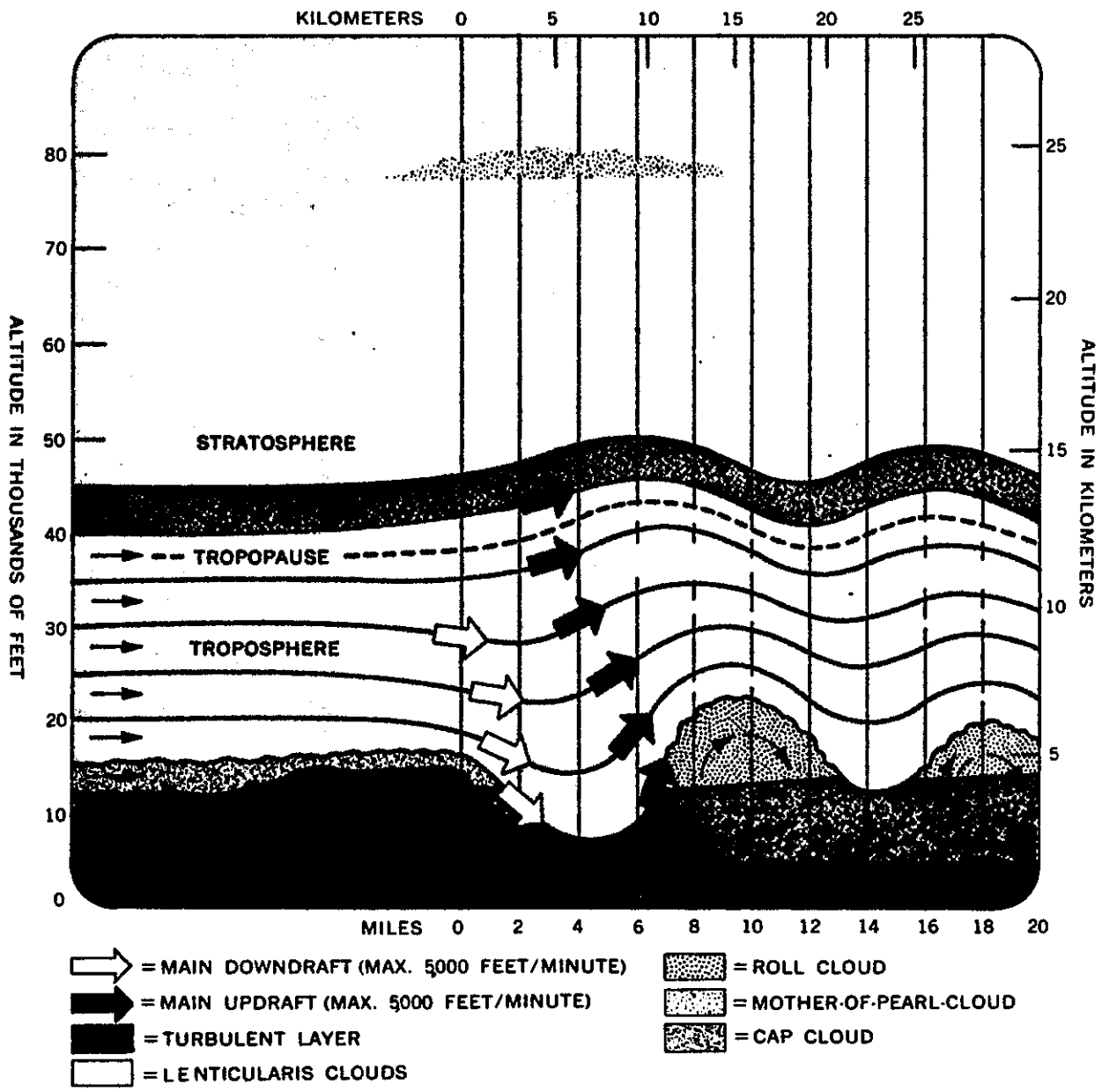


Sea breeze flow into San Fernando Valley, California.



Sea breeze convergence zone, Cape Cod, Massachusetts.

FIGURE 8



Schematic cross section of mountain wave.

FIGURE 9

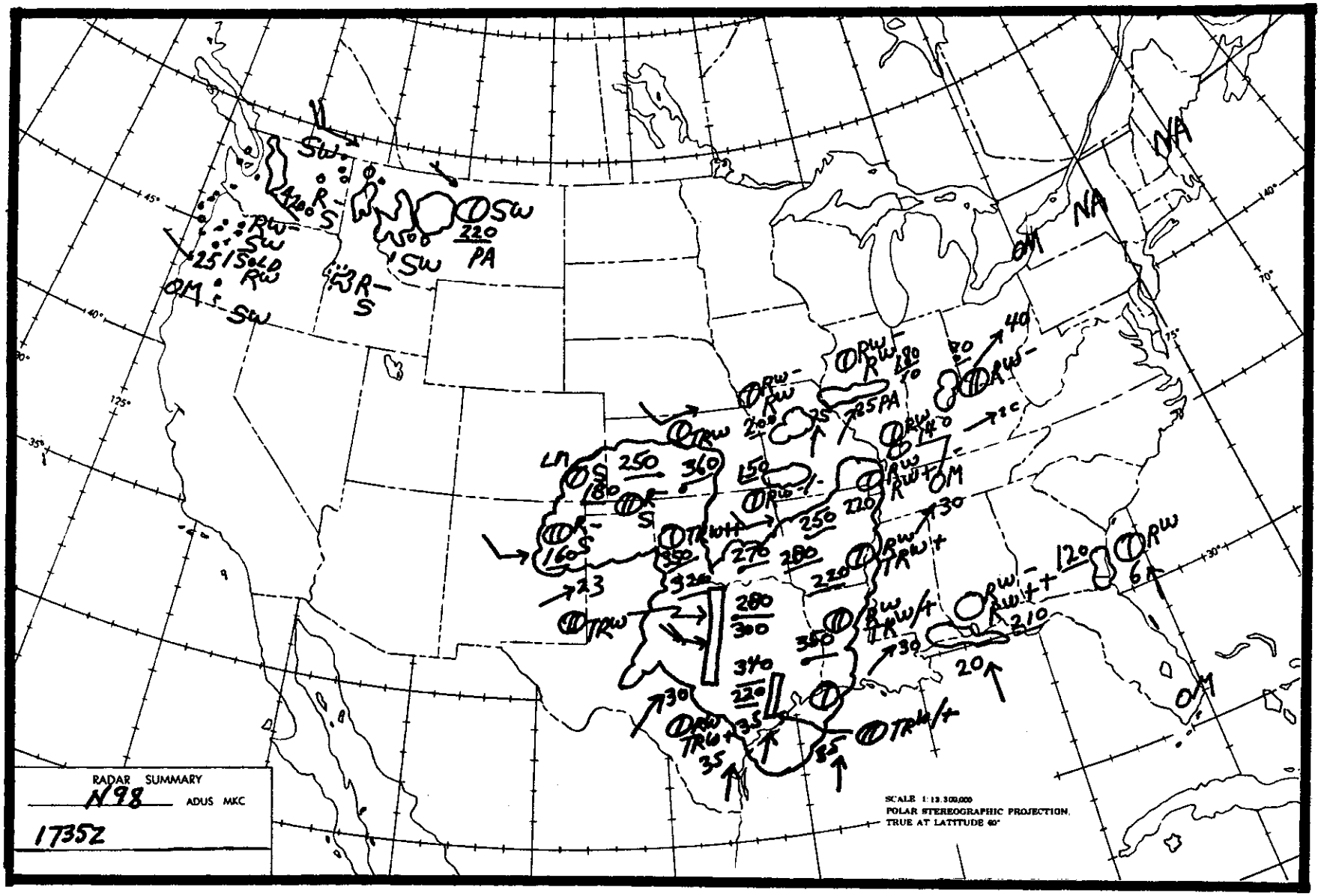
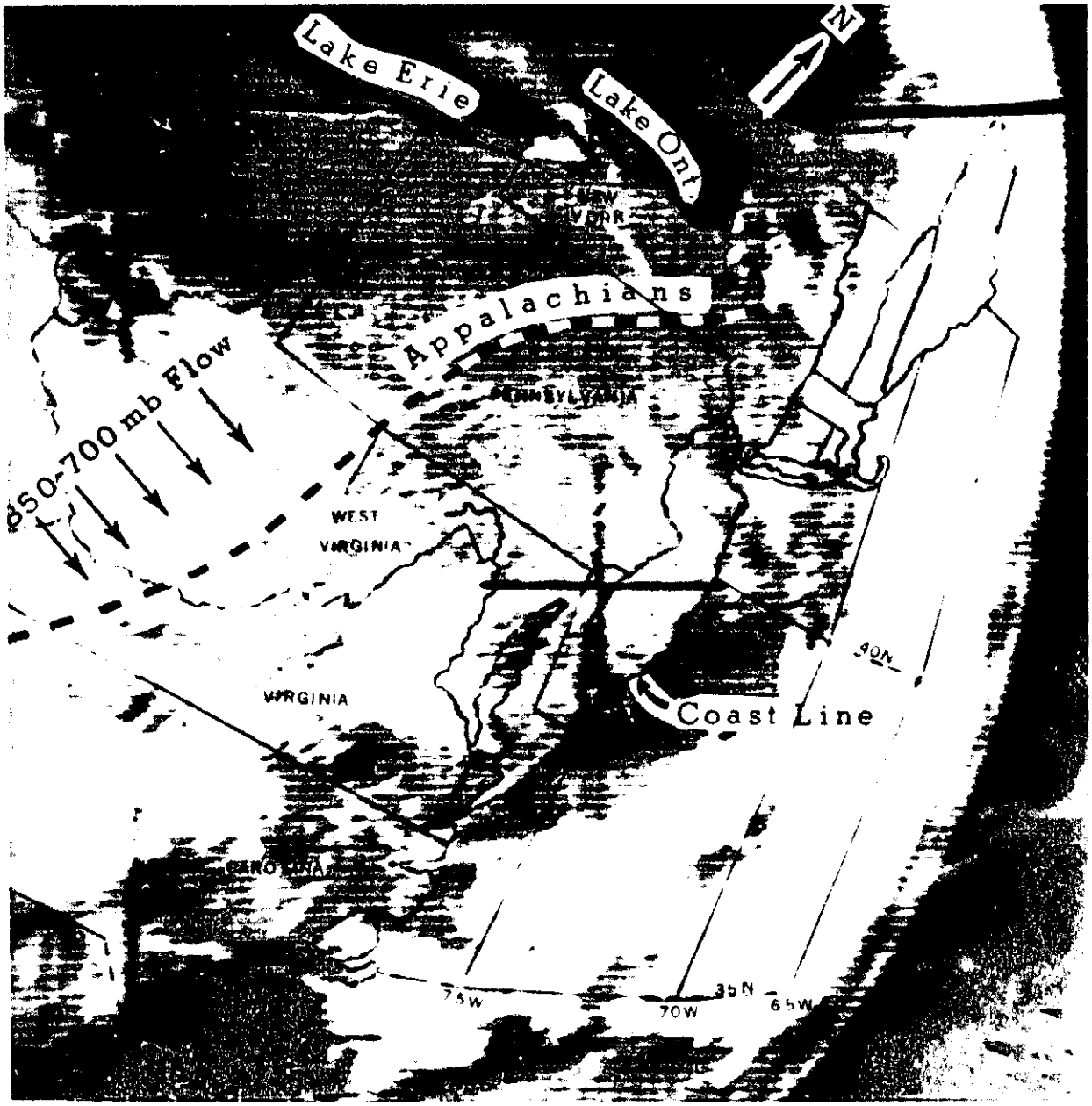
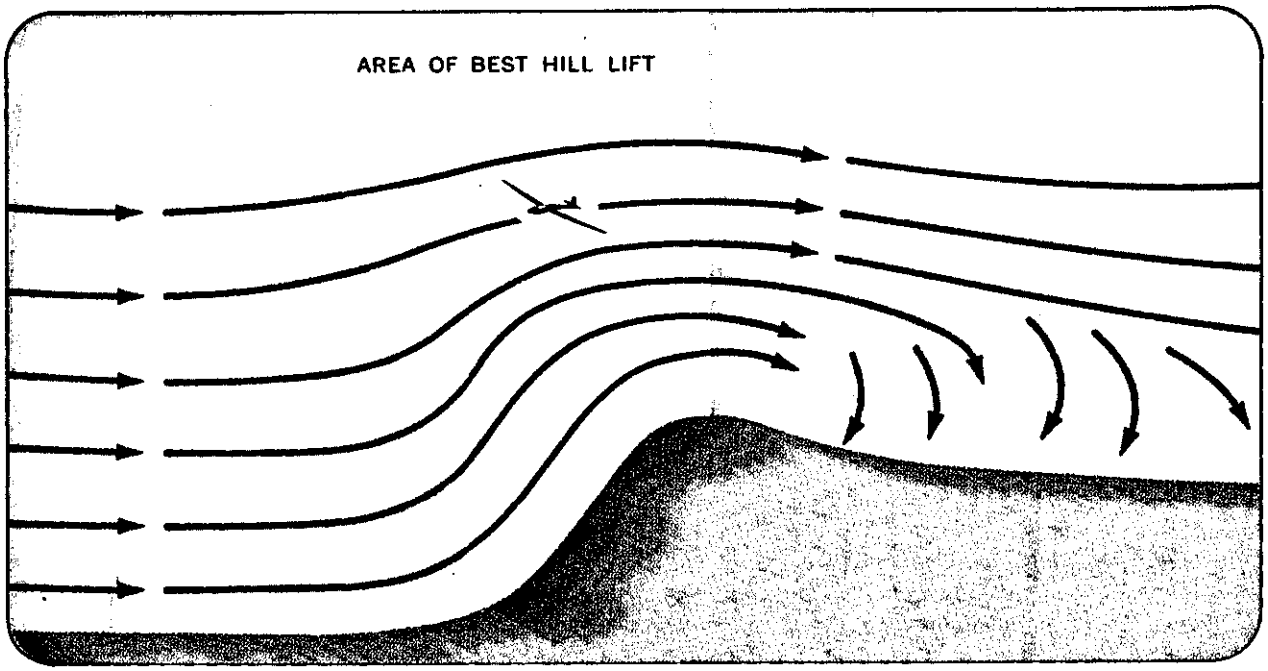


FIGURE 10. RADAR SUMMARY CHART



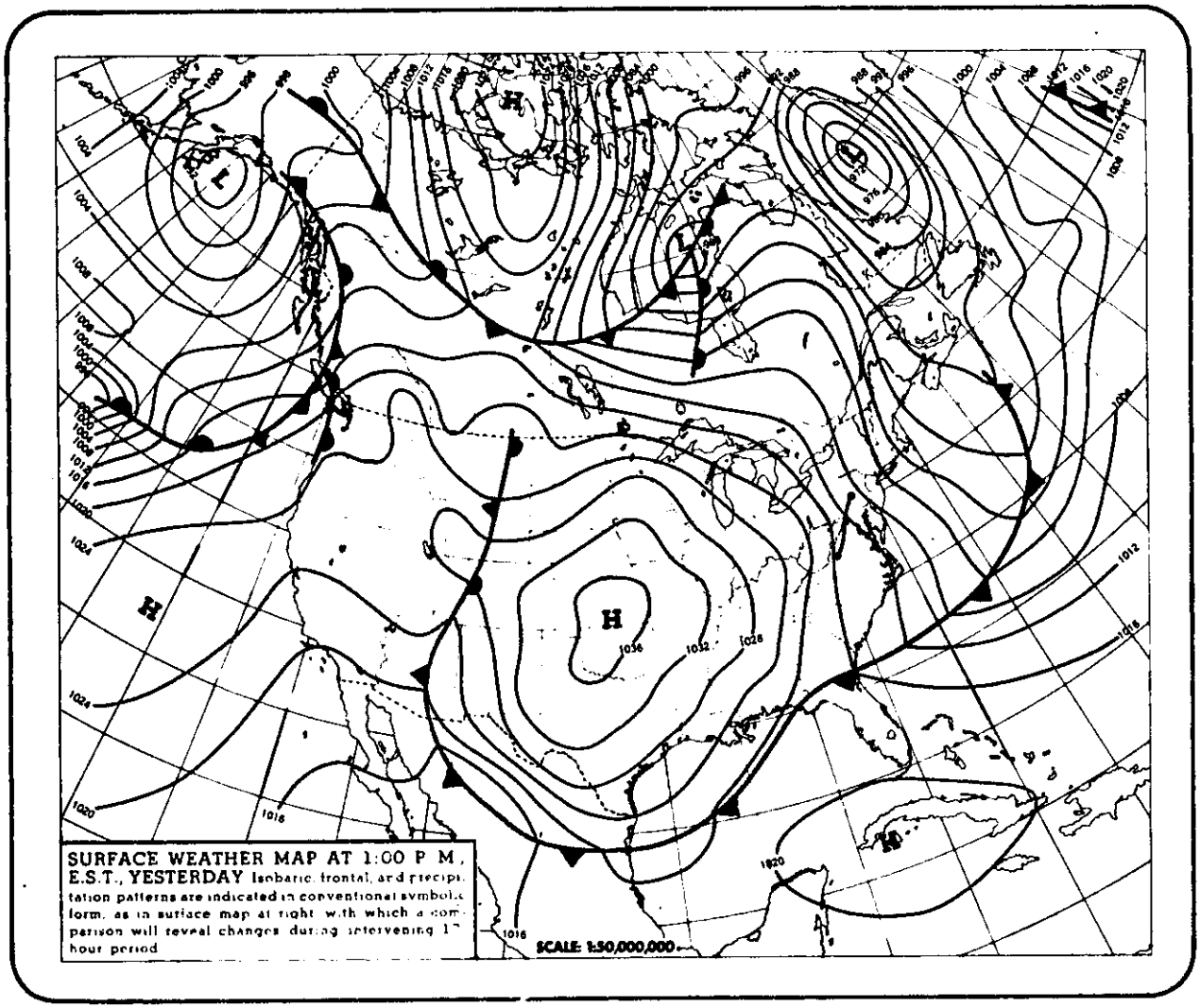
Satellite view of wave clouds, Eastern United States, April 18, 1963.

FIGURE 11



Schematic cross section of airflow over a hill.

FIGURE 12



Synoptic weather pattern and flight path followed during Ridge Flight.

FIGURE 13

AIRPORT/FACILITY DIRECTORY

The Airport Directory in this publication is limited to airports with control towers and/or instrument landing systems. See Part 2 for a complete listing of all public use airports.
NOTE: All times are local time unless otherwise indicated.

LOCATION

The airport location is given in nautical miles (to the nearest mile) and direction from center of referenced city.

ELEVATION

Elevation is given in feet above mean sea level and is based on highest usable portion of the landing area. When elevation is sea level, elevation will be indicated as "00." When elevation is below sea level, a minus sign (−) will precede the figure.

RUNWAYS

The runway surface length, and weight bearing capacity are listed for the longest instrument runway or sealane, or the longest active landing portion of the runway or strip, given to the nearest hundred feet, using 70 feet as the division point, i.e., 1469 feet would be shown as "14"; 1470 feet would be shown as "15". Runway lengths prefixed by the letter "H" indicates that runways are hard surfaced (concrete; asphalt; bitumen, or macadam with a seal coat). If the runway length is not prefixed, the surface is sod, clay, etc. The total number of runways available is shown in parenthesis. (However, only hard surfaced runways are counted at airfields with both hard surfaced and sod runways.)

RUNWAY WEIGHT BEARING CAPACITY

Runway strength data shown in this publication is derived from available information and is a realistic estimate of capability at an average level of activity. It is not intended as a maximum allowable weight or as an operating limitation. Many airport pavements are capable of supporting limited operations with gross weights of 25–50% in excess of the published figures. Permissible operating weights, insofar as runway strengths are concerned, are a matter of agreement between the owner and user. When desiring to operate into any airport at weights in excess of those published in this publication, users should contact the airport management for permission.

Add 000 to figure following S, D, DT and MAX for gross weight capacity, e.g., (S–000).

S–Runway weight bearing capacity for aircraft with single-wheel type landing gear. (DC–3), etc.

D–Runway weight bearing capacity for aircraft with dual-wheel type landing gear. (DC–6), etc.

DT–Runway weight bearing capacity for aircraft with dual-tandem type landing gear. (707), etc.

Quadricycle and dual-tandem are considered virtually equal for runway weight bearing considerations, as are single-tandem and dual-wheel.

Omission of weight bearing capacity indicates information unknown. Footnote remarks are used to indicate a runway with a weight bearing greater than the longest runway.

LIGHTING

B: Rotating Beacon. Green and white, split-beam and other types.

L: Field Lighting. An asterisk (*) may precede an element to indicate that it operates on prior request only (by phone call).

4—Low Intensity Runway
5—Medium Intensity Runway
6—High Intensity Runway
7—Instrument Approach (neon)
7A—Medium Intensity Approach Lights (MALS)
8—High Intensity Instrument Approach (ALS)
10—Visual Approach Slope Indicator (VASI)
11—Runway end identifier lights (threshold strobe) (REIL)
12—Short approach light systems (SALS)
13—Runway alignment lights (RAIL)
14—Runway centerline
15—Touchdown zone

Because the obstructions on virtually all lighted fields are lighted, obstruction lights have not been included in the codification.

SERVICING

S2: Minor airframe repairs.
S3: Minor airframe and minor powerplant repairs.
S4: Major airframe and minor powerplant repairs.
S5: Major airframe and major powerplant repairs.

FUEL

(Fuel data includes each grade available.)

Code	Grade
F12	80/87
F15	91/96
F18	100/130
F22	115/145
F30	Kerosene, freeze point −40°F
F34	Kerosene, freeze point −58°F
F40	Wide-cut gasoline, freeze point −60°F
F45	Wide-cut gasoline without icing inhibitor, freeze point −60°F

OXYGEN

Ox1	High Pressure
Ox2	Low Pressure
Ox3	High Pressure—Replacement Bottles
Ox4	Low Pressure—Replacement Bottles

OTHER

1—NOTAM Service is provided. Applicable only to airports with established instrument approach procedures, or high volume VFR activity.
AOE—Airport of Entry—A customs Airport of Entry where permission from U.S. Customs is not required, however, at least one hour advance notice of arrival must be furnished.
AVASI—Abbreviated Visual Approach Slope Indicator—2 boxes.

FIGURE 14

AIM Excerpt

AIRPORT DIRECTORY

FUEL

Fuel Data Includes Each Grade Available

Code	Grade
F12	80/87
F15	91/98
F18	100/130
F22	115/145
F30	Kerosene, freeze point −40° F.
F34	Kerosene, freeze point −58° F.
F40	Wide-cut gasoline, freeze point −60° F.
F45	Wide-cut gasoline without icing inhibitor, freeze point −60° F.

OXYGEN

Ox1	High pressure
Ox2	Low pressure
Ox3	High pressure—replacement bottles
Ox4	Low pressure—replacement bottles

OTHER

I—Notam Service is provided. Applicable only to airports with established instrument procedures or high volume VFR activity.

AOE—Airport of Entry.

FSS—The name of the associated FSS is shown in all instances. When the FSS is located on the named airport, "ON FLD" is shown following the FSS name. When the FSS can be called through the local telephone exchange, (Foreign Exchange) at the cost of a local call, it is indicated by "(LC)" (local call) with the phone number immediately below the FSS name. When an Interphone line exists between the field and the FSS, it is indicated by "(DL)" (direct line) below the FSS name.

The availability of a VHF/DF at a FSS is indicated by the letters VHF/DF. For service, contact FSS on standard frequencies.

IFR—Airport with approved FAA Standard Instrument Approach Procedure.

LRA—Landing Rights Airport.

RVR—Runway Visual Range, applicable runway provided.
1—Approach
2—Approach and Roll Out
3—Approach, Mid-Point and Roll Out

RVV—Runway Visibility Value, applicable runway provided.

TPA—Traffic Pattern Altitude—This information is provided for only those airports without a 24-hour operating control tower or FSS. Directions of turns are indicated only when turns of the pattern(s) are to the right (non-standard). TPA data are related to the runway listed under the tabulated airport information. Generally, only one altitude is listed; however, separate altitudes may be shown for aircraft of different performance or size.

TRI-VAS—Tri-Color Visual Approach Slope Indicator.

VASI—Visual Approach Slope Indicator, applicable runway provided.

AIRPORT REMARKS

(†)—Indicates that an air traffic control tower and/or an instrument landing system are associated with the airport. For specific details see the Airport/Facility Directory in Part 3 of the Airman's Information Manual.

"Fee" indicates landing charges for private or non-revenue producing aircraft. In addition, fees may be charged for planes that remain over a couple of hours and buy no services, or at major airline terminals for all aircraft.

"Rgt tfc rwy 13" indicates right turns should be made on landings and takeoffs on runway 13.

Obstructions.—Because of space limitations only the more dangerous obstructions are indicated. Natural obstructions, such as trees, clearly discernible for contact operations, are frequently omitted. On the other hand, all pole lines within at least 15:1 glide angle are indicated.

Remarks—data is confined to operational items affecting the status and usability of the airport, traffic patterns and departure procedures.

UNICOM

U-1—122.8 MHz for Landing Areas (except heliports) without an ATC Tower or FSS;

U-2—123.0 MHz for Landing Areas (except heliports with an ATC Tower or FSS;

U-3—123.05 MHz for heliports with or without ATC Tower or FSS;

U-4—122.85 MHz for landing areas not open to the public;

U-5—122.95 MHz for landing areas not open to the public.

Aircraft Categories—*Category I*—Light-weight, single-engine, personal-type propeller driven aircraft. (Does not include higher performance single-engine aircraft such as the T-28.)

Category II—Light-weight, twin engine, propeller driven aircraft weighing 12,500 pounds or less such as the Aero Commander, Twin Beechcraft, DeHavilland Dove, Twin Cessna. (Does not include such aircraft as a Lodestar, Learstar, DC-3).

Category III—All other aircraft such as the higher performance single-engine, heavy twin-engine, four engine and turbojet aircraft.

FIGURE 15

i.e., VHF, UF. Emergency frequency 121.5 is available at all TOWER, APPROACH CONTROL and RADAR facilities, unless indicated as not available in remarks.

COMMUNICATIONS REMARKS

Remarks data are confined to operational items affecting the status and usability of navigational aids, such as: ILS component restrictions, part time hours of operation, frequency sectorization, VOT frequencies.

VOICE CALL

The voice call for contact with the air traffic control tower is listed at each airport assigned such a facility.

SERVICES AVAILABLE

TOWER

Pre-Taxi Clearance Procedure
Clearance Delivery (CLRNC DEL).
Approach Control (App Con) Radar and Non-Radar.
Departure Control (Dep Con) Radar and Non-Radar.
VFR Advisory Service (VFR Adv) Service provided by Non Radar Approach Control.
Radar Advisory Service for VFR Acft (Stage I).
Radar Advisory and Sequencing Service for VFR Acft (Stage II).
Radar Sequencing and Separation Service for participating VFR Aircraft, (Stage III-Terminal Radar Service Area (TRSA)).
Radar Sequencing and Separation Service for all aircraft in a Terminal Control Area (TCA).
Ground Control (GND CON).
VHF Direction Finding (VHF/DF).

RADIO NAVIGATION AIDS

Included in this section is a tabulation listed by facility name of all Air Navigation Radio Aids in the National Airspace System and those upon which the FAA has approved an instrument approach. Private or military Navigation Radio Aids not in the National Airspace System are not tabulated.

All VOR, VORTAC and ILS equipment in the National Airspace System have an automatic monitoring and shutdown feature in the event of malfunction. Unmonitored as used in the publication means that FSS or tower personnel cannot observe the malfunction or shutdown signal.

AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS)

ATIS is continuous broadcast of recorded non-control information in selected areas of high activity. See Part 1.

FLIGHT SERVICE STATION (FSS)

Airport Advisory Service (AAS).
En Route Weather Advisory Service (Flight Watch).
Island, Mountain and Lake Reporting Service.
Remote Weather Radar Display (WR).
VHF Direction Finding (DF).

UNICOM

A private aeronautical advisory communications facility operated for purposes other than air traffic control, transmits and receives on one of the following frequencies:

U-1—122.8 MHz for Landing Areas (except heliports) without an ATC Tower or FSS;
U-2—123.0 MHz for Landing Areas (except heliports with an ATC Tower or FSS;
U-3—123.05 MHz for heliports with or without ATC Tower or FSS;
U-4—122.85 MHz for landing areas not open to the public;
U-5—122.95 MHz for landing areas not open to the public.

NOTE.—UNICOM used for communications must be licensed by the Federal Communications Commission.

RADIO CLASS DESIGNATIONS

Identification of VOR/VORTAC/TACAN Stations by Class (Operational Limitations):

Normal Usable Altitudes and Radius Distances

Class	Altitudes	Distance (miles)
T	12,000' and below	25
L	Below 18,000'	40
H	Below 18,000'	40
H	Within the conterminous 48 states only, between 14,500' and 17,999'	100
H	18,000' — FL 450	130
H	Above FL 450	100

(H)=High (L)=Low (T)=Terminal

Note: An H facility is capable of providing L and T service volume and an L facility additionally provides T service volume.

The term VOR is, operationally, a general term covering the VHF omnidirectional bearing type of facility without regard to the fact that the power, the frequency-protected service volume, the equipment configuration, and operational requirements may vary between facilities at different locations.

AB ---------- Automatic Weather Broadcast (also shown with ᴮ following frequency).
B ---------- Scheduled Broadcast Station (broadcasts weather at 15 minutes after the hour.
DME ------- UHF standard (TACAN compatible) distance measuring equipment.
H ---------- Non-directional radio beacon (homing), power 50 watts to less than 2,000 watts.
HH -------- Non-directional radio beacon (homing), power 2,000 watts or more.
H-SAB ----- Non-directional radio beacons providing automatic transcribed weather service.
ILS -------- Instrument Landing System (voice, where available, on localizer channel).
LDA ------- Localizer Directional Aid.
LMM ------- Compass locator station when installed at middle marker site.
LOM ------- Compass locator station when installed at outer marker site.
MH -------- Non-directional radio beacon (homing) power less than 50 watts.
S ---------- Simultaneous range, homing signal and/or voice.
SABH ------ Non-directional radio beacon not authorized for IFR or ATC. Provides automatic weather broadcasts.
SDF -------- Simplified Direction Facility.
TACAN ----- UHF navigational facility—omnidirectional course and distance information.
VOR -------- VHF navigational facility—omnidirectional, course only.
VOR/DME -- Collocated VOR navigational facility and UHF standard distance measuring equipment.
VORTAC --- Collocated VOR and TACAN navigational facilities.
W ---------- Without voice on radio facility frequency.
Z ---------- VHF station location marker at a LF radio facility.

FIGURE 16

AIM Excerpt

AIRPORT/FACILITY DIRECTORY

SAMPLE

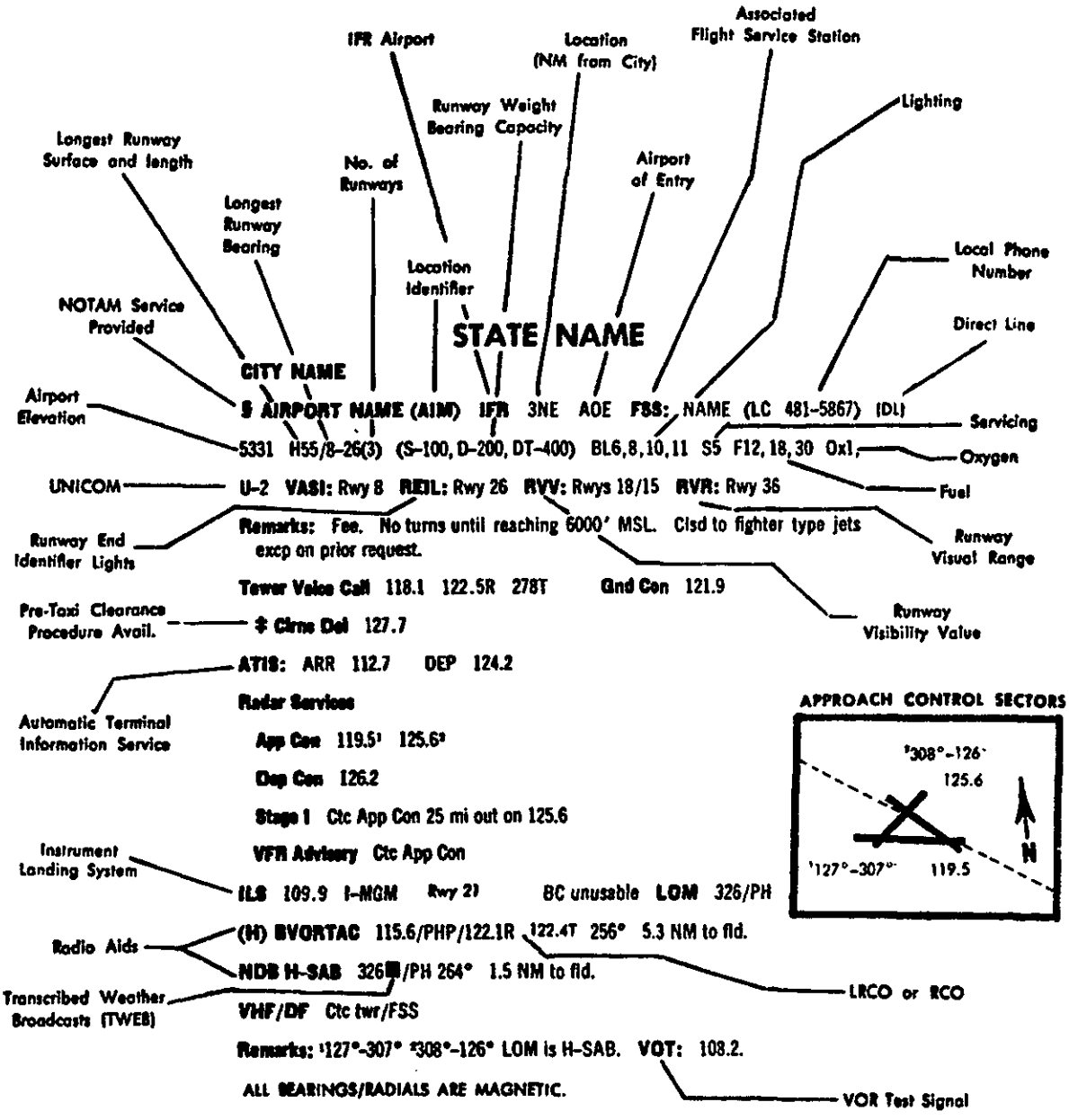


FIGURE 17

AIM Excerpt

AIRPORT LEGEND

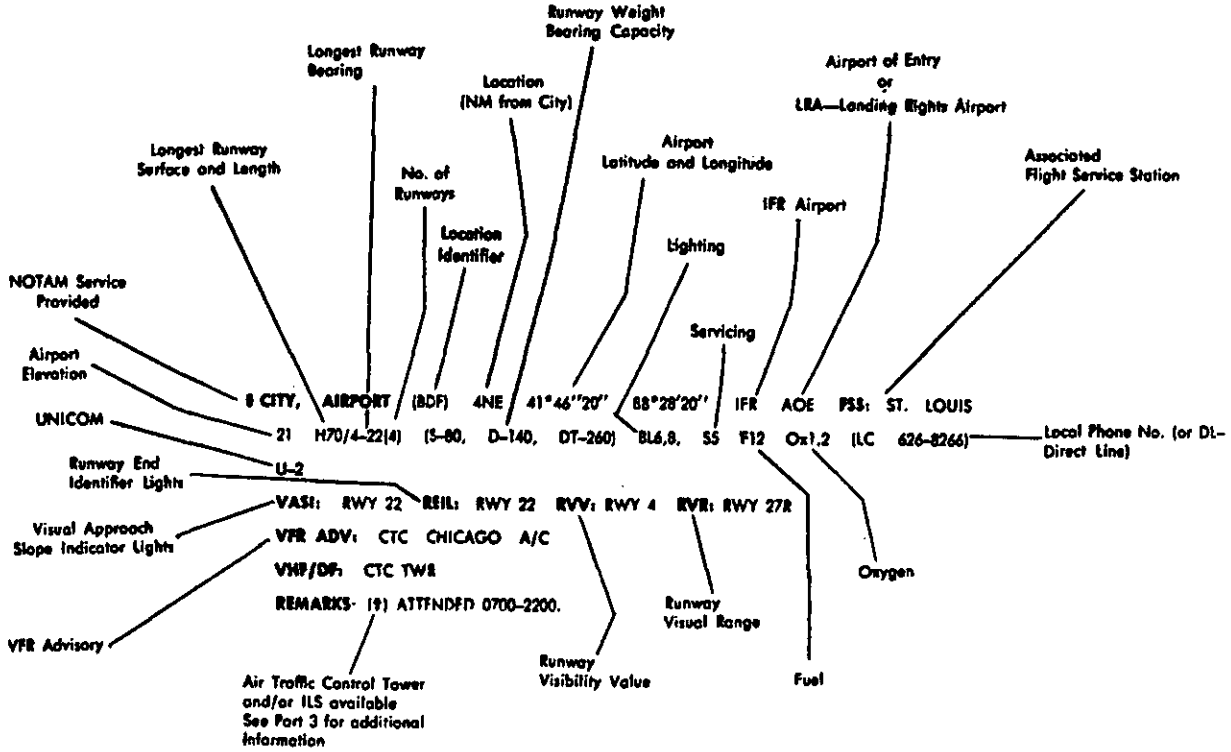


FIGURE 18

AIM Excerpt

ARIZONA

AJO MUNI (P01) 6N 32°27'00'' 112°52'00'' **FSS: PHOENIX**
1458 H63/12-30 (1) BL4 F12
REMARKS: ARPT UNATTENDED. HVY JET TFC VCNTY ARPT. FUEL AVBL EMERG, CALL

AVRA VALLEY **See TUCSON**

BAGDAD 2NE 34°35'45'' 113°10'10'' **FSS: PRESCOTT**
4136 H36/05-23 (1) (S-4) BL4
REMARKS: ARPT UNATTENDED. UNUSUAL AIR CURRENTS VICINITY ARPT,ESPECIALLY EAST APCH. RWY LGTS ACTIVATED BY KEYING 122.8 3 TIMES OR BY PRIOR REQ OR CIRCLING TOWN.

BISBEE MUNI (P04) 6SE 31°21'50'' 109°52'57'' **FSS: DOUGLAS**
4780 39/02-20 (3) L4 S5 F12
REMARKS: RWY LGTS TURNED ON AUTOLY FOR 12 MIN BY VOICE RELAY ON 122.8.

BISBEE DOUGLAS INTERNATIONAL **See DOUGLAS BISBEE**

BOUSE 1E 33°56'00'' 113°59'45'' **FSS: BLYTHE**
968 26/15-33 (1)
REMARKS: ARPT UNATTENDED. P-LINE IN RWY 33 APCH.

BOWIE 1NE 32°20'02'' 109°28'26'' **FSS: DOUGLAS**
3750 39/08-26 (1)
REMARKS: ARPT UNATTENDED. P-LINE 1300' E RWY 26 THR. P-LINE 1400' W RWY 08 THR.

BUCKEYE, PIERCE 2W 33°22'00'' 112°37'05'' **FSS: PHOENIX**
860 30/08-26 (1) L4 S4 F12,18
REMARKS: ARPT ATTENDED MON-SAT 0800-1700. 200' OVERRUN E END & 700' OVERRUN W END.

§ BUCKEYE MUNI (BXK) 6NW 33°25'30'' 112°40'50'' **FSS: PHOENIX**
1024 H38/16-34 (1) (S-12) S5
REMARKS: LOW LEVEL JET TRAFFIC VICINITY OF ARPT. FUEL WILL BE TRUCKED IN ON REQUEST. RWY 16-34 300' WIDE DECOMPOSED PVMNT WITH 35' WIDE ASPH CNTR

BULLHEAD CITY (P06) 1N 35°10'30'' 114°33'15'' **FSS: NEEDLES**
547 H40/17-35 (1) (S-12.5) L4 F12,18
REMARKS: ARPT ATTENDED 0730-DARK.

CAMP VERDE 2SE 34°32'30'' 111°50'15'' **FSS: PRESCOTT**
3126 40/15-33 (1)
REMARKS: ARPT UNATTENDED.

CAMP VERDE, MONTEZUMA 3N 34°36'18'' 111°51'52'' **FSS: PRESCOTT**
3370 H33/16-34 (1)
REMARKS: ARPT UNATTENDED.

CAREFREE (E18) 1E 33°49'05'' 111°53'50'' **FSS: PHOENIX**
2568 H40/06-24 (1) (S-30) BL4 F12,18 U-1
REMARKS: ARPT ATTENDED 0800-1700. TPA 3400'. TKOFS RWY 24 MAINTAIN RWY HDG TO 3000' MSL OR SAFE ALT. PRIOR TO TURNING CROSSWIND. AVOID LOW FLYING OVER HOMES. PLINE E, MOUNTAINS W. RGT TFC RWY 06.

§ CASA GRANDE MUNI (CGZ) 5N 32°57'15'' 111°45'45'' **FSS: PHOENIX**
1462 H38/05-23 (2) (S-12.5) BL4 S5 F12,18 Ox2 **(LC 723-3392)**
REMARKS: ARPT ATTENDED 0800-1900. PARACHUTE DROP ZONES SOUTH AND EAST SIDES OF ARPT. RGT TFC RWY 23, 17.

CASA GRANDE, THREE POINT 1N 32°54'10'' 111°45'40'' **FSS: PHOENIX**
1389 38/17-35 (1) L4 S5 F12,18 U-1 **(LC 723-3392)**
REMARKS: ARPT ATTENDED 0900-0100. RWY LGTS OPER ON UNICOM TIL 0100 LCL ONLY CENTER 2400' OF RWY LGTD.

CASA GRANDE, FRANCISCO GRANDE 7W 32°53'26'' **FSS: PHOENIX**
111°52'07''
1330 52/09-27 (1) L5 S5 F12,18 **(LC 723-3392)**

§ CHANDLER, STELLAR CITY AIR PARK (P19) 4W 33°17'53'' **FSS: PHOENIX**
111°54'54'' IFR
1175 H40/17-35 (1) BL4 S5 F12,18 U-1
REMARKS: RWY LGTS ON N HALF, REFLECTORS ON S HALF OF RWY. P-LINE IN RWY 35 APCH. RGT TFC RWY 17.

CHANDLER MUNI (P18) 3SE 33°16'10'' 111°48'45'' **FSS: PHOENIX**
1235 H26/04-22 (1) (S-14) BL5 S3 F12,18 U-1 **(LC 261-4295)**
REMARKS: ARPT ATTENDED 0800-DUSK. CALM WIND RWY 22.

CHINLE (Q32) ADJ W 36°09'15'' 109°33'00'' **FSS: GALLUP**
5515 52/17-35 (1)
REMARKS: ARPT UNATTENDED. RGT TFC RWY 17, 35.

CLIFF DWELLERS LODGE **See MARBLE CANYON**

§ CLIFTON-MORENCI, GREENLEE COUNTY (CFT) 9SE **FSS: DOUGLAS**
32°57'10'' 109°12'35''
3811 H49/07-25 (1) (S-21) *BL5 **(N)**
REMARKS: ARPT UNATTENDED. FOR RWY LGTS & ROTG BCN PHONE 864-3080 OR 864-4149.

COCHISE COUNTY **See WILLCOX**

COLORADO CITY MUNI 4SW 36°56'58'' 113°00'50'' **FSS: CEDAR CITY**
4840 35/18-36 (2) **(N)**
REMARKS: ARPT UNATTENDED. RGT TFC RWY 13, 31, 18, 36.

COOLIDGE MUNI 2SW 32°58'00'' 111°32'45'' **FSS: PHOENIX**
1402 H21/08-26 (1) (S-4) F12 **(LC 723-3392)**
REMARKS: ARPT IRREGULARLY ATTENDED. FUEL IN EMERG ONLY.

COOLIDGE, FLORENCE MUNI (P08) 6SE 32°56'00'' **FSS: PHOENIX**
111°25'30''
1587 H55/05-23 (4) (S-80,D-115,DT-210) S3 F12,18 **(LC 723-3392)**
REMARKS: PARACHUTE JUMPING SAT & SUN. TPA 1000' AGL. ALL TRAFFIC PATTERNS VARY DURING AF TRAINING. INTENSIVE JET TRAINING RWY 5-23 DAYLGT HRS MON-FRI. CTC AF MOBILE ATCT ON 122.8 BEFORE ENTERING TRAFFIC PATTERN. RGT TFC RWY 05, 08, 11, 35.

COTTONWOOD (P52) 1SW 34°44'00'' 112°02'10'' **FSS: PRESCOTT**
3525 H36/14-32 (1) (S-4) BL4 S5 F12,18 U-1
REMARKS: ARPT ATTENDED DAYLIGHT HRS ON CALL. 950' DIRT OVERRUN SE END. FOR FUEL AFTER HRS PHONE 634-7740 OR 634-2300.

COTTONWOOD LANDING **See BAYIS DAM-SEARCHLIGHT**

COVE 3NE 36°34'50'' 109°10'45'' **FSS: GALLUP**
6100 33/03-21 (2)
REMARKS: ARPT UNATTENDED. RWY NOT MAINTAINED. INQUIRE LOCALLY.

BAYIS DAM-SEARCHLIGHT, NV, COTTONWOOD LANDING (P53) **FSS: NEEDLES**
22N 35°29'07'' 114°39'55''
680 30/MW-SE (1)
REMARKS: ARPT UNATTENDED.

DEER VALLEY MUNICIPAL **See PHOENIX**

DOLAN SPRINGS, LAKE MOHAVE RANCHOS 1W 35°34'06'' **FSS: NEEDLES**
114°17'55''
3200 37/01-19 (1)
REMARKS: ARPT UNATTENDED. P-LINE IN RWY 01 APCH.

DOUGLAS MUNI (DGL) 2E 31°20'30'' 109°30'15'' **FSS: DOUGLAS**
4181 53/18-36 (3) BL5 S5 F12,18 Ox2,4 U-1 **(LC 364-8458)**
REMARKS: ADDNL 3000 X 90 ASPH STRIP ON S SIDE RWY 8-26 CLSD. ONLY MID 2000'.RWY 18-36 LGTD. OX-1 & OX-4 AVBL FM TOWN. ANTENNA IN RWY 08 APCH. RGT TFC RWY 08, 36, 12.

§ DOUGLAS BISBEE, BISBEE DOUGLAS INTERNATIONAL (DUG) **FSS: DOUGLAS ON FLD**
9NW 31°28'02'' 109°36'03'' IFR ADE
4158 H75/12-30 (4) (S-12) BL5 S5 F12,18,34
REMARKS: MAX ALLOWABLE GROSS WGT RWYS 03-21 & 12-30 IS 12500 LBS. RWY LGTS AVBL THRU FSS. RWY 08-26 WT BRG CPTY S-85, D-95, DT-155. RWY 17-35 WT BRG CPTY S-85, D-95, DT-155.

EDS FIELD **See PICACHO**

ELOY MUNI 4NW 32°48'25'' 111°35'10'' **FSS: PHOENIX**
1513 H39/02-20 (1) (S-12.5) BL5 F12,18

ESTRELLA SAILPORT **See MARICOPA**

FALCON FLD **See MESA**

FARM AERO **See PHOENIX**

§ FLAGSTAFF, PULLIAM (FLG) 5S 35°08'16'' 111°40'12'' **FSS: PRESCOTT**
IFR
7012 H70/03-21 (1) (S-65,D-85,DT-130) BL5 S5 F12,18,30 **(LC 774-0475)**
U-1
REMARKS: ARPT ATTENDED 0700-1900 OR CALL AFTER 1900.

FOREST ACRES **See SELIGMAN**

FORT GRANT, ANGEL FLD 1S 32°37'00'' 109°57'00'' **FSS: TUCSON**
4683 29/18-36 (3)
REMARKS: ARPT UNATTENDED.

§ FORT HUACHUCA-SIERRA VISTA, LIBBY AAF/SIERRA VISTA **FSS: DOUGLAS**
MUNI (FHU) 3N 31°35'00'' 110°20'00'' IFR
4664 H53/11-29 (2) BL5 F12,18
REMARKS: ARPT ATTENDED DAYLIGHT. RGT TFC RWY 20, 29.

FIGURE 19

AIM Excerpt

ARIZONA—CONTINUED

PAYSON 2NW 34°15'16'' 111°20'50'' FSS: PHOENIX
5156 49/06-24 (1)
REMARKS: ARPT UNATTENDED.

PHOENIX, FARM AERO 3W 33°25'35'' 112°10'04'' FSS: PHOENIX
1030 24/17-35 (1) L*4 F12 (LC 261-4295)
REMARKS: RWY LGTS AVBL ON PRIOR REQUEST

§ PHOENIX, DEER VALLEY MUNICIPAL (DVT) 17N FSS: PHOENIX
33°41'13'' 112°04'57''
1480 H51/07-25 (1) (S-30,D-45,DT-60) BL4 S5 F12,18 (LC 582-2171)
U-2
REMARKS: (†) GLIDER OPERS IN VICINITY OF ARPT SAT & SUN 1100-SUNSET. FIRST 1000' RWY 7 CLSD TIL JUNE 1975. NON-RADIO EQUIPPED ACFT MUST OBTAIN PRIOR PMSN TO OPERATE IN ARPT TFC AREA, CALL 602-582-2031 OR 602-942-2050. RWY 07 THRESHOLD DISPLACED 650'.

§ PHOENIX, SKY HARBOR INTL (PHX) 3E 33°26'07'' FSS: PHOENIX ON FLD
112°00'43'' IFR LRA
1128 H103/08R-26L (2) (S-100,D-200,DT-350) BL5, 6, 7A, 10, 11, 13 S5 F12,18,30,34 Ox1,2,3,4 U-2
VASI: RWY 26L REIL: RWY 08L, 26R RVV: RWY 08R
REMARKS: (†) FLY BASE LEG AT LEAST 5 MI FM ARPT. UNLESS ADZD BY ATC ALL TURBINE ACFT & ACFT 12,500 LBS & OVER REMAIN AT OR ABOVE 3000' MSL UNTIL ESTABD ON FINAL. STAGE I-CTC APP CON BEYOND 10MI. VASI RWY 26L LTCH 87.78', LTCH 56.34'/LRRP 1675', LRRP 1075'. RGT TFC RWY 26R, 08R. RWY 26L THRESHOLD DISPLACED 706'.

§ PHOENIX, TURF (E19) 13NW 33°38'00'' 112°05'00'' FSS: PHOENIX
1339 30/04-22 (1) S5 F12,18 U-1 (LC 261-4295)
REMARKS: HEAVY GLIDER ACTIVITY VICINITY OF AIRPORT. 8' FENCE PARALLEL & 45' N OF CNTRLN EXTENDING FM THR RWY 4 TO 1300' DOWN RWY. RGT TFC RWY 04. LANDING FEE.

PHOENIX-LITCHFIELD MUNI See GOODYEAR

PICACHO, EDS FIELD 2S 32°41'00'' 111°30'02'' FSS: PHOENIX
1653 51/17-35 (1) S5 F12 U-1
REMARKS: ARPT ATTENDED DAWN-DUSK. P-LINE IN RWY 17 APCH.

PIERCE See BUCKEYE

PINE SPRINGS ADJ E 35°24'03'' 109°16'31'' FSS: GALLUP
6930 23/05-23 (1)
REMARKS: ARPT UNATTENDED.

PRIOR 1SW 36°05'28'' 110°13'58'' FSS: PRESCOTT
6315 32/M-S (1)
REMARKS: ARPT UNATTENDED.

PULACCA 4SW 35°48'00'' 110°25'00'' FSS: PRESCOTT
5573 H38/04-22 (1)
REMARKS: ARPT UNATTENDED. RGT TFC RWY 04, 22, 15, 33.

§ PRESCOTT MUNI (PRC) 8N 34°39'05'' 112°25'15'' IFR FSS: PRESCOTT ON FLD
5042 H76/03-21 (2) (S-50,D-63,DT-100) BL5 S5 F12,18
U-2
VHF/DF: CTC FSS
REMARKS: ARPT ATTENDED 0600-1900 ON CALL OTHER HRS. RWY 03 THRESHOLD DISPLACED 797'

PULLIAM See FLAGSTAFF

QUARTZSITE 1N 33°40'20'' 114°13'22'' FSS: BLYTHE
860 25/MW-SE (1)
REMARKS: ARPT ATTENDED DAYLIGHT.

RANCHO DE LOS CABALLEROS See WICKENBURG

RANCHO ROCA ROJA See RIMROCK

RED MESA See TEEC NOS POS

RIMROCK, RANCHO ROCA ROJA 2SE 34°39'00'' FSS: PRESCOTT
111°43'00''
3904 37/07-25 (1)
REMARKS: ARPT UNATTENDED. P-LINE IN RWY 25 APCH.

RIMROCK 3W 34°39'15'' 111°47'20'' FSS: PRESCOTT
3575 25/05-23 (1) L*4 S5 F12,18
REMARKS: DOWNDRAFTS. RWY LGTS OPER ON PHONE, TELEGRAM OR RDO REQUEST. LND RGTS ON RWY 05. ONLY FIRST 1500' LGTD. RWY 05 MAKE RGT TURN ON TXOF.

ROCK POINT 1N 36°43'55'' 109°37'05'' FSS: GALLUP
4999 37/01-19 (1)
REMARKS: ARPT UNATTENDED. RUF, NOT REGULARLY MAINTD.

ROCKY RIDGE 1NE 36°03'35'' 110°35'15'' FSS: PRESCOTT
5946 25/03-21 (1)
REMARKS: ARPT UNATTENDED.

ROLL, ANTELOPE RANCH (P48) 2SW 32°43'00'' FSS: YUMA
114°01'00''
250 27/08-26 (1)
REMARKS: P-LINE IN RWY 08 APCH.

ROOSEVELT, GRAPEVINE 6E 33°38'22'' 111°03'22'' FSS: PHOENIX
2361 39/16-34 (1)
REMARKS: ARPT UNATTENDED P-LINE IN RWY 34 APCH.

RUBEL RANCH See SELIGMAN

RYAN FIELD See TUCSON

§ SAFFORD MUNI (SAD) 4E 32°51'17'' 109°38'05'' FSS: DOUGLAS
3176 H48/08-26 (2) (S-23) BL5 S5 F12,18,30 U-1
REMARKS: FOR FSS DIAL OAND ASK FOR ENTERPRISE 910.

SAN MANUEL 2NW 32°38'11'' 110°38'48'' FSS: TUCSON
3275 H42/11-29 (1)
REMARKS: ARPT UNATTENDED.

§ SCOTTSDALE MUNI (SDL) 9N 33°37'05'' 111°54'55'' FSS: PHOENIX
IFR
1479 H48/03-21 (1) (S-23) BL5 S5 F12,18,30 Ox1,2,3,4 (LC 261-4295)
U-1
REMARKS: RGT TFC RWY 21.

SEDONA (SEZ) 2SW 34°51'00'' 111°47'10'' IFR FSS: PRESCOTT
4830 H51/03-21 (1) (S-15) BL4 F12,18 U-1
REMARKS: TURBULENCE MAY BE EXPERIENCED IN VICINITY OF ARPT. RGT TFC RWY 21.

SELIGMAN, FOREST ACRES 7SW 35°15'30'' 112°57'15'' FSS: PRESCOTT
5100 54/15-33 (1)
REMARKS: ARPT UNATTENDED. P-LINE S.

SELIGMAN (P23) ADJ W 35°20'00'' 112°53'00'' FSS: PRESCOTT
5237 43/04-22 (1)
REMARKS: ARPT UNATTENDED. P-LINE IN RWY 04 APCH.

SELIGMAN, RUBEL RANCH 25W 35°23'00'' 113°18'00'' FSS: PRESCOTT
5585 48/NW-SE (1)
REMARKS: ARPT UNATTENDED.

SELLS 1NW 31°55'45'' 111°54'15'' FSS: TUCSON
2380 28/04-22 (1) F22,40
REMARKS: ARPT UNATTENDED. FOR FUEL CONTACT POLICE AT SELLS.

SHONTO 1S 36°35'00'' 110°38'00'' FSS: PRESCOTT
6449 35/01-19 (1)
REMARKS: ARPT UNATTENDED.

SNOW LOW MUNI (SOW) 2E 34°15'55'' 109°59'55'' FSS: GALLUP
6411 H40/03-21 (1) (S-15) L4 S5 F18 U-1
REMARKS: ARPT ATTENDED DAYLIGHT. 300' OVERRUN NE END RWY 03-21, NOT TO RWY STRENGTH.

SNOW LOW, WHITE MOUNTAIN LAKE 8NE 34°21'08'' FSS: GALLUP
109°58'10''
6066 H40/12-30 (1) (S-50)
REMARKS: ARPT UNATTENDED. P-LINE IN RWY 30 APCH. RGT TFC RWY 12, 30.

SIERRA VISTA See FORT HUACHUCA-SIERRA VISTA

SNOWFLAKE MUNI 3NW 34°33'05'' 110°06'30'' FSS: GALLUP
5792 48/05-23 (1)
REMARKS: ARPT UNATTENDED. WATCH FOR LIVESTOCK.

SPRINGERVILLE, EAGAR MUNI (O35) 1W 34°08'00'' FSS: GALLUP
109°18'45''
7052 H56/03-21 (1) (S-4) BL4 S5 F18,30 Ox1,3 U-1

ST JOHNS MUNI (SJN) 1N 34°31'15'' 109°22'45'' FSS: GALLUP
5733 H41/13-31 (2) (S-5) BL4 F18
REMARKS: P-LINE IN RWY 02 APCH.

STELLAR CITY AIR PARK See CHANDLER

FIGURE 20

AIM Excerpt

NEW MEXICO

AKIN AND AKIN See **MCALISTER**

ALAMEDA See **ALBUQUERQUE**

§ ALAMOGORDO MUNI (ALM) 5SW 32°50'27'' 105°59'17'' FSS: EL PASO
4197 H70/03-21 (1) (S-68,D-90,DT-140) BL5 S5 F18,30 (LC 437-5511)
Ox1 U-1

§ ALBUQUERQUE, INTERNATIONAL (ABQ) 4SE 35°02'32'' 106°36'19'' IFR LRA FSS: ALBUQUERQUE ON FLD
5352 H134/08-26 (4) (S-100,D-200,DT-350) BL5, 6, 8, 10 S5
F12,18,34,40 Ox1,2,3,4 U-2
VASI: RWY 08 RVV: RWY 35 RVR: RWY 35
REMARKS: (†) 901 FT STOP WAY WEST END RWY 8/26 1053 FT EAST END 1036 FT STOP WAY SW END 3/21 2298 FT NE END. 1907 FT STOP WAY N END RWY 17/35 VASI RWY 8 TCH 50', RRP 1150'. ARRESTING CABLES RWY 35 1500FT FROM THRESHOLD,RWY 17 1007FT FRM THRESH,RWY 26 1053FT FRM THRESH, RWY 8 200FT FRMDISPLACED THRESH TKOFS RWY 3 PROHIBITED EXCEPT FOR EMGCY CONDITIONS ON FLD TKOFS RWY 35 LIMITED TO CONVENTION ACFT NO LARGER THAN DC-3; OTHERS MAY REQ RWY 35 TKOFS FROM ABQ TWR. RWY LGTS OFF DAILY 0600Z-SUNRISE. LGTS AVBL BY REQ TO ATCT. ARRESTING DEVICE RWY 21, 08, 26, 35 RWY 08 THRESHOLD DISPLACED 599'.

ANGEL FIRE See **EAGLE NEST**

APACHE CREEK, JEWETT MESA (Q13) 12N 34°00'12'' 108°40'39'' FSS: GALLUP
7600 35/NE-SW (1)
REMARKS: ARPT UNATTENDED.

§ ARTESIA, MUN (ATS) 4W 32°51'05'' 104°28'05'' IFR FSS: CARLSBAD
3548 H68/12-30 (3) (S-50,D-90,DT-160) BL4 S5 F18 U-1
REMARKS: RWY 30 THRESHOLD DISPLACED 2400'.

AZTEC MUNI (Q19) 2NW 36°50'05'' 108°01'40'' FSS: GALLUP
5877 H28/04-22 (1) (S-8) S5 F18 U-1
REMARKS: ARPT ATTENDED DALGT

BEAVERHEAD AIRSTRIP See **SILVER CITY**

BIA CROWNPOINT See **CROWNPOINT**

BLACK ROCK See **ZUNI PUEBLO**

C S RANCH See **CIMARRON**

CAPITAN, G BAR F RANCH 12E 33°32'40'' 105°22'30'' FSS: ROSWELL
6505 40/E-W (1)
REMARKS: ARPT UNATTENDED.

§ CARLSBAD, CAVERN CITY AIR TRML (CNM) 6SW 32°20'14'' 104°15'46'' IFR FSS: CARLSBAD ON FLD
3293 H78/03-21 (4) (S-40,D-63,DT-105) BL5 S3 F18,30
U-2
REMARKS: ARPT ATTENDED DAYLGT.

CARLSBAD CAVERN AIRPARK See **WHITES CITY**

CARRIZOZO MUNI (Q37) 1NW 33°39'00'' 105°54'00''
5370 H49/06-24 (1) BL5, 10 U-1
VASI: RWY 24
REMARKS: SAVASI RWY 24 TCH 17', RRP 250'.

CAUSEY 5SE 33°50'15'' 103°04'10'' FSS: LUBBOCK
3990 28/18-36 (2) B F12 (H)
REMARKS: ARPT UNATTENDED. ROTG BCN OPERATES ON REQUEST. P-LINES RWYS 9 & 36 FENCE 18. FUEL AVBL EMERG ONLY

CAVERN CITY AIR TRML See **CARLSBAD**

CIMARRON, PHILMONT SCOUT RANCH 3SW 36°29'15'' 104°57'00'' FSS: TRINIDAD
6780 60/NE-SW (1)
REMARKS: ARPT UNATTENDED. BUFFALO ON ARPT

CIMARRON, C S RANCH 7SE 36°28'30'' 104°48'00'' FSS: TRINIDAD
6125 48/E-W (1)
REMARKS: ARPT UNATTENDED.

§ CLAYTON, MUN ARPK (CAO) 2E 36°26'45'' 103°09'15'' FSS: DALHART
4963 H52/03-21 (1) (S-8) BL4 S3 F12,18 U-1

CLINES CORNERS See **MORIARTY**

CLOVIS, HILLCREST 2E 34°24'30'' 103°10'15'' FSS: TUCUMCARI (LC 762-2411)
4244 36/03-21 (4) F12,15
REMARKS: ARPT ATTENDED SEASONALLY. P-LINE IN RWY 03 APCH. P-LINE IN RWY 26 APCH P-LINE IN RWY 31 APCH. P-LINE IN RWY 35 APCH.

§ CLOVIS MUNI (CVN) 7E 34°25'36'' 103°04'37'' IFR FSS: TUCUMCARI (LC 762-2411)
4214 H62/03-21 (2) (S-30,D-45) BL5, 6 S5 F18 Ox1,2
U-1
REMARKS: STAGE II CTC CANNON A/C

COLUMBUS, STOCKYARDS 3S 31°47'30'' 107°38'15'' FSS: DEMING
4017 28/08-26 (2)
REMARKS: ARPT ATTENDED 0700-2100.

CONCHAS DAM, CONCHAS STATE PARK 1SW 35°22'00'' 104°11'15'' FSS: TUCUMCARI
4230 H48/09-27 (1) (S 13) BL4 U-1

CONCHAS STATE PARK See **CONCHAS DAM**

CORONADO See **ALBUQUERQUE**

CREWS FLD See **RATON**

§ CROWNPOINT, BIA CROWNPOINT (Q30) 1N 35°41'00'' 108°09'00'' FSS: TUCUMCARI
6943 53/02-20 (1) U-1
REMARKS: ARPT UNATTENDED. LAND TO S, TKOF TO N. DUE TO SEVERE DOWN DRAFTS ON SE END REGARDLESS OF WIND. P-LINE IN RWY 02 APCH P-LINE IN RWY 20 APCH. RGT TFC RWY 02, 20.

CUBA, PUEBLO PINTADO 38W 35°58'00'' 107°39'00'' FSS: FARMINGTON
6480 24/07-25 (1)
REMARKS: ARPT UNATTENDED. FENCE AND BRUSH BOTH APPROACHES

CUBA, TORREON 23SW 35°47'00'' 107°14'00'' FSS: FARMINGTON
6372 24/17-35 (1)
REMARKS: ARPT UNATTENDED.

§ DEMING MUNI (DMN) 2SE 32°15'27'' 107°43'02'' IFR FSS: DEMING ON FLD
4309 H66/08-26 (2) (S-20) BL5 S5 F12,18
REMARKS: ARPT ATTENDED DAYLGT.

DOWNTOWN See **TAOS**

DULCE ADJ SE 36°55'40'' 106°59'00'' FSS: ALBUQUERQUE
6800 H50/15-33 (1) (S 12 5) *BL*4 U-1
REMARKS: ARPT UNATTENDED P-LINE IN RWY 15 APCH.

EAGLE NEST, ANGEL FIRE 1E 36°25'14'' 105°17'22'' FSS: TRINIDAD
8382 H67/17-35 (1)
REMARKS: ARPT UNATTENDED

EL VADO STATE PARK See **TIERRA AMARILLA**

ESPANOLA MUNI (Q14) 3NE 36°01'30'' 106°02'45'' FSS: ALBUQUERQUE
5790 H50/16-34 (1) (S-18) L4 S5 F18 U-1
REMARKS: ARPT ATTENDED 0800 1700. REPAIRS ON CALL.

ESTANCIA MUNI 1E 34°45'48'' 106°02'27'' FSS: ALBUQUERQUE
6100 40/09-27 (1)
REMARKS: ARPT UNATTENDED RWY 09 THRESHOLD DISPLACED 900'

EUNICE, LEA COUNTY/EUNICE/ (E84) 5W 32°27'20'' 103°14'25'' FSS: ROSWELL
3569 H36/18-36 (1)
REMARKS: ARPT UNATTENDED. P-LINE RWY 18 & RWY 10, TANK RWY 36

§ FARMINGTON MUNI (FMN) 1NW 36°44'28'' 108°13'45'' IFR FSS: GALLUP
5503 H67/07-25 (2) (S-30,D-40) BL5 S5 F18,30 Ox2,4
U-2
REMARKS: (†)

FORT STANTON 3S 33°27'30'' 105°31'31'' FSS: ROSWELL
6771 34/06-24 (2)
REMARKS: ARPT UNATTENDED

§ FORT SUMNER MUNI (FSU) 2NE 34°29'00'' 104°13'00'' FSS: TUCUMCARI
4166 H47/03-21 (2) (S-17)
REMARKS: ARPT UNATTENDED. ARPT NOT MAINTAINED/OVERGROWN WITH VEGTN/CATTLE ON FLD/AUTO RACES WEEKENDS/RCMD PILOTS NOT USE UNLESS CURRENT ONARPT CONDITIONS/EXTRMLY HAZARDOUS. RWY 03 THRESHOLD DISPLACED 250'.

G BAR F RANCH See **CAPITAN**

FIGURE 21

AIM Excerpt

AIRMAN'S INFORMATION MANUAL—PART 3A

NOTICES TO AIRMEN

This part is issued every 14 days. It contains appropriate notices from the daily NOTAM Summary, and other items considered essential to flight safety.

Information Current As of October 31, 1974

This section contains Notices to Airmen that are expected to remain in effect for at least seven days. Temporary notices without published duration dates are normally carried twice unless resubmitted.

NOTE: Notices are arranged in alphabetical order by State (and within the State by City or locality).

NEW OR REVISED DATA: New or revised data are indicated by underlining the first line of the affected item. The new information is not necessarily limited to the underlined portion, which is used only to attract attention to the new insert.

NOTE: All times are local unless otherwise indicated.

ALABAMA

MOBILE, BATES FIELD: Rwy 18–36 closed until Jan 1, 1975. (8–74)

ALASKA

SPECIAL NOTICE: Pilots flying aircraft equipped with SCR–718 altimeters will assure that the altimeter is turned off within 200 NM of Clear, Alaska and Thule, Greeland. (10/74)

For complete information on Alaska consult the Alaska Supplement.

ARIZONA

GRAND CANYON AND PETRIFIED FOREST NATIONAL PARKS: All pilots are requested to avoid flying below the canyon rim and to maintain a distance 1500' above and horizontally from all scenic overlooks, parks, and trails. (10/74)

PHOENIX, DEER VALLEY MUNICIPAL ARPT: Rwy 7R–25L closed until July 1975. (10–74)

PRESCOTT MUNI ARPT: First 1450 ft rwy 11 closed. (8–74)

YUMA MCAS/YUMA INTL ARPT: LOC rwy 21R OTS Nov 25–Dec 18. (11–74)

ARKANSAS

HOPE MUNI ARPT: Rwys 16–34 and 4–22 closed. (8–74)

MENA MUNI ARPT: Rwy 16–34 closed until Jan 1, 1975. Turf strip 4500 ft east side rwy 16–34 for daylight use. (10/74)

ROGERS: NDB "ROG" unmonitored. (10–74)

ROGERS MUNI ARPT: Closed const. (10–74)

CALIFORNIA

SPECIAL NOTICE: Do not mistake dirt strip on large island, Lake Berryessa, lctd lat 38–34 long 122–13 for airport. Strip is unauthorized and unsafe. (10/74)

ANO NUEVO ISLAND: Avoid low flying in the vicinity and over island. Biological research of wild life in progress. (10/74)

BLYTHE ARPT: Intensive airline jet acft training in progress 24 hrs daily. Inbound acft report 20 miles out on 123.6 and guard 123.6 for arpt advisory service. Use other freqs for other purposes. UNICOM is not for arpt advisory use. (10/74)

CALEXICO ARPT: Rotating beacon OTS. (7–74)

CARLSBAD, PALOMAR ARPT: First 1000 ft rwy 24 closed landing Mon-Fri 0700–1700 until Nov 30. (8–74)

LONG BEACH, DAUGHERTY FIELD: First 1000 ft rwy 25L closed 0800–1600 daily until Dec 1. (10/74)

LOS ANGELES INTL ARPT: Crane 216 ft AGL, 2000 ft W and 2400 ft S of approach end rwy 25L until Dec 31, 1974. OM rwy 25L OTS. Rwy 6R–24L closed until Dec 12. ILS rwy 6R OTS until Dec 6. (10/74)

LOS ANGELES: VORTAC "LAX" VOR portion OTS Nov 12 thru Dec 12. (10/74)

OAKLAND, METROPOLITAN OAKLAND INTL ARPT: All turbo-jet, all turbo-prop over 12,500 lbs GWT, and all 4 engine reciprocating acft are prohibited from landing rwys 9L/R and takeoff from rwys 27L/R, 2200–0700 lcl. Same acft prohibited landing rwys 9L/R or takeoff rwys 27L/R 0700–2200 lcl unless certificated under Part 36 or are operd at or below applicable Part 36, Appendix C noise limits for type and weight of acft. Restriction waived if rwy 11/29 clsd or if required by acft for operational safety. (10/74)

OAKLAND, METROPOLITAN OAKLAND INTL ARPT: GS, OM, MM and IM OTS. DF OTS until Jan 1, 1975. (10/74)

SAN DIEGO INTL-LINDBERGH FLD: Rwy 9–27 closed Mon-Fri 0015–0630 until Apr 15, 1975. (9–74)

SAN DIEGO-SANTEE-GILLESPIE FIELD: First 100 ft rwy 35 closed until Nov 30. (9/74)

SAN FRANCISCO INTL ARPT: Twy C west of rwy 1L–19R designated tmpry rwy 11–29. Rwy 11–29 4000 x 75 is clsd to acft over 12,500 lbs, and for dalgt VFR use only indef. Constr equipment from 30 to

FIGURE 22

☆ U.S. GOVERNMENT PRINTING OFFICE : 1976 O—220–439