## Chapter 10 - Aviation Maps: The Art of the Chart



## The Lambert Conformational Projection

## 1. [10-2/Figure 1]

When drawing lines on a Lambert Conformal Conic Projection, a straight line represents a
A rhumb line.
B. great circle route.
C. great rhumb line.

## 2. [10-2/Figure 1]

On a Lambert Conformal Conic Projection, the two standard parallels represent the positions where A. no distortion exists.
B. maximum distortion exists.
C. good things happen.

3. [10-2/Figure 2] Fill in the blank:

Based on the figure above, the two lines identified by " $A$ " in the Lambert Conformal Conic Projection are known as parallels.

## HOUSTON

SECTIONAL AERONAUTICAL CHART
SCALE 1:500,000
Lambert Conformal Conic Projection Standard Parallels $25^{\circ} 20^{\prime}$ and $30^{\circ} 40^{\prime}$ Horizontal Datum: North American Datum of 1983 (World Geodetic System 1984) Topographic data corrected to May 1995

## 4. [10-2/Figure 2]

Based on the sectional chart excerpt above, what are the standard parallels on which this lambert conformal conic projection is based?
A. 25 degrees 20 minutes north latitude, 30 degrees 40 minutes north latitude.
B. 25 degrees 20 minutes west longitude, 30 degrees 40 minutes west longitude.
C. 1 degree north latitude \& 500,000 degrees north latitude.

## The Aeronautical Sectional Chart

## 5. [10-2/1/1]

Sectional charts are valid for flight planning for
A. 12 months.
B. 6 months.
C. a lot of things.

## 6. [10-2/3/2]

Changes on the sectional chart occurring prior to the next publication cycle can be found in the
A. FARs.
B. pilots operating handbook.
C. Airport/Facility Directory.


## 7. [10-2/3/2]

According the Airport/Facility Directory for Los Angeles shown above, what change should you make to your Los Angeles sectional chart in order to make this chart as accurate as possible?
A. No change at all. The changes shown in the A/FD excerpt were already incorporated in this issue of the sectional chart.
B. No change. Just wait for the next issue of the sectional chart to show these changes.
C. Take your pen and mark the position of the 1,838 obstacle and make a note that MCAS airport is deleted.

## World Aeronautical Charts

## 8. [10-4/1/2]

World Aeronautical Charts are valid for
A. 12 months.
B. 6 months.
C. until updated by Notam.
9. [10-5/1/1]

World Aeronautical Charts have a scale of
A. 1 to 500,000.
B. 1 to 250,000 .
C. 1 to 1,000,000.

VFR Terminal Area Charts
10. [10-5/1/1]

VFR Terminal Area Charts are good for
A. 12 months.
B. 6 months.
C. until updated by Notam.

## 11. [10-5/1/1]

VFR Terminal Area Charts have a scale of
A. 1 to 500,000.
B. 1 to 250,000 .
C. 1 to 1,000,000.

Topographical Information on a Sectional Chart
12. [10-5/2/3]

Contour lines on a topographical chart join areas of
A. equal pressure.
B. equal density.
C. equal height.
13. [10-6/1/1]

On a sectional chart, contour lines are commonly spaced at intervals of
A. 500 feet.
B. 100 feet.
C. 200 feet.

14. [10-6/1/1]

Referring to the figure above, the contour lines are spaced at intervals of $\qquad$ -.
A. 500 feet
B. 100 feet
C. 200 feet

## 15. [10-6/2/1]

A specific color shown on a topographic chart doesn't precisely indicate the height of terrain, it indicates
$\qquad$ heights within which terrain can be found in
those areas.
A. specific
B. a random selection of
C. a range of

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16. [10-6/2/1]

The area of terrain identified by area " $A$ " in the figure located in top left hand corner of the opposite page has terrain that varies from
A. 500 feet to 2,000 feet.
B. sea level to 1,000 feet.
C. sea level to 2,000 feet .

## Spot Elevation Symbols

## 17. [10-6/2/2]

Normally, spot elevations (shown as black dots) are chosen by mapmakers to indicate the $\qquad$ on a particular mountain range or ridge.
A. high point
B. low point
C. obstacle points

18. [10-6/2/2]

What is the highest spot elevation shown in the sectional chart excerpt above?
A. 2,242 feet.
B. 2,697 feet.
C. 3,192 feet.

## Spot Elevations Showing Highest Terrain

## 19. [10-7/1/1]

A single spot elevation showing the highest terrain is found within the $\qquad$ bounded by lines of latitude and longitude.
A. quadrangles
B. biangles
C. triangles

20. [10-7/1/1] Fill in the blank:

Referring to the figure above, the highest terrain for the quadrangle shown is $\qquad$ _.

## Maximum Elevation Figures

21. [10-7/1/2]

Maximum elevation figures (MEFs) represent the highest elevation of terrain and other obstacles (towers,
trees, etc.) within $\qquad$ -.
A. any area on the chart
B. a quadrangle
C. a magenta bordered area

## 22. [10-7/1/2]

The maximum elevation figure shown for the quadrangle in the figure above is
A. 5,350 feet.
B. 5,700 feet.
C. 3,944 feet.

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## 23. [10-8/1/1 \& 10-8/2/1\&2]


25. [10-8/1/1 \& 10-8/2/1\&2]

Referring to the figure above, the top of the obstacle approximately 3 miles southwest of the city of Lexington is
A. 579 feet AGL.
B. 265 feet MSL.
C. 579 feet MSL.

26. [10-8/1/1 \& 10-8/2/1\&2]

What minimum altitude is necessary to vertically clear the lighted obstacle on the southwest side of Hobbs airport by 500 feet?
A. 2,500 feet MSL.
B. 2,615 feet MSL.
C. 2,615 feet AGL.

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## 30. [10-11/1/1]

Airports are coded by colors on the map. Those airports colored in $\qquad$ don't have an air traffic control tower. Those shown in $\qquad$ have a tower (although it may not be in operation 24 hours a day-most aren't).
A. magenta, black
B. magenta, blue
C. blue, magenta

## 31. [10-11/2/2]

Normally, both the magenta and blue airport symbols are circles unless the airport has a hard surfaced runway greater than $\qquad$ _.
A. 5,000 feet
B. 10,000 feet
C. 8,000 feet
32. [10-12/1/1]

Any airport having a darkened circle with the runways in reverse-bold white has a $\qquad$ runway between 1,500 and 8,000 feet in length.
A. soft surfaced
B. hard surfaced
C. asphalt covered
33. [10-12/Figure 35]

Referring to the figure above, which public airports depicted have fuel?
A. Carson and Dayton Valley.
B. Douglas, Pinenut and Parker.
C. Douglas and Carson.
29. [10-9/1/2]

What does arrow A point to in the figure to the right?
A. Guy wires extending from radio or TV towers.
B. Power transmission lines.

C. A single-rail railroad.

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34. [10-12/2/2]

Some airports are restricted in that they are private and not open to public use. These airports are identified by the airport symbol containing the letter $\qquad$ _.
A. P
B. UC
C. R


## 35. [10-13/1/2]

Referring to the figure above, the airport data listed under Southwest Georgia Regional airport, what is the airport elevation?
A. 66 feet.
B. 133 feet.
C. 197 feet.

## 36. [10-13/1/2]

Referring to the figure above, what is the length of the longest runway at Southwest Georgia Regional airport?
A. 660 feet.
B. 6,600 feet.
C. 19,700 feet.

## 37. [10-13/1/2]

Referring to the figure above, what does the "*L" mean at Southwest Georgia Regional airport?
A. Runway lighting limitations exist.
B. Runway lighting is available only by prior arrangement.
C. Runway lighting is available if you flight a flight plan.

## 38. $[10-12 / 2 / 3 \& 10-13 / 1 / 2 \& 3]$

Referring to the figure above, what are the ATIS and tower frequencies at Southwest Georgia Regional airport?
A. 120.25 MHz, 133.05 MHz .
B. $133.05 \mathrm{MHz}, 122.95 \mathrm{MHz}$.
C. $133.05 \mathrm{MHz}, 120.25 \mathrm{MHz}$.

39. [10-13/2/2]

Referring to the figure above, what is the total airway distance between VORs for the airway named V66?
A. 66 nautical miles, on Victor airway 87.
B. 66 statute miles, on Victor airway 87.
C. 87 nautical miles, on Victor airway 66.


## 40. [10-13/2/3]

Referring to the figure above, the flag symbol at Hooks Memorial airport (arrow A) represents a A. compulsory reporting point for entering controlled airspace.
B. compulsory reporting point for Hooks Memorial airport.
C. visual checkpoint used to identify position for initial callup to an ATC facility.

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41. [10-13/3/2]

Referring to the figure abve, the symbols identified by arrow A represent
A. airborne vehicles likely to be found in that airspace. B. airborne vehicles in contact with the nearest ATC facility in that airspace.
C. airborne vehicles found only above 3,000 feet AGL in that airspace.

## Park, Wildlife, Forest, Wilderness and Primitive Areas

## 42. [10-14/1/1]

Pilots flying over a national wildlife refuge are requested to fly no lower than
A. 1,000 feet AGL.
B. 2,000 feet AGL.
C. 3,000 feet AGL.

## 43. [10-14/1/1]

(refer to figure in top right corner.) What is the minimum altitude you should fly when heading northbound from Moller airport?
A. 2,000 feet AGL
B. 1,000 feet AGL.
C. 2,000 feet MSL.


Postflight Briefing 10-2: Runway Patterns

44. [10-13/1/2]

Which runways at Long Beach airport have right hand patterns?
A. 7R, 16R, 25R, 34R.
B. $25 \mathrm{~L}, 34 \mathrm{~L}, 7 \mathrm{~L}, 16 \mathrm{~L}$.
C. All traffic patterns are left hand in direction.

45. [10-14/Postflight Briefing \#10-1] Need figure What do the letters represented by arrow "A" represent?
A. Secret Queen Mary code for overflights.
B. GPS identifier for this VFR waypoint.
C. VFR waypoint call letters which are given to ATC on initial call up.
8. A
9. C
10. B
11. B
12. C
13. A
14. A
15. C
16. B
17. A
18. C
19. A
20. 5,350 feet
21. B
22. B
23. C
24. A
25. C
26. B
27. C
28. A
29. B
30. B
31. C
32. B
33. C
34. C
35. C
36. B
37. A
38. C
39. C
40. C
41. A
42. B
43. A
44. A
45. B

