



DINAC

DIRECCIÓN NACIONAL DE AERONÁUTICA CIVIL

**SUBDIRECCIÓN DE NORMAS DE VUELO
GERENCIA DE LICENCIAS AL PERSONAL AERONÁUTICO**

BANCO DE FIGURAS

LICENCIA DE PILOTO PRIVADO-AVIÓN

Primera Edición – Año 2026

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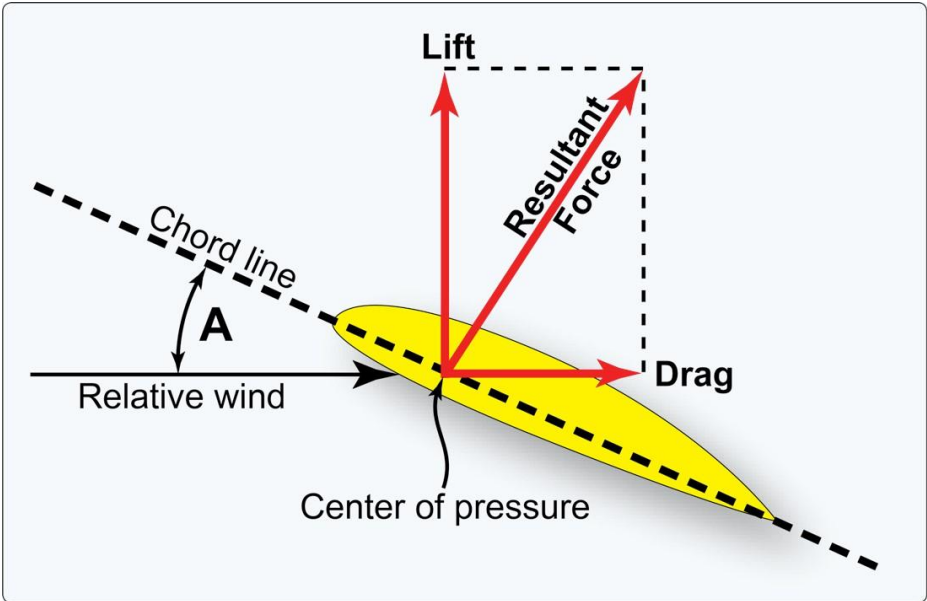


Figure 1. Lift Vector ©ASA

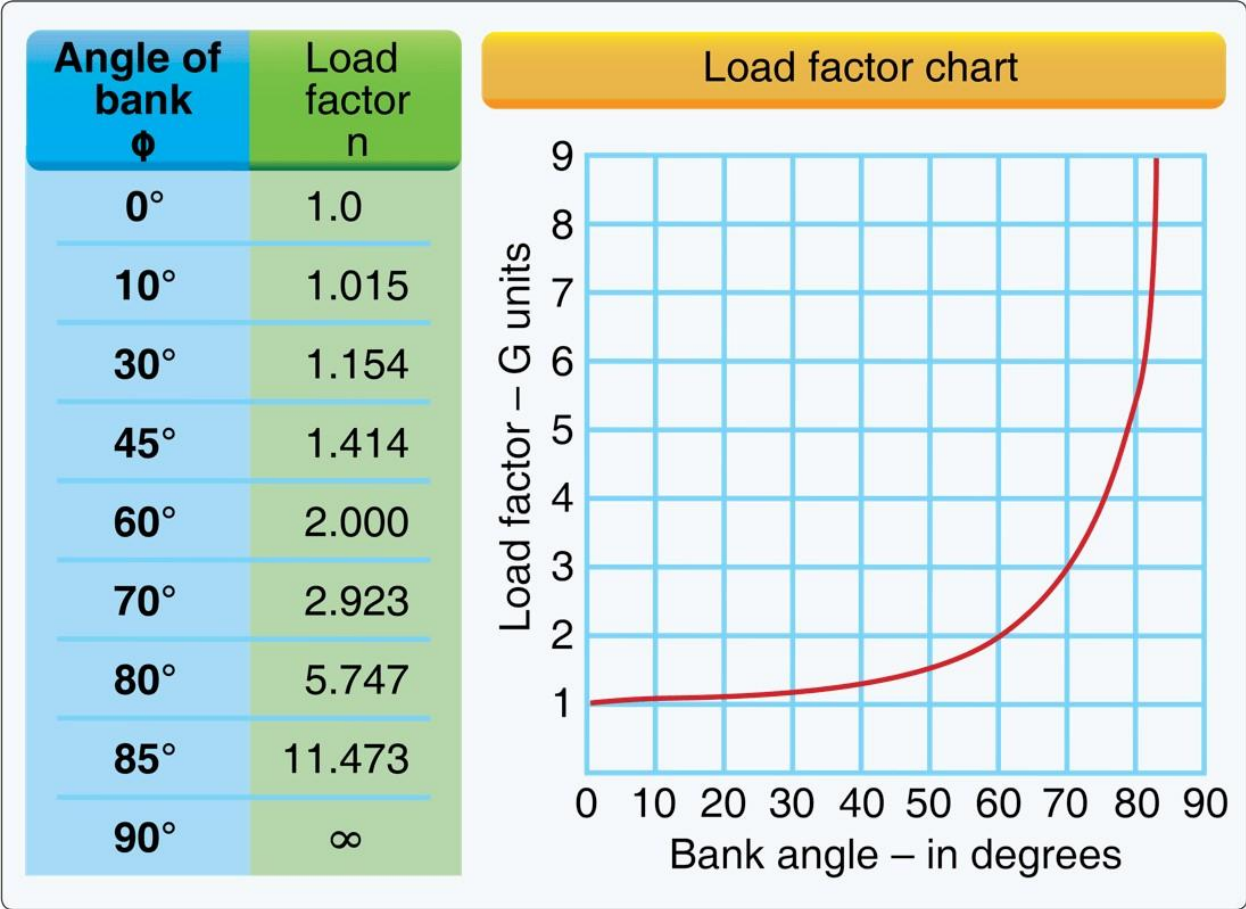


Figure 2. Load Factor Chart ©ASA



Figure 3. Altimeter ©ASA



Figure 4. Airspeed Indicator

©ASA

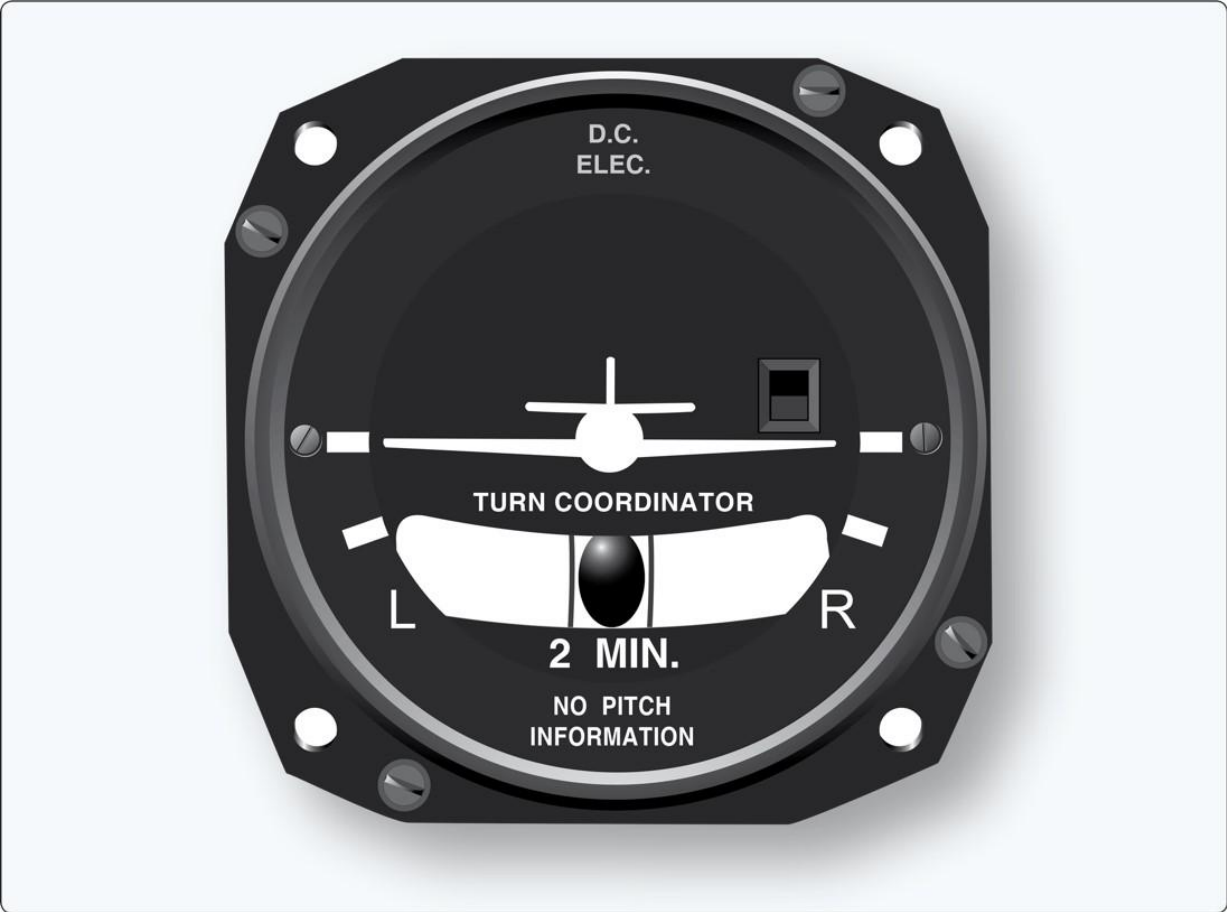


Figure 5. Turn Coordinator

©ASA



Figure 6. Heading Indicator

©ASA

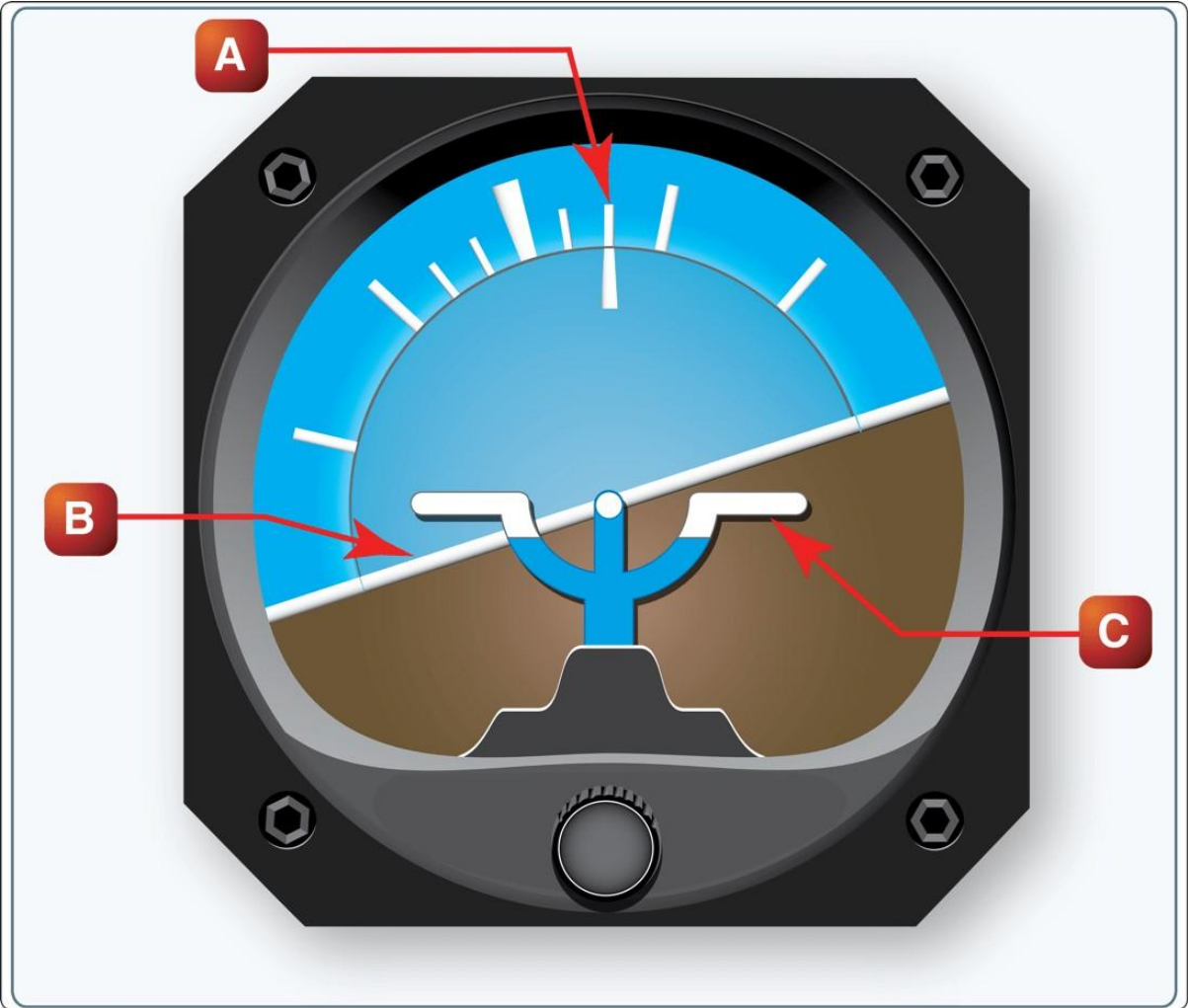


Figure 7. Attitude Indicator

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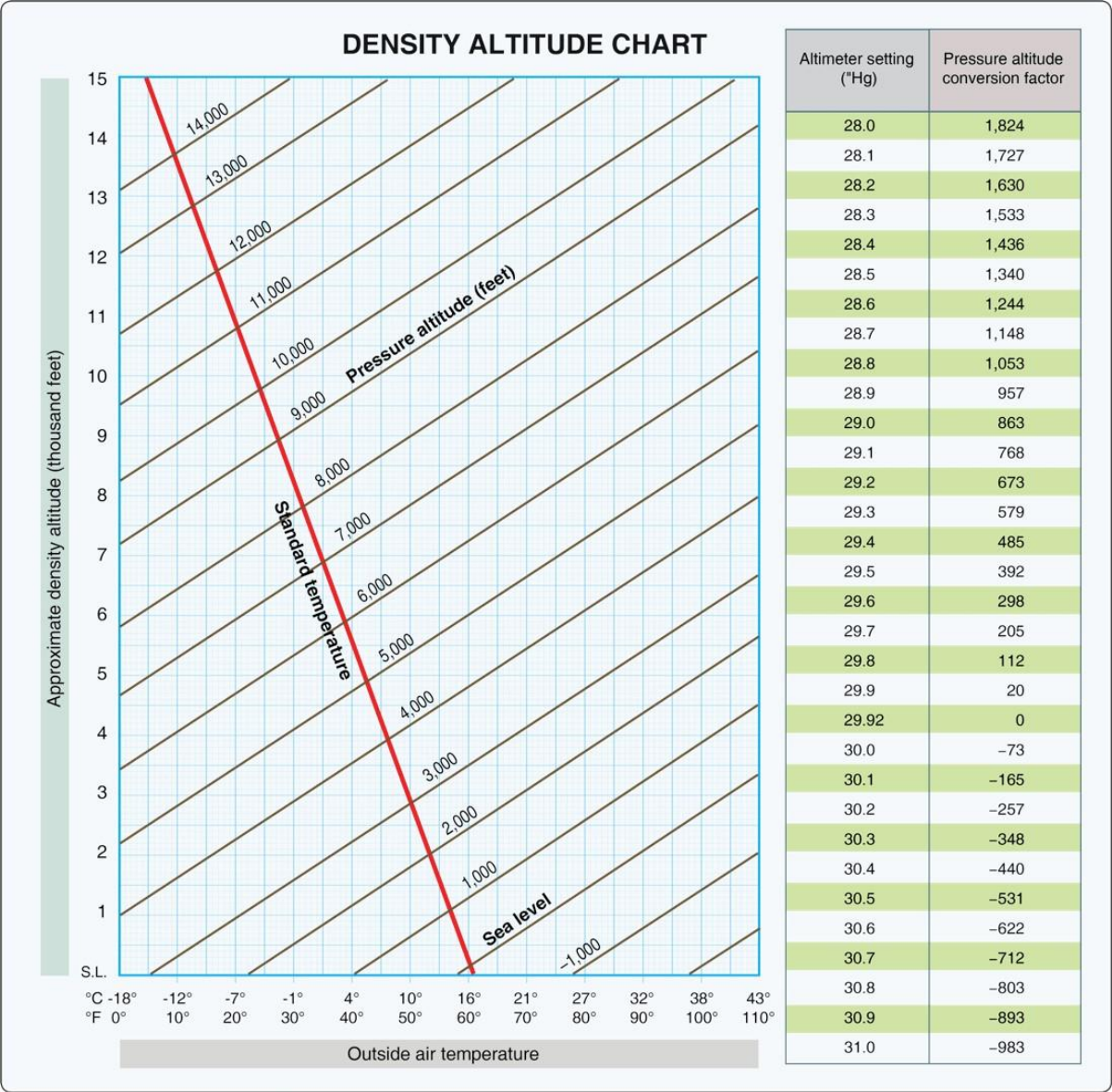


Figure 8. Density Altitude Chart ©ASA

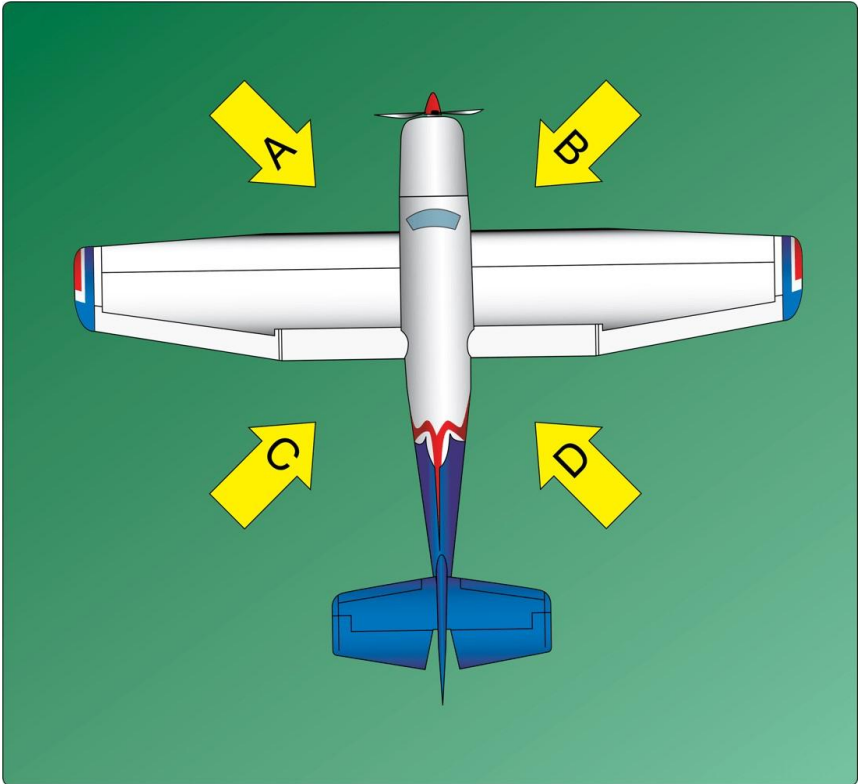


Figure 9. Control Position for Taxi ©ASA

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

Figure 12. Aviation Routine Weather Reports (METAR) ©ASA

UA/OV KOKC-KTUL/TM 1800/FL120/TP BE90/SK BKN018-TOP055/OVC072-TOP089/CLR ABV/TA M7/WV 08021/TB LGT 055-072/IC LGT-MOD RIME 072-089
--

Figure 14. Pilot Weather Report ©ASA

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) ©ASA

FB WBC 151745 DATA BASED ON 151200Z VALID 1600Z FOR USE 1800-0300Z. TEMPS NEG ABV 24000									
FT	3000	6000	9000	12000	18000	24000	30000	34000	39000
ALS			2420	2635-08	2535-18	2444-30	245945	246755	246862
AMA		2714	2725+00	2625-04	2531-15	2542-27	265842	256352	256762
DEN			2321-04	2532-08	2434-19	2441-31	235347	236056	236262
HLC		1707-01	2113-03	2219-07	2330-17	2435-30	244145	244854	245561
MKC	0507	2006+03	2215-01	2322-06	2338-17	2348-29	236143	237252	238160
STL	2113	2325+07	2332+02	2339-04	2356-16	2373-27	239440	730649	731960

Figure 17. Winds and Temperatures Aloft Forecast ©ASA

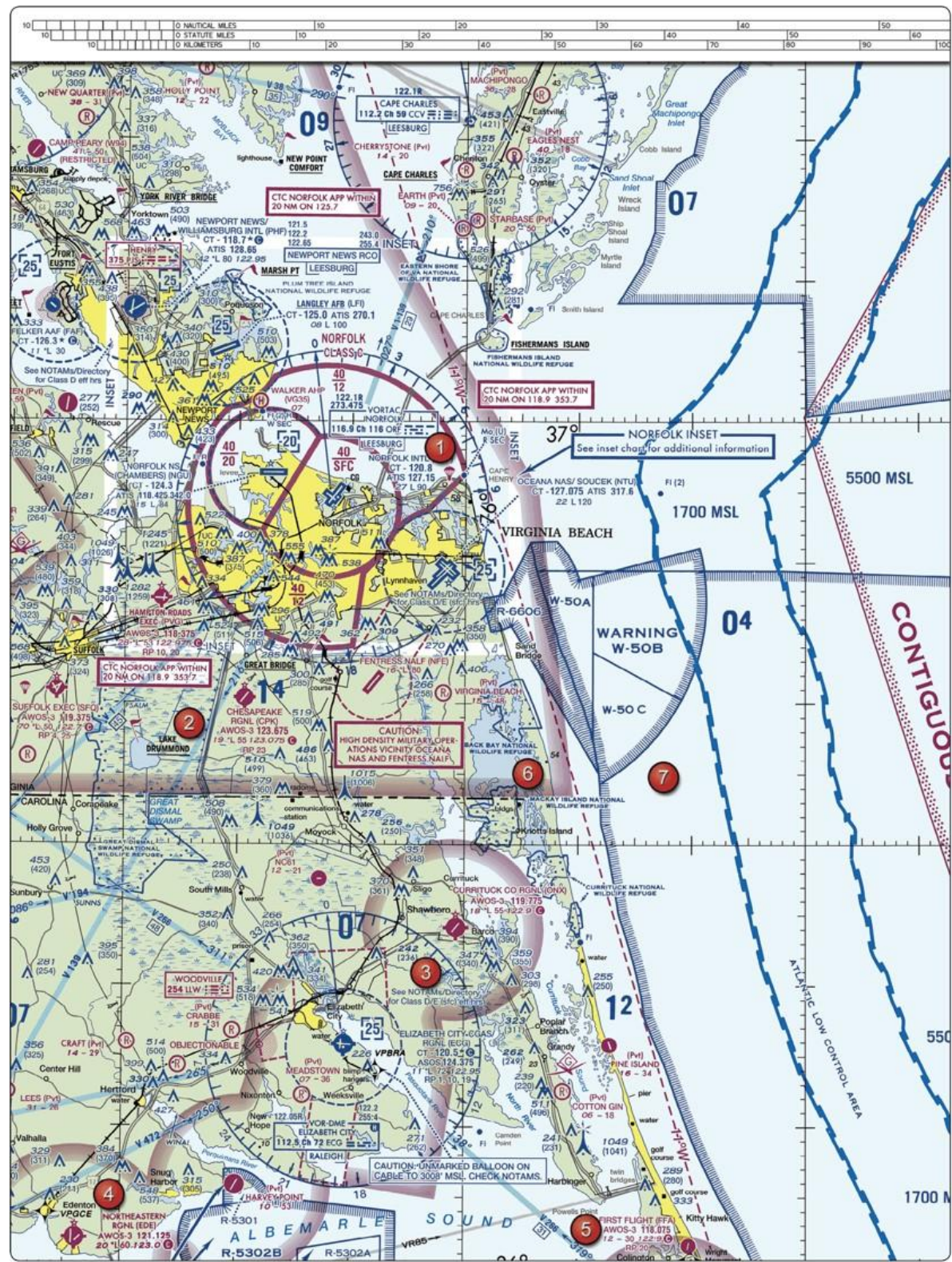


Figure 20. Sectional Chart Excerpt ©ASA
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

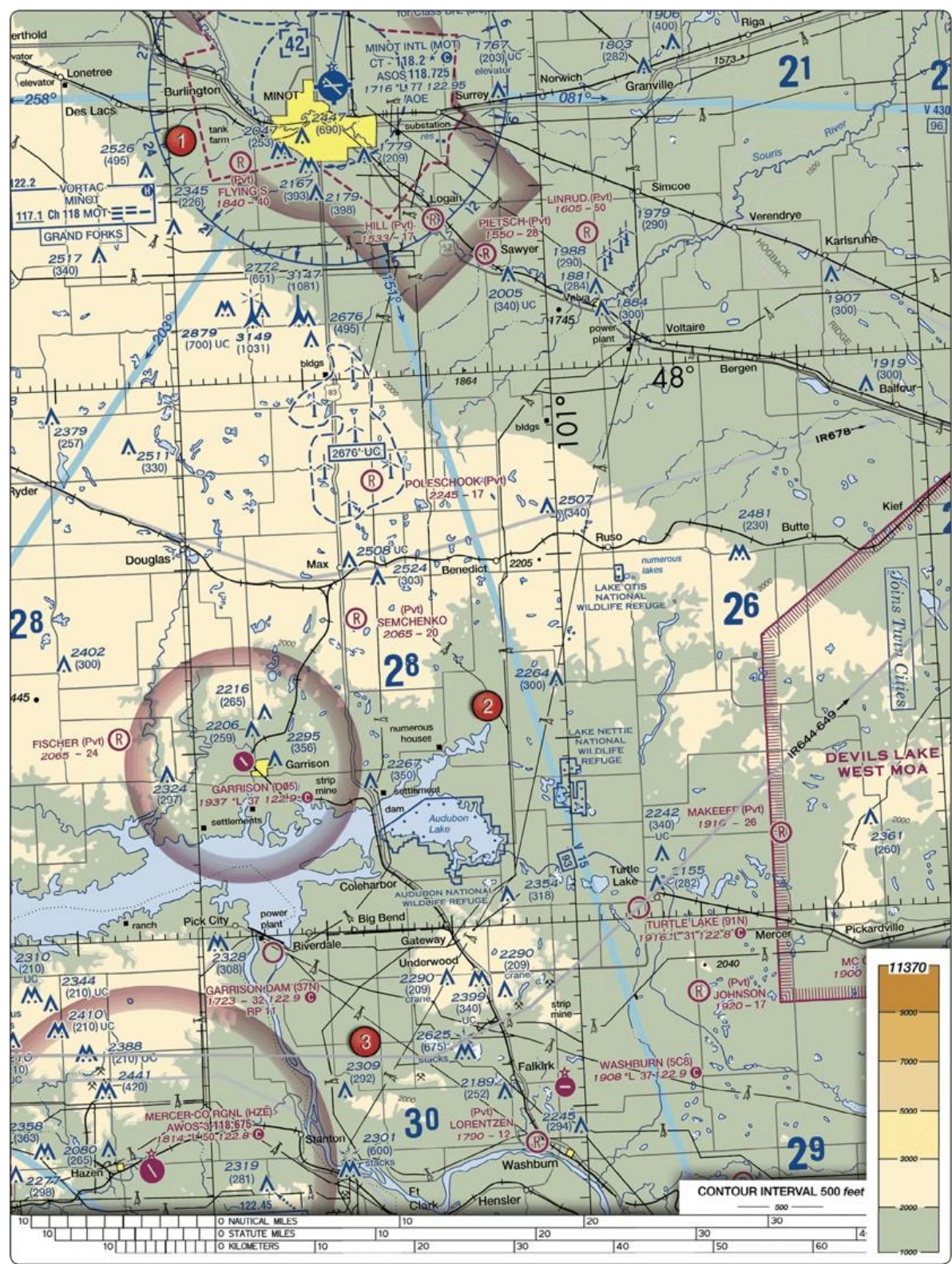


Figure 21. Sectional Chart Excerpt ©ASA
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

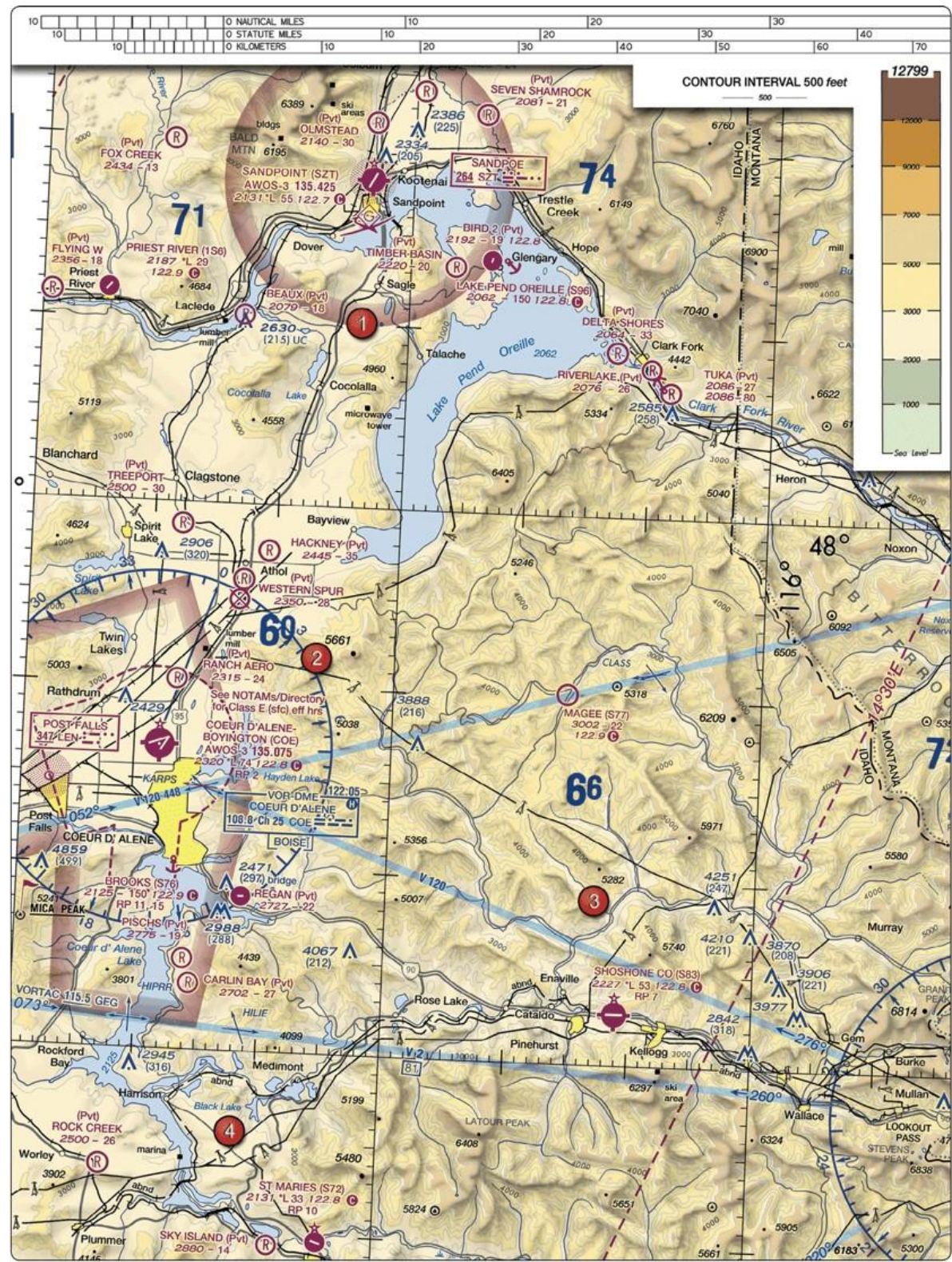


Figure 22. Sectional Chart Excerpt ©ASA
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

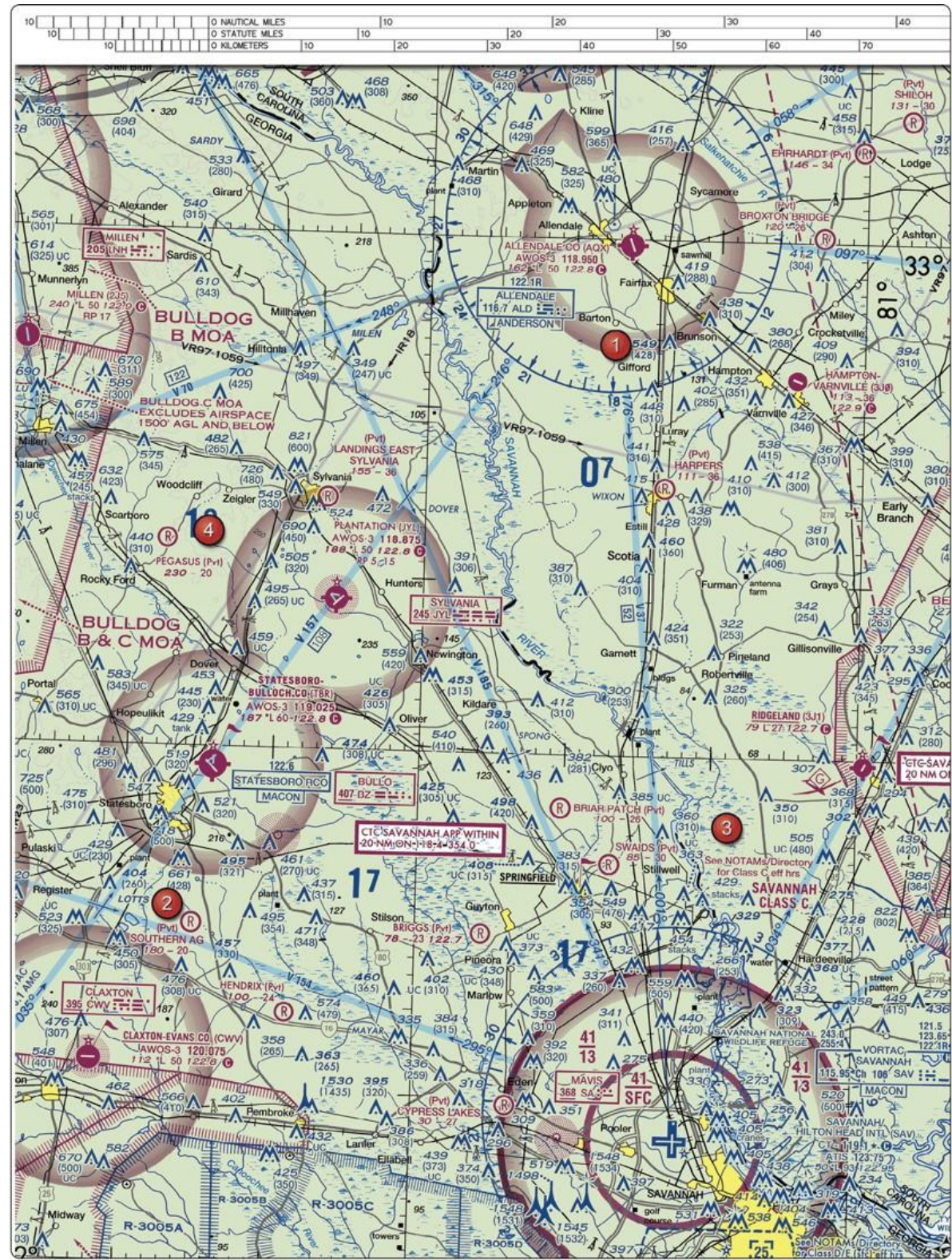


Figure 23. Sectional Chart Excerpt ©ASA
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

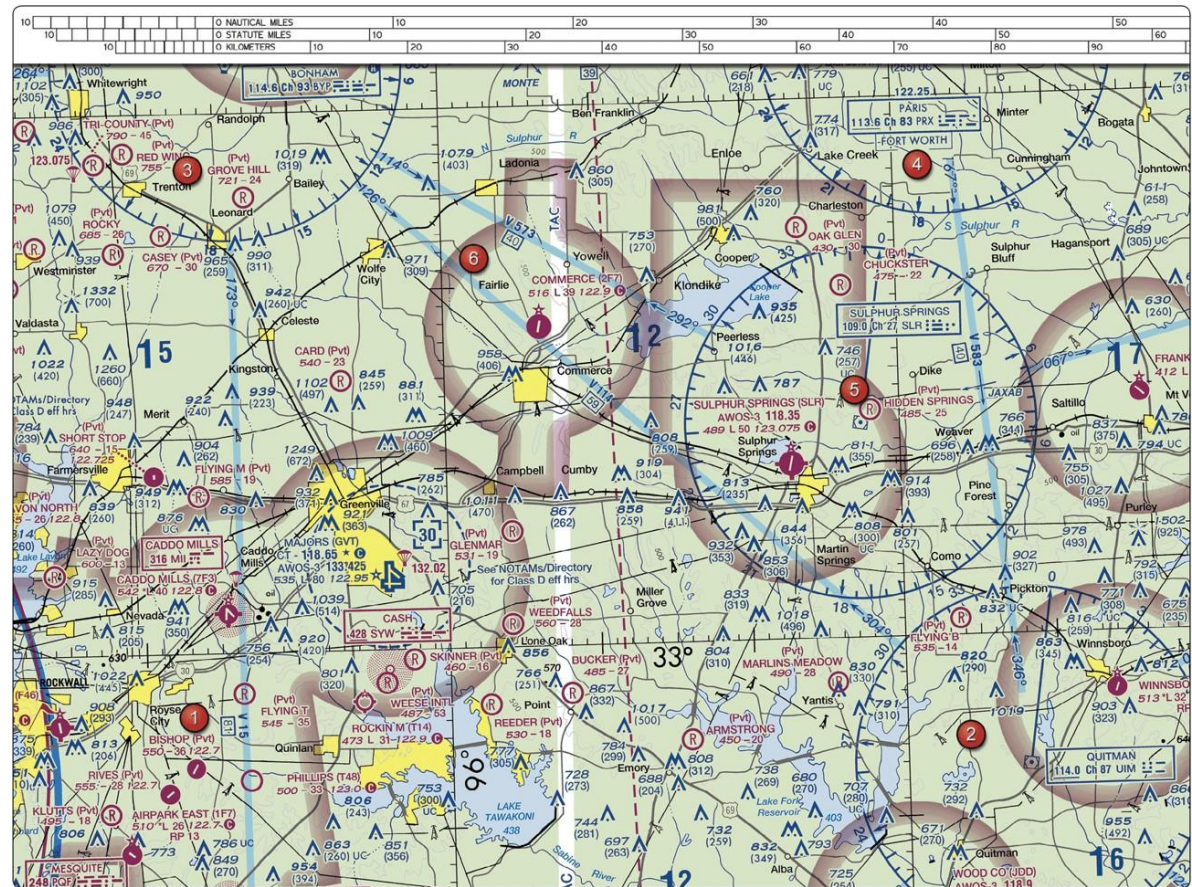


Figure 24. Sectional Chart Excerpt
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

©ASA

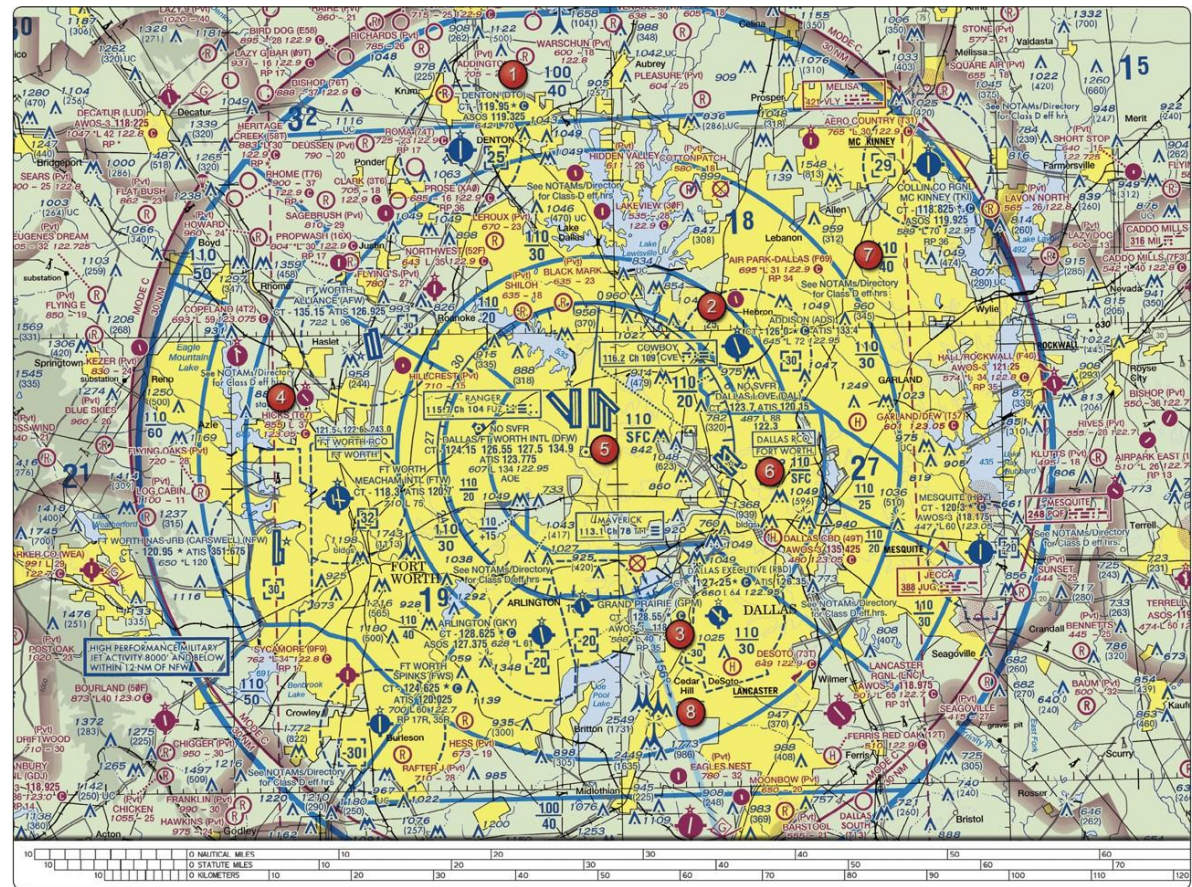


Figure 25. Sectional Chart Excerpt
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

©ASA

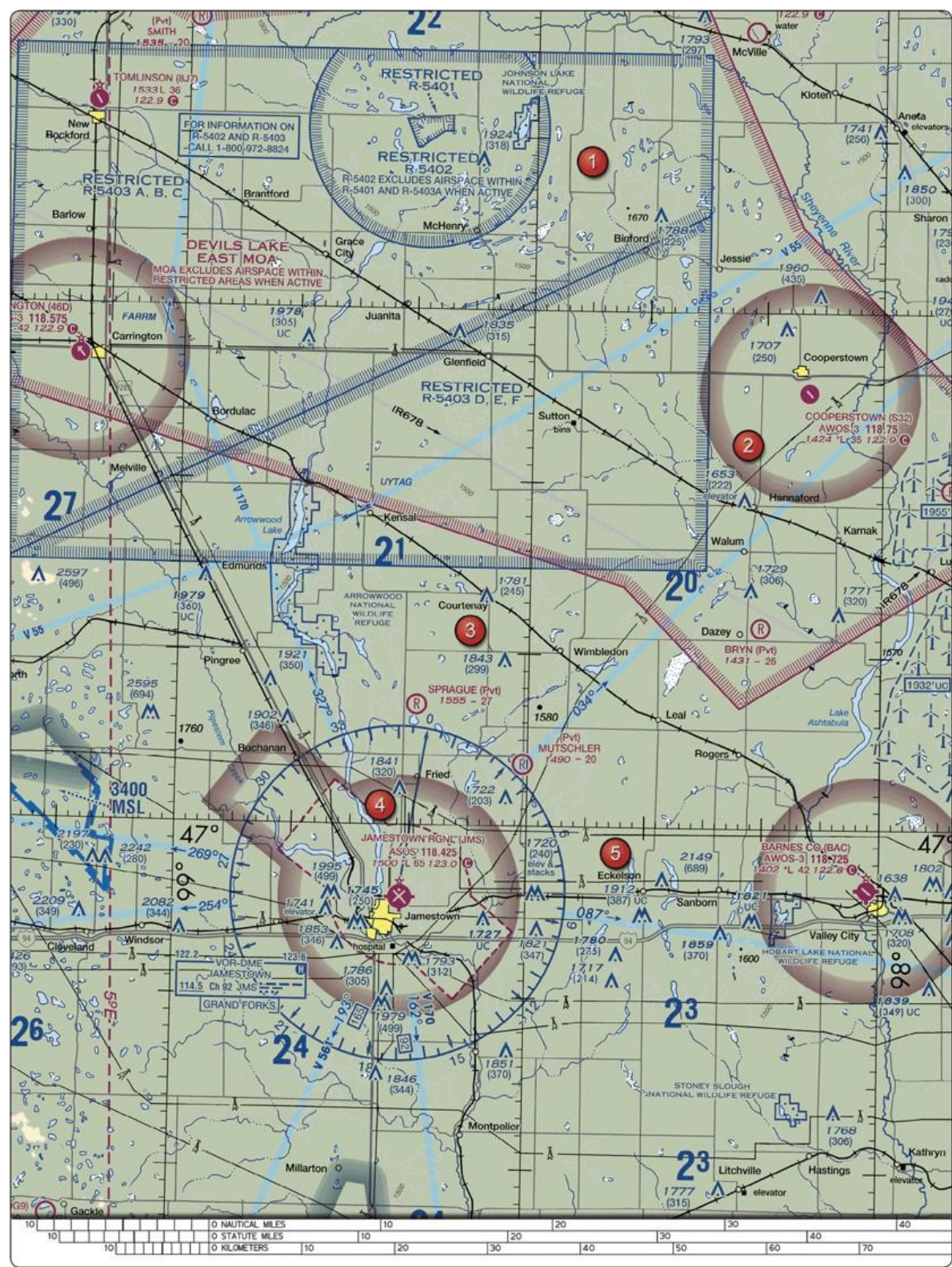


Figure 26. Sectional Chart Excerpt ©ASA
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

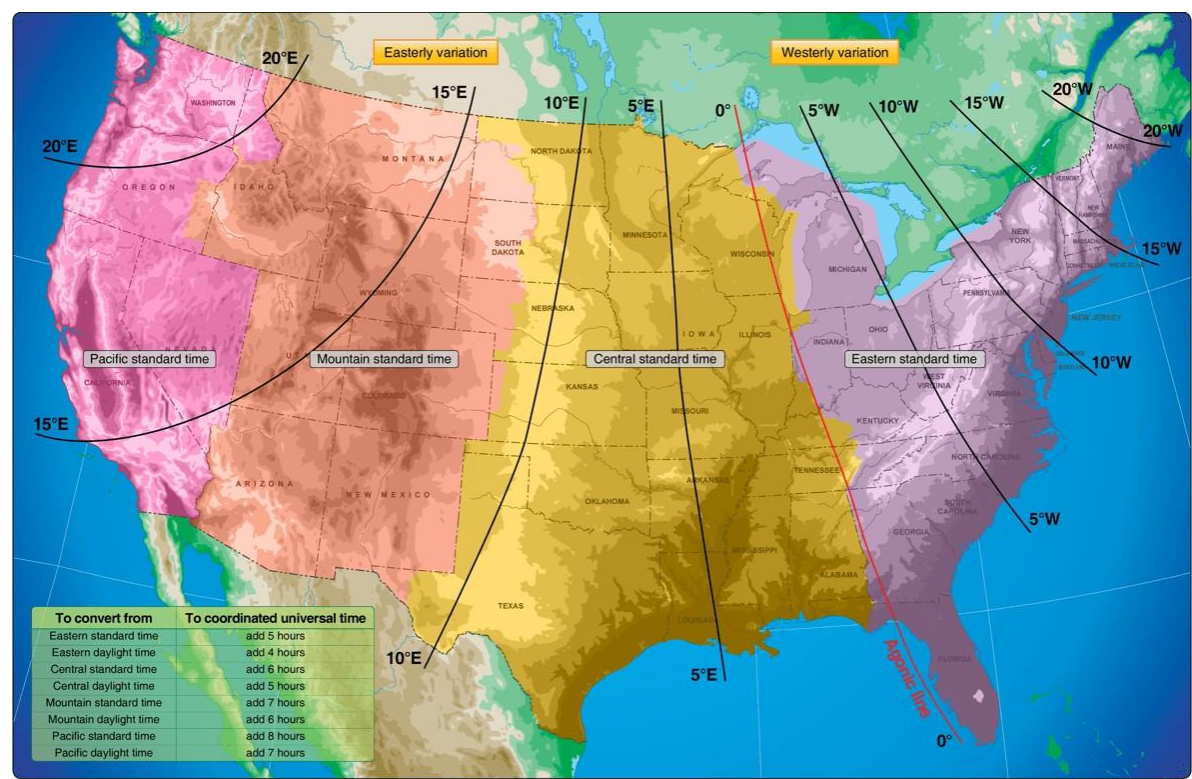
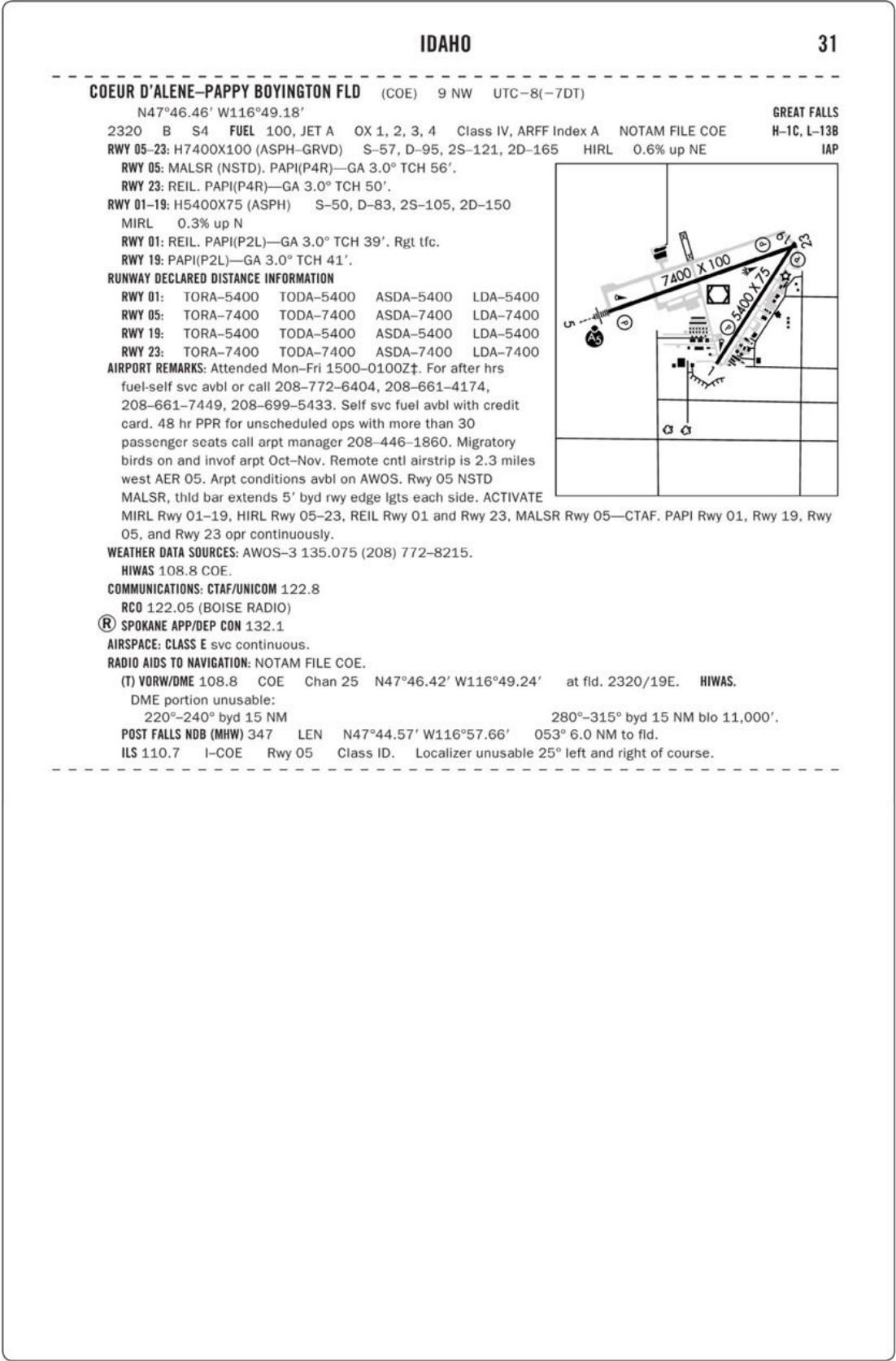


Figure 27. Time Conversion Table ©ASA



Figure 28. VOR ©ASA





Moment limits vs weight (continued)					
Weight	Minimum Moment 100	Maximum Moment 100	Weight	Minimum Moment 100	Maximum Moment 100
2,100	1,617	1,800	2,500	1,932	2,143
2,110	1,625	1,808	2,510	1,942	2,151
2,120	1,632	1,817	2,520	1,953	2,160
2,130	1,640	1,825	2,530	1,963	2,168
2,140	1,648	1,834	2,540	1,974	2,176
2,150	1,656	1,843	2,550	1,984	2,184
2,160	1,663	1,851	2,560	1,995	2,192
2,170	1,671	1,860	2,570	2,005	2,200
2,180	1,679	1,868	2,580	2,016	2,208
2,190	1,686	1,877	2,590	2,026	2,216
2,200	1,694	1,885	2,600	2,037	2,224
2,210	1,702	1,894	2,610	2,048	2,232
2,220	1,709	1,903	2,620	2,058	2,239
2,230	1,717	1,911	2,630	2,069	2,247
2,240	1,725	1,920	2,640	2,080	2,255
2,250	1,733	1,928	2,650	2,090	2,263
2,260	1,740	1,937	2,660	2,101	2,271
2,270	1,748	1,945	2,670	2,112	2,279
2,280	1,756	1,954	2,680	2,123	2,287
2,290	1,763	1,963	2,690	2,133	2,295
2,300	1,771	1,971	2,700	2,144	2,303
2,310	1,779	1,980	2,710	2,155	2,311
2,320	1,786	1,988	2,720	2,166	2,319
2,330	1,794	1,997	2,730	2,177	2,326
2,340	1,802	2,005	2,740	2,188	2,334
2,350	1,810	2,014	2,750	2,199	2,342
2,360	1,817	2,023	2,760	2,210	2,350
2,370	1,825	2,031	2,770	2,221	2,358
2,380	1,833	2,040	2,780	2,232	2,366
2,390	1,840	2,048	2,790	2,243	2,374
2,400	1,848	2,057	2,800	2,254	2,381
2,410	1,856	2,065	2,810	2,265	2,389
2,420	1,863	2,074	2,820	2,276	2,397
2,430	1,871	2,083	2,830	2,287	2,405
2,440	1,879	2,091	2,840	2,298	2,413
2,450	1,887	2,100	2,850	2,309	2,421
2,460	1,894	2,108	2,860	2,320	2,428
2,470	1,902	2,117	2,870	2,332	2,436
2,480	1,911	2,125	2,880	2,343	2,444
2,490	1,921	2,134	2,890	2,354	2,452
			2,900	2,365	2,460
			2,910	2,377	2,468
			2,920	2,388	2,475
			2,930	2,399	2,483
			2,940	2,411	2,491
			2,950	2,422	2,499

Figure 33. Airplane Weight and Balance Tables ©ASA

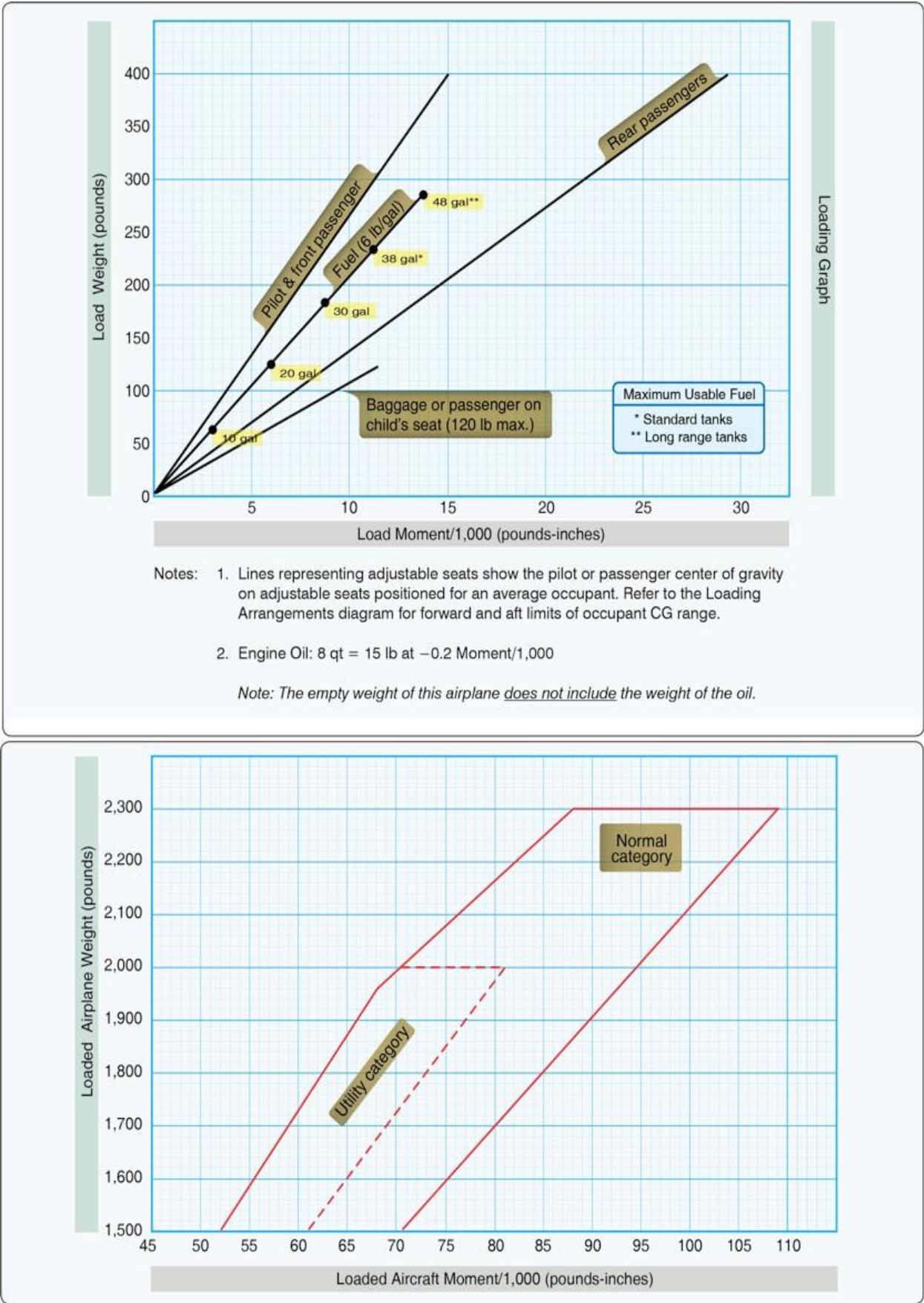


Figure 34. Airplane Weight and Balance Graphs

Cruise power settings																								
65% Maximum continuous power (or full throttle 2,800 pounds)																								
Press ALT.	ISA -20 °C (-36 °F)								Standard day (ISA)								ISA +20 °C (+36 °F)							
	IOAT		Engine speed	MAN. press	Fuel flow per engine		TAS		IOAT		Engine speed	MAN. press	Fuel flow per engine		TAS		IOAT		Engine speed	MAN. press	Fuel flow per engine		TAS	
	Feet	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH	°F	°C	RPM	IN HG	PSI	GPH	KTS	MPH	°F	°C	RPM	IN HG	PSI	GPH	KTS
SL	27	-3	2,450	20.7	6.6	11.5	147	169	63	17	2,450	21.2	6.6	11.5	150	173	99	37	2,450	21.8	6.6	11.5	153	176
2,000	19	-7	2,450	20.4	6.6	11.5	149	171	55	13	2,450	21.0	6.6	11.5	153	176	91	33	2,450	21.5	6.6	11.5	156	180
4,000	12	-11	2,450	20.1	6.6	11.5	152	175	48	9	2,450	20.7	6.6	11.5	156	180	84	29	2,450	21.3	6.6	11.5	159	183
6,000	5	-15	2,450	19.8	6.6	11.5	155	178	41	5	2,450	20.4	6.6	11.5	158	182	79	26	2,450	21.0	6.6	11.5	161	185
8,000	-2	-19	2,450	19.5	6.6	11.5	157	181	36	2	2,450	20.2	6.6	11.5	161	185	72	22	2,450	20.8	6.6	11.5	164	189
10,000	-8	-22	2,450	19.2	6.6	11.5	160	184	28	-2	2,450	19.9	6.6	11.5	163	188	64	18	2,450	20.3	6.5	11.4	166	191
12,000	-15	-26	2,450	18.8	6.4	11.5	162	186	21	-6	2,450	18.8	6.1	10.9	163	188	57	14	2,450	18.8	5.9	10.6	163	188
14,000	-22	-30	2,450	17.4	5.8	10.5	159	183	14	-10	2,450	17.4	5.6	10.1	160	184	50	10	2,450	17.4	5.4	9.8	160	184
16,000	-29	-34	2,450	16.1	5.3	9.7	156	180	7	-14	2,450	16.1	5.1	9.4	156	180	43	6	2,450	16.1	4.9	9.1	155	178

Note: 1. Full throttle manifold pressure settings are approximate.
2. Shaded area represents operation with full throttle.

Figure 35. Airplane Power Setting Table

3ASA

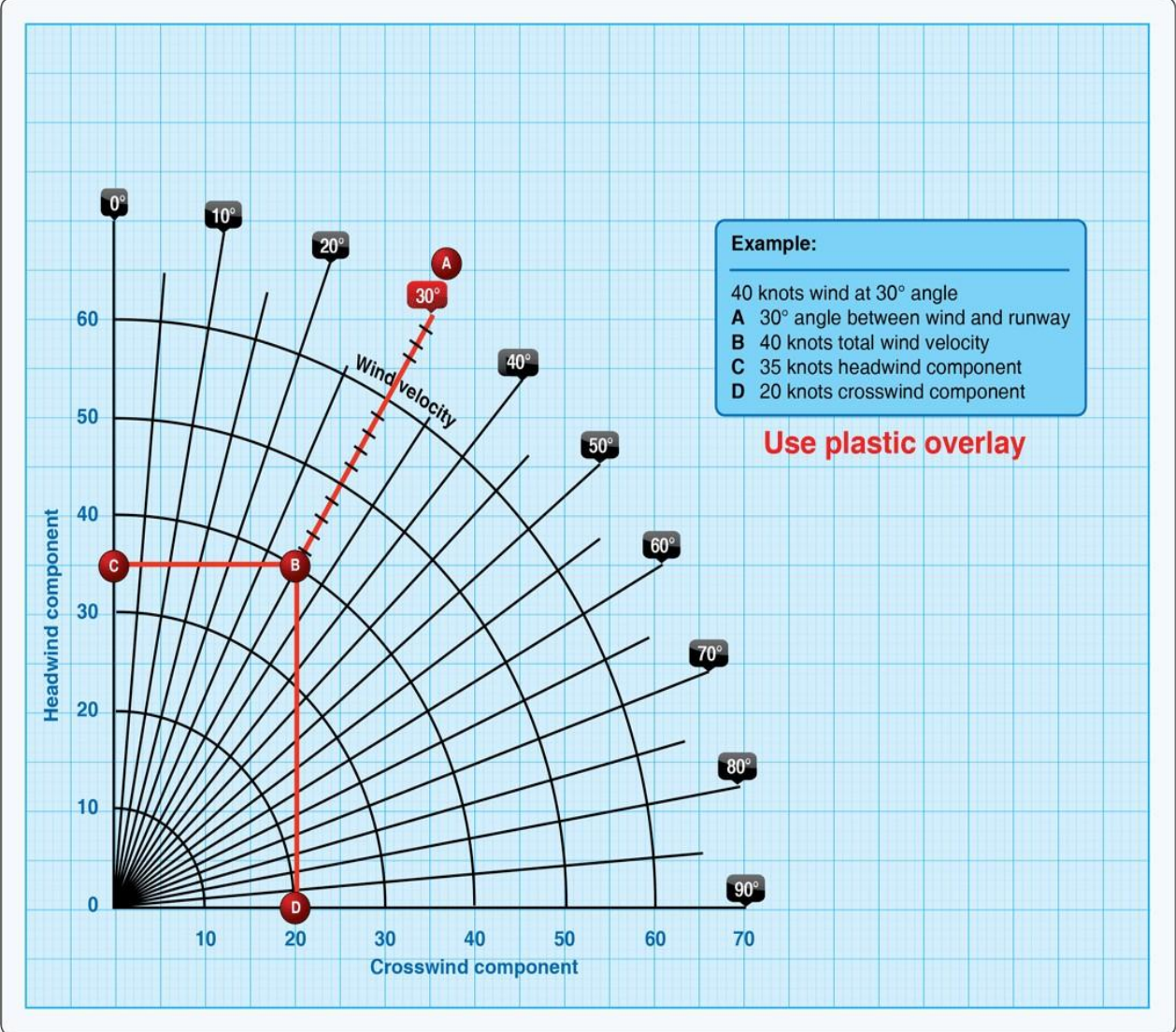


Figure 36. Crosswind Component Graph

3ASA

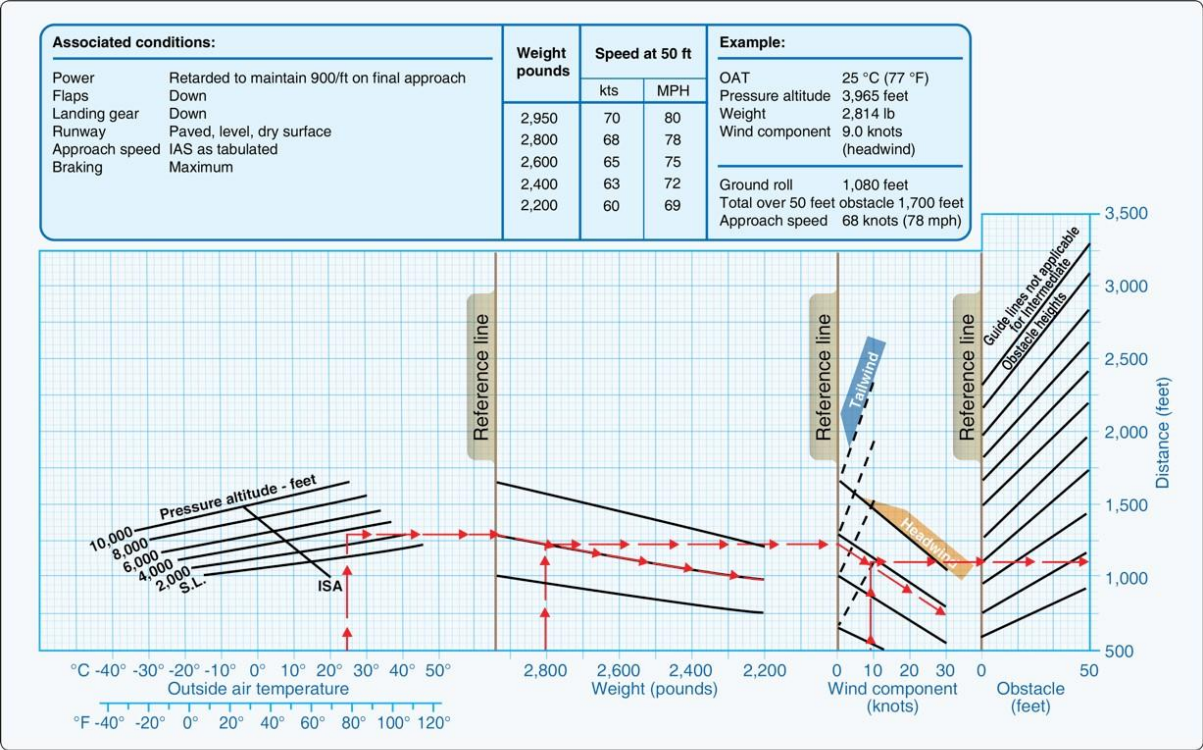


Figure 37. Airplane Landing Distance Graph ©ASA

Landing distance						Flaps lowered to 40° – Power off Hard surface runway – Zero wind			
Gross weight lb	Approach speed, IAS, MPH	At sea level & 59 3F		At 2,500 feet & 50 3F		At 5,000 feet & 41 3F		At 7,500 feet & 32 3F	
		Ground roll	Total to clear 50 feet OBS	Ground roll	Total to clear 50 feet OBS	Ground roll	Total to clear 50 feet OBS	Ground roll	Total to clear 50 feet OBS
1,600	60	445	1,075	470	1,135	495	1,195	520	1,255

NOTE:

1. Decrease the distances shown by 10% for each 4 knots of headwind.

2. Increase the distance by 10% for each 60 3F temperature increase above standard.

3. For operation on a dry, grass runway, increase distance (both "ground roll" and "total to clear 50 feet obstacle") by 20% of the "total to clear 50 feet obstacle" figure.

Figure 38. Airplane Landing Distance Table ©ASA

Example:

OAT

15 3C (59 3F)

Pressure altitude

5,650 feet

Takeoff weight

2,950 lb

Headwind comp.

9.0 knots

Ground roll

1,375 feet

Total distance over
a 50 feet obstacle

2,300 feet

Takeoff speed at

Lift-off

66 knots (76 mph)

50 feet

72 knots (83 mph)

Associated conditions

Power

Full throttle 2,600 rpm

Mixture

Lean to appropriate fuel pressure

Flaps

Up

Landing gear

Retract after positive climb established

Cowl flaps

Open

Weight pounds

2,950

2,800

2,600

2,400

2,200

Takeoff speed

Lift-off

50 ft

kts

MPH

kts

MPH

66

76

72

83

64

74

70

81

63

72

68

78

61

70

66

76

58

67

63

73

The graph plots pressure altitude (feet) on the left y-axis (0 to 10,000) and distance (feet) on the right y-axis (0 to 6,000) against outside air temperature (3C and 3F) on the x-axis (-40 to 50 3C, -40 to 120 3F). It includes weight (pounds) and wind component (knots) scales. Key features include: ISA line, Reference lines, Tailwind and Headwind correction lines, and Obstacle height lines. A red path shows a calculation starting from 5,650 feet pressure altitude, moving to 2,950 lb weight, then to 66 knots lift-off speed, and finally to 2,300 feet total distance over a 50-foot obstacle.

Figure 40. Airplane Takeoff Distance Graph ©ASA

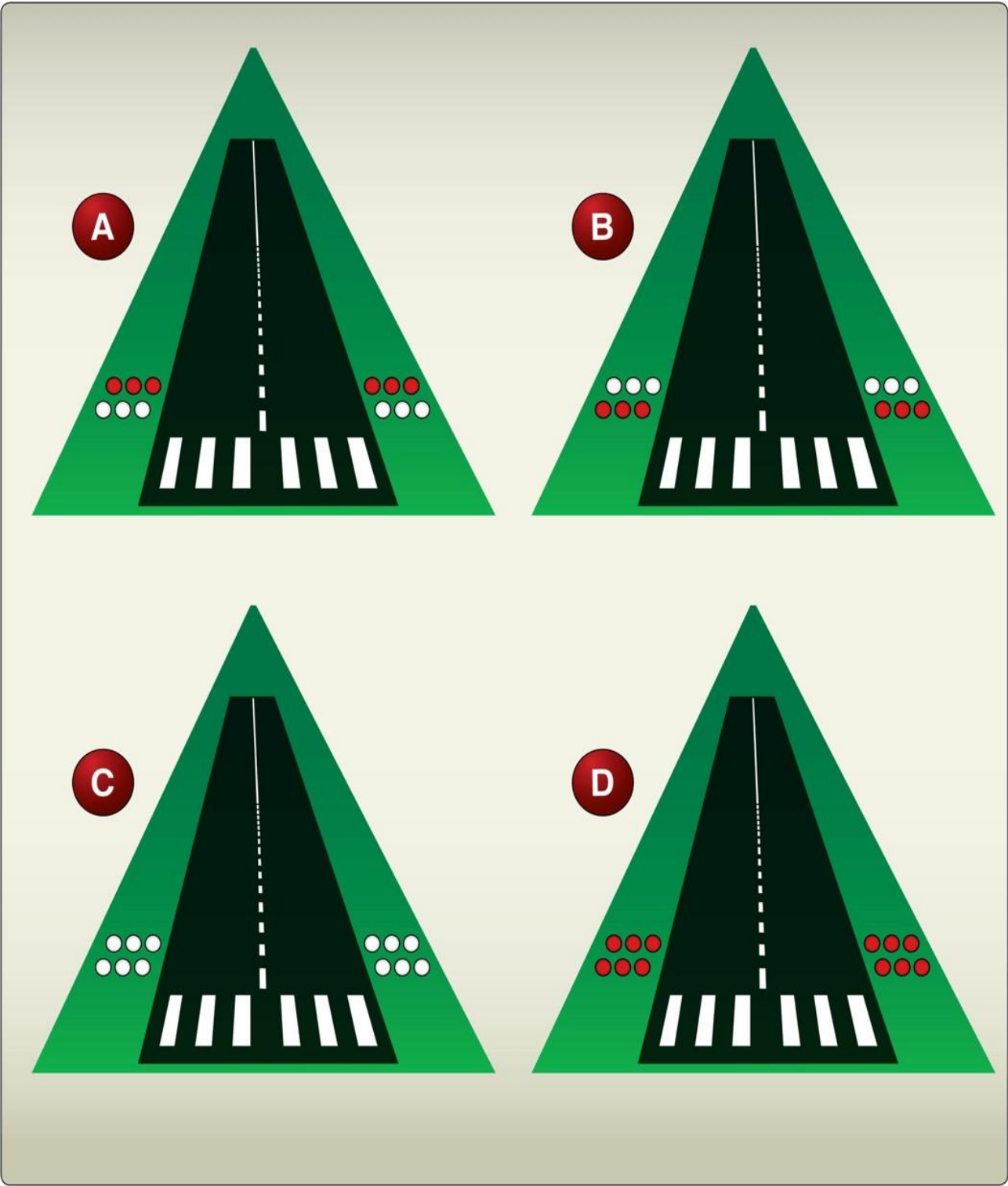


Figure 47. VASI Illustrations

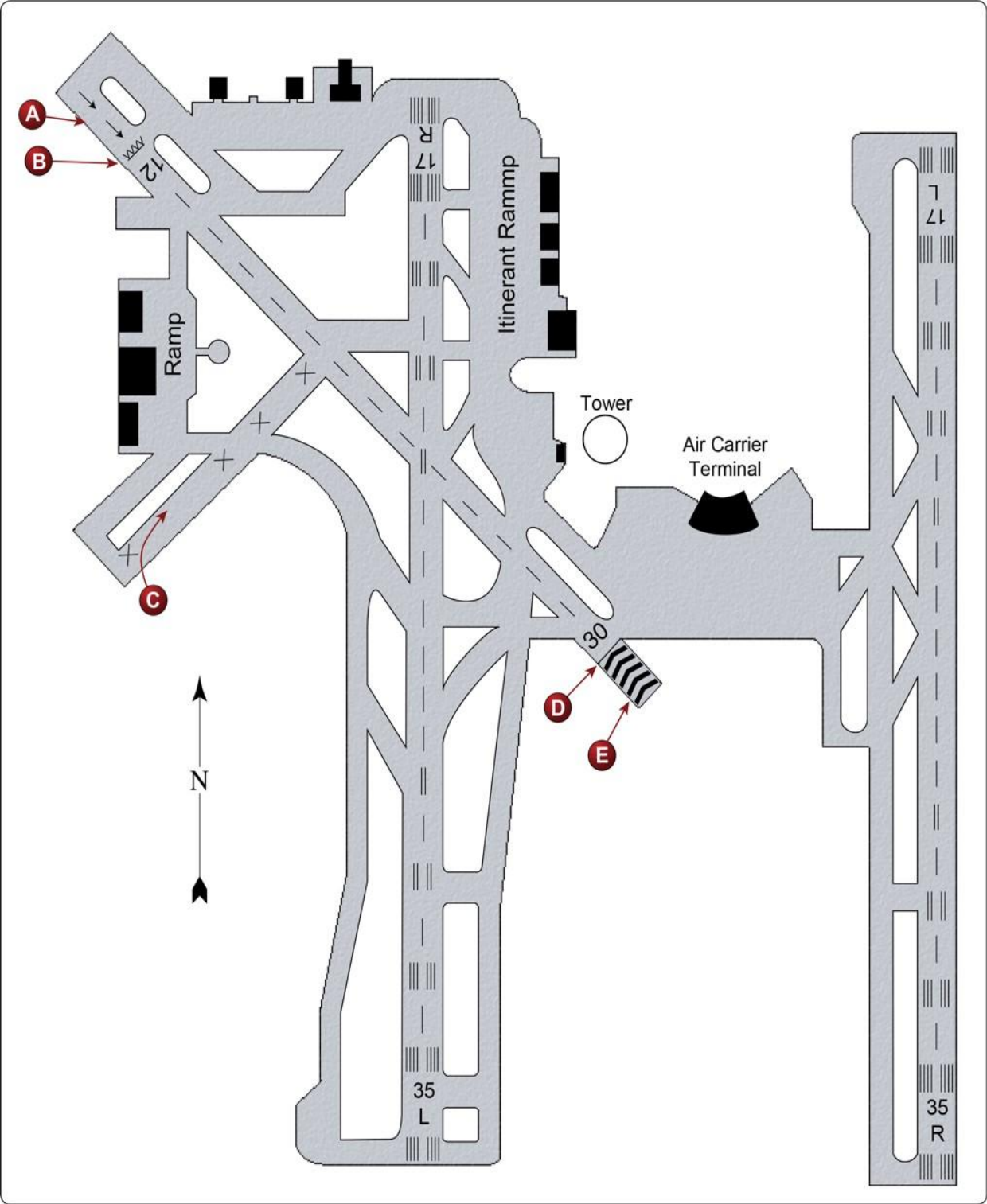


Figure 48. Airport Diagram

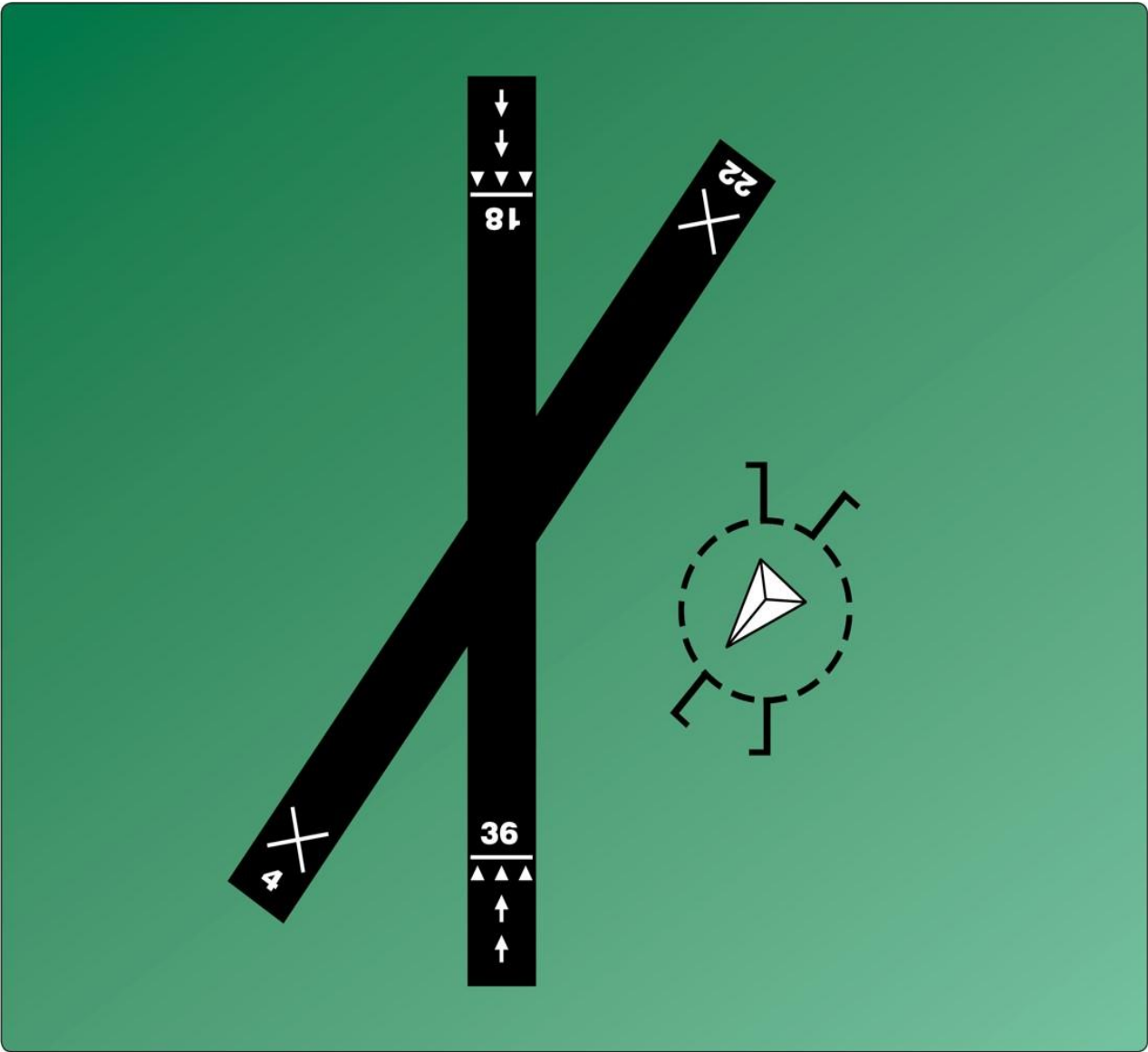


Figure 49. Airport Diagram

©ASA

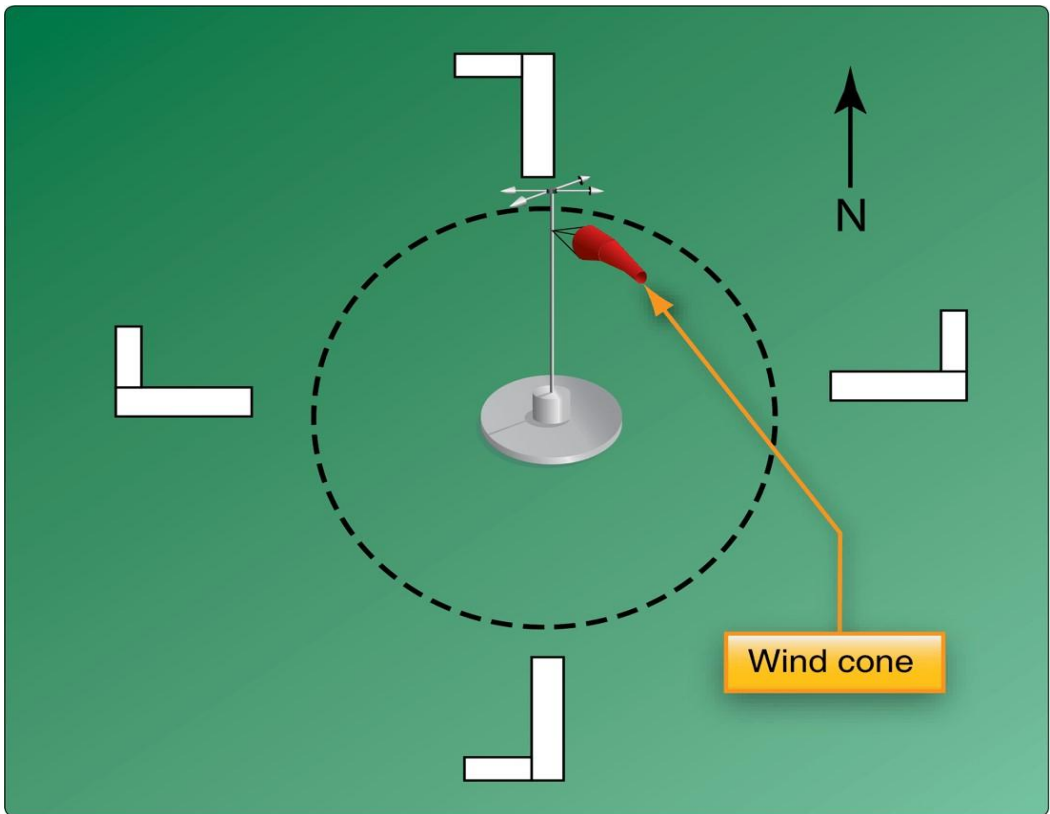


Figure 50. Wind Sock Airport Landing Indicator

©ASA

Approved OMB No. 2120-0026
Exp. 5/31/2017

 U.S. Department of Transportation Federal Aviation Administration		International Flight Plan	
PRIORITY <=FF		ADDRESSEE(S) _____ _____ _____	
FILING TIME _____		ORIGINATOR _____ <=	
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND / OR ORIGINATOR _____			
3 MESSAGE TYPE <=(FPL		7 AIRCRAFT IDENTIFICATION _____	
9 NUMBER _____		8 FLIGHT RULES _____	
TYPE OF AIRCRAFT _____		TYPE OF FLIGHT _____ <=	
WAKE TURBULENCE CAT. _____		10 EQUIPMENT _____ <=	
13 DEPARTURE AERODROME _____		TIME _____ <=	
15 CRUISING SPEED _____		LEVEL _____	
ROUTE _____		_____	
16 DESTINATION AERODROME _____		TOTAL EET HR MIN _____	
18 OTHER INFORMATION _____		ALTN AERODROME _____	
_____		2ND ALTN AERODROME _____ <=	
SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES)			
19 ENDURANCE HR MIN _____		PERSONS ON BOARD P/ _____	
SURVIVAL EQUIPMENT POLAR DESERT MARITIME JUNGLE ☐ / ☐ P ☐ D ☐ M ☐ J		EMERGENCY RADIO UHF VHF ELT R/ ☐ U ☐ V ☐ E	
DINGHIES NUMBER CAPACITY COVER _____		JACKETS LIGHT FLUORES UHF VHF ☐ / ☐ L ☐ F ☐ U ☐ V	
AIRCRAFT COLOR AND MARKINGS A/ _____		_____	
REMARKS N/ _____		_____ <=	
PILOT-IN-COMMAND C/ _____		_____)<=	
FILED BY _____		ACCEPTED BY _____	
ADDITIONAL INFORMATION _____			

FAA Form 7233-1 (7/15)

Figure 51. Flight Plan Form

©ASA

For	N	30	60	E	120	150
Steer	0	27	56	85	116	148
For	S	210	240	W	300	330
Steer	181	214	244	274	303	332

Figure 58. Compass Card

©ASA

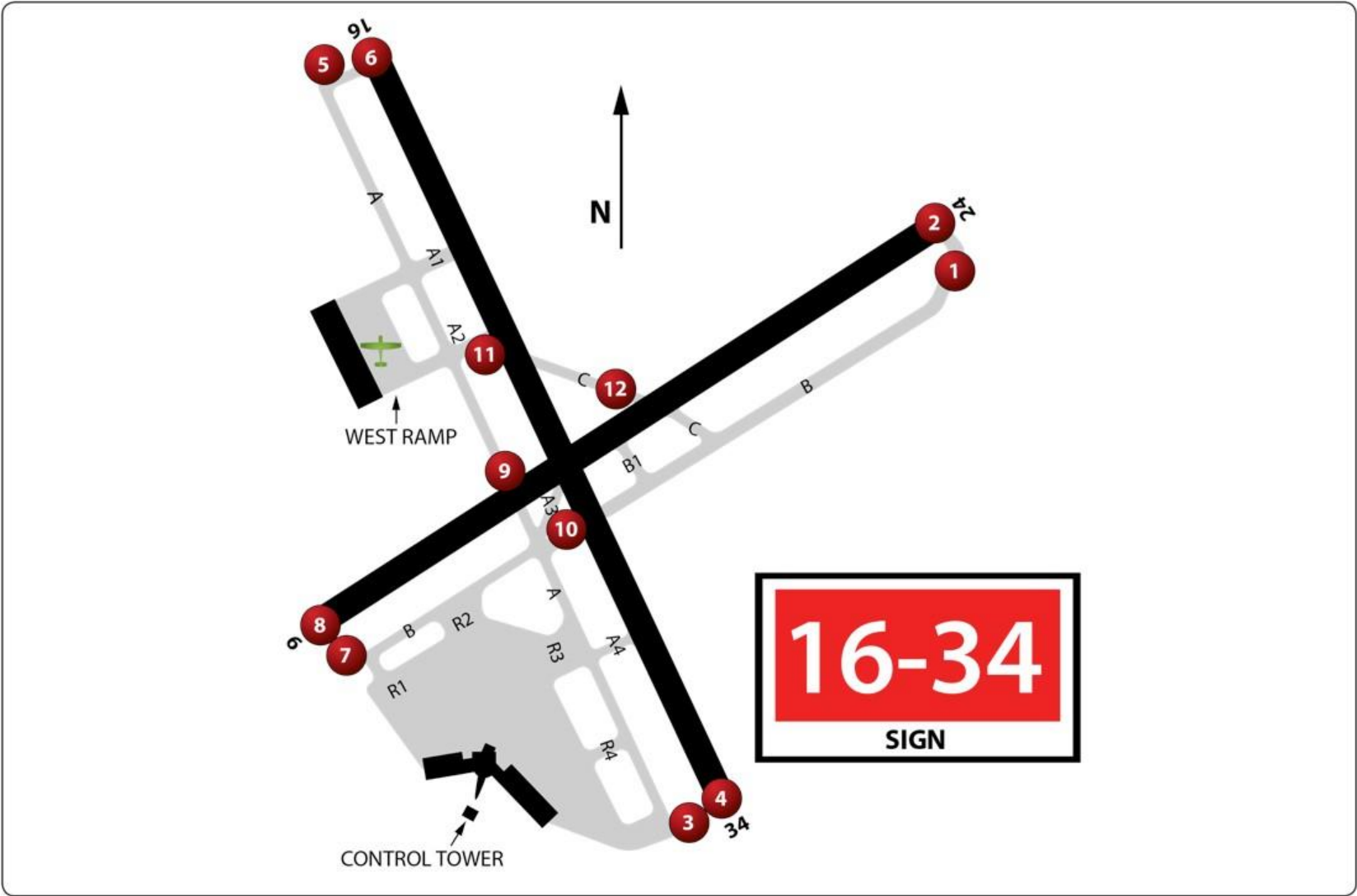


Figure 58. Airport Diagram and Sign



Figure 59. Sectional Chart Excerpt ©ASA
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

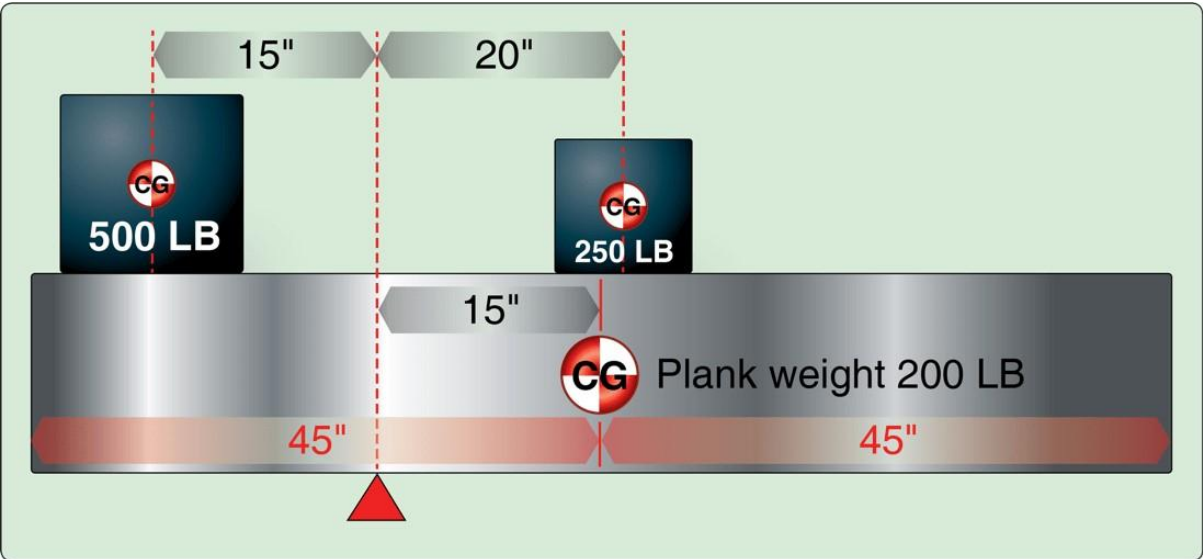


Figure 60. Weight and Balance Diagram ©ASA

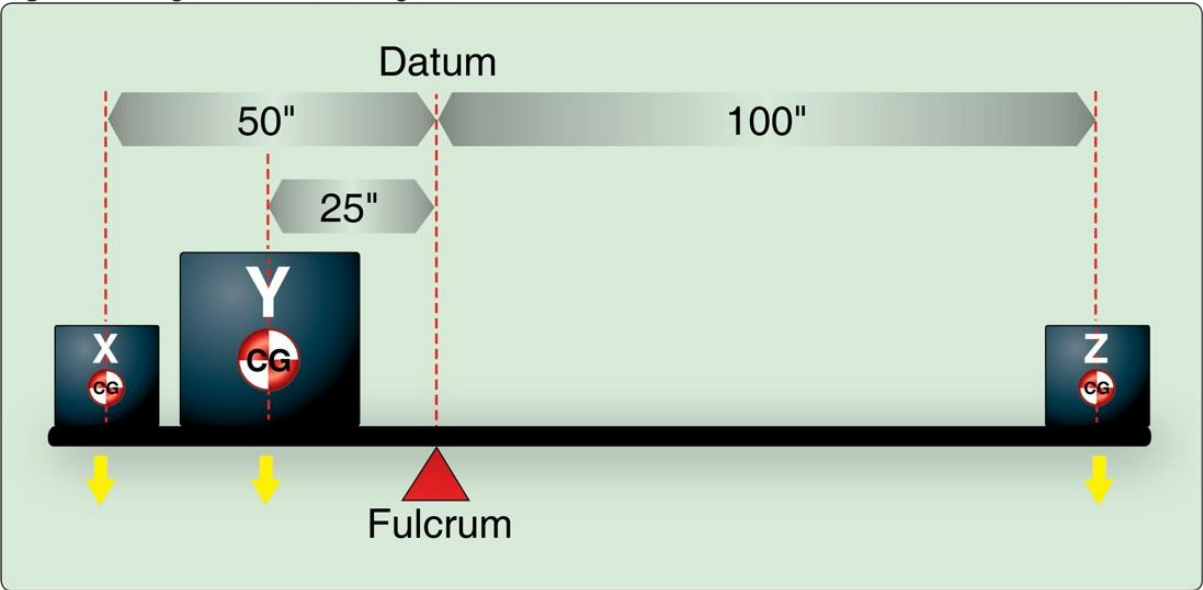


Figure 61. Weight and Balance Diagram ©ASA

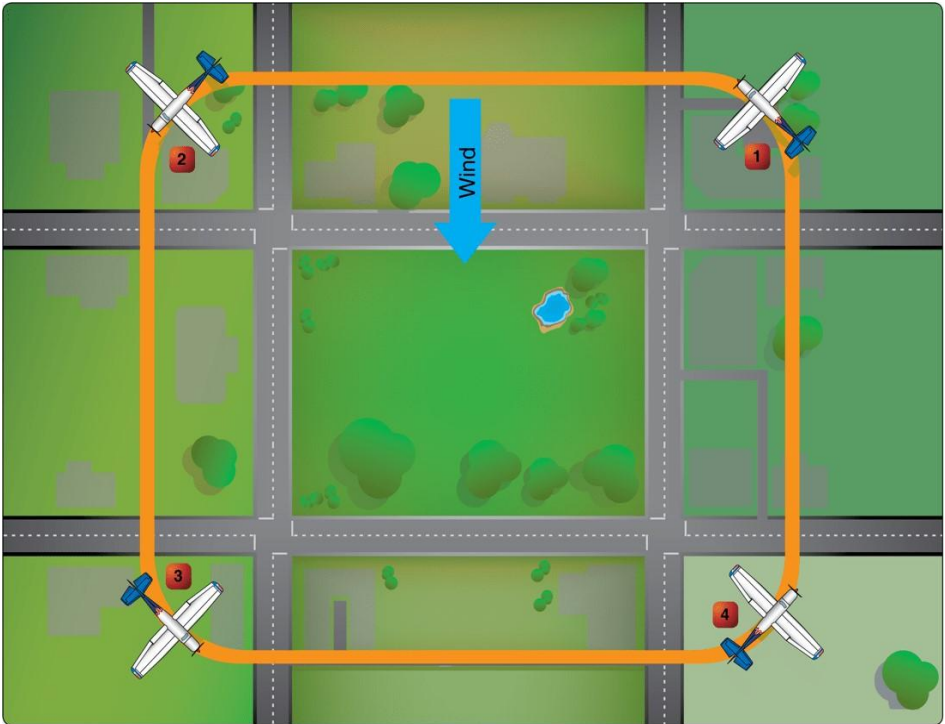


Figure 62. Rectangular Course ©ASA

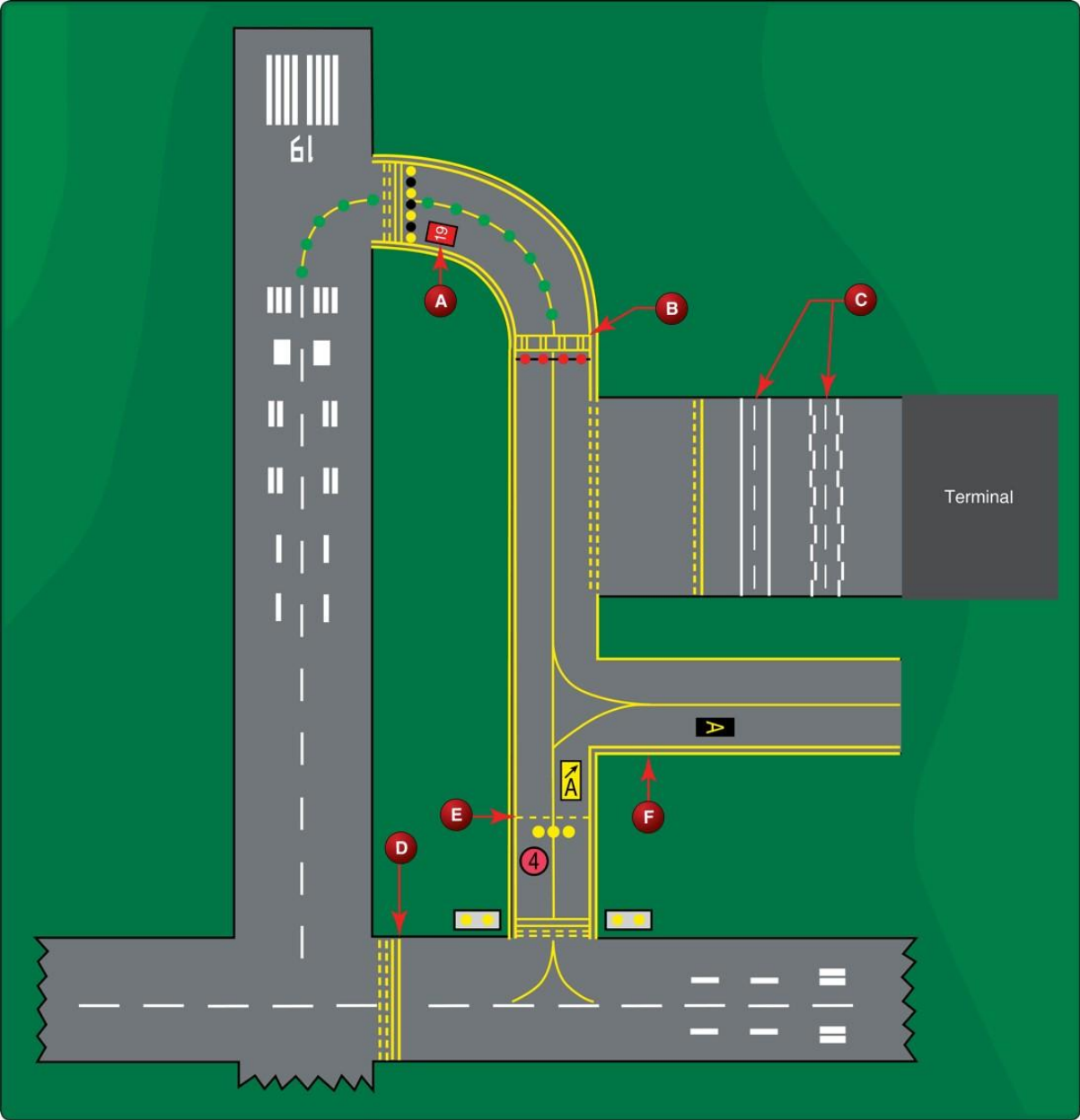


Figure 64. Airport Markings ©ASA

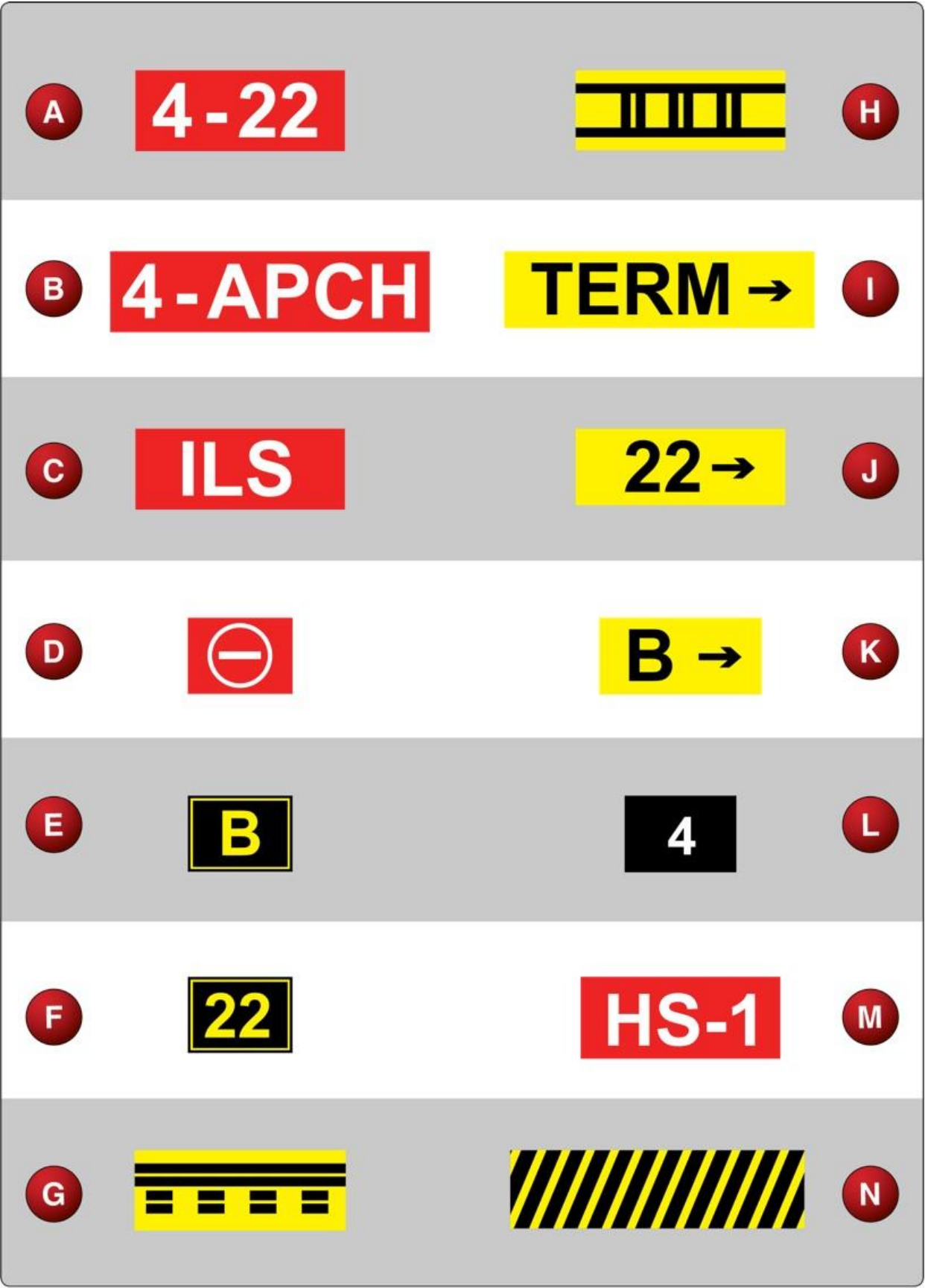


Figure 65. U.S. Airport Signs

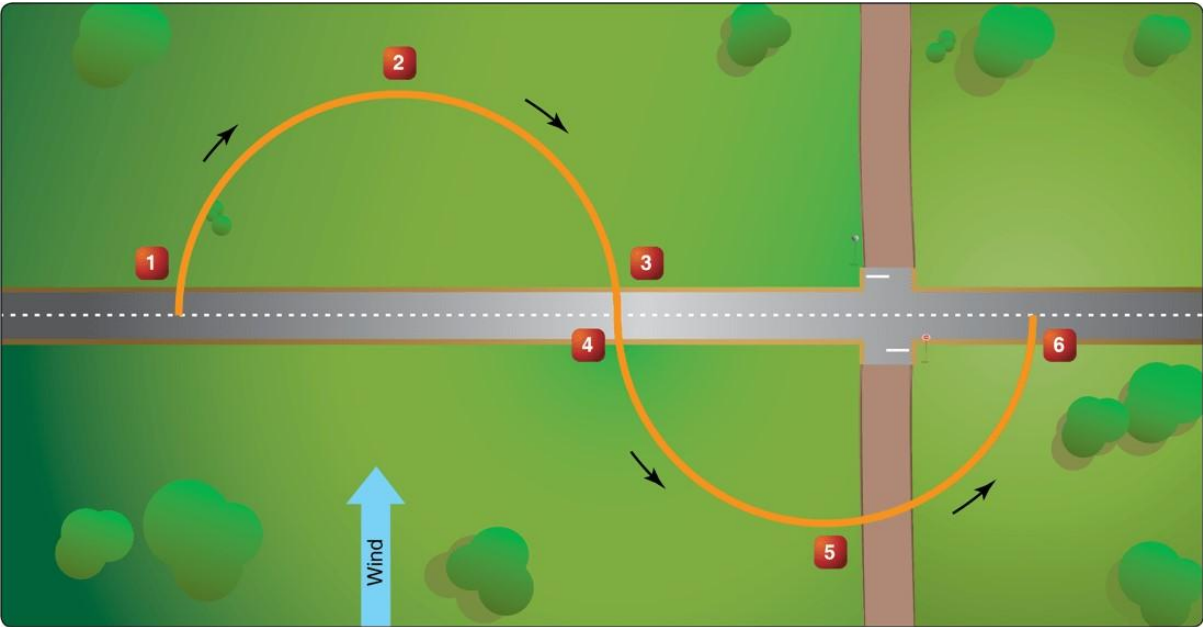


Figure 66. S-Turn Diagram

©ASA

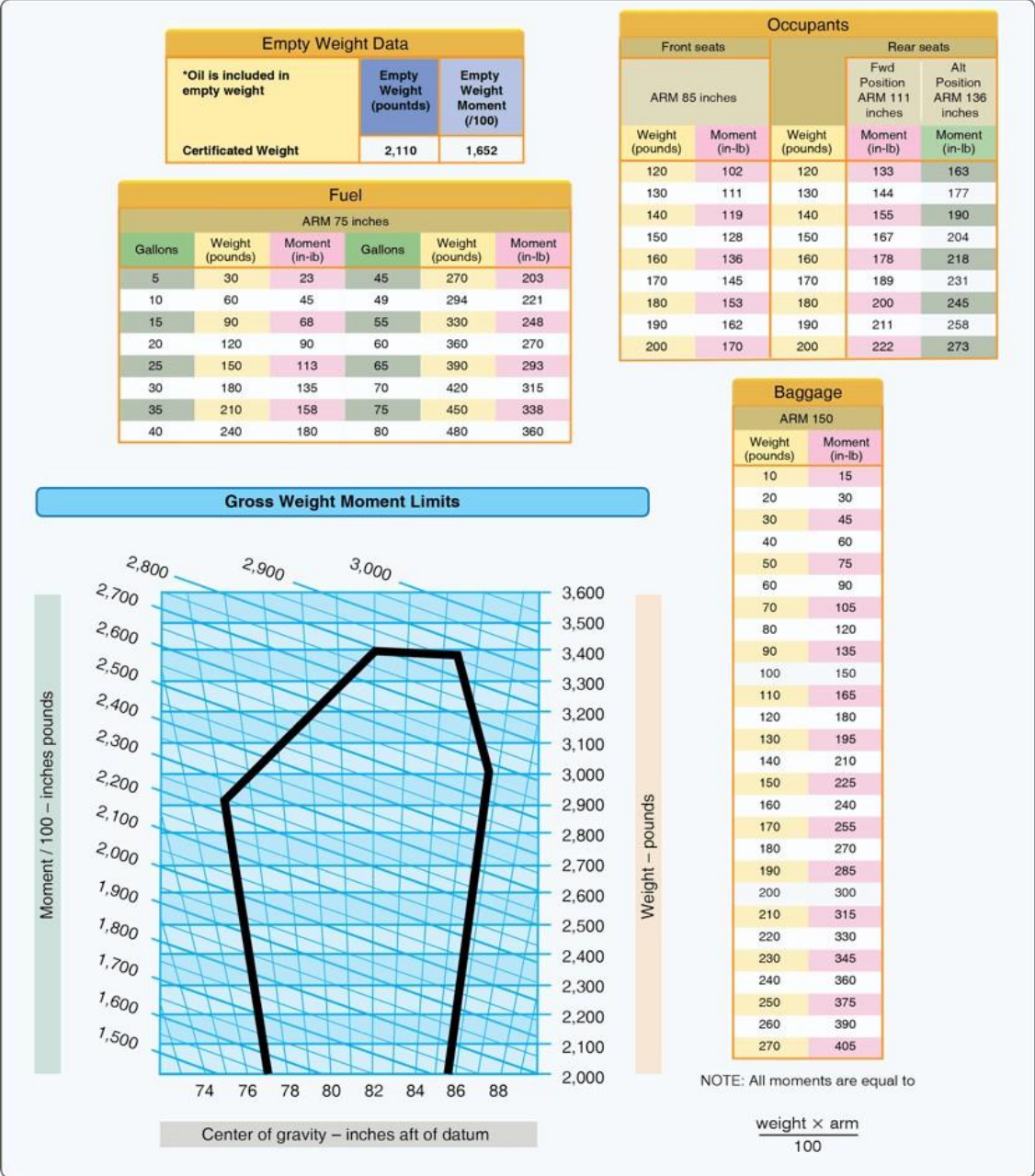


Figure 67. Weight and Balance Chart

©ASA

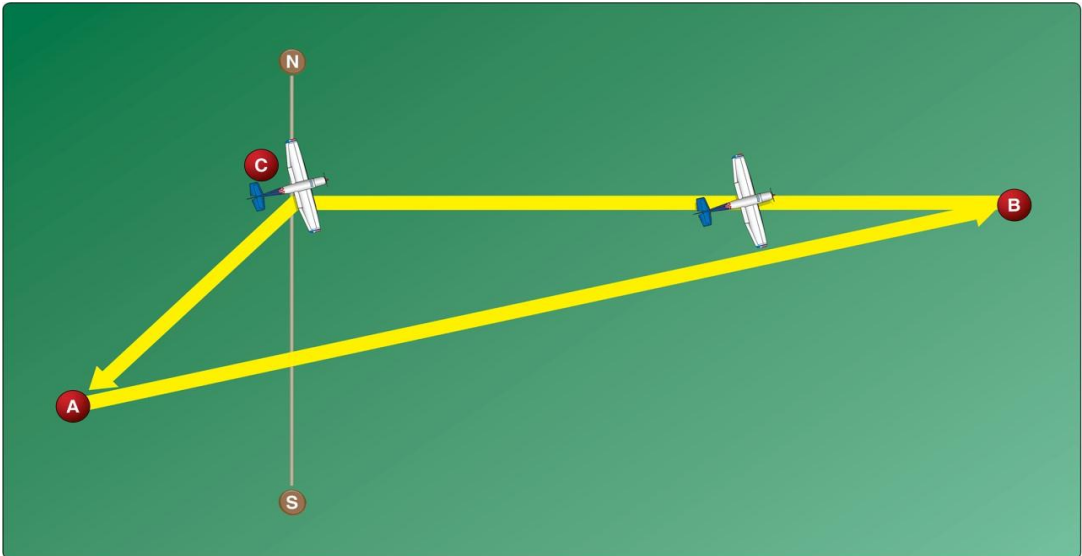


Figure 68. Wind Triangle ©ASA



Figure 69. Sectional Chart Excerpt ©ASA
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.



Figure 74. Sectional Chart Excerpt ©ASA
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.

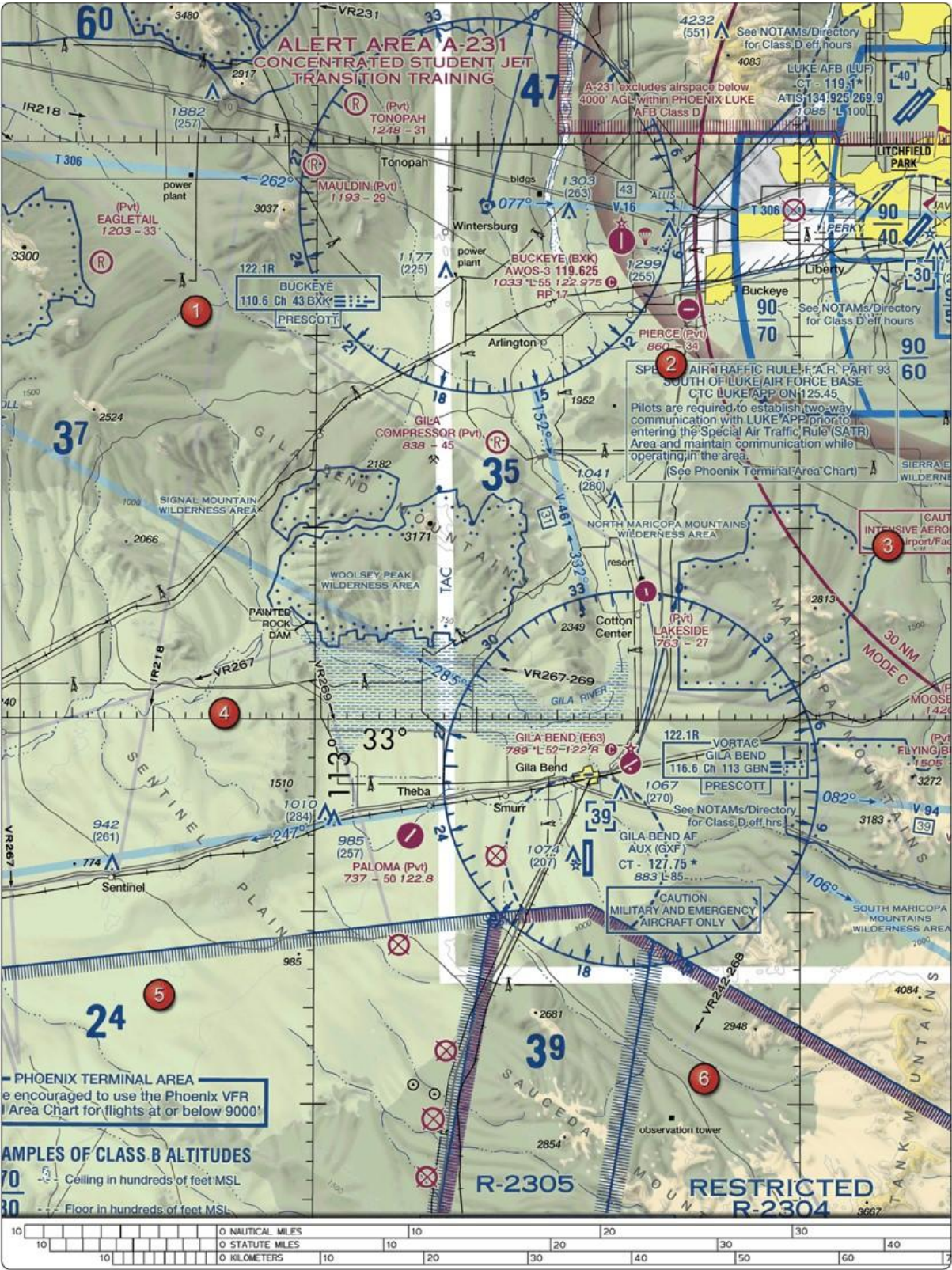
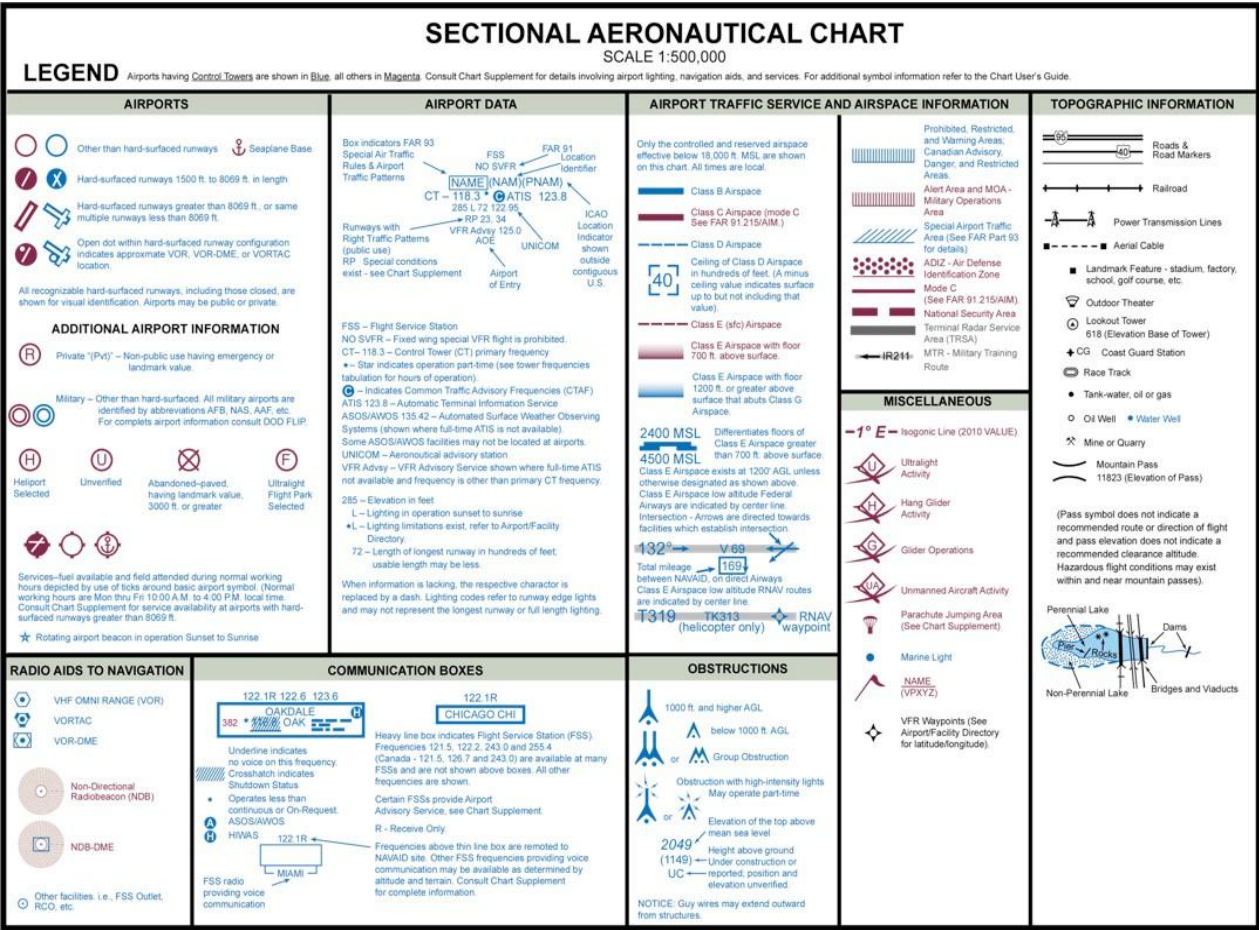


Figure 75. Sectional Chart Excerpt ©ASA
NOTE: Chart is not to scale and should not be used for navigation. Use associated scale.



Figure 82. Altimeter

©ASA



Legend 1. Sectional Aeronautical Chart

©ASA

DIRECTORY LEGEND

5

10

SKETCH LEGEND

RUNWAYS/LANDING AREAS

Hard Surfaced	
Metal Surface	
Sod, Gravel, etc.	
Light Plane,	
Ski Landing Area or Water	
Under Construction	
Closed	
Helicopter Landings Area	
Displaced Threshold	
Taxiway, Apron and Stopways ..	

MISCELLANEOUS BASE AND CULTURAL FEATURES

Buildings	
Power Lines	
Fence	
Towers	
Tanks	
Oil Well	
Smoke Stack	
Obstruction	
Controlling Obstruction	
Trees	
Populated Places	
Cuts and Fills	
Cliffs and Depressions	
Ditch	
Hill	

RADIO AIDS TO NAVIGATION

VORTAC ...		VOR	
VOR/DME ..		NDB	
TACAN		NDB/DME	

MISCELLANEOUS AERONAUTICAL FEATURES

Airport Beacon	
Wind Cone	
Landing Tee	
Tetrahedron	
Control Tower	

or TWR

When control tower and rotating beacon are co-located beacon symbol will be used and further identified as TWR.

APPROACH LIGHTING SYSTEMS

A dot *•* portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting system e.g. (A1) Negative symbology, e.g., (A1) indicates Pilot Controlled Lighting (PCL).

Runway Centerline Lighting	
(A) Approach Lighting System ALSF-2 ..	
(A1) Approach Lighting System ALSF-1 ..	
(A2) Short Approach Lighting System SALS/SALSF	
(A3) Simplified Short Approach Lighting System (SSALR) with RAIL	
(A4) Medium Intensity Approach Lighting System (MALS and MALSF)/(SSALS and SSALF)	
(A5) Medium Intensity Approach Lighting System (MALSR) and RAIL	
(V) Omnidirectional Approach Lighting System (ODALS)	
(D) Navy Parallel Row and Cross Bar	
(F) Air Force Overrun	
(V) Visual Approach Slope Indicator with Standard Threshold Clearance provided	
(V2) Pulsating Visual Approach Slope Indicator (PVASI)	
(V3) Visual Approach Slope Indicator with a threshold crossing height to accommodate long bodied or jumbo aircraft	
(V4) Tri-color Visual Approach Slope Indicator (TRCV)	
(V5) Approach Path Alignment Panel (APAP)	
(P) Precision Approach Path Indicator (PAPI)	

NE, 09 FEB 20XX to 05 APR 20XX