Airman Knowledge Testing Supplement for Sport Pilot, Recreational Pilot, Remote Pilot, and Private Pilot

2018

U.S. Department of Transportation
FEDERAL AVIATION ADMINISTRATION
Flight Standards Service

SECTIONAL AERONAUTICAL CHART

SCALE 1:500,000

LEGEND

Airports having control towers are shown in **blue**, all others in **magenta**. Consult Chart Supplement for details involving airport lighting, navigation aids, and services. For additional symbol information refer to the Chart User's Guide.

AIRPORTS

Other than hard-surfaced runways

Seaplane Base

Hard-surfaced runways 1500 ft. to 8069 ft. in length

Hard-surfaced runways greater than 8069 ft., or same multiple runways less than 8069 ft.

Open dot within hard-surfaced runway configuration indicates approximate VOR, VOR-DME, or VORTAC location.

All recognizable hard-surfaced runways, including those closed, are shown for visual identification. Airports may be public or private.

ADDITIONAL AIRPORT INFORMATION

(R) Restricted or Private – (Soft surfaced runway, or hard surfaced runway less than 1500' in length.) Use only in emergency, or by specific authorization.

Military – Other than hard-surfaced. All military airports are identified by abbreviations AFB, NAS, AAF, etc. For complete airport information, consult DOD FLIP.

(H) Heliport Selected

(U) Unverified

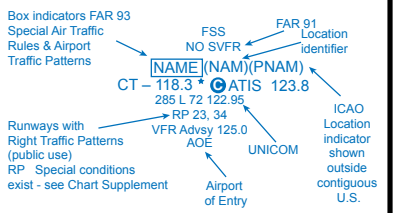
Abandoned–paved, having landmark value, 3000 ft. or greater

(F) Ultralight Flight Park Selected

Services–fuel available and field attended during normal working hours depicted by use of ticks around basic airport symbol. (Normal working hours are Mon thru Fri 10:00 A.M. to 4:00 P.M. local time. Consult Chart Supplement for service availability at airports with hard-surfaced runways greater than 8069 ft.

Rotating airport beacon in operation Sunset to Sunrise

AIRPORT DATA



FSS – Flight Service Station
NO SVFR – Fixed wing special VFR flight is prohibited.
CT– 118.3 – Control Tower (CT) primary frequency
★– Star indicates operation part-time (see tower frequencies tabulation for hours of operation).
(C) – Indicates Common Traffic Advisory Frequencies (CTAF)
ATIS 123.8 – Automatic Terminal Information Service
ASOS/AWOS 135.42 – Automated Surface Weather Observing Systems (shown where full-time ATIS is not available). Some ASOS/AWOS facilities may not be located at airports.
UNICOM – Aeronautical advisory station
VFR Advsy – VFR Advisory Service shown where full-time ATIS not available and frequency is other than primary CT frequency.

285 – Elevation in feet
L – Lighting in operation sunset to sunrise
★L – Lighting limitations exist, refer to Airport/Facility Directory.
72 – Length of longest runway in hundreds of feet; usable length may be less.

When information is lacking, the respective charactor is replaced by a dash. Lighting codes refer to runway edge lights and may not represent the longest runway or full length lighting.

AIRPORT TRAFFIC SERVICE AND AIRSPACE INFORMATION

Only the controlled and reserved airspace effective below 18,000 ft. MSL are shown on this chart. All times are local.

Class B Airspace

Class C Airspace (mode C See FAR 91.215/AIM.)

Class D Airspace

40 Ceiling of Class D Airspace in hundreds of feet. (A minus ceiling value indicates surface up to but not including that value).

Class E (sfc) Airspace

Class E Airspace with floor 700 ft. above surface.

Class E Airspace with floor 1200 ft. or greater above surface that abuts Class G Airspace.

2400 MSL / 4500 MSL Differentiates floors of Class E Airspace greater than 700 ft. above surface.

Class E Airspace exists at 1200' AGL unless otherwise designated as shown above.
Class E Airspace low altitude Federal Airways are indicated by center line.
Intersection - Arrows are directed towards facilities which establish intersection.

132° V 69

Total mileage between NAVAID, on direct Airways
Class E Airspace low altitude RNAV routes are indicated by center line.

T319 TK313 RNAV waypoint (helicopter only)

Prohibited, Restricted, and Warning Areas; Canadian Advisory, Danger, and Restricted Areas.

Alert Area and MOA - Military Operations Area

Special Airport Traffic Area (See FAR Part 93 for details)

ADIZ - Air Defense Identification Zone

Mode C (See FAR 91.215/AIM).

National Security Area

Terminal Radar Service Area (TRSA)

IR211 MTR - Military Training Route

MISCELLANEOUS

−1° E− Isogonic Line (2010 VALUE)

(U) Ultralight Activity

(H) Hang Glider Activity

(G) Glider Operations

(UA) Unmanned Aircraft Activity

Parachute Jumping Area (See Chart Supplement.)

Marine Light

NAME (VPXYZ)

VFR Waypoints (See Chart Supplement for latitude/longitude).

TOPOGRAPHIC INFORMATION

95 40 Roads & Road Markers

Railroad

Power Transmission Lines

Aerial Cable

Landmark Feature - stadium, factory, school, golf course, etc.

Outdoor Theater

Lookout Tower
618 (Elevation Base of Tower)

CG Coast Guard Station

Race Track

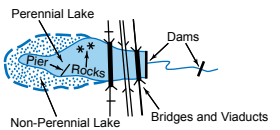
Tank-water, oil or gas

Oil Well • Water Well

Mine or Quarry

Mountain Pass
11823 (Elevation of Pass)

(Pass symbol does not indicate a recommended route or direction of flight and pass elevation does not indicate a recommended clearance altitude. Hazardous flight conditions may exist within and near mountain passes).



RADIO AIDS TO NAVIGATION

VHF OMNI RANGE (VOR)

VORTAC

VOR-DME

Non-Directional Radiobeacon (NDB)

NDB-DME

Other facilities. i.e., FSS Outlet, RCO, etc.

COMMUNICATION BOXES

Underline indicates no voice on this frequency.
Crosshatch indicates Shutdown Status
★ Operates less than continuous or On-Request.
(A) ASOS/AWOS
(H) HIWAS

FSS radio providing voice communication

Heavy line box indicates Flight Service Station (FSS). Frequencies 121.5, 122.2, 243.0 and 255.4 (Canada - 121.5, 126.7 and 243.0) are available at many FSSs and are not shown above boxes. All other frequencies are shown.

Certain FSSs provide Airport Advisory Service, see Chart Supplement.

R - Receive Only.

Frequencies above thin line box are remoted to NAVAID site. Other FSS frequencies providing voice communication may be available as determined by altitude and terrain. Consult Chart Supplement for complete information.

OBSTRUCTIONS

1000 ft. and higher AGL

below 1000 ft. AGL

or Group Obstruction

Obstruction with high-intensity lights May operate part-time

or

Elevation of the top above mean sea level

2049 Height above ground

(1149) Under construction or reported; position and elevation unverified.

UC

NOTICE: Guy wires may extend outward from structures.

Angle of bank Φ	Load factor n
0°	1.0
10°	1.015
30°	1.154
45°	1.414
60°	2.000
70°	2.923
80°	5.747
85°	11.473
90°	∞

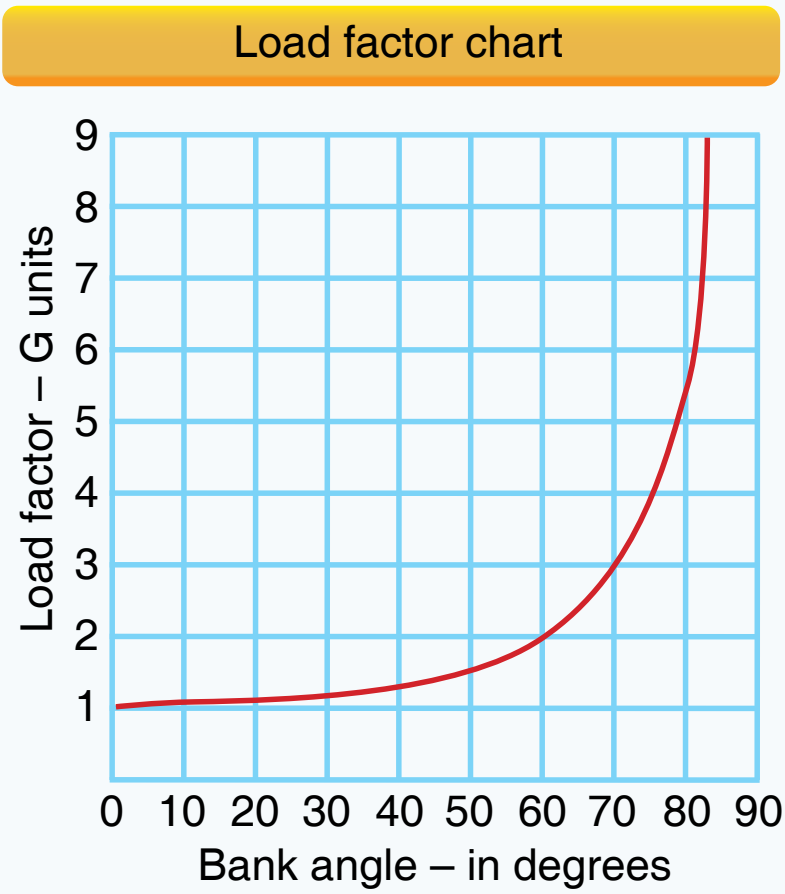


Figure 2. Load Factor Chart.

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METAR KINK 121845Z 11012G18KT 15SM SKC 25/17 A3000
METAR KBOI 121854Z 13004KT 30SM SCT150 17/6 A3015
METAR KLAX 121852Z 25004KT 6SM BR SCT007 SCT250 16/15 A2991
SPECI KMDW 121856Z 32005KT 1 1/2SM RA OVC007 17/16 A2980 RMK RAB35
SPECI KJFK 121853Z 18004KT 1/2SM FG R04/2200 OVC005 20/18 A3006
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Figure 12. Aviation Routine Weather Reports (METAR).

TAF

KMEM 121720Z 1218/1324 20012KT 5SM HZ BKN030 PROB40 1220/1222 1SM TSRA OVC008CB
FM122200 33015G20KT P6SM BKN015 OVC025 PROB40 1220/1222 3SM SHRA
FM120200 35012KT OVC008 PROB40 1202/1205 2SM-RASN BECMG 1306/1308 02008KT BKN012
BECMG 1310/1312 00000KT 3SM BR SKC TEMPO 1212/1214 1/2SM FG
FM131600 VRB06KT P6SM SKC=

KOKC 051130Z 0512/0618 14008KT 5SM BR BKN030 TEMPO 0513/0516 1 1/2SM BR
FM051600 18010KT P6SM SKC BECMG 0522/0524 20013G20KT 4SM SHRA OVC020
PROB40 0600/0606 2SM TSRA OVC008CB BECMG 0606/0608 21015KT P6SM SCT040=

Figure 15. Terminal Aerodrome Forecasts (TAF).

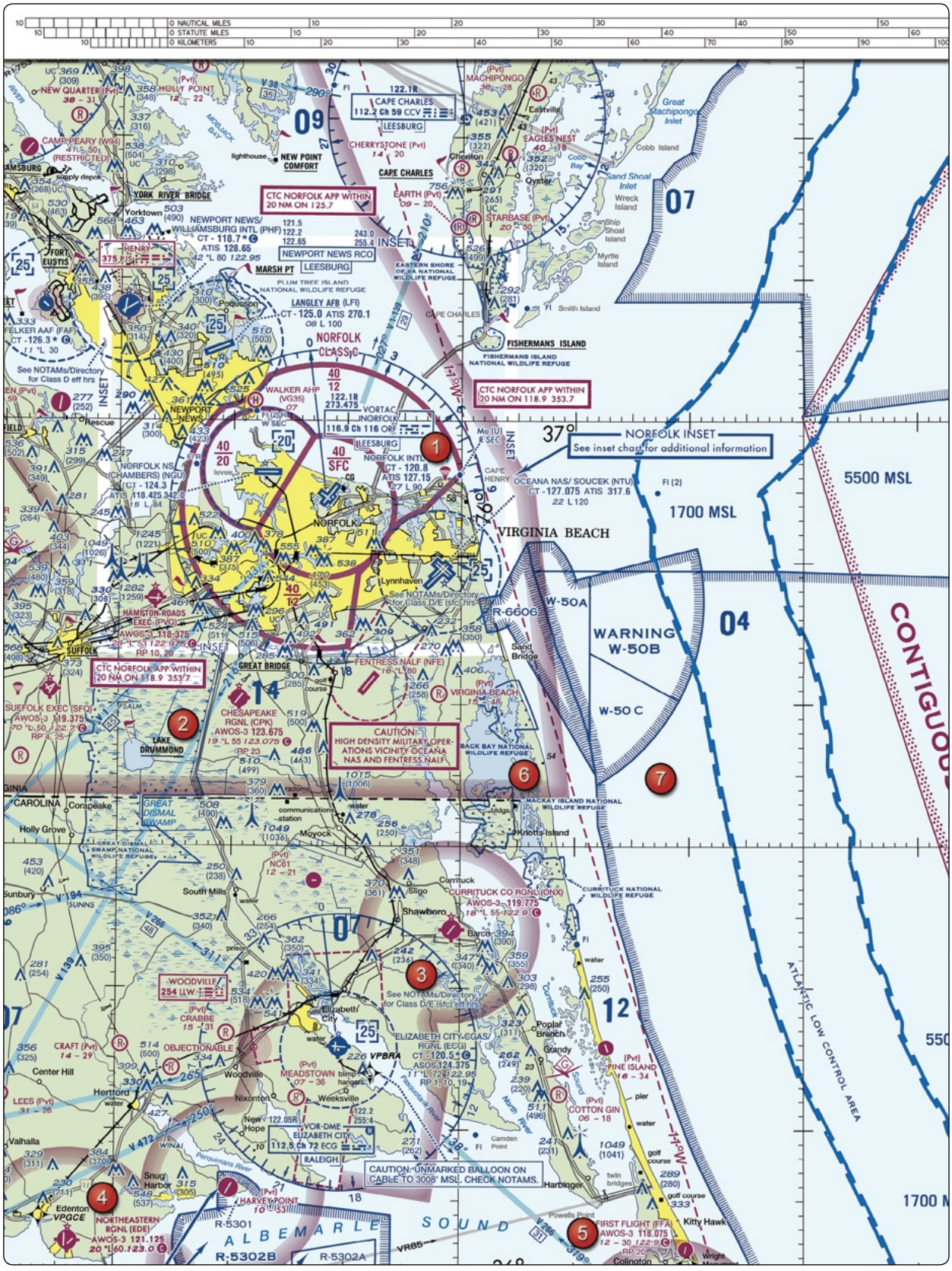

Figure 20. Sectional Chart Excerpt.

NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

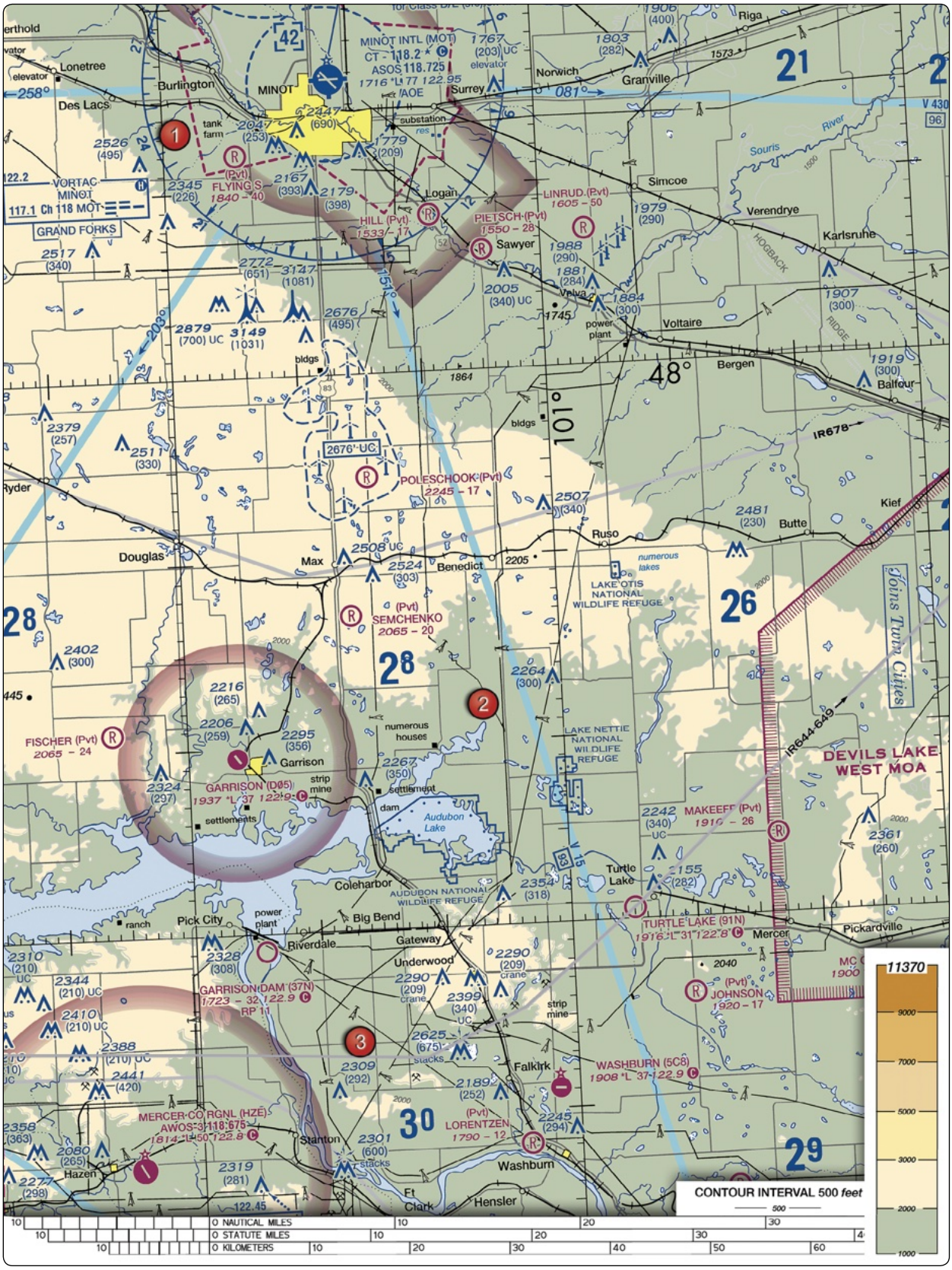

Figure 21. Sectional Chart Excerpt.

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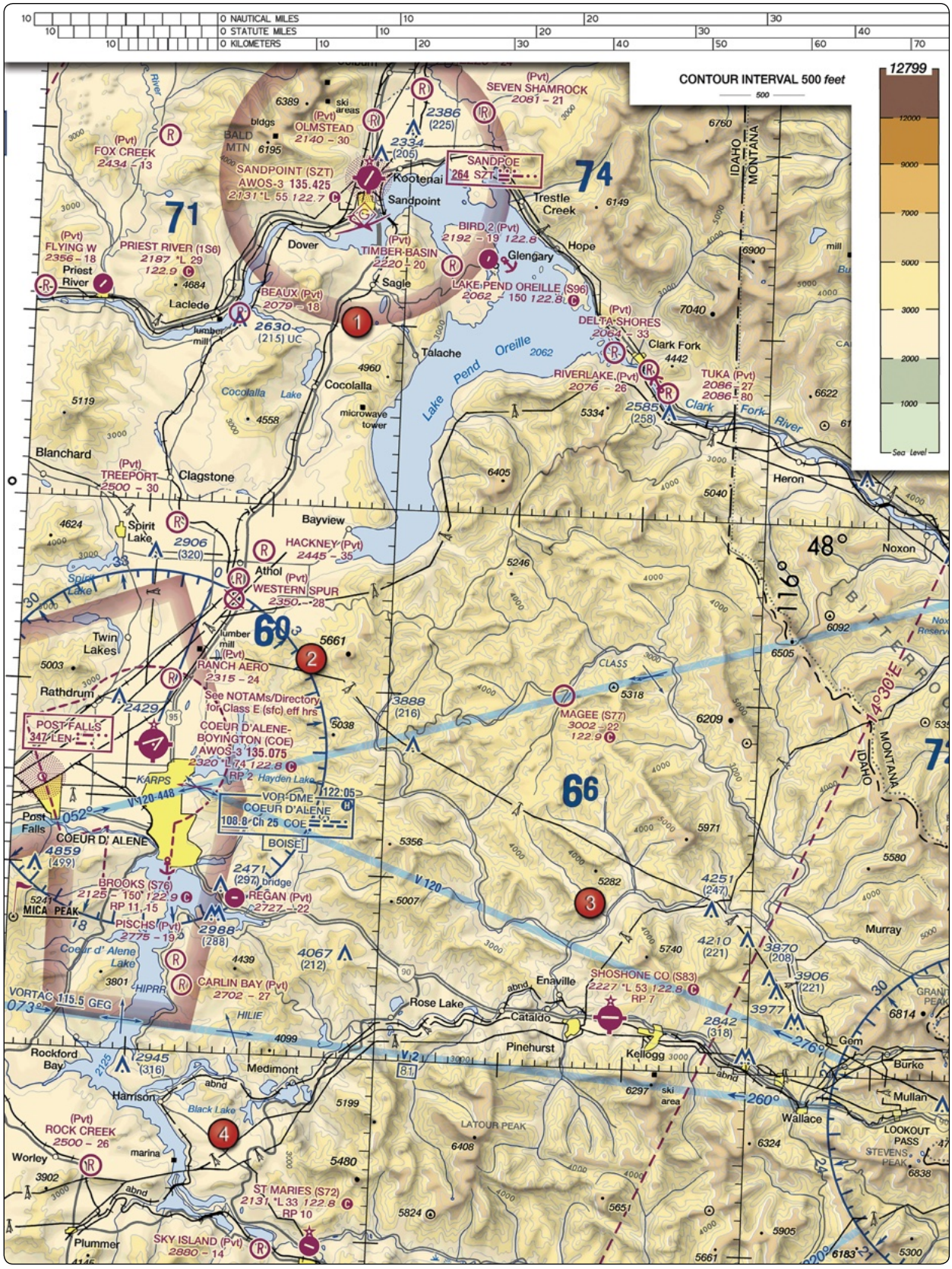

Figure 22. Sectional Chart Excerpt.

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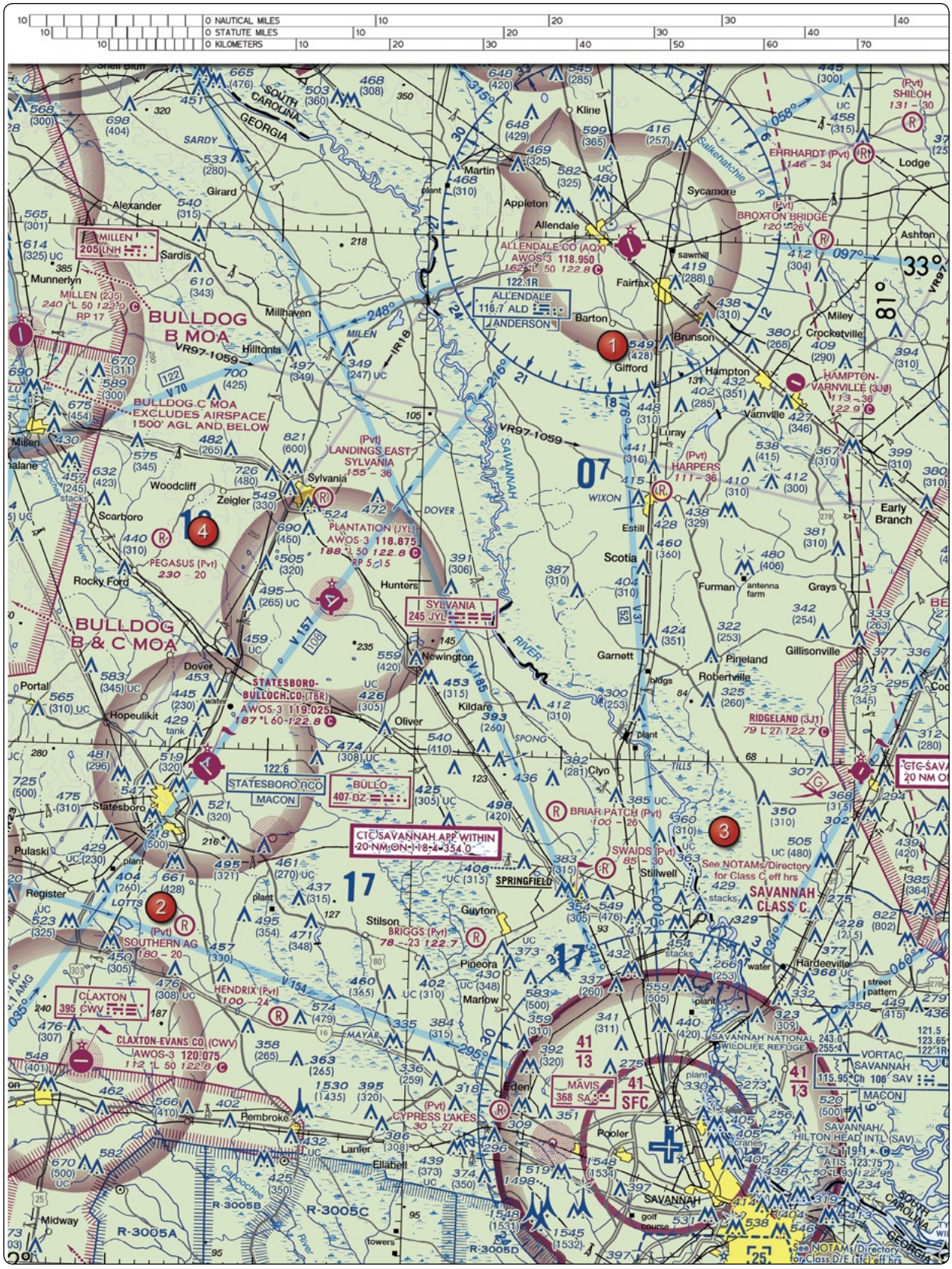

Figure 23. Sectional Chart Excerpt.
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

Figure 25. Sectional Chart Excerpt.

NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

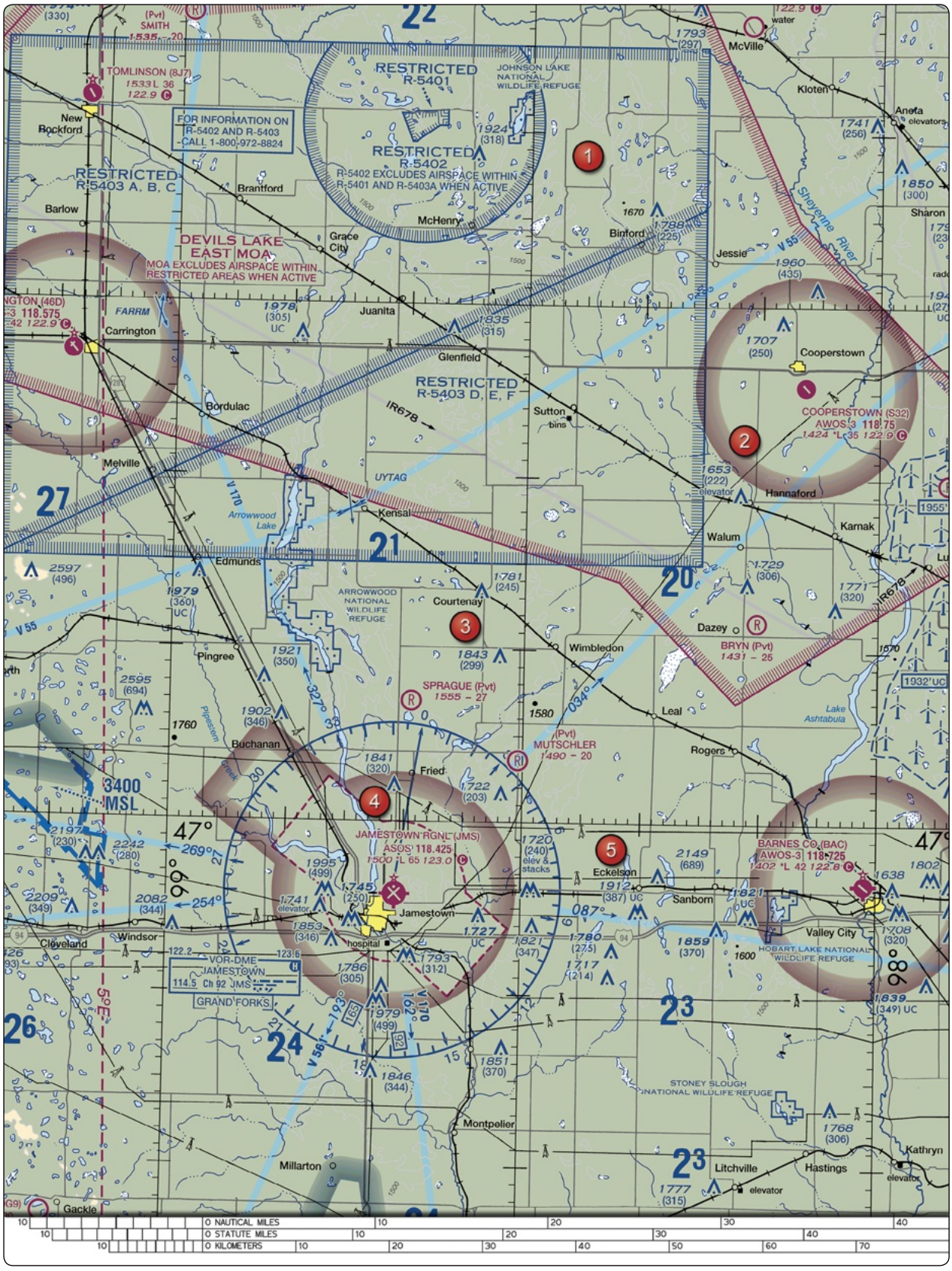

Figure 26. Sectional Chart Excerpt.
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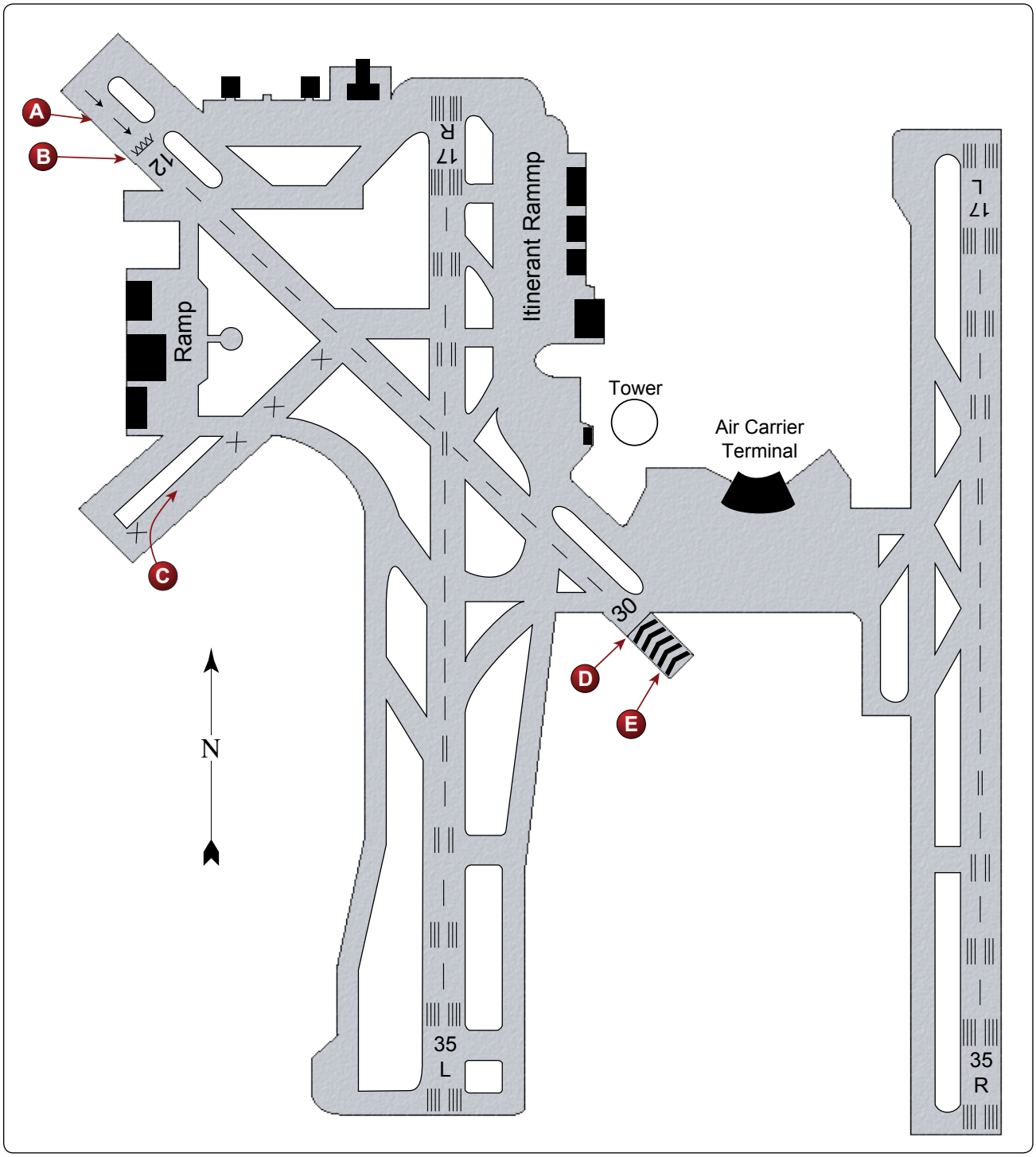

Figure 48. Airport Diagram.

Figure 59. Sectional Chart Excerpt.

Note: *Chart is not to scale and should not be used for navigation. Use associated scale.*

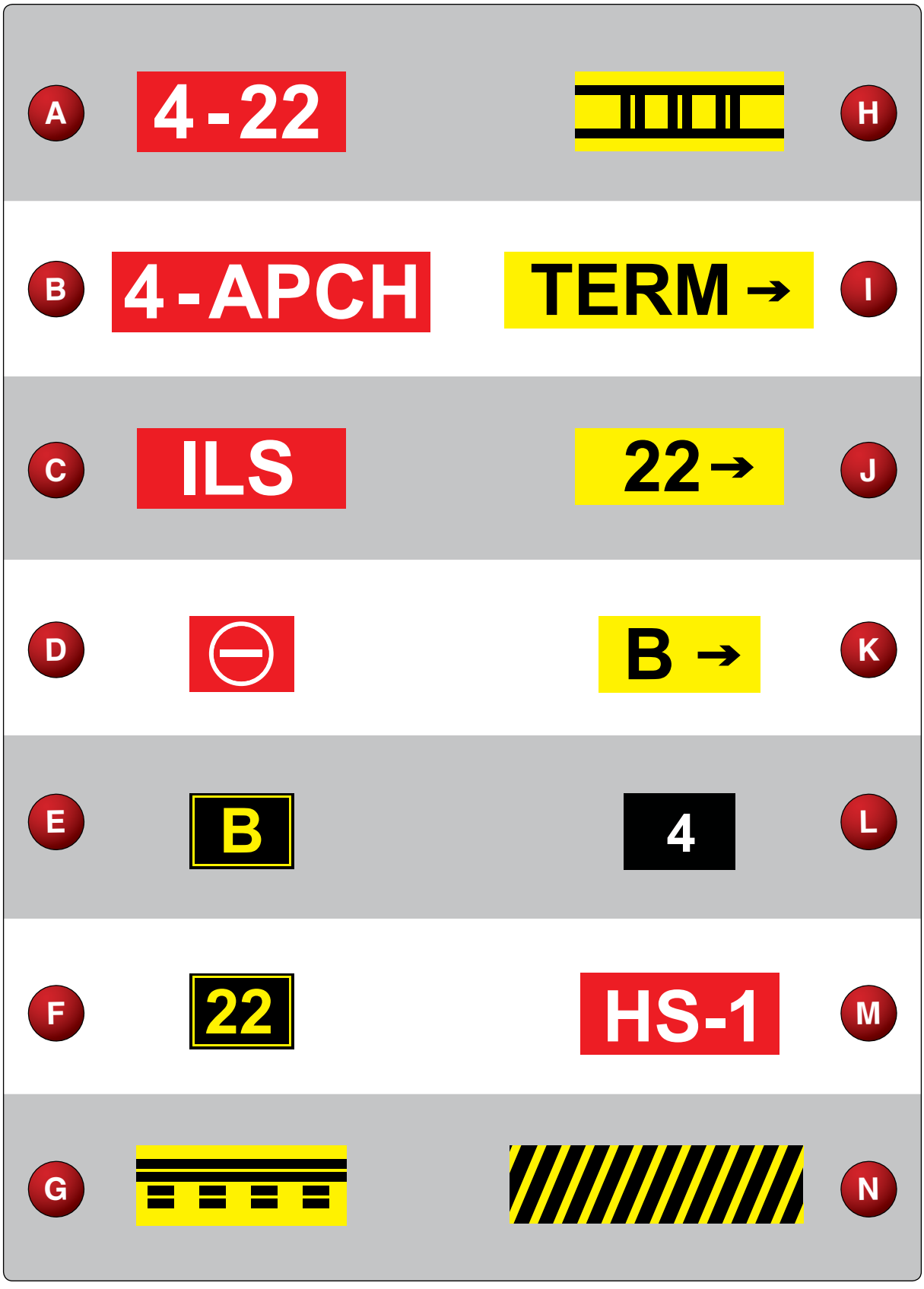

Figure 65. U.S. Airport Signs.

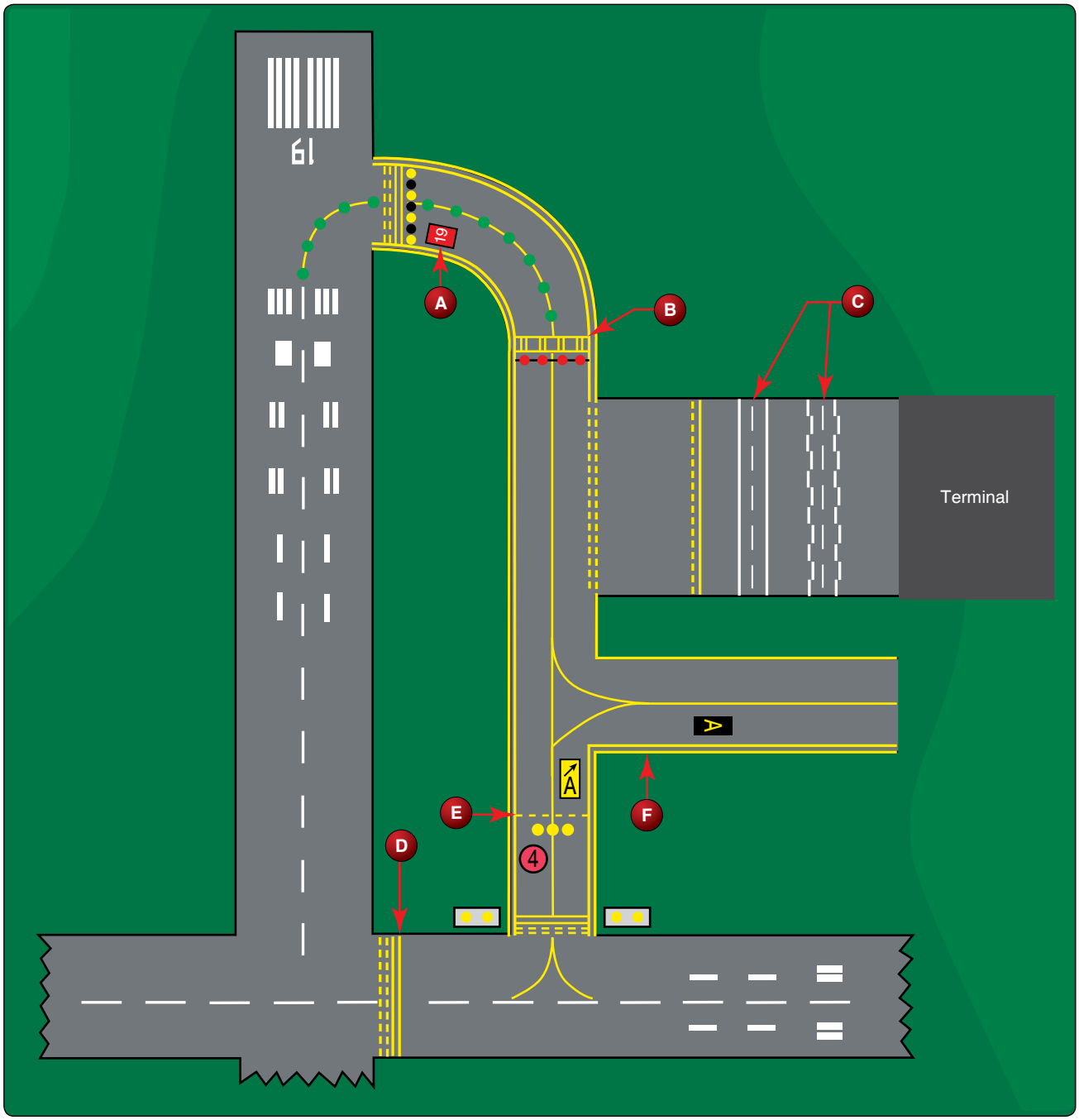

Figure 64. Airport Markings.

Figure 69. Sectional Chart Excerpt.

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Figure 70. Sectional Chart Excerpt.

NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

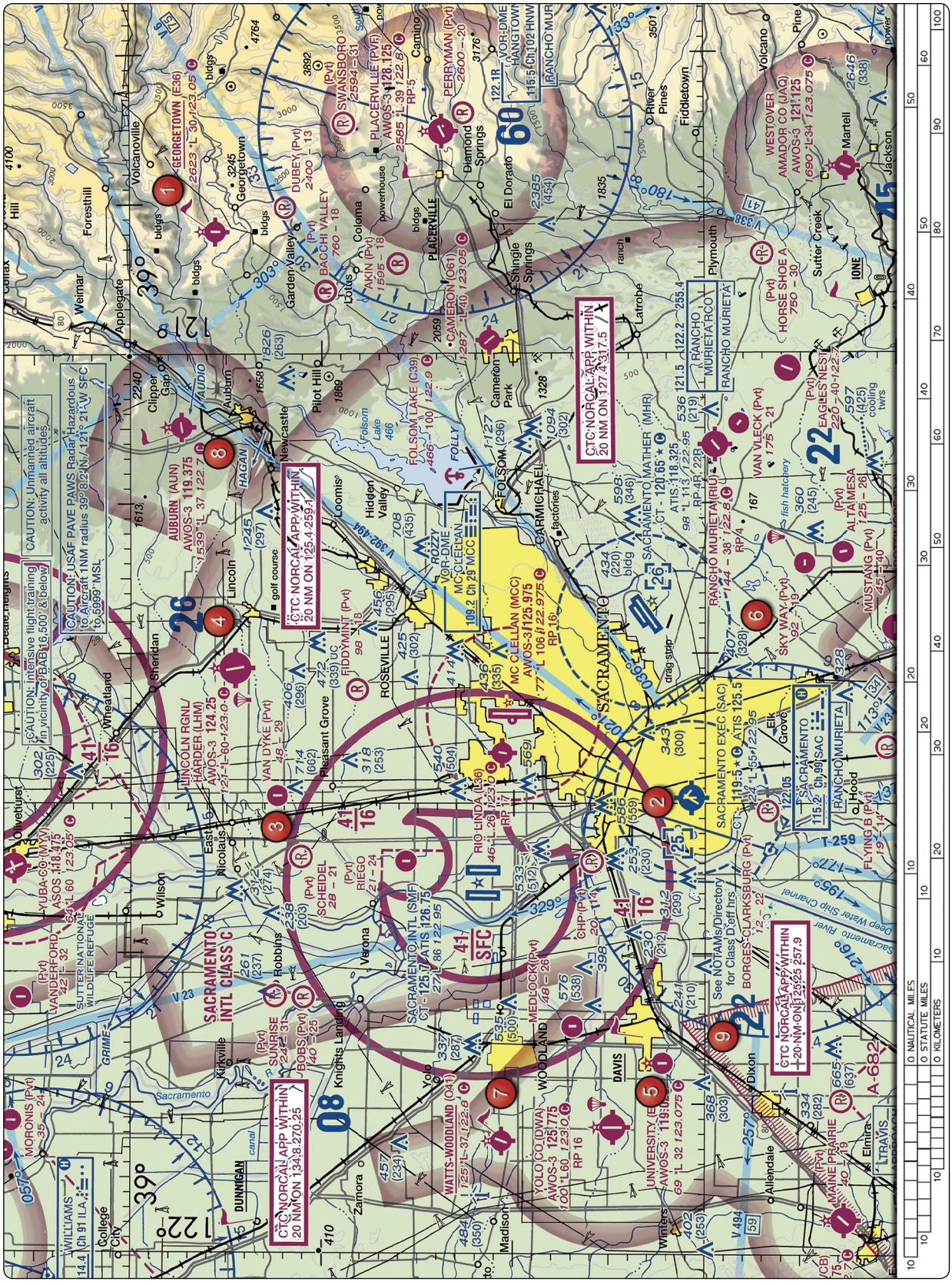

Figure 71. Sectional Chart Excerpt.

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Figure 74. Sectional Chart Excerpt.

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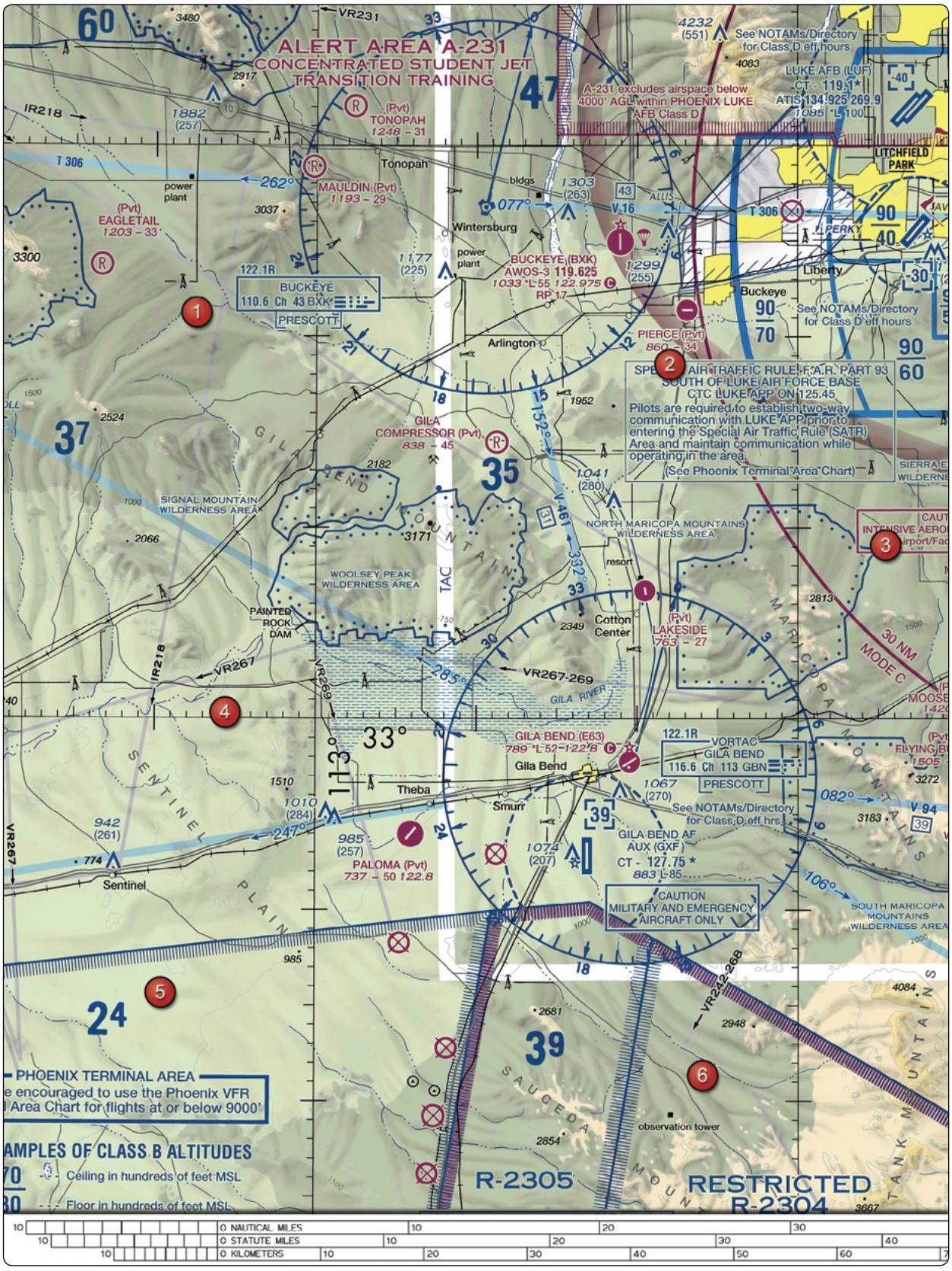

Figure 75. Sectional Chart Excerpt.

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Figure 76. Sectional Chart Excerpt.

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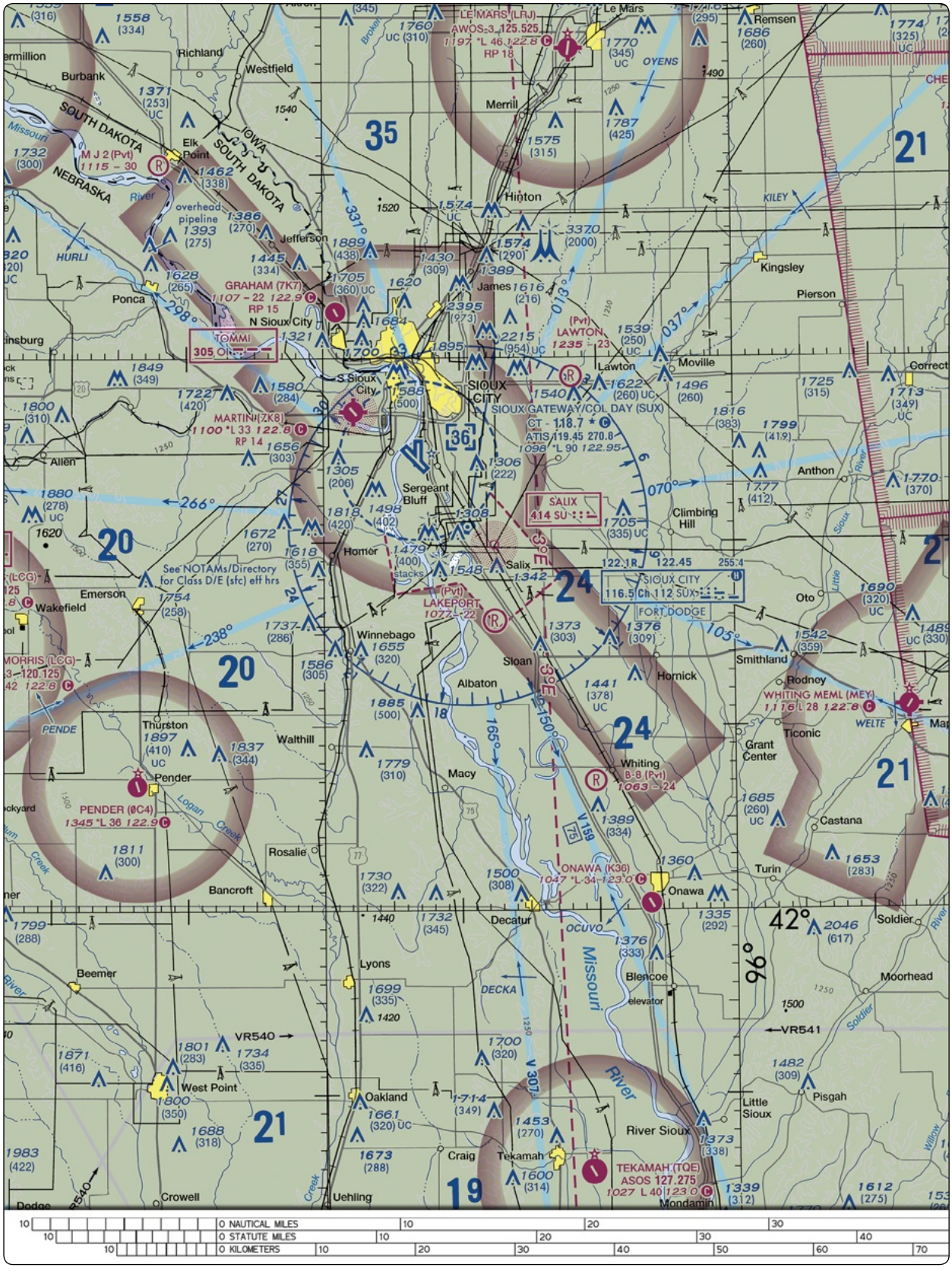

Figure 78. Sectional Chart Excerpt.

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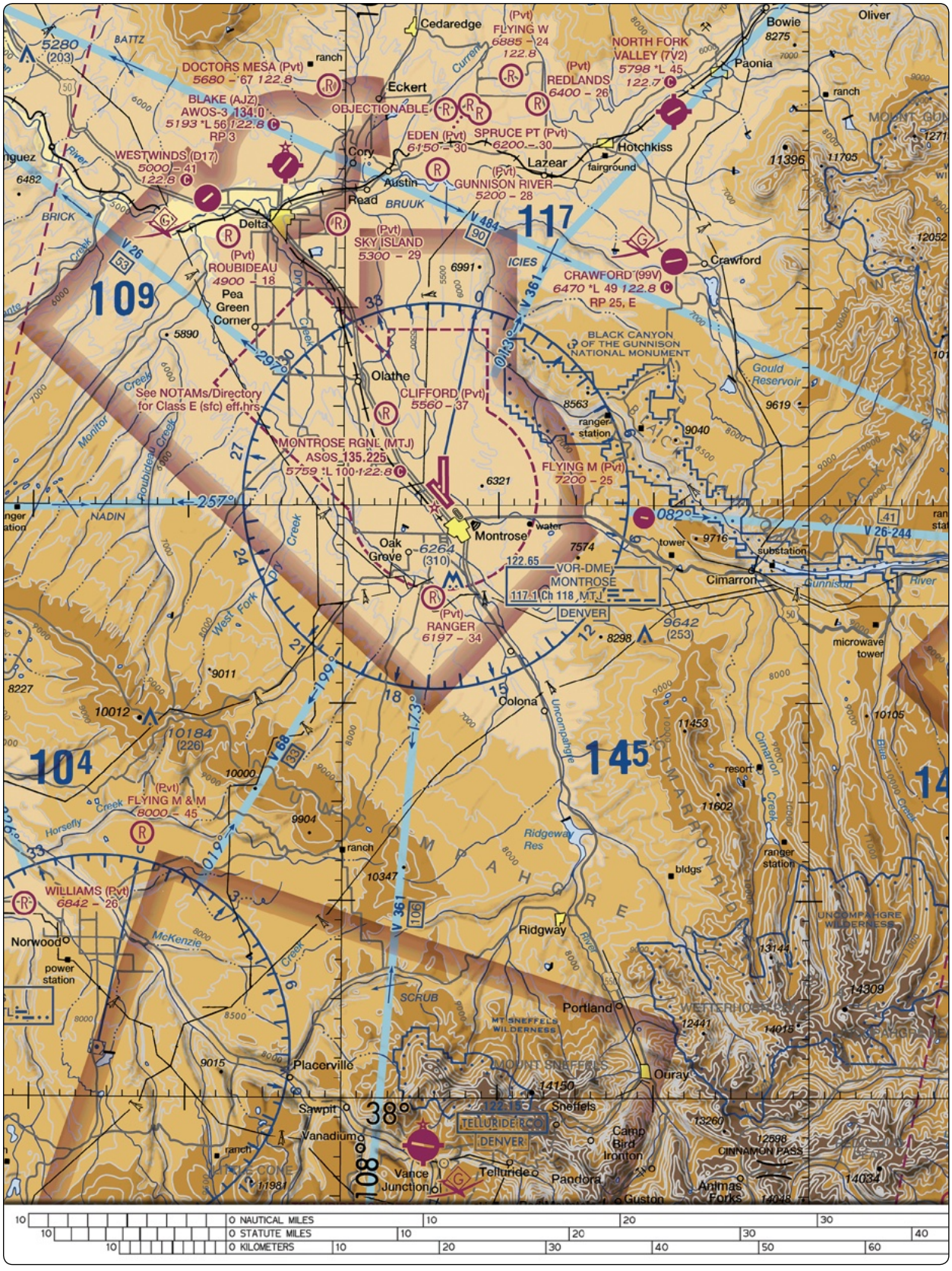

Figure 80. Sectional Chart Excerpt.
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.